



# Provincial Overview of Exploration and Mining in British Columbia, 2023



Ministry of  
Energy, Mines and  
Low Carbon Innovation

Information Circular 2024-01



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**Ministry of Energy, Mines and Low Carbon Innovation  
Responsible Mining and Competitiveness Division  
British Columbia Geological Survey**

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**Front Cover:**

Drilling in limestone by Core Assets Corp. at the Pete's CRD target of the Silver Lime project on the Blue property, southwest of Atlin Lake. Looking west at Willison Glacier. **Photo by Nate Corcoran.**

**Back Cover:**

Drilling in rhyolite by Eskay Mining Corp. on the Scarlet Knob target of the Consolidated Eskay property in the Golden Triangle. Looking west-southwest across Bruce Glacier. **Photo by Nate Corcoran.**

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<https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/publications>

Victoria  
British Columbia  
Canada

January 2024

# Foreword

This volume is the latest in a series of annual reviews that dates back to 1874, when the first Annual Report of the Minister of Mines was published. To prepare the details in the district chapters, the Regional Geologists visit project sites to view outcrops and drill core and to discuss results and progress. A significant amount of information is gleaned from corporate press releases, websites, and reports. Exploration expenditures, drilling estimates, and other metrics were captured in the British Columbia Mineral and Coal Exploration Survey. The survey is a joint initiative between the Ministry of Energy, Mines and Low Carbon Innovation, the Association for Mineral Exploration, and EY LLP.

Provincial mining production by value was down compared to 2022, mostly due to lower average coal prices. The forecasted value of total provincial mining for 2023 is \$15.9 billion. The year started with significant exploration financing in place but, while robust, the total estimated exploration expenditure of \$643.5 million is less than the record set in 2022.

As used in this volume

- grassroots exploration refers to activities that are typically below Mines Act permit thresholds and commonly include mapping, sampling and prospecting
- early-stage exploration includes activities such as geophysics, geochemistry, trenching, and drilling
- advanced-stage exploration is concerned with resource definition, emphasizing drilling and bulk sampling, and may include baseline environmental studies, economic pre-feasibility work, and secondary target exploration
- mine evaluation begins with a commitment to develop a resource and usually coincides with government applications to open a mine and environmental, social, engineering, and financial assessment activities
- mine lease exploration represents work on a mining property beyond known reserves and commonly has characteristics of early-stage or advanced exploration

Founded in 1895, the British Columbia Geological Survey integrates historical data with active research programs and, drawing on continuously advancing concepts and technologies in the Earth sciences, informs the mineral and coal industries. The British Columbia Geological Survey preserves, archives, and provides free web-based access to more than a century's worth of geoscience information.

British Columbia Geological Survey geoscientists work and live on the traditional lands of many First Nations. The Survey looks forward to enhancing relationships and exchanging knowledge with Indigenous communities.

We appreciate the information and access to project sites provided by industry representatives and thank George Owsiacki of Total Earth Science Services for desktop publishing.



Gordon Clarke  
Director, Mineral Development Office  
British Columbia Geological Survey  
January, 2024

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# Exploration and Mining in British Columbia, 2023: A summary



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## 1. Introduction

Reflecting its complex geological history, British Columbia is endowed with diverse minerals and deposit types (Fig. 1). British Columbia is Canada's largest exporter of metallurgical coal, leading producer of copper, and only producer of molybdenum. Also produced are significant amounts of gold, silver, and lead, and more than 30 industrial minerals including gypsum, magnesite, limestone, and dimension stone. Numerous quarries produce sand and gravel or crushed aggregate. Flanked by the Pacific Ocean, British Columbia offers easy access to global markets. Mine operations benefit from tax incentives and a well-developed infrastructure, including low-cost electricity, an integrated road and rail network, and large deep-water ports. Exploration benefits from an extensive geoscience database and a web-based mineral tenure system.

The following report summarizes the chapters prepared by the British Columbia Geological Survey Regional Geologists that are presented elsewhere in this volume. The Regional Geologists (Fig. 2; Table 1) represent the provincial government on geological matters at a regional level. Within their communities, they provide information on exploration trends, possible investment opportunities, land-use processes, First Nation capacity building, and public outreach.

The high profile of the provincial mining sector was highlighted in 2023 by acquisitions, mergers, investments, and property bids. Newmont Corporation purchased Newcrest Mining Limited for US\$17 billion. Newcrest's assets in the province included the **Red Chris** (70%) and **Brucejack** mines. Teck Resources Limited announced it agreed to sell its steelmaking coal business, Elk Valley Resources, for US\$9 billion. If the deal is approved by regulatory bodies, then

Glencore plc will be the majority owner with 77%; Nippon Steel Corporation will own 20% and POSCO 3%. Hudbay Minerals Inc. purchased a 75% interest in the **Copper Mountain** mine from Copper Mountain Mining Corporation for approximately US \$439 million. Bathurst Resources Limited purchased the **Tenas** coal project from Telkwa Coal Limited, a subsidiary of Allegiance Coal Limited. Payments are staged. If the project is permitted, then one year after receiving permits the total payment would be US \$10.33 million, with a retained royalty. Taseko Mines Limited increased their interest in the **Gibraltar** copper mine from 75% to 87.5%. Nicola Mining Inc. signed a letter of intent with Nittetsu Mining Co., Ltd. whereby Nittetsu would acquire a 40% interest in Nicola's **New Craigmont** Copper project for \$25 million. FPX Nickel Corp. announced a \$16 million strategic equity investment by global stainless-steel producer Outokumpu Oyj. Dolly Varden Silver Corp. announced that Hecla Canada Ltd. increased its shareholding from 10.6% to 15.7% with an additional investment of \$10 million. Benchmark Metals Inc. and Thesis Gold Inc. merged, combining the adjacent **Ranch** and **Lawyers** precious metals projects. A new combined resource estimate is planned for Q2 2024, and an updated Preliminary Economic Assessment is planned for Q3 2024.

Work continued on advanced gold projects. Artemis Gold Inc. received their British Columbia Mines Act Permit and reported that their **Blackwater Mine** project remains fully funded and is on track for a first gold pour in the second half of 2024. Ascot Resources Ltd. reported that construction was on track for a first gold pour in Q1 of 2024 for their **Premier Gold** project. Blue Lagoon Resources Inc. submitted its Joint Mines Act-Environmental Act permits amendment application. If

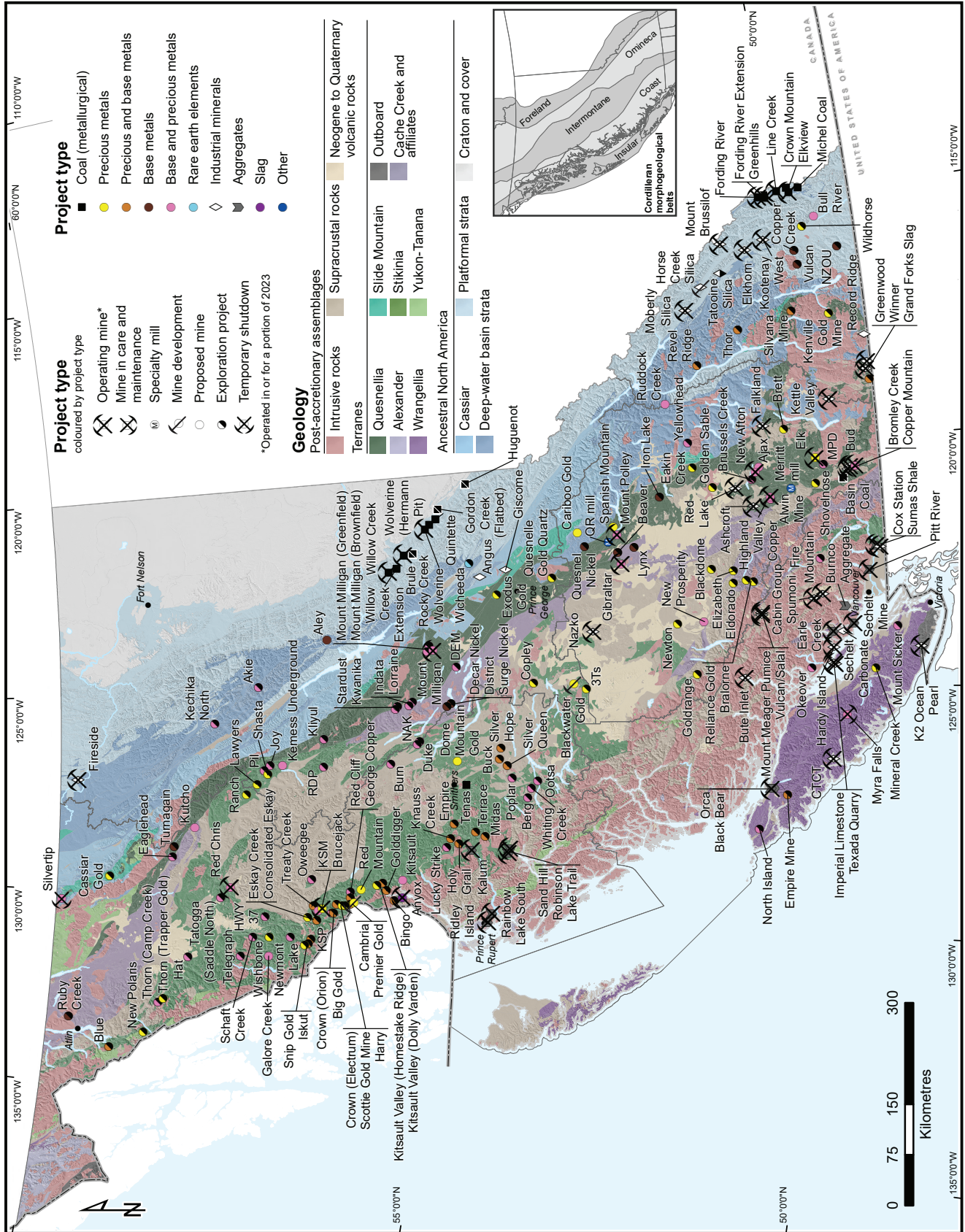


Fig. 1. Mines, mine development, selected exploration projects in British Columbia, 2023. Based on Clarke et al., 2024, British Columbia Geological Survey Open File 2024-01.





Fig. 2. Geographic regions and Regional Geologist offices.

approved, they plan to restart the **Dome Mountain** gold mine.

CertainTeed Gypsum moved mining operations to its **Kootenay West** quarry and is closing its Elkhorn quarry. The Elkhorn quarry has operated for about 40 years and the new quarry is expected to last about as long. CertainTeed is Western Canada’s largest manufacturer and supplier of gypsum wallboard and related products.

Several companies completed economic studies. Skeena Resources Limited announced a positive Feasibility Study. Positive Preliminary Economic Assessments were reported by Northwest Copper Corp., Surge Copper Corp., and Westhaven Gold Corp. FPX Nickel Corp., and Giga Metals Corp., reported positive Pre-Feasibility studies. Early in the year, Osisko Development Corp. announced a positive Feasibility Study and later received an Environmental Assessment Certificate for their **Cariboo Gold** project.

Permitting for projects was ongoing. NWP Coal Canada Ltd. announced an Environmental Assessment Process and Consent Agreement with the Tobacco Plains Indian Band for their **Crown Mountain Coking Coal** project. Canagold Resources Ltd. filed an initial project description to begin the environmental assessment process for their **New Polaris** project. Canadian Critical Minerals Inc. completed the preliminary application

phase for amendments to a Joint Mines Act and Environmental Management Act Permit for the restart of the **Bull River Mine**. West High Yield Resources Ltd. submitted its amended permit application to the British Columbia Mines Development Review Committee for its **Record Ridge** mine project. Ximen Mining Corp. received a Mines Act permit allowing development work at their **Kenville Gold Mine** project.

Low-carbon energy technologies demand critical minerals, but the highly globalized supply chain of critical minerals and products is vulnerable to disruption. Furthermore, increased use of green technologies is increasing the demand for many metals, which could lead to shortages in the next few decades. Based on specific demands and vulnerabilities to supply, different countries have produced different critical minerals lists. Canada’s list, released in 2021, includes a suite of 27 elements, two groups of elements (platinum group metals and rare earth elements) and two minerals (fluorspar, potash). The list is considered critical for the continued economic success of Canada as it transitions to a green economy. British Columbia is Canada’s largest producer of copper and metallurgical coal and only producer of molybdenum and mines magnesium. In 2023, British Columbia had some zinc production, but the only producer (**Myra Falls** mine) announced it was going into care and maintenance late in December. Copper, molybdenum, and magnesium are elements on Canada’s list, and metallurgical coal is required for high-quality steel production. British Columbia has near-term potential to contribute significantly to the production of other critical metals required for a green economy including nickel, rare earth elements, niobium, zinc, tantalum, tungsten, and cobalt.

Mining production in 2023 is estimated to be less than reported for 2022. Total production values are down primarily due to a drop in coal prices. Exploration expenditures for 2023 remained high, but the total did not exceed the record level attained in 2022.

**2. Mine production**

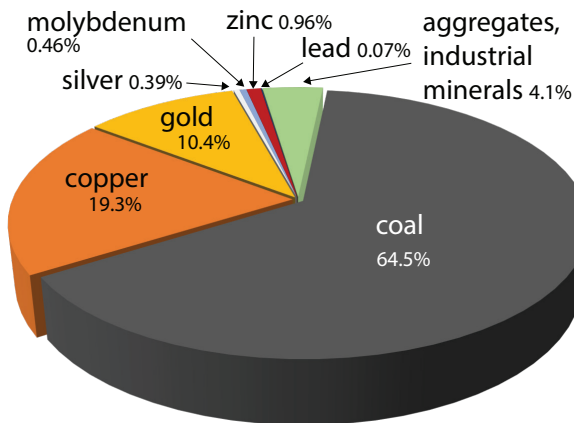
The Ministry of Energy, Mines and Low Carbon Innovation forecasts the total value of mine production for 2023 at \$15.9 billion including coal, copper, gold, industrial minerals, aggregate, zinc, silver, molybdenum, and lead (Fig. 3). This forecast is \$1.6 billion lower than the 2022 revised estimate

Table 1. Mineral Development Office and Regional Geologist contact information.

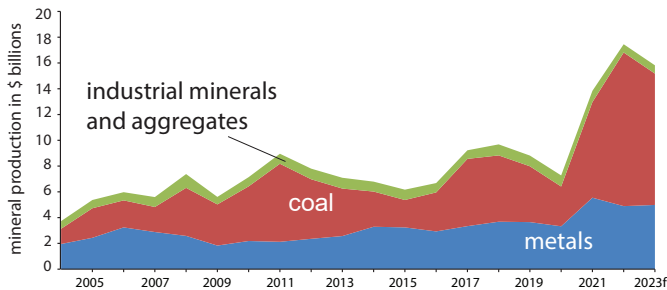
Region	Community	Regional Geologist	Phone	email
Northwest	Smithers	Nate Corcoran	250-876-6707	Nathan.Corcoran@gov.bc.ca
Northeast and North Central	Prince George	Hassan Heidarian	250-649-2977	Hassan.Heidarian@gov.bc.ca
South Central	Kamloops	Cary Pothorin	778-405-4875	Cary.Pothorin@gov.bc.ca
Southeast	Cranbrook	BCGS	250-952-0372	Geological.Survey@gov.bc.ca
Southwest	Vancouver	Bruce Northcote	604-660-2713	Bruce.Northcote@gov.bc.ca
Mineral Development Office	Vancouver	Gordon Clarke	604-660-2094	Gordon.Clarke@gov.bc.ca

of \$17.5 billion made by the Ministry using Natural Resources Canada values (Fig. 4) and is mostly due to decreased coal prices. In 2022 coal peaked at over 670 US\$/t and in 2023 the highest price was 320 US\$/t in February, and in late December was approximately 308 US\$/t.

As in previous years, coal was the highest value mine product (64.5%), followed by copper (19.3%). In 2023, 10 metal mines operated during at least part of the year (Fig. 1; Table 2). Metallurgical coal was produced at four open-pit operations in the southeastern part of the province and three open-pit operations in the northeastern part (Fig. 1; Table 2). About 30 industrial mineral mines and more than 1000 aggregate mines and quarries were in operation.



**Fig. 3.** 2023 forecast value of British Columbia mineral production by commodity; total is \$15.9 billion.



**Fig. 4.** Value of British Columbia mineral production by year 2004-2023; value for 2023 is forecast.

### 3. Mining highlights

#### 3.1. Metal mines

Metal mines accounted for \$5.00 billion (forecast) of all mine production in 2023, representing about 31.5% of total output (Fig. 3). Ten mines produced in 2023 (Fig. 1; Table 2). **Brucejack** (Newmont Corporation) and **Red Chris** (Newmont Corporation 70% and Imperial Metals Ltd. 30%) were the producing metal mines in the Northwest Region.

At the **Brucejack** mine, production for the first three quarters totalled 214,023 oz of Au at a head grade of 6.3 g/t Au and approximately 382,670 oz Ag. In June of 2023, before

Newmont’s takeover was complete, Newcrest Mining Limited reported reserves and resources. Probable reserves totalled 14 Mt grading 8.4 g/t Au and 32 g/t Ag. Measured and Indicated mineral resources totalled 19 Mt grading 13.0 g/t Au and 34.0 g/t Ag. Inferred mineral resources were reported as 9.6 Mt grading 13.0 g/t Au and 13.0 g/t Ag.

The Brucejack ore body incorporates the Valley of the Kings (VOK) and West zones. Several other mineralized zones in phyllic-altered rocks extend across an area 5 km by 1.5 km (from south to north: Bridge, Waterloo, Shore, SG, Gossan Hill, Golden Marmot, and Hanging Glacier). Interpreted as an intermediate-sulphidation epithermal gold-silver deposit, mineralization occurs in sheeted veins, breccia veins, and vein stockworks.

Brownfield surface exploration at Brucejack totalled 15,300 m in 25 diamond drill holes. Drilling at the 1080 HBx and Eastern Promises zones has expanded the VOK deposit, confirming the continuity of high-grade mineralization at depth, with potential for more resource growth at the VOK deposit. Results included 1.0 m grading 5370 g/t Au, a 38.5 m interval grading 49 g/t Au, and an 18 m interval grading 306 g/t Au.

At the **Red Chris** mine, production to the end of the third quarter of 2023 totalled 34,224 oz Au, 73,186 oz Ag, and 39,072 Mlbs Cu. A new mineral resource estimate (June 2023) was released with 314 Mt of Measured and Indicated grading 0.37% Cu and 0.31 g/t Au, and 10.9 Mt of Inferred grading 0.30% Cu and 0.25 g/t Au. The Red Chris underground block cave resource is reported as 957 Mt of Measured and Indicated grading 0.40% Cu and 0.46 g/t Au, and 257 Mt of Inferred grading 0.30% Cu and 0.25 g/t Au.

Drilling at Red Chris totalled 29,480 m with focus on continuity and extension of the resource at the East Ridge deposit. Newmont continues to intersect high-grade mineralization with results such as 406 m grading 1.0% Cu and 1.1 g/t Au including an interval of 248 m grading 1.4% Cu and 1.6 g/t Au. A 274 m interval graded 0.45% Cu and 0.67 g/t Au, including 42 m grading 1.1% Cu and 1.5 g/t Au. Future block cave underground mine operation plans are on track with early works advancing.

In the North Central Region, the **Mt. Milligan** open-pit copper-gold mine is in its tenth year. Production to the end of the 3rd quarter totalled 42.0 Mlb of Cu and 114,000 oz Au. As of December 31, 2022, the mine has Proven and Probable reserves of 224.0 Mt grading 0.18% Cu and 0.37 g/t Au with a combined Measured and Indicated resource of 182.7 Mt at 0.17% Cu and 0.30 g/t Au containing 695 million pounds (lbs) of copper and 1.74 million ounces (oz) of gold and an Inferred Mineral resource of 5.69 Mt at 0.07% Cu and 0.47 g/t Au. The company completed mining in an ore-waste transition zone and began mining higher-grade copper and gold zones in the second half of 2023. Within the mine lease, 7318 m of drilling in 17 holes was completed. The drilling was split between better defining known resources and expanding resources.

In the South Central Region, operating mines include the two largest copper-molybdenum producers (**Gibraltar** and

**Table 2.** Operating metal mines, 2023, forecast mine production, reserves, and resources.

Mine	Region	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1- Q3)	Reserves	Resource	Comments
<b>Brucejack</b>	Northwest	<b>Newmont Corporation</b>	Au, Ag; Epithermal; 104B 193	285,364 oz Au, 510,227 oz Ag	Pr: 14 Mt 8.4 g/t Au, 32 g/t Ag	I: 19 Mt 13.0 g/t Au, 34 g/t Ag  Inf: 9.6 Mt 13.0 g/t Au, 13.0 g/t Ag	15,300 m in 25 diamond drill holes. Drilling at the 1080 HBx and Eastern Promises zones have expanded the VOK deposit, confirming the continuity of high-grade mineralization at depth with potential for more resource growth at the VOK deposit. Results include 1.0 m grading 5370 g/t Au, a 38.5 m interval grading 49 g/t Au, and an 18 m interval grading 306 g/t Au.
<b>Red Chris</b>	Northwest	<b>Newmont Corporation Ltd. 70%, Imperial Metals Corp. 30%</b>	Cu, Au, Ag; Hybrid calcalkalic to alkalic porphyry; 104H 005	52.1 Mlb Cu, 45,627 oz Au, 97,581 oz Ag	Open pit Pr: 42 Mt 0.47% Cu, 0.40 g/t Au  Underground Pr: 585 Mt 0.45% Cu, 0.55 g/t Au	Open pit: M+I: 314 Mt 0.37% Cu, 0.31 g/t Au  Inf: 10.9 Mt 0.31% Cu, 0.26 g/t Au  Underground block cave: M+I: 957 Mt 0.40% Cu, 0.46 g/t Au  Inf: 257 Mt 0.30% Cu, 0.25 g/t Au	29,480 m of diamond drilling with focus on continuity and extension of the resource at East Ridge deposit. Drilling continued to intersect high-grade mineralization with results such as 406 m grading 1.0% Cu and 1.1 g/t Au including 248 m grading 1.4% Cu and 1.6 g/t Au. A 274 m interval graded 0.45% Cu and 0.67 g/t Au including 42 m grading 1.1% Cu and 1.5 g/t Au. Block cave underground mine operation plans are on track with early works advancing.
<b>Mount Milligan</b>	North Central	<b>Centerra Gold Inc.</b>	Cu, Au, Ag; Alkalic porphyry Cu- Au; 093N 194, 191	42 Mlbs Cu 114 koz Au	P+Pr: 224.0 Mt 0.18% Cu, 0.37 g/t Au	M+I: 182.7 Mt 0.17% Cu, 0.30 g/t Au (additional to reserves)  Inf: 5.69 Mt 0.07% Cu, 0.47 g/t Au	7318 m of diamond drilling in 17 holes completed in 2023. More than 350 employees.

Table 2. Continued.

<b>Copper Mountain</b>	South Central	<b>Hudbay Minerals Inc. 75%</b> , Mitsubishi Materials Corporation 25%	Cu, Au, Ag; Porphyry Cu-Au, Alkalic; 092HSE001	60.0 Mlb Cu, 16,000 oz Au, 290,000 oz Ag	P+Pr: 366.9 Mt 0.25% Cu, 0.12 g/t Au, 0.69 g/t Ag	M+I: 137.8 Mt 0.21% Cu, 0.10 g/t Au, 0.69 g/t Ag  Inf: 371.3 Mt 0.25% Cu, 0.13 g/t Au, 0.61 g/t Ag	Reserve/resource estimate Dec. 1, 2023. Updated mine plan, 21-year mine life with current reserves.
<b>Elk</b>	South Central	<b>Gold Mountain Mining Corp.</b>	Au, Ag; Au-quartz veins; 092HNE009, 295, 41, 261	5500 oz Au		M+I: 4.359 Mt 5.6 g/t Au, 11.0 g/t Ag  Inf: 1.497 Mt 5.3 g/t Au, 14.4 g/t Ag	Ongoing modification of pit to improve access and efficiency; improving grade control and auditing grade forecasts; improving drill and blast patterns.
<b>Gibraltar</b>	South Central	<b>Taseko Mines Limited 87.5%</b> , Cariboo Copper Corp. 12.5%	Cu, Mo; Porphyry Cu±Mo±Au; 093B 012	117.0 Mlb Cu, 1.1 Mlb Mo	P+Pr: 706 million short tons 0.25% Cu, 0.008% Mo (sulphide mineral reserves)  P+Pr: 17 short tons 0.15% (acid soluble Cu)	M+I: 1.215 million short tons 0.24% Cu, 0.007% Mo (inclusive of reserves)	Mine life projected to 23 years from Dec. 31, 2021 effective date of calculation.
<b>Highland Valley Copper</b>	South Central	<b>Teck Resources Limited</b>	Cu, Mo; Porphyry Cu±Mo±Au; 092ISW012, 45	206.0 Mlb Cu, 1.1 Mlb Mo	P+Pr: 307 Mt 0.30% Cu, 0.009% Mo	M: 573.7 Mt 0.30% Cu, 0.009% Mo  I: 572.5 Mt 0.25% Cu, 0.010% Mo  Inf: 115.8 Mt 0.22% Cu, 0.010% Mo	HVC 2040 project initiated to extend mine life from 2028 to 2042. EAC application made Oct. 2023.
<b>Mount Polley</b>	South Central	<b>Imperial Metals Corporation</b>	Cu, Au, Ag; Porphyry Cu-Au, Alkalic; 093A 008	29.0 Mlb Cu, 42,000 oz Au	P+Pr: (open pit and underground) 52.5 Mt 0.34% Cu, 0.31 g/t Au, 0.89 g/t Ag	M+I: (open pit and underground) 202.2 Mt 0.28% Cu, 0.30 g/t Au, 0.52 g/t Ag	Reserves and resources estimated in 2016 and adjusted for mining to Jan. 1, 2023.
<b>New Afton</b>	South Central	<b>New Gold Inc.</b>	Au, Ag, Cu; Porphyry Cu-Au, Alkalic; 092INE023	47.3 Mlb Cu, 62,200 oz Au	P+Pr: 36.9 Mt 0.74% Cu, 0.68 g/t Au, 1.7 g/t Ag	M+I: 66.5 Mt 0.71% Cu, 0.57 g/t Au, 2.1 g/t Ag	Reserves and resources estimated at Dec. 31, 2022. Underground exploration drilling results to be incorporated in 2023 year-end resource estimates.

Table 2. Continued.

<b>Myra Falls</b>	Southwest	<b>Myra Falls Mine Ltd. (Part of Trafigura Mining Group)</b>	Zn, Cu, Pb, Ag, Au; Kuroko massive sulphide; 092F 330, 71, 72, 73	Not reported	Not reported but estimated sufficient for 10 years before shutting down.	na	Estimated drilling by year end of more than 30,000 m in 184 holes for infill and addition to known deposits. Entered care and maintenance in December.
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P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

**Highland Valley Copper**) and three major copper-gold mines (**Copper Mountain, Mount Polley** and **New Afton**). The region hosts one small precious metal mine, **Elk**.

At the **Copper Mountain** mine, production to the end of the third quarter totalled 39.18 Mlbs Cu, 10,969 oz Au, and 188,195 oz Ag. In June, Hudbay Minerals Inc. completed purchasing all outstanding Copper Mountain Mining Corporation shares to gain 75% interest in the mine for an estimated \$US439 million. With this acquisition, Hudbay became the third largest copper producer in Canada.

Copper Mountain updated its reserve and resource calculation on December 1, 2023. Proven and Probable reserves were reported at 366.9 Mt at 0.25% Cu, 0.12 g/t Au, and 0.69 g/t Ag. Projected mine life was 21 years. Measured and Indicated mineral resources were reported at 137.8 Mt at 0.21% Cu, 0.10 g/t Au, and 0.69 g/t Ag.; Inferred mineral resources were 371.3 Mt at 0.25% Cu, 0.13 g/t Au, and 0.61 g/t Ag.

Gold Mountain Mining Corp. began operations at the **Elk** open-pit mine in November 2021. The first half of 2023 saw sales of 2,763 oz Au from processing 16,391 t of ore. The current mineral resource estimate at Elk has an effective date of 7 December 2021, with a total pit-constrained and underground Measured and Indicated resource of 4.359 Mt at 5.6 g/t Au and 11 g/t Ag (796 koz Au and 1.524 Moz Ag) and Inferred resource of 1.497 Mt at 5.3 g/t Au and 14.4 g/t Ag (259 koz Au and 686 koz Ag). The mining plan in their Preliminary Economic Assessment includes a 70,000 tpy open pit operation that would transition to a 324,000 tpy underground operation in three years, with a total mine life of 11 years. Gold Mountain Mining has an agreement with New Gold Inc. where ore is transported to New Afton for processing. Gold Mountain Mining entered into a streaming agreement with Silver Crown Royalties Inc. on May 12, 2023, where Silver Crown initially purchased 45% and later increased to 90% of the aggregate gross proceeds from silver sales from production at Elk.

At the **Gibraltar** mine, production for the first nine months was 88.1 Mlb Cu and 803,000 lb Mo. Production was affected by mill downtime and issues with primary crushers in the first half of 2023. All production was from the Gibraltar pit. Relocation of the in-pit crusher is planned for Q2 of 2024. Taseko's most recent reserve calculation reports Proven and Probable 706 M short tons at 0.25% Cu and 0.008% Mo, with 3 Blb Cu and 53 Mlb Mo recoverable. This extends Gibraltar's

mine life 23 years from the effective calculation date of December 31, 2021. Taseko increased ownership interest in Gibraltar from 75% to 87.5% through the purchase of 12.5% interest from Sojitz Corporation on March 15, 2023.

At the **Highland Valley Copper** mine, production for the first nine months was 69,000 t Cu and 844,000 lb Mo. Operations were delayed by a geotechnical issue in the Valley pit, which limited access from late August to early October, and unplanned mill maintenance. The average ore processing rate is 136,000 tpd, with a maximum capacity of 200,000 tpd. Mine life is currently projected to 2028. In 2023, the company conducted tests for using electric assist lifts for haul trucks on the inclined sections of haul roads. Teck's 'HVC 2040' project has the objective of extending mine life to at least 2040, and the company applied for an Environmental Assessment Certificate in October 2023. The project is intended to process 900 Mt of ore for approximately 18 years to produce 4.3 Blb Cu. Key components include enlarging the Valley and Highmont pits, enlarging waste dumps and tailings storage, and increasing the average processing rate by 31%, peaking at 210,000 tpd. Mineral reserves as of December 31, 2022 were Proven and Probable of 307 Mt at 0.30% Cu and 0.008% Mo. Resources were reported as Measured 573.7 Mt at 0.30% Cu and 0.009% Mo; Indicated 572.5 Mt at 0.25% Cu and 0.010% Mo; and Inferred at 115.8 Mt at 0.22% Cu and 0.010% Mo.

**Mount Polley** had its first full year of production since resuming operations in the middle of 2022. The first nine months of production in 2023 was 21.798 Mlb Cu and 31,485 oz Au. Production delays were caused by a lightning strike in Q2 that damaged a mill motor, which was repaired by October. Open-pit and underground mineral reserves as of January 1, 2023 were Proven and Probable 52.568 Mt at 0.342% Cu, 0.319 g/t Au, and 0.895 g/t Ag. Mineral resources were Measured and Indicated 202.2 Mt at 0.287% Cu, 0.304 g/t Au, and 0.527 g/t Ag; Inferred 15.048 Mt at 0.157% Cu, 0.177 g/t Au, and 0.125 g/t Ag. Ten exploration holes were drilled in 2023 between the Springer and Cariboo zones. Springer zone copper-gold mineralization was confirmed both laterally and at depth to 250 m below the current planned depth of the Springer pit.

At the **New Afton** mine, New Gold Inc. reported production to the end of the third quarter as 35.5 Mlb Cu and 46,694 oz Au. Reserves for New Afton as of December 31, 2022, were Proven and Probable 36.9 Mt at 0.74% Cu, 0.68 g/t Au, and

1.7 g/t Ag. Measured and Indicated resources were 66.5 Mt at 0.71% Cu, 0.57 g/t Au, and 2.1 g/t Ag. New Gold is preparing the C-zone for full commercial production by Q3 of 2024 by constructing a series of draw bells to reach steady self-caving. This is designed to increase extraction at the B3 zone from a current 8500 tpd to as much as 16,000 tpd. Upgrades to the New Afton tailings storage facilities include a new thickened and amended tailings plant (TAT). Exploration is ongoing at New Afton, with underground drilling at the K-zone and AI-Southeast zone. Artificial intelligence combined with alteration studies and geochemical data are being used to generate further exploration targets.

Three zones of mineral resources are being evaluated for conversion to mineral reserves with the purpose of extending the current mine life beyond 2030. These include the C-zone, East Extension, and D-zones.

In the Southwest Region, the **Myra Falls** underground Zn-Cu-Pb-Ag- Au mine operated for most of 2023. Late in December, Myra Falls Mine Ltd. (Trafigura Group Pte. Ltd.) announced that the mine would be placed on long-term care and maintenance. The company will be seeking creditor protection to allow corporate restructuring.

### 3.2. Coal mines

Seven coal mines (Fig. 1; Table 3) accounted for a forecast production of \$10.2 billion for 2023. This production represents about 64.4% of all total mining output in the province. Coal was produced at four large open-pit operations of Teck Coal Limited (**Elkview, Fording River, Greenhills, Line Creek**) in southeastern British Columbia and three open-pit operations of Conuma Resources Limited (**Brule, Willow Creek, Wolverine**) in northeastern British Columbia. Teck's focus for development and drilling in 2023 was the **Fording River Extension** project. Teck also did exploration drilling and large diameter core drilling, in their producing pits.

Major news for coal operations was the announced sale of Teck's steelmaking coal division to Glencore PLC for an announced amount of US\$9.0 billion. Terms of the sale include assurances that Glencore PLC will continue operations and retain staff and subcontractors in southeast British Columbia. The deal is projected to be closed by the third quarter of 2024.

### 3.3. Industrial minerals and aggregates

About 30 industrial mineral mines and more than 1000 aggregate operations are active in British Columbia (selected operations are listed in Table 4). With combined forecast production figures of \$645 million (4.1% of total mining production), these operations are important to the economy of the province.

In the Northwest Region, Tru-Grit Abrasives is recycling slag created from smelting copper at the historic **Anyox** site. Numerous aggregate and quarry operations supply sand and gravel and blasted stone for large-scale industrial projects and municipalities throughout the region. Several large aggregate pits operate near Kitimat (**Robinson Lake Trail** and **Sand**

**Hill**) and others operate near Prince Rupert (**Ridley Island** and **Rainbow Lake South**). Owned by the Kitsumkalum First Nation, **Kalum** is an industrial rock quarry. It is the only pit in the region with a rail spur, and it supplies the Canadian National Railway Company with ballast.

In the Northeast Region, Fireside Minerals Ltd. mines veins of massive white barite from their **Fireside** mine. The barite is crushed and bagged on site and trucked to Fort St. John and Alberta for use in the drilling industry. In the South Central Region, industrial mineral commodities produced include roofing granules (from basalt), limestone, dimension stone, opal, railway ballast, diatomaceous earth, and zeolite. The Southeast Region hosts several industrial mineral mines, the largest of which are in the Rocky Mountain foreland belt. Commodities produced include magnesite, silica, gypsum, mineral wool, and abrasives. In 2023 CertainTeed Gypsum Canada Inc. transferred production from its Elkhorn quarry to its new **Kootenay West** quarry. Mining began in 2023 with a planned 400,000 tpy production and a 43-year mine life. The deposit is in evaporites of the Burnais Formation (Devonian) in a section 20-25 m thick grading 75-95% gypsum.

In the Southwest Region several operations remained in steady production and continue to be a major employer. Products include landscaping stone, dimension stone, aggregate, sand and gravel, marble and limestone, and pumice.

## 4. Mine development projects

As used herein, the term 'mine development projects' refers to those where the decision to produce has been made, necessary permits have been acquired, financing has been secured, and on-site construction has started. In 2023, Artemis Gold Inc.'s **Blackwater Gold** project. Sinova Global's **Horse Creek Silica** project, and Ascot Resources Ltd.'s **Premier Gold** project (Fig. 1; Table 5) were considered under development. The **Blackwater Gold** project is in the North Central Region. The **Horse Creek Silica** project is in the Southeast Region and the **Premier Gold** project is in the Northwest Region.

### 4.1. Blackwater Gold (Artemis Gold Inc.)

Artemis Gold Inc. is focused on developing the **Blackwater Gold** project in the North Central Region. Artemis received Environmental Assessment approval in 2019 and a Mines Act permit in early 2023. By the end of September, construction was 45% complete, and approximately \$280 million of the initial capital expenditure of \$730 to \$750 million had been spent. Production is planned for the second half of 2024.

Reserves are reported as Proven and Probable 334.3 Mt grading 0.75 g/t Au and 5.8 g/t Ag. Contained metal is 8 Moz Au and 62.3 Moz Ag, with a life-of-mine average annual gold production of 339,000 oz. Resources at a base case cut off of 0.20 g/t Au Eq are Measured and Indicated 597 Mt at 0.61 g/t Au, and 6.4 g/t Ag. Inferred resources are 17 Mt at 0.45 g/t Au and 12.8 g/t Ag. Mineral resources are reported inclusive of mineral reserves.

The company did 790 m of sonic drilling for geotechnical data and groundwater tracking and monitoring.

**Table 3.** Operating coal mines, 2023, forecast mine production, reserves, and resources.

Mine	Region	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1-Q3)	Reserves	Resource	Comments
<b>Brule</b>	Northeast	<b>Conuma Resources Limited</b>	PCI; Bituminous coal; 093P 007	1.6 Mt	P+Pr: 1.5 Mt	na	Drilling, 2 DDH (264.57 m). About 300 employees.
<b>Willow Creek</b>	Northeast	<b>Conuma Resources Limited</b>	HCC, PCI; Bituminous coal; 093O 008	1.3 Mt	P+Pr: 7.8 Mt	na	About 300 employees, mine and plant.
<b>Wolverine</b>	Northeast	<b>Conuma Resources Limited</b>	HCC; Bituminous coal; 093P 025	2.2 Mt	P+Pr: 1.2 Mt	na	About 300 employees, mine and plant.
<b>Elkview</b>	Southeast	<b>Teck Coal Limited</b> 95%, Nippon Steel & Sumitomo Metal Corporation 2.5%, POSCO 2.5%	HCC; Bituminous coal; 082GNE016, 17	5.4 Mt	na	na	Teck estimates a remaining reserve life of approximately 28 years at the current production rate.
<b>Fording River</b>	Southeast	<b>Teck Coal Limited</b>	HCC; Bituminous coal; 082JSE012	na*	na	na	Proven and Probable reserves sufficient for 27-years mine life; increase to 46 years including the Fording River Extension project.
<b>Greenhills</b>	Southeast	<b>Teck Coal Limited</b> 80%, POSCO Canada Limited ('POSCAN') 20%	HCC; Bituminous coal; 082JSE007, 10	na*	na	na	Proven and Probable reserves are projected to support another 45 years of mining at planned production rates.
<b>Line Creek</b>	Southeast	<b>Teck Coal Limited</b>	HCC, TC; Bituminous coal; 082GNE020	na*	na	na	Proven and Probable reserves at Line Creek are projected to support planned production rates for a further 13 years.

\* Combined total, all mines 23-23.5 Mt

HCC = hard coking coal; PCI = pulverized coal injection; TC = thermal coal

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

**Table 4.** Selected operating industrial mineral mines and quarries, 2023, forecast mine production, reserves, and resources.

Mine	Region	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1-Q3)	Reserves	Resource	Comments
<b>Anyox</b>	Northwest	<b>Tru-Grit Abrasives</b>	Slag steel	unknown	na	na	Slag is mined, cleaned, and barged for roofing and sand for sand blasting.
<b>Kalum</b>	Northwest	<b>Kalum Quarry Ltd.</b>	Industrial rock; Crushed rock	unknown	na	na	Drilling, blasting, crushing, production for CN Railway and others.
<b>Rainbow Lake South</b>	Northwest	<b>Spring Creek Aggregates Ltd.</b>	Industrial rock; Crushed rock	unknown	na	na	Drilling, blasting, crushing, production for CN Railway and LNG projects.
<b>Ridley Island</b>	Northwest	<b>Terus Construction Ltd.</b>	Industrial rock; Crushed rock	unknown	na	na	Drilling, blasting, crushing, production for CN Railway and LNG projects.
<b>Robinson Lake Trail</b>	Northwest	<b>Haisla &amp; Progressive Ventures Construction Ltd.</b>	Industrial rock; Crushed rock	unknown	na	na	Drilling, blasting, crushing, production for CN Railway and LNG projects.
<b>Sand Hill</b>	Northwest	<b>Terus Construction Ltd.</b>	Industrial rock; Crushed rock	unknown	na	na	Crushing for CN Railway and LNG projects.
<b>Fireside</b>	Northeast	<b>Fireside Minerals Ltd.</b>	Barite; Vein barite; 094M 003, 19	na	na	na	Fireside Minerals produces 4.1 API spec barite for sale to western Canadian oil and gas markets. In-pit mapping carried out. Geotechnical drilling for a new pit design. Remote sensing survey of a 20 km <sup>2</sup> area.
<b>Ashcroft</b>	South Central	<b>IG Machine and Fibers Ltd. (IKO Industries Ltd.)</b>	Basalt (roofing granules); 092INW104	300,000 t	na	Approx. 13.3 Mt in 2002	Typically mines 500,000 t with 60% processed into granule products.
<b>Bromley Creek (Zeotech)</b>	South Central	<b>Progressive Planet Products Inc. (International Zeolite Corp. 82.3%, Progressive Planet Solutions Inc. 17.7%)</b>	Zeolite; Open system zeolites; 092HSE243	na	na	M+I (as of 2013-06-30): 550,000 t	Progressive Planet has an agreement to acquire 50% by March 2027.



Table 4. Continued.

<b>Bud</b>	South Central	<b>Progressive Planet Products Inc.</b>	Bentonite; 092HSE162	Approx. 20,000 t annually	na	na	Progressive Planet Solutions Inc. acquired in 2022.
<b>Falkland</b>	South Central	<b>Lafarge Canada Inc.</b>	Gypsum; 082LNW001	10,000-20,000 t annually	na	Approx. 1.8 Mt	Found alternate uses since closure of Lafarge's Kamloops cement plant.
<b>Kettle Valley Quarries</b>	South Central	<b>Kelowna Sand and Gravel Ltd./Kettle Valley Stone Company</b>	Ashlar, flagstone, thin veneer; 082ENW109, 111, 112	na	na	na	
<b>Nazko</b>	South Central	<b>CanLava Mining Corporation</b>	Lava rock; Cinder cone; 093B 060	na	na	Historical: 45 Mt	
<b>Red Lake</b>	South Central	<b>Progressive Planet Products Inc.</b>	Diatomaceous earth; Lacustrine diatomite; 092INE081	Approx. 30,000 t annually	na	na	Progressive Planet Solutions Inc. acquired in 2022.
<b>Elkhorn</b>	Southeast	<b>CertainTeed Gypsum Canada Inc</b>	Gypsum; Bedded gypsum; 082JSW021	Reduced to 0	Mined out	na	Active extraction operations ceased in 2023. Transferred to Kootenay West (see below).
<b>Kootenay West</b>	Southeast	<b>CertainTeed Gypsum Canada Inc</b>	Gypsum; Bedded gypsum; 082JSW005, 20	na	North and South quarries: Total 17 Mt (blended quality of 83% gypsum)	na	Mining began in 2023; planned 400,000 tpy; 43-year mine life.
<b>Grand Forks Slag</b>	Southeast	<b>Pacific Abrasives and Supply Inc.</b>	Slag; Tailings; 082ESE264	na	na	na	Seasonal operation.
<b>Moberly Silica</b>	Southeast	<b>Vitreo Minerals Ltd.</b>	Silica; Industrial silica; 082N 001	About 60 kt product on contract for sales through 2023	na	na	About 140 kt of stockpiled material on site from 2019 mining operations. No mining in 2023.
<b>Mount Brussilof</b>	Southeast	<b>Baymag Inc.</b>	Magnesite; Sparry magnesite; 082JNW001	Approx. 230 kt	na	na	Material is coarse crushed on site and trucked to processing facility in Exshaw, AB.
<b>Winner</b>	Southeast	<b>Rockwool Inc.</b>	Gabbro/basalt; Crushed rock, for mineral wool; 082ESE265	na	na	na	Seasonal operation.

Table 4. Continued.

<b>Bute Inlet</b>	Southwest	<b>Ironwood Clay Company Inc.</b>	Clay; Sedimentary kaolin? (or illite)	na	na	na	Intermittent mining as needed.
<b>Cabin Group</b>	Southwest	<b>Northwest Landscape and Stone Supply Ltd.</b>	Landscaping stone	na	na	na	
<b>Cox Station</b>	Southwest	<b>Mainland Construction Materials ULC</b>	Aggregate; Crushed rock; 092GSE103	Approx. 3-4 Mty	na	na	River and rail access
<b>CTCT</b>	Southwest	<b>Vancouver Island Marble Quarries Ltd.</b>	Marble; Limestone; 092E 020	Typically, about 400 t annually	na	na	Supplies Matrix Marble and Stone Inc.
<b>Earle Creek</b>	Southwest	<b>Lafarge Canada Inc.</b>	Sand and Gravel	Typically, >1 Mty	na	na	Material barged.
<b>Hardy Island</b>	Southwest	<b>Hardy Island Granite Quarries Ltd.</b>	Dimension stone, building stone; Dimension stone-granite; 092F 425	3000-5000 tpy	na	Approx. 100,000 t	Seasonal quarry.
<b>Imperial Limestone</b>	Southwest	<b>Imperial Limestone Co. Ltd.</b> (Parent Arcosa Specialty Materials Inc.)	Limestone; Limestone; 092F 394	500,000 tpy chemical grade limestone plus 50,000 t dolostone	na	75 years	Most of the chemical grade product is shipped to parent company in Seattle.
<b>K2 (Ocean Pearl)</b>	Southwest	<b>K2 Stone Quarries Inc.</b>	Dimension stone, flagstone; Flagstone; 092C 159	15,000-20,000 t annually	na	na	Production number represents material extracted.
<b>Mount Meager Pumice</b>	Southwest	<b>Great Pacific Pumice Inc.</b>	Pumice; Volcanic ash; 092JW 039	na	na	na	Production as required.
<b>Orca</b>	Southwest	<b>Polaris Minerals Corporation</b> (Vulcan Materials Company and 'Namgis First Nation partnership)	Sand and Gravel	Up to 6 Mty	na	121.6 Mt initial resource (2005)	Recently 3.5 to 5 Mty. Increase proposed in mine plan. Vulcan Materials Company acquired the previous owner US Concrete Inc. The quarry has a freighter loading facility.
<b>Pitt River</b>	Southwest	<b>Lafarge Canada Inc.</b>	Aggregate; Crushed rock; 092GSE007	Typically, >1 Mty	na	na	River access for barging.
<b>Sechelt Mine</b>	Southwest	<b>Heidelberg Materials Canada Limited</b>	Sand and Gravel	Typically, 4-6 Mty	na	Several decades	Freighter loading facility.

Table 4. Continued.

<b>Spumoni</b>	Southwest	<b>Northwest Landscape and Stone Supply Ltd.</b>	Flagstone; Flagstone; 092GNW100	na	na	na	Seasonal quarry.
<b>Sumas Shale</b>	Southwest	<b>Sumas Shale Ltd.</b> (Lafarge Canada Inc., Clayburn Industrial Group)	Shale, clay, sandstone; Residual kaolin; 092GSE024	About 500,000 t annually	na	50+ years	Approximately 55% shale, 45% sandstone for cement production.
<b>Texada Quarry</b>	Southwest	<b>Texada Quarrying Ltd.</b> (Lafarge Canada Inc.)	Limestone, aggregate; Limestone; 092F 395	6 Mt including waste	na	100+ years	Mostly produces limestone for cement manufacture. Freighter loading facility available.
<b>Vulcan/Salal</b>	Southwest	<b>Garibaldi Pumice Ltd.</b>	Pumice; Volcanic ash; 092JW 039	Typically, 10,000-20,000 m <sup>3</sup>	na	In 2014, 11,396,000 m <sup>3</sup> pumice  4,990,000 m <sup>3</sup> pumicite (fines)	

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

Table 5. Mine development projects.

Mine	Region	Operator (partner)	Commodity; Deposit type; MINFILE	Reserves	Resource	Comments
<b>Premier Gold</b>	Northwest	<b>Ascot Resources Ltd.</b>	Au, Ag; Epithermal; 104B 054	P+Pr: 3.63 Mt 5.45 g/t Au, 19.1 g/t Ag	I: 4.14 Mt 8.01 g/t Au, 35.1 g/t Ag  Inf: 5.06 Mt 7.25 g/t Au, 28.7 g/t Ag	Plant pre-commissioning is on schedule and planned to start in Q4 2023 with the first gold pour expected in early 2024. 11,886 m of exploration drilling in 87 holes. Highlight drilling results included 9.72 m grading 22.3 g/t Au and 16 g/t Ag including 1.91 m grading 98.1 g/t Au and 30.6 g/t Ag.
<b>Blackwater Gold</b>	North Central	<b>Artemis Gold Inc.</b>	Au, Ag; Epithermal Au-Ag-Cu, (intermediate sulphidation); 093F 037	P+Pr: 334.4 Mt 0.75 g/t Au, 5.8 g/t Ag at a 0.20 g/t AuEq cut off containing 8.0 Moz Au, 62.3 Moz Ag	M+I: 597 Mt (including reserves) 0.61 g/t Au, 6.4 g/t Ag at a 0.20 g/t AuEq cut off containing 11.7 Moz Au, 122.4 Moz Ag	Geotechnical drilling (sonic, 790 m). About 660 employed during construction. \$280 million spent on project construction. Planned life-of-mine average annual gold production of 339,000 oz.
<b>Horse Creek Silica</b>	Southeast	<b>Sinova Global</b>	Silica; Silica sandstone; 082N 043	na	1.4 Mt est.	High purity silica >99.9% SiO <sub>2</sub> , permit updates, road and rail construction, mine site preparation. Planned up to 400,000 tpy.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

#### 4.2. Horse Creek Silica (Sinova Global)

At the **Horse Creek Silica** mine, Sinova Global is redeveloping a seasonal quarry in Mount Wilson orthoquartzites. In 2023, the company continued with permit updates, road construction, rail siding development, and mine site preparation. The mine is expected to produce up to 400,000 tpy of >99% SiO<sub>2</sub> with an estimated resource of 1.4 Mt.

#### 4.3. Premier Gold (Ascot Resources Ltd.)

Ascot Resources Ltd. received a Mines Act permit for construction and operation of their **Premier Gold** mine project in 2021. The project's key deposits are Premier, Silver Coin and Big Missouri, which all had historical mining activities and underground access. In addition, to the north are two smaller resource areas known as Martha Ellen and Dilworth. Plant pre-commissioning is on schedule, with a planned start in Q4 2023 and the first gold pour expected in early 2024. Reserves are reported as Probable 3.63 Mt grading 5.45 g/t Au and 19.1 g/t Ag. Resources at a 3.5 g/t AuEq cut off are reported as Indicated 4.1 Mt grading 8.01 g/t Au and 35.1 g/t Ag and Inferred 5.1 Mt grading 7.25 g/t Au and 28.7 g/t Ag. Mineral resources are reported inclusive of mineral reserves.

Ascot carried out 11,886 m of exploration drilling in 87 holes with more than 7000 m drilled near existing defined resources of the Big Missouri deposit. Highlight exploration drilling results included 9.72 m grading 22.3 g/t Au and 16 g/t Ag including 1.91 m grading 98.1 g/t Au and 30.6 g/t Ag.

### 5. Selected proposed mine or quarry projects

Proposed mines are feasibility-stage projects for which proponents have begun or completed the environmental certification process (generally for late-stage projects) or have submitted or received approvals for Mines Act permits (for projects below British Columbia Environmental Assessment Act thresholds) or are waiting on existing permit amendments. Projects that have permits in place but have yet to obtain financing to begin site construction are also considered to be at the proposed stage. Selected projects (Fig. 1; Table 6) discussed below are grouped by region and commodity type.

#### 5.1. Northwest Region

The Northwest Region contains six proposed metal mines. **Galore Creek**, **KSM** and **Red Mountain** have been granted an Environmental Assessment Certificate and the **Kutcho** project is in the environmental assessment process with the Environmental Assessment Office. The **Dome Mountain Gold** project has both an Environmental Management Act Permit and a Mining Permit, which would allow annual production of up to 75,000 t. The **Kitsault** project is fully permitted for construction. There is one proposed coal mine project, the **Tenas** project.

##### 5.1.1. Proposed metal mines

The **Dome Mountain Gold** project contains a Measured resource of 136,000 t grading 10.32 g/t Au and 57.31 g/t Ag,

an Indicated resource of 662,000 t grading 8.15 g/t Au and 41.19 g/t Ag, and an Inferred resource of 85,000 t grading 6.02 g/t Au and 26.13 g/t Ag (using a cut-and-fill mining method at 3.5 g/t Au cut off). Blue Lagoon Resources Inc. signed a mine restart agreement with the Lake Babine First Nation for underground mining at the Dome Mountain Gold Mine and submitted its Joint Mines Act-Environmental Act permits amendment application. If approved, they plan to restart the Dome Mountain gold mine.

Ten diamond drill holes totalling 2909 m were completed with a focus on extending the strike length and down-dip extent of the Boulder vein. Results from the Boulder vein have extended the strike length by 350 m and contain mineralized intersections such as 16.5 m grading 5.49 g/t Au, 80.9 g/t Ag, and 1.21% Cu, including a 5.65 m interval grading 11.0 g/t Au, 15.8 g/t Ag, and 2.31% Cu, and 1.55 m grading 15.2 g/t Au and 31.4 g/t Ag.

Galore Creek Mining Corp.'s ownership is 50% Teck Resources Ltd. and 50% Newmont Corporation. Galore Creek Mining's **Galore Creek** project contains a Proven and Probable reserve of 528 Mt grading 0.59% Cu, 0.32 g/t Au, and 6.02 g/t Ag. It has a Measured plus Indicated resource (September 2023) of 1.197 Bt grading 0.46% Cu, 0.25 g/t Au, and 4.5 g/t Ag, with an additional Inferred resource of 237.8 Mt grading 0.26% Cu, 0.19 g/t Au, and 2.6 g/t Ag. Exploration in 2023 consisted of 19,040 m of diamond drilling in 56 holes, 700 m of sonic drilling for geotechnical purposes, mapping, prospecting, rock sampling, and excavating test pits. The company focused on engineering work for an ongoing prefeasibility study and on environmental studies.

New Moly LLC is proposing to construct and operate an open-pit molybdenum mine near Kitsault. The proposed **Kitsault** mine is fully permitted for construction and would produce molybdenum and silver for 16 years at a planned 45,500 tpd throughput. To transport materials and equipment, the project will use existing access roads and power lines and an existing permitted barge docking facility. Proven plus Probable reserves are 228.2 Mt grading 0.083% Mo, 5.0 g/t Ag. Measured plus Indicated resources are 321.8 Mt grading 0.071% Mo, 4.8 g/t Ag (2012). The company did baseline environmental monitoring in 2023.

Seabridge Gold Inc.'s **KSM** project consists of five porphyry Cu-Au deposits: Kerr, Sulphurets, Mitchell, East Mitchell (Snowfield) and Iron Cap. It is the largest undeveloped gold project in the world by resources: Measured and Indicated resources (August 2022) of 5.357 Bt grading 0.51 g/t Au, 0.16% Cu, 2.4 g/t Ag, and 63 g/t Mo and an Inferred resource of 5.685 Bt grading 0.36 g/t Au, 0.28% Cu, 2.2 g/t Ag, and 33 g/t Mo. The total KSM Proven and Probable reserves are 2.292 Bt grading 0.64 g/t Au, 0.14% Cu, 2.2 g/t Ag, and 76 g/t Mo. The project has a prefeasibility study plan with a 33-year mine life limited to the Mitchell, East Mitchell, and Sulphurets deposits and considering only open-pit operation. A separate Preliminary Economic Assessment, for a planned 39 years of operation, is for an underground block cave mining

**Table 6.** Selected proposed mine projects.

Mine	Region	Operator (partner)	Commodity; Deposit type; MINFILE	Reserves	Resource	Comments
<b>Dome Mountain Gold</b>	Northwest	<b>Blue Lagoon Resources Inc.</b>	Au, Ag; Au-quartz veins; 093L 276	na	M: 136,000 t 10.32 g/t Au, 57.31 g/t Ag  I: 662,000 t 8.15 g/t Au, 41.19 g/t Ag  Inf: 85,000 t 6.02 g/t Au, 26.13 g/t Ag (resource based on cut-and-fill method at 3.5 g/t Au cut off; January 2022)	Joint Mines Act-Environmental Act permits amendment application. If approved, plan to restart the Dome Mountain gold mine. 2909 m of drilling in 10 holes. Results include 16.5 m grading 5.49 g/t Au, 80.9 g/t Ag, and 1.21% Cu, including a 5.65 m interval grading 11.0 g/t Au, 15.8 g/t Ag, and 2.31% Cu, and 1.55 m grading 15.2 g/t Au and 31.4 g/t Ag.
<b>Galore Creek</b>	Northwest	<b>Galore Creek Mining Corp. (Teck Resources Ltd. 50%, Newmont Corporation 50%)</b>	Cu, Au, Ag; Alkalic porphyry; 104G 090	P+Pr: 528 Mt 0.59% Cu, 0.32 g/t Au, 6.02 g/t Ag	M+I: 1.197 Bt 0.46% Cu, 0.25 g/t Au, 4.5 g/t Ag  Inf: 237.8 Mt 0.26% Cu, 0.19 g/t Au, 2.6 g/t Ag	19,040 m of diamond drilling in 56 holes, 700 m of sonic drilling for geotechnical purposes, mapping, prospecting, rock sampling, and excavating test pits. The company focussed on engineering work for an ongoing prefeasibility study and environmental studies.
<b>Kitsault</b>	Northwest	<b>New Moly LLC</b>	Mo, Ag, Pb; Porphyry Mo (low F type); 103P 120	228.2 Mt 0.083% Mo 5.0 g/t Ag	M+I: 321.8 Mt 0.071% Mo 4.8 g/t Ag (2012)	Environmental baseline monitoring.
<b>KSM</b>	Northwest	<b>Seabridge Gold Inc.</b>	Cu, Au, Ag, Mo; Porphyry Cu±Mo±Au; 104B 191	P+Pr: 2.292 Bt 0.64 g/t Au, 0.14% Cu, 2.2 g/t Ag, 76 g/t Mo	M+I: 5.357 Bt 0.51 g/t Au, 0.16% Cu, 2.4 g/t Ag, 63 g/t Mo  Inf: 5.685 Bt 0.36 g/t Au, 0.28% Cu, 2.2 g/t Ag, 33 g/t Mo (Total for KSM deposits)	Pre-feasibility study with an open pit only plan of a 33-year mine life limited to the Mitchell, East Mitchell, and Sulphurets deposits. Preliminary Economic Assessment with an underground block cave mining operation supplemented with a small open pit. Plan to operate for 39 years.

Table 6. Continued.

<b>Kutcho</b>	Northwest	<b>Kutcho Copper Corp.</b>	Cu, Pb, Zn; Noranda/ Kuroko VMS; 104I 060	Pr: 17.3 Mt 1.58% Cu, 2.31% Zn, 27.9 g/t Ag, 0.39 g/t Au	M+I: 22.8 Mt 1.52% Cu, 2.18% Zn, 0.39 g/t Au, 28.1 g/t Ag  Inf: 12.9 Mt 1.10% Cu, 1.58% Zn, 0.25 g/t Au, 20.0 g/t Ag	The project would have a combined 11-year open pit and underground mine life. Geophysical surveys at Kutcho with 802 line-km of VTEM and 1557 line-km of ZTEM electromagnetic surveys and a seismic survey over the Esso deposit.
<b>Red Mountain</b>	Northwest	<b>Ascot Resources Ltd.</b>	Au, Ag; Subvolcanic and precious metal veins; 103P 086	P+Pr: 2.54 Mt 6.52 g/t Au, 20.60 g/t Ag	M+I: 3.19 Mt 7.63 g/t Au, 21.02 g/t Ag  Inf: 0.41 Mt 5.32 g/t Au, 7.33 g/t Ag	Environmental baseline monitoring.
<b>Tenas</b>	Northwest	<b>Bathurst Resources Limited</b>	PCI; Bituminous coal; 093L 156	P+Pr: 62.9 Mt coal	M+I: 125 Mt  Inf: 1.2 Mt	In the environmental assessment application process with baseline studies ongoing. Proposed production 775-825 kt of steelmaking coal annually with a mine-life of 22 years. Telkwa Coal Ltd. was purchased by Bathurst Resources Limited for US\$10.3 million in September.
<b>Quintette</b>	Northeast	<b>Conuma Resources Limited</b>	Coal; Bituminous coal; 093P 020	P+Pr: 36.0 Mt	na	Permitting underway for a potential restart.
<b>Willow Creek Extension</b>	Northeast	<b>Conuma Resources Limited</b>	Coal; Bituminous coal; 093O 060	P+Pr: 15.6 Mt	na	Prefeasibility study completed in September 2022. Continued baseline monitoring.
<b>Wolverine (Herman Pit)</b>	Northeast	<b>Conuma Resources Limited</b>	Coal; Bituminous coal; 093I 031	P+Pr: 3.9 Mt		Continued baseline monitoring.
<b>Aley</b>	North Central	<b>Taseko Mines Limited</b>	Nb; Carbonatite-hosted; 094B 027	P+Pr: 83.8 Mt 0.50% Nb <sub>2</sub> O <sub>5</sub> (at 0.30% Nb <sub>2</sub> O <sub>5</sub> cut off)	M+I: 285.8 Mt 0.37% Nb <sub>2</sub> O <sub>5</sub> (at 0.20% Nb <sub>2</sub> O <sub>5</sub> cut off)	Proposed open-pit mine with 10,000 tpd ore processing rate and average annual production of 9000 t Nb. Environmental monitoring and product marketing.
<b>Angus</b>	North Central	<b>Vitreo Minerals Ltd.</b>	Silica; Sand, Quartzite; 093J 042	na	na	Proposed mine production is 2.9 Mt of quartz arenite per year over a 20-year mine life.

Table 6. Continued.

<b>Giscome</b>	North Central	<b>Graymont Western Canada Inc.</b>	CaCO <sub>3</sub> ; Limestone; 093J 041, 25	na	I: >100 Mt of limestone (>95% calcium carbonate, <5% magnesium carbonate) in situ	Environmental assessment in place. Proposed 600,000 tpy limestone quarry to feed a vertical lime kiln producing 198,000 t of lime annually during a 50+ year mine life.
<b>Kemess Underground (KUG)</b>	North Central	<b>Centerra Gold Inc.</b>	Cu, Au, Ag; Porphyry Cu±Mo±Au; 094E 021	Pr: 107.38 Mt 0.27% Cu, 0.54 g/t Au, 1.99 g/t Ag containing 629.6 Mlbs Cu, 1.87 Moz Au, 6.88 Moz Ag	I: 173.7 Mt (including reserves) 0.182% Cu, 0.3 g/t Au, 1.55 g/t Ag containing 1195 Mlbs Cu, 3.33 Moz Au, 13.87 Moz Ag	Permitted, proposed underground panel cave mine with 24,600 tpd ore processing rate and life-of- mine average annual production of 106,000 oz Au and 47 Mlbs Cu over a 12-year life of mine.
<b>Ajax</b>	South Central	<b>KGHM Ajax Mining Inc. (KGHM Polska Miedz SA 80%, Abacus Mining and Exploration Corporation 20%)</b>	Cu, Au; Alkalic porphyry; 092INE012, 13	P+Pr (NSR cut off US\$7.10/t): 426 Mt 0.29% Cu, 0.19 g/t Au, 0.39 g/t Ag	M+I (NSR cut off US\$7.10/t): 568 Mt 0.26% Cu, 0.18 g/t Au, 0.35 g/t Ag	Environmental certification denied by provincial (2017) and federal ministers (2018). Proponents are investigating a possible resubmission.
<b>Cariboo Gold</b>	South Central	<b>Osisko Development Corp.</b>	Au; Au-quartz veins; 093H 140, 139, 19, 6	na	M+I: 27.1 Mt 4.0 g/t Au  Inf: 14.4 Mt 3.5 g/t Au (total of multiple zones)	Feasibility study in progress.
<b>New Prosperity</b>	South Central	<b>Taseko Mines Limited</b>	Cu, Au; Porphyry; 092O 041	P+Pr (NSR cut off \$5.50/t): 831 Mt 0.23% Cu, 0.41 g/t Au containing (recoverable) 3.6 Blb Cu, 7.7 Moz Au	M+I (cut off 0.14% Cu): 1010 Mt 0.24% Cu, 0.41 g/t Au	Granted provincial Environmental Certificate 2010 (expired); denied federal approval 2014. Taseko and Tsilhqot'in Nation in discussions.
<b>Ruddock Creek</b>	South Central	<b>Ruddock Creek Mining Corporation (Imperial Metals 100%)</b>	Pb, Zn, Ag; Broken Hill- type; 082M 082	na	M+I (cut off 4.0% Pb+Zn): 6.2 Mt 6.50% Zn, 1.33% Pb  Inf: 6,678 Mt 6.33% Zn, 1.20% Pb	Project at environmental assessment pre-application stage. Feb. 2013 resource before 2018-19 drilling.

Table 6. Continued.

<b>Spanish Mountain</b>	South Central	<b>Spanish Mountain Gold Ltd.</b>	Au, Ag; Au-quartz veins; 093A 043	P+Pr: 95.9 Mt 0.76 g/t Au, 0.71 g/t Ag	M+I: 294 Mt 0.50 g/t Au, 0.72 g/t Ag  Inf: 18 Mt 0.63 g/t Au, 0.76 g/t Ag	Re-entered BC environmental assessment process with a new project description. Feasibility work is continuing.
<b>Bull River</b>	Southeast	<b>Canadian Critical Minerals Inc.</b>	Cu, Au, Ag; Cu±Ag quartz veins; 082GNW002	na	I: 2.26 Mt 1.80% Cu, 0.42 g/t Au, 15.3 g/t Ag  Inf: 1.36 Mt 1.60% Cu, 0.42 g/t Au, 13.6 g/t Ag	Mine pre-application complete and accepted. Beginning final mine permit process. Concentrate processing agreement with New Gold Inc.
<b>Crown Mountain</b>	Southeast	<b>NWP Coal Canada Limited</b> (Jameson Resources Limited 80%, Bathurst Resources Limited 20%)	HCC and PCI; Bituminous coal; 082GNE018	HCC: P: 42.60 Mt Pr: 4.91 Mt  PCI: P: 7.13 Mt Pr: 1.19 Mt (2014)	HCC + PCI: M: 68.9 Mt  I: 6.0 Mt (2014)	Proceeding to Application Development and Review phase, continued public engagement and permit process with federal and provincial regulators. Proposed 2 Mtpy operation (86% HCC and 14% PCI) with 15-year mine life.
<b>Michel Coal</b>	Southeast	<b>North Coal Ltd.</b>	HCC and PCI; Bituminous coal; 082GSE050	na	HCC: M: 44.6 Mt  I: 42.5 Mt open-pit and underground (2015)	Entered pre-application of EA in 2015; received AIR requirements in September 2020.
<b>Record Ridge</b>	Southeast	<b>West High Yield (W.H.Y.) Resources Ltd.</b>	Mg; Alaskan-type Pt±Os±Rh±Ir; 082FSW398	na	M: 28.4 Mt 24.82% Mg  I: 14.6 Mt 24.12% Mg  Inf: 1.07 Mt 24.37% Mg	Public engagement, amended Mines Act permit application provided to BC Mines Development Review Committee.
<b>Black Bear</b>	Southwest	<b>Polaris Materials Corporation</b> (Vulcan Materials Company and 'Namgis First Nation)	Aggregate; Crushed rock	na	20 years (proposed life)	Orca environmental certificate amendment application withdrawn. Proposed 250,000 tpy 4 km from the Orca quarry revised to 3-4 Mtpy. Indicate intention to re-apply under 2018 Act.
<b>BURNCO Aggregate</b>	Southwest	<b>BURNCO Rock Products Ltd.</b>	Aggregate; Sand and Gravel	na	20 Mt	Environmental certificate expired 2023.



Table 6. Continued.

<b>Sechelt Carbonate</b>	Southwest	<b>Ballinteer Management Inc.</b>	Limestone, dolostone, aggregate; Limestone, dolomite, crushed rock; 093GNW031	na	Carbonate rock: 76.1 Mt  Gabbro: >700 Mt	Proponent requests project remain in environmental assessment pre-application stage.
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HCC = hard coking coal; PCI = pulverized coal injection; TC = thermal coal  
P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

operation supplemented by a small open pit. The peak mill feed production is planned at 170,000 tpd. The Preliminary Economic Assessment and Pre-Feasibility study increased mineral resource and reserve estimates relative to previous reports and combine for a mine life of 72 years. Seabridge carried out some early construction activities at KSM.

Kutcho Copper Corp.'s **Kutcho** project is accessible by a 100 km-long seasonal gravel road and an airstrip 10 km from the project deposits. Kutcho Copper Corp. entered the environmental assessment process late in 2019 and has received a Section 11 Order that defines the scope of the assessment and the Indigenous Nations that the company will engage with. The project is not required to undertake a federal environmental assessment. Reported Proven and Probable mineral reserves (July 2021) are 17.3 Mt grading 1.58% Cu, 2.31% Zn, 27.9 g/t Ag, and 0.39 g/t Au. Measured and Indicated mineral resources (inclusive of reserves) are reported as 22.8 Mt grading 1.52% Cu, 2.18% Zn, 28.1 g/t Ag, and 0.39 g/t Au. Reserves and resources are combined for the Main, Esso and Sumac deposits. A Feasibility Study announced favourable economics using US\$3.50/lb Cu and US\$1.15/lb Zn. The project would have a combined 11-year open-pit and underground mine life. Geophysical surveys were conducted at Kutcho with 802 line-km of VTEM and 1557 line-km of ZTEM electromagnetic surveys and a seismic survey over the Esso deposit.

Ascott Resources Ltd.'s **Red Mountain** project is a proposed underground mine 18 km east-northeast of Stewart. A provincial and federal Environmental Assessment Certificate was received in 2018. The project was purchased by Ascott Resources from IDM Mining in 2019 for \$45 million. A Feasibility Study was completed in 2020. Red Mountain is estimated to contain Measured and Indicated resources (April 2020) of 3.19 Mt grading 7.63 g/t Au and 21.02 g/t Ag and an additional Inferred resource of 405,000 t grading 5.32 g/t Au and 7.33 g/t Ag (reported at 3.0 g/t Au cut off for long hole stoping). Environmental baseline monitoring continued, but minimal exploration work was done on the project as Ascott concentrated on their **Premier Gold** project.

### 5.1.2. Proposed coal mines

Telkwa Coal Ltd. was purchased by Bathurst Resources Limited for US \$10.3 million in September; assets transferred

include the Tenas coal project. Bathurst Resources is proposing to develop **Tenas**, which is accessible by road, approximately 17 km south of Smithers. The project entered the provincial environmental assessment process in 2018 and the project proposes to produce approximately 775,000-825,000 t of steelmaking coal annually with a mine life of 22 years. In 2017, a reserve estimate of Proven plus Probable reserves of 62.9 Mt of coal was released. At least 14 coal seams have been recognized in the Skeena Group (Lower-Upper Cretaceous) with individual seams up to 7.6 m thick. Currently there are four conceptual pits (from south to north: Tenas, Goathorn West, Goathorn East, and Telkwa North) on approximately 1050 ha. The current environmental assessment application is only for production of metallurgical coal from the Tenas pit. Proven plus Probable reserves for Tenas are 29.1 Mt.

## 5.2. Northeast Region

Conuma Resources Limited is continuing baseline environmental monitoring for their coal projects including **Wolverine (Hermann Pit)** and **Willow Creek Extension** projects and the company is trying to reopen the **Quintette mine**. There are no proposed metal or industrial mineral mines in the Northeast Region.

### 5.2.1. Proposed coal mines

Conuma Resources Limited is preparing to restart the former **Quintette** mine. The Windy pit will be re-opened. Conuma carried out exploration drilling to better define known resources.

Conuma completed a prefeasibility study in September 2022, and continued baseline monitoring for their **Willow Creek Extension** project. The project contains 15.6 Mt Proven and Probable reserves.

For their **Wolverine (Hermann Pit) project**, Conuma continued baseline environmental monitoring. The project contains 13.9 Mt Proven and Probable reserves of coal.

## 5.3. North Central Region

There are four proposed mines in the North Central Region. Two are proposed metal mines: Taseko Mines Limited's **Aley Niobium** project; and Centerra Gold Inc.'s Cu-Au-Ag **Kemess Underground** project. Industrial mineral projects include Vitreo Mineral Ltd.'s **Angus** project (silica sand) and Graymont Western Canada Inc.'s **Giscome** project (limestone).

### 5.3.1. Proposed metal mines

Taseko Mines Limited's **Aley** niobium-bearing carbonatite project is near the western extremity of platform strata that were deposited on the flank of Ancestral North America. The carbonatite intrusion is oval in map view, measuring about 2.0 km by 2.8 km. Reserves are calculated at 84 Mt grading 0.5% Nb<sub>2</sub>O<sub>5</sub>. The proposed processing plant would have a nominal capacity of 10,000 tpd. Single-stage crushing followed by three stages of grinding and a multi-stage flotation process would produce a Nb<sub>2</sub>O<sub>5</sub> concentrate. The concentrate would then be processed in an on-site converter to produce FeNb as a saleable product. Expected process recovery is 63% with annual production averaging 9 million kg of niobium over the mine life. Environmental monitoring and product marketing initiatives continue.

Centerra Gold Inc.'s **Kemess Underground** (KUG) project is estimated to contain an Indicated resource of 173.7 Mt grading 0.182% Cu, 0.3 g/t Au, and 1.55 g/t Ag. Within this resource are Probable reserves of 107.4 Mt grading 0.27% Cu, 0.54 g/t Au, and 1.99 g/t Ag. Although the former Kemess South mine closed in 2011, infrastructure remains in place and both the camp and ore processing plant will be used to service KUG. KUG is considered a stand-alone operation, to be mined by panel caving, with crushed ore conveyed underground to the processing plant. Processing rate would be 24,600 tpd with an average production of 106,000 oz gold and 47 Mlbs copper during a 12-year mine life. Kemess East (KE), about 1 km east of KUG, is an underground operation that could be integrated into the KUG project. KE has an Indicated resource of 177.5 Mt grading 0.36% Cu, 0.4 g/t Au, and 1.97 g/t Ag, and an Inferred resource of 29.3 Mt grading 0.314% Cu, 0.3 g/t Au, and 2.00 g/t Ag. The KUG project has approval for development, but Centerra has not declared a timeline.

### 5.3.2. Proposed industrial mineral mines or quarries

Vitreo Minerals Ltd.'s wholly owned **Angus** frac sand project would extract quartz arenite from the Monkman East pit and transport it via a newly constructed haul road to a sand plant 2 km northwest of the pit for processing. Proposed mine production is 2.9 Mt of quartz arenite per year over a 20-year mine life. The mining rate is required to meet an annual sales target of 2 Mt of processed silica sand. At the Monkman deposit, a 500 t trench sample was processed for evaluation.

At the **Giscome** project, Graymont Western Canada proposes to mine high-purity limestone rocks of the Antler Formation (Triassic; Slide Mountain Group). Crushed stone would be transported about 5 km by truck to lime kilns at a former stone quarry owned and operated by CN Rail, in the community of Giscome. An existing CN Rail line would be used for transporting the product. The project has Environmental Assessment approval. Due to weak markets for lime in the region, Graymont has not yet decided to initiate construction.

## 5.4. South Central Region

Proposed mine projects in the South Central Region include KGHM Ajax Mining Inc.'s **Ajax**, Osisko Development Corp.'s

**Cariboo Gold**, Taseko Mines Limited's **New Prosperity**, Ruddock Creek Mining Corporation's **Ruddock Creek** and Spanish Mountain Gold Ltd.'s **Spanish Mountain** projects. All are metal mine projects.

### 5.4.1. Proposed metal mines

**Ajax** is an alkalic porphyry copper-gold project in the Iron Mask batholith (Triassic). A 2016 feasibility study proposed an open-pit mine with 65,000 tpd milling capacity and 18-year mine life. The project was denied a provincial Environmental Assessment Certificate in late 2017, and in June of 2018, Natural Resources Canada, Fisheries and Oceans Canada, and the Canadian Coast Guard also denied federal certification. Project operator KGHM reopened an office in Kamloops in 2020 to continue engagement with local First Nations and evaluate the possibility of resubmitting a modified application.

Osisko Development Corp. acquired Barkerville Gold Mines Ltd. and the **Cariboo Gold** project in 2019. The project is a series of structurally controlled orogenic gold-quartz vein deposits that extend along strike for 3.7 km in one corridor (Valley, Cow, Mosquito, and Shaft zones) and for 3.0 km along another (Bonanza Ledge, BC Vein, Lowhee, and KL zones). Several other zones occur along strike and farther to the southeast, including the BC, William Creek, and Prosperine zones. Osisko completed a feasibility study on December 30, 2022. Proven and Probable reserves are 16.7 Mt at 3.78 g/t Au and 0.7 g/t Ag. Measured and Indicated resources are at 14.68 Mt at 3.33 g/t Au; Inferred resources are 15.47 Mt at 3.44 g/t Au. The feasibility study proposed a 12-year mine life with annual production of 163,695 oz Au and a 5.9-year after-tax payback period. Initial capital costs were estimated at \$137.4 million and the expansion at \$451.1 million. All-in sustaining costs were estimated at \$US968.10 per ounce of gold produced, net of credits and including royalties. Milling would begin at 1500 tpd and increase to 4900 tpd after 3 years. A crushing and ore-sorting circuit is planned on site to reduce the volume of material shipped to the Quesnel River mill, about 110 km from the mine site. Metallurgical testing of a bulk sample from the Lowhee zone is planned. A roadheader machine was tested to start excavation at the Cow Mountain portal, one of two being planned to access underground workings. The project received an Environmental Assessment (EA) Certificate in October, 2023. A joint permit application is in process for the Mines Act and Environmental Management Act permits.

Taseko Mines Limited received a provincial Environmental Assessment Certificate (EAC) for the **New Prosperity** project in 2010. However, in February 2014 the Government of Canada refused to authorize the project. In 2019, Taseko entered a standstill agreement with the T̓silhqot̓'in Nation to suspend any legal actions between the parties in order to pursue dialogue. Ongoing discussions have reportedly made progress. New Prosperity is a porphyry copper-gold deposit with Measured and Indicated resources of 1.01 Bt of 0.24% Cu and 0.41 g/t Au. The mine plan proposed an open-pit mine processing 70,000 tpd.

The **Ruddock Creek** project is in the pre-application phase

of the British Columbia Environmental Assessment process. The most recent resource calculation was released in early 2013 and includes Measured and Indicated resources of 6.2 Mt at 6.5% Zn and 1.33% Pb, and Inferred resources of 6.678 Mt at 6.33% Zn and 1.2% Pb. Ruddock Creek is considered a sedimentary exhalative Zn-Pb deposit in gneisses, schists, quartzites, marbles, and calc-silicate metasedimentary rocks of the Shuswap Metamorphic complex.

Spanish Mountain Gold Ltd. submitted a modified application to the British Columbia environmental assessment process in early 2022 for their **Spanish Mountain** project.

A 2021 prefeasibility report projected a 14-year mine life with Proven and Probable reserves of 95.9 Mt at 0.76 g/t Au and 0.71 g/t Ag. The mine plan calls for an open pit with an on-site 20,000 tpd milling capacity. Treatment would use a gravity circuit, a flotation and concentration process, then a carbon in leach (CIL) adsorption process. Initial capital costs were estimated at \$607.2 million, and an after-tax payback period of 3.2 years.

## 5.5. Southeast Region

The Southeast Region has two proposed metal mines (**Bull River**, **Record Ridge**), and two proposed coal mines, (**Crown Mountain**, **Michel Coal**) (Fig. 1; Table 6).

### 5.5.1. Proposed metal mines

Canadian Critical Minerals Inc. is continuing development of its **Bull River** mine. The company completed the mine preapplication process, which was accepted by the Ministry of Energy, Mines and Low Carbon Innovation and the Ministry of Environment and Climate Change Strategy. The company has signed an ore concentrate processing agreement with New Gold Inc. The final mine permit and environmental permit processes are ongoing.

West High Yield Resources Ltd.'s **Record Ridge** magnesium project proposes to mine serpentized ultramafic rocks with high magnesium content and produce MgO and Mg(OH)<sub>2</sub>. At a 21.9% Mg cut off, resources are reported as Measured and Indicated 43.0 Mt grading 24.61% Mg and Inferred 1.07 Mt grading 24.37% Mg. Following feedback from public meetings early in the year, the company revised its application for a Mines Act permit to the British Columbia Mines Development Review Committee. Additionally, the company signed a Cooperation Agreement with the Osoyoos First Nations Band.

### 5.5.2. Proposed coal mines

The **Crown Mountain** mine proposed by NWP Coal Canada Ltd., which is owned by Jameson Resources Limited (80%) and Bathurst Resources Limited (20%), received an Order to proceed to the application, development, and review phase under the British Columbia Environmental Assessment Act from the Environmental Review Office in May. The proposed mine has a production capacity of 3.7 Mt per year for a life of 16 years.

The **Michel Coal** project proposed by North Coal Limited

is in the pre-application process at the Environmental Review Office. The company has proposed a mine with production capacity of 2.3-4 Mt per year and a mine life of 30 years. Public engagement and the application process are ongoing.

## 5.6. Southwest Region

The Southwest Region has no proposed major metal mine or coal mine projects. Proposed industrial mineral mines or quarries and aggregate quarries include the **Black Bear** aggregate project near Port McNeill, the **BURNCO Aggregate** project, and the **Sechelt Carbonate** project.

### 5.6.1. Proposed quarries

Polaris Materials Corporation included the **Black Bear** project near its Orca sand and gravel quarry in an Environmental Certificate amendment for Orca. If the project proceeds, it will be a source of up to 3-4 Mtpy of crushed basalt, an increase over the 250,000 tpy proposed in a 2017 project description. Mine life would be extended from 10 to 20 years. This application was withdrawn with a request by the proponent to re-apply under the 2018 Environmental Assessment Act. A 2022 engagement plan between the Province of British Columbia and the Kwakiutl First Nation describes the nature of the Nation's participation in the Environmental Assessment Office's amendment process. Polaris submitted an engagement plan detailing their proposed engagement activities for the Orca quarry with the Kwakiutl First Nation.

BURNCO Rock Products Ltd.'s **BURNCO Aggregate** project received environmental certification in 2018. Fisheries and Oceans Canada also concluded that the project is unlikely to cause significant environmental harm. The environmental certificate expired in 2023. The proposed sand and gravel mine would ramp up to a 1.6 Mty operation, initially barging product to BURNCO Rock Products Ltd.'s ready-mix concrete plants in South Burnaby and Port Kells.

Ballinteer Management Inc. now holds the property comprising the **Sechelt Carbonate** project. They filed engineering, archeological, and baseline environmental studies for assessment in 2016; activity was not reported for 2017-22, other than maintenance of tenures. The property contains resources of calcite- and dolomite-bearing carbonate rock and gabbroic rock for potential use as aggregate. The original proposal was for a 4-6 tpy quarry producing both limestone and dolostone. Product was to be shipped from a barge loadout on Sechelt Inlet.

## 6. Exploration expenditures

In 2023, exploration expenditures, drilling estimates, and other metrics for British Columbia were captured in the British Columbia Mineral and Coal Exploration Survey. The survey is a joint initiative between the Province of British Columbia Ministry of Energy, Mines and Low Carbon Innovation, the Association for Mineral Exploration, and EY LLP. A full report will be available in March. The new survey does not capture exploration expenditures for aggregates.

Total metal, industrial mineral, and coal exploration expenditures are estimated at \$643.5 million for 2023, down \$96.9 million from the record 2022 survey total of \$740.4 million. Of this, \$26.0 million was from coal projects and \$617.5 million was from metal and other projects (Fig. 5).

Exploration expenditures by region (Fig. 6) can be further divided into five categories: grassroots, early stage, advanced stage, mine evaluation, and mine lease (Figs. 7, 8). The provincial combined total for grassroots and early-stage exploration in the 2023 survey is 35.1%, down slightly from the 2022 total of 38.5%. The total reported drilling for the province was 747,529 m, down 402,021 m from the 2022 total of 1,149,550 m (see Fig. 9 for regional breakdown).

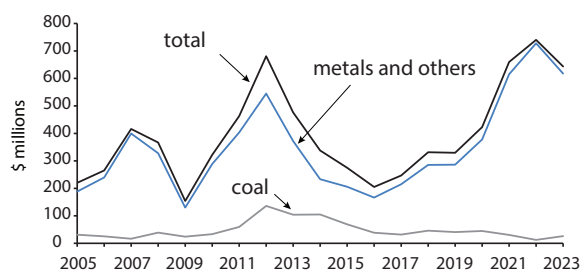


Fig. 5. Exploration expenditures per year, by type.

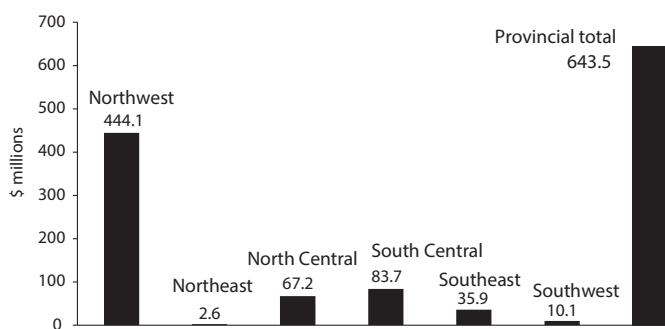


Fig. 6. 2023 exploration expenditures by region.

## 7. Exploration land tenure

Acquisition of new mineral claims in 2023 was down compared to 2022 (Fig. 10). The total for 2023 was 1,915,969 ha vs. 2,301,115 ha for the previous year. New coal licenses issued in 2023 totalled 0 hectares, down from the 2022 total of 9218 ha (Fig. 11).

## 8. Selected exploration project highlights

There was a decrease of \$96.9 million in expenditures in 2023 compared to 2022. Explorationists continued to discover, define, and expand porphyry and porphyry-related copper-gold and copper-molybdenum deposits, gold deposits of various types, and stratiform base-metal, REE, industrial minerals, and coal deposits. Below, selected exploration projects (Fig. 1; Table 7) are grouped by project type and region; the individual

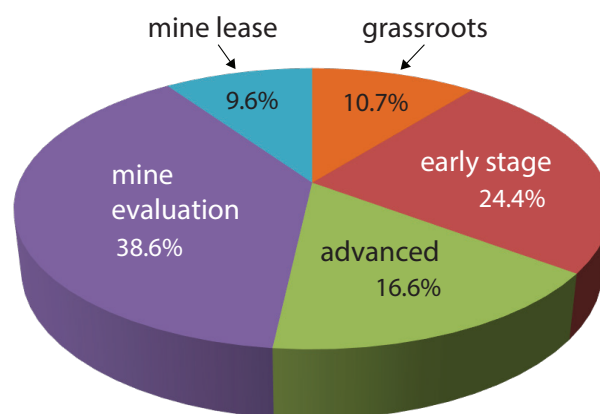


Fig. 7. 2023 exploration expenditures by category.

regional sections of this volume provide further details and additional projects.

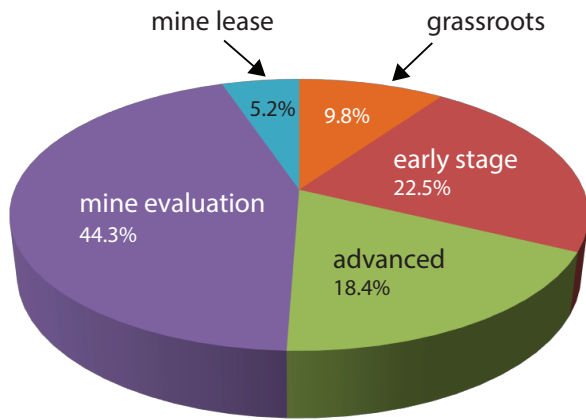
## 8.1. Selected precious metal projects

### 8.1.1. Northwest Region

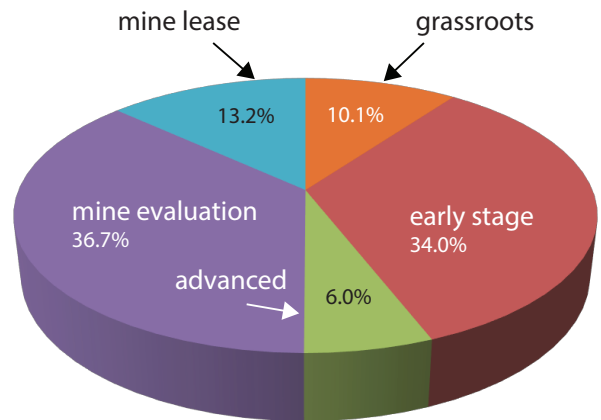
Cassiar Gold Corp. completed 16,138 m of diamond drilling at their **Cassiar Gold** project. Other exploration at Cassiar Gold consisted of prospecting, geological mapping, and soil and rock sampling. Several holes produced long intersections with bulk tonnage gold grades and shorter intervals of high grade. Results from the Cassiar South target included 237.6 m grading 0.69 g/t Au, including 8.3 m grading 2.39 g/t Au, and 1.4 m grading 5.93 g/t Au. Highlights from Taurus East target included 6.6 m grading 22.44 g/t Au, including 0.8 m grading 174.5 g/t Au. At Taurus West, intersections included 71.6 m grading 1.54 g/t Au, including 23.5 m grading 3.68 g/t Au. Another interval of 23.6 m graded 4.19 g/t Au. Completed financings for Cassiar Gold totalled \$12.9 million for 2023.

In November, Skeena Resources Limited released a positive Definitive Feasibility Study for their **Eskay Creek** project that highlighted an after-tax internal rate of return (IRR) of 43% and a 1.2-year payback period on pre-production capital expenditures. The study reported Proven and Probable open-pit mineral reserves of 39.8 Mt containing 3.3 Moz Au and 88.0 Moz Ag with an after-tax net present value of \$2.0 billion at a base case of US\$1800/oz gold and US\$23/oz silver. Life-of-mine production was stated at 2.8 Moz Au and 81.14 Moz Ag for a minimum of 12 years. Highlight results from the 21A West zone were released in 2023 from previous 2022 drilling include 9.26 m grading 18.18 g/t Au and 130.2 g/t Ag, and 5.70 m grading 14.90 g/t Au and 2.5 g/t Ag. Skeena Resources completed financings for \$84.2 million, a royalty agreement for a 0.5% net smelter royalty (NSR) at Eskay Creek worth \$27 million and another royalty agreement for a 1.0% NSR worth \$81 million.

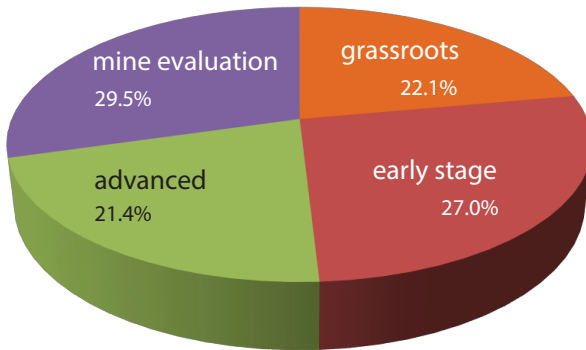
With the recent acquisition of Optimum Ventures Ltd., Blackwolf Copper and Gold Ltd. has an option to acquire an 80% interest in the **Harry** property. The property lies between the historic Scottie Gold and Premier mines. Associated



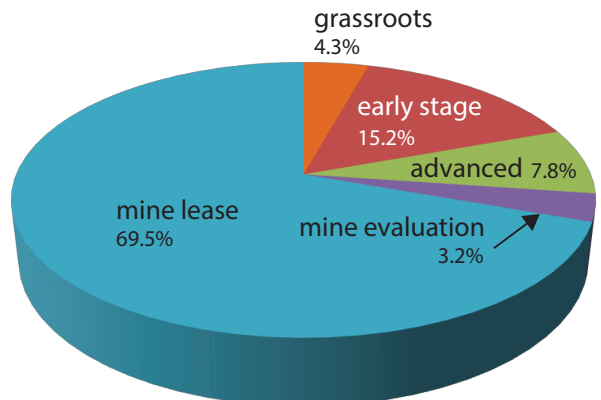
Northwest



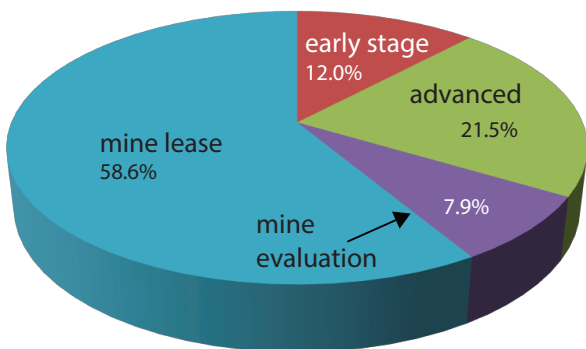
South Central



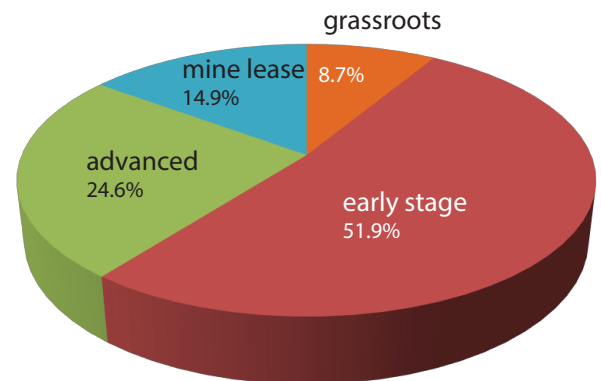
North Central



Southeast



Northeast



Southwest

Fig. 8. 2023 exploration expenditures by category for regions.

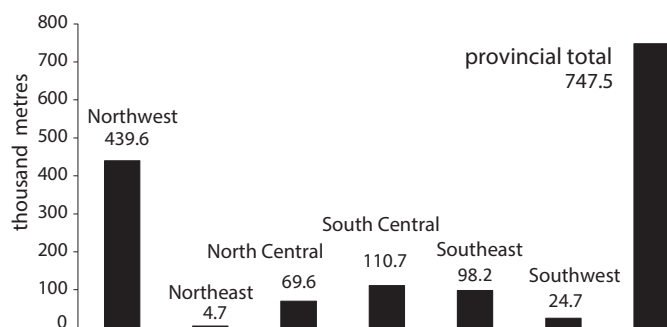


Fig. 9. 2023 exploration drilling by region.

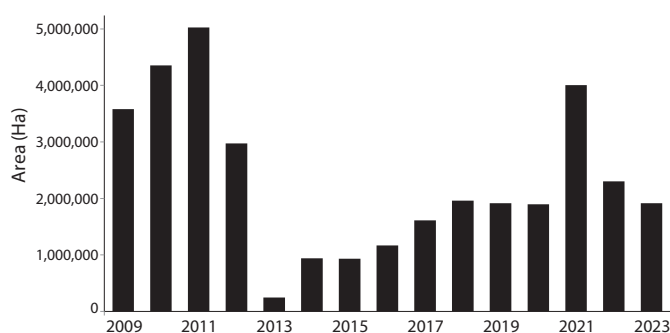


Fig. 10. New mineral claims by year.

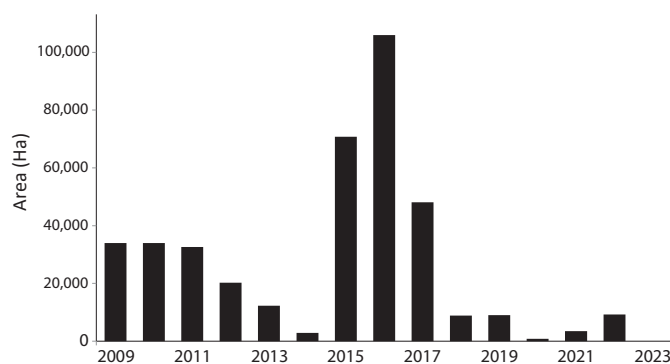


Fig. 11. New coal licence issuances by year.

accessory mineralization including arsenopyrite, galena, and sphalerite in quartz veins may be epithermal. Exploration at Harry consisted of IP and magnetic geophysical surveys, prospecting, rock sampling, and backpack surface drilling. Drilling totalled 1740 m in seven holes; results included 1.0 m grading 312 g/t Au and 101 g/t Ag, and 1.0 m grading 277 g/t Au and 118 g/t Ag.

Dolly Varden Silver Corporation acquired the Homestake Ridge project in 2022 from Fury Gold Mines Ltd. and

combined resources with the Dolly Varden Silver project to consolidate into the Kitsault Valley project. **Kitsault Valley (Homestake Ridge)** contains a total Indicated resource (June 2023) of 0.736 Mt grading 7.02 g/t Au, 74.8 g/t Ag, 0.18% Cu, and 0.077% Pb, and a total Inferred resource of 5.55 Mt grading 4.58 g/t Au, 100 g/t Ag, 0.13% Cu, and 0.142% Pb. The 2023 drilling objective was to infill and expand resources at Dolly Varden and Homestake Ridge and to increase mineral estimates from Indicated and Inferred to Measured and Indicated. This year, Dolly Varden completed one of the largest drilling programs in the province with 51,454 m in 115 holes with approximately half completed at Homestake Ridge. Reported results from Homestake Ridge include 25 m grading 46.31 g/t Au and 70 g/t Ag, including 9.84 m grading 111.9 g/t Au and 162 g/t Ag, and 0.48 m grading 1145 g/t Au and 826 g/t Ag. Another high-grade intersection of 0.38 m graded 3.78 g/t Au and 13,855 g/t Ag.

Canagold Resources Ltd. worked towards a Feasibility Study at their **New Polaris** gold project. This work resulted in an increased mineral resource estimate with an Indicated resource of 2.965 Mt grading 11.61 g/t Au and an Inferred resource of 926,000 t grading 8.93 g/t Au at a 4 g/t Au cut off. Results released in 2023 included 7.14 m grading 9.64 g/t Au, 2.78 m grading 53.8 g/t Au including 0.75 m grading 85.5 g/t Au, 4.7 m grading 12.9 g/t Au, and 4.56 m grading 11.0 g/t Au.

In 2023, Thesis Gold Inc. merged with Benchmark Metals Inc. to combine the Lawyers Au-Ag project and the Ranch project as one continuous land package in the Toodoggone mining area. This new company will continue as Thesis Gold Inc. The epithermal Au-Ag **Ranch** project is in the Northwest Region, whereas the epithermal Au-Ag Lawyers project lies in the North Central Region. Thesis completed more than 18,800 m of diamond drilling in 147 holes at Ranch.

Other exploration included prospecting, rock sampling, and geological mapping. Drilling at the Bonanza-Ridge, Bingo, Steve, JK, and BV zones yielded results that included 4.05 m grading 119.49 g/t Au, including 2.0 m grading 231 g/t Au, and 24.7 m grading 5.37 g/t Au and 6.51 g/t Ag. Thesis Gold also completed a financing in October for \$11.16 million.

Scottie Resources Corp.'s **Scottie Gold Mine** project, 35 km north of Stewart, is centred on the past-producing Scottie Gold mine, which operated from 1981 to 1985, producing 95,426 oz of Au at 16.2 g/t Au. Gold occurs in steeply dipping pyrrhotite-pyrite-quartz-calcite veins. Scottie Resources carried out 20,106 m of diamond drilling in 84 holes and geophysical surveys at the Blueberry zone. Results included 3.7 m grading 56.4 g/t Au and 33.8 g/t Ag, 2.0 m grading 88.4 g/t Au and 25.0 g/t Ag, 4.0 m grading 28.2 g/t Au and 17.5 g/t Ag, and 19.0 m grading 8.21 g/t Au. Drill results have increased the Blueberry zone's known depth of mineralization to 525 m and its strike length to 1.55 km. In 2023, Scottie Resources completed financings totalling \$8.38 million.

Hochschild Mining decided against exercising its right to earn a 60% interest and take over as operator for the **Snip Gold** project. As a result, the project is now 100% wholly owned

Table 7. Selected exploration projects.

Project	Region	Operator (partner)	Commodity; Deposit type; MINFILE	Resource (NI 43-101 compliant unless indicated otherwise)	Comments
<b>Berg</b>	Northwest	<b>Surge Copper Corp.</b>	Cu, Mo, Ag; Porphyry Cu±Mo±Au; 093E 046	M+I: 1.009 Bt 0.23% Cu, 0.03% Mo, 4.6 g/t Ag  Inf: 542 Mt 0.17% Cu, 0.02% Mo, 3.7 g/t Ag (July 2023)	A Preliminary Economic Assessment was released in July stating a net present value of \$2.1 billion, an Internal Rate of Return of 20% for a 30-year mine life. In December, Surge announced they had entered into a definitive purchase agreement to acquire a 100% interest in the project. Three holes drilled totalling 2077 m. Prospecting, large IP survey, and soil and rock sampling.
<b>Big Gold</b>	Northwest	<b>Teuton Resources Corp.</b>	Au, Ag, Pb, Zn Cu; Polymetallic veins; 104B 674	na	Prospecting, geological mapping, and rock sampling Highlight rock sample assays 27.7 g/t Au, 6240 g/t Ag, 1.45% Cu, 6.4% Pb, and 3.11% Zn, and 57.1 g/t Ag, 0.72% Cu, 12.1% Pb, and 9.32% Zn.
<b>Bingo</b>	Northwest	<b>Juggernaut Exploration Ltd.</b>	Au, Cu, Pb, Zn; Polymetallic veins	na	Seven holes drilled (1017 m), prospecting, mapping, and rock sampling. Highlight drill results include 5.11 m grading 7.57 g/t Au, 20.23 g/t Ag, and 2.72% Cu, including 2.90 m grading 13.05 g/t Au, 24.93 g/t Ag, and 4.70% Cu. Another interval of 10.12 m graded 2.52 g/t Au, 11.05 g/t Ag, and 1.16% Cu, including 5.89 m grading 4.01 g/t Au, 17.37 g/t Ag, and 1.85% Cu.
<b>Blue</b>	Northwest	<b>Core Assets Corp.</b>	Ag, Pb, Zn, Cu; Skarn carbonate replacement; 104M 022	na	41 holes drilled (4260 m), prospecting, geological mapping, and an IP geophysical survey. Results at the Gally target included 0.5 m grading 1030 g/t Ag, 21.6% Zn, 10.8% Pb, and 1.16% Cu within 8.0 m grading 139 g/t Ag, 2.3% Zn, 1.2% Pb, and 0.18% Cu.
<b>Buck</b>	Northwest	<b>Sun Summit Minerals Corp.</b>	Au, Ag, Zn, Pb, Cu; Polymetallic veins; 093L 009	na	3738 m of drilling in 13 holes at the Buck Main zone. Geological mapping, prospecting, soil sampling, and rock sampling.

Table 7. Continued.

<b>Burn</b>	Northwest	<b>Commander Resources Ltd.</b>	Au, Cu; Porphyry Cu±Mo±Au; 093M 134	na	4000 m of diamond drilling, geological mapping, prospecting, and rock sampling. Rock samples from the newly discovered CR zone returned 1.00% Cu, 3.2 g/t Ag, 0.94% Cu, and 4.1 g/t Ag. Drill results included 185.9 m grading 0.39 g/t Au, 8.2 g/t Ag, and 0.53% Zn including a 11.9 m interval grading 1.26 g/t Au, 7.4 g/t Ag, and 0.64% Zn. Another interval of 1.5 m graded 6.79 g/t Au and 1.8 g/t Ag. Sun Summit plans to release a Mineral Resource Estimate in Q1 2024.
<b>Cambria</b>	Northwest	<b>Scottie Resources Corp.</b>	Au, Ag, Cu; Polymetallic veins, Porphyry Cu±Mo±Au	na	Geological mapping, soil sampling, and prospecting.
<b>Cassiar Gold</b>	Northwest	<b>Cassiar Gold Corp.</b>	Au; Precious metal veins; 104P 012, 19	Inf: 37.9 Mt 1.14 g/t Au (0.5 g/t Au cut off) (April 2022)	16,138 m of drilling. Results from the Cassiar South target: 237.6 m grading 0.69 g/t Au, including 8.3 m grading 2.39 g/t Au, and 1.4 m grading 5.93 g/t Au. At Taurus East target: 6.6 m grading 22.44 g/t Au, including 0.8 m grading 174.5 g/t Au. At Taurus West: intersections included 71.6 m grading 1.54 g/t Au, including 23.5 m grading 3.68 g/t Au; another interval of 23.6 m graded 4.19 g/t Au. Completed financings for Cassiar Gold totalled \$12.9 Million for 2023.
<b>Consolidated Eskay</b>	Northwest	<b>Eskay Mining Corp. 80%, Kirkland Lake Gold Ltd. 20%</b>	Au, Ag, Cu, Zn; Noranda/ Kuroko massive sulphide; 104B 385	na	24 holes drilled (5700 m), prospecting, geological mapping, and rock sampling. Several drill intersections at the Cumberland target returned high-grade gold and silver such as 15.0 m grading 3.02 g/t Au, 68.66 g/t Ag, 0.24% Cu, 0.73% Pb, and 4.86% Zn including 3.41 m grading 8.48 g/t Au, 103.27 g/t Ag, 0.23% Cu, 1.08% Pb, and 4.16 Zn. Tarn lake drilling results included 2.45 m grading 7.83 g/t Au and 6.96 g/t Ag, including 0.95 m grading 12.4 g/t Au and 10.0g/t Ag. Rock samples from massive sulphide discovered at Scarlet knob graded 22.26 g/t Au, 461.97 g/t Ag, 0.22% Cu, 14.57% Pb, and 10.50% Zn.



Table 7. Continued.

<b>Crown (Electrum)</b>	Northwest	<b>Goldstorm Metals Corp.</b>	Au, Ag, Cu; Polymetallic veins; 104B 200	na	Geological mapping, prospecting, and rock sampling. Rock samples from Orion include a 0.25 m chip sample grading 0.67 g/t Au, 320.0 g/t Ag, 11.96% Cu, 0.088% Co, and 0.55% Zn, and a 0.5 m channel sample grading 0.28 g/t Au, 226.0 g/t Ag, 6.95% Cu, 0.079% Co, and 0.37% Zn.
<b>Crown (Orion)</b>	Northwest	<b>Goldstorm Metals Corp.</b>	Au, Ag, Cu, Co, Zn; Polymetallic veins; 104B 672	na	Geological mapping, prospecting, and rock sampling. Rock samples from Orion include a 0.25 m chip sample grading 0.67 g/t Au, 320.0 g/t Ag, 11.96% Cu, 0.088% Co, and 0.55% Zn, and a 0.5 m channel sample grading 0.28 g/t Au, 226.0 g/t Ag, 6.95% Cu, 0.079% Co, and 0.37% Zn.
<b>Duke</b>	Northwest	<b>Amarc Resources Ltd.</b>	Cu, Au; Porphyry Cu±Mo±Au; 093M 009	na	11,070 m drilled in 24 holes, 5759 line-km airborne magnetic survey, a large lidar survey, 68 line-km of ground magnetics, 122 line-km of IP geophysics, detailed geological mapping, prospecting, soil and rock sampling. Highlight results include 541.6 m grading 0.24% Cu, 0.016% Mo, 0.04 g/t Au, and 1.2 g/t Ag, 238.2 m grading 0.29% Cu, 0.019% Mo, 0.06 g/t Au, and 1.4 g/t Ag, and 125.6 m grading 0.38% Cu, 0.024% Mo, 0.08 g/t Au, and 1.8 g/t Ag.
<b>Eaglehead</b>	Northwest	<b>Northern Fox Copper Inc.</b>	Cu, Mo, Au; Porphyry Cu±Mo±Au; 104I 008	I: 70.81 Mt 0.221% Cu, 0.0108% Mo, 0.061 g/t Au, 0.9 g/t Ag  Inf: 242.3 Mt 0.192% Cu, 0.0035% Mo, 0.043 g/t Au, 0.6 g/t Ag (2023)	Northern Fox completed an updated mineral resource estimate.
<b>Empire</b>	Northwest	<b>Juggernaut Exploration Ltd.</b>	Ag, Pb, Zn, Au, Cu; Polymetallic veins; 093L 116	na	1500 m drilled, prospecting, and rock sampling. Rock sample highlights include 36,875 g/t Ag, 4.68 g/t Au, 27.6% Cu, and 3.27% Zn. A channel sample (length not given) assayed 22,694 g/t Ag, 26.4% Cu, and 2.8% Zn.

Table 7. Continued.

<b>Eskay Creek</b>	Northwest	<b>Skeena Resources Limited</b>	Au, Ag, Cu, Pb, Zn; VMS and precious metal veins; 104B 008	M+I: 50.1 Mt 2.6 g/t Au, 63.0 g/t Ag (pit constrained)  P+Pr: 39.8 Mt 2.6 g/t Au, 68.7 g/t Ag (November 2023)	A positive feasibility study was released with an after-tax internal rate of return (IRR) of 43% and a 1.2-year payback period on pre-production capital expenditures. This study came with updated mineral resource estimates. Results for 2022 drilling at the 21A West zone were released in 2023 and highlights included 9.26 m grading 18.18 g/t Au and 130.2 g/t Ag, and 5.70 m grading 14.90 g/t Au and 2.5 g/t Ag. Skeena Resources completed financings for \$84.2 million, a royalty agreement for a 0.5% NSR at Eskay Creek worth \$27 million and another royalty agreement for a 1.0% NSR worth \$81 million.
<b>George Copper</b>	Northwest	<b>MTB Metals Corp.</b>	Ag, Cu, Pb, Zn; Subaqueous hot spring Ag-Au; 104A 180	na	Three drill holes at the George Copper project intersected sulphide mineralization containing pyrite, chalcopyrite, and sphalerite. Geological mapping, and rock sampling.
<b>Golddigger</b>	Northwest	<b>Goliath Resources Ltd.</b>	Au, Cu, Pb, Zn; Polymetallic veins; 103P 341	na	34,000 m of diamond drilling in 124 holes, geological mapping, prospecting, and rock sampling. Reported results included 7.90 m grading 64.88 g/t Au and 8.03 g/t Ag, including 5.90 m grading 86.84 g/t Au and 6.52 g/t Ag, including 2.75 m grading 186.0 g/t Au and 13.29 g/t Ag.
<b>Harry</b>	Northwest	<b>Blackwater Copper and Gold Ltd.</b>	Au, Ag, Cu; Intrusion-related and polymetallic veins; 104B 434	na	1740 m drilling in seven holes, IP and magnetic geophysical surveys, prospecting, rock sampling and backpack surface drilling. Highlight drill results included 1.0 m grading 312 g/t Au and 101 g/t Ag and 1.0 m grading 277 g/t Au and 118 g/t Ag.
<b>Hat</b>	Northwest	<b>Doubleview Gold Corp.</b>	Cu, Au; Alkalic porphyry; 104J 021	na	10,320 m was drilled at Hat. Drilling results included 143.3 m grading 0.64 g/t Ag, 0.43 g/t Au, 134.6 g/t Co, 0.36% Cu, and 1.29 g/t Sc. Within this interval, 77.2 m graded 0.9 g/t Ag, 0.64 g/t Au, 147 g/t Co, 0.48% Cu, and 1.51 g/t Sc.
<b>Holy Grail</b>	Northwest	<b>Prospect Ridge Resources Corp.</b>	Ag, Au, Pb, Zn; Polymetallic veins	na	Prospect Ridge acquired 100% ownership of the project. Geological mapping, prospecting, and rock sampling. Highlight results released in 2023 from previous field seasons for the 4 Shore showing include 28.0 g/t Au, 56.9 g/t Ag, and 2.03% Cu, and another sample with 13.7 g/t Au, 39.9 g/t Ag, and 1.33% Cu.

Table 7. Continued.

<b>Hwy 37</b>	Northwest	<b>Kingfisher Metals Corp.</b>	Cu, Au, Ag; Porphyry; 104G 434	na	2150 m of diamond drilling in 6 holes.
<b>Iskut</b>	Northwest	<b>Seabridge Gold Inc.</b>	Cu, Au; Porphyry; 104B 694	na	19,830 m of diamond drilling in 23 holes, airborne magnetic survey, magnetotelluric survey. Highlight results from the Snip North Target include 1.8 m grading 15.3 g/t Au, 430.0 g/t Ag, and 1.5% Cu, 277 m grading 0.8 g/t Au, 1.19 g/t Ag, and 0.07% Cu, 21.0 m grading 1.73 g/t Au, 2.2 g/t Ag, and 0.07% Cu, and 253 m grading 0.61 g/t Au, 1.36 g/t Ag, and 0.07% Cu.
<b>Kitsault Valley (Dolly Varden)</b>	Northwest	<b>Dolly Varden Silver Corporation</b>	Cu, Pb, Zn, Ag; Au; Epithermal, Kuroko VMS with polymetallic veins; 103P 188	Dolly Varden I: 3.417 Mt 299.8 g/t Ag  Inf: 1.285Mt 277.0 g/t Ag (2023)	51,454 m of drilling total in 115 holes, on the Kitsault project. Approximately half of this drilling was completed at Dolly Varden. Highlights included 26.99 m grading 296 g/t Ag, 1.68% Pb, and 3.01% Zn, 10.74 m grading 371 g/t Ag, 2.82% Pb, and 4.99% Zn including 0.5 m grading 1475 g/t Ag, 10.65% Pb, and 12% Zn, and 29.34 m grading 381 g/t Ag, including 1.0 m grading 1898 g/t Ag.
<b>Kitsault Valley (Homestake Ridge)</b>	Northwest	<b>Dolly Varden Silver Corporation</b>	Au, Ag, Pb, Zn; Polymetallic veins, Marine volcanic association Cu, Pb, Zn, Au, Ag; 103P 188	Homestake Ridge I: 0.736 Mt 7.02 g/t Au, 74.8 g/t Ag  Inf: 5.545 Mt 4.58 g/t Au, 100 g/t Ag (2023)	51,454 m of drilling total in 115 holes, on the Kitsault project. Approximately half of this drilling was completed at Homestake Ridge. Highlights include 25 m grading 46.31 g/t Au and 70 g/t Ag, including 9.84 m grading 111.9 g/t Au and 162 g/t Ag, and 0.48 m grading 1145 g/t Au and 826 g/t Ag. Another high-grade intersection of 0.38 m graded 3.78 g/t Au and 13,855 g/t Ag.
<b>Knauss Creek</b>	Northwest	<b>Prospect Ridge Resources Corp.</b>	Ag, Au, Pb, Zn; Polymetallic veins; 103I 048	na	Geological mapping, prospecting, and rock sampling at Knauss Creek. Highlight rock sample results include assays of: 78.90 g/t Au, 457 g/t Ag, and 13.45% Cu; 23.80 g/t Au, 738 g/t Ag, and 5.42% Cu; 15.20 g/t Au, 1970 g/t Ag, and 0.39% Cu; and 20.60 g/t Au, 175.0 g/t Ag and 0.54% Cu.
<b>KSP</b>	Northwest	<b>Skeena Resources Limited</b>	Au, Ag, Cu; Precious metal veins, Polymetallic veins	na	Stream sediment sampling, prospecting, geological mapping, and rock sampling. Highlight rock samples include 14.20 g/t Au, 11.4 g/t Ag, 1.09% Cu, and 0.05% Zn, and 9.26 g/t Au, 6.9 g/t Ag, 0.71% Cu, and 0.02% Zn.
<b>Lucky Strike</b>	Northwest	<b>Goliath Resources Ltd.</b>	Cu, Au, Mo; Porphyry; 103I 204	na	1000 m drilling, geological mapping, prospecting, rock sampling, and geophysical surveying.

Table 7. Continued.

<b>Midas</b>	Northwest	<b>Juggernaut Exploration Ltd.</b>	Au, Ag, Cu, Zn; Skarn; 103I 131	na	4000 m drilled, rock sampling, prospecting, geological mapping, and IP geophysics. Drill results include 22.0 m grading 0.22 g/t Au, 2.73 g/t Ag, 0.20% Cu, and 0.38% Zn which included 5.0 m grading 0.35 g/t Au, 6.10 g/t Ag, 0.64% Cu, and 0.67% Zn. Another 1.0 m interval graded 1.30 g/t Au, 8.92 g/t Ag, and 0.74% Cu. Highlight channel samples from the VG Zone included 4.34 m grading 10.28 g/t Au, 2 m grading 15.37 g/t Au, and 3.11 m grading 5.43 g/t Au.
<b>NAK</b>	Northwest	<b>American Eagle Gold Corp.</b>	Cu, Au; Porphyry Cu±Mo±Au; 093M 010	na	7781 m diamond drilling in 10 holes. Results included 302 m grading 0.53 g/t Au, 0.40% Cu, 1.27 g/t Ag, and 431.4 ppm Mo within 771 m grading 0.28 g/t Au, 0.25% Cu, 0.96 g/t Ag, and 207 ppm Mo. American Eagle also completed an exploration agreement with Lake Babine First Nation to get consent for a five-year exploration program and participation in any environmental baseline work conducted.
<b>New Polaris</b>	Northwest	<b>Canagold Resources Ltd.</b>	Au; Au-quartz veins; 104K 003	I: 2.965 Mt 11.61 g/t Au  Inf: 926,000 t 8.93 g/t Au (2023)	An updated mineral resource estimate while working towards a Feasibility study. Results released in 2023, included 7.14 m grading 9.64 g/t Au, 2.78 m grading 53.8 g/t Au including 0.75 m of 85.5 g/t Au, 4.7 m grading 12.9 g/t Au, and 4.56 m grading 11.0 g/t Au.
<b>Newmont Lake</b>	Northwest	<b>Enduro Metals Corporation</b>	Au, Cu, Ag; Intrusion-related Au pyrrhotite veins; 104B 126	na	Geological mapping, prospecting, rock sampling and drone magnetic geophysical surveying. Rock sampling highlights include 0.77% Cu and 0.20 g/t Au, 0.31% Cu and 0.63g/t Au, and 2.04% Cu and 104 g/t Ag.
<b>Ootsa</b>	Northwest	<b>Surge Copper Corp.</b>	Cu, Au, Ag, Mo; Calc-alkaline porphyry; 093E 105	M+I: 438.6 Mt 0.18% Cu, 0.12g/t Au, 0.017% Mo, 2.1 g/t Ag  Inf: 137.7 Mt 0.15% Cu, 0.1 g/t Au, 0.015% Mo, 2.0 g/t Ag (2022)	Geological mapping, prospecting, rock sampling, and soil sampling.

Table 7. Continued.

<b>Oweegee</b>	Northwest	<b>Sanatana Resources Inc.</b>	Cu, Au; Subvolcanic Cu-Ag-Au (As-Sb); 104A 165	na	An 8.5 line-km 3D surface IP geophysical survey. Highlight assays from 2022 reported this year include 112.1 m grading 0.22 g/t Au, 0.17% Cu, and 1.10 g/t Ag, and 196 m grading 0.13 g/t Au, 0.09% Cu, and 1.5 g/t Ag.
<b>Poplar</b>	Northwest	<b>Universal Copper Ltd.</b>	Cu, Au, Ag, Mo; Porphyry Cu±Mo±Au	I: 152.3 Mt 0.32% Cu, 0.09 g/t Au, 2.58 g/t Ag, 0.009% Mo  Inf: 139.3 Mt 0.29% Cu, 0.07 g/t Au, 4.95 g/t Ag, 0.005% Mo (2021)	1933 line-km airborne magnetotelluric survey.
<b>Ranch</b>	Northwest	<b>Thesis Gold Inc.</b>	Au, Ag; Epithermal; 094E 267	na	18,800 m of diamond drilling. Prospecting, rock sampling, and geological mapping. Drilling results included 4.05 m grading 119.49 g/t Au, including 2.0 m grading 231 g/t Au, and 24.7 m grading 5.37 g/t Au and 6.51 g/t Ag. Thesis Gold also completed a financing in October for \$11.16 million.
<b>Red Cliff</b>	Northwest	<b>Decade Resources Ltd.</b>	Au, Ag, Cu, Pb, Zn; Polymetallic veins; 104A 209	na	23 holes drilled (1600 m), prospecting, geological mapping, and rock sampling at the Red Cliff project. Highlight results include 6.09 m of 2.03 g/t Au, 0.021% Cu, and 0.614% Zn. Another hole of 1.6 m grading 3.91 g/t Au, 0.59% Cu, and 0.18% Zn.
<b>Ruby Creek</b>	Northwest	<b>Stuhini Exploration Ltd.</b>	Mo; Porphyry Cu±Mo±Au; 104N 080	M+I: 369.4 Mt 0.053% Mo  Inf: 41.9 Mt 0.047% Mo (2022)	Geological mapping, prospecting, and rock sampling. Highlight rock sample results from the Volcanic Creek target included 1.098% Mo, 0.77% Mo, and 0.57% Mo. Stuhini Exploration Ltd. completed the acquisition of the Ruby Creek property in June.
<b>Schaft Creek</b>	Northwest	<b>Teck Resources Ltd. 75%, Copper Fox Minerals Inc. 25%</b>	Cu, Mo, Au, Ag; Porphyry Cu±Mo±Au; 104G 015	M+I: 1.346 Bt 0.26% Cu, 0.16 g/t Au, 0.017% Mo, 1.25 g/t Ag  Inf: 343.6 Mt 0.17% Cu, 0.11 g/t Au, 0.013% Mo, 0.84 g/t Ag (2021)	Geotechnical drilling totalling 9000 m for engineering studies. Environmental baseline data were collected for in future permit regulatory requirements.

Table 7. Continued.

<b>Scottie Gold Mine</b>	Northwest	<b>Scottie Resources Corp.</b>	Au, Ag, Cu; Intrusion-related and polymetallic veins; 104B 034	na	20,106 m of diamond drilling in 84 holes and geophysical surveys at the Blueberry zone. Results included 3.7 m grading 56.4 g/t Au and 33.8 g/t Ag, 2.0 m grading 88.4 g/t Au and 25.0 g/t Ag, 4.0 m grading 28.2 g/t Au and 17.5 g/t Ag, and 19.0 m grading 8.21 g/t Au. Drill results have increased the Blueberry zone's known depth of mineralization to 525 m and its strike length to 1.55 km. Scottie Resources completed financings totalling \$8.38 million.
<b>Silver Hope</b>	Northwest	<b>Finlay Minerals Ltd.</b>	Cu, Ag, Au, Zn, Pb, Mo; Subvolcanic Cu-Ag-Au (As-Sb); 093L 056	na	Lidar survey, biogeochemical sampling, soil mercury vapour surveys, soil sampling, prospecting and machine-learning data review of the property. Results released in 2023 for drilling from 2022 included 31 m grading 0.2% Cu, 11.8 g/t Ag, and 0.22 g/t Au, including 11.42 m grading 0.49% Cu, 30.1 g/t Ag, and 0.41 g/t Au. Another hole intersected 76.57 m grading 0.45% Cu, 14.6 g/t Ag, and 0.14 g/t Au.
<b>Silver Queen</b>	Northwest	<b>Equity Metals Corporation</b>	Ag, Pb, Zn, Au; Transitional porphyry-epithermal; 093L 002	I: 3.445 Mt 3.5% Zn, 2.13 g/t Au, 189 g/t Ag, 0.24% Cu, 0.6% Pb  Inf: 1.9 Mt 2.0% Zn, 0.82 g/t Au, 167 g/t Ag, 0.23% Cu, 0.5% Pb (resources at NSR cut off of \$100/t) (2022)	9989 m of diamond drilling in 26 holes. Highlight results from the George Lake target included 0.6 m grading 1.5 g/t Au, 1073 g/t Ag, 6.3% Cu, 4.0% Pb, and 1.6% Zn within a 4.1 m interval grading 0.5 g/t Au, 209 g/t Ag, 1.7% Cu, 0.7% Pb, and 0.4% Zn. Other results included 0.3 m grading 4.1 g/t Au, 824 g/t Ag, 0.7% Cu, and 3.4% Pb within 1.5 m grading 1.3 g/t Au, 226 g/t Ag, 1.0% Cu, 1.7% Pb, and 6.6% Zn, and 0.5 m grading 10.4 g/t Au, 115 g/t Ag, 0.6% Cu, 0.9% Pb, and 1.4% Zn. Highlight rock samples from the Cole Lake target graded 55.2 g/t Au, 5049 g/t Ag, 3.2% Pb, and 0.12% Zn, and 1736 g/t Ag, 22.7% Pb, and 1.2% Zn.
<b>Silvertip</b>	Northwest	<b>Coeur Mining Inc.</b>	Ag, Pb, Zn; Manto carbonate replacement; 104O 038	M+I: 6.40 Mt 265 g/t Ag, 5.12% Pb, 9.68% Zn  Inf: 1.69 Mt 239.5 g/t Ag, 4.43% Pb, 10.09% Zn (January 2023)	30,000 m of drilling in 85 holes. Highlight results included 12 m grading 459.6 g/t Ag, 15.1% Zn, and 8.7% Pb, and 6.2 m grading 778.3 g/t Ag, 13.6% Zn, and 14.7% Pb. An updated mineral resource estimate was released at year-end 2022.

Table 7. Continued.

<b>Snip Gold</b>	Northwest	<b>Skeena Resources Limited</b>	Au, Ag; Intrusion-related Au pyrrhotite veins; 104B 250	I: 2.74 Mt 9.35 g/t Au  Inf: 0.5 Mt 7.10 g/t Au (September 2023)	Hochschild Mining plc decided against exercising its right to earn a 60% interest and take over as operator for the Snip Gold project. The project is now 100% owned by Skeena Resources Limited. In September, Skeena released an updated mineral resource estimate.
<b>Tatogga (Saddle North)</b>	Northwest	<b>Newmont Corporation</b>	Cu, Au, Ag; Porphyry Cu-Au (alkalic); 104G 432	I: 298 Mt 0.28% Cu, 0.36 g/t Au, 0.8 g/t Ag  Inf: 543 Mt 0.25% Cu, 0.31 g/t Au, 0.7 g/t Ag (2020)	Newmont worked with the Tahltan Heritage Resources Environmental Assessment Team on a Tahltan land-use study and supported a local infrastructure study in Iskut through the Tahltan Industry Working Group.
<b>Telegraph</b>	Northwest	<b>MTB Metals Corp.</b>	Cu; Porphyry Cu-Au (alkalic)	na	2142 m of drilling in 4 holes, geological mapping, an IP geophysical survey, prospecting, soil, and rock sampling at the DOK trend. Highlight drill results include 133.8 m grading 0.23% Cu, 0.11 g/t Au, 1.58 g/t Ag, and 20.63 ppm Mo, including 22.2 m grading 0.31% Cu, 0.21 g/t Au, 2.23 g/t Ag, and 7.96 ppm Mo. Another interval had 6 m grading 0.11% Cu, 1.11 g/t Au, 4.54 g/t Ag, and 98.05 ppm Mo.
<b>Terrace</b>	Northwest	<b>Decade Resources Ltd.</b>	Au, Ag, Pb; Polymetallic veins; 103I 107	na	33 holes drilled (4000 m), rock sampling, and prospecting, mostly at the Terrace gold property. Drilling tested the Excelsior and Croesus showings for porphyry copper potential. The company reported narrow zones of quartz veining containing chalcopyrite; one hole with molybdenum mineralization on fracture faces and in quartz veinlets.

Table 7. Continued.

<b>Thorn (Camp Creek)</b>	Northwest	<b>Brixton Metals Corporation</b>	Cu, Ag, Au; Porphyry Cu±Mo±Au; 104K 174	na	10,100 m of drilling in nine holes. Highlight results include 1202 m grading 0.228% Cu, 0.05 g/t Au, 2.27 g/t Ag, and 233 ppm Mo, including 630 m grading 0.336% Cu, 0.07 g/t Au, 2.74 g/t Ag, and 309 ppm Mo, which also included 109 m grading 0.511% Cu, 0.08 g/t Au, 3.7 g/t Ag, and 498 ppm Mo. Another drill hole had a 34 m interval grading 0.333% Cu, 0.09 g/t Au, 2.06 g/t Ag, and 243 ppm Mo. At other regional targets, several rock samples returned high grade copper-gold mineralization including 33.3% Cu, 7.0 g/t Au, and 238 g/t Ag at the East target, 39.0 g/t Au and 65.9 g/t Ag at the South target, 13.0% Cu, 0.9 g/t Au, and 30.3 g/t Ag at the Plum target. More than 48 rock samples across the project returning 1% Cu or greater.
<b>Thorn (Trapper Gold)</b>	Northwest	<b>Brixton Metals Corporation</b>	Au; Epithermal; 104K 175	na	6625 m of diamond drilling in 11 holes. Highlight results include 98.0 m grading 0.62 g/t Au and 1.42 g/t Ag, including a 32.0 m interval grading 1.15 g/t Au and 2.07 g/t Ag, and a 6 m interval grading 5.07 g/t Au and 6.23 g/t Ag. Another hole assayed 253 m grading 1.40 g/t Au including 93.0 m grading 3.22 g/t Au, and 12.31 m grading 16.18 g/t Au. In December, Brixton completed financings totalling \$14.5 million.
<b>Treaty Creek</b>	Northwest	<b>Tudor Gold Corp. 60%, Teuton Resources Corp. 20%, American Creek Resources Ltd. 20%</b>	Cu, Au; Porphyry; 104A 004	I: 641.9 Mt 0.91 g/t Au, 5.45 g/t Ag, 0.15% Cu  Inf: 233.9 Mt 0.74 g/t Au, 5.99 g/t Ag, 0.16% Cu (March 2023)	31,904 m of diamond drilling in 34 holes for 2023. Drilling focused on mineralized structures not currently in the resource model that are thought to host high-grade gold. Results include 601.5 m grading 1.23 g/t Au, 2.93 g/t Ag, and 0.12% Cu, including 123 m grading 3.23 g/t Au, 5.57 g/t Ag, and 0.19% Cu and 15 m grading 14.89 g/t Au, 4.72 g/t Ag, and 0.6% Cu. Another interval of 19.5 m grades 5.41 g/t Au, 1.09 g/t Ag, and 0.24% Cu. In 2023, Tudor Gold completed financings totalling \$27.8 million.



Table 7. Continued.

<b>Turnagain</b>	Northwest	<b>Giga Metals Corporation</b>	Ni, Co, Pt, Cu, Mo; Alaskan-type, magmatic; 104I 014	M+I: 1.574 Bt 0.210% Ni, 0.013% Co, 0.020 g/t Pd, 0.022 g/t Pt  Inf: 1.164 Bt 0.206% Ni, 0.012% Co, 0.016 g/t Pd, 0.018 g/t Pt (2023)	Announced a positive Pre-Feasibility study for a post-tax 11.4% IRR and NPV of \$574 million based on a 30-year project life at a long-term nickel price of \$9.75/lb, with 78% payability for nickel in concentrate. The PFS included an updated mineral resource estimate adding Pd and Pt to the resource.
<b>Whiting Creek</b>	Northwest	<b>Huckleberry Mines Ltd.</b>	Cu, Mo, Au; Porphyry Cu±Mo±Au; 093E 050	na	Seven holes drilled (2100 m), geological mapping, geophysical surveys. Highlight results include 162.5 m grading 0.33% Cu and 1.64 g/t Ag, and 52.6 m grading 0.45% Cu and 1.29 g/t Ag.
<b>Wishbone</b>	Northwest	<b>Origen Resources Inc.</b>	Au; Au-quartz veins; 104G 185	na	Geological mapping, prospecting, soil, and rock sampling in 2023. Highlight rock samples graded 202.6 g/t Au and 76.6 g/t Au.
<b>Gordon Creek (Flatbed)</b>	Northeast	<b>Colonial Coal International Corporation</b>	Coal; Bituminous coal; 093I 049	Inf: 298 Mt	Project maintenance work.
<b>Huguenot</b>	Northeast	<b>Colonial Coal International Corporation</b>	Coal; Bituminous coal; 093I 036	M+I: 132 Mt  Inf: 0.5 Mt	Project maintenance work.
<b>Rocky Creek</b>	Northeast	<b>CTI Plus Resources Ltd.</b>	Coal; Bituminous coal; 093P 004	na	Large diameter core drilling for bulk sample. Nine holes, 240 m.
<b>3Ts</b>	North Central	<b>Independence Gold Corp.</b>	Au, Ag; Epithermal Au-Ag (low sulphidation); 093F 055	Tommy and Ted-Mint veins Inf: 4.47 Mt 3.64 g/t Au, 96.26 g/t Ag (at a cut off grade of 0.4 g/t AuEq in-pit, 2.01 g/t AuEq underground)	Drilling, 44 DDH (6300 m). Highlight results included 11.50 m grading 8.82 g/t Au and 78.26 g/t Ag, and 0.75 m grading 26.75 g/t Au and 295 g/t Ag.
<b>Akie</b>	North Central	<b>ZincX Resources Corp.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb-Ag; 094F 031	I: 22.7 Mt 8.32% Zn, 1.81% Pb, 14.1 g/t Ag  Inf: 7.5 Mt 7.04% Zn, 1.24% Pb, 12.0 g/t Ag (at 5% Zn cut off)	Carried out general infrastructure maintenance and work to maintain compliance with environmental permits.
<b>Copley</b>	North Central	<b>Centerra Gold Inc.</b>	Au, Cu, Zn; Epithermal Au-Ag: (low sulphidation); 093F 070	na	Drilling, 9 DDH (513 m). 774 line-km of drone magnetics.

Table 7. Continued.

<b>Decar Nickel District</b>	North Central	<b>FPX Nickel Corp.</b>	Ni, Fe; Podiform chromite; 093K 116	Baptiste deposit I: 1815 Mt 0.129% DTR Ni, 0.211% Total Ni, 0.0035% DTR Co, 2.40% DTR Fe  Inf: 339 Mt 0.131% DTR Ni, 0.212% Total Ni, 0.0037% DTR Co, 2.55% DTR Fe	Filed a NI 43-101 technical report, Prefeasibility study completed, 33-year mine life.
<b>DEM</b>	North Central	<b>Evergold Corp.</b>	As, Au, Ag, Cu; Au skarn; 093K 077	na	Filed a NI 43-101 report.
<b>Exodus Gold</b>	North Central	<b>Exodus Mineral Exploration Ltd.</b>	Au; Au-quartz veins, Epithermal Au, Ag, Cu, Pb, Zn; 093J 043	na	Rock sampling of high-grade gold veins returned values including 24.4 g/t Au.
<b>Indata</b>	North Central	<b>Alpha Copper Corp.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au	na	Released 2022 drilling results with a highlight of 170.7 m grading 0.23% Cu and 26.0 m grading 0.47% Cu. Reported results from a 405 line-km airborne magnetic survey.
<b>Joy</b>	North Central	<b>Amarc Resources Ltd.</b>	Cu, Au; Porphyry Cu±Mo±Au; 094E 016, 57	Pine deposit I: historic non NI 43-101 compliant: 40 Mt 0.15% Cu, 0.57 g/t Au (Stealth Mining Corporation 1997)	638 line-km of airborne magnetotelluric geophysics, 30 km <sup>2</sup> of ground-based MT geophysics, and 72.5 line-km of IP ground geophysics, and undertook geologic mapping. Soil (1788) and rock (769) sampling was also carried out.
<b>Kechika North</b>	North Central	<b>ZincX Resources Corp.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb-Ag; 094F 015	na	Optioned to an arm's length third party.
<b>Kliyul</b>	North Central	<b>Pacific Ridge Exploration Ltd.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 094D 023	I: historic non NI 43-101 compliant: 2.3 Mt 1.30 g/t Au, 0.45% Cu, 6.9 g/t Ag	19 DDH (10,284 m). Highlight results included: 305.5 m grading 0.23% Cu, 0.51 g/t Au, and 1.22 g/t Ag, and 540.3 m grading 0.19% Cu, 0.36 g/t Au, and 1.09 g/t Ag.

Table 7. Continued.

<b>Kwanika</b>	North Central	<b>NorthWest Copper Corp.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 093N 073	Kwanika Central zone Open pit M+I: 66.6 Mt 0.26% Cu, 0.25 g/t Au, 0.92 g/t Ag  Underground M+I: 36.8 Mt 0.51% Cu, 0.62 g/t Au, 1.60 g/t Ag  South zone pit Inf: 25.4 Mt 0.28% Cu, 0.06 g/t Au, 1.68 g/t Ag	Preliminary Economic Assessment and updated mineral resource assessment. PEA is for the combined Kwanika and Stardust deposits and the company refers to the project as Kwanika-Stardust.
<b>Lawyers</b>	North Central	<b>Thesis Gold Inc.</b>	Au, Ag; Epithermal Au-Ag (low sulphidation); 094E 66	Open pit M: 20.3 Mt 1.21 g/t Au, 30.5 g/t Ag  I: 45.5 Mt 1.09 g/t Au, 18.2 g/t Ag  Inf: 2.3 Mt 0.91 g/t Au, 12.8 g/t Ag  Out of Pit I: 1.6 Mt 2.74 g/t Au, 60.6 g/t Ag  Inf: 2.6 Mt 3.32 g/t Au, 56.3 g/t Ag	Drilling, 51 DDH (23,691 m). Highlight results included 45.00 m grading 1.03 g/t Au and 51.53 g/t Ag, 53.00 m grading 2.12 g/t Au and 104.95 g/t Ag, and 45.00 m grading 2.29 g/t Au and 132.10 g/t Ag.
<b>Lorraine</b>	North Central	<b>NorthWest Copper Corp.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 093N 002, 094C 069, 174	I: 12.95 Mt 0.55% Cu, 0.16 g/t Au  Inf: 45.45 Mt 0.43% Cu, 0.1 g/t Au	Reported 2022 drilling results, which included 45.85 m grading 0.49% Cu, 0.19 g/t Au, and 3.6 g/t Ag, 46.90 m grading 0.59% Cu, 0.25 g/t Au, and 4.2 g/t Ag, and 102.80 m grading 0.28% Cu, 0.05 g/t Au, and 1.3 g/t Ag.
<b>Mount Milligan (Brownfield)</b>	North Central	<b>Centerra Gold Inc.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 093N 194	na	Drilling, 26 DDH (14,537 m).
<b>Mount Milligan (Greenfield)</b>	North Central	<b>Centerra Gold Inc.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 093N 194	na	Drilling, 16 DDH (6289.5 m).

Table 7. Continued.

<b>Pil</b>	North Central	<b>Cascadia Minerals Ltd.</b>	Cu, Au, Ag; Porphyry Cu±Mo±Au, Alkalic porphyry Cu-Au; 094E 310, 377	na	Carried out prospecting, soil sampling and a TITAN geophysical survey.
<b>Quesnelle Gold Quartz</b>	North Central	<b>Golden Cariboo Resources Ltd.</b>	Au, Ag; Quartz ±carbonate veins in greenstone and sedimentary rocks; 093G 015	na	Drilling, 1 DDH (279.8 m). Filed a NI 43-101 technical report.
<b>RDP</b>	North Central	<b>Pacific Ridge Exploration Ltd.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 094D 065	na	Drilling, 3 DDH (1428 m). Highlight results included 62 m grading 0.16% Cu, 0.06 g/t Au, and 0.84 g/t Ag at Day, and 110 m grading 0.09% Cu, 0.20 g/t Au, and 0.31 g/t Ag at Bird.
<b>Shasta Mine</b>	North Central	<b>TDG Gold Corp.</b>	Au, Ag; Epithermal Au-Ag (low sulphidation); 094E 050, 26	I: 12.6 Mt 0.99 g/t Au, 35.0 g/t Ag (at a cut off grade of 0.4 g/t AuEq)  Inf: 15.43 Mt 0.77 g/t Au, 28.7 g/t Ag (at a cut off grade of 0.4 g/t AuEq)	Filed a NI 43-101 Mineral Resource. Reported 2022 drilling results, which included 9.5 m grading 7.76 g/t Au and 271 g/t Ag, 8.0 m grading 8.59 g/t Au and 67 g/t Ag, and 1.5 m grading 14.05 g/t Au and 634 g/t Ag.
<b>Stardust</b>	North Central	<b>NorthWest Copper Corp.</b>	Cu, Au, Ag, Zn; Cu skarn; 093N 009	Canyon Creek I: 1.6 Mt 1.49% Cu, 1.63 g/t Au, 30.1 g/t Ag  Inf: 4.1 Mt 1.00% Cu, 1.38 g/t Au, 22.8 g/t Ag	Preliminary Economic Assessment and updated mineral resource assessment. PEA is for the combined Kwanika and Stardust deposits and the company refers to the project as Kwanika-Stardust.
<b>Surge Nickel</b>	North Central	<b>Surge Battery Metals Inc.</b>	Ni, Fe; Podiform chromite; 093N 035	na	Filed a NI 43-101 technical report. Reported 2022 drilling results, which included 94 m grading 0.058% DTR Ni and 15 m grading 0.119% DTR Ni.

Table 7. Continued.

<b>Wicheeda</b>	North Central	<b>Defense Metals Corp.</b>	Nb, REE; Carbonatite-hosted deposits; 093J 014	M: 6.37 Mt 2.086% TREO  I: 27.80 Mt 1.84% TREO  Inf: 11.05 Mt 1.02% TREO (at a cut off grade 0.5% TREO)  Total metal % = sum of Ce+La+Nd+Pr+Sm+Nb percentages	Geotechnical drilling. Filed an updated NI 43-101 mineral resource estimate. Filed an updated NI 43-101 mineral resource estimate. Geotechnical drilling (16 sonic holes totalling 225.5 m), overburden test pits (20 totalling 76.8 m), diamond drilling (six holes 1182 m), metallurgical testing, environmental testing on anticipated waste rock, shipment of mixed rare earth oxide and mixed rare earth carbonate to interested parties allowing the recipients to independently verify the quality of REE products.
<b>Alwin Mine</b>	South Central	<b>GSP Resource Corp.</b>	Cu, Ag, Au, Mo; Porphyry Cu-Au (alkalic); 092ISW010	na	Fall diamond drill program in October-November 2023: five holes, 640 m. Visible Cu-Mo sulphide minerals reported.
<b>Basin Coal</b>	South Central	<b>Basin Mine Holdings Ltd.</b>	Coal; Bituminous coal, Bentonite; 092HSE157	M+I: 82.3 Mt  Inf: 35 Mt at 8:1 stripping ratio (historic resource)	Conducted plant maintenance and coal testing. Economic and transportation studies.
<b>Beaver-Lynx</b>	South Central	<b>Inomin Mines Inc.</b>	Ni, Co; Ultramafic- mafic; 093B 073, 285	na	Four diamond drill holes, 968 m; initial metallurgical testing. Drilling highlight 179.27 m grading 23% Mg, 0.19% Ni, and 0.36% Cr.
<b>Bralorne</b>	South Central	<b>Talisker Resources Ltd.</b>	Au; Au-quartz veins; 092JNE001	I: 117,300 t 8.85 g/t Au  Inf: 8.033 Mt 6.32 g/t Au	Resource published Jan. 2023. Fall 15,000 m diamond drilling to upgrade part of resource to Indicated. Preparing for test mining; enlarging portal and access ramp to 4 m by 4 m.
<b>Brett</b>	South Central	<b>Ximen Mining Corp.</b>	Au, Ag; Epithermal Au- Ag-Cu (low sulphidation); 082LSW110, 131	na	Interpretation of airborne magnetic and lidar surveys conducted in 2022.
<b>Brussels Creek</b>	South Central	<b>Recharge Resources Ltd.</b>	Cu, Au, Pd; Porphyry Cu-Au (alkalic); 092INE089	na	Three hole, 900 m NQ diamond drilling. Highlight drill intersection of 3.5 m grading 5.08 g/t Au.
<b>Eakin Creek</b>	South Central	<b>Trailbreaker Resources Ltd.</b>	Au; Plutonic-related Au-quartz veins; 092P 103, 172, 26	na	Eleven hole, 2039 m diamond drill program. Au values up to 14.3 g/t Au over 1.0 m.
<b>Eldorado</b>	South Central	<b>Gelum Resources Ltd.</b>	Au, Cu; Polymetallic veins, Au-quartz veins; 092O 026, 092JNE105, 95, 45	na	Drilling in 2022 (three holes, 795 m); drilling in 2023 (six holes, 1340 m). Results reported for 2022 included 44.0 m grading 0.414 g/t Au.

Table 7. Continued.

<b>Elizabeth (Elizabeth-Blackdome)</b>	South Central	<b>Tempus Resources Ltd.</b>	Au, Ag; Au-quartz veins, Epithermal Au-Ag-Cu (low sulphidation); 092O 053, 12	I: 317,200 t 5.97 g/t Au  Inf: 315,000 t 3.48 g/t Au	Updated resource calculation for Elizabeth deposit. Surface sampling identified two new targets.
<b>Golden Sable</b>	South Central	<b>Trailbreaker Resources Ltd.</b>	Au; Plutonic-related Au-quartz veins; 092P 027	na	Soil sampling confirmed and extended known 3 km Au in soil anomaly by 1 km. Mapping and prospecting.
<b>Goldrange</b>	South Central	<b>Kingfisher Metals Corp.</b>	Au, Ag; Au and Cu±Ag quartz veins; 092N 058, 59, 47, 57, 48	na	Results from 2022 drilling including 40 m grading 2.86 g/t Au.
<b>Iron Lake</b>	South Central	<b>Tech-X Resources Inc.</b>	Cu, Au, Pt, Pd, Co; Alkalic porphyry Cu-Au and ultramafic hosted; 092P 132, 113, 182, 222	na	Drilling 1680 m in 3 holes. Results included 9.5 m grading 0.42% Cu, 341 ppm Ni.
<b>MPD</b>	South Central	<b>Kodiak Copper Corp.</b>	Cu, Au; Alkalic porphyry Cu-Au; 092HNE243, 55, 191, 244	na	Drilling (33 holes, 18,562 m). Surface work included IP, soil surveys, and trenching. Highlight drill intersections from the West zone include 158.0 m grading 0.28% Cu, 0.28 g/t Au, and 0.83 g/t Ag, and 16.0 m grading 0.93% Cu, 0.64 g/t Au, and 3.20 g/t Ag.
<b>Newton</b>	South Central	<b>Carlyle Commodities Corp.</b>	Au, Ag; Epithermal Au-Ag-Cu (low sulphidation); 092O 050	Inf.: 42,396,600 t 0.63 g/t Au, 3.43 g/t Ag	Three drill holes, 2016 m. Highlights included 689.0 m grading 0.51 g/t Au, 1.48 g/t Ag. Additional new drilling began in December. Metallurgical testing initiated. Updated resource estimate in 2022.
<b>Quesnel Nickel</b>	South Central	<b>Green River Gold Corp.</b>	Ni, Co, talc; Mafic-ultramafic; 093A 130, 093H 061, 139	na	Portable drilling 641 m, 8 holes by late 2023: drilling continued. Assays included 108.1 m grading 0.184% Ni, 0.009% Co, 0.10% Cr, and 21.9% Mg. Geological mapping, rock and soil sampling programs.
<b>Reliance Gold</b>	South Central	<b>Endurance Gold Corporation</b>	Au, Ag, Sb; Au-quartz veins, Stibnite veins and disseminations; 092JNE033, 136, 191	na	Drilling (5301 m, 22 holes). Highlight intersection 9.3 m grading 8.98 g/t Au.
<b>Shovelnose</b>	South Central	<b>Westhaven Gold Corp.</b>	Au, Ag; Epithermal Au-Ag-Cu (low sulphidation); 092HNE309, 308	I: 2.983 Mt 6.38 g/t Au, 34.1 g/t Ag  Inf: 1.331 Mt 3.89 g/t Au, 16.9 g/t Ag	Underground resource used for PEA, July 2023. Drilling 40 holes (10,803 m); drilling continues. Highlight results included 24.95 m grading 14.66 g/t Au, 35.52 g/t Ag, and 3.68 m grading 17.68 g/t Au, 31.49 g/t Ag.

Table 7. Continued.

<b>Yellowhead</b>	South Central	<b>Taseko Mines Limited</b>	Cu, Au, Ag; Noranda/Kuroko; 082M 008, 9	P+Pr: 817 Mt 0.28% Cu, 0.03 g/t Au, 1.3 g/t Ag	Engineering and community relations.
<b>Copper Creek</b>	Southeast	<b>DLP Resources Inc.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb-Ag;	na	Diamond drilling; three holes, 868 m.
<b>Fording River Extension</b>	Southeast	<b>Teck Coal Limited</b>	HCC; Bituminous coal; 082JSE012	na	Exploration drilling carried out to expand resource.
<b>Greenwood</b>	Southeast	<b>Grizzly Discoveries Inc.</b>	Cu; Cu skarn; 082ESE034	na	Mapping and sampling across numerous mineral occurrences in the Greenwood camp.
<b>Kenville Gold Mine</b>	Southeast	<b>Ximen Mining Corp.</b>	Au; Au-quartz veins; 082FSW086	na	Mines permit received, surface works and environmental matters addressed for planned new adit, 1200 m underground development and more than 20,000 m underground drilling. Lidar airborne photogrammetry, airborne magnetic survey.
<b>NZOU</b>	Southeast	<b>DLP Resources Inc.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb-Ag	na	Diamond drilling; one hole, 1333 m completed.
<b>Revel Ridge</b>	Southeast	<b>Rokmaster Resources Corp.</b>	Pb, Zn, Ag; Irish-type carbonate-hosted Zn-Pb; 082M 003	M and I: 7.156 Mt 4.14 g/t Au, 51.2 g/t Ag, 1.96% Pb, 4.19% Zn  I: 7.563 Mt 4.42 g/t Au, 46.9 g/t Ag, 1.48% Pb, 2.62% Zn (2023)	Nine holes (1969 m); updated mineral resource estimate.
<b>Silvana Mine</b>	Southeast	<b>Klondike Silver Corp.</b>	Ag, Pb, Zn; Polymetallic veins Ag-Pb-Zn ±Au; 082FNW050	na	Four underground holes completed.
<b>Tatooine Silica</b>	Southeast	<b>Homerun Resources Inc.</b>	Silica; Silica sandstone; 082KNE012	na	28 samples taken, 27 averaged 98.8% SiO <sub>2</sub> , two new zones were identified.
<b>Thor</b>	Southeast	<b>Taranis Resources Inc.</b>	Base metals; Polymetallic manto Ag-Pb-Zn; 082KNW030	na	Electromagnetic survey, rock and float sampling, best float sample: 14.55 g/t Au, 1045 g/t Ag, 3.23% Cu, 0.05% Pb, 0.43% Zn. Completed 888 m of drilling at the newly discovered Thunder zone.
<b>Vulcan</b>	Southeast	<b>Eagle Plains Resources Ltd.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb-Ag; 082FNE093	na	Drilling 6 holes 4256 m, bore hole EM, petrography.

Table 7. Continued.

<b>Wildhorse</b>	Southeast	<b>Ximen Mining Corp.</b>	Au; Au-quartz veins	na	Drilling, one hole, 528 m.
<b>Empire Mine</b>	Southwest	<b>Coast Copper Corp.</b>	Au, Ag, Cu, Fe, Co; Fe skarn, Cu skarn; 092L 044, 45, 46	Inf: 594,000 t 3.52 g/t Au, 0.50% Cu	Updated resource estimate, identified four exploration targets south of the resource area, and discovered a new showing.
<b>Fire Mountain</b>	Southwest	<b>Cascade Copper Corp.</b>	Cu, Au, Ag; Porphyry; 092GNE004, 3, 2, 42	na	Porphyry mineralization identified, highlight sample 14.96 g/t Au, 1.58% Cu and 52 g/t Ag.
<b>Mineral Creek</b>	Southwest	<b>Theia Gold Corp.</b>	Au, Ag; Au-quartz veins; 092F 079, 331	na	Induced polarization and drilling. Theia is a private company, proposed reverse takeover by Karus Gold Corp.
<b>Mount Sicker</b>	Southwest	<b>Sasquatch Resources Corp.</b>	Cu, Au, Ag, Pb, Zn; Kuroko massive sulphide Cu-Pb-Zn; 092B 040, 76, 110, 1	na	Portable drilling with highlight interval of 7.55 m grading 5.4 g/t Au, 7.5% Cu, 125 g/t Ag and 5.9% Zn. Also evaluating historical waste and tailings. Ground based gravity survey.
<b>North Island</b>	Southwest	<b>Northisle Copper and Gold Inc.</b>	Cu, Au, Mo, Re; Porphyry Cu±Mo±Au; 092L 185, 240, 200	I: 527,344,000 t 0.20% Cu, 0.24 g/t Au, 0.008% Mo, 0.31 ppm Re  Inf: 417,272,000 t 0.15% Cu, 0.18 g/t Au, 0.006% Mo, 0.29 ppm Re	Drilling (year-end estimate of more than 10,000 m, 24 holes) and ground magnetic survey. Highlight from Northwest Expo 130 m grading 1.65 g/t Au and 0.33% Cu. Resource estimate (2020) combines Hushamu and Red Dog deposits.
<b>Okeover</b>	Southwest	<b>Alpha Copper Corp.</b>	Cu, Mo; Porphyry Cu±Mo±Au; 092K 008, 57, 168	Inf: 86.8 Mt 0.31% Cu, 0.014% Mo	Mineralized intervals included 78.67 m 0.27% Cu 0.02 g/t Au, 1.00 g/t Ag, 82.8 ppm Mo, and 134.5 m 0.20% Cu, 0.01 g/t Au, 0.84 g/t Ag, 40.7 ppm Mo.

M = Measured; I = Indicated; Inf = Inferred

by Skeena Resources Limited. The project includes the past-producing underground mine, which produced at an average grade of 27.5 g/t Au between 1991 and 1999. In September, Skeena released an updated mineral resource estimate with an Indicated resource of 2.74 Mt grading 9.35 g/t Au and an Inferred resource of 0.5 Mt grading 7.10 g/t Au.

Brixton Metals Corporation's Thorn project in the northwest corner of British Columbia, has one of the largest continuous mineral tenure packages in the province, and has 14 defined copper-gold-silver targets. Brixton completed 6625 m of diamond drilling in eleven holes at the **Thorn (Trapper Gold)** target. Geological mapping, prospecting, soil sampling, and

rock sampling were also carried out at several of their targets. Drilling results included 98.0 m grading 0.62 g/t Au and 1.42 g/t Ag, including a 32.0 m interval grading 1.15 g/t Au and 2.07 g/t Ag, and a 6 m interval grading 5.07 g/t Au and 6.23 g/t Ag. Another hole assayed 253 m grading 1.40 g/t Au including 93.0 m grading 3.22 g/t Au, and 12.31 m grading 16.18 g/t Au. In December, Brixton completed financings totalling \$14.5 million.

Origin Resources Inc.'s **Wishbone** property extends across an area of 3941 ha, 50 km west of the Galore Creek proposed mine and immediately north of its access road. The property has eleven areas targeted for gold-silver bearing quartz-carbonate



veins and VMS style mineralization. Origen performed geological mapping, prospecting, soil, and rock sampling. Highlight rock samples graded 202.6 and 76.6 g/t Au.

### 8.1.2. North Central Region

Independence Gold Corp. completed 44 diamond drill holes totalling 6300 m at their **3Ts** project. The drilling resulted in the discovery of the Ian and Johnny veins and an extension of the Tommy vein system. Highlight results included 11.50 m grading 8.82 g/t Au and 78.26 g/t Ag, and 0.75 m grading 26.75 g/t Au and 295 g/t Ag. A new copper-silver target (Ootsa) was discovered during surface exploration. Sample highlights from selected grab samples included 0.4% Cu and 78.0 g/t Ag.

Centerra Gold Inc. completed 513 m of drilling in nine holes at its **Copley** project. The company also did 74 line-km of drone magnetics.

At their **Exodus Gold** project, Exodus Mineral Exploration Ltd. conducted surface sampling. Rock samples of mineralized veins returned values up to 24.4 g/t Au. The company received a drilling permit.

Thesis Gold Inc. and Benchmark Metals Inc. merged and now operate as Thesis Gold Inc. Thesis was active at its **Lawyers** project with 24,000 m of drilling, focusing on the Dukes Ridge and Cliff Creek deposits. Highlight results included 45.00 m grading 1.03 g/t Au and 51.53 g/t Ag, 53.00 m grading 2.12 g/t Au and 104.95 g/t Ag, and 45.00 m grading 2.29 g/t Au and 132.10 g/t Ag.

Golden Cariboo Resources Ltd. continued to explore at their Quesnelle **Gold Quartz** project. A total of 279.8 m of diamond drilling was completed in one hole.

TDG Gold Corp. reported 2022 drilling results for their **Shasta Mine** project and highlights included 9.5 m grading 7.76 g/t Au and 271 g/t Ag, 8.0 m grading 8.59 g/t Au and 67 g/t Ag, and 1.5 m grading 14.05 g/t Au and 634 g/t Ag. Drilling results from 2022 were incorporated in an updated NI 43-101 mineral resource estimate. At a 0.40 g/t AuEq cut off they reported Indicated 12.578 Mt grading 0.99 g/t Au and 35 g/t Ag and Inferred 15.432 Mt grading 0.77 g/t Au and 28.7 g/t Ag.

### 8.1.3. South Central Region

Tempus Resources Ltd.'s former **Blackdome** gold mine is about 30 km north of their **Elizabeth** deposit. A 2010 Preliminary Economic Assessment proposed mining at both sites and processing at Blackdome with the existing and permitted plant. The two areas have different styles of mineralization. Blackdome is a low-sulphidation epithermal deposit in Cenozoic intermediate to felsic volcanic rocks whereas Elizabeth is considered an orogenic gold vein deposit with mineralized veins in a Paleocene quartz diorite intrusion of the Shulaps ultramafic complex. Tempus published an updated mineral resource for their **Elizabeth** project in November, with an Indicated resource of 317,200 t at 5.97 g/t Au (60,900 oz Au) and an Inferred resource of 315,000 t at 3.48 g/t Au (35,200 oz Au) at a 1.5 g/t Au cut off. Surface exploration work

included property wide prospecting and sampling to follow up on geophysical and geochemical targets, and two new target areas were identified.

Talisker Resources Ltd. released an inaugural resource estimate for their **Bralorne** project in January 2023 with Indicated 117,300 t at 8.85 g/t Au and Inferred 8.033 Mt at 6.32 g/t Au. The resource was calculated based on 660 drill holes and extends along a strike length of 4.5 km to a depth of 700 m, including the historic King, Charlotte, Bralorne, and Pioneer mines. Historic mining was to a maximum depth of 1900 m. Since acquiring the project in 2019, Talisker has assembled a property package that includes numerous gold showings and past-producing mines not included in the current resource. In late 2023, Talisker announced plans to amend their current Mines Act permit to allow for test mining and enlargement of the Mustang mine portal and access ramp to 4 m by 4 m. A letter of intent was signed with New Gold Inc. for completing a purchase agreement of 300,000 t of ore from Bralorne to be processed at the New Afton mine. A 15,000 m drill program began on October 17, 2023 to upgrade part of the current resource to an Indicated category. Total reported historical production was 4.2 Moz Au at an average head grade of 17.7 g/t Au from the Bralorne, King, and Pioneer mines, which operated from 1889-1971.

Ximen Mining Corp. reported airborne magnetic and lidar surveys at the **Brett** property in 2022. The lidar survey included 54 km<sup>2</sup>, and the magnetic survey 484 line-km. Results from the surveys were released in late 2023 and will be used to help with bedrock mapping and structural interpretation. The target at Brett is low-sulphidation epithermal gold-silver mineralization.

Trailbreaker Resources Ltd. completed 2039 m of drilling (11 holes) at their **Eakin Creek** project in 2023. Highlight intersections include 3.0 m grading 2.42 g/t Au and 1.0 m grading 14.3 g/t Au.

Gelum Resources Ltd. completed an IP geophysical survey across 15 km<sup>2</sup> at the **Eldorado** project. Results from diamond drilling in 2022 (three holes, totalling 795 m) were reported in 2023 and included 44.0 m grading 0.414 g/t Au. Drilling planned for 2022 was resumed in the fall of 2023 with six holes totalling 1340 m. Wealth Minerals Ltd. acquired an option to earn in up to 20% of the Eldorado project on August 31, 2023.

Trailbreaker Resources Ltd. undertook soil sampling, mapping, and prospecting on the **Golden Sable** project, and located historical drill collars. The soil sampling was designed to confirm a previously reported 3 km-long gold anomaly. The work confirmed previous results and extended the anomaly 1 km.

Kingfisher Metals Corp. reported results from drilling in 2022 at the **Goldrange** project. Highlight intervals from one hole included 40.0 m grading 2.86 g/t Au and from another 25.0 m grading 1.93 g/t Au. Gold-quartz veins in intrusive rocks are the exploration target.

At their **Newton** project, Carlyle Commodities Corp. drilled 2016 m in three holes early in 2023. The holes extended mineralization that was in a 2022 pit-constrained resource

calculation with Inferred 42.4 Mt 0.63 grading g/t Au and 3.43 g/t Ag at a 0.25 g/t Au cut off. Highlight results include one hole returning 689.0 m grading 0.51 g/t Au, 1.48 g/t Ag and another returning 649.9 m grading 0.50 g/t Au, 1.87 g/t Ag. Carlyle began further drilling in December. Metallurgical testing began at Base Metallurgical Laboratories Ltd. in Kamloops for recovery with gravity concentration, sulphide flotation, and leaching tests on different particle sizes.

Endurance Gold drilled 5301 m in 22 holes in 2023 at their **Reliance Gold** project. Drilling was targeted on the Diplomat, Imperial, Eagle, and Crown zones. A highlight 9.3 m intersection graded 8.98 g/t Au. The project area includes the historic Minto Mine, which produced 17,500 oz Au before WWII.

Westhaven Gold Corp. released a preliminary economic analysis (PEA) in July for the **Shovelnose** project South zone, based on underground mining. The revised calculation for an underground resource is Indicated 2.983 Mt at 6.38 g/t Au, 34.1 g/t Ag, and Inferred 1.331 Mt at 3.89 g/t Au, 16.9 g/t Ag at a 1.5 g/t Au cut off. The calculation was based on 162 drill holes totalling 61,726 m. Some key points of the PEA include an all-in sustaining cost of \$US752/oz AuEq, an after-tax net present value of \$222 million, a 2.6 year after tax payback period, a 1000 tpd production rate, and a 9.5-year mine life. As of November 2023, more than 10,803 m had been drilled in 40 holes during the year. Drilling targeted several areas both along and away from the main Zone One trend. Selected results include 24.95 m grading 14.66 g/t Au, 35.52 g/t Ag, and 3.68 m grading 17.68 g/t Au, 31.49 g/t Ag.

#### 8.1.4. Southeast Region

Ximen Mining Corp. received its permit for major work onsite for their **Kenville Gold Mine** project and will open a new portal with a plan for 1200 m of underground development followed by 20,250 m of underground drilling. The permit allows related surface works and addresses environmental matters, most of which were completed by the end of the summer. The company also completed lidar, airborne photogrammetry, and airborne magnetic survey across the mine area.

Ximen also completed drilling one hole (528.7 m) at its **Wildhorse** project in an area where gold was panned from surface sediments. The hole intersected multiple carbonate-quartz veins and an altered and veined zone associated with a porphyry dike.

#### 8.1.5 Southwest Region

Theia Gold Corp. conducted a drill program at **Mineral Creek**, following geochemical surveys and geophysics. Theia is currently a private company and has not reported details. Karus Gold Corp. announced a binding letter of intent to acquire Theia in a reverse takeover of Karus by Theia.

### 8.2. Selected precious and base metal projects

#### 8.2.1. Northwest Region

Tuerton Resources Corp.'s **Big Gold** property is 7 km north of the historic Granduc mine and consists of six claims totalling

2835 ha in a larger block of eight properties known as the Luxor project, which extends across 21,540 ha. Exploration in 2023 consisted of prospecting, geological mapping, and rock sampling. A total of 120 samples were taken for hyperspectral analysis to aid with alteration mapping. Exploration identified a massive sulphide occurrence more than 25 m long called the Roman zone. Highlight rock sample assays included 27.7 g/t Au, 6240 g/t Ag, 1.45% Cu, 6.4% Pb, and 3.11% Zn, and 57.1 g/t Ag, 0.72% Cu, 12.1% Pb, and 9.32% Zn.

Juggernaut Exploration Ltd.'s **Bingo** property extends across 989 ha 45 km southwest of Stewart. Juggernaut completed its first drilling with 1017 m in seven holes. Exploration included prospecting, mapping, and rock sampling. Drilling at the Bingo Main zone identified a 550 m by 300 m mineralized area with shear-hosted quartz veins. Highlight drill results include 5.11 m grading 7.57 g/t Au, 20.23 g/t Ag, and 2.72% Cu including a 2.90 m interval grading 13.05 g/t Au, 24.93 g/t Ag, and 4.70% Cu. Another interval of 10.12 m graded 2.52 g/t Au, 11.05 g/t Ag, and 1.16% Cu, including a 5.89 m interval grading 4.01 g/t Au, 17.37 g/t Ag, and 1.85% Cu.

Core Assets Corp. drilled 4260 m in 41 holes at their **Blue** property, which consists of several projects. Drilling was focused on multiple targets at the Silver Lime project, and core from Pete's target contained massive sulphide mineralization. Results at the Gally target included 0.5 m grading 1030 g/t Ag, 21.6% Zn, 10.8% Pb, and 1.16% Cu within 8.0 m grading 139 g/t Ag, 2.3% Zn, 1.2% Pb, and 0.18% Cu. Core Assets also carried out prospecting, geological mapping, and an IP geophysical survey and completed financings for \$6.63 million.

Sun Summit Minerals Corp.'s 15,000 ha **Buck** property is accessible by an all-season road, 12 km south of Houston. Sun Summit carried out 3738 m of drilling in 13 holes at the Buck Main zone with focus to expand high-grade and bulk tonnage gold mineralization both laterally and at depth. Exploration work included geological mapping, prospecting, and soil and rock sampling. Two rock samples from the newly discovered CR zone returned 1.00% Cu and 3.2 g/t Ag, and 0.94% Cu and 4.1 g/t Ag. Drill results included 185.9 m grading 0.39 g/t Au, 8.2 g/t Ag, and 0.53% Zn including a 11.9 m interval grading 1.26 g/t Au, 7.4 g/t Ag, and 0.64% Zn. Another interval of 1.5 m graded 6.79 g/t Au and 1.8 g/t Ag.

Scottie Resources Corp.'s **Cambria** project includes 31,736 ha across 140 mineral tenure blocks less than 1 km from Stewart. It borders Ascot Resource's Red Mountain proposed mine to the east and the Premier gold mine to the west. Scottie Resources continued to advance the project through detailed geological mapping, soil sampling, and prospecting.

Eskay Mining Corp. completed 5700 m of drilling in 24 holes, carried out prospecting, geological mapping, and rock sampling across their **Consolidated Eskay** gold project.

Drilling was completed at several new exploration targets in search of volcanogenic massive sulphide mineralization. Targets included Cumberland, Scarlet Knob, Tarn Lake, Storie Creek, Maroon Cliffs, and Hexagon-Mercury. VMS mineralization was intersected at each of the six new targets. Eskay Mining

also conducted prospecting, geological mapping, and rock sampling of the Scarlet Ridge-Tarn Lake trend, Scarlet Valley, Cumberland, and Hexagon-Mercury targets. Several drill intersections at the Cumberland target returned high-grade gold and silver such as 15.0 m grading 3.02 g/t Au, 68.66 g/t Ag, 0.24% Cu, 0.73% Pb, and 4.86% Zn including 3.41 m grading 8.48 g/t Au, 103.27 g/t Ag, 0.23% Cu, 1.08% Pb, and 4.16% Zn. Tarn Lake drilling results included 2.45 m grading 7.83 g/t Au and 6.96 g/t Ag including 0.95 m grading 12.4 g/t Au and 10.0 g/t Ag. Rock samples from massive sulphide discovered at Scarlet Knob graded 22.26 g/t Au, 461.97 g/t Ag, 0.22% Cu, 14.57% Pb, and 10.50% Zn.

The **Crown (Electrum)** property is part of Goldstorm Metals Corp.'s Crown project, a 16,469 ha mineral tenure area that consists of several properties: Mackie East and West, Orion, High North, Fairweather, Delta and Electrum. The property is 15 km south of the Brucejack mine. The area is being targeted for precious metal veins, subaqueous hot spring VMS mineralization, and porphyry Au-Cu mineralization. Goldstorm drilled 2581 m in eleven holes at Electrum. Highlight drilling results include 0.5 m grading 233.5 g/t Au, 756.0 g/t Ag, 0.73% Pb, and 0.51% Zn within an interval of 2.1 m grading 57.34 g/t Au, 214.27 g/t Ag, 0.19% Pb, and 0.16% Zn, within a 4.5 m interval grading 27.0 g/t Au, 111.09 g/t Ag, 0.10% Pb, and 0.09% Zn. Other work completed included geological mapping, prospecting, and rock sampling.

Juggernaut Exploration Ltd.'s **Empire** property area of 12,480 ha is 70 km northeast of Terrace. Juggernaut drilled 1500 m at the Metallica zone of the Empire property. Prospecting and rock sampling were also carried out. Rock sample highlights include a grab sample of a vein with massive sulphide mineralization assaying 36,875 g/t Ag, 4.68 g/t Au, 27.6% Cu, and 3.27% Zn. A channel sample (length not reported) assayed 22,694 g/t Ag, 26.4% Cu, and 2.8% Zn.

Goliath Resources Ltd.'s **Golddigger** property is 7 km west of the Dolly Varden mine access road. At the Surebet and Main zones, stratabound massive sulphide mineralization (galena-sphalerite-pyrite) and silica alteration occur in folded Hazelton Group sedimentary and volcanoclastic rocks along northwest-trending faults. Goliath completed 34,000 m of diamond drilling in 124 holes, geological mapping, prospecting, and rock sampling. Drilling focused at the Surebet target with 98 of the 124 holes. Reported results included 7.90 m grading 64.88 g/t Au and 8.03 g/t Ag including 5.90 m grading 86.84 g/t Au and 6.52 g/t Ag, including 2.75 m grading 186.0 g/t Au and 13.29 g/t Ag.

Prospect Ridge Resources Corp.'s **Holy Grail** property extends across 69,515 ha and is 10 km north of Terrace. Prospect Ridge acquired 100% ownership of the project and completed geological mapping, prospecting, and rock sampling. Highlight results released in 2023 from previous field seasons for the 4 Shore showing include 28.0 g/t Au, 56.9 g/t Ag, and 2.03% Cu, and another sample with 13.7 g/t Au, 39.9 g/t Ag, and 1.33% Cu.

Seabridge Gold Inc.'s **Iskut** project includes the former Johnny Mountain mine and the Bronson Slope copper-gold

deposit. Seabridge carried out 19,830 m of diamond drilling in 23 holes, and airborne magnetic and ground magnetotelluric surveys. Drilling discovered new mineralization that consists of an intact, well-preserved intermediate sulphidation epithermal system. Highlight results from the Snip North target include 1.8 m grading 15.3 g/t Au, 430.0 g/t Ag, and 1.5% Cu, 277 m grading 0.8 g/t Au, 1.19 g/t Ag, and 0.07% Cu, 21.0 m grading 1.73 g/t Au, 2.2 g/t Ag, and 0.07% Cu, and 253 m grading 0.61 g/t Au, 1.36 g/t Ag, and 0.07% Cu.

Dolly Varden Silver Corporation acquired the Homestake Ridge project in 2022 from Fury Gold Mines Ltd. and combined resources with their Dolly Varden project to consolidate into the Kitsault Valley project. **Kitsault Valley (Dolly Varden)** contains a total Indicated resource (June 2023) of 3.417 Mt grading 317 g/t Ag, and a total Inferred resource of 1.296 Mt grading 250.9 g/t Ag. The 2023 drilling objective was to infill and expand resources at the Dolly Varden and Homestake Ridge deposits and to increase mineral estimates from Indicated and Inferred to Measured and Indicated. This year Dolly Varden completed one of the largest drilling programs in the province with 51,454 m in 115 holes. This drilling intersected multiple sections with visible silver. Drilling at Kitsault Valley (Dolly Varden) intersected 26.99 m grading 296 g/t Ag, 1.68% Pb, and 3.01% Zn, 10.74 m grading 371 g/t Ag, 2.82% Pb, and 4.99% Zn including 0.5 m grading 1475 g/t Ag, 10.65% Pb, and 12% Zn, and 29.34 m grading 381 g/t Ag including 1.0 m grading 1898 g/t Ag. The immediate area of the Dolly Varden property has a long history of mining. Between 1910 and 1959, the Dolly Varden mine produced more than 20 Moz silver.

Prospect Ridge Resources Corp.'s **Knauss Creek** property is about 35 km northeast of Terrace. Prospect Ridge is exploring the potential for polymetallic veins, skarn, and porphyry mineralization and completed geological mapping, prospecting, and rock sampling at Knauss Creek. Highlight rock sample results include assays of 78.90 g/t Au, 457 g/t Ag, and 13.45% Cu, another grading 23.80 g/t Au, 738 g/t Ag, and 5.42% Cu, another grading 15.20 g/t Au, 1970 g/t Ag, 0.39% Cu, and one grading 20.60 g/t Au, 175.0 g/t Ag and 0.54% Cu.

Skeena Resources Limited's **KSP** property is a 64,000 ha tenure area, 24 km southwest of Eskay Creek. Exploration consisted of stream-sediment sampling, the results of which were combined with historical data to guide prospecting, geological mapping, and rock sampling. Highlight rock samples include 14.20 g/t Au, 11.4 g/t Ag, 1.09% Cu, and 0.05% Zn, and 9.26 g/t Au, 6.9 g/t Ag, 0.71% Cu, and 0.02% Zn.

Juggernaut Exploration Ltd.'s **Midas** Property is 24 km southeast of Terrace and extends across an area of 20,803 ha. More than 4000 m was drilled at the property with a focus on the Kokomo discovery and following up on IP anomalies. Drill results include 22.0 m grading 0.22 g/t Au, 2.73 g/t Ag, 0.20% Cu, and 0.38% Zn, which included a 5.0 m interval grading 0.35 g/t Au, 6.10 g/t Ag, 0.64% Cu, and 0.67% Zn. Another 1.0 m interval graded 1.30 g/t Au, 8.92 g/t Ag, and 0.74% Cu. Highlight channel samples from the VG Zone

included 4.34 m grading 10.28 g/t Au, 2 m grading 15.37 g/t Au, and 3.11 m grading 5.43 g/t Au. Other exploration included rock sampling, prospecting, geological mapping, and IP geophysical surveying.

The **Red Cliff** project is 20 km north of Stewart. Decade Resources Ltd. carried out more than 1600 m of diamond drilling in 23 holes, prospecting, geological mapping, and rock sampling. Four gold-bearing zones have been identified on the project, Red Cliff, Upper Montrose, Lower Montrose, and Waterpump. Drilling focused on better defining the Montrose zones. Highlight results include 6.09 m grading 2.03 g/t Au, 0.021% Cu, and 0.614% Zn. Another hole returned 1.6 m grading 3.91 g/t Au, 0.59% Cu, and 0.18% Zn.

Finlay Minerals Ltd.'s **Silver Hope** project's mineral tenure surrounds the past-producing Equity Silver mine, which operated from 1980 to 1994, processing 33.8 Mt grading 0.4% Cu, 64.9 g/t Ag, and 0.46 g/t Au. Finlay completed a lidar survey, biogeochemical sampling, soil mercury vapour surveys, soil sampling, and prospecting, and contracted a machine-learning data review of the property. Results released in 2023 for drilling in 2022 included 31 m grading 0.2% Cu, 11.8 g/t Ag, and 0.22 g/t Au including a 11.42 m interval grading 0.49% Cu, 30.1 g/t Ag, and 0.41 g/t Au. Another hole intersected 76.57 m grading 0.45% Cu, 14.6 g/t Ag, and 0.14 g/t Au.

The **Silver Queen** historic mine is 43 km south of Houston and is accessible by an all-season road. Since discovery, more than 500 drill holes and 9 km of underground workings have been completed. In 2022, Equity Metals Corp. released an updated mineral resource estimate with an Indicated resource of 3.445 Mt grading 3.5% Zn, 2.13 g/t Au, 189 g/t Ag, 0.24% Cu, and 0.6% Pb. An Inferred resource of 1.9 Mt of 2.0% Zn, 0.82 g/t Au, 167 g/t Ag, 0.23% Cu, and 0.5% Pb (resources at NSR cut off of \$100/t). In 2023, Equity completed prospecting, rock and soil sampling, and 9989 m of diamond drilling in 26 holes. Drilling first focused on the Camp and Sveinson deposits, then later at the George Lake and Cole Lake targets. Highlight results from the George Lake target included 0.6 m grading 1.5 g/t Au, 1073 g/t Ag, 6.3% Cu, 4.0% Pb, and 1.6% Zn within a 4.1 m interval grading 0.5 g/t Au, 209 g/t Ag, 1.7% Cu, 0.7% Pb, and 0.4% Zn. Other results included 0.3 m grading 4.1 g/t Au, 824 g/t Ag, 0.7% Cu, and 3.4% Pb within 1.5 m grading 1.3 g/t Au, 226 g/t Ag, 1.0% Cu, 1.7% Pb, and 6.6% Zn, and 0.5 m grading 10.4 g/t Au, 115 g/t Ag, 0.6% Cu, 0.9% Pb, and 1.4% Zn. Highlight rock samples from the Cole Lake target graded 55.2 g/t Au, 5049 g/t Ag, 3.2% Pb, and 0.12% Zn, and 1736 g/t Ag, 22.7% Pb, and 1.2% Zn.

Decade Resources Ltd.'s **Terrace** project has three main properties: Terrace Gold, Treasure Mountain, and Dardanella, approximately 20 km east of Terrace. Mineral tenure consists of 48 contiguous claims totalling 17,470 ha. Decade carried out 5300 m of diamond drilling in 37 holes, rock sampling, and prospecting, mostly at the Terrace Gold property. Drilling tested the Excelsior and Croesus showings for porphyry copper potential. The company reported narrow zones of quartz veins containing chalcopyrite; one hole had molybdenum

mineralization on fracture surfaces and in quartz veinlets. Decade also reported they had identified a new 50 m by 30 m zone of mineralized outcrop that returned grab sample results up to 10% Cu, 502 g/t Ag, and 4 g/t Au.

The **Treaty Creek** project is owned 60% by Tudor Gold corp. and 20% by Teuton Resources Corp. and 20% American Creek Resources Ltd. Tudor is the operator. The project has a bulk tonnage resource in Jurassic volcanic and intrusive rocks that also host the KSM deposits 5 km to the southwest. A new mineral resource estimate was released (March 2023) with 641.9 Mt of Indicated resource grading 0.91 g/t Au, 5.45 g/t Ag, and 0.15% Cu, and 233.9 Mt of Inferred grading 0.74 g/t Au, 5.99 g/t Ag, and 0.16% Cu. Exploration at Treaty Creek consisted of 31,904 m of diamond drilling in 34 holes. Drilling focused on mineralized structures not currently in the resource model that are thought to host high-grade gold. Highlight results include 601.5 m grading 1.23 g/t Au, 2.93 g/t Ag, and 0.12% Cu including a 123 m interval grading 3.23 g/t Au, 5.57 g/t Ag, and 0.19% Cu, and a 15 m interval grading 14.89 g/t Au, 4.72 g/t Ag, and 0.6% Cu.

Another interval of 19.5 m graded 5.41 g/t Au, 1.09 g/t Ag, and 0.24% Cu. In 2023, Tudor Gold completed financings totalling \$27.8 million.

### 8.2.2 Southeast Region

Grizzly Discoveries Inc. sampled numerous sites of known polymetallic skarn and vein mineralization at their **Greenwood** project. These include Sappho, Midway, Motherlode North, Copper Mountain, Imperial, Crown Point, Ket 28 and Dayton. Selected results from the Imperial area yielded six samples with greater than 1 g/t Au up to 12.1 g/t Au and eight samples yielded greater than 40 g/t Ag up to 469 g/t Ag.

At their **Revel Ridge** project Rokmaster Resources Corp. completed drilling nine holes (1969 m total) that were designed to test extensions of both the Yellowjacket and Main zones. All holes intersected mineralization. Selected intersections include: 2.64% Pb, 6.67% Zn, 0.11 g/t Au, and 60.54 g/t Ag over 28.5 m in the Yellowjacket zone, and 0.52% Pb, 1.15% Zn, 3.88 g/t Au, and 28.0 g/t Ag in the Main zone. In June of 2023, the company released an updated mineral resource estimate for both the Yellowjacket and Main zones with Measured and Indicated at 7.156 Mt at 1.96% Pb, 4.19% Zn, 4.14 g/t Au, and 51.2 g/t Ag, and Inferred at 7.563 Mt at 1.48% Pb, 2.62% Zn, 4.42 g/t Au, and 46.9 g/t Ag.

Projected down from surface workings of the historic Jennie Lind-Read and Evening Lode mines, four drill holes intersected Main Vein structures at Klondike Silver Corp.'s **Silvana Mine** project. Further drilling targeted the downward projection of the Carnation hanging wall and footwall lodes. Silver-lead-zinc mineralization is in a structurally bound carbonate-quartz breccia in interbedded black argillite and quartzite.

At their **Thor** project Taranis Resources Inc. undertook boulder tracing and sampling over a geophysical anomaly coincident with a north-northwest fault and reported epithermal gold mineralization in the structure. Eight float boulder

sample results were released with the best sample grading: 14.55 g/t Au, 1045 g/t Ag, 3.23% Cu, 0.05% Pb, and 0.43% Zn from a massive pyrite and tetrahedrite block. The company completed 888 m of drilling to better understand the newly discovered Thunder zone.

### 8.2.3. Southwest Region

Coast Copper Corp. reported an updated resource estimate for their **Empire Mine** project, identified four exploration targets south of the resource area and discovered a new showing. The 2023 Inferred resource estimate has 594,000 t grading 3.52 g/t Au and 0.50% Cu at a \$30 net smelter return cut off. Coast Copper has an option to acquire 100% interest in the central part of the property from Mirva Properties Ltd.

## 8.3. Selected base metal projects

### 8.3.1. Northwest Region

Stuhini Exploration Ltd. completed the acquisition of the **Ruby Creek** property in June. The property is 14 km from Atlin, extends across 28,631 ha, and is road accessible. A mineral resource estimate (March 2022) has a combined Measured and Indicated resource of 369.4 Mt grading 0.053% Mo and an Inferred resource of 41.9 Mt grading 0.047% Mo. Stuhini carried out mapping, prospecting, and rock sampling. Highlight rock sample results from the Volcanic Creek target included assays of 1.098% Mo, 0.77% Mo, and 0.57% Mo.

Giga Metals Corp.'s **Turnagain** nickel-cobalt deposit is an Alaskan-type Pt-(Os-Rh-Ir) ultramafic. The deposit has maximum dimensions of 3 by 8.2 km and displays a dunite core surrounded by peripheral peridotite, pyroxene-rich peridotite, wehrlite, and olivine pyroxene. Sulphide mineralization includes pyrrhotite, pentlandite, chalcopyrite, and trace bornite. In 2022, Giga Metals completed a joint venture transaction, with Mitsubishi Corporation earning a 15% equity interest in Turnagain and forming a new company, Hard Creek Nickel Corp. Giga Metals announced a positive Pre-Feasibility study for a post-tax 11.4% internal rate of return and net present value of \$574 million based on a 30-year project life at a long-term nickel price of \$9.75/lb, with 78% payability for nickel in concentrate. With the Pre-Feasibility study came an updated mineral resource estimate that added Pd and Pt. The total Measured and Indicated resource is now 1.574 Bt at 0.210% Ni, 0.013% Co, 0.020 g/t Pd, and 0.022 g/t Pt, and the Inferred resource is 1.164 Bt at 0.206% Ni, 0.012% Co, 0.016 g/t Pd, and 0.018 g/t Pt.

### 8.3.2. North Central Region

FPX Nickel Corp. filed a NI 43-101 Preliminary Feasibility Study for their **Decar Nickel District** project. The study proposes a 29-year mine life with two phases. Phase 1 involves mining and processing 108,000 tpd during its first nine years of operation. At the start of year 10, Phase 2 would begin with expansion of the plant increasing the total processing rates to 162,000 tpd of ore. The operation will result in two nickel coproducts. About 93% of the contained nickel will be

in a high-grade awaruite concentrate (60% nickel), while the rest will be in a mixed hydroxide precipitate (MHP) product. Average nickel production will be 59,100 tpy.

Surge Battery Metals Inc. acquired the remaining 20% interest in the **Surge Nickel** project bringing their interest to 100%. The company filed a NI 43-101 technical report for the HN4 and Ni100 claim groups, which included results from 993 m of drilling in three holes carried out at HN4 in late 2022. Highlight results included 94 m grading 0.058% DTR Ni and 15 m grading 0.119% DTR Ni.

### 8.3.3. South Central Region

The **Beaver** and **Lynx** projects are connected properties where Inomin Mines Inc. is exploring for Mg-Ni-Cr-Co. Initial metallurgical testing was done at SGS Canada Inc. to evaluate different methods for extracting Mg and Ni. HCl leaching resulted in recovery of 99% of Mg in magnesite and brucite from whole ore and after flotation. Up to 58% Ni was recovered by flotation. Four diamond drill holes totalling 968 m were drilled at the South and Ring zone targets at Beaver. A highlight intersection of 179.27 m graded 23% Mg, 0.19% Ni, and 0.36% Cr. Mineralization is in Permian to Triassic serpentinized dunite, peridotite, and gabbro of Cache Creek terrane.

Happy Creek Minerals Ltd. carried out surface prospecting and mapping in 2023 at their **Fox Tungsten** project. In late 2023, Happy Creek received an approval on an amendment to an existing multi-year, area-based permit that allows for significantly expanded areas for drilling, trenching, and road access.

Tech-X Resources Inc., who has an option to earn up to 80% interest in the **Iron Lake** project, drilled 1680 m in three holes targeting massive sulphide mineralization and a conductivity geophysical anomaly. Zones of massive magmatic sulphides, including pyrite and pyrrhotite, were intersected including 9.5 m grading 0.42% Cu and 341 ppm Ni.

Green River Gold Corp. continued work at their **Quesnel Nickel** project, including geological mapping, soil and rock sampling, and small core drill testing. By late 2023, 641 m in eight holes had been drilled using a backpack drill that yields AQTk-sized core (3.55 cm). A highlight drill intersection of 108.1 m graded 0.184% Ni, 0.009% Co, 0.10% Cr, and 21.9% Mg. Green River has applied for a permit to drill 20 holes totalling 6000 m. Serpentinized ultramafic rocks of Slide Mountain terrane are targeted for Ni-Co-Cr-Mg mineralization.

### 8.3.4. Southeast Region

DLP Resources Inc. completed drilling 868 m in three holes at their **Copper Creek** project. The Copper Creek targets are sediment hosted-stratiform copper-silver-cobalt mineralization in the middle to upper parts of the Creston Formation (Belt-Purcell basin).

DPL resources Inc. drilled one 1333 m drill hole at their **NZOU** project, but drilling was suspended because water was unavailable. The company plans to complete the hole in 2024.

At their **Vulcan** project Eagle Plains Resources Ltd. completed

drilling six holes (4256 m total). The holes targeted the historic Hilo horizon, which similar to the historic Sullivan mine, is near the Lower-Middle Aldridge Formation (Mesoproterozoic Belt-Purcell Supergroup) contact. The company refers to mineralization below the Hilo horizon discovered in 2022 and intersected again in 2023 as the Vulcan horizon. The Vulcan horizon is a thick package of variably mineralized and altered fragmental rocks up to 140 m true thickness with bedding-parallel laminations containing sphalerite, galena, pyrrhotite, arsenopyrite and chalcopyrite. Drilling was followed by borehole EM in three holes.

## 8.4. Selected base and precious metal projects

### 8.4.1. Northwest Region

In December, Surge Copper Corp. announced they had entered into a definitive purchase agreement to acquire a 100% interest in the **Berg** project from Thompson Creek Metals Company Inc., a wholly owned subsidiary of Centerra Gold Inc. A Preliminary Economic Assessment was released in July for the Berg deposit stating a net present value of \$2.1 billion and an internal rate of return of 20% for a 30-year mine life. The updated resource estimate has a total Measured and Indicated resource of 1.009 Bt grading 0.23% Cu, 0.03% Mo, and 4.6 g/t Ag, and an Inferred resource of 542 Mt grading 0.17% Cu, 0.02% Mo, and 3.7 g/t Ag. Exploration included three holes totalling 2077 m of diamond drilling, geological mapping, prospecting, and soil and rock sampling. Results included 756.0 m grading 0.26% Cu, 0.026% Mo, and 3.6 g/t Ag, including 90.0 m of 0.42% Cu, 0.004% Mo, and 2.8 g/t Ag.

Freeport-McMoRan Mineral Properties Canada Inc. has entered into a joint-venture agreement to earn up to a 75% interest in the **Burn** copper and gold porphyry project with Commander Resources Ltd. as the operator. Exploration in 2023 included 4000 m of diamond drilling, geological mapping, prospecting, and rock sampling.

The **Crown (Orion)** property is part of Goldstorm Metals Corp.'s Crown project, a 16,469 ha mineral tenure area that consists of several properties: Mackie East and West, Orion, High North, Fairweather, Delta and Electrum. The project is directly south of KSM and 4 km southwest of the Brucejack mine. The area is being targeted for precious metal veins, subaqueous hot spring VMS mineralization, and porphyry Au-Cu mineralization. Work completed included geological mapping, prospecting, and rock sampling (total of 1057 including seven channel saw-cut, 284 chip, 766 grab). Rock sampling at the Orion area discovered a new target, referred to as the Copernicus zone, a 200 m by 800 m area with polymetallic sulphide mineralization. Rock samples from Orion included a 0.25 m chip sample that graded 0.67 g/t Au, 320.0 g/t Ag, 11.96% Cu, 0.088% Co, and 0.55% Zn, and a 0.5 m channel sample grading 0.28 g/t Au, 226.0 g/t Ag, 6.95% Cu, 0.079% Co, and 0.37% Zn.

Amarc Resources Ltd.'s **Duke** project is north of Babine Lake at the edge of the Northwest and North Central Mineral

Development Office regions. Amarc completed winter diamond drilling with 11,070 m drilled in 24 holes. Work is funded by Boliden Mineral Canada Ltd. who, in November 2022, entered into an earn-in agreement for 60% ownership of the project by spending \$30 million in four years and an additional 10% by spending a further \$60 million in six years. Regional exploration in 2023 included a 5759 line-km airborne magnetic survey, a lidar survey, 68 line-km of ground magnetics, 122 line-km of IP geophysics, detailed geological mapping, prospecting, and soil and rock sampling. Results from the 2022-23 drilling program include 541.6 m grading 0.24% Cu, 0.016% Mo, 0.04 g/t Au, and 1.2 g/t Ag, 238.2 m grading 0.29% Cu, 0.019% Mo, 0.06 g/t Au, and 1.4 g/t Ag, and 125.6 m grading 0.38% Cu, 0.024% Mo, 0.08 g/t Au, and 1.8 g/t Ag.

Northern Fox Copper Inc.'s **Eaglehead** project, 50 km east of Dease Lake, is a calc-alkalic porphyry Cu-Mo-Au-Ag deposit in Jurassic rocks of Quesnel terrane. Northern Fox completed an updated mineral resource estimate. The deposit now has an Indicated resource of 70.81 Mt grading 0.221% Cu, 0.0108% Mo, 0.061 g/t Au, and 0.9 g/t Ag. Inferred resources are 242.3 Mt grading 0.192% Cu, 0.0035% Mo, 0.043 g/t Au, and 0.6 g/t Ag at a \$5.50 NSR cut off.

MTB Metals Corp.'s **George Copper** project is part of MTB's BA property. The property is 18 km northeast of Stewart. Highway 37A and the Northwest Transmission Line run through the property. This year, exploration at George Copper included three drill holes, geological mapping, and rock sampling. The three drill holes intersected sulphide mineralization consisting of pyrite, chalcopyrite, and sphalerite.

Doubleview report their **Hat** project as a gold-rich copper porphyry with silver and additional critical metals including cobalt, palladium, and scandium. For 2023, 10,320 m was drilled at Hat. Drilling results included 143.3 m grading 0.36% Cu, 0.43 g/t Au, 0.64 g/t Ag, 134.6 g/t Co, and 1.29 g/t Sc. Within this interval, 77.2 m graded 0.48% Cu, 0.64 g/t Au, 0.9 g/t Ag, 147 g/t Co, and 1.51 g/t Sc.

Kingfisher Metals has entered two option agreements to consolidate the two properties previously known as Ball Creek East and Hank into the **Hwy 37** copper-gold project. The new project extends across 36,200 ha, immediately west of Highway 37 and approximately 50 southwest of Iskut. In March, the two four-year options were completed, giving Kingfisher a 100% earn-in interest in both properties. The area is being targeted for porphyry Cu-Ag and epithermal gold deposits. Kingfisher completed 2150 m of diamond drilling in six holes.

Goliath Resources Ltd. owns a 49% interest in the **Lucky Strike** property with an option to acquire an additional 51%. The property extends across 31,511 ha, is road accessible, and is 40 km north of Terrace. The newly discovered Bullseye Au-Cu-Ag porphyry system is defined by a 1200 m by 1000 m area of alteration with porphyry outcropping at surface. Goliath completed 1000 m drilling and carried out geological mapping, prospecting, rock sampling and geophysical surveying.

American Eagle Gold Corp. carried out 7781 m of diamond drilling in ten holes at the **NAK** copper-gold project and owns a

100% option to purchase the property. Results included 302 m grading 0.53 g/t Au, 0.40% Cu, 1.27 g/t Ag, and 431 ppm Mo within 771 m grading 0.28 g/t Au, 0.25% Cu, 0.96 g/t Ag, and 207 ppm Mo. American Eagle also completed an exploration agreement with the Lake Babine First Nation to get consent for a 5-year exploration program and participation in any environmental baseline work conducted.

Enduro Metals Corporation discovered new porphyry copper-gold mineralization at their North Toe prospect on the **Newmont Lake** project. Exploration at Newmont Lake consisted of geological mapping, prospecting, rock sampling, and drone magnetic geophysical surveying. Rock sampling highlights include 0.77% Cu and 0.20 g/t Au, 0.31% Cu and 0.63 g/t Au, and 2.04% Cu and 104 g/t Ag.

Surge Copper Corp.'s **Ootsa** project contains three separate deposits: Ox, East Seel, and West Seel. The project is at the edge of a southeast-trending belt of porphyry Cu-Au deposits and prospects with four other deposits northwest of Ootsa including Lucky Ship, Berg, Whiting Creek, and Huckleberry. In 2022, a mineral resource estimate reported a Measured and Indicated resource of 438.6 Mt grading 0.18% Cu, 0.017% Mo, 0.12 g/t Au, and 2.1 g/t Ag, and an additional Inferred resource of 137.7 Mt grading 0.15% Cu, 0.015% Mo, 0.10 g/t Au, and 2.0 g/t Ag. This year, Surge's focus was mainly on their Berg project. Exploration at Ootsa consisted of geological mapping, prospecting, rock, and soil sampling.

Sanatana Resources Inc.'s **Oweegee** Cu-Au porphyry project is along Highway 37 and is crossed by the Northwest Transmission Line. This year, Sanatana carried out 8.5 line-km of 3D surface IP geophysics at Oweegee. Assays from 2022 were reported this year and highlights include 112.1 m grading 0.17% Cu, 0.22 g/t Au, and 1.10 g/t Ag, and 196 m grading 0.09% Cu, 0.13g/t Au, and 1.5g/t Ag.

Universal Copper Ltd.'s **Poplar** project is road accessible, extends across an area of 61,566 ha, and has a high voltage hydro-electric line crossing through it. The property is in a historic mining region south of Houston and 35 km north of the Huckleberry mine. The project has an Indicated resource of 152.3 Mt grading 0.32% Cu, 0.009% Mo, 0.09 g/t Au, and 4.95 g/t Ag, and an Inferred resource of 139.3 Mt grading 0.29% Cu, 0.005% Mo, 0.07 g/t Au, and 4.95 g/t Ag calculated at a 0.20% Cu grade cut off (September 2021). Universal Copper completed a 1933 line-km airborne magnetotelluric survey.

The **Schaft Creek** project is owned by Teck Resources Limited (75%) and Copper Fox Metals Inc. (25%). The Schaft Creek porphyry deposit has a Measured and Indicated resource (September 2021) of 1.346 Bt grading 0.26% Cu, 0.16 g/t Au, 0.017% Mo, and 1.25 g/t Ag. Inferred resources are 343.6 Mt grading 0.17% Cu, 0.11 g/t Au, 0.013% Mo, and 0.84 g/t Ag. In 2023, focus was on geoscience and engineering, geotechnical and environmental data collection, community support, infrastructure upgrades, and permitting. Teck completed geotechnical drilling totalling 9000 m. Environmental baseline data were collected for future permit regulatory requirements.

The **Silvertip** mine property remains on care and maintenance, but Coeur Mining Inc. continues to work on the project. It is redeveloping the geological model, identifying new structures and carbonate-replacement deposit manto and chimney mineralization, and expanding the resource in all directions. An updated mineral resource estimate was released at year-end 2022 including a Measured and Indicated resource containing 60.12 Moz Ag, 1.365 Blbs Zn, and 722.2 Mlbs Pb.

Coeur's 2023 exploration program included 30,000 m of drilling in 85 holes. The focus of drilling was resource expansion and step-outs at the Southern silver zone, to test underneath the Discovery zone, and to define a resource at the Saddle zone. More manto mineralization was found at the Camp Creek west zone, Saddle zone, and the Southern Silver zone. Drilling indicated that manto mineralization at the Saddle zone potentially connects with the manto in the Discovery zone and to the Southern Silver zone chimney mineralization. Drilling intersected chimney/feeder structures beneath the currently known Southern Silver zone. Highlight results included 12 m grading 459.6 g/t Ag, 15.1% Zn, and 8.7% Pb, and 6.2 m grading 778.3 g/t Ag, 13.6% Zn, and 14.7% Pb.

Newmont Corporation's Tatogga project includes the **Saddle North** deposit. The deposit has an Indicated resource (August 2020) of 298 Mt grading 0.28% Cu, 0.36 g/t Au, and 0.8 g/t Ag, and an Inferred Resource of 543 Mt grading 0.25% Cu, 0.31 g/t Au, and 0.7 g/t Ag. Newmont worked with the Tahltan Heritage Resources Environmental Assessment Team on a Tahltan land-use study and supported a local infrastructure study in Iskut through the Tahltan Industry Working Group.

MTB Metals Corp.'s **Telegraph** project consists of multiple properties. Mountain Boy has a 60% option on the DOK property, 100% interest in the DOKX-Yeti property, and 100% interest in ground that they staked. Mountain Boy carried out 2142 m of drilling in four holes, geological mapping, an IP geophysical survey, prospecting, and soil and rock sampling at the DOK trend. Highlight drill results include 133.8 m grading 0.23% Cu, 0.11 g/t Au, 1.58 g/t Ag, and 20.63 ppm Mo, including 22.2 m grading 0.31% Cu, 0.21 g/t Au, 2.23 g/t Ag, and 7.96 ppm Mo. Another 6 m interval graded 0.11% Cu, 1.11 g/t Au, 4.54 g/t Ag, and 98.05 ppm Mo.

Brixton Metals Corporation continued to drill porphyry copper mineralization at the Camp Creek target of their Thorn project. Of the 16,730 m of diamond drilling completed in 2023, most was completed at **Thorn (Camp Creek)** (10,100 m in nine holes). Highlight results include 1202 m grading 0.228% Cu, 0.05 g/t Au, 2.27 g/t Ag, and 233 ppm Mo, including 630 m grading 0.336% Cu, 0.07 g/t Au, 2.74 g/t Ag, and 309 ppm Mo, which also included 109 m grading 0.511% Cu, 0.08 g/t Au, 3.7 g/t Ag, and 498 ppm Mo. Another drill hole had a 34 m interval grading 0.333% Cu, 0.09 g/t Au, 2.06 g/t Ag, and 243 ppm Mo. At other targets, several rock samples returned high-grade copper-gold mineralization including 33.3% Cu, 7.0 g/t Au, and 238 g/t Ag at the East Target, 39.0 g/t Au and 65.9 g/t Ag at the South Target, and 13.0% Cu, 0.9 g/t Au, and 30.3 g/t Ag at the Plum target. More than 48 rock samples returned 1% Cu or greater.

Huckleberry Mines Ltd.'s **Whiting Creek** property is 8 km north of the Huckleberry mine, which is currently on care and maintenance status. Chalcopyrite, molybdenite, and pyrite mineralization occurs as veinlets and disseminations. The best grades of mineralization are in zones of potassic alteration. In addition to geological mapping and geophysical surveys, 2100 m of drilling (seven holes) was completed. Highlight results included 162.5 m grading 0.33% Cu and 1.64 g/t Ag, and 52.6 m grading 0.45% Cu and 1.29 g/t Ag.

#### 8.4.2. North Central Region

For their **Akie** project, ZincX Resources Corp. carried out general infrastructure maintenance and, to maintain compliance of environmental permits, stream and water well sampling. They also announced that they had optioned their **Kechika North** project to an arm's-length third party. The project includes the Kwad, Weiss, Bear/Spa, Driftpile South, Saint, and Thro properties.

Evergold Corp. filed a NI 43-101 technical report and completed 947 m of drilling in three drill holes for their **DEM** project. Drilling was carried out in an area initially identified as having porphyry-style alteration. Subsequent work by industry including soil sampling, mapping, airborne magnetic, and ground IP surveys further defined the current target area.

Alpha Copper Corp. released 2022 drilling results for their **Indata** project. Highlights included 170.7 m grading 0.23% Cu and 26.0 m grading 0.47% Cu. The company also released the results of a 405 line-km airborne magnetic survey flown over an area of 44.1 km<sup>2</sup>.

Amarc Resources Ltd. completed airborne and surface exploration on its **Joy** project to further define targets for planned 2024 drilling. Amarc is the operator, but the project is funded by Freeport-McMoRan Mineral Properties Canada Inc. who is earning into a potential 70% of the project. The company did 638 line-km of airborne magnetotelluric geophysics, 30 km<sup>2</sup> of ground-based MT geophysics, and 72.5 line-km of IP ground geophysics, and undertook geologic mapping. Soil (1788) and rock (769) sampling was also carried out.

Pacific Ridge Exploration Ltd. completed 19 diamond drill holes totalling 10,284 m at their **Kliyul** project. Highlight results included 305.5 m grading 0.23% Cu, 0.51 g/t Au, and 1.22 g/t Ag within 540.3 m grading 0.19% Cu, 0.36 g/t Au, and 1.09 g/t Ag. The company increased the size of the project area from approximately 52 km<sup>2</sup> to approximately 92 km<sup>2</sup>. The new mineral claims are contiguous and adjoin the western and southern sides of the previous claims.

NorthWest Copper Corp. announced the results for a positive Preliminary Economic Assessment of the Kwanika-Stardust project. The project involves the development of three copper-gold deposits known as Kwanika Central, Kwanika South, and Stardust. For **Kwanika**, a 22,000 tpd operation is proposed, producing a high-quality copper concentrate with significant gold and silver byproduct credits. For the Kwanika Central open pit with a cut off US\$ 8.21/t, the company reported a Measured and Indicated resource of 66.6 Mt grading 0.26% Cu,

0.25 g/t Au, and 0.92 g/t Ag and an Inferred resource of 4.1 Mt grading 0.15% Cu, 0.15 g/t Au, and 0.58 g/t Ag. For Kwanika Central underground with a cut off US\$ 16.41/t, the company reported a Measured and Indicated resource of 36.8 Mt grading 0.51% Cu, 0.62 g/t Au, and 1.60 g/t Ag. The Inferred resource for an open pit at Kwanika South at a cut off US\$ 8.21/t is 25.4 Mt grading 0.28% Cu, 0.06 g/t Au, and 1.68 g/t Ag. For an underground operation at **Stardust** at a cut off US\$ 88.00/t, the company reported an Indicated resource of 1.6 Mt grading 1.49% Cu, 1.63 g/t Au, and 30.1 g/t Ag. The Inferred resource is 4.1 Mt grading 1.00% Cu, 1.38 g/t Au, and 22.8 g/t Ag.

Northwest Copper Corp. released results from their 2022 **Lorraine** project drilling, which encountered multiple intersections of copper, gold, and silver mineralization outside of the resource shell. Highlight assays include 45.85 m grading 0.49% Cu, 0.19 g/t Au, and 3.6 g/t Ag, 46.90 m grading 0.59% Cu, 0.25 g/t Au, and 4.2 g/t Ag, and 102.80 m grading 0.28% Cu, 0.05 g/t Au, and 1.3 g/t Ag.

Centerra Gold Inc. carried out brownfield exploration at their **Mount Milligan (Brownfield)** project. They did 14,537 m of diamond drilling in 26 holes. They also carried out work on their **Mount Milligan (Greenfield)** project where they completed 16 diamond drill holes totalling 6290 m and collected 203 soil samples.

Cascadia Minerals Ltd. reported that they carried out prospecting, soil sampling and a TITAN geophysical survey at their **Pil** project.

Pacific Ridge Exploration Ltd. was active on the **RDP** project with 1428 m of diamond drilling in three holes. Two holes were completed on the Day target and one hole on the Bird target.

Pacific Ridge was the operator, but the program was funded by Antofagasta Minerals S.A. Highlight results included 62 m grading 0.16% Cu, 0.06 g/t Au, and 0.84 g/t Ag at Day and 110 m grading 0.09% Cu, 0.20 g/t Au, and 0.31 g/t Ag at Bird. Bird is a new discovery of porphyry copper-gold mineralization.

#### 8.4.3. South Central Region

GSP Resource Corp. has an option to earn a 100% interest in the **Alwin Mine** project. Alwin is a historic Cu-Ag-Au underground mine that produced from 1916 to 1981. It is immediately west of Teck Resources Limited's Highland Valley Copper Mine. GSP completed 640 m of diamond drilling in five holes in October, 2023. Visible pyrite, chalcopyrite, bornite, and molybdenite were reported in altered intrusive rock in all holes. Alwin is a porphyry Cu-Ag-Au-Mo deposit in the Guichon Creek batholith.

Recharge Resources Ltd. drilled 900 m in three holes at the **Brussels Creek** project. A highlight drill intersection assayed 3.5 m grading 5.08 g/t Au. Approximately 10 km west of New Gold Inc.'s New Afton mine, Brussels Creek is considered an alkalic porphyry Cu-Au target.

Kodiak Copper Corp. continued exploration at the **MPD** project with IP geophysical surveys, soil geochemistry, trenching, and drilling. Kodiak drilled 18,562 m in 33 holes, mostly between the Axe, West, and South zones in the southern



part of the property and the Man zone in the northern part. Highlight intersections from the West zone include 158.0 m grading 0.28% Cu, 0.28 g/t Au, and 0.83 g/t Ag, and 16.0 m grading 0.93% Cu, 0.64 g/t Au, and 3.20 g/t Ag. Known mineralization in the West zone has been extended to 300 m by 300 m on surface, and to a depth of more than 800 m. Notable features include intersections of narrow higher grade structurally controlled precious metal mineralization and Cu-Au mineralization in hydrothermal breccia. A highlight intersection from the Man zone was 116.0 m grading 0.34% Cu, 0.28 g/t Au, and 1.71 g/t Ag. One hole intersected Cu-Au mineralization from surface to a depth of 995 m. Kodiak acquired 11 claims totalling 7800 ha contiguous with the MPD property. The MPD property hosts a series of alkalic porphyry Cu-Au targets, including the Man, Prime, and Dillard.

Taseko Mines Limited is confirming with the British Columbia Environmental Assessment Office (EAO) and the Impact Assessment Agency of Canada that an environmental assessment certificate is required for the **Yellowhead** project. Taseko is preparing to enter the environmental assessment process by making engineering enhancements to the project and engaging with First Nations communities. In 2020, Taseko completed a Feasibility Study on the project that outlined Proven and Probable reserves at 817 Mt at 0.28% Cu, 0.03 g/t Au, and 1.3 g/t Ag at a 0.17% Cu cut off. The mill would process 90,000 tpd with a 25-year mine life. The Yellowhead project is considered a remobilized polymetallic volcanogenic massive sulphide deposit.

Mineralization is hosted in the 'EBA' mafic to intermediate volcanic rock (Devonian to Mississippian) unit of the Eagle Bay assemblage (Lower Cambrian to Mississippian) metamorphosed sedimentary and volcanic rock package.

#### 8.4.4. Southwest Region

Cascade Copper Corp. reported reconnaissance work at its recently acquired **Fire Mountain** property. A recent discovery of porphyry mineralization and alteration returned values of 14.96 g/t Au, 1.58% Cu and 52 g/t Ag in quartz-magnetite-chalcocopyrite-epidote veins. Most of the property is subject of an option agreement with vendor Torr Resources Corp.

Sasquatch Resources Corp. reported results of portable drilling for their **Mount Sicker** project. Results included 7.55 m grading 5.4 g/t Au, 7.5% Cu, 125 g/t Ag and 5.9% Zn. A gravity survey was scheduled for November. The company is also investigating reprocessing waste rock and tailings from historic mining. The project hosts several past-producing VMS deposits.

Northisle Copper and Gold Inc. reported drilling at the Northwest Expo, Goodspeed, and Pemberton Hills targets of their **North Island** project, with results including 130 m grading 1.65 g/t Au and 0.33% Cu at Northwest Expo and conducted a late 2023 round of drilling (year-end estimate of more than 10,000 m in 24 holes) and ground magnetic surveys at Northwest Expo and Goodspeed. Of more than seven Cu-Au-Mo±Re porphyry targets and deposits spanning approximately

40 km west-northwest of the past-producing Island Copper mine, two central deposits have resource estimates. Hushamu has an Indicated resource of 472.9 Mt grading 0.20% Cu, 0.23 g/t Au, 0.008% Mo, and 0.35 ppm Re plus a large Inferred resource. Red Dog has an Indicated resource of 54.5 Mt grading 0.22% Cu, 0.31 g/t Au, and 0.004% Mo.

Alpha Copper Corp. reported results from 2000 m of drilling done at the North Lake zone of the **Okeover** project in late 2022. Longer mineralized intersections included 78.67 m 0.27% Cu, 0.02 g/t Au, 1.00 g/t Ag, 82.8 ppm Mo, and 134.5 m 0.20% Cu, 0.01 g/t Au, 0.84 g/t Ag, and 40.7 ppm Mo. Alpha terminated its option agreement, but subsequently closed a new deal with Northwest Copper Corp. for 100% of the property in 2023. The North Lake zone is at the northern end of a north-northwest trending string of porphyry Cu-Mo targets related to younger intrusions in Cretaceous diorite-granodiorite of the Coast Plutonic complex.

### 8.5. Selected rare earth element projects

#### 8.5.1. North Central Region

Defense Metals Corp.'s **Wicheeda** carbonatite is a deformed intrusion that hosts light rare earth elements (LREE) in the Kechika Group. The core of the intrusion is a dolomite carbonatite, which transitions outward to a calcite carbonatite. Hydrothermal veins and plugs in the dolomite carbonatite are mineralized with REE fluorocarbonates, ancylite (cerium, lanthanum) and monazite (cerium, lanthanum, neodymium). Minor concentrations of niobium are also present. Defense Metals Corp. filed an updated NI 43-101 mineral resource estimate on the project. At a cut off grade of 0.5% Total Rare Earth Oxide (TREO), they reported a Measured resource of 6.4 Mt averaging 2.86% TREO, a 27.8 Mt Indicated resource averaging 1.84% TREO, and a 11.1 Mt Inferred resource averaging 1.02% TREO. The company commenced phase 2 of its planned infrastructure and open pit geotechnical drilling required to complete a Preliminary Feasibility Study. Work included 16 sonic geotechnical overburden drill holes totalling 225.5 m, 20 overburden geotechnical test pits totalling 76.8 m, six diamond drill holes totalling 1182 m, shipment of a 2700 kg sample for further metallurgical testing, and environmental test work on anticipated mine waste rock. The company also shipped samples of mixed rare earth oxide and mixed rare earth carbonate to interested parties allowing the recipients to independently verify the high-quality of REE products from the Wicheeda deposit. The samples were generated during 2023 hydrometallurgical piloting test work performed on concentrate produced by earlier flotation pilot plant testing of a 26-tonne bulk sample.

### 8.6. Selected coal projects

#### 8.6.1. Northeast Region

Colonial Coal continued to work on their **Gordon Creek (Flatbed)** project. The project has 298 Mt of Inferred metallurgical coal considered as underground mineable. They also continued to work on their **Huguenot** project.

Measured and Indicated surface mineable coal resources total 132.0 Mt, with an additional Inferred resource of 0.5 Mt. CTI Plus Resources Ltd. carried out a large diameter core drilling program to obtain a bulk sample at their **Rocky Creek** project. A total of fourteen 9-inch core holes were drilled, totalling 24 m. Sampling is to provide information on coal washability and coal quality.

### 8.6.2. South Central Region

In 2023, Basin Mine Holdings Ltd. conducted sampling and testing of coal material at the **Basin Coal** project, an historic producing mine in the Similkameen coalfields with exploration dating back to 1908 and operations to 1912. Basin Mine Holdings Ltd. is a private company that gained control of the Basin Coal project in 2021. The project is permitted to produce up to 350,000 tpy. Infrastructure includes a 250 tph operating Parnaby wash plant. An historic resource calculation from July 2009 noted Measured and Indicated resources of 82.3 Mt and Inferred 35 Mt at a cut off stripping ratio of 8:1. The main seam has an average thickness of 17 m, and the lower seam 7.4 m. The coal is classified as high volatile bituminous and C thermal coal considered appropriate for metallurgical coking.

### 8.6.3. Southeast Region

Teck Coal Limited continued with exploration at their **Fording River Extension** project. The project has the potential to add 19 years to the current 27-year Fording River mine life.

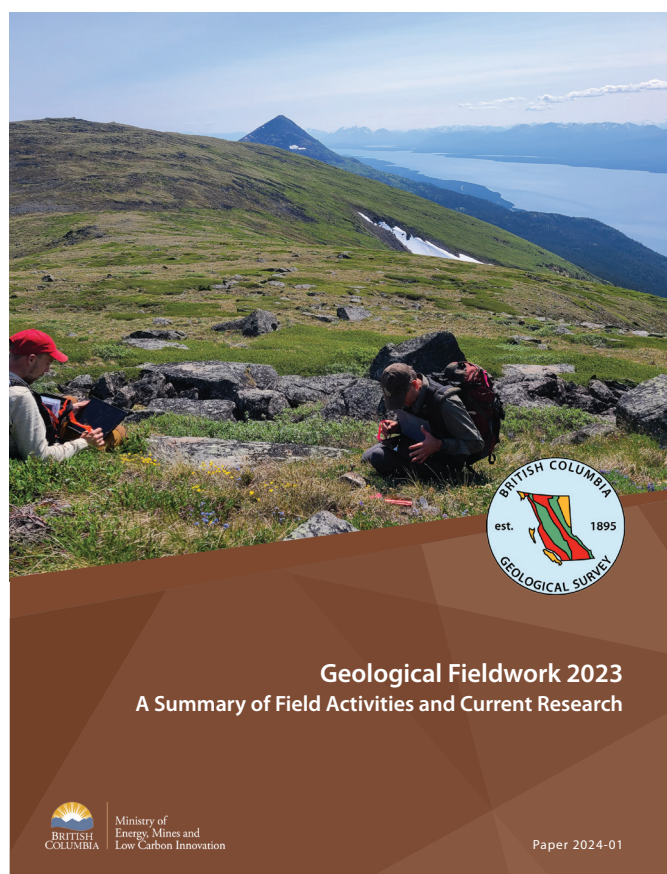
## 8.7. Selected industrial mineral projects

### 8.7.1. Southeast Region

Homerun Resources Inc. mapped and sampled at their **Tatooine Silica** property. Twenty-eight samples were taken with 27 averaging 98.8% SiO<sub>2</sub>. Two new silica zones were identified in structural blocks, one of which is 170 m thick and extends along strike for at least 300 m. The new zones are east of the old Brisco quarry on the property.

## 9. The British Columbia Geological Survey

Headquartered in Victoria, the British Columbia Geological Survey (BCGS) is part of the British Columbia Ministry of Energy, Mines and Low Carbon Innovation. As the steward of geoscience and mineral resource information in the province, the Survey has role in stimulating mineral exploration, attracting investment, informing decisions with technical information, and providing continuous research based on more than a century of corporate memory. The Survey is the primary repository for provincial geoscience knowledge. Maps, reports, and databases are freely available online and are public resources for First Nations and stakeholder groups including local communities, the minerals industry, public safety agencies, environmental scientists, research organizations, and government agencies (Fig. 12). Current research programs continue to define the geological evolution and natural resources of the province, generating knowledge and data to support land use and resource management decisions that balance economic, environmental,



**Fig. 12.** Geological Fieldwork contains peer-reviewed papers that summarize field activities and current research by the British Columbia Geological Survey.

and community interests. A particular focus is providing public geoscience to support the growth of British Columbia as a competitive jurisdiction for mineral exploration, boosted by the recent attention of policy makers and industry to critical minerals. By connecting government with the minerals industry and local communities, the Survey supports the growth of British Columbia as a competitive jurisdiction for mineral exploration.

Like most geological survey organizations around the world, critical minerals, which are essential for low-carbon technologies, were a major theme for the Survey in 2023. To inform the Critical Minerals Strategy being developed by the provincial government, the Survey compiled a critical minerals atlas as the initial step in evaluating the critical mineral endowment of the province and in building awareness of critical mineral opportunities for the exploration and mining industries. The Survey also began field projects directed at assessing opportunities through mineral system studies in regions known to contain critical minerals. These studies are primarily focused on assessing potential critical mineral co- and by-products in the mineral systems that host major producing mines and will assess some of the more underexplored mineral systems in British Columbia such as carbonatites and iron skarns. Both to aid in the search for critical minerals and to support current

land-use decisions, the Survey has revitalized its mineral potential mapping work of the 1990s. This new work takes advantage of about 30 years of new data, knowledge, advances in GIS applications, and computer power to enable statistical analysis of spatial data using weights of evidence modelling. Foundational mapping programs continued in the ‘Golden Triangle’ and near the British Columbia-Yukon border. Analysis of spectrometer, magnetometer, and lidar data acquired using remotely piloted aircraft system (RPAS, or drone) platforms in the Interior Plateau also continued.

The Survey continues to update data products, such as compiled geochemical and geochronological datasets. The provincial geological sample archive, which was relocated and fully catalogued in 2022, is being used to upgrade historical analytical results with modern high-precision techniques and to conduct new rock-physical property and whole rock isotopic studies. Geoscience databases, including MINFILE, COALFILE, Property File, and the Assessment Reports Indexing System (ARIS) continue to expand, digital data are being captured from assessment reports, and geological map compilations are being integrated into the British Columbia Digital Geology database. The Survey has been making efforts to build a geoscience spatial data infrastructure (gSDI) to manage all geological and mineral resource data together as sub-systems in the same environment using common data and system components and well-defined interfaces across service boundaries.

The Survey remains an organization in transition. In the last year, the Survey has embarked on a hiring campaign to fill vacancies that resulted from retirements, departures, and growth. BCGS is currently staffed by 38 permanent staff; five vacancies are at various stages of competition. BCGS continues to support training the next generation of geoscientists by its summer field assistant hiring program and by supporting graduate student projects.

## 10. Foreign investment initiatives

Opportunities exist for companies to attract foreign investment using government services and staff. The province participates in international investment missions showcasing mineral and coal opportunities. If you are interested in profiling your projects or investment opportunities in upcoming events, connect with the Mineral Development Office in Vancouver for more information.

## 11. Concluding remarks

The forecasted value of total provincial mining production is \$15.9 billion down from last years revised value of \$17.5 billion. Total exploration expenditures were \$643.5 million down from the previous years record of \$740.4 million. Lower mining production was primarily due to an overall drop in average coal prices for the year. Exploration financings that had rebounded post COVID were affected by economic uncertainties and global conflicts. Despite this, new discoveries, excellent exploration results, and acquisitions and earn ins confirm

British Columbia’s reputation as a premier jurisdiction for mineral exploration and mine development opportunities. The province continues to attract investment by large multinational mining companies. Newmont Corporation took over Newcrest Mining Limited, for US\$17 billion. Newcrest’s assets in British Columbia included the Red Chris Mine (70%) and the Brucejack Mine (100%). Hudbay Minerals Inc. bought Copper Mountain Mining Corporation and a 75% interest in the Copper Mountain mine for an estimated transaction value of \$US439 million. Taseko Mines Limited increased ownership interest in Gibraltar to 87.5% through the purchase of 12.5% interest from Sojitz Corporation. Teck Resources Limited announced it agreed to sell its steelmaking coal business, Elk Valley Resources, for US \$9 billion. If the deal is approved by regulatory bodies, then Glencore plc will be the majority owner with 77%; Nippon Steel Corporation will own 20% and POSCO 3%.

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# Exploration and mining in the Northwest Region, British Columbia



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## 1. Introduction

The Northwest Region has a long history of mining and is prospective for a wide range of commodities including precious metals, base metals, and coal. This region includes about 263,000 km<sup>2</sup> of British Columbia, approximately 25% of the province (Fig. 1). Mineral exploration is mostly concentrated in a loosely defined area in the northern part of the region popularly known as the ‘Golden Triangle’. Several other exploration projects were in operation to the southeast. Exploration remained strong for copper and precious metals in the Northwest Region. Advanced projects supported by mid-tier and major companies remained stable and make up a large portion of the exploration budget. Decreased financing was noticed in grassroots and early-stage exploration projects for junior companies due to lower metal prices and market uncertainties with higher interest rates.

Estimates for exploration expenditures, drilling programs, and other metrics were captured in the British Columbia Mineral and Coal Exploration Survey, a joint initiative of the Province of British Columbia Ministry of Energy, Mines and Low Carbon Innovation, the Association for Mineral Exploration in British Columbia, and EY LLP. For the Northwest Region, exploration expenditures are estimated at \$444.1 million. The estimate for exploration drilling is 439,610 m (Clarke et al., 2024; EY LLP, 2024).

The Northwest Region contains two operating metal mines (**Brucejack** and **Red Chris**). The region also has six proposed metal mines (**Dome Mountain**, **Galore Creek**, **Kitsault**, **KSM**, **Kutcho**, and **Red Mountain**), and one proposed coal mine (**Tenas**). One mine development project is currently under construction (**Premier Gold**). Numerous grass roots, early- to advanced-stage projects were tracked, and selected projects are discussed below. Large industrial projects in the region are driving demand for aggregate, and placer gold mining continues throughout the region. The region has a long history with small-scale jade mining, both in situ and placer. However, in 2021 a provincial government Order in Council was announced restricting jade mining which has been extended to May 11, 2024.

Noteworthy acquisitions, earn ins, and proposed mergers

were announced in 2023. The most significant is the acquisition of Australian owned Newcrest Mining Limited by an American company, Newmont Corporation, for \$17 billion. Another large merger was Benchmark Metals Inc. and Thesis Gold Inc. merging under the Thesis Gold Inc. title, combining the adjacent **Ranch** and **Lawyers** precious metals projects. Some large financings were completed such as Skeena Resources Limited receiving \$84.2 million and net smelter royalty agreements for a total of \$108 million at Eskay Creek, Tudor Gold Corp.’s financings totalling \$29 million, and Seabridge Gold Inc. completing a 1.2% net smelter royalty agreement with Sprott Streaming for US\$150 million at the **KSM** project.

## 2. Geological overview

Metallogeny in British Columbia is intimately linked to the tectonic evolution of the Canadian Cordillera, first as an accretionary orogen consisting of allochthonous terranes that were welded to, and deformed with, the western margin of Ancestral North America, primarily in the Jurassic, then as the site of post-accretionary tectonism and magmatism (e.g., Nelson et al., 2013). The Northwest Region provides a transect across the Cordilleran orogen (Fig. 1) with several distinct tectonostratigraphic terranes. From east to west the region is underlain by: 1) autochthonous and parautochthonous carbonate and siliciclastic strata deposited on the flank of Ancestral North America (Laurentia); 2) the Intermontane terranes, including the Slide Mountain terrane (back-arc basin); the Yukon-Tanana terrane (a rifted Devonian pericratonic arc); the Quesnel and Stikine volcanic arc terranes (formed outboard of Ancestral North America starting in the Late Paleozoic and accreted in the Middle Jurassic); and the Cache Creek oceanic terrane, which intervenes between Quesnellia and Stikinia; 3) the Alexander terrane; 4) post-accretionary rocks; and 5) younger cover rocks. The allochthonous terranes initially accreted to each other and to western North America in the Jurassic. Since then, the region has been intruded by post-accretion plutonic suites and covered, in part, by Jurassic and younger syn- and post-accretionary siliciclastic deposits. For details about the geology, metallogeny, and tectonics of the Northwest Region see Nelson et al. (2013) and Colpron and Nelson (2021).

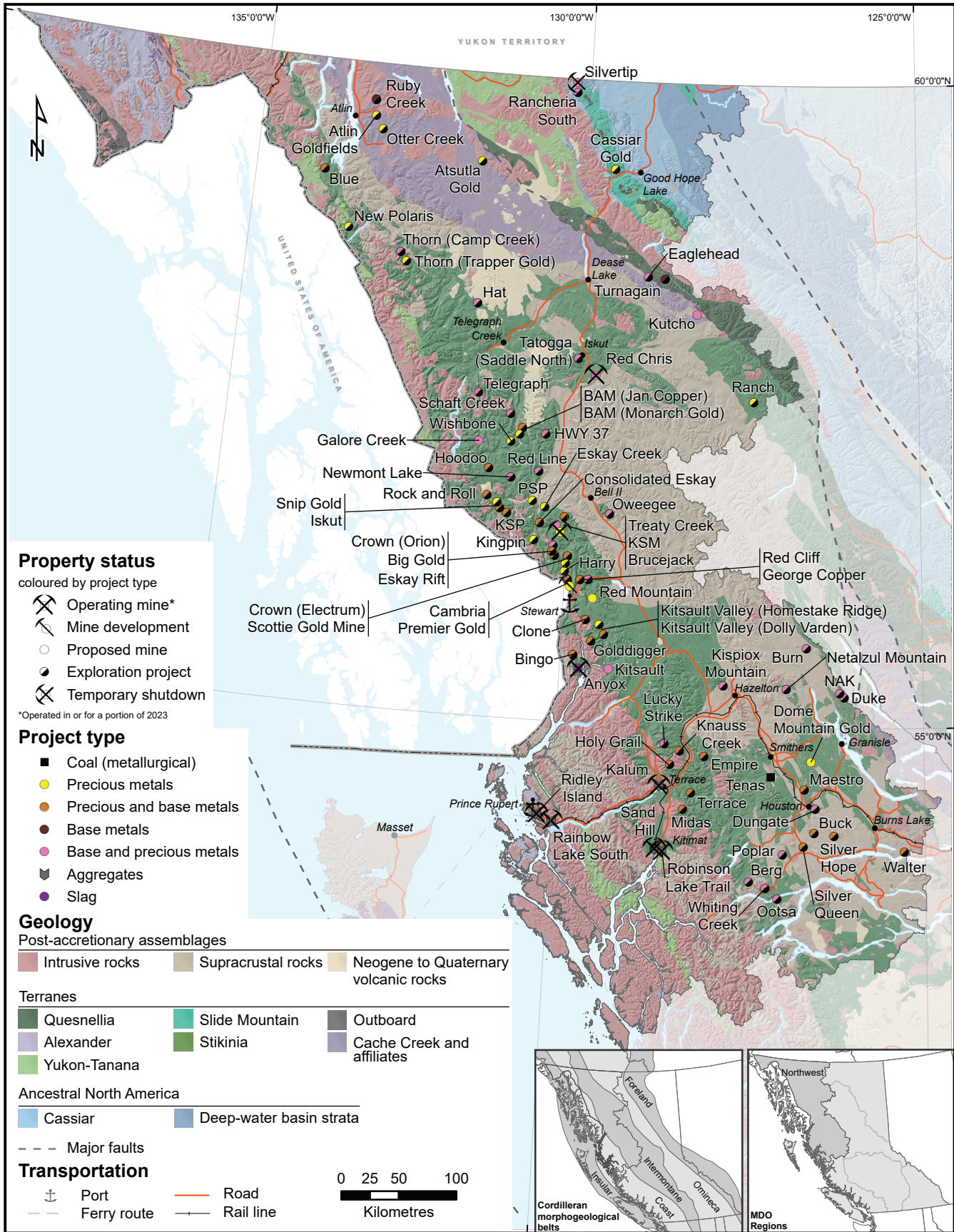


Fig. 1. Mines, proposed mines, and selected exploration projects, Northwest Region, 2023. Terranes after Nelson et al. (2013).

### 3. Mines and quarries

In 2023, two metal mines operated in the Northwest Region (**Brucejack** and **Red Chris**). One industrial mineral mine (**Anyox**) and numerous aggregate operations supplied large-scale industrial projects and local townships throughout the region (Fig. 1; Tables 1, 2). Placer gold mining is ongoing, predominantly in the Atlin and Turnagain areas.

#### 3.1. Metal mines

The **Brucejack** and **Red Chris** mines operated in 2023 (Fig. 1; Table 1).

##### 3.1.1. Brucejack (Newmont Corporation)

In November, Newmont Corporation finalized the acquisition of Newcrest Mining Limited and assets included the **Brucejack** gold-silver mine. The underground mine is accessed by a 75 km all-season mining road off Highway 37. The last 12 km of the road is across the Knipple glacier. A 57 km-long transmission line built specifically for the mine supplies power. Production for the first three quarters totalled 214,023 oz of Au at a head grade of 6.3 g/t Au and 382,670 oz Ag. Work is in progress to revise ore resources and reserves estimates. As of June 2023, Newcrest reported an Indicated mineral resource estimate totalling 19 Mt grading 13.0 g/t Au and 34 g/t Ag. Probable reserves totalled 14 Mt grading 8.4 g/t Au and 32 g/t Ag.

The Brucejack ore body incorporates the Valley of the Kings (VOK) and West zones. Several other mineralized zones in phyllic-altered rocks extend across an area 5 km by 1.5 km (from south to north: Bridge, Waterloo, Shore, SG, Gossan Hill, Golden Marmot, and Hanging Glacier). Interpreted as an intermediate-sulphidation epithermal gold-silver deposit, mineralization occurs in sheeted veins, breccia veins, and vein stockworks that cut Lower Jurassic metasedimentary and volcanic rocks of the Hazelton Group. Gold and silver at both the VOK and West zones are mainly in electrum (Fig. 2) and lesser sulphosalts. Visible gold is common. Chalcopyrite, galena, and sphalerite are also common. Brownfield surface

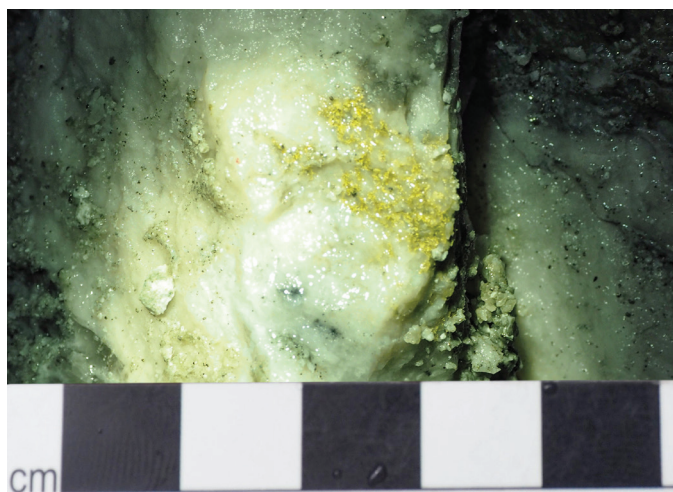


Fig. 2. Electrum in quartz-carbonate vein at the Brucejack mine (Newmont Corporation).

exploration at Brucejack totalled 15,300 m in 25 diamond drill holes. Drilling at the 1080 HBx and Eastern Promises zones has expanded the VOK deposit, confirming the continuity of high-grade mineralization at depth, with potential for more resource growth at the VOK deposit. Results include 1.0 m grading 5370 g/t Au, a 38.5 m interval grading 49 g/t Au, and an 18 m interval grading 306 g/t Au.

##### 3.1.2. Red Chris (Newmont Corporation 70%, Imperial Metals Ltd. 30%)

In November, Newmont Corporation finalized the acquisition of Newcrest Mining Limited. Assets included the **Red Chris** open-pit copper-gold mine. The mine is 17 km east-southeast of the community of Iskut and is accessed from Highway 37. The Northwest Transmission Line powers the site. Production to the end of the third quarter of 2023 totalled 34,224 oz Au, 73,186 oz Ag, and 39.072 Mlbs Cu. A new mineral resource estimate (June 2023) was released with 314 Mt of Measured and Indicated grading 0.37% Cu and 0.31 g/t Au, and 10.9 Mt of Inferred grading 0.30% Cu and 0.25 g/t Au. The Red Chris underground block cave resource is reported as 957 Mt of Measured and Indicated grading 0.40% Cu and 0.46 g/t Au, and 257 Mt of Inferred grading 0.30% Cu and 0.25 g/t Au.

The deposit is hosted by the Red stock (U-Pb zircon 203.8 Ma; Rees et al., 2015), which intrudes and alters Upper Triassic Stuhini Group rocks, and is faulted against Middle Jurassic rocks of the Bowser Lake Group. Rees et al. (2015) described multiple igneous phases, alteration, and controls on mineralization.

Drilling at Red Chris totalled 29,480 m with focus on continuity and extension of the resource at the East Ridge deposit. Newmont continues to intersect high-grade mineralization with results such as 406 m grading 1.0% Cu and 1.1 g/t Au including 248 m grading 1.4% Cu and 1.6 g/t Au. A 274 m interval graded 0.45% Cu and 0.67 g/t Au including 42 m grading 1.1% Cu and 1.5 g/t Au. Future block cave underground mine operation plans are on track with early works advancing.

#### 3.2. Coal mines

In 2023, no coal mines operated in the Northwest Region. The **Tenas** project is listed as a proposed mine (Section 6.2.1.).

#### 3.3. Industrial mineral mines and quarries

Tru-Grit Abrasives (Fig. 1; Table 2) is recycling slag at the historic **Anyox** site, where slag was created from smelting copper. The slag is mined, cleaned, separated, and barged south for roof shingles and sand blasting. The material is also used to add iron into Portland cement. The operation has been active for more than 30 years and more than 2.5 Mt has been reclaimed from the 4.5 Mt abandoned by smelting operations in the 1930s.

#### 3.4. Aggregate and industrial rock quarries

Numerous aggregate and quarry operations supply sand and gravel and blasted stone for large-scale industrial projects and

**Table 1.** Metal mines, Northwest Region.

Mine	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production	Reserves	Resource	Comments
<b>Brucejack</b>	<b>Newmont Corporation</b>	Au, Ag; Epithermal; 104B 193	285,364 oz Au, 510,227 oz Ag	Pr: 14 Mt 8.4 g/t Au, 32 g/t Ag	I: 19 Mt 13.0 g/t Au, 34 g/t Ag  Inf: 9.6 Mt 13.0 g/t Au, 13.0 g/t Ag	15,300 m in 25 diamond drill holes. Drilling at the 1080 HBx and Eastern Promises zones have expanded the VOK deposit, confirming the continuity of high-grade mineralization at depth with potential for more resource growth at the VOK deposit. Results include 1.0 m grading 5370 g/t Au, a 38.5 m interval grading 49 g/t Au, and an 18 m interval grading 306 g/t Au.
<b>Red Chris</b>	<b>Newmont Corporation 70%, Imperial Metals Corporation 30%</b>	Cu, Au, Ag; Hybrid calc-alkalic to alkalic porphyry; 104H 005	52.1 Mlb Cu, 45,627 oz Au, 97,581 oz Ag	Open pit Pr: 42 Mt 0.47% Cu, 0.40 g/t Au  Underground Pr: 585 Mt 0.45% Cu, 0.55 g/t Au	Open pit: M+I: 314 Mt 0.37% Cu, 0.31 g/t Au  Inf: 10.9 Mt 0.31% Cu, 0.26 g/t Au  Underground block cave: M+I: 957 Mt 0.40% Cu, 0.46 g/t Au  Inf: 257 Mt 0.30% Cu, 0.25 g/t Au	29,480 m of diamond drilling with focus on continuity and extension of the resource at East Ridge deposit. Drilling continued to intersect high-grade mineralization with results such as 406 m grading 1.0% Cu and 1.1 g/t Au including 248 m grading 1.4% Cu and 1.6 g/t Au. A 274 m interval graded 0.45% Cu and 0.67 g/t Au including 42 m grading 1.1% Cu and 1.5 g/t Au. Block cave underground mine operation plans are on track with early works advancing.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

municipalities throughout the region (Fig. 1; Table 2). Several large aggregate pits operate near Kitimat (**Robinson Lake Trail** and **Sand Hill**) and others operate near Prince Rupert (**Ridley Island** and **Rainbow Lake South**). Owned by the Kitsumkalum First Nation, **Kalum** is an industrial rock quarry. It is the only pit in the region with a rail spur, and it supplies the Canadian National Railway Company with ballast.

#### 4. Placer operations

Placer gold mining operations have been ongoing for more than a century in the Northwest Region and continue today with a focus in the Atlin and Turnagain areas and, to a lesser extent, north of Dease Lake and near Cassiar. Due to the large number of operations and difficulty in obtaining information, these projects are not tracked.

#### 5. Mine development

When a project acquires the necessary permits including (Mines Act permit from the Ministry of Energy, Mines and Low Carbon Innovation and an Environmental Management Act permit from the Ministry of Environment) and mine construction begins, the mine development stage is reached. At this stage, these expenditures are considered construction and development costs and not exploration, so they are not input in the mineral exploration expenditures survey. The only mine development project in the Northwest Region is Ascot Resources Ltd.'s **Premier Gold** project. (Fig. 1; Table 3).

##### 5.1. Premier Gold (Ascot Resources Ltd.)

Ascot Resources Ltd. received a Mines Act permit for construction and operation of their **Premier Gold** mine project



**Table 2.** Selected industrial mineral mines and quarries, Northwest Region.

Mine	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1-Q3)	Reserves	Resource	Comments
Anyox	Tru-Grit Abrasives	Slag steel	unknown	na	na	Slag is mined, cleaned, and used for roofing; sand for sand blasting.
Kalum	Kalum Quarry Ltd.	Industrial rock; Crushed rock	unknown	na	na	Drilling, blasting, crushing; production for CN Railway and others.
Rainbow Lake South	Spring Creek Aggregates Ltd.	Industrial rock; Crushed rock	unknown	na	na	Drilling, blasting, crushing; production for CN Railway and LNG projects.
Ridley Island	Terus Construction Ltd.	Industrial rock; Crushed rock	unknown	na	na	Drilling, blasting, crushing; production for CN Railway and LNG projects.
Robinson Lake Trail	Haisla & Progressive Ventures Construction Ltd.	Industrial rock; Crushed rock	unknown	na	na	Drilling, blasting, crushing; production for CN Railway and LNG projects.
Sand Hill	Terus Construction Ltd.	Industrial rock; Crushed rock	unknown	na	na	Crushing for CN Railway and LNG projects.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

**Table 3.** Mine or quarry development, Northwest Region.

Project	Operator (partner)	Commodity; Deposit type; MINFILE	Reserves	Resource	Comments
Premier Gold	Ascot Resources Ltd.	Au, Ag; Epithermal; 104B 054	Pr: 3.63 Mt 5.45 g/t Au, 19.1 g/t Ag	I: 4.14 Mt 8.01 g/t Au, 35.1 g/t Ag  Inf: 5.06 Mt 7.25 g/t Au, 28.7 g/t Ag	Plant pre-commissioning is on schedule and planned to start in Q4 2023 with the first gold pour expected in early 2024. 11,886 m of exploration drilling in 87 holes. Highlight drilling results included 9.72 m grading 22.3 g/t Au and 16 g/t Ag including 1.91 m grading 98.1 g/t Au and 30.6 g/t Ag.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

in 2021. Plant pre-commissioning is on schedule, with a planned start in Q4 2023 and the first gold pour expected in early 2024. Ascot carried out 11,886 m of exploration drilling in 87 holes with over 7000 m drilled near existing defined resources of the Big Missouri deposit. Highlight exploration drilling results included 9.72 m grading 22.3 g/t Au and 16 g/t Ag including 1.91 m grading 98.1 g/t Au and 30.6 g/t Ag.

The Premier underground mine operated between 1918 and 1952 and was one of the largest gold mines in North America, producing 2 Moz Au and 45 Moz Ag. Mineralization is hosted by andesitic tuffs, lapilli tuffs, and andesitic flows of the Unuk River Formation (Hazelton Group) that are cut by early Jurassic calc-alkaline plutons of the Texas Creek suite. The principal

gold-bearing mineral is electrum in quartz breccias, veins, and stockworks generally surrounded by an alteration envelope of quartz-sericite-pyrite. Base metal mineralization is also in quartz veins as sphalerite and galena associated with argentite and freibergite. The mineralization and metal composition suggest an intermediate-sulphidation epithermal genesis.

## 6. Proposed mines or quarries

Proposed mines are feasibility-stage projects for which proponents have begun or completed the environmental certification process (generally for late-stage projects) or have submitted or received approvals for Mines Act permits (for projects below British Columbia Environmental Assessment

Act thresholds) or are waiting on existing permit amendments. Projects that have permits in place but have yet to obtain financing to begin site construction are also considered to be at the proposed stage. The Northwest Region contains six proposed metal mines and one proposed coal mine (Fig. 1; Table 4).

### 6.1. Proposed metal mines

The Northwest Region contains six proposed metal mines. **Galore Creek, Kitsault, KSM, and Red Mountain** have been granted an Environmental Assessment Certificate and the **Kutcho** project is in the environmental assessment process with the Environmental Assessment Office. The **Dome Mountain Gold** project has both an Environmental Management Act Permit and a Mining Permit, which would allow annual production of up to 75,000 t.

#### 6.1.1. Dome Mountain Gold (Blue Lagoon Resources Inc.)

The **Dome Mountain Gold** project contains a Measured resource (January 2022) of 136,000 t grading 10.32 g/t Au and 57.31 g/t Ag, an Indicated resource of 662,000 t grading 8.15 g/t Au and 41.19 g/t Ag, and an Inferred resource of 85,000 t grading 6.02 g/t Au and 26.13 g/t Ag (using a cut-and-fill mining method at 3.5 g/t Au cut off).

Orogenic gold-silver mineralization is mainly in two zones (the Boulder vein and Argillite vein systems) in fragmental volcanic rocks of the Telkwa Formation and basalts or other altered volcanic rocks of the Nilkitkwa Formation. In addition to the large vein systems, more than a dozen mineralized veins occur, mostly striking east-west and northwest-southeast. Veins (0.7 to 4.5 m wide) contain quartz±calcite±ankerite with lesser sulphide mineralization. Alteration is positively correlated with gold and consists of abundant carbonate-sericite-pyrite that envelopes veins. Base metal sulphide mineralization is associated with higher gold and silver grades.

Blue Lagoon Resources Inc. signed a mine restart agreement with the Lake Babine First Nation for underground mining at the Dome Mountain Gold Mine and submitted its Joint Mines Act-Environmental Act permits amendment application. If approved, they plan to restart the Dome Mountain gold mine. Ten diamond drill holes totalling 2909 m were completed with a focus on extending the strike length and down-dip extent of the Boulder vein. Results from the Boulder vein have extended the strike length by 350 m and contain mineralized intersections such as 16.5 m grading 5.49 g/t Au, 80.9 g/t Ag, and 1.21% Cu, including a 5.65 m interval grading 11.0 g/t Au, 15.8 g/t Ag, and 2.31% Cu, and 1.55 m grading 15.2 g/t Au and 31.4 g/t Ag.

#### 6.1.2. Galore Creek (Galore Creek Mining Corporation)

The Galore Creek alkalic complex includes multiphase syenite, monzonite, and monzodiorite dikes and stocks that cut volcanic and sedimentary rocks of the Stuhini Group. Mineralization is thought to be at the end member of the silica-undersaturated porphyry Cu-Au deposit type. At the Central zone (the principal economic resource) initial potassic

alteration and gold-copper and sulphide mineralization formed from highly oxidized fluids. Hydrothermal processes during the second period generated calcic alteration and brecciation, followed by potassic alteration and mineralization of bornite and chalcopyrite (Micko et al., 2014).

The **Galore Creek** project contains a Proven and Probable reserve of 528 Mt grading 0.59% Cu, 0.32 g/t Au, and 6.02 g/t Ag. It has a Measured plus Indicated resource (September 2023) of 1.197 Bt grading 0.46% Cu, 0.25 g/t Au, and 4.5 g/t Ag, with an additional Inferred resource of 237.8 Mt grading 0.26% Cu, 0.19 g/t Au, and 2.6 g/t Ag. Exploration in 2023 consisted of 19,040 m of diamond drilling in 56 holes, 700 m of sonic drilling for geotechnical purposes, mapping, prospecting, rock sampling, and excavating test pits. The company focused on engineering work for an ongoing prefeasibility study and on environmental studies.

#### 6.1.3. Kitsault (New Moly LLC)

New Moly LLC is proposing to construct and operate an open-pit molybdenum mine near Kitsault. The proposed **Kitsault** mine is fully permitted for construction and would produce molybdenum and silver for 16 years at a planned 45,500 tpd throughput. To transport materials and equipment, the project will use existing access roads and power lines and an existing permitted barge docking facility. Measured plus Indicated resources are 321.8 Mt at 0.071% Mo and 4.8 g/t Ag (2012). The deposit is hosted in the Lime Creek intrusive complex (Eocene) that cuts Jurassic argillite and greywackes of the Bowser Lake Group. The company did baseline environmental monitoring in 2023.

#### 6.1.4. KSM (Seabridge Gold Inc.)

The **KSM** project consists of five porphyry Cu-Au deposits: Kerr, Sulphurets, Mitchell, East Mitchell (Snowfield) and Iron Cap. It is the largest undeveloped gold project in the world by resources: Measured and Indicated resources (August 2022) of 5.357 Bt grading 0.51 g/t Au, 0.16% Cu, 2.4 g/t Ag, and 63 g/t Mo and an Inferred resource of 5.685 Bt grading 0.36 g/t Au, 0.28% Cu, 2.2 g/t Ag, and 33 g/t Mo. The total KSM Proven and Probable reserves are 2.292 Bt grading 0.64 g/t Au, 0.14% Cu, 2.2 g/t Ag, and 76 g/t Mo.

The KSM project has a prefeasibility study plan with a 33-year mine life limited to the Mitchell, East Mitchell, and Sulphurets deposits for an open-pit operation only. A separate Preliminary Economic Assessment, for a planned 39 years of operation, is for an underground block cave mining operation supplemented by a small open pit. The peak mill feed production is planned at 170,000 tpd. The Preliminary Economic Assessment and Pre-Feasibility study increased mineral resource and reserve estimates relative to previous reports and combine for a mine life of 72 years. Seabridge continued its early construction activities at KSM.

KSM is part of the Sulphurets district, which contains abundant porphyry Cu-Au and related systems along a 200 km-long north-northwest trending corridor in northwestern Stikinia

**Table 4.** Selected proposed mines or quarries, Northwest Region.

Project	Operator (partner)	Commodity; Deposit type; MINFILE	Reserves	Resource	Comments
<b>Dome Mountain</b>	<b>Blue Lagoon Resources Inc.</b>	Au, Ag; Au-quartz veins; 093L 276	na	M: 136,000 t 10.32 g/t Au, 57.31 g/t Ag  I: 662,000 t 8.15 g/t Au, 41.19 g/t Ag  Inf: 85,000 t 6.02 g/t Au, 26.13 g/t Ag (resource based on cut-and-fill method at 3.5 g/t Au cut off; January 2022)	Joint Mines Act-Environmental Act permits amendment application. If approved, plan to restart the Dome Mountain gold mine. 2909 m of drilling in 10 holes. Results include 16.5 m grading 5.49 g/t Au, 80.9 g/t Ag, and 1.21% Cu, including a 5.65 m interval grading 11.0 g/t Au, 15.8 g/t Ag, and 2.31% Cu, and 1.55 m grading 15.2 g/t Au and 31.4 g/t Ag.
<b>Galore Creek</b>	<b>Galore Creek Mining Corp. (Teck Resources Ltd. 50%, Newmont Corporation 50%)</b>	Cu, Au, Ag; Alkaline porphyry; 104G 090	P+Pr: 528 Mt 0.59% Cu, 0.32 g/t Au, 6.02 g/t Ag	M+I: 1.197 Bt 0.46% Cu, 0.25 g/t Au, 4.5 g/t Ag  Inf: 237.8 Mt 0.26% Cu, 0.19 g/t Au, 2.6 g/t Ag	19,040 m of diamond drilling in 56 holes, 700 m of sonic drilling for geotechnical purposes, mapping, prospecting, rock sampling, and excavating test pits. The company focussed on engineering work for an ongoing prefeasibility study and environmental studies.
<b>Kitsault</b>	<b>New Moly LLC</b>	Mo, Ag, Pb; Porphyry Mo (low F type); 103P 120	P+Pr: 228.2 Mt 0.083% Mo, 5.0 g/t Ag	M+I: 321.8 Mt 0.071% Mo, 4.8 g/t Ag (2012)	Environmental baseline monitoring.
<b>KSM</b>	<b>Seabridge Gold Inc.</b>	Cu, Au, Ag, Mo; Porphyry Cu±Mo±Au; 104B 191	P+Pr: 2.292 Bt 0.64 g/t Au, 0.14% Cu, 2.2 g/t Ag, 76 g/t Mo	M+I: 5.357 Bt 0.51 g/t Au, 0.16% Cu, 2.4 g/t Ag, 63 g/t Mo  Inf: 5.685 Bt 0.36 g/t Au, 0.28% Cu, 2.2 g/t Ag, 33 g/t Mo (Total for KSM deposits)	Pre-feasibility study with an open pit only plan of a 33-year mine life limited to the Mitchell, East Mitchell, and Sulphurets deposits. Preliminary Economic Assessment with an underground block cave mining operation supplemented with a small open pit. Plan to operate for 39 years.
<b>Kutcho</b>	<b>Kutcho Copper Corp.</b>	Cu, Pb, Zn; Noranda/Kuroko VMS; 104I 060	Pr: 17.3 Mt 1.58% Cu, 2.31% Zn, 27.9 g/t Ag, 0.39 g/t Au	M+I: 22.8 Mt 1.52% Cu, 2.18% Zn, 0.39 g/t Au, 28.1 g/t Ag  Inf: 12.9 Mt 1.10% Cu, 1.58% Zn, 0.25 g/t Au, 20.0 g/t Ag	The project would have a combined 11-year open pit and underground mine life. Geophysical surveys at Kutcho with 802 line-km of VTEM and 1557 line-km of ZTEM electromagnetic surveys and a seismic survey over the Esso deposit.

Table 4. Continued.

<b>Red Mountain</b>	<b>Ascot Resources Ltd.</b>	Au, Ag; Subvolcanic and precious metal veins; 103P 086	P+Pr: 2.54 Mt 6.52 g/t Au, 20.60 g/t Ag	M+I: 3.19 Mt 7.63 g/t Au, 21.02 g/t Ag  Inf: 0.41 Mt 5.32 g/t Au, 7.33 g/t Ag	Environmental baseline monitoring.
<b>Tenas</b>	<b>Bathurst Resources Limited</b>	PCI; Bituminous coal; 093L 156	P+Pr: 62.9 Mt	M+I: 124.6 Mt  Inf: 1.2 Mt	In the environmental assessment application process with baseline studies ongoing. Proposed production 775-825 kt of steelmaking coal annually with a mine-life of 22 years. Telkwa Coal Ltd. was purchased by Bathurst Resources Limited for US \$10.3 million in September.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

(Febbo et al., 2019). Four phases of calc-alkaline porphyry Cu-Au-Mo mineralization at KSM are genetically related to dioritic intrusions of the Sulphurets suite (Febbo et al., 2015), with the deposits distributed along a 12 km-long north-striking linear array. The intrusions cut volcanosedimentary rocks of the Stuhini Group (Upper Triassic) and sandstones, conglomerates, and andesitic rocks of the Jack Formation, a basal unit of the Hazelton Group (Upper Triassic to Lower Jurassic). Mineralization is disseminated in sheeted quartz veinlets and clustered quartz-vein stockworks and is open at depth.

#### 6.1.5. Kutcho (Kutcho Copper Corp.)

The **Kutcho** project is accessible by a 100 km-long seasonal gravel road and an airstrip 10 km from the project deposits. Kutcho Copper Corp. entered the environmental assessment process late in 2019 and has received a Section 11 Order that defines the scope of the assessment and the Indigenous Nations that the company will engage with. The project is not required to undertake a federal environmental assessment.

Considered Kuroko-type volcanic massive sulphide deposits, the Cu-Zn-Au-Ag mineralization is in felsic and largely fragmental volcanic rocks in the upper part of the Kutcho Formation, a Permian-Triassic unit of bimodal volcanic rocks. Reported Proven and Probable mineral reserves (July 2021) are 17.3 Mt grading 1.58% Cu, 2.31% Zn, 27.9 g/t Ag, and 0.39 g/t Au. Measured and Indicated mineral resources (inclusive of reserves) are reported as 22.8 Mt grading 1.52% Cu, 2.18% Zn, 28.1 g/t Ag, and 0.39 g/t Au. Reserves and resources are combined for the Main, Esso and Sumac deposits. A Feasibility Study announced favourable economics using US\$3.50/lb Cu and US\$1.15/lb Zn. The project would have a combined 11-year open-pit and underground mine life. Geophysical surveys were conducted at Kutcho with 802 line-km of VTEM and 1557 line-km of ZTEM electromagnetic surveys and a seismic survey over the Esso deposit.

#### 6.1.6. Red Mountain (Ascot Resources Ltd.)

**Red Mountain** is a proposed underground mine 18 km east-northeast of Stewart. Discovered in 1989, the project has had extensive exploration since, including 466 diamond drill holes and more than 2 km of underground development. A provincial and federal Environmental Assessment Certificate was received in 2018. The project was purchased by Ascot Resources Ltd. from IDM Mining Ltd. in 2019 for \$45 million, and a Feasibility Study was completed in 2020. Red Mountain contains Measured and Indicated resources (April 2020) of 3.19 Mt grading 7.63 g/t Au and 21.02 g/t Ag and an Inferred resource of 405,000 t grading 5.32 g/t Au and 7.33 g/t Ag (reported at 3.0 g/t Au cut off for long hole stoping mining).

The property is underlain by Upper Triassic-Lower Jurassic metasedimentary and volcanic rocks that were intruded by a multi-phased intermediate intrusive complex. Gold occurs in pyrite-rich brecciated bodies and stockworks along the margins of the intrusive rocks, with low-temperature quartz-sericite-pyrite (phyllic) alteration containing high-grade gold and high-temperature K-feldspar alteration. Environmental baseline monitoring continued, but minimal exploration work was done on the project as Ascot concentrated on the Premier Gold project.

#### 6.2. Proposed coal mines

There is currently one proposed coal mine, Bathurst Resources Limited's **Tenas** project.

##### 6.2.1. Tenas (Bathurst Resources Limited)

Telkwa Coal Ltd. was purchased by Bathurst Resources Limited for US \$10.3 million in September; assets transferred include the **Tenas** coal project. Bathurst Resources is proposing to develop the project, which is accessible by road, approximately 17 km south of Smithers. The project entered the provincial environmental assessment process in 2018 and the project proposes to produce approximately 775,000-825,000 t

of steelmaking coal annually with a mine life of 22 years. In 2017, a reserve estimate of Proven plus Probable reserves of 62.9 Mt of coal was released. At least 14 coal seams have been recognized in the Skeena Group (Lower-Upper Cretaceous) with individual seams up to 7.6 m thick. Currently there are four conceptual pits (from south to north: Tenas, Goathorn West, Goathorn East, and Telkwa North) on approximately 1050 ha. The current environmental assessment application is only for production of metallurgical coal from the Tenas pit. Proven plus Probable reserves for Tenas are 29.1 Mt.

## 7. Selected exploration activities and highlights

Exploration projects are described on a continuum from early to advanced stages. The earliest stage is considered grassroots. Typically, the grassroots stage includes the collection of rock and soil samples for geochemical analysis, commonly in conjunction with regional geological mapping and geophysical surveys. This preliminary work is used to generate targets to test, usually by drilling. At these early stages, it is a common practice to establish base-line environmental testing and engage with communities and First Nations. As a project progresses, drilling may delineate a mineral resource and establish baseline economics. Later stages of exploration generally coincide with mine evaluation, feasibility, and economic studies, which include environmental, social, engineering, and financial considerations.

### 7.1. Selected precious metal projects

The Northwest Region has numerous precious metal projects (Fig. 1; Table 5), many of which are in the loosely defined area popularly known as the Golden Triangle.

#### 7.1.1. Atlin Goldfields (Brixton Metals Corporation)

Pacific Bay Minerals Ltd. had entered an option agreement with Brixton Metals Corporation to acquire 100% interest in the **Atlin Goldfields** project near Atlin. Pacific Bay did not fulfill their option agreements and the property is now back to a 100% Brixton ownership. Brixton completed one diamond drill hole totalling 350 m.

#### 7.1.2. Atsutla Gold (Trailbreaker Resources Ltd.)

The **Atsutla Gold** project extends across an area of 40,057 ha 130 km northwest of Dease Lake. Previous exploration identified five gold zones and mineral occurrences showing potential on the property for porphyry Cu-Mo, polymetallic veins, and Fe skarn mineralization. A new technical report was filed in May.

#### 7.1.3. BAM (Monarch Gold) (P2 Gold Inc.)

P2 Gold Inc. drilled two holes totalling 913 m and carried out geological mapping, prospecting, and rock sampling on their **BAM** project. One hole of 509 m was drilled to target geophysical anomalies below the Monarch Gold zone. In January, P2 Gold released an initial Inferred mineral resource estimate for the Monarch Gold zone totalling 27.2 Mt grading

0.59 g/t Au and 2.52 g/t Ag. The company later relinquished their option on mineral tenures in the southern part of BAM, including the Monarch Gold zone. In March, the company acquired the Ball Creek claims from Orogen Royalties Inc. to extend the BAM project northward.

#### 7.1.4. Cassiar Gold (Cassiar Gold Corp.)

Cassiar Gold Corp. completed 16,138 m of diamond drilling at their **Cassiar Gold** project. Other exploration at Cassiar Gold consisted of prospecting, geological mapping, and soil and rock sampling. Several holes produced long intersections with bulk tonnage gold grades and shorter intervals of high grade gold. Results from the Cassiar South target included 237.6 m grading 0.69 g/t Au, including 8.3 m grading 2.39 g/t Au, and 1.4 m grading 5.93 g/t Au. Highlights from the Taurus East target included 6.6 m grading 22.44 g/t Au, including 0.8 m grading 174.5 g/t Au. At Taurus West, intersections included 71.6 m grading 1.54 g/t Au, including 23.5 m grading 3.68 g/t Au. Another interval of 23.6 m graded 4.19 g/t Au. Completed financings for Cassiar Gold totalled \$12.9 Million for 2023.

#### 7.1.5. Eskay Creek (Skeena Resources Limited)

**Eskay Creek** has been the focus of considerable exploration since 1932. In 1988, the news of drilling intersecting stratiform stibnite-realgar rich mineralization (Roth, 1989) at the 21A zone sparked a staking rush throughout the region. An underground mine operated from 1994 to 2008 and produced 3.3 Moz of Au and 160 Moz of Ag (average grades of 45 g/t Au and 2224 g/t Ag).

In November, a positive Definitive Feasibility Study was released that highlighted an after-tax internal rate of return (IRR) of 43% and a 1.2-year payback period on pre-production capital expenditures. The study reported Proven and Probable open-pit mineral reserves of 39.8 Mt containing 3.3 Moz Au and 88.0 Moz Ag with an after-tax net present value of \$2.0 billion at a base case of US\$1800/oz gold and US\$23/oz silver. Life-of-mine production was stated at 2.8 Moz Au and 81.14 Moz Ag for a minimum of 12 years. Highlight results from the 21A West zone were released in 2023 from previous 2022 drilling include 9.26 m grading 18.18 g/t Au and 130.2 g/t Ag, and 5.70 m grading 14.90 g/t Au and 2.5 g/t Ag. Skeena Resources completed financings for \$84.2 million, a royalty agreement for a 0.5% net smelter royalty (NSR) at Eskay Creek worth \$27 million and another royalty agreement for a 1.0% NSR worth \$81 million.

#### 7.1.6. Harry (Blackwolf Copper and Gold Ltd.)

With the recent acquisition of Optimum Ventures Ltd., Blackwolf Copper and Gold Ltd. has an option to acquire an 80% interest in the **Harry** property. This gold-silver property is hosted by sericite-altered Lower Jurassic felsic volcanic breccia and andesite tuff, with interbedded siltstone, argillite, and conglomerate of the Unuk River Formation (Hazelton Group). The property lies between the historic Scottie Gold and Premier mines. Associated accessory mineralization including

**Table 5.** Selected exploration projects, Northwest Region.

<b>Project</b>	<b>Operator (partner)</b>	<b>Commodity; Deposit type; MINFILE</b>	<b>Resource (NI 43- 101 compliant unless indicated otherwise)</b>	<b>Comments</b>
<b>Atlin Goldfields</b>	<b>Brixton Metals Corporation</b>	Au; Precious metal veins; 104N 043	na	Pacific Bay decided against their option agreement, the property is now back to 100% Brixton ownership. One diamond drill hole (350 m).
<b>Atsutla Gold</b>	<b>Trailbreaker Resources Ltd.</b>	Au, Ag; Polymetallic veins; 104O 007	na	A new technical report was filed in May.
<b>BAM (Jan Copper)</b>	<b>P2 Gold Inc.</b>	Cu, Au; Epithermal Au-Ag-Cu	na	One hole drilled (404 m), geological mapping, prospecting, and rock sampling.
<b>BAM (Monarch Gold)</b>	<b>P2 Gold Inc.</b>	Au; Epithermal Au-Ag-Cu	Inf: 27.2 Mt 0.59 g/t Au, 2.52 g/t Ag (January 2023)	One hole drilled (509 m) targeting geophysical anomalies below the Monarch Gold zone. Geological mapping, prospecting, and rock sampling. Relinquished option on tenures including Monarch Gold. Extended BAM northward by acquiring Ball Creek claims from Orogen Royalties Inc.
<b>Berg</b>	<b>Surge Copper Corp.</b>	Cu, Mo, Ag; Porphyry Cu±Mo±Au; 093E 046	M+I: 1.009 Bt 0.23% Cu, 0.03% Mo, 4.6 g/t Ag  Inf: 542 Mt 0.17% Cu, 0.02% Mo, 3.7 g/t Ag (July 2023)	A Preliminary Economic Assessment was released in July stating a net present value of \$2.1 billion, an Internal Rate of Return of 20% for a 30-year mine life. In December, Surge announced they had entered into a definitive purchase agreement to acquire a 100% interest in the project. Three holes drilled totalling 2077 m. Prospecting, large IP survey, and soil and rock sampling.
<b>Big Gold</b>	<b>Teuton Resources Corp.</b>	Au, Ag, Pb, Zn Cu; Polymetallic veins; 104B 674	na	Prospecting, geological mapping, and rock sampling Highlight rock sample assays 27.7 g/t Au, 6240 g/t Ag, 1.45% Cu, 6.4% Pb, and 3.11% Zn, and 57.1 g/t Ag, 0.72% Cu, 12.1% Pb, and 9.32% Zn.
<b>Bingo</b>	<b>Juggernaut Exploration Ltd.</b>	Au, Cu, Pb, Zn; Polymetallic veins	na	Seven holes drilled (1017 m), prospecting, mapping, and rock sampling. Highlight drill results include 5.11 m grading 7.57 g/t Au, 20.23 g/t Ag, and 2.72% Cu, including 2.90 m grading 13.05 g/t Au, 24.93 g/t Ag, and 4.70% Cu. Another interval of 10.12 m graded 2.52 g/t Au, 11.05 g/t Ag, and 1.16% Cu, including 5.89 m grading 4.01 g/t Au, 17.37 g/t Ag, and 1.85% Cu.
<b>Blue</b>	<b>Core Assets Corp.</b>	Ag, Pb, Zn, Cu; Skarn carbonate replacement; 104M 022	na	41 holes drilled (4260 m), prospecting, geological mapping, and an IP geophysical survey. Results at the Gally target included 0.5 m grading 1030 g/t Ag, 21.6% Zn, 10.8% Pb, and 1.16% Cu within 8.0 m grading 139 g/t Ag, 2.3% Zn, 1.2% Pb, and 0.18% Cu.
<b>Buck</b>	<b>Sun Summit Minerals Corp.</b>	Au, Ag, Zn, Pb, Cu; Polymetallic veins; 093L 009	na	3738 m of drilling in 13 holes at the Buck Main zone. Geological mapping, prospecting, soil sampling, and rock sampling.

Table 5. Continued.

<b>Burn</b>	<b>Commander Resources Ltd.</b>	Au, Cu; Porphyry Cu±Mo±Au; 093M 134	na	4000 m of diamond drilling, geological mapping, prospecting, and rock sampling. Rock samples from the newly discovered CR zone returned 1.00% Cu, 3.2 g/t Ag, 0.94% Cu, and 4.1 g/t Ag. Drill results included 185.9 m grading 0.39 g/t Au, 8.2 g/t Ag, and 0.53% Zn including a 11.9 m interval grading 1.26 g/t Au, 7.4 g/t Ag, and 0.64% Zn. Another interval of 1.5 m graded 6.79 g/t Au and 1.8 g/t Ag. Sun Summit plans to release a Mineral Resource Estimate in Q1 2024.
<b>Cambria</b>	<b>Scottie Resources Corp.</b>	Au, Ag, Cu; Polymetallic veins, Porphyry Cu±Mo±Au	na	Geological mapping, soil sampling, and prospecting.
<b>Cassiar Gold</b>	<b>Cassiar Gold Corp.</b>	Au; Precious metal veins; 104P 012, 19	Inf: 37.9 Mt 1.14 g/t Au (0.5 g/t Au cut off) (April 2022)	16,138 m of drilling. Results from the Cassiar South target: 237.6 m grading 0.69 g/t Au, including 8.3 m grading 2.39 g/t Au, and 1.4 m grading 5.93 g/t Au. At Taurus East target: 6.6 m grading 22.44 g/t Au, including 0.8 m grading 174.5 g/t Au. At Taurus West: intersections included 71.6 m grading 1.54 g/t Au, including 23.5 m grading 3.68 g/t Au; another interval of 23.6 m graded 4.19 g/t Au. Completed financings for Cassiar Gold totalled \$12.9 Million for 2023.
<b>Clone</b>	<b>Teuton Resources Corp. 75%, Silver Grail Resources Ltd. 25%</b>	Au, Ag, Cu, Co, Pb; Polymetallic veins; 103P 251	na	Prospecting, geological mapping, and rock sampling.
<b>Consolidated Eskay</b>	<b>Eskay Mining Corp. 80%, Kirkland Lake Gold Ltd. 20%</b>	Au, Ag, Cu, Zn; Noranda/Kuroko massive sulphide; 104B 385	na	24 holes drilled (5700 m), prospecting, geological mapping, and rock sampling. Several drill intersections at the Cumberland target returned high-grade gold and silver such as 15.0 m grading 3.02 g/t Au, 68.66 g/t Ag, 0.24% Cu, 0.73% Pb, and 4.86% Zn including 3.41 m grading 8.48 g/t Au, 103.27 g/t Ag, 0.23% Cu, 1.08% Pb, and 4.16% Zn. Tarn lake drilling results included 2.45 m grading 7.83 g/t Au and 6.96 g/t Ag, including 0.95 m grading 12.4 g/t Au and 10.0 g/t Ag. Rock samples from massive sulphide discovered at Scarlet knob (Fig. 6) graded 22.26 g/t Au, 461.97 g/t Ag, 0.22% Cu, 14.57% Pb, and 10.50% Zn.
<b>Crown (Electrum)</b>	<b>Goldstorm Metals Corp.</b>	Au, Ag, Cu; Polymetallic veins; 104B 200	na	11 holes drilled (2581 m), geological mapping, prospecting, and rock sampling. Highlight drilling results include 0.5 m grading 233.5 g/t Au, 756.0 g/t Ag, 0.73% Pb, and 0.51% Zn within 2.1 m grading 57.34 g/t Au, 214.27 g/t Ag, 0.19% Pb, and 0.16% Zn within 4.5 m grading 27.0 g/t Au, 111.09 g/t Ag, 0.10% Pb, and 0.09% Zn.
<b>Crown (Orion)</b>	<b>Goldstorm Metals Corp.</b>	Au, Ag, Cu, Co, Zn; Polymetallic veins; 104B 672	na	Geological mapping, prospecting, and rock sampling. Rock samples from Orion include a 0.25 m chip sample grading 0.67 g/t Au, 320.0 g/t Ag, 11.96% Cu, 0.088% Co, and 0.55% Zn, and a 0.5 m channel sample grading 0.28 g/t Au, 226.0 g/t Ag, 6.95% Cu, 0.079% Co, and 0.37% Zn.

Table 5. Continued.

<b>Duke</b>	<b>Amarc Resources Ltd.</b>	Cu, Au; Porphyry Cu±Mo±Au; 093M 009	na	11,070 m drilled in 24 holes, 5759 line-km airborne magnetic survey, a large lidar survey, 68 line-km of ground magnetics, 122 line-km of IP geophysics, detailed geological mapping, prospecting, soil and rock sampling. Highlight results include 541.6 m grading 0.24% Cu, 0.016% Mo, 0.04 g/t Au, and 1.2 g/t Ag, 238.2 m grading 0.29% Cu, 0.019% Mo, 0.06 g/t Au, and 1.4 g/t Ag, and 125.6 m grading 0.38% Cu, 0.024% Mo, 0.08 g/t Au, and 1.8 g/t Ag.
<b>Dungate</b>	<b>Edgemont Gold Corp.</b>	Cu, Au; Porphyry Cu±Mo±Au; 093L 010	na	Edgemont worked on advancing a mineral resource estimate for the project.
<b>Eaglehead</b>	<b>Northern Fox Copper Inc.</b>	Cu, Mo, Au; Porphyry Cu±Mo±Au; 104I 008	I: 70.81 Mt 0.221% Cu, 0.0108% Mo, 0.061 g/t Au, 0.9 g/t Ag  Inf: 242.3 Mt 0.192% Cu, 0.0035% Mo, 0.043 g/t Au, 0.6 g/t Ag (2023)	Northern Fox completed an updated mineral resource estimate.
<b>Empire</b>	<b>Juggernaut Exploration Ltd.</b>	Ag, Pb, Zn, Au, Cu; Polymetallic veins; 093L 116	na	1500 m drilled, prospecting, and rock sampling. Rock sample highlights include 36,875 g/t Ag, 4.68 g/t Au, 27.6% Cu, and 3.27% Zn. A channel sample (length not given) assayed 22,694 g/t Ag, 26.4% Cu, and 2.8% Zn.
<b>Eskay Creek</b>	<b>Skeena Resources Limited</b>	Au, Ag, Cu, Pb, Zn; VMS and precious metal veins; 104B 008	M+I: 50.1 Mt 2.6 g/t Au, 63.0 g/t Ag (pit constrained)  P+Pr: 39.8 Mt 2.6 g/t Au, 68.7 g/t Ag (November 2023)	A positive feasibility study was released with an after-tax internal rate of return (IRR) of 43% and a 1.2-year payback period on pre-production capital expenditures. This study came with updated mineral resource estimates. Results for 2022 drilling at the 21A West zone were released in 2023 and highlights included 9.26 m grading 18.18 g/t Au and 130.2 g/t Ag, and 5.70 m grading 14.90 g/t Au and 2.5 g/t Ag. Skeena Resources completed financings for \$84.2 million, a royalty agreement for a 0.5% NSR at Eskay Creek worth \$27 million and another royalty agreement for a 1.0% NSR worth \$81 million.
<b>Eskay Rift</b>	<b>Teuton Resources Corp.</b>	Au, Ag, Zn, Cu; Subaqueous hot spring Ag-Au; 104B 675	na	Prospecting, geological mapping, and rock sampling.
<b>George Copper</b>	<b>MTB Metals Corp.</b>	Ag, Cu, Pb, Zn; Subaqueous hot spring Ag-Au; 104A 180	na	Three drill holes at the George Copper project intersected sulphide mineralization containing pyrite, chalcopyrite, and sphalerite. Geological mapping, and rock sampling.
<b>Golddigger</b>	<b>Goliath Resources Ltd.</b>	Au, Cu, Pb, Zn; Polymetallic veins; 103P 341	na	34,000 m of diamond drilling in 124 holes, geological mapping, prospecting, and rock sampling. Reported results included 7.90 m grading 64.88 g/t Au and 8.03 g/t Ag, including 5.90 m grading 86.84 g/t Au and 6.52 g/t Ag, including 2.75 m grading 186.0 g/t Au and 13.29 g/t Ag.



Table 5. Continued.

<b>Harry</b>	<b>Blackwolf Copper and Gold Ltd.</b>	Au, Ag, Cu; Intrusion-related and polymetallic veins; 104B 434	na	1740 m drilling in seven holes, IP and magnetic geophysical surveys, prospecting, rock sampling and backpack surface drilling. Highlight drill results included 1.0 m grading 312 g/t Au and 101 g/t Ag and 1.0 m grading 277 g/t Au and 118 g/t Ag.
<b>Hat</b>	<b>Doubleview Gold Corp.</b>	Cu, Au; Alkalic porphyry; 104J 021	na	10,320 m was drilled at Hat. Drilling results included 143.3 m grading 0.64 g/t Ag, 0.43 g/t Au, 134.6 g/t Co, 0.36% Cu, and 1.29 g/t Sc. Within this interval, 77.2 m graded 0.9 g/t Ag, 0.64 g/t Au, 147 g/t Co, 0.48% Cu, and 1.51 g/t Sc.
<b>Holy Grail</b>	<b>Prospect Ridge Resources Corp.</b>	Ag, Au, Pb, Zn; Polymetallic veins	na	Prospect Ridge acquired 100% ownership of the project. Geological mapping, prospecting, and rock sampling. Highlight results released in 2023 from previous field seasons for the 4 Shore showing include 28.0 g/t Au, 56.9 g/t Ag, and 2.03% Cu, and another sample with 13.7 g/t Au, 39.9 g/t Ag, and 1.33% Cu.
<b>Hoodoo</b>	<b>Skeena Resources Limited</b>	Cu, Zn, Pb, Au; Besshi VMS and intrusion related precious metal veins	na	Stream sediment sampling, prospecting, geological mapping, and rock sampling.
<b>Hwy 37</b>	<b>Kingfisher Metals Corp.</b>	Cu, Au, Ag; Porphyry; 104G 434	na	2150 m of diamond drilling in 6 holes.
<b>Iskut</b>	<b>Seabridge Gold Inc.</b>	Cu, Au; Porphyry; 104B 694	na	19,830 m of diamond drilling in 23 holes, airborne magnetic survey, magnetotelluric survey. Highlight results from the Snip North Target include 1.8 m grading 15.3 g/t Au, 430.0 g/t Ag, and 1.5% Cu, 277 m grading 0.8 g/t Au, 1.19 g/t Ag, and 0.07% Cu, 21.0 m grading 1.73 g/t Au, 2.2 g/t Ag, and 0.07% Cu, and 253 m grading 0.61 g/t Au, 1.36 g/t Ag, and 0.07% Cu.
<b>Kingpin</b>	<b>Skeena Resources Limited</b>	Au, Ag, Cu Pb, Zn; Precious metal veins, Polymetallic veins	na	Stream sediment sampling, prospecting, geological mapping, and rock sampling.
<b>Kispiox Mountain</b>	<b>Jaxon Mining Inc.</b>	Cu, Mo, Ag, Sb; Polymetallic veins	na	Petrographic study, soil sampling, and rock sampling, and portable-backpack drilling.
<b>Kitsault Valley (Dolly Varden)</b>	<b>Dolly Varden Silver Corporation</b>	Cu, Pb, Zn, Ag, Au; Epithermal, Kuroko VMS with polymetallic veins; 103P 188	Dolly Varden I: 3.417 Mt 299.8 g/t Ag  Inf: 1.285Mt 277.0 g/t Ag (2023)	51,454 m of drilling total in 115 holes, on the Kitsault project. Approximately half of this drilling was completed at Dolly Varden. Highlights included 26.99 m grading 296 g/t Ag, 1.68% Pb, and 3.01% Zn, 10.74 m grading 371 g/t Ag, 2.82% Pb, and 4.99% Zn including 0.5 m grading 1475 g/t Ag, 10.65% Pb, and 12% Zn, and 29.34 m grading 381 g/t Ag, including 1.0 m grading 1898 g/t Ag.
<b>Kitsault Valley (Homestake Ridge)</b>	<b>Dolly Varden Silver Corporation</b>	Au, Ag, Pb, Zn; Polymetallic veins, Marine volcanic association Cu, Pb, Zn, Au, Ag; 103P 188	Homestake Ridge I: 0.736 Mt 7.02 g/t Au, 74.8 g/t Ag  Inf: 5.545 Mt 4.58 g/t Au, 100 g/t Ag (2023)	51,454 m of drilling total in 115 holes, on the Kitsault project. Approximately half of this drilling was completed at Homestake Ridge. Highlights include 25 m grading 46.31 g/t Au and 70 g/t Ag, including 9.84 m grading 111.9 g/t Au and 162 g/t Ag, and 0.48 m grading 1145 g/t Au and 826 g/t Ag. Another high-grade intersection of 0.38 m graded 3.78 g/t Au and 13,855 g/t Ag.

Table 5. Continued.

<b>Knauss Creek</b>	<b>Prospect Ridge Resources Corp.</b>	Ag, Au, Pb, Zn; Polymetallic veins; 103I 048	na	Geological mapping, prospecting, and rock sampling at Knauss Creek. Highlight rock sample results include assays of: 78.90 g/t Au, 457 g/t Ag, and 13.45% Cu; 23.80 g/t Au, 738 g/t Ag, and 5.42% Cu; 15.20 g/t Au, 1970 g/t Ag, and 0.39% Cu; and 20.60 g/t Au, 175.0 g/t Ag and 0.54% Cu.
<b>KSP</b>	<b>Skeena Resources Limited</b>	Au, Ag, Cu; Precious metal veins, Polymetallic veins	na	Stream sediment sampling, prospecting, geological mapping, and rock sampling. Highlight rock samples include 14.20 g/t Au, 11.4 g/t Ag, 1.09% Cu, and 0.05% Zn, and 9.26 g/t Au, 6.9 g/t Ag, 0.71% Cu, and 0.02% Zn.
<b>Lucky Strike</b>	<b>Goliath Resources Ltd.</b>	Cu, Au, Mo; Porphyry; 103I 204	na	1000 m drilling, geological mapping, prospecting, rock sampling, and geophysical surveying.
<b>Maestro</b>	<b>Quartz Mountain Resources Ltd.</b>	Au, Ag, Cu Mo; Porphyry, Polymetallic veins; 093L 028	na	2 holes drilled (1445 m).
<b>Midas</b>	<b>Juggernaut Exploration Ltd.</b>	Au, Ag, Cu, Zn; Skarn; 103I 131	na	4000 m drilled, rock sampling, prospecting, geological mapping, and IP geophysics. Drill results include 22.0 m grading 0.22 g/t Au, 2.73 g/t Ag, 0.20% Cu, and 0.38% Zn which included 5.0 m grading 0.35 g/t Au, 6.10 g/t Ag, 0.64% Cu, and 0.67% Zn. Another 1.0 m interval graded 1.30 g/t Au, 8.92 g/t Ag, and 0.74% Cu. Highlight channel samples from the VG Zone included 4.34 m grading 10.28 g/t Au, 2 m grading 15.37 g/t Au, and 3.11 m grading 5.43 g/t Au.
<b>NAK</b>	<b>American Eagle Gold Corp.</b>	Cu, Au; Porphyry Cu±Mo±Au; 093M 010	na	7781 m diamond drilling in 10 holes. Results included 302 m grading 0.53 g/t Au, 0.40% Cu, 1.27 g/t Ag, and 431.4 ppm Mo within 771 m grading 0.28 g/t Au, 0.25% Cu, 0.96 g/t Ag, and 207 ppm Mo. American Eagle also completed an exploration agreement with Lake Babine First Nation to get consent for a five-year exploration program and participation in any environmental baseline work conducted.
<b>Netalzul Mountain</b>	<b>Jaxon Mining Inc.</b>	Cu, Au; Sediment-hosted Cu; 094D 104	na	Geophysical inversion modelling was compiled with geochemical data to update their 3D geological model.
<b>New Polaris</b>	<b>Canagold Resources Ltd.</b>	Au; Au-quartz veins; 104K 003	I: 2.965 Mt 11.61 g/t Au  Inf: 926,000 t 8.93 g/t Au (2023)	An updated mineral resource estimate while working towards a Feasibility study. Results released in 2023, included 7.14 m grading 9.64 g/t Au, 2.78 m grading 53.8 g/t Au including 0.75 m of 85.5 g/t Au, 4.7 m grading 12.9 g/t Au, and 4.56 m grading 11.0 g/t Au.
<b>Newmont Lake</b>	<b>Enduro Metals Corporation</b>	Au, Cu, Ag; Intrusion-related Au pyrrhotite veins; 104B 126	na	Geological mapping, prospecting, rock sampling and drone magnetic geophysical surveying. Rock sampling highlights include 0.77% Cu and 0.20 g/t Au, 0.31% Cu and 0.63g/t Au, and 2.04% Cu and 104 g/t Ag.

Table 5. Continued.

<b>Ootsa</b>	<b>Surge Copper Corp.</b>	Cu, Au, Ag, Mo; Calc-alkaline porphyry; 093E 105	M+I: 438.6 Mt 0.18% Cu, 0.12g/t Au, 0.017% Mo, 2.1 g/t Ag  Inf: 137.7 Mt 0.15% Cu, 0.1 g/t Au, 0.015% Mo, 2.0 g/t Ag (2022)	Geological mapping, prospecting, rock sampling, and soil sampling.
<b>Otter Creek</b>	<b>Garibaldi Resources Corp.</b>	Au; Au-quartz veins; 104N 032	na	One hole drilled (63 m).
<b>Oweegee</b>	<b>Sanatana Resources Inc.</b>	Cu, Au; Subvolcanic Cu-Ag-Au (As-Sb); 104A 165	na	An 8.5 line-km 3D surface IP geophysical survey. Highlight assays from 2022 reported this year include 112.1 m grading 0.22 g/t Au, 0.17% Cu, and 1.10 g/t Ag, and 196 m grading 0.13 g/t Au, 0.09% Cu, and 1.5 g/t Ag.
<b>Poplar</b>	<b>Universal Copper Ltd.</b>	Cu, Au, Ag, Mo; Porphyry Cu±Mo±Au	I: 152.3 Mt 0.32% Cu, 0.09 g/t Au, 2.58 g/t Ag, 0.009% Mo  Inf: 139.3 Mt 0.29% Cu, 0.07 g/t Au, 4.95 g/t Ag, 0.005% Mo (2021)	1933 line-km airborne magnetotelluric survey.
<b>PSP</b>	<b>Garibaldi Resources Corp.</b>	Au, Ag, Cu; Precious metal veins, Polymetallic veins; 104B 742	na	1162 m of drilling. Results included 0.6 m grading 0.2 g/t Au and 82 g/t Ag.
<b>Ranch</b>	<b>Thesis Gold Inc.</b>	Au, Ag; Epithermal; 094E 267	na	18,800 m of diamond drilling. Prospecting, rock sampling, and geological mapping. Drilling results included 4.05 m grading 119.49 g/t Au, including 2.0 m grading 231 g/t Au, and 24.7 m grading 5.37 g/t Au and 6.51 g/t Ag. Thesis Gold also completed a financing in October for \$11.16 million.
<b>Rancheria South</b>	<b>CMC Metals Ltd.</b>	Ag, Pb, Zn; Manto carbonate-replacement; 104O 034	na	2143 m drilling in eleven drill holes and a gravity geophysical survey at the Silverknife property.
<b>Red Cliff</b>	<b>Decade Resources Ltd.</b>	Au, Ag, Cu, Pb, Zn; Polymetallic veins; 104A 209	na	23 holes drilled (1600 m), prospecting, geological mapping, and rock sampling at the Red Cliff project. Highlight results include 6.09 m of 2.03 g/t Au, 0.021% Cu, and 0.614% Zn. Another hole of 1.6 m grading 3.91 g/t Au, 0.59% Cu, and 0.18% Zn.
<b>Red Line</b>	<b>Copperhead Resources Inc.</b>	Cu, Au; Porphyry Cu±Mo±Au; 104G 022	na	Geological mapping, prospecting, rock sampling.

Table 5. Continued.

<b>Rock and Roll</b>	<b>Etruscus Resources Corp.</b>	Cu, Zn, Pb, Au; Besshi VMS and intrusion-related precious metal veins; 104B 377	Inf: 2.02 Mt 0.71 g/t Au, 87.1 g/t Ag, 0.23% Cu, 0.23% Pb, 0.98% Zn (2018)	IP geophysics, geological mapping, and rock sampling. Etruscus added 16 new mineral tenure blocks just north of and contiguous to the Rock and Roll property for rare earth element potential, named the Pheno claims.
<b>Ruby Creek</b>	<b>Stuhini Exploration Ltd.</b>	Mo; Porphyry Cu±Mo±Au; 104N 080	M+I: 369.4 Mt 0.053% Mo  Inf: 41.9 Mt 0.047% Mo (2022)	Geological mapping, prospecting, and rock sampling. Highlight rock sample results from the Volcanic Creek target included 1.098% Mo, 0.77% Mo, and 0.57% Mo. Stuhini Exploration Ltd. completed the acquisition of the Ruby Creek property in June.
<b>Schaft Creek</b>	<b>Teck Resources Ltd. 75%, Copper Fox Minerals Inc. 25%</b>	Cu, Mo, Au, Ag; Porphyry Cu±Mo±Au; 104G 015	M+I: 1.346 Bt 0.26% Cu, 0.16 g/t Au, 0.017% Mo, 1.25 g/t Ag  Inf: 343.6 Mt 0.17% Cu, 0.11 g/t Au, 0.013% Mo, 0.84 g/t Ag (2021)	Geotechnical drilling totalling 9000 m for engineering studies. Environmental baseline data were collected for in future permit regulatory requirements.
<b>Scottie Gold Mine</b>	<b>Scottie Resources Corp.</b>	Au, Ag, Cu; Intrusion-related and polymetallic veins; 104B 034	na	20,106 m of diamond drilling in 84 holes and geophysical surveys at the Blueberry zone. Results included 3.7 m grading 56.4 g/t Au and 33.8 g/t Ag, 2.0 m grading 88.4 g/t Au and 25.0 g/t Ag, 4.0 m grading 28.2 g/t Au and 17.5 g/t Ag, and 19.0 m grading 8.21 g/t Au. Drill results have increased the Blueberry zone's known depth of mineralization to 525 m and its strike length to 1.55 km. Scottie Resources completed financings totalling \$8.38 million.
<b>Silver Hope</b>	<b>Finlay Minerals Ltd.</b>	Cu, Ag, Au, Zn, Pb, Mo; Subvolcanic Cu-Ag-Au (As-Sb); 093L 056	na	Lidar survey, biogeochemical sampling, soil mercury vapour surveys, soil sampling, prospecting and machine-learning data review of the property. Results released in 2023 for drilling from 2022 included 31 m grading 0.2% Cu, 11.8 g/t Ag, and 0.22 g/t Au, including 11.42 m grading 0.49% Cu, 30.1 g/t Ag, and 0.41 g/t Au. Another hole intersected 76.57 m grading 0.45% Cu, 14.6 g/t Ag, and 0.14 g/t Au.
<b>Silver Queen</b>	<b>Equity Metals Corporation</b>	Ag, Pb, Zn, Au; Transitional porphyry-epithermal; 093L 002	I: 3.445 Mt 3.5% Zn, 2.13 g/t Au, 189 g/t Ag, 0.24% Cu, 0.6% Pb  Inf: 1.9 Mt 2.0% Zn, 0.82 g/t Au, 167 g/t Ag, 0.23% Cu, 0.5% Pb (resources at NSR cut off of \$100/t) (2022)	9989 m of diamond drilling in 26 holes. Highlight results from the George Lake target included 0.6 m grading 1.5 g/t Au, 1073 g/t Ag, 6.3% Cu, 4.0% Pb, and 1.6% Zn within a 4.1 m interval grading 0.5 g/t Au, 209 g/t Ag, 1.7% Cu, 0.7% Pb, and 0.4% Zn. Other results included 0.3 m grading 4.1 g/t Au, 824 g/t Ag, 0.7% Cu, and 3.4% Pb within 1.5 m grading 1.3 g/t Au, 226 g/t Ag, 1.0% Cu, 1.7% Pb, and 6.6% Zn, and 0.5 m grading 10.4 g/t Au, 115 g/t Ag, 0.6% Cu, 0.9% Pb, and 1.4% Zn. Highlight rock samples from the Cole Lake target graded 55.2 g/t Au, 5049 g/t Ag, 3.2% Pb, and 0.12% Zn, and 1736 g/t Ag, 22.7% Pb, and 1.2% Zn.

Table 5. Continued.

<b>Silvertip</b>	<b>Coeur Mining Inc.</b>	Ag, Pb, Zn; Manto carbonate-replacement; 104O 038	M+I: 6.40 Mt 265 g/t Ag, 5.12% Pb, 9.68% Zn  Inf: 1.69 Mt 239.5 g/t Ag, 4.43% Pb, 10.09% Zn (January 2023)	30,000 m of drilling in 85 holes. Highlight results included 12 m grading 459.6 g/t Ag, 15.1% Zn, and 8.7% Pb, and 6.2 m grading 778.3 g/t Ag, 13.6% Zn, and 14.7% Pb. An updated mineral resource estimate was released at year-end 2022.
<b>Snip Gold</b>	<b>Skeena Resources Limited</b>	Au, Ag; Intrusion-related Au pyrrhotite veins; 104B 250	I: 2.74 Mt 9.35 g/t Au  Inf: 0.5 Mt 7.10 g/t Au (September 2023)	Hochschild Mining plc decided against exercising its right to earn a 60% interest and take over as operator for the Snip Gold project. The project is now 100% owned by Skeena Resources Limited. In September, Skeena released an updated mineral resource estimate.
<b>Tatogga (Saddle North)</b>	<b>Newmont Corporation</b>	Cu, Au, Ag; Porphyry Cu-Au (alkalic); 104G 432	I: 298 Mt 0.28% Cu, 0.36 g/t Au, 0.8 g/t Ag  Inf: 543 Mt 0.25% Cu, 0.31 g/t Au, 0.7 g/t Ag (2020)	Newmont worked with the Tahltan Heritage Resources Environmental Assessment Team on a Tahltan land-use study and supported a local infrastructure study in Iskut through the Tahltan Industry Working Group.
<b>Telegraph</b>	<b>MTB Metals Corp.</b>	Cu; Porphyry Cu-Au (alkalic)	na	2142 m of drilling in 4 holes, geological mapping, an IP geophysical survey, prospecting, soil, and rock sampling at the DOK trend. Highlight drill results include 133.8 m grading 0.23% Cu, 0.11 g/t Au, 1.58 g/t Ag, and 20.63 ppm Mo, including 22.2 m grading 0.31% Cu, 0.21 g/t Au, 2.23 g/t Ag, and 7.96 ppm Mo. Another interval had 6 m grading 0.11% Cu, 1.11 g/t Au, 4.54 g/t Ag, and 98.05 ppm Mo.
<b>Terrace</b>	<b>Decade Resources Ltd.</b>	Au, Ag, Pb; Polymetallic veins; 103I 107	na	33 holes drilled (4000 m), rock sampling, and prospecting, mostly at the Terrace gold property. Drilling tested the Excelsior and Croesus showings for porphyry copper potential. The company reported narrow zones of quartz veining containing chalcopyrite; one hole with molybdenum mineralization on fracture faces and in quartz veinlets.
<b>Thorn (Camp Creek)</b>	<b>Brixton Metals Corporation</b>	Cu, Ag, Au; Porphyry Cu±Mo±Au; 104K 174	na	10,100 m of drilling in nine holes. Highlight results include 1202 m grading 0.228% Cu, 0.05 g/t Au, 2.27 g/t Ag, and 233 ppm Mo, including 630 m grading 0.336% Cu, 0.07 g/t Au, 2.74 g/t Ag, and 309 ppm Mo, which also included 109 m grading 0.511% Cu, 0.08 g/t Au, 3.7 g/t Ag, and 498 ppm Mo. Another drill hole had a 34 m interval grading 0.333% Cu, 0.09 g/t Au, 2.06 g/t Ag, and 243 ppm Mo. At other regional targets, several rock samples returned high grade copper-gold mineralization including 33.3% Cu, 7.0 g/t Au, and 238 g/t Ag at the East target, 39.0 g/t Au and 65.9 g/t Ag at the South target, 13.0% Cu, 0.9 g/t Au, and 30.3 g/t Ag at the Plum target. More than 48 rock samples across the project returning 1% Cu or greater.

Table 5. Continued.

<b>Thorn (Trapper Gold)</b>	<b>Brixton Metals Corporation</b>	Au; Epithermal; 104K 175	na	6625 m of diamond drilling in 11 holes. Highlight results include 98.0 m grading 0.62 g/t Au and 1.42 g/t Ag, including a 32.0 m interval grading 1.15 g/t Au and 2.07 g/t Ag, and a 6 m interval grading 5.07 g/t Au and 6.23 g/t Ag. Another hole assayed 253 m grading 1.40 g/t Au including 93.0 m grading 3.22 g/t Au, and 12.31 m grading 16.18 g/t Au. In December, Brixton completed financings totalling \$14.5 million.
<b>Treaty Creek</b>	<b>Tudor Gold Corp. 60%, Teuton Resources Corp. 20%, American Creek Resources Ltd. 20%</b>	Cu, Au; Porphyry; 104A 004	I: 641.9 Mt 0.91 g/t Au, 5.45 g/t Ag, 0.15% Cu  Inf: 233.9 Mt 0.74 g/t Au, 5.99 g/t Ag, 0.16% Cu (March 2023)	31,904 m of diamond drilling in 34 holes for 2023. Drilling focussed on mineralized structures not currently in the resource model that are thought to host high-grade gold. Results include 601.5 m grading 1.23 g/t Au, 2.93 g/t Ag, and 0.12% Cu, including 123 m grading 3.23 g/t Au, 5.57 g/t Ag, and 0.19% Cu and 15 m grading 14.89 g/t Au, 4.72 g/t Ag, and 0.6% Cu. Another interval of 19.5 m grades 5.41 g/t Au, 1.09 g/t Ag, and 0.24% Cu. In 2023, Tudor Gold completed financings totalling \$27.8 million.
<b>Turnagain</b>	<b>Giga Metals Corporation</b>	Ni, Co, Pt, Cu, Mo; Alaskan-type, magmatic; 104I 014	M+I: 1.574 Bt 0.210% Ni, 0.013% Co, 0.020 g/t Pd, 0.022 g/t Pt  Inf: 1.164 Bt 0.206% Ni, 0.012% Co, 0.016 g/t Pd, 0.018 g/t Pt (2023)	Announced a positive Pre-Feasibility study for a post-tax 11.4% IRR and NPV of \$574 million based on a 30-year project life at a long-term nickel price of \$9.75/lb, with 78% payability for nickel in concentrate. The PFS included an updated mineral resource estimate adding Pd and Pt to the resource.
<b>Walter</b>	<b>Centerra Gold Inc.</b>	Au, Ag, Pb; 093K 122	na	397 soil and 27 channel samples.
<b>Whiting Creek</b>	<b>Huckleberry Mines Ltd.</b>	Cu, Mo, Au; Porphyry Cu±Mo±Au; 093E 050	na	Seven holes drilled (2100 m), geological mapping, geophysical surveys. Highlight results include 162.5 m grading 0.33% Cu and 1.64 g/t Ag, and 52.6 m grading 0.45% Cu and 1.29 g/t Ag.
<b>Wishbone</b>	<b>Origen Resources Inc.</b>	Au; Au-quartz veins; 104G 185	na	Geological mapping, prospecting, soil, and rock sampling in 2023. Highlight rock samples graded 202.6 g/t Au and 76.6 g/t Au.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

arsenopyrite, galena, and sphalerite in quartz veins may be epithermal. Exploration at Harry consisted of IP and magnetic geophysical surveys, prospecting, rock sampling, and backpack surface drilling. Drilling totalled 1740 m in seven holes; results included 1.0 m grading 312 g/t Au and 101 g/t Ag, and 1.0 m grading 277 g/t Au and 118 g/t Ag.

#### 7.1.7. Kingpin (Skeena Resources Limited)

The **Kingpin** property includes a tenure area of 32,000 ha, 25 km southwest of Eskay Creek. Exploration at Kingpin consisted of stream-sediment sampling to target geochemical anomalies. These results combined with historical stream-sediment sampling data were used to guide prospecting, geological mapping, and rock sampling.

#### 7.1.8. Kitsault Valley (Homestake Ridge) (Dolly Varden Silver Corporation)

Dolly Varden Silver Corporation acquired the Homestake Ridge project in 2022 from Fury Gold Mines Ltd. and combined resources with the Dolly Varden Silver project to consolidate into the Kitsault Valley project. **Kitsault Valley (Homestake Ridge)** contains a total Indicated resource (June 2023) of 0.736 Mt grading 7.02 g/t Au, 74.8 g/t Ag, 0.18% Cu, and 0.077% Pb, and a total Inferred resource of 5.55 Mt grading 4.58 g/t Au, 100 g/t Ag, 0.13% Cu, and 0.142% Pb.

The 2023 drilling objective was to infill and expand resources at Dolly Varden and Homestake Ridge and to increase mineral estimates from Indicated and Inferred to Measured and Indicated. This year Dolly Varden completed one of the

largest drilling programs in the province with 51,454 m in 115 holes with approximately half completed at Homestake Ridge. Reported results from Homestake Ridge include 25 m grading 46.31 g/t Au and 70 g/t Ag, including 9.84 m grading 111.9 g/t Au and 162 g/t Ag, and 0.48 m grading 1145 g/t Au and 826 g/t Ag. Another high-grade intersection of 0.38 m graded 3.78 g/t Au and 13,855 g/t Ag.

The property is underlain by Hazelton Group volcanic and volcanoclastic rocks. Historic and recent exploration suggest the potential for epithermal base and precious metal and volcanogenic massive sulphide deposits.

#### 7.1.9. New Polaris (Canagold Resources Ltd.)

Canagold Resources Ltd. worked towards a Feasibility Study at their **New Polaris** gold project. This work resulted in an increased mineral resource estimate with an Indicated resource of 2.965 Mt grading 11.61 g/t Au and an Inferred resource of 926,000 t grading 8.93 g/t Au at a 4 g/t Au cut off. Results released in 2023 included 7.14 m grading 9.64 g/t Au, 2.78 m grading 53.8 g/t Au including 0.75 m of 85.5 g/t Au, 4.7 m grading 12.9 g/t Au, and 4.56 m grading 11.0 g/t Au.

#### 7.1.10. Otter Creek (Garibaldi Resources Corp.)

The **Otter Creek** project is a lode gold prospect extending across 8704 ha 12 km east of Atlin. Known for placer gold, lode gold was discovered by Mihalyuk et al. (2017). Placer operations enabled geologists to sample and map the bedrock in excavated pits before backfilling. In 2023, one 63 m hole was drilled.

#### 7.1.11. PSP (Garibaldi Resources Corp.)

The Palm Springs property (**PSP**) is 12 km from Garibaldi's E&L Nickel Mountain project and 12 km west of Eskay Creek. Most exploration on the project has focused on the Casper showing. Garibaldi completed 1162 m of drilling across three targets exploring for Au-Cu-Ag polymetallic veins and VMS mineralization. Results included 0.6 m grading 0.2 g/t Au and 82 g/t Ag.

#### 7.1.12. Ranch (Thesis Gold Inc.)

In 2023, Thesis Gold Inc. merged with Benchmark Metals Inc. to combine the **Lawyers** Au-Ag project and the **Ranch** project as one continuous land package in the Toodoggone mining area. This new company will continue as Thesis Gold Inc. The epithermal Au-Ag Ranch project is in the Northwest Region, whereas the epithermal Au-Ag Lawyers project lies in the North Central Region. Thesis completed more than 18,800 m of diamond drilling in 147 holes at Ranch. Other exploration included prospecting, rock sampling, and geological mapping. Drilling at the Bonanza-Ridge, Bingo, Steve, JK, and BV zones yielded results that included 4.05 m grading 119.49 g/t Au, including 2.0 m grading 231 g/t Au, and 24.7 m grading 5.37 g/t Au and 6.51 g/t Ag. Thesis Gold also completed a financing in October for \$11.16 million.

#### 7.1.13. Scottie Gold Mine (Scottie Resources Corp.)

The **Scottie Gold Mine** project, 35 km north of Stewart, is centred on the past-producing Scottie Gold mine, which operated from 1981 to 1985, producing 95,426 oz of Au at 16.2 g/t Au. The property is crosscut by north-striking and locally abundant east-striking faults. Stanley and Nelson (2022) recognized Stuhini Group and a Hazelton Group stratigraphy in the area that is comparable to that in the McTagg anticlinorium. Gold occurs in steeply dipping pyrrhotite-pyrite-quartz-calcite veins (Fig. 3). Scottie Resources carried out 20,106 m of diamond drilling in 84 holes and geophysical surveys at the Blueberry zone. Results included 3.7 m grading 56.4 g/t Au and 33.8 g/t Ag, 2.0 m grading 88.4 g/t Au and 25.0 g/t Ag, 4.0 m grading 28.2 g/t Au and 17.5 g/t Ag, and 19.0 m grading 8.21 g/t Au. Drill results have increased the Blueberry zone's known depth of mineralization to 525 m and its strike length to 1.55 km. In 2023, Scottie Resources completed financings totalling \$8.38 million.



**Fig. 3.** Weathered semi-massive to massive sulphide mineralization (pyrite, pyrrhotite) that hosts gold within the Blueberry vein at the Scottie Gold project (Scottie Resources Corp.).

#### 7.1.14. Snip Gold (Skeena Resources Limited)

Hochschild Mining plc decided against exercising its right to earn a 60% interest and take over as operator for the **Snip Gold** project. As a result, the project is now 100% wholly owned by Skeena Resources Limited. The project includes the past-producing underground mine, which produced at an average grade of 27.5 g/t Au between 1991 and 1999. The deposit is a southwest-dipping vein system in Upper Triassic

metasedimentary rocks of the Stuhini Group that are cut by Early Jurassic stocks and plutons. In September, Skeena released an updated mineral resource estimate with an Indicated resource of 2.74 Mt grading 9.35 g/t Au and an Inferred resource of 0.5 Mt grading 7.10 g/t Au.

#### 7.1.15. Thorn (Trapper Gold) (Brixton Metals Corporation)

The **Thorn** project (Fig. 4), in the northwest corner of British Columbia, has one of the largest continuous mineral tenure packages in the province, and has 14 defined copper-gold-silver targets. Brixton completed 6625 m of diamond drilling in eleven holes at the **Thorn (Trapper Gold)** target. Geological mapping, prospecting, soil, and rock sampling programs were also carried out at several of their targets. Results from the Trapper Gold epithermal target include 98.0 m grading 0.62 g/t Au and 1.42 g/t Ag, including a 32.0 m interval grading 1.15 g/t Au and 2.07 g/t Ag, and a 6 m interval grading 5.07 g/t Au and 6.23 g/t Ag. Another hole assayed 253 m grading 1.40 g/t Au including 93.0 m grading 3.22 g/t Au, and 12.31 m grading 16.18 g/t Au. In December, Brixton completed financings totalling \$14.5 million.



**Fig. 4.** Looking east along the Thorn Trapper target with vein-hosted sulphide mineralization in Cretaceous quartz diorites intruding into Upper Triassic Stuhini group volcanic and volcanoclastic rock (Brixton Metals Corporation).

#### 7.1.16. Wishbone (Origen Resources Inc.)

The **Wishbone** property extends across an area of 3941 ha 50 km west of the Galore Creek proposed mine and immediately north of its access road. The property has eleven areas targeted for gold-silver bearing quartz-carbonate veins and VMS-style mineralization. Origen performed geological mapping, prospecting, soil, and rock sampling in 2023. Highlight rock samples graded 202.6 and 76.6 g/t Au.

### 7.2. Selected precious and base metal projects

Many precious and base metal projects are active throughout the Northwest Region (Fig. 1; Table 5).

#### 7.2.1. BAM (Jan Copper) (P2 Gold Inc.)

P2 Gold drilled 2 holes totalling 913 m at their **BAM** project.

One hole was drilled at the Jan Copper zone. The company reported geochronologic work, without details, indicating Jan Copper zone mineralization is likely linked to 321 Ma intrusive rocks, significantly older than the Monarch Gold zone, which is hosted in 220 Ma (Late Triassic) rocks. Geological mapping, prospecting, and rock sampling were also completed. P2 Gold later relinquished their option on mineral tenures in the southern part of BAM, including the Jan Copper zone.

#### 7.2.2. Big Gold (Teuton Resources Corp.)

The **Big Gold** Property is 7 km north of the historic Granduc mine and consists of six claims totalling 2835 ha in a larger block of eight properties known as the Luxor project, which extends across 21,540 ha. Exploration in 2023 consisted of prospecting, geological mapping, and rock sampling. A total of 120 samples were taken for hyperspectral analysis to aid with alteration mapping. Exploration identified a massive sulphide occurrence more than 25 m long called the Roman zone. Highlight rock samples assayed 27.7 g/t Au, 6240 g/t Ag, 1.45% Cu, 6.4% Pb, and 3.11% Zn, and 57.1 g/t Ag, 0.72% Cu, 12.1% Pb, and 9.32% Zn.

#### 7.2.3. Bingo (Juggernaut Exploration Ltd.)

The **Bingo** property extends across 989 ha 45 km southwest of Stewart. Juggernaut Exploration Ltd. completed its first drilling with 1017 m in seven holes. Exploration included prospecting, mapping, and rock sampling. Drilling at the Bingo Main zone identified a 550 by 300 m mineralized area with shear-hosted quartz veins. Highlight drill results include 5.11 m grading 7.57 g/t Au, 20.23 g/t Ag, and 2.72% Cu including a 2.90 m interval grading 13.05 g/t Au, 24.93 g/t Ag, and 4.70% Cu. Another interval of 10.12 m graded 2.52 g/t Au, 11.05 g/t Ag, and 1.16% Cu, including a 5.89 m interval grading 4.01 g/t Au, 17.37 g/t Ag, and 1.85% Cu.

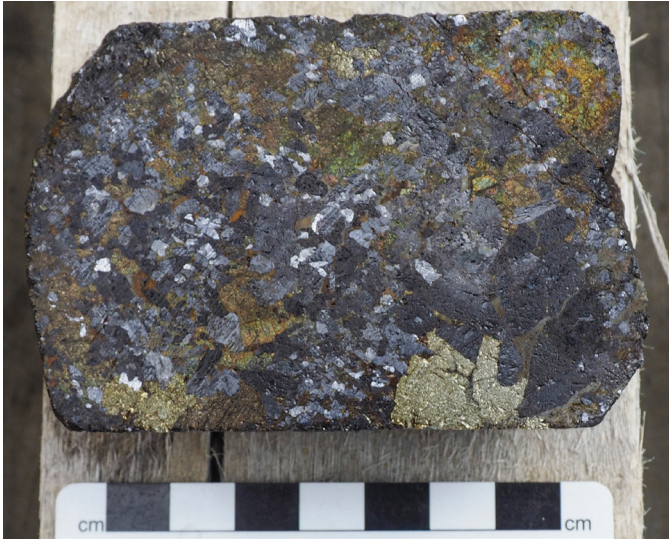
#### 7.2.4. Blue (Core Assets Corp.)

Core Assets drilled 4260 m in 41 holes at their **Blue** property. The Blue property contains a number of projects. Drilling was focused on multiple targets at the Silver Lime project. Core from Pete's target contained massive sulphide mineralization (Fig. 5). Results at the Gally target included 0.5 m grading 1030 g/t Ag, 21.6% Zn, 10.8% Pb, and 1.16% Cu within 8.0 m grading 139 g/t Ag, 2.3% Zn, 1.2% Pb, and 0.18% Cu. Core Assets also carried out prospecting, geological mapping, and an IP geophysical survey and completed financings for \$6.63 million.

#### 7.2.5. Buck (Sun Summit Minerals Corp.)

Sun Summit Minerals Corp.'s 15,000 ha **Buck** property is accessible by an all-season road, 12 km south of Houston. The property is underlain by andesitic to rhyolitic tuffs, flows, and breccias of the Hazelton Group (Upper Triassic to Lower Jurassic). Sulphides occur in veinlets, disseminations, or coarse fracture fillings, mainly in rhyolitic breccias. Sun Summit carried out 3738 m of drilling in 13 holes at the Buck Main





**Fig. 5.** Mineralized drill core (galena, sphalerite, chalcopyrite, pyrrhotite, pyrite), Pete's target, Silver Lime project, Blue property (Core Assets Corporation).

zone with focus to expand high-grade and bulk tonnage gold mineralization both laterally and at depth. Exploration work included geological mapping, prospecting, and soil and rock sampling. Two rock samples from the newly discovered CR zone returned 1.00% Cu and 3.2 g/t Ag, and 0.94% Cu and 4.1 g/t Ag. Drill results included 185.9 m grading 0.39 g/t Au, 8.2 g/t Ag, and 0.53% Zn including a 11.9 m interval grading 1.26 g/t Au, 7.4 g/t Ag, and 0.64% Zn. Another interval of 1.5 m graded 6.79 g/t Au and 1.8 g/t Ag.

#### 7.2.6. Cambria (Scottie Resources Corp.)

The **Cambria** project includes 31,736 ha across 140 mineral tenure blocks less than 1 km from Stewart. It is at the western edges of the Cambria and Todd icefields, bordering Ascot Resource's Red Mountain proposed mine to the east and the Premier gold mine to the west. Scottie Resources continued to advance the project through detailed geological mapping, soil sampling, and prospecting.

#### 7.2.7. Clone (Teuton Resources Corp. 75%, Silver Grail Resources Ltd. 25%)

The **Clone** property was first staked in 1995. It is 20 km southeast of Stewart and 16 km south of the Red Mountain proposed gold mine. Gold and gold-cobalt mineralization is in a series of sub-parallel shear zones that have an approximate strike length of 500 m. Exploration in 2023 included prospecting, geological mapping, and rock sampling.

#### 7.2.8. Consolidated Eskay (Eskay Mining Corp.)

Eskay Mining Corp. completed 5700 m of drilling in 24 holes, carried out prospecting, geological mapping, and rock sampling across their **Consolidated Eskay** gold project. Drilling was completed at several new exploration targets in search of volcanogenic massive sulphide mineralization.

Targets included Cumberland, Scarlet Knob, Tarn Lake, Storie Creek, Maroon Cliffs, and Hexagon-Mercury. VMS mineralization was intersected at each of the six new targets.

Eskay Mining also conducted prospecting, geological mapping, and rock sampling of the Scarlet Ridge-Tarn Lake trend, Scarlet Valley, Cumberland, and Hexagon-Mercury targets. Several drill intersections at the Cumberland target returned high grade gold and silver such as 15.0 m grading 3.02 g/t Au, 68.66 g/t Ag, 0.24% Cu, 0.73% Pb, and 4.86% Zn including 3.41 m grading 8.48 g/t Au, 103.27 g/t Ag, 0.23% Cu, 1.08% Pb, and 4.16% Zn. Tarn Lake drilling results included 2.45 m grading 7.83 g/t Au and 6.96 g/t Ag including 0.95 m grading 12.4 g/t Au and 10.0 g/t Ag. Rock samples from massive sulphide discovered at Scarlet Knob (Fig. 6) graded 22.26 g/t Au, 461.97 g/t Ag, 0.22% Cu, 14.57% Zn, and 10.50% Pb.



**Fig. 6.** Outcrop of massive to semi-massive sulphide mineralization (outlined in red), Scarlet Knob discovery, Consolidated Eskay project (Eskay Mining Corp.).

#### 7.2.9. Crown (Electrum) (Goldstorm Metals Corp.)

The **Crown (Electrum)** property is part of Goldstorm Metals Corp.'s **Crown** project, a 16,469 ha mineral tenure area that consists of several properties: Mackie East and West, Orion, High North, Fairweather, Delta and Electrum. The property is 15 km south of the Brucejack mine. The area is being targeted for precious metal veins, subaqueous hot spring VMS mineralization, and porphyry Au-Cu mineralization. Goldstorm drilled 2581 m in eleven holes at Electrum. Highlight drilling results include 0.5 m grading 233.5 g/t Au, 756.0 g/t Ag, 0.73% Pb, and 0.51% Zn within an interval of 2.1 m grading 57.34 g/t Au, 214.27 g/t Ag, 0.19% Pb, and 0.16% Zn, within a 4.5 m interval grading 27.0 g/t Au, 111.09 g/t Ag, 0.10% Pb, and 0.09% Zn. Other work completed included geological mapping, prospecting, and rock sampling.

### 7.2.10. Empire (Juggernaut Exploration Ltd.)

The **Empire** property area is 12,480 ha and is 70 km northeast of Terrace. Juggernaut drilled 1500 m at the Metallica zone of the Empire property. Prospecting and rock sampling were also carried out. Rock sample highlights include a grab sample of a vein with massive sulphide mineralization assaying 36,875 g/t Ag, 4.68 g/t Au, 27.6% Cu, and 3.27% Zn. A channel sample (length not reported) assayed 22,694 g/t Ag, 26.4% Cu, and 2.8% Zn.

### 7.2.11. Eskay Rift (Teuton Resources Corp.)

The **Eskay Rift** property is 5 km northeast of the historic Granduc mine and approximately 20 km south of the KSM deposit. Exploration included prospecting, geological mapping, and rock sampling.

### 7.2.12. Golddigger (Goliath Resources Ltd.)

The **Golddigger** property is 7 km west of the Dolly Varden mine access road. At the Surebet and Main zones, stratabound massive sulphide mineralization (galena-sphalerite-pyrite) and silica alteration occur in folded Hazelton Group sedimentary and volcanoclastic rocks along northwest-trending faults. Goliath completed 34,000 m of diamond drilling in 124 holes, geological mapping, prospecting, and rock sampling. Drilling focused at the Surebet target with 98 of the 124 holes completed there. Reported results included 7.90 m grading 64.88 g/t Au and 8.03 g/t Ag including 5.90 m grading 86.84 g/t Au and 6.52 g/t Ag, including 2.75 m grading 186.0 g/t Au and 13.29 g/t Ag.

### 7.2.13. Holy Grail (Prospect Ridge Resources Corp.)

The **Holy Grail** property extends across 69,515 ha and is 10 km north of Terrace. Prospect Ridge acquired 100% ownership of the project and completed geological mapping, prospecting, and rock sampling. Highlight results released in 2023 from previous field seasons for the 4 Shore showing include 28.0 g/t Au, 56.9 g/t Ag, and 2.03% Cu, and another sample with 13.7 g/t Au, 39.9 g/t Ag, and 1.33% Cu.

### 7.2.14. Hoodoo (Skeena Resources Limited)

The **Hoodoo** property was acquired through the acquisition of Quest Ex Gold & Copper Ltd. in 2022. It is 50 km northwest of Eskay Creek and directly north of the Rock and Roll property. Skeena did stream-sediment sampling and prospecting.

### 7.2.15. Iskut (Seabridge Gold Inc.)

The **Iskut** project includes the former Johnny Mountain mine and the Bronson Slope copper-gold deposit. Seabridge carried out 19,830 m of diamond drilling in 23 holes, and an airborne magnetic, and ground magnetotelluric geophysical surveys. Drilling discovered new mineralization that consists of an intact, well-preserved intermediate sulphidation epithermal system. Highlight results from the Snip North target include 1.8 m grading 15.3 g/t Au, 430.0 g/t Ag, and 1.5% Cu, 277 m grading 0.8 g/t Au, 1.19 g/t Ag, and 0.07% Cu, 21.0 m grading

1.73 g/t Au, 2.2 g/t Ag, and 0.07% Cu, and 253 m grading 0.61 g/t Au, 1.36 g/t Ag, and 0.07% Cu.

### 7.2.16. Kitsault Valley (Dolly Varden) (Dolly Varden Silver Corporation)

The Homestake Ridge project was combined with the Dolly Varden Silver project to consolidate into the Kitsault Valley project in 2022. **Kitsault Valley (Dolly Varden)** contains a total Indicated resource (June 2023) of 3.417 Mt grading 317 g/t Ag, and a total Inferred resource of 1.296 Mt grading 250.9 g/t Ag.

The 2023 drilling objective was to infill and expand resources at Dolly Varden and Homestake Ridge and to increase mineral estimates from Indicated and Inferred to Measured and Indicated. This year Dolly Varden completed one of the largest drilling programs in the province with 51,454 m in 115 holes. This drilling intersected multiple sections with visible silver (Fig. 7). Drilling at Dolly Varden intersected 26.99 m grading 296 g/t Ag, 1.68% Pb, and 3.01% Zn, 10.74 m grading 371 g/t Ag, 2.82% Pb, and 4.99% Zn including 0.5 m grading 1475 g/t Ag, 10.65% Pb, and 12% Zn, and 29.34 m grading 381 g/t Ag including 1.0 m grading 1898 g/t Ag.

The immediate area of the Dolly Varden property has a long history of mining. Between 1910 and 1959, the Dolly Varden mine produced more than 20 Moz of silver. The property is underlain by Hazelton Group volcanic and volcanoclastic rocks. Historic and recent exploration suggest the potential for epithermal base and precious metal and volcanogenic massive sulphide deposits.



**Fig. 7.** Visible silver in core of a quartz-carbonate vein, Dolly Varden deposit. Kitsault Valley project (Dolly Varden Silver Corporation).

### 7.2.17. Knauss Creek (Prospect Ridge Resources Corp.)

The **Knauss Creek** property is located about 35 km northeast of Terrace where Prospect Ridge Resources Corp. is exploring the potential for polymetallic veins, skarn, and porphyry mineralization. Prospect Ridge completed geological mapping, prospecting, and rock sampling at Knauss Creek. Highlight rock sample results include assays of: 78.90 g/t Au, 457 g/t Ag, and 13.45% Cu; 23.80 g/t Au, 738 g/t Ag, and 5.42% Cu; 15.20 g/t Au, 1970 g/t Ag, and 0.39% Cu; and 20.60 g/t Au, 175.0 g/t Ag and 0.54% Cu.

### 7.2.18. KSP (Skeena Resources Limited)

The **KSP** property is a 64,000 ha tenure area, 24 km southwest of Eskay Creek. Exploration consisted of stream-sediment sampling the results of which were combined with historical data to guide prospecting, geological mapping, and rock sampling. Highlight rock samples include 14.20 g/t Au, 11.4 g/t Ag, 1.09% Cu, and 0.05% Zn, and 9.26 g/t Au, 6.9 g/t Ag, 0.71% Cu, and 0.02% Zn.

### 7.2.19. Maestro (Quartz Mountain Resources Ltd.)

The **Maestro** property is 15 km north of the town of Houston. The property is underlain by Hazelton Group Lower to Mid-Jurassic volcanic and volcanoclastic rocks, with local areas underlain by Upper Jurassic Bowser Lake Group sedimentary rocks. Two main styles of mineralization occur in the property area. The predominant style is structurally controlled quartz veins with disseminated molybdenite and chalcopyrite, along with associated pyrite, chalcopyrite, galena, sphalerite and tetrahedrite veins, commonly silver bearing. The other style of mineralization is quartz and ankerite veins, breccias and zones of disseminated sulphides, spatially associated with green sericite alteration. Quartz Mountain Resources Ltd. completed two drill holes totalling 1445 m.

### 7.2.20. Midas (Juggernaut Exploration Ltd.)

The **Midas** Property is 24 km southeast of Terrace and extends across an area of 20,803 ha. More than 4000 m was drilled at the property with a focus on the Kokomo discovery and following up on IP anomalies. Drill results include 22.0 m grading 0.22 g/t Au, 2.73 g/t Ag, 0.20% Cu, and 0.38% Zn, which included a 5.0 m interval grading 0.35 g/t Au, 6.10 g/t Ag, 0.64% Cu, and 0.67% Zn. Another 1.0 m interval graded 1.30 g/t Au, 8.92 g/t Ag, and 0.74% Cu. Highlight channel samples from the VG Zone included 4.34 m grading 10.28 g/t Au, 2 m grading 15.37 g/t Au, and 3.11 m grading 5.43 g/t Au. Other exploration included rock sampling, prospecting, geological mapping, and IP geophysical surveying.

### 7.2.21. Red Cliff (Decade Resources Ltd.)

The **Red Cliff** project is 20 km north of Stewart. Decade carried out more than 1600 m of diamond drilling in 23 holes, prospecting, geological mapping, and rock sampling. Four gold-bearing zones have been identified on the project, Red Cliff, Upper Montrose, Lower Montrose, and Waterpump. Drilling focused on better defining the Montrose zones. Highlight results include 6.09 m grading 2.03 g/t Au, 0.021% Cu, and 0.614% Zn. Another hole returned 1.6 m grading 3.91 g/t Au, 0.59% Cu, and 0.18% Zn.

### 7.2.22. Rock and Roll (Etruscus Resources Corp.)

The **Rock and Roll** property is 7 km northwest of the past-producing Snip mine. The property includes the Black Dog VMS deposit and the SRV zone. Etruscus carried out late season IP geophysics, geological mapping, and rock sampling to follow up on the Kashmir and Heather zones for porphyry

mineralization potential. Etruscus added 16 new mineral tenure blocks (Pheno claims) north of and contiguous with the Rock and Roll property for rare earth element potential.

### 7.2.23. Silver Hope (Finlay Minerals Ltd.)

The **Silver Hope** project's mineral tenure surrounds the past-producing Equity Silver mine, which operated from 1980 to 1994, processing 33.8 Mt grading 0.4% Cu, 64.9 g/t Ag, and 0.46 g/t Au. Finlay completed a lidar survey, biogeochemical sampling, soil mercury vapour surveys, soil sampling, prospecting, and contracted a machine-learning data review of the property. Results released in 2023 for drilling in 2022 included 31 m grading 0.2% Cu, 11.8 g/t Ag, and 0.22 g/t Au including a 11.42 m interval grading 0.49% Cu, 30.1 g/t Ag, and 0.41 g/t Au. Another hole intersected 76.57 m grading 0.45% Cu, 14.6 g/t Ag, and 0.14 g/t Au.

### 7.2.24. Silver Queen (Equity Metals Corp.)

The **Silver Queen** historic mine is 43 km south of Houston and is accessible by an all-season road. Since discovery, more than 500 drill holes and 9 km of underground workings have been completed on the property. In 2022, Equity released an updated mineral resource estimate with an Indicated resource of 3.445 Mt grading 3.5% Zn, 2.13 g/t Au, 189 g/t Ag, 0.24% Cu, and 0.6% Pb. An Inferred resource of 1.9 Mt of 2.0% Zn, 0.82 g/t Au, 167 g/t Ag, 0.23% Cu, and 0.5% Pb (resources at NSR cut off of \$100/t). In 2023, Equity completed prospecting, rock and soil sampling, and 9989 m of diamond drilling in 26 holes. Drilling first focused on the Camp and Sveinson deposits, then later at the George Lake and Cole Lake targets. Highlight results from the George Lake target included 0.6 m grading 1.5 g/t Au, 1073 g/t Ag, 6.3% Cu, 4.0% Pb, and 1.6% Zn within a 4.1 m interval grading 0.5 g/t Au, 209 g/t Ag, 1.7% Cu, 0.7% Pb, and 0.4% Zn. Other results included 0.3 m grading 4.1 g/t Au, 824 g/t Ag, 0.7% Cu, and 3.4% Pb within 1.5 m grading 1.3 g/t Au, 226 g/t Ag, 1.0% Cu, 1.7% Pb, and 6.6% Zn, and 0.5 m grading 10.4 g/t Au, 115 g/t Ag, 0.6% Cu, 0.9% Pb, and 1.4% Zn. Highlight rock samples from the Cole Lake target graded 55.2 g/t Au, 5049 g/t Ag, 3.2% Pb, and 0.12% Zn, and 1736 g/t Ag, 22.7% Pb, and 1.2% Zn.

### 7.2.25. Terrace (Decade Resources Ltd.)

The **Terrace** project has three main properties: Terrace Gold, Treasure Mountain, and Dardanelle, approximately 20 km east of Terrace. Mineral tenure consists of 48 contiguous claims totalling 17,470 ha. Decade carried out 5300 m of diamond drilling in 37 holes, rock sampling, and prospecting, mostly at the Terrace Gold property. Drilling tested the Excelsior and Croesus showings for porphyry copper potential. The company reported narrow zones of quartz veining containing chalcopyrite; one hole had molybdenum mineralization on fracture surfaces and in quartz veinlets. Decade also reported they had identified a new 50 by 30 m zone of mineralized outcrop that returned grab sample results up to 10% Cu, 502 g/t Ag, and 4 g/t Au.

### 7.2.26. Treaty Creek (Tudor Gold Corp. 60%, Teuton Resources Corp. 20%, American Creek Resources Ltd. 20%)

Tudor Gold Corp.'s **Treaty Creek** project has a bulk tonnage resource in Jurassic volcanic and intrusive rocks that also host the KSM deposits 5 km to the southwest. A new mineral resource estimate was released (March 2023) with 641.9 Mt of Indicated resource grading 0.91 g/t Au, 5.45 g/t Ag, and 0.15% Cu, and 233.9 Mt of Inferred grading 0.74 g/t Au, 5.99 g/t Ag, and 0.16% Cu. Exploration at Treaty Creek consisted of 31,904 m of diamond drilling in 34 holes. Drilling focused on mineralized structures not currently in the resource model that are thought to host high-grade gold. Highlight results include 601.5 m grading 1.23 g/t Au, 2.93 g/t Ag, and 0.12% Cu including a 123 m interval grading 3.23 g/t Au, 5.57 g/t Ag, and 0.19% Cu, and a 15 m interval grading 14.89 g/t Au, 4.72 g/t Ag, and 0.6% Cu. Another interval of 19.5 m graded 5.41 g/t Au, 1.09 g/t Ag, and 0.24% Cu. In 2023, Tudor Gold completed financings totalling \$27.8 million.

### 7.2.27. Walter (Centerra Gold Inc.)

Centerra Gold Inc. was active at its **Walter** project, collecting 397 soil and 27 channel samples.

## 7.3. Selected base metal projects

The Northwest Region contains several base metal projects. One is an ultramafic-hosted nickel project (Fig. 1; Table 5). Base metals are explored for primarily as polymetallic vein, VMS and, to lesser extent, SEDEX and manto replacement deposits.

### 7.3.1. Ruby Creek (Stuhini Exploration Ltd.)

Stuhini Exploration Ltd. completed the acquisition of the **Ruby Creek** property in June. The property is 14 km from Atlin, extends across 28,631 ha, and is road accessible. A mineral resource estimate (March 2022) has a combined Measured and Indicated resource of 369.4 Mt grading 0.053% Mo and an Inferred resource of 41.9 Mt grading 0.047% Mo. Stuhini carried out mapping, prospecting, and rock sampling. Highlight rock sample results from the Volcanic Creek target included assays of 1.098% Mo, 0.77% Mo, and 0.57% Mo.

### 7.3.2. Turnagain (Giga Metals Corp.)

The **Turnagain** nickel-cobalt deposit is an Alaskan-type Pt-(Os-Rh-Ir) ultramafic. The deposit has maximum dimensions of 3 km by 8.2 km and displays a dunite core surrounded by peripheral peridotite, pyroxene-rich peridotite, wehrlite, and olivine pyroxene. Sulphide mineralization includes pyrrhotite, pentlandite, chalcopyrite, and trace bornite. In 2022, Giga Metals completed a joint venture transaction, with Mitsubishi Corporation earning a 15% equity interest in Turnagain and forming a new company, Hard Creek Nickel Corp. Giga Metals announced a positive Pre-Feasibility study for a post-tax 11.4% internal rate of return and net present value of \$574 million based on a 30-year project life at a long-term

nickel price of \$9.75/lb, with 78% payability for nickel in concentrate. With the Pre-Feasibility study came an updated mineral resource estimate that added Pd and Pt. The total Measured and Indicated resource is now 1.574 Bt at 0.210% Ni, 0.013% Co, 0.020 g/t Pd, and 0.022 g/t Pt, and the Inferred resource is 1.164 Bt at 0.206% Ni, 0.012% Co, 0.016 g/t Pd, and 0.018 g/t Pt.

## 7.4. Selected base and precious metals projects

The Northwest Region hosts many base and precious metals projects (Fig. 1; Table 5). Many of these projects are porphyry deposits that are highly prospective for Au-Cu-Mo bulk-tonnage mineralization related to Triassic-Jurassic island arc assembly and post-accretionary intrusive complexes.

### 7.4.1. Berg (Surge Copper Corp.)

In December, Surge Copper Corp. announced they had entered into a definitive purchase agreement to acquire a 100% interest in the **Berg** project from Thompson Creek Metals Company Inc., a wholly owned subsidiary of Centerra Gold Inc. A Preliminary Economic Assessment was released in July for the Berg deposit stating a net present value of \$2.1 billion and an internal rate of return of 20% for a 30-year mine life. The updated resource estimate has a total Measured and Indicated resource of 1.009 Bt grading 0.23% Cu, 0.03% Mo, and 4.6 g/t Ag, and an Inferred resource of 542 Mt grading 0.17% Cu, 0.02% Mo, and 3.7 g/t Ag. Exploration included three holes totalling 2077 m of diamond drilling, geological mapping, prospecting, and soil and rock sampling. Results included 756.0 m grading 0.26% Cu, 0.026% Mo, and 3.6 g/t Ag, including 90.0 m of 0.42% Cu, 0.004% Mo, and 2.8 g/t Ag.

### 7.4.2. Burn (Commander Resources Ltd.)

Freeport-McMoRan Mineral Properties Canada Inc. has entered into a joint-venture agreement to earn up to a 75% interest in the **Burn** copper and gold porphyry project with Commander Resources Ltd. as the operator. Exploration in 2023 included 4000 m of diamond drilling, geological mapping, prospecting, and rock sampling.

### 7.4.3. Crown (Orion) (Goldstorm Metals Corp.)

The **Orion** property is part of Goldstorm Metals Corp.'s **Crown** project, a 16,469 ha mineral tenure area that consists of several properties: Mackie East and West, Orion, High North, Fairweather, Delta and Electrum. The project is directly south of KSM and 4 km southwest of the Brucejack mine. The area is being targeted for precious metal veins, subaqueous hot spring VMS mineralization, and porphyry Au-Cu mineralization. Work completed included geological mapping, prospecting, and rock sampling (total of 1057 including seven channel saw-cut, 284 chip, 766 grab). Rock sampling at the Orion area discovered a new target, referred to as the Copernicus zone, a 200 m by 800 m area with polymetallic sulphide mineralization. Rock samples from Orion included a 0.25 m chip sample that

graded 0.67 g/t Au, 320.0 g/t Ag, 11.96% Cu, 0.088% Co, and 0.55% Zn, and a 0.5 m channel sample grading 0.28 g/t Au, 226.0 g/t Ag, 6.95% Cu, 0.079% Co, and 0.37% Zn.

#### 7.4.4. Duke (Amarc Resources Ltd.)

Amarc Resources Ltd.'s **Duke** project is north of Babine Lake at the edge of the Northwest and North Central Mineral Development Office regions. Amarc completed winter diamond drilling with 11,070 m drilled in 24 holes. Work is funded by Boliden Mineral Canada Ltd. who, in November 2022, entered into an earn-in agreement for 60% ownership of the project by spending \$30 million in four years and an additional 10% by spending a further \$60 million in six years. Regional exploration in 2023 included a 5759 line-km airborne magnetic survey, a lidar survey, 68 line-km of ground magnetics, 122 line-km of IP geophysics, detailed geological mapping, prospecting, and soil and rock sampling. Results from the 2022-23 drilling program include 541.6 m grading 0.24% Cu, 0.016% Mo, 0.04 g/t Au, and 1.2 g/t Ag, 238.2 m grading 0.29% Cu, 0.019% Mo, 0.06 g/t Au, and 1.4 g/t Ag, and 125.6 m grading 0.38% Cu, 0.024% Mo, 0.08 g/t Au, and 1.8 g/t Ag.

#### 7.4.5. Dungate (Edgemont Gold Corp.)

Edgemont's **Dungate** Cu-Au porphyry project extends across 1582 ha 6 km southeast of Houston. Edgemont worked on advancing a mineral resource estimate.

#### 7.4.6. Eaglehead (Northern Fox Copper Inc.)

Northern Fox's **Eaglehead** project, 50 km east of Dease Lake, is a calc-alkalic porphyry Cu-Mo-Au-Ag deposit in Jurassic rocks of Quesnel terrane. The area is underlain by porphyritic biotite granodiorite intruding quartz porphyry and hornblende quartz diorite. Higher copper grades are spatially related to intensity of potassic and sericite-chlorite alteration and zones of increased quartz vein, late-stage magmatic breccia, and fracture density. Chalcopyrite, bornite, and pyrite also occurs as disseminations in the host rock (Bird, 2023). Northern Fox completed an updated mineral resource estimate for the Eaglehead Project. The deposit now has an Indicated resource of 70.81 Mt grading 0.221% Cu, 0.0108% Mo, 0.061 g/t Au, and 0.9 g/t Ag. Inferred resources are 242.3 Mt grading 0.192% Cu, 0.0035% Mo, 0.043 g/t Au, and 0.6 g/t Ag at a \$5.50 NSR cut off.

#### 7.4.7. George Copper (MTB Metals Corp.)

MTB Metals Corp.'s **George Copper** project is part of MTB's BA property. The property is 18 km northeast of Stewart. Highway 37A and the Northwest Transmission Line run through the property. This year, exploration at George Copper included three drill holes, geological mapping, and rock sampling. The three drill holes intersected sulphide mineralization consisting of pyrite, chalcopyrite, and sphalerite.

#### 7.4.8. Kispiox Mountain and Netalzul Mountain (Jaxon Mining Inc.)

The Hazelton property consists of five projects with potential for polymetallic veins, porphyry Cu, and epithermal mineralization. For the **Kispiox Mountain** project, a petrographic study was completed; exploration included soil and rock sampling and portable-backpack drilling. Further geophysical inversion modelling was compiled with geochemical data for the **Netalzul Mountain** project to update the 3D geological model.

#### 7.4.9. Hat (Doubleview Gold Corp.)

Doubleview report their **Hat** project as a gold-rich copper porphyry with silver and additional critical metals including cobalt, palladium, and scandium. For 2023, 10,320 m was drilled at Hat. Drilling results included 143.3 m grading 0.36% Cu, 0.43 g/t Au, 0.64 g/t Ag, 134.6 g/t Co, and 1.29 g/t Sc. Within this interval, 77.2 m graded 0.48% Cu, 0.64 g/t Au, 0.9 g/t Ag, 147 g/t Co, and 1.51 g/t Sc.

#### 7.4.10. Hwy 37 (Kingfisher Metals Corp.)

Kingfisher Metals has entered two option agreements to consolidate the two properties previously known as Ball Creek East and Hank into the **Hwy 37** copper-gold project. The new project extends across 36,200 ha, immediately west of Highway 37 and approximately 50 southwest of Iskut. In March, the two four-year options were completed, giving Kingfisher a 100% earn-in interest in both properties. The area is being targeted for porphyry Cu-Ag and epithermal gold deposits. Kingfisher completed 2150 m of diamond drilling in six holes.

#### 7.4.11. Lucky Strike (Goliath Resources Ltd.)

Goliath Resources Ltd. owns a 49% interest in the **Lucky Strike** property with an option to acquire an additional 51%. The property extends across 31,511 ha, is road accessible, and is 40 km north of Terrace. The newly discovered Bullseye Au-Cu-Ag porphyry system is defined by a 1200 by 1000 m area of alteration with porphyry outcropping at surface. Goliath completed 1000 m drilling and also carried out geological mapping, prospecting, rock sampling and geophysical surveying.

#### 7.4.12. NAK (American Eagle Gold Corp.)

American Eagle Gold Corp. carried out 7781 m of diamond drilling in ten holes at the **NAK** copper-gold project and owns a 100% option to purchase the property. Results included 302 m grading 0.53 g/t Au, 0.40% Cu, 1.27 g/t Ag, and 431 ppm Mo within 771 m grading 0.28 g/t Au, 0.25% Cu, 0.96 g/t Ag, and 207 ppm Mo. American Eagle also completed an exploration agreement with the Lake Babine First Nation to get consent for a 5-year exploration program and participation in any environmental baseline work conducted.

#### 7.4.13. Newmont Lake (Enduro Metals Corporation)

Enduro Metals Corporation discovered new porphyry copper-gold mineralization at their North Toe prospect on the **Newmont Lake** project. Exploration at Newmont Lake consisted of geological mapping, prospecting, rock sampling, and drone magnetic geophysical surveying. Rock sampling highlights include 0.77% Cu and 0.20 g/t Au, 0.31% Cu and 0.63 g/t Au, and 2.04% Cu and 104 g/t Ag.

#### 7.4.14. Ootsa (Surge Copper Corp.)

The **Ootsa** project contains three separate deposits: Ox, East Seel, and West Seel. The project is at the edge of a southeast-trending belt of porphyry Cu-Au deposits and prospects with four other deposits northwest of Ootsa including Lucky Ship, Berg, Whiting Creek, and Huckleberry. Like other deposits in the region, calc-alkaline porphyry mineralization at Ootsa is temporally associated with the Bulkley suite intrusive rocks (Cretaceous). In 2022, a mineral resource estimate reported a Measured and Indicated resource of 438.6 Mt grading 0.18% Cu, 0.017% Mo, 0.12 g/t Au, and 2.1 g/t Ag, and an additional Inferred resource of 137.7 Mt grading 0.15% Cu, 0.015% Mo, 0.10 g/t Au, and 2.0 g/t Ag. This year, Surge's focus was mainly on their Berg project. Exploration at Ootsa consisted of geological mapping, prospecting, rock, and soil sampling.

#### 7.4.15. Oweege (Sanatana Resources Inc.)

Sanatana's **Oweege** Cu-Au porphyry project is along Highway 37 and is crossed by the Northwest Transmission Line. This year, Sanatana carried out 8.5 line-km of 3D surface IP geophysics at Oweege. Assays from 2022 were reported this year and highlights include 112.1 m grading 0.17% Cu, 0.22 g/t Au, and 1.10 g/t Ag, and 196 m grading 0.09% Cu, 0.13g/t Au, and 1.5g/t Ag.

#### 7.4.16. Poplar (Universal Copper Ltd.)

The **Poplar** project is road accessible, extends across an area of 61,566 ha and has a high voltage hydro-electric line crossing through it. The property is in a historic mining region south of Houston, and 35 km north of the Huckleberry mine. The project has an Indicated resource of 152.3 Mt grading 0.32% Cu, 0.009% Mo, 0.09 g/t Au, and 4.95 g/t Ag, and an Inferred resource of 139.3 Mt grading 0.29% Cu, 0.005% Mo, 0.07 g/t Au, and 4.95 g/t Ag calculated at a 0.20% Cu grade cut off (September 2021). Universal Copper completed a 1933 line-km airborne magnetotelluric survey.

#### 7.4.17. Rancheria South (CMC Metals Ltd.)

The **Rancheria South** project includes three properties: Rancheria South, Amy, and Silverknife. These properties are adjacent and west of the Silvertip Mine along the BC-Yukon border. Exploration here is focused on silver-lead-zinc-gold carbonate replacement mineralization similar to Silvertip, polymetallic veins, and skarn mineralization. CMC Metals Ltd. completed 2143 m drilling in eleven drill holes and a gravity geophysical survey at the Silverknife property.

#### 7.4.18. Red Line (Copperhead Resources Inc.)

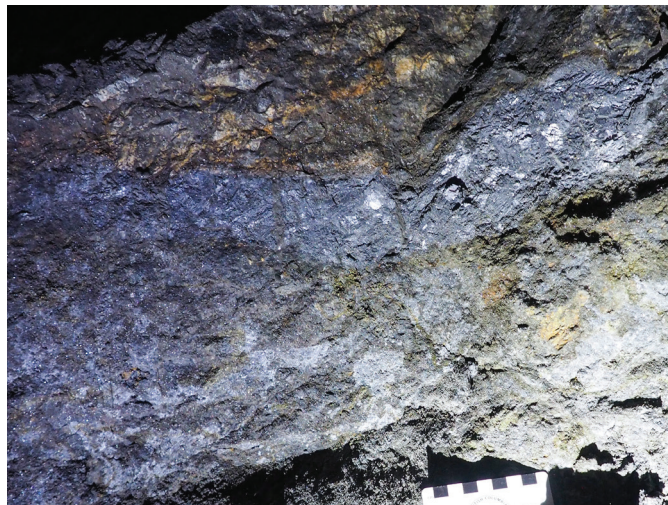
The **Red Line** project was started to target potential mineralization along the contact between Stuhini Group volcanic rocks (Upper Triassic) and siliciclastic rocks in the lower part of the Hazelton Group (Upper Triassic to Lower Jurassic). Exploration consisted of geological mapping, prospecting, and rock sampling. Copperhead is exploring a K-feldspar porphyritic syenite known in the area to have potential for alkalic porphyry Cu-Au-Ag deposits.

#### 7.4.19. Schaft Creek (Teck Resources Limited 75%, Copper Fox Metals Inc. 25%)

The **Schaft Creek** porphyry deposit is an advanced-stage joint venture with a Measured and Indicated resource (September 2021) of 1.346 Bt grading 0.26% Cu, 0.16 g/t Au, 0.017% Mo, and 1.25 g/t Ag. Inferred resources are 343.6 Mt grading 0.17% Cu, 0.11 g/t Au, 0.013% Mo, and 0.84 g/t Ag. In 2023, focus was on geoscience and engineering, geotechnical and environmental data collection, community support, infrastructure upgrades, and permitting. Teck completed geotechnical drilling totalling 9000 m. Environmental baseline data were collected for future permit regulatory requirements.

#### 7.4.20. Silvertip (Coeur Mining Inc.)

The **Silvertip** mine remains on care and maintenance while Coeur Mining Inc. redevelops the geological model, identifies new structures and carbonate-replacement deposit manto and chimney mineralization, and expands the resource in all directions. An updated mineral resource estimate was released at year-end 2022 including a Measured and Indicated resource containing 60.12 Moz Ag, 1.365 Blbs Zn, and 722.2 Mlbs Pb. Coeur's 2023 exploration program included 30,000 m of drilling in 85 holes. The focus of drilling was resource expansion and step-outs at the Southern silver zone, to test underneath the Discovery zone, and to define a resource at the Saddle zone. More manto mineralization was found at the Camp Creek west zone, Saddle zone, and the Southern Silver zone (Fig. 8).



**Fig. 8.** Galena vein (dark grey) in massive to semi-massive sulphide (pyrite, pyrrhotite, galena, sphalerite) Southern Silver zone, Silvertip mine (Coeur Mining Inc.).

Drilling indicated that manto mineralization at the Saddle zone potentially connects with the manto in the Discovery zone and to the Southern Silver zone chimney mineralization. Drilling intersected chimney/feeder structures beneath the currently known Southern Silver zone. Highlight results included 12 m grading 459.6 g/t Ag, 15.1% Zn, and 8.7% Pb, and 6.2 m grading 778.3 g/t Ag, 13.6% Zn, and 14.7% Pb.

#### 7.4.21. Tatogga (Saddle North) (Newmont Corporation)

Newmont Corporation's Tatogga project includes the **Tatogga (Saddle North)** deposit. The deposit has an Indicated resource (August 2020) of 298 Mt grading 0.28% Cu, 0.36 g/t Au, and 0.8 g/t Ag, and an Inferred Resource of 543 Mt grading 0.25% Cu, 0.31 g/t Au, and 0.7 g/t Ag. Newmont worked with the Tahltan Heritage Resources Environmental Assessment Team on a Tahltan land-use study and supported a local infrastructure study in Iskut through the Tahltan Industry Working Group.

#### 7.4.22. Telegraph (MTB Metals Corp.)

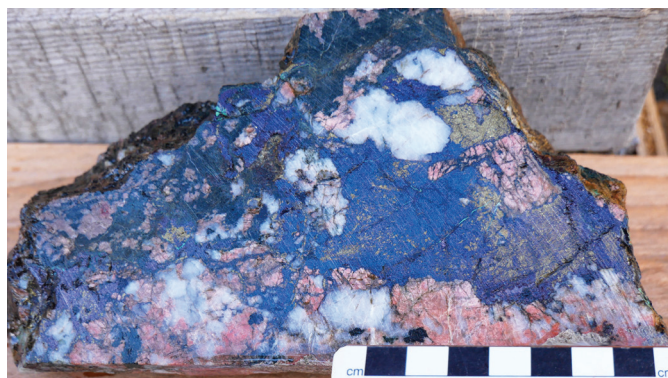
Mountain Boy's **Telegraph** project consists of multiple properties. Mountain Boy has a 60% option on the DOK property, 100% interest in the DOKX-Yeti property, and 100% interest in ground that they staked. Mountain Boy carried out 2142 m of drilling in four holes, geological mapping, an IP geophysical survey, prospecting, and soil and rock sampling at the DOK trend. Highlight drill results include 133.8 m grading 0.23% Cu, 0.11 g/t Au, 1.58 g/t Ag, and 20.63 ppm Mo, including 22.2 m grading 0.31% Cu, 0.21 g/t Au, 2.23 g/t Ag, and 7.96 ppm Mo. Another 6 m interval graded 0.11% Cu, 1.11 g/t Au, 4.54 g/t Ag, and 98.05 ppm Mo.

#### 7.4.23. Thorn (Camp Creek) (Brixton Metals Corporation)

Brixton continued to drill porphyry copper mineralization at the **Camp Creek** target of their **Thorn** project. Of the 16,730 m of diamond drilling completed in 2023, most was completed at the Camp Creek target (10,100 m in nine holes). Highlight results include 1202 m grading 0.228% Cu, 0.05 g/t Au, 2.27 g/t Ag, and 233 ppm Mo, including 630 m grading 0.336% Cu, 0.07 g/t Au, 2.74 g/t Ag, and 309 ppm Mo, which also included 109 m grading 0.511% Cu, 0.08 g/t Au, 3.7 g/t Ag, and 498 ppm Mo. Another drill hole had a 34 m interval grading 0.333% Cu, 0.09 g/t Au, 2.06 g/t Ag, and 243 ppm Mo. At other targets, several rock samples returned high grade copper-gold mineralization including 33.3% Cu, 7.0 g/t Au, and 238 g/t Ag at the East Target, 39.0 g/t Au and 65.9 g/t Ag at the South Target, and 13.0% Cu, 0.9 g/t Au, and 30.3 g/t Ag at the Plum target. More than 48 rock samples returned 1% Cu or greater (Fig. 9).

#### 7.4.24. Whiting Creek (Huckleberry Mines Ltd.)

The **Whiting Creek** property is 8 km north of the Huckleberry mine, which is currently on care and maintenance status. Mineralization is in stocks of the Bulkley plutonic suite (Late Cretaceous) that cut Hazelton Group volcanic rocks (Lower



**Fig. 9.** Bornite (blue) and chalcopyrite (yellow) in sample of quartz K-feldspar vein from regional Metla target of the Thorn project (Brixton Metals Corporation).

Jurassic). Chalcopyrite, molybdenite, and pyrite mineralization occurs as veinlets and disseminations. The best grades are in zones of potassic alteration. In addition to geological mapping and geophysical surveys, 2100 m of drilling (seven holes) was completed. Highlight results included 162.5 m grading 0.33% Cu and 1.64 g/t Ag, and 52.6 m grading 0.45% Cu and 1.29 g/t Ag.

## 8. Geological research

van Straaten et al. (2023) released GIS, structural, magnetic susceptibility, and other digital data to support the recently published map (van Straaten et al., 2022) of the Dease Lake area. van Straaten (2024) synthesized stratigraphic and geochronologic work focused on the upper part of the Hazelton Group along the Stikine arc in northern Stikinia. Norris et al. (2023) documented successive generations of alteration assemblages at the Red Chris mine, using stable isotopic geochemistry to establish early magmatic and later mixed magmatic and meteoric sources of hydrothermal fluids. Day and Marquez (2023) examined the distribution of selenium in materials from surface gossans to deeper-level rocks at the Red Chris mine. Working at the North Rok porphyry copper deposit, Moradpouri et al. (2023) used soil geochemistry to establish that the depth of erosion is supra-ore. Based on the initial season of a two-year field-based project along the British Columbia-Yukon border, Mihalyuk et al. (2024) presented the initial results of mapping in the Gladys Lake area near Atlin, reassigning ophiolitic rocks previously considered part of Cache Creek terrane to Atlin terrane and describing what might be distal ultramafic-associated massive sulphide (UAMS) mineralization. Also working near Atlin, Tominaga et al. (2023) tested high-resolution magnetic-geochemical mapping of ophiolitic rocks as a tool to monitor serpentinization distribution and processes.

Part of province-wide studies directed at critical minerals, Orovan et al. (2024) examined core at the past-producing Kitsault mine and recognized features (e.g., unidirectional solidification textures) that might record permeable structures that focused ore-bearing fluids, and Brzozowski and Zaborniak (2024) examined core at the E&L magmatic Ni-Cu-PGE

sulphide deposit. Brzozowski and Zaborniak (2024) provided textural evidence indicating that sedimentary rock assimilation contributed to the sulphide saturation history of the E&L magma and shallow-level volatile exsolution, sulphide liquid transport through conduit plumbing, and subsequent metal remobilization. To support current land-use decisions and to aid in the search for the critical minerals, the British Columbia Geological Survey has revitalized its mineral potential mapping work of the 1990s. This new work takes advantage of about 30 years of new data, knowledge, advances in GIS applications, and computer power to enable statistical analysis of spatial data using weights of evidence modelling. A comparison of results between work done in the 1990s and the current work for an area that includes a large part of the Northwest Region indicates that the new work largely corroborates the old and that both are of value for assisting land-use decisions and mineral exploration (Wearmouth et al., 2024).

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# Exploration and mining in the North Central and Northeast regions, British Columbia



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## 1. Introduction

A northeast to southwest transect through the Northeast and the North Central regions provides a cross section from undeformed rocks deposited on Precambrian basement to allochthonous terranes accreted to Ancestral North America (Fig. 1). In the Northeast Region, platformal sedimentary rocks transition westward to deep-water basin strata at the eastern limit of Cordilleran deformation, close to the border of the North Central Region. The North Central Region displays a history of ocean opening and closing, island arc volcanism, and terrane accretion onto the western margin of Ancestral North America. Terrane emplacement was followed by continued orogeny, magmatism, and sedimentation. Both regions were extensively glaciated.

The Northeast Region is prospective for coal and industrial minerals and has three producing coal mines: Conuma Resources Limited's **Brule**, **Wolverine**, and **Willow Creek** operations. Conuma Resources Limited is also working towards reopening the **Quintette** mine, which was purchased from Teck Resources Limited in 2022. In the far north of the region, Fireside Minerals Ltd. produces barite from its **Fireside** mine to supply the oil and gas drilling industry. The North Central Region is prospective for copper, gold, silver, zinc, lead, niobium, and rare earth elements. These minerals occur mainly in porphyry, epithermal or vein and stockwork, SEDEX, and carbonatite settings. The North Central Region has one producing metal mine, the **Mount Milligan** copper-gold operation (Centerra Gold Inc.). Significant work and results included those reported for Centerra Gold Inc.'s **Mount Milligan (Brownfield)** and **Mount Milligan (Greenfield)** projects, Thesis Gold Inc.'s **Lawyers** project, Pacific Ridge Exploration Ltd.'s **Kliyul** and **RPD** projects, TDG Gold Corp.'s **Baker** and **Shasta** projects, Amarc Resources Ltd.'s **Joy** project, and Defense Metals Corp.'s **Wicheeda** project. Artemis Gold Inc. reported significant construction progress for their **Blackwater Gold** project.

Estimates for exploration expenditures, drilling programs, and other metrics were captured in the British Columbia Mineral and Coal Exploration Survey, a joint initiative of the Province of British Columbia Ministry of Energy, Mines and Low

Carbon Innovation, the Association for Mineral Exploration in British Columbia, and EY LLP. For the North Central Region, exploration expenditures are estimated at \$67.1 million. The estimate for exploration drilling is 69,590 m. For the Northeast Region, exploration expenditures are estimated at \$2.6 million. The estimate for exploration drilling exploration is 4710 m (Clarke et al., 2024; EY LLP, 2024).

## 2. Geological overview

The Canadian Cordillera records a history of supercontinent rifting followed by collisions between the westward-driven North American continental plate and a succession of island arc volcanosedimentary and intrusive assemblages (terranes) developed outboard of Ancestral North America and accreted to each other and to the continental margin (e.g., Nelson et al., 2013). Terrane evolution continues today as the Juan de Fuca plate slides beneath Vancouver Island. In the Northeast and Central regions, the most easterly rocks are platformal sedimentary units that thicken westward and transition to deep-water basin strata. These rocks are deformed mainly by eastward-vergent thrust faults and folds along northwest-southeast trends. The Rocky Mountain trench marks the site of about 800 km of post-accretion dextral strike slip along the Tintina fault system. Deformed deep-water basin sedimentary rocks immediately west of the Rocky Mountain trench are referred to as the Cassiar terrane (Fig. 1). Outboard of the Cassiar terrane is a group of volcanic assemblages referred to (roughly from east to west) as the Slide Mountain terrane, the Quesnel and Stikine terranes (Quesnellia and Stikinia), and the Cache Creek terrane. The Cache Creek terrane is separated from Quesnellia by the Pinchi fault, another major crustal break, which locally exposes areas of ultramafic rocks. These terranes are intruded by intermediate to felsic plutonic and volcanic rocks that are overlain by younger sedimentary and volcanic rocks. Mineral deposit types and distributions are intimately related to the geologic evolution of the terranes (e.g., Nelson et al., 2013). Thus, platformal rocks deposited above Ancestral North America host coal and potash deposits, and post-accretionary sedimentary rocks overlying the Stikine terrane host coal deposits. Deep-water basin strata host SEDEX

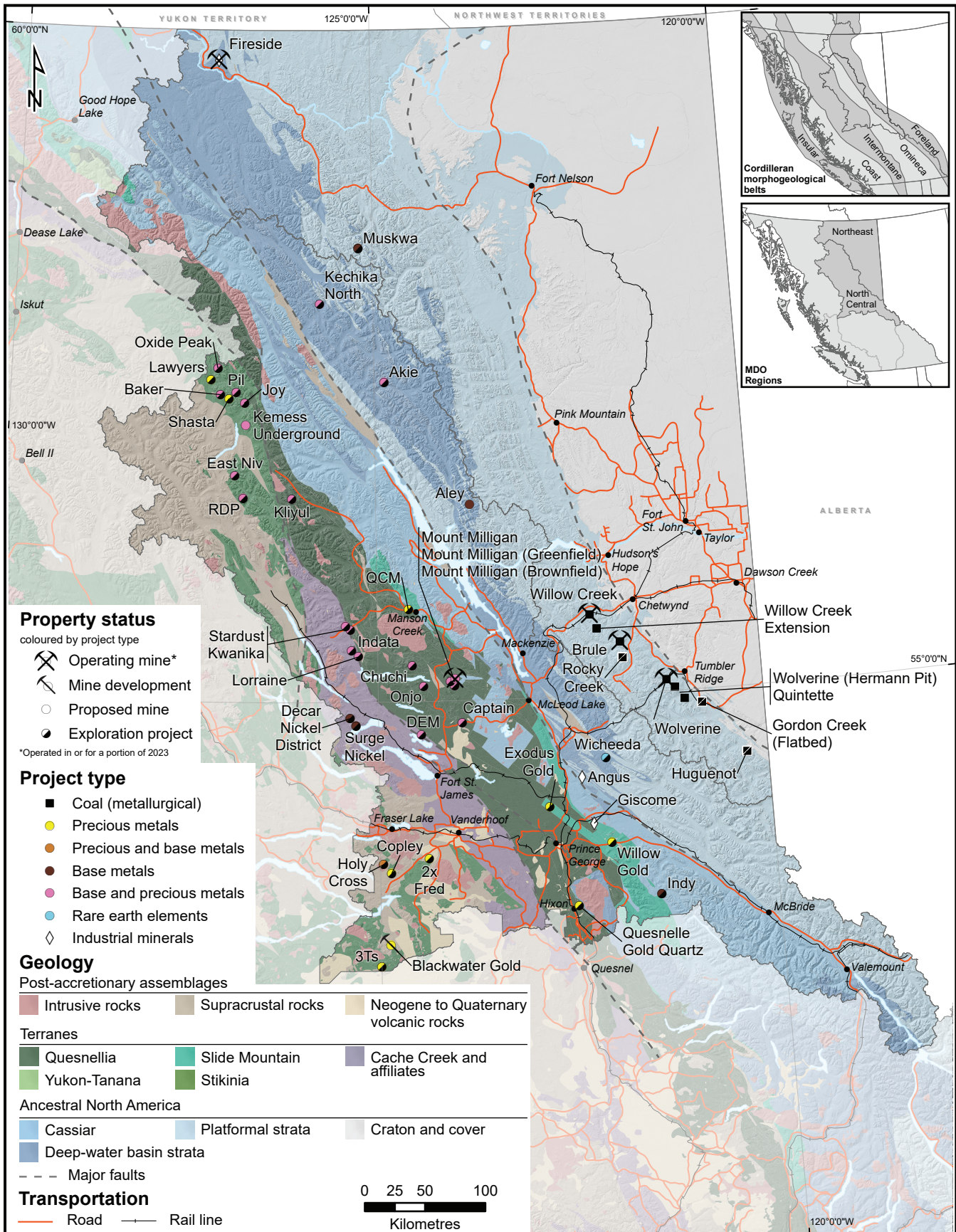


Fig. 1. Mines and selected projects, North Central and Northeast regions, 2023. Terranes after Nelson et al. (2013).

and Mississippi Valley-type lead-zinc deposits and are intruded by carbonatite bodies hosting niobium and rare earth elements (REE). The island arc assemblages of Quesnellia and Stikinia host large polymetallic porphyry, epithermal, and orogenic precious metal deposits.

### 3. Mines and quarries

In 2023, one metal mine operated in the North Central Region; three coal mines, and one industrial mineral mine operated in the Northeast Region (Fig. 1; Tables 1-3).

#### 3.1. Metal mines

**Mount Milligan** is the only producing metal mine (copper-gold) in the North Central Region (Fig. 1; Table 1).

##### 3.1.1. Mount Milligan (Centerra Gold Inc.)

The **Mount Milligan** mine is hosted by mafic to intermediate volcanic and pyroclastic rocks of the Takla Group (Triassic to Lower Jurassic) that are intruded by Lower Jurassic monzonite

porphyry stocks. The ore body is a silica-saturated alkalic porphyry deposit in which copper and gold (with accessory silver) mineralization is in sulphides across an area of 2500 m by 1500 m. The deposit has two principal zones. At the Main zone, mineralization is mostly in volcanic rocks; at the Southern Star zone, mineralization is in a monzonite stock and in volcanic rocks.

As of December 31, 2022, the mine has Proven and Probable reserves of 224.0 Mt grading 0.18% Cu and 0.37 g/t Au with a combined Measured and Indicated resource of 182.7 Mt at 0.17% Cu and 0.30 g/t Au containing 695 million pounds (Mlbs) of copper and 1.74 million ounces (Moz) of gold and an Inferred Mineral resource of 5.69 Mt at 0.07% Cu and 0.47 g/t Au. The pit has been planned as a series of seven discrete pushbacks. The planned mine life is just over 11 years (2022-2033).

Mount Milligan produced 114,000 ounces of gold and 42 million pounds of copper in the first three quarters of 2023. The company completed mining in an ore-waste transition zone and began mining higher-grade copper and gold zones

**Table 1.** Metal mines, North Central Region.

Mine	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1-Q3)	Reserves	Resource	Comments
<b>Mount Milligan</b>	<b>Centerra Gold Inc.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 093N 194, 191	42 Mlbs Cu 114 koz Au	P+Pr: 224.0 Mt 0.18% Cu, 0.37 g/t Au	M+I: 182.7 Mt 0.17% Cu, 0.30 g/t Au (additional to reserves)  Inf: 5.69 Mt 0.07% Cu, 0.47 g/t Au	7318 m of diamond drilling in 17 holes completed in 2023. More than 350 employees.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

**Table 2.** Coal mines, Northeast Region.

Mine	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1-Q3)	Reserves	Resource	Comments
<b>Brule</b>	<b>Conuma Resources Limited</b>	PCI; Bituminous coal; 093P 007	1.6 Mt	P+Pr: 1.5 Mt	na	Drilling, 2 DDH (264.57 m). About 300 employees.
<b>Willow Creek</b>	<b>Conuma Resources Limited</b>	HCC, PCI; Bituminous coal; 093O 008	1.3 Mt	P+Pr: 7.8 Mt	na	About 300 employees, mine and plant.
<b>Wolverine</b>	<b>Conuma Resources Limited</b>	HCC; Bituminous coal; 093P 025	2.2 Mt	P+Pr: 1.2 Mt	na	About 300 employees, mine and plant.

HCC = hard coking coal; PCI = pulverized coal injection; TC = thermal coal

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

**Table 3.** Selected industrial mineral mines and quarries, Northeast Region.

Mine	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1-Q3)	Reserves	Resource	Comments
<b>Fireside</b>	<b>Fireside Minerals Ltd.</b>	Barite; Vein barite; 094M 003, 19	na	na	na	Fireside Minerals produces 4.1 API spec barite for sale to western Canadian oil and gas markets. In-pit mapping carried out. Geotechnical drilling for a new pit design. Remote sensing survey of a 20 km <sup>2</sup> area.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

in the second half of 2023. Within the mine lease, 7318 m of drilling in 17 holes was completed (Fig. 2). The drilling was split between better defining known resources and expanding resources.



**Fig. 2.** Logging core at the Mount Milligan mine (Centerra Gold Inc.).

### 3.2. Coal mines

Conuma Resources Limited is currently producing from the **Brule**, **Willow Creek**, and **Wolverine** mines (Fig. 3; Table 2).

All coal is shipped by rail to the Trigon Terminal, Prince Rupert. Coal from the three mines can be blended at port to create different quality mixtures for customer needs.

#### 3.2.1. Brule Mine (Conuma Resources Limited)

Forecast production for the **Brule** mine was 1.6 Mt of pulverized coal injection (PCI) coal. The coal is in folded and thrust-faulted rocks of the Gething Formation. The direct-ship coal product is transported by truck to the **Willow Creek** mine site then sent by rail to the Trigon Terminal. The company drilled two holes (264.57 m) to extend the deposit.

#### 3.2.2. Willow Creek Mine (Conuma Resources Limited)

The **Willow Creek** mine forecasted production was 1.3 Mt of hard coking coal (HCC) and pulverized coal injection (PCI) product. Coal is mined from several seams in the Gething Formation (Fig. 4). The coal is processed on site then transported by rail to the Trigon Terminal.

#### 3.2.3. Wolverine Mine (Conuma Resources Limited)

Forecast production for the **Wolverine** mine was 2.2 Mt of hard coking coal (HCC). Coal from the mine is processed on site and loaded for rail transport to the Trigon Terminal. Coal is mined from the Gates Formation at the Perry Creek pit, which is nearing the end of its resources. Conuma has an environmental assessment in progress for an amendment that would allow mining from the Hermann pit and use the existing Wolverine processing plant and loadout facilities. The proposed Hermann pit is approximately 16 km from the Wolverine mine Perry Creek pit and coal processing plant.

### 3.3. Industrial mineral mines and quarries

In 2023, the **Fireside** barite mine was in operation in the Northeast Region (Fig. 1; Table 3). No industrial mineral mines or quarries operations were reported for the North Central Region.

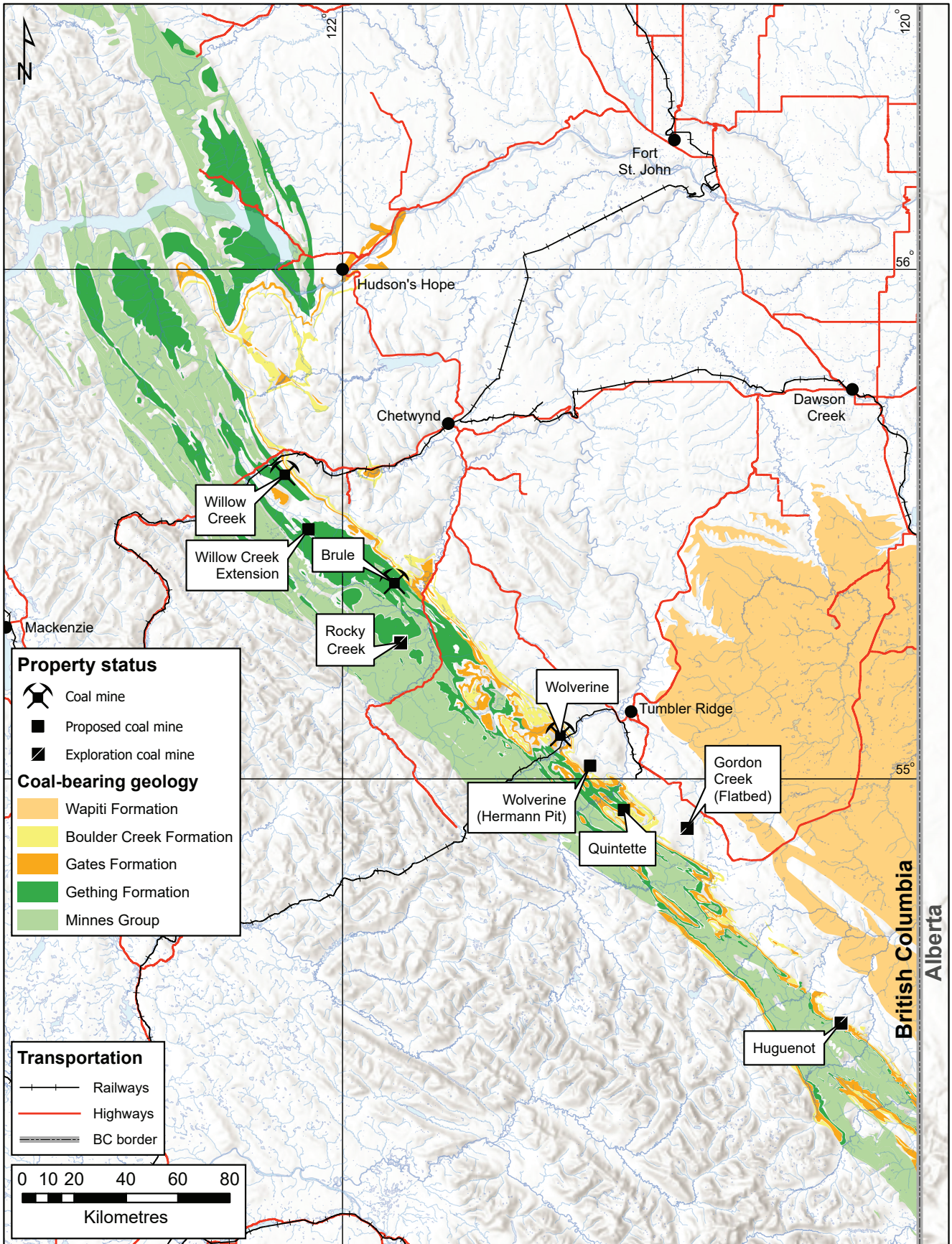


Fig. 3. Coal mines, proposed coal mines, and coal exploration projects, northeastern British Columbia, 2023.



**Fig. 4.** Gently dipping coal-bearing Gething Formation strata, Willow Creek mine (Conuma Resources Ltd.).

### 3.3.1. Fireside (Fireside Minerals Ltd.)

At the **Fireside** mine, Fireside Minerals Ltd. quarries massive white barite from veins cutting Paleozoic sedimentary rocks of the Kechika Group near the Yukon border. The barite veins are steeply dipping, trend north to northeast, and have a combined true thickness of 6.5 m. Barite concentrations in the veins range from 96.0 to 99.4% BaSO<sub>4</sub>. Geotechnical drilling was carried out for a new proposed pit design. In-pit mapping was carried out and a remote sensing survey was completed over a 20 km<sup>2</sup> area by Auracle Geospatial Science Inc.

## 4. Placer operations

Placer exploration is a widespread activity in parts of British Columbia, and permits are required only when surface disturbance is proposed. In the North Central Region, operations are distributed primarily in the Manson Creek, Fort St. James to Mackenzie, and Hixon areas. Larger scale operations are generally sited on abandoned stream channels and benches, and use backhoes and hydraulic excavators to extract gravel, which is then processed through a wash plant, either on site or at a remote location. Due to the number of operations and because production is not reported, these operations are not tracked. In the Northeast Region, current placer interest is minimal.

## 5. Mine or quarry development

Artemis Gold Inc.'s **Blackwater Gold** gold-silver project in the North Central Region is at the mine development stage (Table 4).

### 5.1. Blackwater Gold (Artemis Gold Inc.)

Artemis Gold Inc. is focused on developing the **Blackwater Gold** project in the North Central Region (Fig. 5). Artemis received Environmental Assessment approval in 2019 and a Mines Act permit in early 2023. By the end of September, construction was 45% complete, and approximately \$280 million of the initial capital expenditure of \$730 to \$750 million had been spent. The company did 790 m of sonic drilling for geotechnical data and groundwater tracking and monitoring. The deposit is hosted by intermediate to felsic volcanic rocks in the Kasalka Group (Upper Cretaceous; Stikine terrane). In this intermediate sulphidation epithermal system, the host rocks are pervasively fractured and sericitized. Sulphides include pyrite, sphalerite, marcasite, and pyrrhotite as disseminations and pore fillings that are strongly controlled by a set of northeast- and northwest-trending faults. Reserves are reported at 8 Moz Au and 62.2 Moz Ag, with a life-of-mine average annual gold production of 339,000 oz (August 2020).



**Fig. 5.** Construction activities at the Blackwater Gold project site (Artemis Gold Inc.).

## 6. Selected proposed mines or quarries

Proposed mines are feasibility-stage projects for which proponents have begun the environmental certification process (in the case of large projects) or have submitted applications for Mines Act permits (in the case of projects below British Columbia Environmental Assessment Act thresholds) or are waiting on existing permit amendments. Projects that have permits in place but have yet to obtain financing to begin site construction are also considered to be at the proposed stage. The two proposed metal mines in the North Central Region are Taseko Mines Limited's **Aley** project, and Centerra Gold Inc.'s **Kemess Underground** project. There are also two proposed industrial mineral mines in the region: Greymont Western Canada Inc.'s **Giscome** project and Vitreo Minerals Ltd.'s **Angus** project (Table 5). There are three proposed coal mines in the Northeast Region (Fig. 3; Table 5): Conuma Resources Limited's **Herman**, **Willow Creek Extension**, and **Quintette** projects.



**Table 4.** Mine development projects, North Central Region.

Project	Operator (partner)	Commodity; Deposit type; MINFILE	Reserves	Resource	Comments
<b>Blackwater Gold</b>	<b>Artemis Gold Inc.</b>	Au, Ag; Epithermal Au-Ag-Cu (intermediate sulphidation); 093F 037	P+Pr: 334.4 Mt 0.75 g/t Au, 5.8 g/t Ag at a sulphidation); 0.20 g/t AuEq cut off containing 8.0 Moz Au, 62.3 Moz Ag	M+I: 597 Mt (including reserves) 0.61 g/t Au, 6.4 g/t Ag at a cut off containing 0.20 g/t AuEq 11.7 Moz Au, 122.4 Moz Ag	Geotechnical drilling (sonic, 790 m). About 660 employed during construction. \$280 million spent on project construction. Reserves (August 2020) are reported at 8 Moz Au and 62.2 Moz Ag, with a life-of-mine average annual gold production of 339,000 oz.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

### 6.1. Proposed metal mines

The two proposed metal mines in the North Central Region are Taseko Mines Limited's **Aley** project, and Centerra Gold Inc.'s **Kemess Underground** project.

#### 6.1.1. Aley (Taseko Mines Limited)

Taseko Mines Limited's **Aley** niobium-bearing carbonatite project is near the western extremity of platformal strata that were deposited on the flank of Ancestral North America. The carbonatite intrusion is oval in map view, measuring about 2.0 km by 2.8 km. Reserves are calculated at 84 Mt grading 0.5% Nb<sub>2</sub>O<sub>5</sub>. The proposed processing plant would have a nominal capacity of 10,000 tpd. Single-stage crushing followed by three stages of grinding and a multi-stage flotation process would produce a Nb<sub>2</sub>O<sub>5</sub> concentrate. The concentrate would then be processed in an on-site converter to produce FeNb as a saleable product. Expected process recovery is 63% with annual production averaging 9 million kg of niobium over the mine life. Environmental monitoring and product marketing initiatives continue.

#### 6.1.2. Kemess Underground (Centerra Gold Inc.)

Centerra Gold Inc.'s **Kemess Underground (KUG)** project is estimated to contain an Indicated resource of 173.7 Mt grading 0.182% Cu, 0.3 g/t Au, and 1.55 g/t Ag. Within this resource are Probable reserves of 107.4 Mt grading 0.27% Cu, 0.54 g/t Au, and 1.99 g/t Ag. Although the former Kemess South mine closed in 2011, infrastructure remains in place and both the camp and ore processing plant will be used to service KUG. KUG is considered a stand-alone operation, to be mined by panel caving, with crushed ore conveyed underground to the processing plant. Processing rate would be 24,600 tpd with an average production of 106,000 oz gold and 47 Mlbs copper during a 12-year mine life. Kemess East (KE), about 1 km east of KUG, is an underground operation that could be integrated into the KUG project. KE has an Indicated resource of 177.5 Mt grading 0.36% Cu, 0.4 g/t Au, and 1.97 g/t Ag, and an Inferred resource of 29.3 Mt grading 0.314% Cu, 0.3 g/t Au, and 2.00 g/t Ag. The KUG project has approval for development, but Centerra has not declared a timeline.

### 6.2. Proposed coal mines

Conuma Resources Limited is continuing baseline environmental monitoring for their **Wolverine (Hermann Pit)** and **Willow Creek Extension** projects and the company is trying to reopen the **Quintette** mine.

#### 6.2.1. Quintette (Conuma Resources Limited)

Conuma Resources Limited is preparing to restart the former **Quintette** mine. The Windy pit will be re-opened, where the coal seams of the Gates Formation (Lower Cretaceous, Fort St. John Group) generally have shallow (<15°) dips (Fig. 6). The Gates Formation, which consists of sandstone, shale, siltstone, conglomerate, and coal, is cut by northwest-trending low-angle thrust faults and exposed in a series of related open folds. Conuma carried out exploration drilling to better define known resources.



**Fig. 6.** Gates Formation coal seams in the Little Windy pit, Quintette mine (Conuma Resources Ltd.).

#### 6.2.2. Willow Creek Extension (Conuma Resources Limited)

Conuma Resources Limited completed a prefeasibility study

**Table 5.** Selected proposed mines and quarries, North Central and Northeast regions.

Project	Operator (partner)	Commodity; Deposit type; MINFILE	Reserves	Resource	Comments
<b>Aley</b> (North Central Region)	<b>Taseko Mines Limited</b>	Nb; Carbonatite-hosted; 094B 027	P+Pr: 83.8 Mt 0.50% Nb <sub>2</sub> O <sub>5</sub> (at 0.30% Nb <sub>2</sub> O <sub>5</sub> cut off)	M+I: 285.8 Mt 0.37% Nb <sub>2</sub> O <sub>5</sub> (at 0.20% Nb <sub>2</sub> O <sub>5</sub> cut off)	Proposed open-pit mine with 10,000 tpd ore processing rate and average annual production of 9000 t Nb. Environmental monitoring and product marketing.
<b>Angus</b> (North Central Region)	<b>Vitreo Minerals Ltd.</b>	Silica; Sand, Quartzite; 093J 042	na	na	Proposed mine production is 2.9 Mt of quartz arenite per year over a 20-year mine life.
<b>Giscome</b> (North Central Region)	<b>Graymont Western Canada Inc.</b>	CaCO <sub>3</sub> ; Limestone; 093J 041, 25	na	I: >100 Mt of limestone (>95% calcium carbonate, <5% magnesium carbonate) in situ	Environmental assessment in place. Proposed 600,000 tpy limestone quarry to feed a vertical lime kiln producing 198,000 t of lime annually during a 50+ year mine life.
<b>Kemess Underground (KUG)</b> (North Central Region)	<b>Centerra Gold Inc.</b>	Cu, Au, Ag; Porphyry Cu±Mo±Au; 094E 021	Pr: 107.38 Mt 0.27% Cu, 0.54 g/t Au, 1.99 g/t Ag containing 629.6 Mlbs Cu, 1.87 Moz Au, 6.88 Moz Ag	I: 173.7 Mt (including reserves) 0.182% Cu, 0.3 g/t Au, 1.55 g/t Ag containing 1195 Mlbs Cu, 3.33 Moz Au, 13.87 Moz Ag	Permitted, proposed underground panel cave mine with 24,600 tpd ore processing rate and life-of-mine average annual production of 106,000 oz Au and 47 Mlbs Cu over a 12-year life of mine.
<b>Quintette</b> (Northeast Region)	<b>Conuma Resources Limited</b>	Coal; Bituminous coal; 093P 020	P+Pr: 36.0 Mt	na	Permitting underway for a potential restart.
<b>Willow Creek Extension</b> (Northeast Region)	<b>Conuma Resources Limited</b>	Coal; Bituminous coal; 093O 060	P+Pr: 15.6 Mt	na	Prefeasibility study completed in September 2022. Continued baseline monitoring.
<b>Wolverine (Hermann Pit)</b> (Northeast Region)	<b>Conuma Resources Limited</b>	Coal; Bituminous coal; 093I 031	P+Pr: 3.9 Mt	na	Continued baseline monitoring.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

in September 2022, and continued baseline monitoring for their **Willow Creek Extension** project. The project contains 15.6 Mt Proven and Probable reserves.

### 6.2.3. Wolverine (Hermann Pit) (Conuma Resources Limited)

Conuma Resources Limited continued baseline environmental monitoring for its **Wolverine (Hermann Pit) project**, which contains 13.9 Mt Proven and Probable reserves of coal in the Gates Formation. Coal seams are mostly in folds with moderate to steep (40-70°) dips of the Gates Formation (Fort St. John Group; Lower Cretaceous).

### 6.3. Selected proposed industrial mineral mines or quarries

Proposed industrial mineral mines or quarries include Graymont Western Canada Inc.'s **Giscome** project and Vitreo Minerals Ltd.'s **Angus** project in the North Central Region.

#### 6.3.1. Giscome (Graymont Western Canada Inc.)

At the **Giscome** project, Graymont Western Canada proposes to mine high-purity limestone rocks of the Antler Formation (Triassic; Slide Mountain Group). Crushed stone would be transported about 5 km by truck to lime kilns at a former stone quarry, owned and operated by CN Rail, in the community of Giscome. An existing CN Rail line would be used for

transporting the product. The project has Environmental Assessment approval. Due to weak markets for lime in the region, Graymont has not yet decided to initiate construction.

### 6.3.2. Angus (Vitreo Minerals Ltd.)

Vitreo Minerals Ltd.'s wholly owned **Angus** frac sand project would extract quartz arenite from the Monkman East pit and transport it via a newly constructed haul road to a sand plant 2 km northwest of the pit where it will be processed. Proposed mine production is 2.9 Mt of quartz arenite per year over a 20-year mine life. The mining rate is required to meet an annual sales target of 2 Mt of processed silica sand. The company's most recent exploration activities were conducted on the Monkman deposit. A 500 t trench sample was processed for evaluation.

## 7. Selected exploration activities and highlights

Exploration continued in the North Central and Northeast regions (Fig. 1; Tables 6, 7). Large programs were carried out in the North Central Region including drilling at the **Mount Milligan (Brownfield)** and **Mount Milligan (Greenfield)** (Centerra Gold Inc.), **Lawyers** (Thesis Gold Inc.), and **Kliyul** and **RDP** (Pacific Ridge Exploration Ltd.) projects.

### 7.1. Selected precious metal projects

In 2023, exploration activities were carried out at several precious metal projects in the North Central Region (Fig. 1; Table 6).

#### 7.1.1. 2X Fred (Centerra Gold Inc.)

Centerra Gold Inc. reclaimed roads and drill pads at their **2X Fred** project.

#### 7.1.2. 3Ts (Independence Gold Corp.)

Independence Gold Corp. completed 44 diamond drill holes totalling 6300 m at their **3Ts** project. The drilling resulted in the discovery of the Ian and Johnny veins and an extension of the Tommy vein system. Highlight results included 11.50 m grading 8.82 g/t Au and 78.26 g/t Ag, and 0.75 m grading 26.75 g/t Au and 295 g/t Ag. A new copper-silver target (Ootsa) was discovered during surface exploration. Sample highlights from selected grab samples included 0.4% Cu and 78.0 g/t Ag.

#### 7.1.3. Copley (Centerra Gold Inc.)

Centerra Gold Inc. completed 513 m of drilling in nine holes at its **Copley** project. The company also did 74 line-km of drone magnetics.

#### 7.1.4. Exodus Gold (Exodus Mineral Exploration Ltd.)

At the **Exodus Gold** project, Exodus Mineral Exploration Ltd. conducted surface sampling. Rock samples of mineralized veins returned values up to 24.4 g/t Au. The company received a drilling permit.

### 7.1.5. Lawyers (Thesis Gold Inc.)

Thesis Gold Inc. and Benchmark Metals Inc. merged and now operate as Thesis Gold Inc. Thesis was active at its **Lawyers** project (Fig. 7) with 23,691 m of drilling, focusing on the Dukes Ridge and Cliff Creek deposits. Highlight results included 45.00 m grading 1.03 g/t Au and 51.53 g/t Ag, 53.00 m grading 2.12 g/t Au and 104.95 g/t Ag, and 45.00 m grading 2.29 g/t Au and 132.10 g/t Ag.



Fig. 7. Lawyers project, core logging and storage facility (Thesis Gold Inc.).

#### 7.1.6. QCM (Kestrel Gold Inc.)

Kestrel Gold Inc. continued exploration on their **QCM** project with prospecting. Highlight results from channel sampling included 1.2 m grading 2.085 g/t Au.

#### 7.1.7. Quesnelle Gold Quartz (Golden Cariboo Resources Ltd.)

Golden Cariboo Resources Ltd. continued to explore at their **QCM** project. A total of 279.8 m of diamond drilling was completed in one hole.

#### 7.1.8. Shasta Mine (TDG Gold Corp.)

TDG Gold Corp. reported 2022 drilling results and highlights included 9.5 m grading 7.76 g/t Au and 271 g/t Ag, 8.0 m grading 8.59 g/t Au and 67 g/t Ag, and 1.5 m grading 14.05 g/t Au and 634 g/t Ag.

**Table 6.** Selected exploration projects, North Central Region.

<b>Project</b>	<b>Operator (partner)</b>	<b>Commodity; Deposit type; MINFILE</b>	<b>Resource</b>	<b>Comments</b>
<b>2X Fred</b>	<b>Centerra Gold Inc.</b>	Au, Ag; Epithermal Au-Ag (low sulphidation); 093F 089	na	Reclamation carried out on all roads and drill pads in 2023.
<b>3Ts</b>	<b>Independence Gold Corp.</b>	Au, Ag; Epithermal Au-Ag (low sulphidation); 093F 055	Tommy and Ted-Mint veins Inf: 4.47 Mt 3.64 g/t Au, 96.26 g/t Ag (at a cut off grade of 0.4 g/t AuEq in-pit, 2.01 g/t AuEq underground)	Drilling, 44 DDH (6300 m). Highlight results included 11.50 m grading 8.82 g/t Au and 78.26 g/t Ag, and 0.75 m grading 26.75 g/t Au and 295 g/t Ag.
<b>Akie</b>	<b>ZincX Resources Corp.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb- Ag; 094F 031	I: 22.7 Mt 8.32% Zn, 1.81% Pb, 14.1 g/t Ag  Inf: 7.5 Mt 7.04% Zn, 1.24% Pb, 12.0 g/t Ag (at 5% Zn cut off)	Carried out general infrastructure maintenance and work to maintain compliance with environmental permits.
<b>Baker</b>	<b>TDG Gold Corp.</b>	Au, Ag; Epithermal Au-Ag (low sulphidation); 094E 050, 26	na	Relogging, resampling, and assaying historical drilling to examine the potential porphyry targets for drill testing. Highlight results included 126.8 m grading 0.12 g/t Au, 2 g/t Ag, and 0.04% Cu, and 105.8 m grading 0.14 g/t Au, 4 g/t Ag, and 0.05% Cu.
<b>Captain</b>	<b>Orestone Mining Corp.</b>	Cu, Au; Alkalic porphyry Cu-Au; 093J 026, 094C 180	na	Reported 2022 drilling results, which included 14 m grading 1.8 g/t Au and 0.22% Cu.
<b>Chuchi</b>	<b>Pacific Ridge Exploration Ltd.</b>	Cu, Au; Alkalic porphyry Cu-Au	na	27.5 line-km of ground IP.
<b>Copley</b>	<b>Centerra Gold Inc.</b>	Au, Cu, Zn; Epithermal Au-Ag (low sulphidation); 093F 070	na	Drilling, 9 DDH (513 m). 774 line-km of drone magnetics.
<b>Decar Nickel District</b>	<b>FPX Nickel Corp.</b>	Ni, Fe; Podiform chromite; 093K 116	Baptiste deposit  I: 1815 Mt 0.129% DTR Ni, 0.211% Total Ni, 0.0035% DTR Co, 2.40% DTR Fe  Inf: 339 Mt 0.131% DTR Ni, 0.212% Total Ni, 0.0037% DTR Co, 2.55% DTR Fe	Filed a NI 43-101 technical report, Prefeasibility study completed, 33-year mine life.
<b>DEM</b>	<b>Evergold Corp.</b>	As, Au, Ag, Cu; Au skarn; 093K 077	na	Filed a NI 43-101 report.

Table 6. Continued.

<b>East Niv</b>	<b>NorthWest Copper Corp.</b>	Cu, Au; Alkalic porphyry Cu-Au	na	Reported 2022 drilling results, which included 100.80 m grading 0.24 g/t Au, 0.10% Cu, and 0.40 g/t Ag, and 124.86 m grading 0.22 g/t Au, 0.07% Cu, and 0.70 g/t Ag.
<b>Exodus Gold</b>	<b>Exodus Mineral Exploration Ltd.</b>	Au; Au-quartz veins, Epithermal Au, Ag, Cu, Pb, Zn; 093J 043	na	Rock sampling of high-grade gold veins returned values including 24.4 g/t Au.
<b>Holy Cross</b>	<b>Evergold Corp.</b>	Au, Ag, Cu; Rhyolite breccia and quartz stockwork veining; 093F 029	na	Reported 2022 drilling results, which included 2 m grading 1.14 g/t Au, 4 m grading 16.8 g/t Ag and 0.81% Cu, and 0.5 m grading 170 g/t Ag and 1.6% Cu.
<b>Indata</b>	<b>Alpha Copper Corp.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au	na	Released 2022 drilling results with a highlight of 170.7 m grading 0.23% Cu and 26.0 m grading 0.47% Cu. Reported results from a 405 line-km airborne magnetic survey.
<b>Indy</b>	<b>InZinc Mining Ltd.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb- Ag; 093H 072	na	Drilling, 9 RC (1064 m). Reported 2022 drilling results, which included 27.1 m of red clay grading 0.67% Zn, 0.13% Ni, 0.0163% Co, and 0.036% TREO; within this, 7.7 m graded 0.11% Cu.
<b>Joy</b>	<b>Amarc Resources Ltd.</b>	Cu, Au; Porphyry Cu±Mo±Au; 094E 016, 57	Pine deposit I: historic non NI 43-101 compliant: 40 Mt 0.15% Cu, 0.57 g/t Au (Stealth Mining Corporation 1997)	638 line-km of airborne magnetotelluric geophysics, 30 km <sup>2</sup> of ground-based MT geophysics, and 72.5 line-km of IP ground geophysics, and undertook geologic mapping. Soil (1788) and rock (769) sampling was also carried out.
<b>Kechika North</b>	<b>ZincX Resources Corp.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb- Ag; 094F 015	na	Optioned to an arm's length third party.
<b>Kliyul</b>	<b>Pacific Ridge Exploration Ltd.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 094D 023	I: historic non NI 43-101 compliant: 2.3 Mt 1.30 g/t Au, 0.45% Cu, 6.9 g/t Ag	19 DDH (10,284 m). Highlight results included: 305.5 m grading 0.23% Cu, 0.51 g/t Au, and 1.22 g/t Ag, and 540.3 m grading 0.19% Cu, 0.36 g/t Au, and 1.09 g/t Ag.

Table 6. Continued.

<b>Kwanika</b>	<b>NorthWest Copper Corp.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 093N 073	Kwanika Central zone Open pit M+I: 66.6 Mt 0.26% Cu, 0.25 g/t Au, 0.92 g/t Ag  Underground M+I: 36.8 Mt 0.51% Cu, 0.62 g/t Au, 1.60 g/t Ag  South zone pit Inf: 25.4 Mt 0.28% Cu, 0.06 g/t Au, 1.68 g/t Ag	Preliminary Economic Assessment and updated mineral resource assessment. PEA is for the combined Kwanika and Stardust deposits and the company refers to the project as Kwanika-Stardust.
<b>Lawyers</b>	<b>Thesis Gold Inc.</b>	Au, Ag; Epithermal Au-Ag (low sulphidation); 094E 066	Open pit M: 20.3 Mt 1.21 g/t Au, 30.5 g/t Ag  I: 45.5 Mt 1.09 g/t Au, 18.2 g/t Ag  Inf: 2.3 Mt 0.91 g/t Au, 12.8 g/t Ag  Out of Pit I: 1.6 Mt 2.74 g/t Au, 60.6 g/t Ag  Inf: 2.6 Mt 3.32 g/t Au, 56.3 g/t Ag	Drilling, 51 DDH (23,691 m). Highlight results included 45.00 m grading 1.03 g/t Au and 51.53 g/t Ag, 53.00 m grading 2.12 g/t Au and 104.95 g/t Ag, and 45.00 m grading 2.29 g/t Au and 132.10 g/t Ag.
<b>Lorraine</b>	<b>NorthWest Copper Corp.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 093N 002, 094C 069, 174	I: 12.95 Mt 0.55% Cu, 0.16 g/t Au  Inf: 45.45 Mt 0.43% Cu, 0.1 g/t Au	Reported 2022 drilling results, which included 45.85 m grading 0.49% Cu, 0.19 g/t Au, and 3.6 g/t Ag, 46.90 m grading 0.59% Cu, 0.25 g/t Au, and 4.2 g/t Ag, and 102.80 m grading 0.28% Cu, 0.05 g/t Au, and 1.3 g/t Ag.
<b>Mount Milligan (Brownfield)</b>	<b>Centerra Gold Inc.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 093N 194	na	Drilling, 26 DDH (14,537 m).
<b>Mount Milligan (Greenfield)</b>	<b>Centerra Gold Inc.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 093N 194	na	Drilling, 16 DDH (6289.5 m).
<b>Onjo</b>	<b>Pacific Ridge Exploration Ltd.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au	na	27.5 line-km of ground IP over Chica and Gingla zones.

Table 6. Continued.

<b>Oxide Peak</b>	<b>TDG Gold Corp.</b>	Cu, Au, Ag; Porphyry Cu±Mo±Au, Epithermal Au- Ag-Cu (low sulphidation); 094E 181	na	Reported 2022 drilling results, which included 13.0 m grading 0.23% Cu and 0.33 g/t Au, and 9.1 m grading 0.16% Cu and 0.035 g/t Au.
<b>Pil</b>	<b>Cascadia Minerals Ltd.</b>	Cu, Au, Ag; Porphyry Cu±Mo±Au, Alkalic porphyry Cu-Au; 094E 310, 377	na	Carried out prospecting, soil sampling and a TITAN geophysical survey.
<b>QCM</b>	<b>Kestrel Gold Inc.</b>	Au, Cu; Au-quartz veins; 093N 200	na	Channel sampling with 1.2 m grading 2.085 g/t Au.
<b>Quesnelle Gold Quartz</b>	<b>Golden Cariboo Resources Ltd.</b>	Au, Ag; Quartz ±carbonate veins in greenstone and sedimentary rocks; 093G 015	na	Drilling, 1 DDH (279.8 m). Filed a NI 43-101 technical report.
<b>RDP</b>	<b>Pacific Ridge Exploration Ltd.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 094D 065	na	Drilling, 3 DDH (1428 m). Highlight results included 62 m grading 0.16% Cu, 0.06 g/t Au, and 0.84 g/t Ag at Day, and 110 m grading 0.09% Cu, 0.20 g/t Au, and 0.31 g/t Ag at Bird.
<b>Shasta</b>	<b>TDG Gold Corp.</b>	Au, Ag; Epithermal Au-Ag (low sulphidation); 094E 050, 26	I: 12.6 Mt 0.99 g/t Au, 35.0 g/t Ag (at a cut off grade of 0.4 g/t AuEq)  Inf: 15.43 Mt 0.77 g/t Au, 28.7 g/t Ag (at a cut off grade of 0.4 g/t AuEq)	Filed a NI 43-101 Mineral Resource. Reported 2022 drilling results, which included 9.5 m grading 7.76 g/t Au and 271 g/t Ag, 8.0 m grading 8.59 g/t Au and 67 g/t Ag, and 1.5 m grading 14.05 g/t Au and 634 g/t Ag.
<b>Stardust</b>	<b>NorthWest Copper Corp.</b>	Cu, Au, Ag, Zn; Cu skarn; 093N 009	Canyon Creek I: 1.6 Mt 1.49% Cu, 1.63 g/t Au, 30.1 g/t Ag  Inf: 4.1 Mt 1.00% Cu, 1.38 g/t Au, 22.8 g/t Ag	Preliminary Economic Assessment and updated mineral resource assessment. PEA is for the combined Kwanika and Stardust deposits and the company refers to the project as Kwanika-Stardust.
<b>Surge Nickel</b>	<b>Surge Battery Metals Inc.</b>	Ni, Fe; Podiform chromite; 093N 035	na	Filed a NI 43-101 technical report. Reported 2022 drilling results, which included 94 m grading 0.058% DTR Ni and 15 m grading 0.119% DTR Ni.

Table 6. Continued.

<b>Wicheeda</b>	<b>Defense Metals Corp.</b>	Nb, REE; Carbonatite-hosted deposits; 093J 014	M: 6.37 Mt 2.086% TREO  I: 27.80 Mt 1.84% TREO  Inf: 11.05 Mt 1.02% TREO (at a cut off grade 0.5% TREO)  Total metal % = sum of Ce+La+Nd+Pr+Sm+Nb percentages	Geotechnical drilling. Filed an updated NI 43-101 mineral resource estimate. Filed an updated NI 43-101 mineral resource estimate. Geotechnical drilling (16 sonic holes totalling 225.5 m), overburden test pits (20 totalling 76.8 m), diamond drilling (six holes 1182 m), metallurgical testing, environmental testing on anticipated waste rock, shipment of mixed rare earth oxide and mixed rare earth carbonate to interested parties allowing the recipients to independently verify the quality of REE products.
<b>Willow Gold</b>	<b>Exodus Mineral Exploration Ltd.</b>	Au, Ag; Au- and Ag-bearing quartz veins	na	Conducted further rock sampling and prospecting.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

Table 7. Selected exploration projects, Northeast Region.

<b>Project</b>	<b>Operator (partner)</b>	<b>Commodity Deposit type; MINFILE</b>	<b>Resource (NI 43-101 compliant unless indicated otherwise)</b>	<b>Comments</b>
<b>Gordon Creek (Flatbed)</b>	<b>Colonial Coal International Corporation</b>	Coal; Bituminous coal; 093I 049	Inf: 298 Mt	Project maintenance work.
<b>Huguenot</b>	<b>Colonial Coal International Corporation</b>	Coal; Bituminous coal; 093I 036	M+I: 132 Mt Inf: 0.5 Mt	Project maintenance work.
<b>Muskwa</b>	<b>Fabled Copper Corp.</b>	Cu, Ag, Pb, Co; Cu ±Ag quartz veins; 094K 012, 50	na	Surface samples at Eagle Creek copper occurrence (Neil property) assayed 23.40%, 15.55%, 19.85%, and 21.90% Cu.
<b>Rocky Creek</b>	<b>CTI Plus Resources Ltd.</b>	Coal; Bituminous coal; 093P 004	na	Large diameter core drilling for bulk sample. Nine holes, 240 m.

M = Measured; I = Indicated; Inf = Inferred

Drilling results from 2022 were incorporated in an updated NI 43-101 mineral resource estimate. At a 0.40 g/t AuEq cut off they reported Indicated 12.578 Mt grading 0.99 g/t Au and 35 g/t Ag, and Inferred 15.432 Mt grading 0.77 g/t Au and 28.7 g/t Ag.

#### 7.1.9. Willow Gold (Exodus Mineral Exploration Ltd.)

At the **Willow Gold** project, Exodus Mineral Exploration Ltd. conducted further rock sampling and prospecting work following up on 2022 sampling.

## 7.2. Selected precious and base metal projects

Projects include Evergold Corp.'s **Holy Cross** project in the North Central Region (Fig. 1; Table 6).

### 7.2.1. Holy Cross (Evergold Corp.)

Evergold Corp. reported 2022 drilling results for their **Holy Cross** project. Highlight results included 2 m grading 1.14 g/t Au, 4 m grading 16.8 g/t Ag and 0.81% Cu, and 0.5 m grading 170 g/t Ag and 1.6% Cu.



### 7.3. Selected base metal projects

Base metal projects include FPX Nickel Corp.'s **Decar Nickel** District project and Nickel Rock Resources **Surge Nickel** project (Fig. 1; Table 6) in the North Central Region and Fabled Copper Corp.'s **Muskwa** project in the Northeast Region (Fig. 1; Table 7).

#### 7.3.1. Decar Nickel District (FPX Nickel Corp.)

FPX Nickel Corp. filed a NI 43-101 Preliminary Feasibility Study for their **Decar Nickel District** project (Fig. 8). The study proposes a 29-year mine life with two phases. Phase 1 involves mining and processing 108,000 tpd during its first nine years of operation. At the start of year 10, Phase 2 would begin with expansion of the plant increasing the total processing rates to 162,000 tpd of ore. The operation will result in two nickel coproducts. About 93% of the contained nickel will be in a high-grade awaruite concentrate (60% nickel), while the rest will be in a mixed hydroxide precipitate (MHP) product. Average nickel production will be 59,100 tpy.



**Fig. 8.** Serpentine alteration in peridotite, Decar Nickel District project (FPX Nickel Corp.).

#### 7.3.2. Indy (InZinc Mining Ltd.)

At its **Indy** project, Indy InZinc Mining Ltd. completed 1064 m of reverse circulation drilling in 9 holes at the Keel Red and Echo North targets. The company reported 2022 drilling results for the Keel Red target. One hole intersected 27.1 m of red clay grading 0.67% Zn, 0.13% Ni, 0.0163% Co, and 0.036% TREO; within this, 7.7 m graded 0.11% Cu.

#### 7.3.3. Muskwa (Fabled Copper Corp.)

Fabled Copper Corp. released the results of the sampling in 2022 at their **Muskwa** project, which consists of the Neil, Toro, and Bronson properties. Surface samples at the Eagle Creek copper occurrence (Neil property) assayed 23.40, 15.55, 19.85, and 21.90% Cu.

#### 7.3.4. Surge Nickel (Surge Battery Metals Inc.)

Surge Battery Metals Inc. acquired the remaining 20% interest in the **Surge Nickel** project bringing their interest to 100%. The company filed a NI 43-101 technical report for the HN4 and Ni100 claim groups, which included results from 993 m of drilling in three holes carried out at HN4 in late 2022. Highlight results included 94 m grading 0.058% DTR Ni and 15 m grading 0.119% DTR Ni.

### 7.4. Selected base and precious metal projects

Base and precious metal projects continued to be an important focus of exploration in the Quesnel and Stikine terranes of the North Central Region (Fig. 1; Table 6).

#### 7.4.1. Akie and Kechika North (ZincX Resources Corp.)

For their **Akie** project, ZincX Resources Corp. carried out general infrastructure maintenance and, to maintain compliance of environmental permits, stream and water well sampling. They also announced that they had optioned their **Kechika North** project to an arm's-length third party. The project includes the Kwad, Weiss, Bear/Spa, Driftpile South, Saint, and Thro properties.

#### 7.4.2. Baker (TDG Gold Corp.)

TDG Gold Corp. was active on their **Baker** project. Historical drill core was relogged, resampled, and reassayed to evaluate potential porphyry targets for drill testing. Highlight results included 126.8 m grading 0.12 g/t Au, 2 g/t Ag, and 0.04% Cu, and 105.8 m grading 0.14 g/t Au, 4 g/t Ag, and 0.05% Cu. TDG Gold Corp. considers that the porphyry-style mineralization was later overprinted by a high-grade epithermal gold-silver system. Historical drilling at the Baker B vein (Fig. 9) targeted high-grade Au-Ag mineralization and, as a result, drill holes were historically only selectively sampled based on the epithermal Au-Ag model, neglecting broader mineralized zones, and were not assayed for base metals. The company also completed stream-sediment sampling across the deposit footprint focused on the potential for a porphyry target.

#### 7.4.3. Captain (Orestone Mining Corp.)

Orestone Mining Corp. has reevaluated gold-copper mineralized altered volcanic rocks found in three previous drill holes on the **Captain** project. The company reported a 14 m interval in quartz monzonite porphyry dikes graded 1.8 g/t Au and 0.22% Cu.

#### 7.4.4. Chuchi (Pacific Ridge Exploration Ltd.)

Pacific Ridge Exploration Ltd. completed a 12.5 line-km IP



Fig. 9. Baker project, B vein (TDG Gold Corp.).

survey on its **Chuchi** project to extend historical coverage over the BP and Klaw zones. Three other IP lines (15 line-km) were completed over the Coho and Coho West zones.

#### 7.4.5. DEM (Evergold Corp.)

Evergold Corp. filed a NI 43-101 technical report.

#### 7.4.6. East Niv (NorthWest Copper Corp.)

NorthWest Copper Corp. reported results from 2022 drilling for their **East Niv** project. Highlights included 100.80 m grading 0.24 g/t Au, 0.10% Cu, and 0.40 g/t Ag, and 124.86 m grading 0.22 g/t Au, 0.07% Cu, and 0.70 g/t Ag. The company identified four porphyry exploration targets.

#### 7.4.7. Indata (Alpha Copper Corp.)

Alpha Copper Corp. released 2022 drilling results. Highlights included 170.7 m grading 0.23% Cu and 26.0 m grading 0.47% Cu. The company also released the results of a 405 line-km airborne magnetic survey flown over an area of 44.1 km<sup>2</sup>.

#### 7.4.8. Joy (Amarc Resources Ltd.)

Amarc Resources Ltd. completed airborne and surface exploration on its **Joy** project to further define targets for planned 2024 drilling. Amarc is the operator, but the project is funded by Freeport-McMoRan Mineral Properties Canada Inc. who is

earning into a potential 70% of the project. The company did 638 line-km of airborne magnetotelluric geophysics, 30 km<sup>2</sup> of ground-based MT geophysics, and 72.5 line-km of IP ground geophysics, and undertook geologic mapping. Soil (1788) and rock (769) sampling was also carried out.

#### 7.4.9. Kliyul (Pacific Ridge Exploration Ltd.)

Pacific Ridge Exploration Ltd. completed 19 diamond drill holes totalling 10,284 m at their **Kliyul** project (Fig. 10). Highlight results included 305.5 m grading 0.23% Cu, 0.51 g/t Au, and 1.22 g/t Ag within 540.3 m grading 0.19% Cu, 0.36 g/t Au, and 1.09 g/t Ag. The company increased the size of the project area from approximately 52 km<sup>2</sup> to approximately 92 km<sup>2</sup>. The new mineral claims are contiguous and adjoin the western and southern sides of the previous claims.



Fig. 10. Kliyul project camp (Pacific Ridge Exploration Ltd.).

#### 7.4.10. Kwanika-Stardust (NorthWest Copper Corp.)

NorthWest Copper Corp. announced the results for a positive Preliminary Economic Assessment of the **Kwanika-Stardust** project. The project involves the development of three copper-gold deposits known as Kwanika Central, Kwanika South, and Stardust. A 22,000 tpd operation is proposed, producing a high-quality copper concentrate with significant gold and silver byproduct credits.

For the Kwanika Central open pit with a cut off US\$ 8.21/t, the company reported a Measured and Indicated resource of

66.6 Mt grading 0.26% Cu, 0.25 g/t Au, and 0.92 g/t Ag and an Inferred resource of 4.1 Mt grading 0.15% Cu, 0.15 g/t Au, and 0.58 g/t Ag. For Kwanika Central underground with a cut off US\$ 16.41/t, the company reported a Measured and Indicated resource of 36.8 Mt grading 0.51% Cu, 0.62 g/t Au, and 1.60 g/t Ag. The Inferred resource for an open pit at Kwanika South at a cut off US\$ 8.21/t is 25.4 Mt grading 0.28% Cu, 0.06 g/t Au, and 1.68 g/t Ag. For an underground operation at Stardust at a cut off US\$ 88.00/t the company reported an Indicated resource of 1.6 Mt grading 1.49% Cu, 1.63 g/t Au, and 30.1 g/t Ag. The Inferred resource is 4.1 Mt grading 1.00% Cu, 1.38 g/t Au, and 22.8 g/t Ag.

#### 7.4.11. Lorraine (NorthWest Copper Corp.)

Northwest Copper Corp. released results from their 2022 **Lorraine** project drilling, which encountered multiple intersections of copper, gold, and silver mineralization outside of the resource shell. Highlight assays include 45.85 m grading 0.49% Cu, 0.19 g/t Au, and 3.6 g/t Ag, 46.90 m grading 0.59% Cu, 0.25 g/t Au, and 4.2 g/t Ag, and 102.80 m grading 0.28% Cu, 0.05 g/t Au, and 1.3 g/t Ag.

#### 7.4.12. Mount Milligan (Brownfield) (Centerra Gold Inc.)

Centerra Gold Inc. was active on their **Mount Milligan (Brownfield)** project with 14,537 m of diamond drilling in 26 holes.

#### 7.4.13. Mount Milligan (Greenfield) (Centerra Gold Inc.)

Centerra Gold Inc. completed 16 diamond drill holes totalling 6289.5 m at their **Mount Milligan (Greenfield)** project. Exploration for new porphyry copper-gold deposits and low sulphidation epithermal gold-silver deposits in the Mount Milligan tenure package continued and included the collection of 203 soil samples.

#### 7.4.14. Onjo (Pacific Ridge Exploration Ltd.)

Pacific Ridge Exploration Ltd. was active on its **Onjo** project carrying out 27.5 line-km of ground IP surveying over the Chica and Gingla zones. The property hosts skarn and alkalic porphyry copper-gold mineralization associated with monzonitic phases of the Witch Lake intrusions that cut Takla Group volcanic rocks.

#### 7.4.15. Oxide Peak (TDG Gold Corp.)

TDG Gold Corp. reported the results of 2022 drilling at its **Oxide Peak** project. Highlight results included 13.0 m grading 0.23% Cu and 0.33 g/t Au, and 9.1 m grading 0.16% Cu and 0.035 g/t Au.

#### 7.4.16. Pil (Cascadia Minerals Ltd.)

Cascadia Minerals Ltd. reported that they carried out prospecting, soil sampling and a TITAN geophysical survey at their **Pil** project. The property is transected by the regional-scale NNW-trending Pillar fault, which juxtaposes west-

dipping volcanoclastic and epiclastic rocks in the upper part of the Toadoggone Formation to the east against volcanic rocks in the lower part of the Toadoggone Formation Takla Group volcanic rocks, and Black Lake suite intrusions to the west.

#### 7.4.17. RDP (Pacific Ridge Exploration Ltd.)

Pacific Ridge Exploration Ltd. was active on the **RDP** project with 1428 m of diamond drilling in three holes. Two holes were completed on the Day target and one hole on the Bird target. Pacific Ridge was the operator, but the program was funded by Antofagasta Minerals S.A. Highlight results included 62 m grading 0.16% Cu, 0.06 g/t Au, and 0.84 g/t Ag at Day and 110 m grading 0.09% Cu, 0.20 g/t Au, and 0.31 g/t Ag at Bird. Bird is a new discovery of porphyry copper-gold mineralization.

### 7.5. Selected rare earth element projects

Defense Metals Corporation's **Wicheeda** rare earth element project is in the North Central Region. (Fig. 1; Table 6).

#### 7.5.1. Wicheeda (Defense Metals Corp.)

The **Wicheeda** carbonatite is a deformed intrusion that hosts light rare earth elements (LREE) in the Kechika Group. The core of the intrusion is a dolomite carbonatite, which transitions outward to a calcite carbonatite. Hydrothermal veins and plugs in the dolomite carbonatite are mineralized with REE fluorocarbonates, ancylite (cerium, lanthanum) and monazite (cerium, lanthanum, neodymium). Minor concentrations of niobium are also present. Defense Metals Corp. filed an updated NI 43-101 mineral resource estimate on the project. At a cut off grade of 0.5% Total Rare Earth Oxide (TREO), they reported a Measured resource of 6.4 Mt averaging 2.86% TREO, a 27.8 Mt Indicated resource averaging 1.84% TREO, and a 11.1 Mt Inferred resource averaging 1.02% TREO. The company commenced phase 2 of its planned infrastructure and open pit geotechnical drilling required to complete a Preliminary Feasibility Study. Work included 16 sonic geotechnical overburden drill holes totalling 225.5 m, 20 overburden geotechnical test pits totalling 76.8 m, six diamond drill holes totalling 1182 m, shipment of a 2700 kg sample for further metallurgical testing, and environmental test work on anticipated mine waste rock. They also shipped samples of mixed rare earth oxide and mixed rare earth carbonate to interested parties allowing the recipients to independently verify the high-quality of REE products from the Wicheeda deposit. The samples were generated during 2023 hydrometallurgical piloting test work performed on concentrate produced by earlier flotation pilot plant testing of a 26-tonne bulk sample.

### 7.6. Selected coal projects

Conuma carried out exploration at their **Brule** mine property. Colonial Coal International Corporation carried out work at their **Gordon Creek (Flatbed)** and **Huguenot** projects. CTI Plus Resources Ltd. did work at their **Rocky Creek** project.

### 7.6.1. Gordon Creek (Flatbed) (Colonial Coal International Corporation)

Colonial Coal continued to work on their **Gordon Creek (Flatbed)** project. The project has 298 Mt of Inferred metallurgical coal considered as underground mineable.

### 7.6.2. Huguenot (Colonial Coal International Corporation)

Colonial Coal continued to work on their **Huguenot** project. Measured and Indicated surface mineable coal resources total 132.0 Mt, with an additional Inferred resource of 0.5 Mt.

### 7.6.3. Rocky Creek (CTI Plus Resources Ltd.)

CTI Plus carried out a large diameter core drilling program to obtain a bulk sample at their **Rocky Creek** project. The project is located approximately 50 km south of Chetwynd. A total of fourteen 9-inch core holes were drilled, totalling 240 m. Sampling is to provide information on coal washability and coal quality.

## 7.7. Selected industrial mineral projects

Apart from the proposed Giscome limestone quarry (see section 6.3.1.), no significant industrial mineral exploration projects were tracked.

## 8. Geological research

Jones et al. (2003) presented new igneous zircon Hf-O data from Hogem batholith that indicate predominantly juvenile magmatic sources with minimal contribution by Ancestral North America crust. Milidragovic et al. (2023a) presented detrital zircon U-Pb, Lu-Hf, and trace element data to document that the Cunningham formation in north-central British Columbia is a latest Triassic overlap succession linking Cache Creek terrane to Stikinia. Milidragovic et al. (2023b) examined the S isotopic composition of primary sulphides at Polaris Alaskan-type ultramafic-mafic intrusion, concluding that the sub-arc mantle contributed subducted sulphate. Using multi-element stream-sediment geochemical data collected as part of Regional Geochemical Survey (RGS) programs since 1976, Rukhlov et al. (2024) defined a multivariant ‘critical mineral index’ to assess prospectivity for carbonatite-hosted critical metals in the British Columbia alkaline province and examined the dispersion of metals downstream from the Aley carbonatite complex. Seiler et al. (2023) evaluated magnetic separation for recovering nickel from awaruite at the Baptiste deposit and reported recoveries of up to 96%. To support current land-use decisions and to aid in the search for the critical minerals needed for a low-carbon future, the British Columbia Geological Survey has revitalized its mineral potential mapping work of the 1990s. This new work takes advantage of about 30 years of new data, knowledge, advances in GIS applications, and computer power to enable statistical analysis of spatial data using weights of evidence modelling. A comparison of results between work done in the 1990s and the current work for an area that includes part of the North Central Region indicates that the new work largely corroborates the old

and that both are of value for assisting land-use decisions and mineral exploration (Wearmouth et al., 2024).

## 9. Summary

The North Central Region has three proposed metal mine projects and two proposed industrial mineral mine projects. The Northeast Region has several proposed coal mine projects and one proposed industrial mineral mine project. The North Central Region has several active mineral exploration projects whereas in the Northeast Region the predominant commodity explored for is coal.

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# Exploration and mining in the South Central Region, British Columbia



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## 1. Introduction

The South Central Region is the most active mining district in British Columbia and the most productive copper mining district in Canada. Currently five major metal mines are in operation, including **Highland Valley Copper**, **Gibraltar**, **Copper Mountain**, **Mount Polley**, **New Afton**, and one smaller operation (**Elk**). Five projects are proposed or are in the permitting process. There are several operating industrial mineral mines or quarries, hundreds of active placer gold operations, dozens of aggregate quarries, and one coal project currently being evaluated. More than 100 exploration projects are active in the region, but not all companies publish or record exploration work.

With a wide range of tectonic settings and resultant geological environments, the South Central region hosts a variety of metallic ore deposit types including porphyry copper (Cu-Mo and Cu-Au-Ag), orogenic gold, epithermal gold, volcanogenic massive sulphide, mafic-ultramafic Ni-Co-PGE, polymetallic veins, skarn, pegmatite REE, and placer gold. Industrial mineral deposits include zeolite, bentonite, gypsum, diatomite, crushed stone, building stone, and aggregate.

Estimates for exploration expenditures, drilling programs, and other metrics were captured in the British Columbia Mineral and Coal Exploration Survey, a joint initiative of the Province of British Columbia Ministry of Energy, Mines and Low Carbon Innovation, the Association for Mineral Exploration in British Columbia, and EY LLP. For the South Central Region, exploration expenditures are estimated at \$83.7 million. The estimate for exploration drilling is 110,710 m (Clarke et al., 2024; EY LLP, 2024).

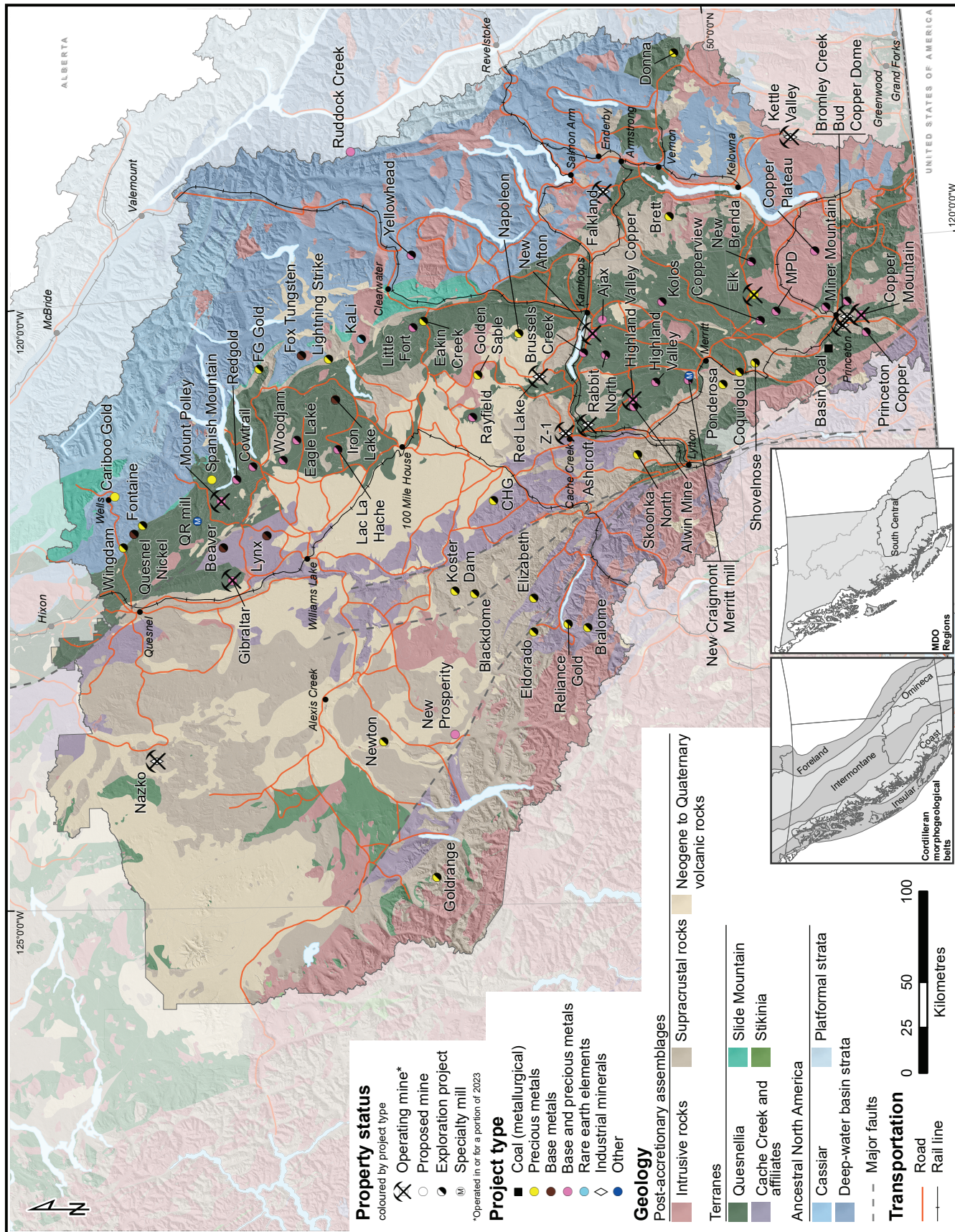
In 2023, Hudbay Minerals Inc. bought Copper Mountain Mining Corporation and a 75% interest in the **Copper Mountain** mine for an estimated transaction value of \$US439 million. Taseko Mines Limited increased ownership interest in **Gibraltar** to 87.5% through the purchase of 12.5% interest from Sojitz Corporation. Imperial Metals Corporation completed a full year of production at **Mount Polley** since restarting in 2022. Teck Resources Limited is advancing a program to extend mine life at the **Highland Valley Copper** mine, as is New Gold Inc. at the **New Afton** mine. The

**Cariboo Gold** project of Osisko Development Corporation received an Environmental Assessment Certificate (EAC) and anticipates receiving the remaining permits required to begin construction by Q2 of 2024. New or updated reserve or resource calculations and/or economic assessments were released for several projects, including Talisker Resources Ltd. at **Bralorne**, Tempus Resources Ltd. at **Elizabeth**, and Westhaven Gold Corp. at **Shovelnose**.

## 2. Geological overview

The tectonic and metallogenic evolution of the Canadian Cordillera are intimately linked (Fig. 1, e.g., Nelson et al., 2013). The South Central Region straddles three of British Columbia's five morphogeological belts (from west to east: Coast; Intermontane; Omineca). The mid-Mesozoic and older geological framework is represented by cratonic and pericratonic rocks in the east, and a series of Late Paleozoic through mid-Mesozoic arc and oceanic terranes to the west (Fig. 1). Younger rocks include Jura-Cretaceous siliciclastic and local volcanic rocks, Eocene volcanic rocks, Neogene and Quaternary basalt, and Middle Jurassic to Eocene granitic intrusions.

The oldest rocks in the region are Paleoproterozoic basement gneiss complexes at the eastern boundary, such as in the Monashee complex. These are interpreted as parts of the North American craton (Armstrong et al., 1991), overlain by Neoproterozoic to Paleozoic cover deposited following rifting that formed the western margin of Ancestral North America (McDonough and Parrish, 1991; Murphy et al., 1991). To the northwest, the Cassiar terrane consists of Neoproterozoic to mid-Paleozoic siliciclastic and carbonate rocks interpreted as distal facies of the North American platform (Struik, 1988a). Also affiliated with Ancestral North America, the Kootenay terrane (deep-water basin strata on Figure 1) include Neoproterozoic to mid-Paleozoic deep-water facies equivalents deposited west of the North American platform. Lower Cambrian and older rocks are similar to North American strata to the east, but the overlying lower Paleozoic succession is characterized by units of coarse siliciclastic and mafic volcanic rocks that may reflect intermittent crustal extension (Colpron and Price, 1995).



This belt also includes Devonian-Mississippian calc-alkaline to alkalic volcanic rocks and associated granitoid intrusions, found mainly in the Eagle Bay assemblage (Schiarizza and Preto, 1987), which reflect the initiation of east-dipping subduction beneath the North American plate margin. These rocks host polymetallic volcanogenic massive sulphide (VMS) occurrences, and the **Yellowhead** bulk tonnage copper deposit. Slide Mountain terrane is the easternmost tract of oceanic rocks in the Canadian Cordillera. These rocks may be the remnant of a Late Paleozoic marginal basin that formed behind a westward-retreating volcanic arc in Quesnel terrane. The Fennell Formation hosts copper-zinc-silver massive sulphide mineralization at the Chu Chua occurrence.

Quesnel terrane is a Late Triassic to Early Jurassic island arc complex (e.g., Mortimer, 1987; Struik, 1988a, b; Unterschütz et al., 2002). It also includes a Late Paleozoic arc sequence, represented by the Harper Ranch Group (Beatty et al., 2006) and, in the south, assemblages of oceanic rocks (Tempelman-Kluit, 1989). The Mesozoic rocks are represented mainly by Middle to Upper Triassic volcanic and sedimentary rocks of the Nicola Group, together with abundant Upper Triassic to Lower Jurassic calc-alkaline to alkaline intrusions (Preto, 1977, 1979; Mortimer, 1987; Panteleyev et al., 1996; Schiarizza et al., 2013). The Nicola Group consists mainly of volcanic and volcanic-derived sedimentary rocks, but also includes siltstone and slate intercalated with quartzite and limestone (Bloodgood, 1990; Schiarizza et al., 2013; Mihalynuk et al., 2015; Schiarizza, 2019; Mihalynuk and Diakow, 2020). The volcanic rocks are mainly augite-phyric shoshonitic basalts, but the western part of the group locally includes a belt of calc-alkaline volcanic rocks with substantial amounts of rhyolite and dacite (Preto, 1977, 1979; Mortimer, 1987). A younger stratigraphic component of Quesnel terrane consists of Lower to Middle Jurassic sedimentary rocks that unconformably overlie the western parts of the Nicola Group (Travers, 1978; Logan and Moynihan, 2009; Schiarizza et al., 2013). Quesnel terrane is important for its porphyry copper deposits (e.g., Logan, 2013; Logan and Mihalynuk, 2014). The plutons that host these deposits conform, in part, to a pattern defined by parallel belts of calc-alkaline and alkalic plutons that become progressively younger from west to east (Schiarizza, 2014). The western (Late Triassic) calc-alkaline belt includes the Guichon Creek batholith, host to the **Highland Valley Copper Mine** (copper-molybdenum), and the Granite Mountain batholith, host to the **Gibraltar** mine (copper-molybdenum). A well-defined belt farther east comprises younger, latest Triassic alkalic plutons, which host alkalic porphyry copper-gold deposits, including producing mines at **Copper Mountain** and **New Afton** and the **Mount Polley** mine, which has resumed operation. A third belt, younger and farther to the east, is defined by several large, Lower Jurassic calc-alkaline plutons.

Cache Creek terrane, consisting of Carboniferous to Early Jurassic chert, argillite, basalt, limestone, sandstone, gabbro, and serpentinized ultramafic rocks of the Cache Creek complex, forms a belt to the west of Quesnel terrane in the central and

northern parts of the region. It is interpreted, at least in part, as a subduction complex responsible for generating the Quesnel magmatic arc (Travers, 1978; Struik et al., 2001).

Cadwallader terrane, as interpreted by Schiarizza (2013), underlies parts of the Intermontane and eastern Coast belts, west of Cache Creek and Quesnel terranes. It includes a Late Permian-Early Triassic primitive oceanic arc complex, and an overlying Late Triassic-Middle Jurassic arc complex and associated siliciclastic apron. Bridge River terrane is in the eastern Coast belt, west of Lytton and Lillooet, where it is partially enveloped by Cadwallader terrane. It is represented mainly by the Bridge River complex, comprising structurally interleaved slivers of chert, argillite, basalt, blueschist, gabbro, serpentinite, limestone, and sandstone (Schiarizza et al., 1997). Both Cadwallader and Bridge River terranes are shown as 'Cache Creek and affiliates' on Figure 1.

Stikinia (Stikine terrane) is a mid-Paleozoic to Middle Jurassic arc terrane that is markedly similar to Quesnellia (Quesnel terrane) and forms a predominant component of the Cordillera in central and northern British Columbia. It is represented in the northwestern part of the South Central Region by a few scattered exposures of volcanic and sedimentary rocks correlated with the Hazelton Group (Upper Triassic to Middle Jurassic; Tipper, 1959, 1969). Younger stratigraphic units overlap older terranes and cover large parts of the region. These units include: Upper Jurassic to Upper Cretaceous siliciclastic rocks of the Tyaughton-Methow basin, which overlap Cadwallader and Bridge River terranes in the eastern Coast belt (Schiarizza et al., 1997); and mid-Cretaceous arc volcanic rocks of the Spences Bridge Group, which form a northwest-trending belt that overlaps Quesnel and Cache Creek terranes in the Merritt-Lillooet area (Monger and McMillan, 1989), and continues westward across the Fraser River where it overlaps Cadwallader and possibly Stikine terranes (Mahoney et al., 2013). Eocene volcanic and subordinate sedimentary rocks (e.g., Kamloops Group, Penticton Group, Princeton Group) are prominent in some locations. Neogene basalt of the Chilcotin Group overlaps Quesnel, Cache Creek, Cadwallader, and Stikine terranes throughout much of the central part of the region (Dohaney et al., 2010). Granitic plutons, ranging from late Middle Jurassic to Eocene, occur throughout the region and, in some cases, are responsible for significant mineralization (e.g., IKE, **New Prosperity**).

### 3. Mines and selected quarries

In the South Central region, two metal mines produce copper and molybdenum (**Highland Valley Copper** and **Gibraltar**), three produce copper, gold, and silver (**Copper Mountain**, **Mount Polley**, and **New Afton**) and one produces gold and silver (**Elk**; Fig. 1; Table 1). Five major projects are proposed or in the permitting process. More than 50 industrial mineral mines or quarries operate in the region; they produce bentonite, zeolite, diatomite, gypsum, crushed stone, building stone, and aggregate. Dozens of placer mines are permitted and active on a seasonal or intermittent basis. One coal project (**Basin**) is

Table 1. Metal mines, South Central Region.

Mine	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1-Q3)	Reserves	Resource	Comments
<b>Copper Mountain</b>	<b>Hudbay Minerals Inc. 75%</b> , Mitsubishi Materials Corporation 25%	Cu, Au, Ag; Porphyry Cu-Au, Alkalic; 092HSE001	60.0 Mlb Cu, 16,000 oz Au, 290,000 oz Ag	P+Pr: 366.9 Mt 0.25% Cu, 0.12 g/t Au, 0.69 g/t Ag	M+I: 137.8 Mt 0.21% Cu, 0.10 g/t Au, 0.69 g/t Ag  Inf: 371.3 Mt 0.25% Cu, 0.13 g/t Au, 0.61 g/t Ag	Reserve/resource estimate Dec. 1, 2023. Updated mine plan, 21-year mine life with current reserves.
<b>Elk</b>	<b>Gold Mountain Mining Corp.</b>	Au, Ag; Au-quartz veins; 092HNE009, 295, 41, 261	5500 oz Au	na	M+I: 4.359 Mt 5.6 g/t Au, 11.0 g/t Ag  Inf: 1.497 Mt 5.3 g/t Au, 14.4 g/t Ag	Ongoing modification of pit to improve access and efficiency; improving grade control and auditing grade forecasts; improving drill and blast patterns.
<b>Gibraltar</b>	<b>Taseko Mines Limited 87.5%</b> , Cariboo Copper Corp. 12.5%	Cu, Mo; Porphyry Cu±Mo±Au; 093B 012	117.0 Mlb Cu, 1.1 Mlb Mo	P+Pr: 706 million short tons 0.25% Cu, 0.008% Mo (sulphide mineral reserves)  P+Pr: 17 short tons 0.15% (acid soluble Cu)	M+I: 1.215 million short tons 0.24% Cu, 0.007% Mo (inclusive of reserves)	Mine life projected to 23 years from Dec. 31, 2021 effective date of calculation.
<b>Highland Valley Copper</b>	<b>Teck Resources Limited</b>	Cu, Mo; Porphyry Cu±Mo±Au; 092ISW012, 45	206.0 Mlb Cu, 1.1 Mlb Mo	P+Pr: 307 Mt 0.30% Cu, 0.009% Mo	M: 573.7 Mt 0.30% Cu, 0.009% Mo  I: 572.5 Mt 0.25% Cu, 0.010% Mo  Inf: 115.8 Mt 0.22% Cu, 0.010% Mo	HVC 2040 project initiated to extend mine life from 2028 to 2042. EAC application made Oct. 2023.
<b>Mount Polley</b>	<b>Imperial Metals Corporation</b>	Cu, Au; Porphyry Cu-Au, Alkalic; 093A 008	29.0 Mlb Cu, 42,000 oz Au	P+Pr open pit and underground: 52.5 Mt 0.34% Cu, 0.31 g/t Au, 0.89 g/t Ag	M+I open pit and underground: 202.2 Mt 0.28% Cu, 0.30 g/t Au, 0.52 g/t Ag	Reserves and resources estimated in 2016 and adjusted for mining to Jan. 1, 2023.
<b>New Afton</b>	<b>New Gold Inc.</b>	Au, Ag, Cu; Porphyry Cu-Au, Alkalic; 092INE023	47.3 Mlb Cu, 62,200 oz Au	P+Pr: 36.9 Mt 0.74% Cu, 0.68 g/t Au, 1.7 g/t Ag	M+I: 66.5 Mt 0.71% Cu, 0.57 g/t Au, 2.1 g/t Ag	Reserves and resources estimated at Dec. 31, 2022. Underground exploration drilling results to be incorporated in 2023 year-end resource estimates.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred



currently being evaluated. More than 100 exploration projects are active in the region, but not all companies publish or record exploration work.

### 3.1. Metal mines

Six of British Columbia's ten operating metal mines are in the South Central Region (Fig. 1; Table 1). Two are copper-molybdenum mines (**Gibraltar** and **Highland Valley Copper**), three are copper-gold mines (**New Afton**, **Copper Mountain**, and **Mount Polley**), and one is a gold-silver mine (**Elk**).

#### 3.1.1. Copper Mountain (Hudbay Minerals Inc. 75%, Mitsubishi Materials Corporation 25%)

The **Copper Mountain** copper-gold open-pit mine has been in production since August 2011 and operates at a milling capacity of 45,000 tpd. On June 20, 2023, Hudbay Minerals Inc. completed the purchase of all outstanding Copper Mountain Mining Corporation shares to gain 75% interest in the mine for an estimated \$US439 million. With this acquisition, Hudbay became the third largest copper producer in Canada.

Copper Mountain updated its reserve and resource calculation on December 1, 2023. Proven and Probable reserves were reported at 366.9 Mt at 0.25% Cu, 0.12 g/t Au, and 0.69 g/t Ag. Projected mine life was 21 years. Measured and Indicated mineral resources were reported at 137.8 Mt at 0.21% Cu, 0.10 g/t Au, and 0.69 g/t Ag.; Inferred mineral resources were 371.3 Mt at 0.25% Cu, 0.13 g/t Au, and 0.61 g/t Ag.

In early 2023, Copper Mountain's production guidance was planned at 88-98 Mlb Cu at an all-in sustaining cost of \$2.45-\$2.95/lb. Reported production for the first nine months of 2023 was 39.175 Mlb Cu, 10,969 oz Au, and 188,195 oz Ag.

Copper Mountain is an alkalic porphyry deposit. Late Triassic Nicola Group volcanic and sedimentary rocks were intruded by several plutonic phases. This includes the Copper Mountain suite, including the Voight stock (Late Triassic) and the polyphase Lost Horse intrusive complex (Late Triassic). Copper and gold mineralization is mainly in Nicola Group volcanic rocks and Lost Horse intrusive rocks and is thought to be temporally and spatially related to emplacement of the Lost Horse intrusive complex (Klue et al., 2022).

#### 3.1.2. Elk (Gold Mountain Mining Corp.)

Gold Mountain Mining Corp. began operations at the **Elk** open-pit mine in November 2021 (Fig. 2). The first half of 2023 saw sales of 2,763 oz Au from processing 16,391 t of ore.

The current mineral resource estimate at Elk has an effective date of 7 December 2021, with a total pit-constrained and underground Measured and Indicated resource of 4.359 Mt at 5.6 g/t Au and 11 g/t Ag (796 koz Au and 1.524 Moz Ag) and Inferred resource of 1.497 Mt at 5.3 g/t Au and 14.4 g/t Ag (259 koz Au and 686 koz Ag). The mining plan in the Preliminary Economic Assessment includes a 70,000 tpy open pit operation that would transition to a 324,000 tpy underground operation in three years, with a total mine life of 11 years (Peters et al., 2021). Gold Mountain Mining has an



**Fig. 2.** Blast hole drill, excavator, and haul truck at Elk Gold mine (Gold Mountain Mining Corp.).

agreement with New Gold Inc. where ore is transported to New Afton for processing. Gold Mountain Mining entered into a streaming agreement with Silver Crown Royalties Inc. on May 12, 2023, where Silver Crown initially purchased 45% and later increased to 90% of the aggregate gross proceeds from silver sales from production at Elk.

Operations at Elk are being refined via improved grade control, improved drilling and blasting patterns, auditing grade forecasts, and testing a gravity concentration method for production assaying. Transition to the underground production phase is being evaluated.

The Elk gold deposit is considered a mesothermal, intrusive related, structurally controlled gold-silver quartz vein system. The property is underlain by Triassic volcanic rocks of the Nicola Group in the west and the Osprey Lake batholith (Late Jurassic) in the east. Different phases of the Osprey Lake intrusions range in composition from diorite to granodiorite to quartz monzonite. Nine zones of gold-silver mineralization occur mostly in quartz-sulphide veins in phyllic- and silica-altered Osprey Lake rock, with some in similarly altered Nicola Group volcanic rock (Peters et al., 2021)

#### 3.1.3. Gibraltar (Taseko Mines Limited 87.5%, Cariboo Copper Corp. 12.5%)

**Gibraltar** has processing capacity of 85,000 tpd. Production at the Gibraltar mine during the first nine months of 2023 was 88.1 Mlb of Cu and 803 klb of Mo in concentrate. Production was affected by mill downtime and issues with primary crushers in the first half of 2023. All production was from the Gibraltar pit. Relocation of the in-pit crusher is planned for Q2 of 2024.

Taseko's most recent reserve calculation reports Proven and Probable 706 M short tons at 0.25% Cu and 0.008% Mo, with 3 Blb Cu and 53 Mlb Mo recoverable. This extends Gibraltar's mine life 23 years from the effective calculation date of December 31, 2021. Taseko increased ownership interest in Gibraltar from 75% to 87.5% through the purchase of 12.5% interest from Sojitz Corporation on March 15, 2023.

Gibraltar is considered a calc-alkaline Cu-Mo porphyry

system. The mine is in Quesnel terrane, in a fault-bounded block consisting of Middle to Upper Triassic volcanic and sedimentary rocks of the Nicola Group, Late Triassic to Early Jurassic intrusions, and Early to Middle Jurassic sedimentary rocks of the Dragon Mountain succession. Mineralization is in the Granite Mountain batholith (Upper Triassic). Ductile shear zones are considered important controls on copper-molybdenum mineralization. (van Straaten et al., 2020).

### 3.1.4. Highland Valley Copper (Teck Resources Limited)

Production in the first three quarters of 2023 was 69,000 t Cu and 844,000 lb Mo. Production guidance for 2023 was initially 108,000 to 118,000 t Cu and 0.8-1.2 Mlb Mo; this was updated in Q3 to 100,000 to 108,000 t Cu. Operations were delayed by a geotechnical issue in the Valley pit, which limited access from late August to early October, and unplanned mill maintenance. The average ore processing rate is 136,000 tpd, with a maximum capacity of 200,000 tpd. Mine life is currently projected to 2028.

In 2023, the company conducted tests for using electric assist lifts for haul trucks on the inclined sections of haul roads. Teck's 'HVC 2040' project has the objective of extending mine life to at least 2040, and the company applied for an Environmental Assessment Certificate in October 2023. The project is intended to process 900 Mt of ore for approximately 18 years to produce 4.3 Blb Cu. Key components include enlarging the Valley and Highmont pits, enlarging waste dumps and tailings storage, and increasing the average processing rate by 31%, peaking at 210,000 tpd. Mineral reserves as of December 31, 2022 are Proven and Probable of 307 Mt at 0.30% Cu and 0.008% Mo. Resources are reported as Measured 573.7 Mt at 0.30% Cu and 0.009% Mo; Indicated 572.5 Mt at 0.25% Cu and 0.010% Mo; and Inferred at 115.8 Mt at 0.22% Cu and 0.010% Mo.

**Highland Valley Copper** consists of a cluster of calc-alkaline porphyry Cu-Mo deposits in the Guichon Creek batholith (Upper Triassic), with production currently coming from the Lornex, Valley, and Highmont pits.

### 3.1.5. Mount Polley (Imperial Metals Corporation)

**Mount Polley** had its first full year of production since resuming operations in the middle of 2022. The first nine months of production in 2023 was 21.798 Mlb Cu and 31,485 oz Au, with mill throughput averaging 16,047 tpd. Some production delays were caused by a lightning strike in Q2 that damaged a mill motor, which was repaired by October. Open-pit and underground mineral reserves as of January 1, 2023 are Proven and Probable 52.568 Mt at 0.342% Cu, 0.319 g/t Au, and 0.895 g/t Ag. Mineral resources are Measured and Indicated 202.2 Mt at 0.287% Cu, 0.304 g/t Au, and 0.527 g/t Ag; Inferred 15.048 Mt at 0.157% Cu, 0.177 g/t Au, and 0.125 g/t Ag. These values were calculated based on Brown et al., 2016, and adjusted for mining activity.

Ten exploration holes were drilled in 2023 between the Springer and Cariboo zones. Springer zone copper-gold mineralization was confirmed both laterally and at depth to

250 m below the current planned depth of the Springer pit.

Mount Polley is an alkalic porphyry Cu-Au deposit hosted in hydrothermal breccia and stockwork zones in the Mount Polley intrusive complex (Late Triassic). The composition of different intrusive phases ranges from diorite to monzonite. The Mount Polley complex intrudes Middle to Upper Triassic to Lower Jurassic Nicola Group volcanic and sedimentary rock.

### 3.1.6. New Afton (New Gold Inc.)

Production at the **New Afton** copper-gold mine for the first nine months of 2023 was 35.5 Mlb Cu and 46,694 oz Au, from milling an average of 8326 tpd. New Gold's production guidance for 2023 was 50,000-60,000 oz Au and 38-48 Mlb Cu. New Afton is an underground block cave operation below the past producing Afton open pit mine, which closed in 1997. Reserves for New Afton as of December 31, 2022, are Proven and Probable 36.9 Mt at 0.74% Cu, 0.68 g/t Au, and 1.7 g/t Ag. Measured and Indicated resources are 66.5 Mt at 0.71% Cu, 0.57 g/t Au, and 2.1 g/t Ag.

New Gold is preparing the C-zone for full commercial production by Q3 of 2024 by constructing a series of draw bells to reach steady self-caving. This is designed to allow extraction of up to 16,000 tpd from a current 8500 tpd at the B3 zone. Upgrades to the New Afton tailings storage facilities include a new thickened and amended tailings plant (TAT).

Exploration is ongoing at New Afton, with underground drilling at the K-zone and AI-Southeast zone. Artificial intelligence combined with alteration studies and geochemical data are being used to generate further exploration targets. Three zones of mineral resources are being evaluated for conversion to mineral reserves with the purpose of extending the current mine life beyond 2030. These include the C-zone, East Extension, and D-zones.

New Afton is an alkalic porphyry Cu-Au deposit. It is hosted by Upper Triassic to Lower Jurassic Nicola Group volcanic and sedimentary rocks that were intruded by multiple phases of the Iron Mask batholith. These phases range in composition from diorite to monzonite; the Cherry Creek monzonite is thought to be the most significant driver of the New Afton system (Lipske et al., 2020).

### 3.1.7. Merritt Mill (Nicola Mining Inc.)

The **Merritt Mill** and tailings facility is at the Craigmont mine site. It has a 200 tpd capacity and is capable of custom milling various ore types. Several additions have been made since 2021, including a gravity jig separation and a shaker table system. It can produce gold or silver concentrates and is the only facility in British Columbia permitted to take feed from mines across the province. The Merritt Mill processed more than 5000 t of material from Blue Lagoon Resources Inc.'s Dome Mountain project since June 2021 as part of an agreement that has been extended to March 31, 2027. Osisko Development Corp. sent ore from stockpiles at the Bonanza Ledge test mine for processing in 2023 (see Cariboo Gold project, section 6.1.2.).

### 3.2 Coal mines

No coal mines operated in the South Central Region in 2023.

### 3.3. Selected industrial mineral mines and quarries

More than ten industrial mineral mines and quarries operate in the South Central region; only a selection is reported here (Fig. 1; Table 2). There were 44 permitted sand and gravel pits operating in 2023.

#### 3.3.1. Ashcroft (I.G. Machine and Fibers Ltd.)

The **Ashcroft** basalt quarry has been in operation since 2001. The operator is I.G. Machine and Fibers Ltd., is a subsidiary of IKO Industries Ltd. Nicola Group basalts are processed into roofing granules. The permit allows up to 500,000 tpy production of basalt, which will produce 300,000 tpy of roofing granules with a 40% waste ratio. The original mineable and probable reserves would allow for about 30 years of production.

#### 3.3.2. Bromley Creek/Zeotech (International Zeolite Corp. 82.3%, Progressive Planet Solutions Inc. 17.7%)

The **Bromley Creek/Zeotech** quarry is permitted for zeolite production of up to 20,000 tpy. Progressive Planet Solutions has an agreement to purchase up to 50% of the quarry by March 2027, with payments made quarterly. Progressive Planet Solutions markets zeolite as a natural fertilizer and soil conditioner for agriculture and as an anti-caking additive for livestock feed.

#### 3.3.3. Bud (Progressive Planet Solutions Inc.)

The **Bud** quarry is a bentonite producer. In 2022, Progressive Planet Solutions Inc. purchased Absorbent Products Ltd., taking ownership of the **Bud** quarry and **Red Lake** quarry (see below). Progressive Planet markets bentonite as an absorbent for spills and as an absorbent and deodorizer for pet and livestock applications.

#### 3.3.4. Falkland (Lafarge Canada Inc.)

Lafarge's **Falkland** quarry is permitted to produce gypsum and anhydrite. They are exploring the possibility of using gypsum and anhydrite to produce a natural fertilizer. The company is also testing the commercial application of PozGlass 100G, which is a proprietary cement additive produced by Progressive Planet Solutions Inc. designed to reduce carbon emissions. Lafarge is not mining limestone at **Falkland** so, except for producing construction aggregate, their Kamloops cement plant is on care and maintenance.

#### 3.3.5. Kettle Valley quarries (Kelowna Sand and Gravel Ltd.)

Kelowna Sand and Gravel Ltd. operates several quarries in the region producing a variety of decorative, landscaping, drainage, and dimension stone, as well as sand and gravel. Kettle Valley Stone Company is an affiliated company and vendor of veneer finishing stone.

#### 3.3.6. Nazko (Canlava Mining Corp.)

Canlava Mining Corp. produces a variety of commercial

products including lightweight fill, filler material for lightweight cement, landscaping rock, traction aid on ice, filtration media, soil conditioner, and beauty products. These are made from red and black scoria from the **Nazko** quarry.

#### 3.3.7. Red Lake (Progressive Planet Solutions Inc.)

The **Red Lake** quarry produces diatomaceous earth, which is marketed for a variety of pet and livestock uses and industrial spill absorbents. In 2022, Progressive Planet Solutions acquired Absorbent Products Ltd. and the **Red Lake** and **Bud** quarries.

### 4. Placer operations

In 2023, more than 500 placer mines were classified as 'operating' in the South Central region. Of these, only 30 were classified as 'working'. Most are operated on an intermittent basis, and details are not reported.

#### 4.1. Wingdam (Omineca Mining and Metals Ltd. 50%, Hamilton Gold Royalties Ltd. 50%)

Omineca Mining and Metals Ltd. is excavating access to a 2.4 km-long, gold paleoplacer channel 50 m below Lightning Creek at their **Wingdam** project. Hamilton Gold Royalties Ltd. earned a 50% interest in the project in 2022. Under the agreement, Hamilton is required to conduct mining activities in exchange for 50% of production.

Underground development continued in 2023, with excavation of a drift parallel to the paleochannel and initiation of cuts across the paleochannel. During 2023 operations, Omineca reported production of 11 ounces of coarse gold and one 1.13 ounce nugget from processing 50 cubic yards of material. Omineca plans to use freeze technology to allow safe access to the paleochannel gravels and backfill mined areas with processed material mixed with concrete. Omineca has an ongoing exploration program for lode gold in the area that is not subject to the placer mining agreement with Hamilton.

### 5. Mine development

The criteria for mine development projects are those that have a positive production decision, key government approvals, and on-site construction has begun. There are no major projects in the South Central region that currently qualify as being in mine development.

### 6. Proposed mines

Proposed mines are feasibility-stage projects for which proponents have begun the environmental certification process (in the case of large projects) or have submitted applications for Mines Act permits (in the case of projects below British Columbia Environmental Assessment Act thresholds) or are waiting for existing permit amendments. Projects that have permits in place but have yet to obtain financing to begin site construction are also considered to be at the proposed stage. The South Central Region has five projects in the proposed mines category: **Ajax**, **Cariboo Gold**, **New Prosperity**, **Ruddock Creek**, and **Spanish Mountain** (Fig. 1; Table 3).

**Table 2.** Selected industrial mineral mines and quarries, South Central Region.

Mine	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1-Q3)	Reserves	Resource	Comments
Ashcroft	IG Machine and Fibers Ltd. (IKO Industries Ltd.)	Basalt (roofing granules); 092INW104	300,000 t	na	13.3 Mt in 2002	Typically mines 500,000 t with 60% processed into granule products.
Bromley Creek (Zeotech)	Progressive Planet Products Inc. (International Zeolite Corp. 82.3%, Progressive Planet Solutions Inc. 17.7%)	Zeolite; Open system zeolites; 092HSE243	na	na	M+I (as of 2013-06-30): 550,000 t	Progressive Planet has an agreement to acquire 50% by March 2027.
Bud	Progressive Planet Products Inc.	Bentonite; 092HSE162	Approx. 20,000 t annually	na	na	Progressive Planet Solutions Inc. acquired in 2022.
Falkland	Lafarge Canada Inc.	Gypsum; 082LNW001	10,000-20,000 t annually	na	1.8 Mt	Testing cement applications with Progressive Planet Solutions' PozGlass 100G product.
Kettle Valley Quarries	Kelowna Sand and Gravel Ltd./Kettle Valley Stone Company	Ashlar, flagstone, thin veneer; 082ENW109, 111, 112	na	na	na	
Nazko	CanLava Mining Corporation	Lava rock; Cinder cone; 093B 060	na	na	Historical: 45 Mt	
Red Lake	Progressive Planet Solutions Inc.	Diatomaceous earth; Lacustrine diatomite; 092INE081	Approx. 30,000 t annually	na	na	Progressive Planet Solutions Inc. acquired in 2022.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

## 6.1. Proposed metal mines

### 6.1.1. Ajax (KGHM Ajax Mining Inc. 80%, Abacus Mining and Exploration Corporation 20%)

Ajax is an alkalic porphyry copper-gold project in the Iron Mask batholith (Triassic). A 2016 feasibility study proposed an open-pit mine with 65,000 tpd milling capacity and 18-year mine life. The project was denied a provincial Environmental Assessment certificate in late 2017, and in June of 2018, Natural Resources Canada, Fisheries and Oceans Canada, and the Canadian Coast Guard also denied federal certification. Project operator KGHM reopened an office in Kamloops in 2020 to continue engagement with local First Nations and evaluate the possibility of resubmitting a modified application.

### 6.1.2. Cariboo Gold (Osisko Development Corp.)

Osisko Development Corp. acquired Barkerville Gold Mines Ltd. and the **Cariboo Gold** project in 2019 (Fig. 3). The project is a series of structurally controlled orogenic gold-quartz vein deposits that extend along strike for 3.7 km in one corridor (Valley, Cow, Mosquito, and Shaft zones) and for 3.0 km along another (Bonanza Ledge, BC Vein, Lowhee, and KL zones). Several other zones occur along strike and farther to the southeast, including the BC, William Creek, and Prosperine zones.

Osisko completed a feasibility study on December 30, 2022. Proven and Probable reserves are 16.7 Mt at 3.78 g/t Au and 0.7 g/t Ag. Measured and Indicated resources are at 14.68 Mt

**Table 3.** Selected proposed mines or quarries, South Central Region.

Project	Operator (partner)	Commodity; Deposit type; MINFILE	Reserves	Resource	Comments
Ajax	<b>KGHM Ajax Mining Inc. (KGHM Polska Miedź SA 80%, Abacus Mining and Exploration Corporation 20%)</b>	Cu, Au; Alkalic porphyry; 092INE012, 13	P+Pr (NSR cut off US\$7.10/t): 426 Mt 0.29% Cu, 0.19 g/t Au, 0.39 g/t Ag	M+I (NSR cut off US\$7.10/t): 568 Mt 0.26% Cu, 0.18 g/t Au, 0.35 g/t Ag	Environmental certification denied by provincial (2017) and federal ministers (2018). Proponents are investigating a possible resubmission.
<b>Cariboo Gold</b>	<b>Osisko Development Corp.</b>	Au; Au-quartz veins; 093H 140, 139, 19, 6	P+Pr: 16.7 Mt 3.78 g/t Au, 0.7 g/t Ag	M+I: 14.682 Mt 3.33 g/t Au  Inf: 15.47 Mt 3.44 g/t Au (all zones)	Feasibility study Dec. 30, 2022; resource and reserve calculations updated. Environmental Assessment Certificate received Oct. 2023. Remaining permits in process.
<b>New Prosperity</b>	<b>Taseko Mines Limited</b>	Cu, Au; Porphyry; 092O 041	P+Pr (NSR cut off \$5.50/t): 830 Mt 0.23% Cu, 0.41 g/t Au containing (recoverable) 3.6 Blb Cu, 7.7 Moz Au	M+I (cut off 0.14% Cu- inclusive of reserves): 1011 Mt 0.24% Cu, 0.41 g/t Au	Granted provincial Environmental Certificate 2010 (expired): denied federal approval 2014. Taseko and T̄silhqot̄'in Nation in discussions.
<b>Ruddock Creek</b>	<b>Ruddock Creek Mining Corporation (Imperial Metals 100%)</b>	Pb, Zn, Ag; Broken Hill- type; 082M 082	na	M+I (cut off 4.0% Pb+Zn): 6.2 Mt 6.50% Zn, 1.33% Pb  Inf: 6.678 Mt 6.33% Zn, 1.20% Pb	Project at environmental assessment pre-application stage. Feb. 2013 resource does not include 2018-19 drilling.
<b>Spanish Mountain</b>	<b>Spanish Mountain Gold Ltd.</b>	Au, Ag; Au-quartz veins; 093A 043	P+Pr: 95.9 Mt 0.76 g/t Au, 0.71 g/t Ag	M+I: 294 Mt 0.50 g/t Au, 0.72 g/t Ag  Inf: 18 Mt 0.63 g/t Au, 0.76 g/t Ag	Re-entered BC environmental assessment process with a new project description. Feasibility work is continuing.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

at 3.33 g/t Au; Inferred is 15.47 Mt at 3.44 g/t Au. The feasibility study proposed a 12-year mine life with annual production of 163,695 oz Au and a 5.9 year after-tax payback period. Initial capital costs were estimated at \$137.4 million and the expansion at \$451.1 million. All-in sustaining costs were estimated at \$US968.10 per ounce of Au produced, net of credits and including royalties. Milling would begin at 1500 tpd and increase to 4900 tpd after 3 years. A crushing and ore-sorting circuit is planned on site to reduce volume of material shipped to the Quesnel River mill about 110 km from the mine site. Metallurgical testing of a bulk sample from the

Lowhee zone is planned. A roadheader machine was tested to start excavation at the Cow Mountain portal (Fig. 3), one of two being planned to access underground workings. The project received an Environmental Assessment (EA) certificate in October, 2023. A joint permit application is in process for the Mines Act and Environmental Management Act permits.

### 6.1.3. New Prosperity (Taseko Mines Limited)

Taseko Mines Limited received a provincial Environmental Assessment certificate (EAC) for the **New Prosperity** project in 2010. However, in February 2014 the Government of



**Fig. 3.** Cow Mountain portal at Cariboo Gold project (Osisko Development Corp.).

Canada refused to authorize the project. In 2019, Taseko entered a standstill agreement with the T̓silhqot̓'in Nation to suspend any legal actions between the parties in order to pursue dialogue. Ongoing discussions have reportedly made progress. New Prosperity is a porphyry copper-gold deposit with Measured and Indicated resources of 1.01 Bt of 0.24% Cu and 0.41 g/t Au. The mine plan proposed an open-pit mine processing 70,000 tpd.

#### **6.1.4. Ruddock Creek (Imperial Metals Corporation 100%)**

The **Ruddock Creek** project is in the pre-application phase of the British Columbia Environmental Assessment process. The most recent resource calculation was released in early 2013 and includes Measured and Indicated resources of 6.2 Mt at 6.5% Zn and 1.33% Pb, and Inferred resources of 6.678 Mt at 6.33% Zn and 1.2% Pb. Ruddock Creek is considered a sedimentary exhalative Zn-Pb deposit in gneisses, schists, quartzite, marble, and calc-silicate metasedimentary rocks of the Shuswap Metamorphic complex.

#### **6.1.5. Spanish Mountain (Spanish Mountain Gold Ltd.)**

Spanish Mountain Gold Ltd. submitted a modified application to the British Columbia environmental assessment process in early 2022 for their **Spanish Mountain** project.

A 2021 prefeasibility report projected a 14-year mine life with Proven and Probable reserves of 95.9 Mt at 0.76 g/t Au and 0.71 g/t Ag. The mine plan calls for an open-pit with an on-site 20,000 tpd milling capacity. Treatment is with a gravity circuit, a flotation and concentration process, then a carbon in leach (CIL) adsorption process. Initial capital costs are \$607.2 million, and an after-tax payback period of 3.2 years.

Spanish Mountain is considered a sediment-hosted vein deposit. Weakly metamorphosed Middle Triassic Nicola Group volcanosedimentary rocks including argillite, siltstone, feldspathic sandstone, greywacke, limestone, tuff, and basalt are cut by dioritic sills and dikes (Schiarizza, 2018). Gold mineralization occurs as fine disseminations in the graphitic argillite and in quartz veins in siltstone, tuff, and greywacke units as free gold or associated with sulphides (Gilmour, 2021).

#### **6.2. Proposed coal mines**

No coal mines are proposed at present.

#### **6.3. Selected proposed industrial mineral mines or quarries**

Industrial mineral sites and aggregate quarries do not follow the environmental assessment permitting process and are not treated in this report.

#### **7. Selected exploration activities and highlights**

In 2023, most projects in the South Central Region targeted precious metals, base metals, base and precious metals, and rare earth elements (Fig. 1; Table 4). Several companies completed resource and reserve calculations and/or economic studies, including Talisker Resources Ltd., Tempus Resources Ltd., and Westhaven Gold Corp.

#### **7.1. Selected precious metals projects**

##### **7.1.1. Bralorne (Talisker Resources Ltd.)**

Talisker Resources Ltd. released an inaugural resource estimate for their **Bralorne** project in January 2023 (Pelletier et al., 2023), with Indicated 117,300 t at 8.85 g/t Au and Inferred 8.033 Mt at 6.32 g/t Au. The resource was calculated based on 660 drill holes and extends along a strike length of 4.5 km to a depth of 700 m, including the historic King, Charlotte, Bralorne, and Pioneer mines. Historic mining was to a maximum depth of 1900 m. Since acquiring the project in 2019, Talisker has assembled a property package that includes numerous gold showings and past-producing mines not included in the current resource. In late 2023, Talisker announced plans to amend the current Mines Act permit to allow for test mining and enlargement of the Mustang mine portal and access ramp to 4 m by 4 m. A letter of intent was signed with New Gold Inc. for completing an ore purchase agreement of 300,000 t of ore from Bralorne to be processed at the New Afton mine. A 15,000 m drill program began on October 17, 2023 to upgrade

**Table 4.** Selected exploration projects, South Central Region.

<b>Project</b>	<b>Operator (partner)</b>	<b>Commodity; Deposit type; MINFILE</b>	<b>Resource (NI 43-101 compliant unless indicated otherwise)</b>	<b>Comments</b>
<b>Alwin Mine</b>	<b>GSP Resource Corp.</b>	Cu, Ag, Au, Mo; Porphyry Cu-Au (alkalic); 092ISW010	na	Fall diamond drill program in October-November 2023: five holes, 640 m. Visible Cu-Mo sulphide minerals reported.
<b>Basin Coal</b>	<b>Basin Mine Holdings Ltd.</b>	Coal; Bituminous coal, Bentonite; 092HSE157	M+I: 82.3 Mt Inf: 35 Mt at 8:1 stripping ratio (historic resource)	Conducted plant maintenance and coal testing. Economic and transportation studies.
<b>Beaver-Lynx</b>	<b>Inomin Mines Inc.</b>	Ni, Co; Ultramafic-mafic; 093B 073, 285	na	Four diamond drill holes, 968 m; initial metallurgical testing. Drilling highlight 179.27 m grading 23% Mg, 0.19% Ni, and 0.36% Cr.
<b>Bralorne</b>	<b>Talisker Resources Ltd.</b>	Au; Au-quartz veins; 092JNE001	I: 117,300 t 8.85 g/t Au  Inf: 8.033 Mt 6.32 g/t Au	Resource published Jan. 2023. Fall 15,000 m diamond drilling to upgrade part of resource to Indicated. Preparing for test mining; enlarging portal and access ramp to 4 by 4 m.
<b>Brett</b>	<b>Ximen Mining Corp.</b>	Au, Ag; Epithermal Au-Ag-Cu (low sulphidation); 082LSW110, 131	na	Interpretation of airborne magnetic and lidar surveys conducted in 2022.
<b>Brussels Creek</b>	<b>Recharge Resources Ltd.</b>	Cu, Au, Pd; Porphyry Cu-Au (alkalic); 092INE089	na	Three hole, 900 m NQ diamond drilling. Highlight drill intersection of 3.5 m grading 5.08 g/t Au.
<b>CHG</b>	<b>Cariboo Rose Resources Ltd.</b>	Au, Ag; Carbonate-hosted disseminated Au, Ag; 092P 083	na	Under option to Basin Uranium Corp.; RC drilling.
<b>Copper Dome</b>	<b>Canada One Mining Corp.</b>	Cu, Au; Porphyry Cu-Au (alkalic); 092HSE133	na	Sampling and mapping fieldwork; option of neighbouring CMI property.
<b>Copper Plateau</b>	<b>Cascade Copper Corp.</b>	Cu, Mo, Au, Ag, Re; Porphyry Cu±Mo±Au; 092JW 051	na	Acquired 2789 ha property.
<b>Copperview</b>	<b>Vizsla Copper Corp.</b>	Cu, Au; Porphyry Cu-Au (alkalic); None	na	997 line-km aeromagnetic survey.
<b>Coquigold</b>	<b>Cariboo Rose Resources Ltd. (CMP Minerals Inc.)</b>	Au, Au; Epithermal Au-Ag-Cu (low sulphidation); 092HNE062	na	Results of late 2022 drilling and geophysical survey released. Alteration zones noted but no significant mineralization.
<b>Cowtrail</b>	<b>Cariboo Rose Resources Ltd. (BRS Mining Resources Ltd.)</b>	Au, Cu; Alkalic porphyry Cu-Au; 093A 266, 116	na	Optioned to BRS Resources Ltd. to earn up to 60%; diamond drilling.

Table 4. Continued.

<b>Donna</b>	<b>Eagle Plains Resources Ltd. (Annacotty Resources Ltd.)</b>	Au, Ag, Pb, Zn; Polymetallic veins; 082LSE022	na	Prospecting, soil sampling, geological mapping.
<b>Eagle Lake</b>	<b>Trailbreaker Resources Ltd.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 093A 268, 255	na	Part of Eagle Lake property optioned to Vizsla Copper Corp.
<b>Eakin Creek</b>	<b>Trailbreaker Resources Ltd.</b>	Au; Plutonic-related Au-quartz veins; 092P 103, 172, 26	na	Eleven hole, 2039 m diamond drill program. Au values up to 14.3 g/t Au over 1.0 m.
<b>Eldorado</b>	<b>Gelum Resources Ltd.</b>	Au, Cu; Polymetallic veins, Au-quartz veins; 092O 026, 092JNE105, 95, 45	na	Drilling in 2022 (three holes, 795 m); drilling in 2023 (six holes, 1340 m). Results reported for 2022 included 44.0 m grading 0.414 g/t Au.
<b>Elizabeth (Elizabeth-Blackdome)</b>	<b>Tempus Resources Ltd.</b>	Au, Ag; Au-quartz veins, Epithermal Au-Ag-Cu (low sulphidation); 092O 053, 12	I: 317,200 t 5.97 g/t Au Inf: 315,000 t 3.48 g/t Au	Updated resource calculation for Elizabeth deposit. Surface sampling identified two new targets.
<b>FG Gold</b>	<b>Karus Gold Corp.</b>	Au, Ag; Au-quartz veins; 093A 061	M: 5,600,000 t 0.812 g/t Au I: 9,570,000 t 0.755 g/t Au Inf: 27,493,000 t 0.718 g/t Au	Sampling and geological mapping. 2015 resource estimate considered historical by Karus.
<b>Fontaine</b>	<b>Green River Gold Corp.</b>	Au, Ag; Au-quartz veins; 093A 139	na	Prospecting in area of historic Galleon showing.
<b>Fox Tungsten</b>	<b>Happy Creek Minerals Ltd.</b>	W; W skarns; 093A 259, 260, 261, 211	I: 582,000 t 0.826% WO <sub>3</sub> Inf: 565,400 t 1.231% WO <sub>3</sub>	Prospecting and surface work. Multi-year area-based permit amendment approved.
<b>Golden Sable</b>	<b>Trailbreaker Resources Ltd.</b>	Au; Plutonic-related Au-quartz veins; 092P 027	na	Soil sampling confirmed and extended known 3 km Au in soil anomaly by 1 km. Mapping and prospecting.
<b>Goldrange</b>	<b>Kingfisher Metals Corp.</b>	Au, Ag; Au and Cu±Ag quartz veins; 092N 058, 59, 47, 57, 48	na	Results from 2022 drilling including 40 m grading 2.86 g/t Au.
<b>Highland Valley</b>	<b>Happy Creek Minerals Ltd.</b>	Cu, Mo, Au, Ag, Re; Porphyry Cu±Mo±Au; 092ISE199	na	AMT geophysical survey; mapping; silt, soil, rock sampling.
<b>Iron Lake</b>	<b>Tech-X Resources Inc.</b>	Cu, Au, Pt, Pd, Co; Alkalic porphyry Cu-Au and ultramafic hosted; 092P 132, 113, 182, 222	na	Drilling 1680 m in 3 holes. Results included 9.5 m grading 0.42% Cu, 341 ppm Ni.



Table 4. Continued.

<b>KaLi</b>	<b>Green River Gold Corp.</b>	Li, Cs, Ta; Pegmatite; 092P 022	na	Prospecting and initial sampling.
<b>Kolos</b>	<b>Torr Metals Inc.</b>	Cu, Mo, Au, Ag; Porphyry Cu±Mo±Au; 092ISE229	na	ZTEM airborne geophysics; 3348 soil samples, 47 rock samples.
<b>Koster Dam</b>	<b>Cariboo Rose Resources Ltd., Discovery Lithium Inc.</b>	Au, Ag; Au-quartz veins; 092O 031	na	Prospecting; float samples including 2.61, 2.38, 1.47 g/t Au.
<b>Lac La Hache</b>	<b>EnGold Mines Ltd.</b>	Cu, Au, Ag, Fe; Alkalic porphyry Cu-Au, Cu skarn; 092P 120, 108, 2, 153	Aurizon Inf: 1.99 Mt 2.32 g/t Au, 0.6% Cu, 5.37 g/t Ag  Spout zone open pit I: 6.5 Mt 0.33% Cu, 1.34 g/t Ag, 0.05 g/t Au, 11.62% magnetite  Inf: 7.66 Mt 0.27% Cu, 0.99 g/t Ag, 0.04 g/t Au, 9.5% magnetite  Spout zone u/g Inf: 0.39 Mt 1.0% Cu, 2.58 g/t Ag, 0.13 g/t Au, 10.33% magnetite  G1 u/g Inf: 1.71 Mt 1.25% Cu, 6.45 g/t Ag, 0.19 g/t Au, 30.94% magnetite	ALS GoldSpot Discoveries Ltd. Artificial intelligence applied to existing data to generate exploration targets.
<b>Lightning Strike</b>	<b>Cariboo Rose Resources Ltd.</b>	Au, Ag; Au-quartz veins; 093A 250	na	Results reported from 2022 RC drilling 11 holes, 1466 m. Highlights included 6.1 m grading 0.67 g/t Au and 7.7 m grading 0.51 g/t Au.
<b>Little Fort</b>	<b>New Gold Inc.</b>	Cu, Au, Ag; Alkalic porphyry Cu-Au; 092INE023	na	Soil geochemistry, sampling, IP geophysics.
<b>Miner Mountain</b>	<b>Sego Resources Inc.</b>	Cu, Au; Alkalic porphyry Cu-Au; 092HSE203, 78	na	Property data review and interpretation, planning of next phase drilling.

Table 4. Continued.

<b>MPD</b>	<b>Kodiak Copper Corp.</b>	Cu, Au; Alkalic porphyry Cu-Au; 092HNE243, 55, 191, 244	na	Drilling (33 holes, 18,562 m). Surface work included IP, soil surveys, and trenching. Highlight drill intersections from the West zone include 158.0 m grading 0.28% Cu, 0.28 g/t Au, and 0.83 g/t Ag, and 16.0 m grading 0.93% Cu, 0.64 g/t Au, and 3.20 g/t Ag.
<b>Napoleon</b>	<b>Golden Independence Mining Corp.</b>	Au; Plutonic-related Au- quartz veins	na	Soil and rock sampling, airborne magnetic survey. Staked additional 506 hectares.
<b>New Brenda</b>	<b>Flow Metals Corp.</b>	Au, Ag, Cu; Au-quartz veins; 092HNE289, 302, 303	na	Soil grid over 4 km <sup>2</sup> : 448 samples: Cu-Mo-Ag in soil anomaly.
<b>New Craigmont</b>	<b>Nicola Mining Inc.</b>	Cu, Au; Cu skarns; 092ISE035	na	Compiled historical data, generated model for porphyry Cu-Au targets. Testing XRF sorting of mine waste.
<b>Newton</b>	<b>Carlyle Commodities Corp.</b>	Au, Ag; Epithermal Au-Ag-Cu (low sulphidation); 092O 050	Inf.: 42,396,600 t 0.63 g/t Au, 3.43 g/t Ag	Three drill holes, 2016 m. Highlights included 689.0 m grading 0.51 g/t Au, 1.48 g/t Ag. Additional new drilling began in December. Metallurgical testing initiated. Updated resource estimate in 2022.
<b>Ponderosa</b>	<b>Au Gold Corp.</b>	Au, Ag; Au-quartz veins; 092ISE192	na	Results released from 2022 drilling included 18.91 m grading 0.44 g/t Au, 0.88 g/t Ag.
<b>Princeton Copper</b>	<b>Collective Metals Inc., Tulameen Resources Corporation</b>	Cu, Au; Alkalic porphyry Cu-Au; 092HSE135	na	Data review.
<b>Quesnel Nickel</b>	<b>Green River Gold Corp.</b>	Ni, Co, talc; Mafic-ultramafic; 093A 130, 093H 061, 139	na	Portable drilling 641 m, 8 holes by late 2023: drilling continued. Assays included 108.1 m grading 0.184% Ni, 0.009% Co, 0.10% Cr, and 21.9% Mg. Geological mapping, rock and soil sampling programs.
<b>Rabbit North</b>	<b>Tower Resources Ltd.</b>	Cu, Au; Alkalic porphyry Cu-Au; 092INE045, 147	na	Eleven drill holes (2455 m). Reported results include 72.4 m grading 0.27% Cu, 0.40 g/t Au, and 0.010% Mo, and 92.0 m grading 1.13 g/t Au. Ground magnetic survey.
<b>Rayfield</b>	<b>Golden Sky Minerals Corp.</b>	Cu,Au; Alkalic porphyry Cu-Au; 092P 005	na	Multi-year area based permit approved.
<b>Reliance Gold</b>	<b>Endurance Gold Corporation</b>	Au, Ag, Sb; Au-quartz veins, Stibnite veins and disseminations; 092JNE033, 136, 191	na	Drilling (5301 m, 22 holes). Highlight intersection 9.3 m grading 8.98 g/t Au.

Table 4. Continued.

<b>Shovelnose</b>	<b>Westhaven Gold Corp.</b>	Au, Ag; Epithermal Au-Ag-Cu (low sulphidation); 092HNE309, 308	I: 2.983 Mt 6.38 g/t Au, 34.1 g/t Ag  Inf: 1.331 Mt 3.89 g/t Au, 16.9 g/t Ag	Underground resource used for PEA, July 2023. Drilling 40 holes (10,803 m); drilling continues. Highlight results included 24.95 m grading 14.66 g/t Au, 35.52 g/t Ag, and 3.68 m grading 17.68 g/t Au, 31.49 g/t Ag.
<b>Skoonka North</b>	<b>Westhaven Gold Corp.</b>	Au, Ag; Epithermal Au-Ag-Cu, (low sulphidation); 092ISW122	na	Rock, stream silt, soil sampling. Silt samples up to 1720 ppb Au.
<b>Wingdam</b>	<b>Omineca Mining and Metals Ltd.</b>	Au; Au-quartz veins; 093H 012	na	Underground development in drift and crosscut to prepare for placer gold recovery.
<b>Woodjam, Redgold</b>	<b>Vizsla Copper Corp.</b>	Cu, Au; Alkalic porphyry Cu-Au; 093A 269, 78	Southeast zone Inf: 227.5 Mt 0.31% Cu  Deerhorn zone Inf: 32.8 Mt 0.49 g/t Au, 0.22% Cu  Takom zone Inf: 8.3 Mt 0.26 g/t Au, 0.22% Cu	3000 line-km airborne geophysical survey. Expanded property area by 15,821 ha through three transactions.
<b>Yellowhead</b>	<b>Taseko Mines Limited</b>	Cu, Au, Ag; Noranda/Kuroko; 082M 008, 9	P+Pr: 817 Mt 0.28% Cu, 0.03 g/t Au, 1.3 g/t Ag	Engineering and community relations.

M = Measured; I = Indicated; Inf = Inferred

part of the current resource to an Indicated category. Gold-quartz veins are in diorite, quartz diorite, gabbro, and granite of the Bralorne intrusive suite (Permian) and to a lesser extent in Permian-Triassic Pioneer Formation intermediate to mafic volcanic rock. Total reported historical production was 4.2 Moz Au at an average head grade of 17.7 g/t Au from the Bralorne, King, and Pioneer mines, which operated from 1889-1971.

#### 7.1.2. Brett (Ximen Mining Corp.)

Ximen reported airborne magnetic and lidar surveys at the **Brett** property in 2022. The lidar survey covered 54 km<sup>2</sup>, and the magnetic survey 484 line-km. Results from the surveys were released in late 2023 and will be used to help with bedrock mapping and structural interpretation. The target at Brett is low sulphidation epithermal gold-silver mineralization.

#### 7.1.3. CHG (Cariboo Rose Resources Ltd.)

Cariboo Rose Resources Ltd.'s **CHG** project is under option to operator Basin Uranium Corp. A reverse circulation drilling program started in 2023.

#### 7.1.4. Coquigold (Cariboo Rose Resources Ltd., CMP Minerals Inc.)

Cariboo Rose Resources Ltd. completed 284 m of diamond drilling in three holes along with an airborne geophysical survey on the **Coquigold** project in late 2022 and results were released in June, 2023. Several alteration zones were intersected, but no significant Au-Ag mineralization. The Coquigold project is under option to CMP Mining Inc., who may earn a 70% interest in the project. Coquigold is an epithermal precious metals project in the Late Cretaceous volcanic rocks of the Spences Bridge belt.

#### 7.1.5. Donna (Eagle Plains Resources Ltd., Annacotty Resources Corp.)

Eagle Plains Resources and option partner Annacotty Resources Corp. conducted soil sampling, prospecting, and geological mapping on the **Donna** project, targeting intrusive-hosted gold. The property extends across the historic St. Paul and Morgan mines (Au-Ag-Pb-Zn). Annacotty Resources has an option to earn up to 60% interest in the project.

#### 7.1.6. Eakin Creek (Trailbreaker Resources Ltd.)

Trailbreaker Resources Ltd. completed 2039 m of drilling (11 holes) at the **Eakin Creek** project in 2023. Highlight intersections include 3.0 m grading 2.42 g/t Au and 1.0 m grading 14.3 g/t Au. Eakin Creek is considered an intrusive-hosted gold deposit. Silica-altered Thuya batholith granite and Polaris suite diorite host disseminated pyrite and quartz-carbonate-pyrite veinlets.

#### 7.1.7. Eldorado (Gelum Resources Ltd., Wealth Minerals Ltd.)

Gelum Resources Ltd. completed an IP geophysical survey across 15 km<sup>2</sup> at the **Eldorado** project. Results from diamond drilling in 2022 (three holes, totalling 795 m) were reported in 2023 and include included 44.0 m grading 0.414 g/t Au. Drilling planned for 2022 was resumed in the fall of 2023 with six holes totalling 1340 metres. Wealth Minerals Ltd. acquired an option to earn in up to 20% of the **Eldorado** project on August 31, 2023. Eldorado is considered an orogenic quartz-sulphide vein target.

#### 7.1.8. Elizabeth and Blackdome (Tempus Resources Ltd.)

Tempus Resources Ltd. published an updated mineral resource for their **Elizabeth** project in November, 2023, with an Indicated resource of 317,200 t at 5.97 g/t Au (60,900 oz Au) and an Inferred resource of 315,000 t at 3.48 g/t Au (35,200 oz Au) at a 1.5 g/t Au cut off. Surface exploration work included property-wide prospecting and sampling to follow up on geophysical and geochemical targets and two new target areas were identified. The former **Blackdome** gold mine is about 30 km north of the Elizabeth deposit. A 2010 Preliminary Economic Assessment proposed mining at both sites and processing at Blackdome with the existing and permitted plant. The two areas have different styles of mineralization. Blackdome is a low sulphidation epithermal deposit in Cenozoic intermediate to felsic volcanic rocks whereas Elizabeth is considered an orogenic gold vein deposit with mineralized veins in a Paleocene quartz diorite intrusion of the Shulaps ultramafic complex.

#### 7.1.9. FG Gold (Karus Gold Corp.)

Karus Gold Corp. conducted sampling and geological mapping on the **FG Gold** project targeting quartz veins in sedimentary rocks.

#### 7.1.10. Fontaine (Green River Gold Corp.)

Fieldwork at Green River Gold Corp.'s **Fontaine** project included prospecting in and around the historical Galleon showing. The Fontaine project is being explored for orogenic gold-silver veins. The property is partially underlain by Barkerville terrane Snowshoe Group phyllite, quartzite, and schist, and is adjacent to Osisko Development Corp.'s Cariboo Gold project.

#### 7.1.11. Golden Sable (Trailbreaker Resources Ltd.)

Trailbreaker Resources Ltd. undertook soil sampling, mapping, and prospecting on the **Golden Sable** project, and located historical drill collars. The soil sampling was designed to confirm a previously reported 3 km-long gold anomaly. The work confirmed previous results and extended the anomaly 1 km. Gold-quartz veins in intrusive rocks are the exploration target.

#### 7.1.12. Goldrange (Kingfisher Metals Corp.)

Kingfisher Metals Corp. reported results from drilling in 2022 at the **Goldrange** project. Highlight intervals from one hole included 40.0 m grading 2.86 g/t Au and from another 25.0 m grading 1.93 g/t Au. Gold-quartz veins in intrusive rocks are the exploration target.

#### 7.1.13. Koster Dam (Cariboo Rose Resources Ltd., Discovery Lithium Inc.)

Airborne magnetic geophysical targets and previous reconnaissance sampling helped to focus prospecting for gold-quartz veins in volcanic rocks at the **Koster Dam** project. Float samples of felsic volcanic rock with quartz veins and quartz-cemented breccia returned highlight values of 2.61, 2.38, 1.47, and 0.74 g/t Au. Cariboo Rose Resources holds 55% of the project, and Discovery Lithium Inc. 45%.

#### 7.1.14. Lightning Strike (Cariboo Rose Resources Ltd.)

Cariboo Rose Resources Ltd. reported results from 11 reverse circulation holes drilled in late 2022 (1466 m total) at the **Lightning Strike** project. Highlight intersections included 6.1 m grading 0.67 g/t Au and 7.7 m grading 0.51 g/t Au. All holes intersected quartz veins with pyrite mineralization.

#### 7.1.15. Napoleon (Golden Independence Mining Corp.)

Golden Independence Mining Corp. conducted soil and rock sampling and a 70 line-km airborne magnetic geophysical survey at the **Napoleon** project. Staking added 506 ha to the project area.

#### 7.1.16. Newton (Carlyle Commodities Corp.)

At the **Newton** project, Carlyle Commodities Corp. drilled 2016 m in three holes early in 2023. The holes extended mineralization included in a 2022 pit-constrained resource calculation with Inferred 42.4 Mt 0.63 grading g/t Au and 3.43 g/t Ag at a 0.25 g/t Au cut off (O'Brien and Turnbull, 2022). Highlight results include one hole returning 689.0 m grading 0.51 g/t Au, 1.48 g/t Ag and another returning 649.9 m grading 0.50 g/t Au, 1.87 g/t Ag. Carlyle began further drilling in December. Metallurgical testing began at Base Metallurgical Laboratories Ltd. in Kamloops, B.C. for recovery with gravity concentration, sulphide flotation, and leaching tests on different particle sizes. Newton is a low to intermediate sulphidation epithermal gold project hosted in Cretaceous intrusive, sedimentary, and volcanic rock of the Spences Bridge Group (Cretaceous).

### 7.1.17. Ponderosa (Au Gold Corp.)

In 2022, Au Gold Corp. drilled 2335 m in 20 diamond drill holes at their **Ponderosa** project, testing the Tomahawk and Flat Iron targets. Au Gold reported extensive zones of silica alteration, brecciation, and epithermal textures, and results released in 2023 included 18.91 m grading 0.44 g/t Au, 0.88 g/t Ag. Ponderosa is considered a low sulphidation epithermal Au-Ag target in Cretaceous Spences Bridge Group volcanic rocks.

### 7.1.18. Reliance Gold (Endurance Gold Corporation)

Endurance Gold drilled 5301 m in 22 holes in 2023 at the **Reliance Gold** project. Drilling was targeted on the Diplomat, Imperial, Eagle, and Crown zones. A highlight 9.3 m intersection graded 8.98 g/t Au. Reliance Gold is an orogenic Au quartz-sulphide vein deposit. Gold occurs in breccias, quartz-sulphide veins, and stockworks, and has been tested along a 1500 m strike length to a depth of 600 m. Mineralization is spatially associated with ankerite-sericite alteration in mafic volcanic rocks and is apparently related to a northwest-trending shear zone. The project area includes the historic Minto Mine, which produced 17,500 oz Au before WWII.

### 7.1.19. Shovelnose (Westhaven Gold Corp.)

Westhaven Gold Corp. released a preliminary economic analysis (PEA) in July for the **Shovelnose** project South zone, based on underground mining (Fig. 4). The revised calculation for an underground resource is Indicated 2.983 Mt at 6.38 g/t Au, 34.1 g/t Ag, and Inferred 1.331 Mt at 3.89 g/t Au, 16.9 g/t Ag at a 1.5 g/t Au cut off. The calculation was based on 162 drill holes totalling 61,726 m. Some key points of the PEA include an all-in sustaining cost of \$US752/oz AuEq, an after-tax net present value of \$222 million, a 2.6 year after tax payback period, a 1000 tpd production rate, and a 9.5-year mine life. As of November 2023, more than 10,803 m had been drilled in 40 holes during the year. Drilling targeted several areas both along and away from the main Zone One trend. Selected results include 24.95 m grading 14.66 g/t Au, 35.52 g/t Ag, and 3.68 m grading 17.68 g/t Au, 31.49 g/t Ag. Shovelnose is a low sulphidation epithermal precious metals project in intermediate to felsic volcanic rocks of the Spences Bridge Group (Cretaceous).

### 7.1.20. Skoonka North (Westhaven Gold Corp.)

Rock, soil, and stream-silt sampling were carried out by Westhaven Gold Corp. at the **Skoonka North** project. Silt samples ranged up to 1720 and 992 ppb Au. Skoonka North is a low sulphidation epithermal precious metals project in intermediate to felsic volcanic rocks of the Spences Bridge Group (Cretaceous).

## 7.2. Selected base metal projects

### 7.2.1. Beaver-Lynx (Inomin Mines Inc.)

The **Beaver** and **Lynx** projects are connected properties where Inomin is exploring for Mg-Ni-Cr-Co. Initial metallurgical

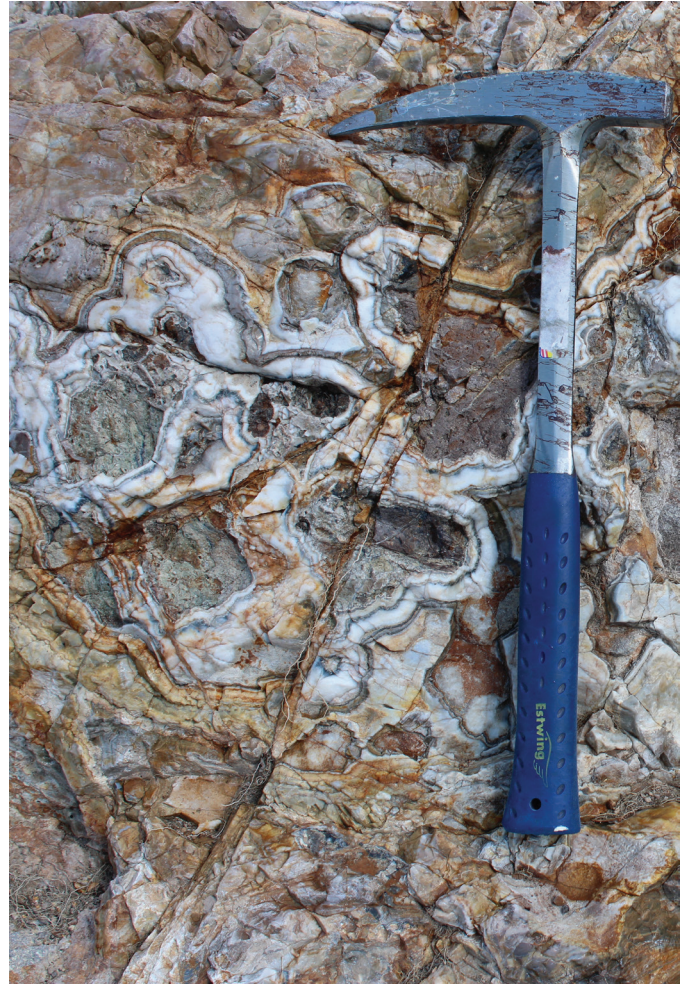


Fig. 4. Banded chalcidonic silica on breccia fragments at Franz zone, Shovelnose project (Westhaven Gold Corp.).

testing was done at SGS Canada Inc. to evaluate different methods for extracting Mg and Ni. HCl leaching resulted in recovery of 99% of Mg in magnesite and brucite from whole ore and after flotation. Up to 58% Ni was recovered by flotation. Four diamond drill holes totalling 968 m were drilled at the South and Ring zone targets at Beaver. A highlight intersection of 179.27 m graded 23% Mg, 0.19% Ni, and 0.36% Cr. Mineralization is in Permian to Triassic serpentinized dunite, peridotite, and gabbro of Cache Creek terrane.

### 7.2.2. Fox Tungsten (Happy Creek Minerals Ltd.)

Happy Creek Minerals Ltd. carried out surface prospecting and mapping in 2023 at their **Fox Tungsten** project. In late 2023, Happy Creek received an approval on an amendment to an existing multi-year, area based permit that allows for significantly expanded areas for drilling, trenching, and road access. Tungsten skarn mineralization is at the contact between the Deception Mountain stock, a Cretaceous multiphase monzogranite intrusive unit, and surrounding calc-silicate marble, quartzite, and schistose metasedimentary rocks.

### 7.2.3. Highland Valley (Happy Creek Minerals Ltd.)

Happy Creek Minerals Ltd. reviewed and compiled data from more than 28 targets at the **Highland Valley** project, which is contiguous with Teck Resources Limited's Highland Valley Copper mine. The Northeast, Mystery, and Billy targets have Cu ±Mo in soil anomalies with coincident magnetic and IP geophysical anomalies. Zones of Cu ±Mo mineralization identified from limited historical sampling including trenching and drilling, occur in these zones with porphyry copper-style alteration and mineralization. An example includes drilling at the Northeast target, for which the last 40 m of a hole returned 0.32% Cu. In 2023, the company conducted a 3D audio-magnetotelluric geophysical survey, geological mapping, and silt, soil, and rock sampling. A multi-year area-based exploration permit is current to 2026.

### 7.2.4. Quesnel Nickel (Green River Gold Corp.)

Green River Gold Corp. continued work at the **Quesnel Nickel** project, including geological mapping, soil and rock sampling, and small core drill testing. By late 2023, 641 m in eight holes had been drilled using a backpack drill that yields AQTk-sized core (3.55 cm). A highlight drill intersection of 108.1 m graded 0.184% Ni, 0.009% Co, 0.10% Cr, and 21.9% Mg. Green River has applied for a permit to drill 20 holes totalling 6000 m. Serpentinized ultramafic rocks of Slide Mountain terrane are targeted for Ni-Co-Cr-Mg mineralization.

## 7.3. Selected base and precious metal projects

### 7.3.1. Alwin Mine (GSP Resource Corp.)

GSP Resource Corp. has an option to earn a 100% interest in the **Alwin Mine** project. Alwin is a historic Cu-Ag-Au underground mine that produced from 1916 to 1981. It is immediately west of Teck Resources Limited's Highland Valley Copper Mine. GSP completed 640 m of diamond drilling in five holes in October, 2023. Visible pyrite, chalcopyrite, bornite, and molybdenite were reported in altered intrusive rock in all holes. GSP conducted a compilation of historic information in 2022, including drill logs, and generated a 3D model. The model was used to plan the 2023 drilling. Alwin is a porphyry Cu-Ag-Au-Mo deposit in the Guichon Creek batholith.

### 7.3.2. Brussels Creek (Recharge Resources Ltd.)

Recharge Resources Ltd. drilled 900 m in three holes at the **Brussels Creek** project. A highlight drill intersection assayed 3.5 m grading 5.08 g/t Au. approximately 10 km west of New Gold Inc.'s New Afton mine, Brussels Creek is considered an alkalic porphyry Cu-Au target.

### 7.3.3. Copper Dome (Canada One Mining Corp.)

Canada One Mining Corp. conducted soil sampling, MMI soil sampling, rock sampling, geological mapping, and backpack drill testing at the **Copper Dome** project. Canada One expanded the Copper Dome project area through an option to acquire 100% of the contiguous CM1 property from private vendors. Copper Dome is contiguous to and south of Hudbay

Minerals Inc.'s Copper Mountain mine. The exploration target is alkalic porphyry Cu-Au mineralization.

### 7.3.4. Copper Plateau (Cascade Copper Corp.)

Cascade Copper Corp. acquired a 90% interest in the **Copper Plateau** project from Tuktu Resources Ltd. Copper Plateau is a 2789 ha project area with drilling data from previous operators targeting porphyry Cu-Mo-Au-Ag.

### 7.3.5. Copperview (Vizsla Copper Corp.)

Vizsla Copper Corp. acquired the **Copperview** project from Mineworks Ventures Inc. in July of 2023. It consists of three non-contiguous claim blocks near Kodiak Copper Corp.'s MPD project (see section 7.3.13.). A high-resolution aeromagnetic survey (997 line-km) was completed late in 2023. Copperview is considered prospective for porphyry Cu-Au mineralization.

### 7.3.6. Cowtrail (Cariboo Rose Resources Ltd., BRS Resources Ltd.)

Cariboo Rose Resources Ltd. and operator/optionee BRS Resources Ltd. initiated exploration work at **Cowtrail** project in late May 2023 and started a diamond drilling program. BRS Resources Ltd. has an option to earn up to a 60% interest in the project. Cowtrail is northeast and contiguous with Vizsla Copper Corp.'s Woodjam project and southeast of Imperial Metals Corporation's Mount Polley mine. The target is porphyry Cu-Au mineralization.

### 7.3.7. Eagle Lake (Trailbreaker Resources Ltd.)

Trailbreaker Resources Ltd. acquired the **Eagle Lake** project in 2022 though an agreement with Teck Resources Limited. Four claims of this project totalling 6482 ha were optioned to Vizsla Copper Corp. in 2023. Vizsla may earn 100% of these properties, which border the Woodjam project. Eagle Lake is a porphyry Cu-Au-Ag target.

### 7.3.8. Iron Lake (Eastfield Resources Ltd., Tech-X Resources Inc.)

Tech-X Resources Inc., who has an option to earn up to 80% interest in the **Iron Lake** project, drilled 1680 m in three holes targeting massive sulphide mineralization and a conductivity geophysical anomaly. Zones of massive magmatic sulphides, including pyrite and pyrrhotite, were intersected including 9.5 m grading 0.42% Cu and 341 ppm Ni. The project is underlain by the Iron Lake mafic-ultramafic intrusive complex in Nicola Group rocks and is targeting magmatic Cu-Ni-Co-Pt-Pd sulphides in ultramafic rocks, and porphyry Cu-Au mineralization in the nearby Takomkane batholith.

### 7.3.9. Kolos (Torr Metals Inc.)

Torr Metals Inc. conducted a ZTEM airborne geophysical survey at the **Kolos** alkalic porphyry copper-gold project, which was staked in late 2023. Soil samples (3348) and rock samples (47) were collected in a 48 km<sup>2</sup> area over the main historical showings. Kolos is underlain by Nicola Group (Late

Triassic) volcanic and sedimentary rocks, which are intruded by Late Triassic granodiorite to quartz monzonite rocks.

### 7.3.10. Lac La Hache (Engold Mines Ltd.)

EnGold Mines Ltd.'s **Lac La Hache** project has a variety of porphyry-related deposit types, including the Aurizon zone hydrothermal breccia and quartz veins, the G1 and Spout Cu-Fe skarn zones, and the Ann North and Berkey alkalic porphyry Cu-Au zones. The Aurizon, G1, and Spout zones have existing resource estimates (see Table 4). ALS GoldSpot Discoveries Ltd. was engaged by EnGold to apply artificial intelligence processes to existing data. Through this process, 66 new exploration targets were generated.

### 7.3.11. Little Fort (New Gold Inc.)

New Gold Inc. initiated fieldwork at the **Little Fort** project with soil geochemistry, geological mapping, and IP geophysical surveys targeting alkalic porphyry Cu-Au mineralization. New Gold is employing ALS GoldSpot Discoveries Ltd. artificial intelligence technology to help compile data and generate targets. A five-year exploration and drilling permit was granted.

### 7.3.12. Miner Mountain (Sego Resources Inc.)

Sego Resources Inc. conducted a review of geological information, geophysical survey data, and results from their 2022 drill campaign at the **Miner Mountain** project. A re-analysis of samples from one hole was done to test for platinum group elements. Re-analysis of a 2 m sample returned 0.13 g/t Pd in an 11 m interval that originally returned 0.6% Cu and 0.13 g/t Au. Miner Mountain is considered an alkalic porphyry Cu-Au target.

### 7.3.13. MPD (Kodiak Copper Corp.)

Kodiak Copper Corp. continued exploration at the **MPD** project with IP geophysical surveys, soil geochemistry, trenching, and drilling. Kodiak drilled 18,562 m in 33 holes, mostly between the Axe/West/South zones in the south and the Man zone in the north of the property. Highlight intersections from the West zone include 158.0 m grading 0.28% Cu, 0.28 g/t Au, and 0.83 g/t Ag, and 16.0 m grading 0.93% Cu, 0.64 g/t Au, and 3.20 g/t Ag. Known mineralization in the West zone has been extended to 300 by 300 m on surface, and to a depth of more than 800 m. Notable features include intersections of narrow higher grade structurally controlled precious metal mineralization and Cu-Au mineralization in hydrothermal breccia. A highlight intersection from the Man zone was 116.0 m grading 0.34% Cu, 0.28 g/t Au, and 1.71 g/t Ag. One hole intersected Cu-Au mineralization from surface to a vertical depth of 995 m. Kodiak acquired 11 claims totalling 7800 ha contiguous with the MPD property. The MPD property hosts a series of alkalic porphyry Cu-Au targets, including the Man, Prime, and Dillard.

### 7.3.14. New Brenda (Flow Metals Corp.)

Flow Metals Corp. conducted soil sampling across a 4 km<sup>2</sup>

area based on interpretation of a magnetic low geophysical anomaly on the **New Brenda** project. A Cu-Mo-Ag in soil anomaly was defined and is coincident with a magnetic low. The company is targeting porphyry Cu-Mo-Ag mineralization.

### 7.3.15. New Craigmont (Nicola Mining Inc.)

Following up on a 1029 line-km ZTEM survey and a soil geochemical survey at the **New Craigmont** project undertaken in 2022, Nicola Mining Inc. is compiling geophysical, geological, and historical drilling and mine production information. In addition to the historic Cu-Fe skarn mineralization, porphyry Cu-Au targets related to the Guichon Creek batholith intrusive units are being evaluated. The company drilled 2700 m in 6 holes testing skarn and porphyry Cu-Au targets. Nicola has an agreement with the Mineral Deposit Research Unit of UBC to help fund studies for post-graduate theses focused on porphyry Cu-Au potential at New Craigmont. Other projects include continued studies of the mine terrace material at New Craigmont, which has a current resource calculation (see Table 4). Tests with XRF sorting were conducted to upgrade the average grade in the terrace material. The Craigmont mine was developed on a series of Cu-Fe skarn orebodies at the contact between Upper Triassic volcanosedimentary rocks of the Nicola Group and the Guichon Creek batholith (Late Triassic to Early Jurassic).

### 7.3.16. Princeton Copper (Collective Metals Inc., Tulameen Resources Corporation)

Exploration work at Collective Metals Inc.'s **Princeton Copper** project included a detailed data review and compilation, relogging of core from previous operators, soil sampling, and prospecting in an area with a strong magnetic anomaly. Collective has an option agreement to earn up to 70% of the Princeton Copper project from Tulameen Resources Corporation. The Princeton project is underlain by Nicola Group volcanic and sedimentary rocks (Late Triassic to Early Jurassic), which have been intruded by Boulder granodiorite to quartz diorite (Late Triassic to Early Jurassic) and several Early Cretaceous intrusive phases. The exploration target is alkalic porphyry Cu-Au mineralization.

### 7.3.17. Rabbit North (Tower Resources Ltd.)

Tower Resources Ltd. conducted diamond drilling in 11 holes (totalling more than 2455 m) at the **Rabbit North** property in 2023. Holes targeted the Thunder and Lightning gold zones and the Rainbow Cu-Au zone. Highlight drill intersections include 72.4 m grading 0.27% Cu, 0.40 g/t Au, and 0.010% Mo, and 92.0 m grading 1.13 g/t Au. A 112 line-km ground magnetic geophysical survey was also completed. Rabbit North is considered an alkalic porphyry Cu-Au target.

### 7.3.18. Rayfield (Golden Sky Minerals Corp.)

Golden Sky Minerals Corp. defined five alkalic porphyry Cu-Au target zones at the **Rayfield** project through soil geochemistry and historic exploration data review. Rayfield

received a multi-year area based permit for geophysical surveys and drilling.

### 7.3.19. Woodjam, Redgold (Vizsla Copper Corp.)

Vizsla Copper Corp. undertook geophysical work and diamond drilling at their **Woodjam** project. A 3000 line-km airborne magnetic, radiometric, and VLF survey was completed in January. Drilling of 18 holes (8000 m total) began in July. As of September, 14 holes and 5970 m had been completed. Reported results included 293.2 m grading 0.54% Cu, 0.005% Mo, 0.05 g/t Au, and 1.84 g/t Ag. Historical mineral resource estimates are available for three of six known mineralized zones at Woodjam (Southeast, Takom, and Deerhorn zones). The total is 262.8 Mt of 0.30% Cu and 0.11 g/t Au. The Woodjam project area was expanded in 2023 by 15,821 ha through the option of three different contiguous claim blocks. Two options allow for Vizsla to acquire 100% ownership. The third is an option to acquire up to 70% of the **Redgold** project, which is between the Woodjam property and Imperial Metals Mt. Polley property. The Redgold project has a geological database including geophysical, geochemical, and drill data from 49 holes. The Woodjam project is a porphyry Cu-Au-Mo target with both alkaline and calc-alkaline features.

### 7.3.20. Yellowhead (Taseko Mines Limited)

Taseko Mines Limited is confirming with the British Columbia Environmental Assessment Office (EAO) and the Impact Assessment Agency of Canada that an environmental assessment certificate is required for the **Yellowhead** project. Taseko is preparing to enter the environmental assessment process by making engineering enhancements to the project and engaging with First Nations communities. In 2020, Taseko completed a Feasibility Study on the project that outlined Proven and Probable reserves at 817 Mt at 0.28% Cu, 0.03 g/t Au, and 1.3 g/t Ag at a 0.17% Cu cut off (Weymark, 2020). The mill would process 90,000 tpd with a 25-year mine life. The Yellowhead project is considered a remobilized polymetallic volcanogenic massive sulphide (VMS) deposit. Mineralization is hosted in the 'EBA' mafic to intermediate volcanic rock (Devonian to Mississippian) unit of the Eagle Bay assemblage (Lower Cambrian to Mississippian) metamorphosed sedimentary and volcanic rock package.

## 7.4. Selected coal projects

Only one coal project was active in the South Central region in 2023 (Table 4).

### 7.4.1. Basin Coal (Basin Mine Holdings Ltd.)

In 2023, Basin Mine Holdings Ltd. conducted sampling and testing of coal material at the **Basin Coal** project, a historic producing mine in the Similkameen coalfields with exploration dating back to 1908 and operations to 1912. Basin Mine Holdings Ltd. is a private company that gained control of the Basin Coal project in 2021. The project is permitted to produce up to 350,000 tpy. Infrastructure includes a 250 tph operating

Parnaby wash plant, which produces clean coal through a filter press system. Water is recycled to the plant and the process results in a low volume of tailings material. An historic resource calculation from July 2009 noted Measured and Indicated resources of 82.3 Mt and Inferred 35 Mt at a cut off stripping ratio of 8:1. The main seam has an average thickness of 17 m, and the lower seam 7.4 m. The coal is classified as high volatile bituminous and C thermal coal and is considered to be appropriate for metallurgical coking.

## 7.5. Selected other projects

Only one project under the category other was active in the South Central Region in 2023 (Table 4).

### 7.5.1. KaLi (Green River Gold Corp.)

The **KaLi** project of Green River Gold Corp. is considered prospective for Li-Cs-Ta pegmatite and porphyry Cu-Mo deposits. Green River Gold conducted initial prospecting and sampling for Li-bearing pegmatites. XRF analyses confirmed the presence of Ta-Nb-Rb in some samples, which were sent for lab analyses. The property was historically explored for porphyry Cu-Mo mineralization in quartz monzonite.

## 8. Geological research

Elia et al. (2023) summarized the remotely piloted aircraft system (RPAS) platforms and sensors that were used to acquire spectrometer, magnetometer, and lidar data in the Mount Polley mine, Woodjam prospect, and Guichon Creek batholith areas and the methods for processing survey data, as an aid for mapping surficial geology and drift prospecting.

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# Exploration and mining in the Southeast Region, British Columbia



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## 1. Introduction

Four metallurgical coal mines operate in the Elk Valley of the Southeast Region, accounting for most of Canada's coal production and exports, and mine expansion and exploration continued at these mines. Dating back to the mid-1800s, the region has a long history of metals mining, including lead, zinc, and silver from the past-producing Sullivan mine and gold and silver from the Rossland, Greenwood, Sheep Creek, and Slocan camps. Today, exploration in the region focuses on base and precious metals with some recent extensions into lithium and related metals on Canada's critical minerals list. The region hosts several industrial mineral mines and quarries, and placer mining continues. The Trail smelter (Teck Resources Ltd.) produces refined lead, and zinc (which is on Canada's critical minerals list), silver and cadmium along with other metals on Canada's critical minerals list (germanium, indium), and fertilizer products. Estimates for exploration expenditures, drilling programs, and other metrics were captured in the British Columbia Mineral and Coal Exploration Survey, a joint initiative of the Province of British Columbia Ministry of Energy, Mines and Low Carbon Innovation, the Association for Mineral Exploration in British Columbia, and EY LLP. For the Southeast Region, exploration expenditures are estimated at \$35.9 million. The estimate for exploration drilling is 98,210 m (Clarke et al., 2024; EY LLP, 2024). A slow-down in exploration activities reflects reduced financing (some companies suspended operations) and delays in permit approvals for drilling.

## 2. Geological overview

The mineral endowment of British Columbia, including the Southeast Region, is intimately tied to the tectonic evolution of the Canadian Cordillera, which records a protracted history of supercontinent breakup followed by accretion of allochthonous terranes to the western flank of Ancestral North America and post-accretion deformation and magmatism (e.g., Nelson et al., 2013). From east to west, the Southeast Region provides a cross-section through several components of the Canadian Cordillera (Fig. 1). On the east are Archean to Mesoproterozoic basement rocks of Ancestral North America, Proterozoic rift and intracratonic basin successions (Belt

Purcell and Windermere supergroups), Paleozoic to Jurassic passive margin and deep-water basin deposits, and Jurassic to Cretaceous foreland basin deposits. To the west are the Slide Mountain terrane, which records Devonian subduction beneath the western flank of Ancestral North America and back-arc extension that led to the creation of the 1000 km-wide Slide Mountain ocean, and the Quesnel volcanosedimentary arc terrane and its basement (Nelson and Colpron, 2007; Nelson et al., 2013). The Southeast Region contains two of the major physiographic belts commonly used to describe the Canadian Cordillera (Fig. 1). In the Rocky Mountain foreland belt, mainly unmetamorphosed sedimentary rocks are deformed by northeast-vergent, thin-skinned thrusts and folds. The Omineca belt contains greenschist- to amphibolite-grade siliciclastic and volcanic rocks and basement-cored gneiss domes (Monger, 1999).

## 3. Mines and quarries

### 3.1. Metal mines

No metal mines operated in the Southeast Region in 2023.

### 3.2. Coal mines

Coal remains British Columbia's most valuable mined commodity with sales forecasted at \$10.2 billion for 2023, which accounts for approximately 64.5% of the mining revenue for the province. In the Southeast Region, Teck Coal Limited mines coal from structurally thickened seams of the Kootenay Group (upper Jurassic to lower Cretaceous; Fig. 2; Table 1) at four open-pit operations along the Elk River valley: **Fording River, Greenhills, Line Creek, and Elkview**. More than 95% is metallurgical, high-quality hard coking coal. Coal is shipped via rail to three main shipping terminals on the west coast (Westshore, Neptune, and Ridley). Total annual production from the mines in the Southeast Region for 2023 is estimated to be 23-23.5 Mt of metallurgical coal. Q3 production was 5.5 Mt with nine-month sales (2023) of 17.3 Mt. Major news for the coal operations was the announced sale of Teck's steelmaking coal division to Glencore PLC with a minority stake by Nippon Steel Corporation and POSCO for an announced amount of US\$9.0 billion. Terms of the sale include assurances that Glencore PLC will continue operations and retain staff and

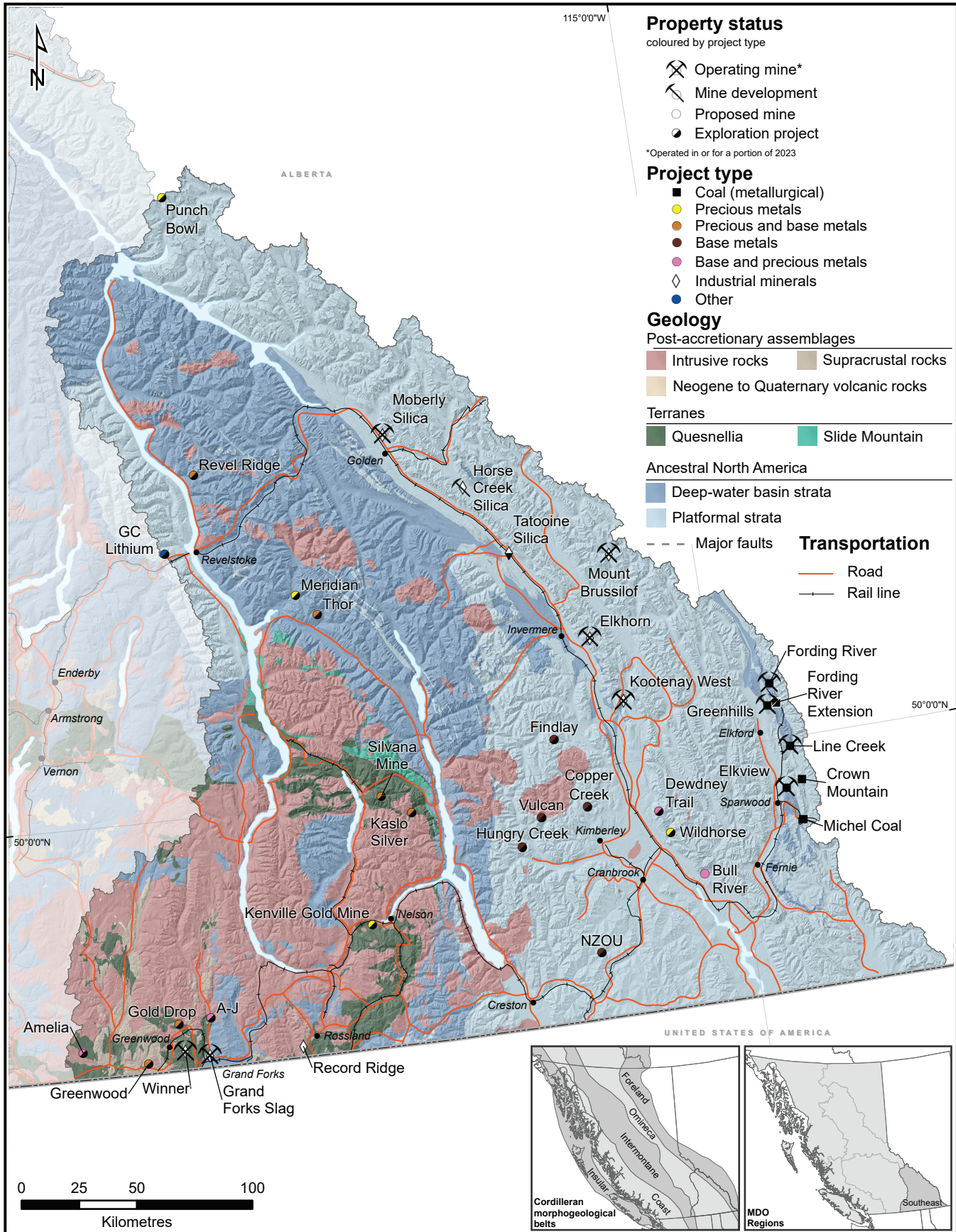


Fig. 1. Mines and selected exploration projects, Southeast Region, 2023. Terranes after Nelson et al. (2013).

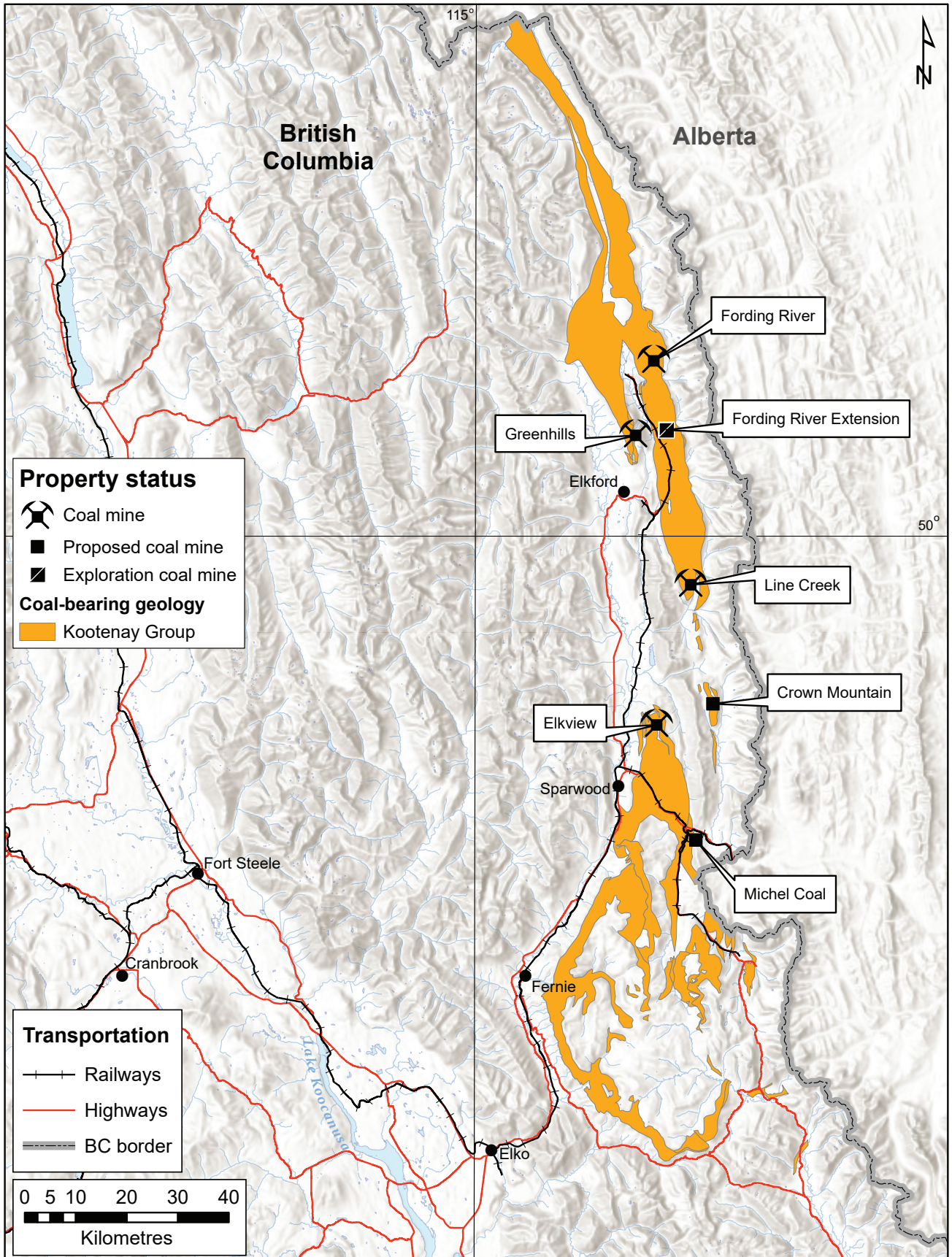


Fig. 2. Map of the Kootenay Group and East Kootenay coalfields, including the major coal mines and projects in southeastern British Columbia.

**Table 1.** Coal mines, Southeast Region.

Mine	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1-Q3)	Reserves	Resource	Comments
<b>Elkview</b>	<b>Teck Coal Limited 95%</b> ; Nippon Steel & Sumitomo Metal Corporation 2.5%; POSCO 2.5%	HCC; Bituminous coal; 082GNE016, 17	na	na	na	Teck estimates a remaining reserve life of approximately 28 years at the current production rate.
<b>Fording River</b>	<b>Teck Coal Limited</b>	HCC; Bituminous coal; 082JSE012	na	na	na	Proven and Probable reserves sufficient for 27 years mine life; increase to 46 years including the Fording River Extension project.
<b>Greenhills</b>	<b>Teck Coal Limited 80%</b> ; POSCO Canada Limited ('POSCAN') 20%	HCC; Bituminous coal; 082JSE007, 10	na	na	na	Proven and Probable reserves are projected to support another 45 years of mining at planned production rates.
<b>Line Creek</b>	<b>Teck Coal Limited</b>	HCC, TC; Bituminous coal; 082GNE020	na	na	na	Proven and Probable reserves at Line Creek are projected to support planned production rates for a further 13 years.
<b>All mines</b>			23-23.5 Mt			

HCC = hard coking coal; PCI = pulverized coal injection; TC = thermal coal; ULV = ultra low volatile  
P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

subcontractors in southeast British Columbia. The deal is projected to be closed by the third quarter of 2024.

### 3.2.1. Elkview (Teck Coal Limited 95%, Nippon Steel Corporation 2.5%, POSCO 2.5%)

The **Elkview** mine, which extends across 27,100 ha of coal lands, produces metallurgical coal. Upgraded in 2020, the annual production capacity of the mine and preparation plant is 9.0 Mt and Teck estimates a remaining mine life of 28 years.

### 3.2.2. Fording River (Teck Coal Limited)

The **Fording River** mine, which extends across 13,000 ha of coal lands, produces metallurgical coal and minor thermal coal. The current annual production capacity of the mine is 9 Mt; the preparation plant has a capacity of 9.5 Mt. In 2022, production continued from the Eagle Mountain and Swift pits. The focus for development and drilling in 2023 was the **Fording River Extension** project. Teck also did exploration drilling and large diameter core drilling, in their producing pits. Proven and Probable reserves at the mine are sufficient for a 27-year mine life and, if the Fording River Extension project is included, a 46-year life.

### 3.2.3. Greenhills (Teck Coal Limited 80%, POSCO Canada Limited ('POSCAN') 20%)

The **Greenhills** mine consists of 11,800 ha of coal lands.

Mainly metallurgical coal is produced although some thermal coal is mined. The current annual production capacity is 5.9 Mt from the mine and 5.4 Mt from the preparation plant. Some coal from Greenhills is processed at Fording River. Proven and Probable reserves are projected to support 45 years of mining.

### 3.2.4. Line Creek (Teck Coal Limited)

The **Line Creek** mine consists of 8200 ha of coal lands and produces mainly metallurgical coal and minor thermal coal. The annual production capacity of the mine and preparation plant is 4.0 Mt. Proven and Probable reserves are projected to support mining for a further 13 years.

## 3.3. Industrial minerals mines and quarries

The Southeast Region has several industrial mineral mines and quarries (Fig. 1; Table 2). The operators range from local companies through to large international corporations.

### 3.3.1. Elkhorn (CertainTeed Gypsum Canada Inc.)

The **Elkhorn** mine produced gypsum from Middle Devonian evaporites of the Burnais Formation. As the reserve life ended, the mine blended a product with anhydrite that was once left behind as waste. Production was transferred to the new Kootenay West quarry in 2023.

**Table 2.** Selected industrial mineral mines, Southeast Region.

Mine	Operator	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1- Q3)	Reserves	Resource	Comments
<b>Elkhorn</b>	<b>CertainTeed Gypsum Canada Inc.</b>	Gypsum; Bedded gypsum; 082JSW021	Reduced to 0	Mined out	na	Active extraction operations ceased in 2023. Transferred to Kootenay West (see below).
<b>Kootenay West</b>	<b>CertainTeed Gypsum Inc.</b>	Gypsum; Bedded gypsum; 082JSW005, 20	na	North and South quarries: Total 17 Mt (blended quality of 83% gypsum)	na	Mining began in 2023; planned 400,000 tpy; 43- year mine life.
<b>Grand Forks Slag</b>	<b>Pacific Abrasives and Supply Inc.</b>	Slag; Tailings; 082ESE264	na	na	na	Seasonal operation.
<b>Moberly Silica</b>	<b>Vitreo Minerals Ltd.</b>	Silica; Industrial silica; 082N 001	~60 kt product on contract for sales through 2023	na	na	~140 kt of stockpiled material on site from 2019 mining operations. No mining in 2023.
<b>Mount Brussilof</b>	<b>Baymag Inc.</b>	Magnesite; Sparry magnesite; 082JNW001	~230 kt	na	na	Material is coarse crushed on site and trucked to processing facility in Exshaw, AB.
<b>Winner</b>	<b>Rockwool Inc.</b>	Gabbro/basalt; Crushed rock, for mineral wool; 082ESE265	na	na	na	Seasonal operation.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

### 3.3.2. Grand Forks Slag (Pacific Abrasives and Supply Inc.)

The company supplies slag material from the former Granby Consolidated Mining, Smelting and Power Company smelter site for sand blasting abrasive material.

### 3.3.3. Kootenay West (CertainTeed Gypsum Canada Inc.)

The company transferred production from its Elkhorn quarry to its new **Kootenay West** quarry. Mining began in 2023 with a planned 400,000 tpy production and a 43-year mine life. The deposit is in evaporites of the Burnais Formation (Devonian) in a section 20-25 m thick grading 75-95% gypsum.

### 3.3.4. Moberly Silica (Vitreo Minerals Ltd.)

The last production at the **Moberly Silica** mine, owned by Vitreo Minerals Ltd., was in 2019 and 200,000 t of material was stockpiled. The company began contract sales of 60,000 t in the summer of 2021. The silica deposit (99% SiO<sub>2</sub>) is in regionally extensive orthoquartzites, 300 m thick at the mine site, of the Mount Wilson Formation (Middle to Upper Ordovician).

### 3.3.5. Mount Brussilof (Baymag Inc.)

In production since 1981, Baymag Inc. produces magnesite at

the **Mount Brussilof** mine from Cambrian limestones in which magnesium has replaced calcium. Quarried ore is crushed then trucked to the company's processing facilities in Exshaw, Alberta. Annual magnesite production is approximately 230 kt.

### 3.3.6. Winner (Rockwool Inc.)

Rockwool Inc. extracts gabbro and basalt from its seasonal **Winner** quarry.

## 4. Placer operations

Placer mines have operated in southeastern British Columbia since the gold rush of the 1860s. Although activities were not tracked in 2023, several placer areas have operations under Mines Act permits. Active locations include, Goldstream River, Quartz Creek, Lardeau Creek, Perry Creek, Moyie River, Wild Horse River, and the Nelson-Salmo-Trail region. The placer creeks are generally linked to areas with known bedrock gold mineralization.

## 5. Mine or quarry development

Mine development projects are those for which a decision to produce has been made, key government approvals are in

place, and on-site construction has begun. **Horse Creek Silica** (Table 3) is the only industrial mineral project in the Southeast Region at the mine development stage.

### 5.1. Horse Creek Silica (Sinova Global)

At the **Horse Creek Silica** mine, Sinova Global is redeveloping a seasonal quarry in Mount Wilson orthoquartzites. In 2023, the company continued with permit updates, road construction, rail siding development, and mine site preparation. The mine is expected to produce up to 400,000 tpy of >99% SiO<sub>2</sub> with an estimated resource of 1.4 Mt.

## 6. Proposed mines and quarries

Proposed mines are feasibility-stage projects for which proponents have begun the environmental certification process (in the case of large projects) or have submitted applications for Mines Act permits (in the case of projects below British Columbia Environmental Assessment Act thresholds) or are waiting on existing permit amendments. Projects that have permits in place but have yet to obtain financing to begin site construction are also considered to be at the proposed stage. The Southeast Region has two proposed metal mines (**Bull River**, **Record Ridge**), and two proposed coal mines, (**Crown Mountain**, **Michel Coal**; Fig. 2; Table 4).

### 6.1. Proposed metal mines

#### 6.1.1. Bull River (Canadian Critical Minerals Inc.)

Canadian Critical Minerals Inc. is continuing development of its **Bull River** mine project. The company completed the mine pre-application process, which was accepted by the Ministry of Energy, Mines and Low Carbon Innovation and the Ministry of Environment and Climate Change Strategy. The company has signed an ore concentrate processing agreement with New Gold Inc. The final mine permit and environmental permit processes are ongoing.

#### 6.1.2. Record Ridge (West High Yield Resources Ltd.)

The **Record Ridge** magnesium project is in a variably serpentinized and locally carbonatized ultramafic cumulate body. The body is cut by Coryell intrusion syenites, quartz-poor monzonites, and granodiorite to the west and faulted against andesite and basalt of the Elise Formation to the east. Following feedback from public meetings early in the year, the company revised its application for a Mines Act permit to the British Columbia Mines Development Review Committee. Additionally, the company signed a Cooperation Agreement with the Osoyoos First Nations Band.

**Table 3.** Selected mine development projects, Southeast Region.

Project	Operator (partner)	Commodity; Deposit type; MINFILE	Reserves	Resource	Comments
<b>Horse Creek Silica</b>	<b>Sinova Global</b>	Silica; Silica sandstone; 082N 043	na	1.4 Mt est.	High purity silica (>99.9% SiO <sub>2</sub> ) permit updates, road and rail construction, mine site preparation. Planned up to 400,000 tpy.

### 6.2. Proposed coal mines

Two coal mine proposals are currently in the Environmental Review process.

#### 6.2.1. Crown Mountain (NWP Coal Canada Ltd.)

The **Crown Mountain** mine proposed by NWP Coal Canada Ltd. received an Order to proceed to the Application Development and Review phase under the British Columbia Environmental Assessment Act from the Environmental Review Office in May. The proposed mine has a production capacity of 3.7 Mt per year for a life of 16 years.

#### 6.2.2. Michel Coal (North Coal Limited)

The **Michel Coal** project proposed by North Coal Limited is in the Pre-Application process at the Environmental Review Office. The company has proposed a mine with production capacity of 2.3-4 Mt per year and a mine life of 30 years. Public engagement and the application process are ongoing.

## 7. Selected exploration activities and highlights

In 2023, numerous precious metal, polymetallic base and precious metal, and industrial mineral projects were active in the Southeast Region (Table 5).

### 7.1. Selected precious metal projects

#### 7.1.1. Kenville Gold Mine (Ximen Mining Corp.)

The company received its permit for major work onsite and will open a new portal with a plan for 1200 m of underground development followed by 20,250 m of underground drilling. The permit allows related surface works and addresses environmental matters, most of which were completed by the end of the summer. The company also completed lidar, airborne photogrammetry, and airborne magnetic surveys across the mine area.

#### 7.1.2. Meridian (New Gold Inc.)

The company completed geological mapping over 4 km, underground mapping over 1 km, chip sampling, lidar surveys, drone-mounted aeromagnetic surveys, and digitization of historical underground workings at their **Meridian** project. Targets are gold-bearing quartz veins that strike northwest in metasedimentary rocks of the Broadview Formation (lower Paleozoic, Lardeau Group).

#### 7.1.3. Punch Bowl (Pegasus Resources Inc.)

The company prospected and sampled at the **Punch Bowl** property, which is part of their Golden project. They collected



**Table 4.** Selected proposed mines, Southeast Region.

Project	Operator (partner)	Commodity; Deposit type; MINFILE	Reserves	Resource	Comments
<b>Bull River</b>	<b>Canadian Critical Minerals Inc.</b>	Cu, Au, Ag; Cu ±Ag quartz veins; 082GNW002	na	I: 2.26 Mt 1.80% Cu, 0.42 g/t Au, 15.3 g/t Ag  Inf: 1.36 Mt 1.60% Cu, 0.42 g/t Au, 13.6 g/t Ag	Mine pre-application complete and accepted. Beginning final mine permit process. Concentrate processing agreement with New Gold Inc.
<b>Crown Mountain</b>	<b>NWP Coal Canada Limited (Jameson Resources Limited 80%, Bathurst Resources Limited 20%)</b>	HCC and PCI; Bituminous coal; 082GNE018	HCC: P: 42.60 Mt Pr: 4.91 Mt  PCI: P: 7.13 Mt Pr: 1.19 Mt (2014)	HCC + PCI: M: 68.9 Mt  I: 6.0 Mt (2014)	Proceeding to Application Development and Review phase, continued public engagement and permit process with federal and provincial regulators. Proposed 2 Mtpa operation (86% HCC and 14% PCI) with 15-year mine life.
<b>Michel Coal</b>	<b>North Coal Ltd.</b>	HCC and PCI; Bituminous coal; 082GSE050	na	HCC: M: 44.6 Mt  I: 42.5 Mt; open-pit and underground (2015)	Entered pre-application of EA in 2015; continuing public engagement, in EAO process, projected mine production of 1.8 Mtpa for 23 years.
<b>Record Ridge</b>	<b>West High Yield (W.H.Y.) Resources Ltd.</b>	Mg; Alaskan-type Pt +/-Os+/-Rh+/-Ir; 082FSW398	na	M: 28.4 Mt 24.82% Mg  I: 14.6 Mt 24.12% Mg  Inf: 1.07 Mt 24.37% Mg	Public engagement, amended Mines Act permit application provided to BC Mines Development Review Committee.

HCC = hard coking coal; PCI = pulverized coal injection; TC = thermal coal  
P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

25 rock samples from both known and newly discovered quartz veins. They are examining quartz-gold veins in quartzites and pelites of the McNaughton Formation (lower Cambrian).

#### 7.1.4. Wildhorse (Ximen Mining Corp.)

Ximen Mining Corp. completed drilling one hole (528.7 m) at its **Wildhorse** project in an area where gold was panned from surface sediments. The hole intersected multiple carbonate-quartz veins and an altered and veined zone associated with a porphyry dike.

### 7.2. Selected precious and base metal projects

#### 7.2.1. Gold Drop (GGX Gold Corp.)

The company is working on epithermal gold veins in the historic Greenwood camp and reviewed existing data with a focus on tellurium results and any association with known veins or lineaments.

#### 7.2.2. Greenwood (Grizzly Discoveries Inc.)

The company sampled numerous sites of known polymetallic skarn and vein mineralization at their **Greenwood** project. These include Sappho, Midway, Motherlode North, Copper Mountain, Imperial, Crown Point, Ket 28 and Dayton. Selected results from the Imperial area yielded six samples with greater than 1 g/t Au up to 12.1 g/t Au and eight samples yielded greater than 40 g/t Ag up to 469 g/t Ag. The company is awaiting drilling permits for its **Robocop** project.

#### 7.2.3. Kaslo Silver (Spey Resources Corp.)

The company collected a total of 207 soil samples were collected along lines at 25 m spacing and 62 rock samples. Mineralization is present in both bedding-parallel manto carbonate-replacement bodies and structurally controlled fracture fill veins.

Table 5. Selected exploration projects, Southeast Region.

Project	Operator (partner)	Commodity; Deposit type; MINFILE	Resource (NI 43-101 compliant unless indicated otherwise)	Comments
A-J	Belmont Resources Inc.	Au; Polymetallic veins Ag-Pb-Zn ±Au; 082ESE047	na	Drilling: nine holes, 2000 m. Disseminated sulphides in talc-serpentinite alteration zones.
Amelia	Ximen Mining Corp.	Au; Polymetallic veins Ag-Pb-Zn ±Au; 082ESW020	na	Drilling, eight holes (2064 m), lidar, airborne photogrammetry, airborne magnetic survey.
Copper Creek	DLP Resources Inc.	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb-Ag; New	na	Diamond drilling; three holes, 868 m.
Dewdney Trail	PJX Resources Inc.	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb-Ag; 082GNW094	na	Prospecting, float sampling, soil, mapping.
Findlay	Eagle Plains Resources Ltd.	Pb, Zn, Ag; Polymetallic veins Ag-Pb-Zn ±Au; 082KSE060	na	Geological mapping, prospecting, soil sampling.
GC Lithium	MGX Minerals Inc.	Li; REE-pegmatite; 082M 024	na	Geological mapping, 14 geochemical samples.
Gold Drop	GGX Gold Corp.	Au, Cu, Ag, Pb, Zn; Epithermal Au-Ag-Cu, low sulphidation; 082ESE153	na	Review of existing data.
Greenwood	Grizzly Discoveries Inc.	Cu; Cu skarn; 082ESE034	na	Mapping and sampling across numerous mineral occurrences in the Greenwood camp.
Hungry Creek	DLP Resources Inc.	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb-Ag; 082FSE110	na	Prospecting and sampling. 2022 drilling reported chalcopyrite and copper oxides in Creston Formation sedimentary rocks.
Kaslo Silver	Spey Resources Corp.	Ag, Au, Pb, Zn; Polymetallic veins Ag-Pb-Zn ±Au; 082FNW096	na	207 soil samples, 62 rock grab samples.
Kenville Gold Mine	Ximen Mining Corp.	Au; Au-quartz veins; 082FSW086	na	Mines permit received, surface works and environmental matters addressed for planned new adit, 1200 m underground development and more than 20,000 m underground drilling. Lidar airborne photogrammetry, airborne magnetic survey.
Meridian	New Gold Inc.	Ag; Polymetallic veins Ag-Pb-Zn ±Au; 082KNW064	na	Surface and underground mapping, lidar, drone EM, compilation of historical information.

Table 5. Continued.

<b>NZOU</b>	<b>DLP Resources Inc.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb- Ag	na	Diamond drilling; one hole, 1333 m completed.
<b>Punch Bowl</b>	<b>Pegasus Resources Inc.</b>	Au; Carbonate-hosted disseminated Au- Ag; 083D 038	na	Prospecting, 25 samples.
<b>Revel Ridge</b>	<b>Rokmaster Resources Corp.</b>	Pb, Zn, Ag; Irish-type carbonate-hosted Zn-Pb; 082M 003	M and I: 7.156 Mt 4.14 g/t Au, 51.2 g/t Ag, 1.96% Pb, 4.19% Zn  I: 7.563 Mt 4.42 g/t Au, 46.9 g/t Ag, 1.48% Pb, 2.62% Zn (2023)	Nine holes (1969 m); updated mineral resource estimate.
<b>Silvana Mine</b>	<b>Klondike Silver Corp.</b>	Ag, Pb, Zn; Polymetallic veins Ag-Pb-Zn ±Au; 082FNW050	na	Four underground holes completed.
<b>Tatooine Silica</b>	<b>Homerun Resources Inc.</b>	Silica; Silica sandstone; 082KNE012	na	28 samples taken, 27 averaged 98.8% SiO <sub>2</sub> , two new zones were identified.
<b>Thor</b>	<b>Taranis Resources Inc.</b>	Base metals; Polymetallic manto Ag-Pb-Zn; 082KNW030	na	Electromagnetic survey, rock and float sampling, best float sample: 14.55 g/t Au, 1045 g/t Ag, 3.23% Cu, 0.05% Pb, 0.43% Zn.
<b>Vulcan</b>	<b>Eagle Plains Resources Ltd.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn-Pb- Ag; 082FNE093	na	Drilling 6 holes 4256 m, bore hole EM, petrography.
<b>Wildhorse</b>	<b>Ximen Mining Corp.</b>	Au; Au-quartz veins	na	Drilling, one hole, 528 m.

M = Measured; I = Indicated; Inf = Inferred

#### 7.2.4. Silvana Mine (Klondike Silver Corp.)

Projected down from surface workings of the historic Jennie Lind-Read and Evening Lode mines, four drill holes intersected Main Vein structures. Further drilling targeted the downward projection of the Carnation hanging wall and foot wall lodes. Silver-lead-zinc mineralization is in a structurally bound carbonate-quartz breccia in interbedded black argillite and quartzite of the Slocan Group.

#### 7.2.5. Thor (Taranis Resources Inc.)

The company undertook boulder tracing and sampling over a geophysical anomaly coincident with a north-northwest fault and reported epithermal gold mineralization in the structure. Eight float boulder sample results were released with the

best sample grading: 14.55 g/t Au, 1045 g/t Ag, 3.23% Cu, 0.05% Pb, and 0.43% Zn from a massive pyrite and tetrahedrite block. The company completed 888 m of drilling to better understand the newly discovered Thunder zone.

#### 7.2.6. Revel Ridge (Rokmaster Resources Corp.)

The company completed drilling nine holes (1969 m total) that were designed to test extensions of both the Yellowjacket and Main zones. All holes intersected mineralization. Selected intersections include: 2.64% Pb, 6.67% Zn, 0.11 g/t Au, and 60.54 g/t Ag over 28.5 m in the Yellowjacket zone, and 0.52% Pb, 1.15% Zn, 3.88 g/t Au, and 28.0 g/t Ag in the Main zone. In June of 2023, the company released an updated mineral resource estimate for both the Yellowjacket and Main

zones with Measured and Indicated at 7.156 Mt at 1.96% Pb, 4.19% Zn, 4.14 g/t Au, and 51.2 g/t Ag, and Inferred at 7.563 Mt at 1.48% Pb, 2.62% Zn, 4.42 g/t Au, and 46.9 g/t Ag.

### 7.3. Selected base metal projects

#### 7.3.1. Copper Creek (DLP Resources Inc.)

The company completed drilling 868 m in three holes. The **Copper Creek** targets are sediment hosted-stratiform copper-silver-cobalt mineralization in the middle to upper parts of the Creston Formation (Belt-Purcell basin).

#### 7.3.2. Findlay (Eagle Plains Resources Ltd.)

The company completed surface mapping, prospecting, and soil sampling in the Midfork and Tourmalinite ridge areas of the **Findlay** project. The property is underlain by Aldridge Formation quartz wacke, quartz arenite, siltstone and argillite intruded by Moyie gabbroic sills. Mineralization comprises disseminations and streaks of galena, chalcopyrite, sphalerite, pyrite, and ankerite spatially related to northwest-trending quartz veins.

#### 7.3.3. Hungry Creek (DLP Resources Inc.)

The company started prospecting and sampling in July, 2023. Chalcopyrite, intense sericite alteration, and carbonate alteration were observed in upper Creston Formation quartzites.

#### 7.3.4. NZOU (DLP Resources Inc.)

The company drilled one 1333 m drill hole, but drilling was suspended because water was unavailable. The company plans to complete the hole in 2024. Most of the property is underlain Aldridge Formation greywackes (Mesoproterozoic Belt-Purcell Supergroup) that are cut by gabbroic Moyie sills.

#### 7.3.5. Vulcan (Eagle Plains Resources Ltd.)

The company completed drilling six holes (4256 m total). The holes targeted the historic Hilo horizon, which similar to the historic Sullivan mine, is near the Lower-Middle Aldridge Formation (Mesoproterozoic Belt-Purcell Supergroup) contact. The company refers to mineralization below the Hilo horizon discovered in 2022 and intersected again in 2023 as the Vulcan horizon. The Vulcan horizon is a thick package of variably mineralized and altered fragmental rocks up to 140 m true thickness with bedding-parallel laminations containing sphalerite, galena, pyrrhotite, arsenopyrite and chalcopyrite. Drilling was followed by borehole EM in three holes.

### 7.4. Selected base and precious metal projects

#### 7.4.1. A-J (Belmont Resources)

Nine holes (totalling 2000 m) were drilled on targets in the North zone between the Golden Crown and Athlestan-Jackpot mines and targets defined in a geophysical survey done in 2020. The targets are strong coincident resistivity-chargeability anomalies consisting mainly of variably altered mafic volcanic rocks. Intersections include fine-grained disseminated sulphides in zones of talc-serpentinite alteration.

#### 7.4.2. Amelia (Ximen Mining Corp.)

The company completed lidar, airborne photogrammetry, and airborne magnetic surveys. Interpretation of the results identified two sets of lineaments. The predominant north-northwest trend parallels major faults in the area including the Mt. Verde fault and the Silver King shear zone, both associated with gold mineralization. A secondary east-northeast trend was inferred to represent cross faults or smaller quartz veins. The company received a drilling permit and eight holes (2064 m total) were completed. The holes are targeting veins below the existing mine. Disseminated pyrite, sphalerite, garnet, and chalcopyrite have been identified in core.

#### 7.4.3. Dewdney Trail (PJX Resources Inc.)

The company found numerous talus boulders with sedimentary-exhalative type mineralization, comprising sphalerite, galena, pyrite, and pyrrhotite. Assay results included 9.33% Zn, 2.48% Pb, and 14.62 g/t Ag, 6.71% Zn, 2.23% Pb, 16.05 g/t Ag, and 0.12% Cu. Soil samples up-slope from the boulders returned elevated zinc, silver, lead, and gold values. The property is adjacent to the old Estella mine site near Fort Steele.

### 7.5. Selected other projects

#### 7.5.1. GC Lithium (MGX Minerals Corp.)

The company completed a small geological mapping program and took 14 rock samples. Granitic pegmatite bodies in the area contain variable lepidolite and pink (or green) tourmaline mineralization and contain lithium-cesium-tantalum mineralization. The company is waiting for a drill permit to further test pegmatite zones.

### 7.6. Selected industrial mineral projects

#### 7.6.1. Tatooine (Homerun Resources Inc.)

The company mapped and sampled the property. Twenty-eight samples were taken with 27 averaging 98.8% SiO<sub>2</sub>. Two new silica zones were identified in structural blocks, one of which is 170 m thick and extends along strike for at least 300 m. The new zones are east of the old Brisco quarry on the property.

## 8. Geological research

Using multi-element stream-sediment geochemical data collected as part of Regional Geochemical Survey (RGS) programs since 1976, Rukhlov et al. (2024) defined a multivariate ‘critical mineral index’ to assess prospectivity for carbonatite-hosted critical metals in the British Columbia alkaline province. Detailed data from carbonatites in the Blue River area, which contains at least 18 carbonatite bodies, including at the Upper Fir deposit, one of the largest and best studied Nb-Ta occurrences in the Canadian Cordillera, served to develop this critical mineral index.

Hanneson and Unsworth (2023) presented a regional 3-D resistivity model of the southern Canadian Cordillera, providing new insights into the lithospheric structure and the distribution

of fluids at depth. Abdale et al. (2023) examined sapphire from the Monashee complex, presenting petrographic, geochemical, and  $^{206}\text{Pb}/^{238}\text{U}$  ages of garnet-equilibrated zircon to establish the time of peak metamorphism and ensuing partial melting, and Damant et al. (2023) used apatite fission-track and (U-Th)/He thermochronology to document Miocene reactivation along the Columbia River fault at the eastern margin of the Monashee complex. Paradis et al. (2023) examined three carbonate hosted lead-zinc deposits in the Kootenay Arc to evaluate the effects of deformation and metamorphism on sphalerite by analyzing for trace elements and sulphur isotopes, Kontak et al. (2023) reviewed mineral and chemical characteristics of Mississippi Valley-type deposits, and Knaack et al. (2023) used thallium isotopes to examine the origin of a sediment-hosted Zn-rich massive sulphide deposit. Burgess et al. (2023) provided a high-precision perovskite ( $\text{CaTiO}_3$ ) date from the Ice River complex. Caron et al. (2023) reported on the Cranbrook Lagerstätte biota, providing new information about depositional environments, and taphonomic conditions. Belley (2023) examined gem quality iolite from high-grade metamorphic rocks of the Thor-Odin dome. Petryshen (2023) assessed the extent and spatial distribution of selenium and other potentially toxic elements from near the town of Sparwood in the Elk River Valley.

## 9. Summary

Exploration has been varied across a spectrum of commodities, including precious and base metals, critical minerals, industrial minerals, and coal. Industrial minerals production has remained steady. Coal prices were high during the year and demand for metallurgical coal remains strong.

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# Exploration and mining in the Southwest Region, British Columbia



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## 1. Introduction

The Southwest Region (Fig. 1) has a long history of mining. This history includes: the use of native copper by First Nations; silver, gold, and coal mining by the mid-19th century; mining of iron in the mid-20th century; and substantial copper production throughout the 20th century. Although mining and exploration for metals continues in the region, most mining is for construction materials, mainly aggregates for local markets with some exports from the largest coastal quarries.

The area recently had one major polymetallic metal mine, **Myra Falls** (Myra Falls Mine Ltd., Trafigura Mining Group), and numerous industrial minerals and aggregate operations. Operations have been episodic since the mine was placed on care and maintenance in 2015. Although the mine restarted in April 2019, it was once again placed on care and maintenance in December, 2023.

Northisle Copper and Gold Inc. was active with drilling and geophysics on northern Vancouver Island. More than 30 other exploration projects were tracked, mainly grass roots or early stage and small scale. Estimates for exploration expenditures, drilling programs, and other metrics were captured in the British Columbia Mineral and Coal Exploration Survey, a joint initiative of the Province of British Columbia Ministry of Energy, Mines and Low Carbon Innovation, the Association for Mineral Exploration in British Columbia, and EY LLP. For the Southwest Region, exploration expenditures are estimated at \$10.1 million. The estimate for exploration drilling is 24,700 m (Clarke et al., 2024; EY LLP, 2024).

## 2. Geological overview

Metallogeny in British Columbia is closely linked to the tectonic evolution of the Canadian Cordillera, first as an accretionary orogen consisting of allochthonous terranes that were welded to and deformed with the western margin of Ancestral North America, primarily during the Jurassic, and then as the site of post-accretionary tectonism and magmatism (e.g., Nelson et al., 2013).

The Southwest Region includes parts of the Insular, Coast, and Intermontane morphogeological regions. Most of the area is underlain by rocks of the Wrangell terrane and the

Coast Plutonic complex (Fig. 1). Wrangellia is a Devonian to Jurassic island arc terrane that underlies most of Vancouver Island and Haida Gwaii. The oldest rocks on Vancouver Island are Devonian volcanic arc andesites, basalts, breccias, tuffs, and tuffaceous sediments of the Sicker Group and allied intrusive rocks, which are overlain by Mississippian-Permian limestones, argillites, and minor conglomerate of the Buttle Lake Group. This Paleozoic basement is exposed in two major uplifts on southern and central Vancouver Island. The Cowichan anticlinorium and the Buttle Lake anticlinorium host the past volcanogenic massive sulphide polymetallic producer at **Mount Sicker** and the mine at **Myra Falls**.

Unconformably overlying the Paleozoic rocks are Middle to Upper Triassic oceanic flood basalts and related sedimentary rocks of the Vancouver Group. The upper part of the Vancouver Group contains numerous skarn occurrences adjacent to Jurassic intrusions (Island Plutonic suite). The Tasu past producer on Haida Gwaii is one of the larger examples of numerous iron and iron-copper skarns. Between 1914 and 1983, it produced 12 Mt of iron concentrate as well as copper, gold, and silver.

The Vancouver Group is overlain by arc rocks of Bonanza Group (Upper Triassic-Middle Jurassic), a volcanosedimentary succession of subaerial basalts to rhyolitic flows and tuffs (Nixon and Orr, 2007). The Bonanza Group north of Holberg Inlet hosts the past-producing Island Copper Cu-Mo-Au porphyry mine and other undeveloped porphyry and epithermal prospects where they are intruded by Island Plutonic suite granodiorite and quartz diorite.

On the east coast of Vancouver Island, in the Strait of Georgia and on the western mainland, Wrangellia is buried by rocks of the Nanaimo Group, an Upper Cretaceous continental to marine molassoid succession containing debris derived from unroofing of the Coast belt and northern Cascades (Mustard, 1994). The Comox Formation, the basal unit of the Nanaimo Group, hosts economically important coal deposits that were mined historically in the Nanaimo area.

The Coast Mountain range is underlain by the Coast Plutonic complex, a large northwest-trending batholith consisting largely of diorite, quartz diorite, tonalite, and granodiorite calc-alkaline rocks with less abundant high-grade metamorphic

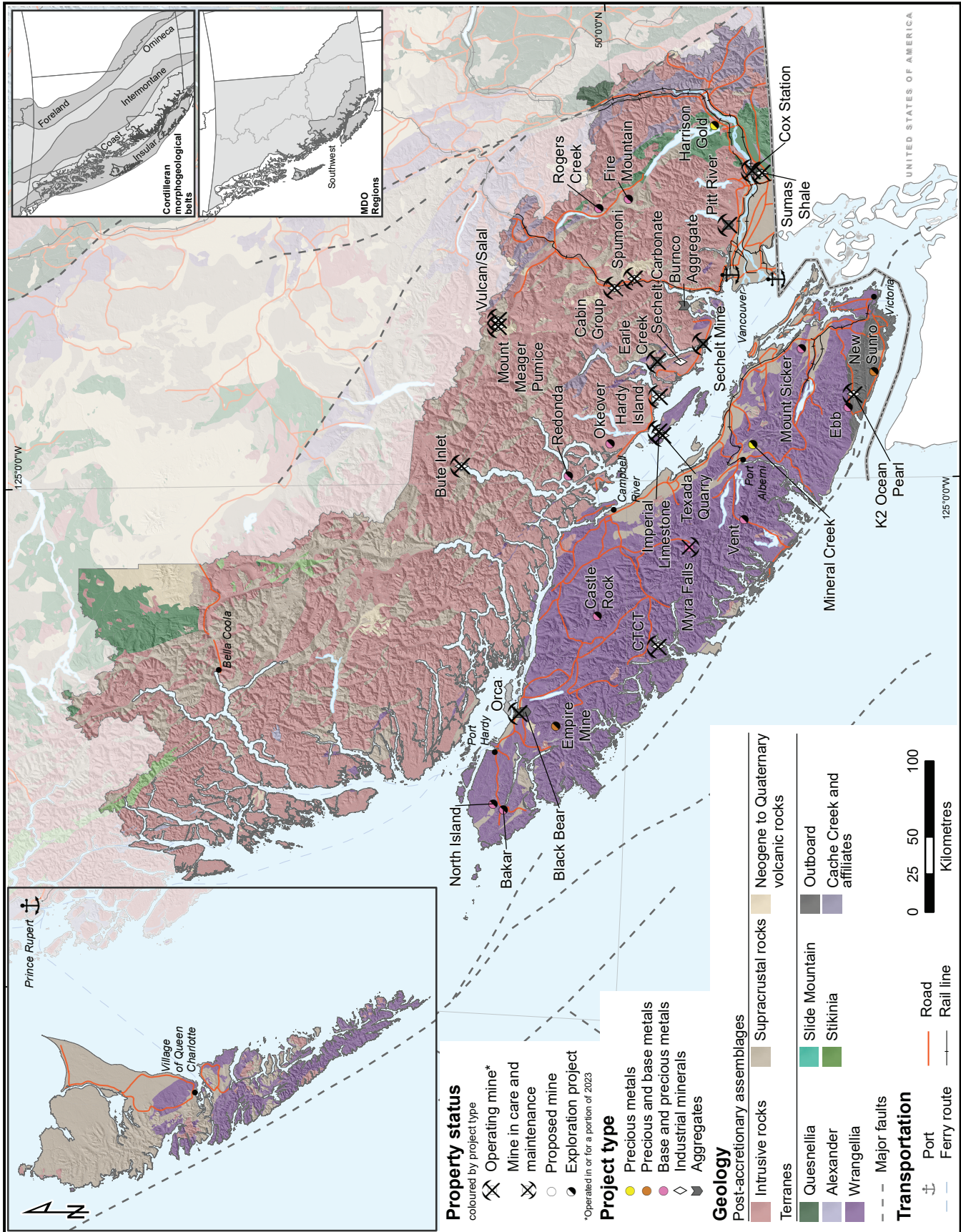


Fig. 1. Mines, proposed mines and selected exploration projects, Southwest Region, 2023. Terranes after Nelson et al. (2013).



rocks. For the most part, uplift and erosion have removed the levels at which epithermal and porphyry mineralization form, with some exceptions. At the southern end of the Coast Plutonic complex, economically important deposits occur in pendants of the Gambier Group, overlapping Late Jurassic to Mid-Cretaceous arc-related volcanic and sedimentary rocks. The most productive of these deposits was the Britannia mine, a Kuroko-type polymetallic volcanogenic massive sulphide deposit that produced 517,000 t of copper along with zinc, silver, gold, lead, and cadmium between 1905 and 1974. At the southeastern edge of the Coast ranges, the Giant Mascot ultramafic-mafic intrusive suite (Late Cretaceous, Manor et al., 2014, 2015, 2016, 2017) hosts the province's only past-producing nickel mine, Giant Mascot Nickel, which operated between 1958 and 1974.

Eocene to Miocene ancestral Cascades arc magmatism extended as far northward as southwestern British Columbia, as does present day Cascades magmatism. Evidence of forearc Paleocene to Miocene magmatism can be traced from southern Oregon through Alaska (Madsen et al., 2006). Mount Washington Copper (Eocene) produced 3548 t of copper, 131 kg gold and 7235 kg silver. Catface Copper (Eocene) has a significant undeveloped resource. Other presumably Cenozoic targets include Giant Copper and **Okeover**. Harmony, on Graham Island, Haida Gwaii (Fig. 1) is a Miocene epithermal deposit with a significant undeveloped gold resource. Some recent exploration targets Neogene mineralization along a magmatic belt between the Brooks Peninsula and Alert Bay on northern Vancouver Island (Nixon et al., 2011a, b; 2020).

Quaternary Cascades magmatism has produced pumice and other volcanic rocks quarried for construction, landscaping, and other applications. The Mount Meager area has also been investigated as a possible source of geothermal energy.

On Vancouver Island, the western and southern margins of Wrangellia are structurally juxtaposed with the Pacific Rim terrane, which consists of possible mélangé deposits (Rusmore and Cowan, 1985; Brandon, 1989) and the Leech River complex, an assemblage of greenschist- to amphibolite-grade mudstones, sandstones, and mafic volcanic rocks cut by granitic bodies (Groome et al., 2003). Slate and siltstone are quarried for building stone in the Leech River complex. The Leech River has been an active placer gold camp since 1864. Gold quartz veins have been the subject of recent exploration near the Leech River fault, along the southern margin of the terrane.

The Crescent terrane represents Eocene accretion of Late Cretaceous or Paleocene to Early Eocene seamounts. The Leech River fault marks the boundary of Pacific Rim and Crescent terranes. The Metchosin Igneous complex, a partial ophiolite and northernmost extent of the Coast Range basalt province (Massey, 1986), contains three tholeiitic intrusion-hosted past producers of copper and precious metals, the most significant of which was the Sunro mine.

The southeastern Coast belt, north of the international

border is underlain by the Nooksack-Harrison and Chilliwack terranes (equivalent to Stikinia; Monger and Struik, 2006), and the Bridge River, Cadwallader, and Methow terranes, allied with the main Cache Creek terrane (Fig. 1). These represent slices of oceanic and arc-related rocks enclosed between Intermontane and Insular terranes during Middle Jurassic to Middle Cretaceous regional sinistral faulting (Bustin et al., 2013; Monger and Brown, 2016). Gambier Group-equivalent overlap deposits and parts of the Nooksack-Harrison terrane are prospective for VMS mineralization. The Coquihalla serpentine belt, along the Hozameen fault between the Bridge River terrane to the west and the Methow terrane to the east, hosts several gold prospects and five past producers including the Carolin mine, which operated between 1981 and 1984.

Tectonic uplift, erosion, and glaciation produced sand and gravel deposits important to the construction and transportation industries of the Lower Mainland. Most are products of the most recent retreat of the Cordilleran Ice Sheet in the Pleistocene (e.g., Howes, 1983; Clague and Ward, 2011).

### 3. Mines

The Southwest Region has one metal mine, and numerous industrial minerals and aggregate operations (Fig. 1; Tables 1-3). No coal mine is producing. Of eight large-scale industrial minerals operations in the region, two entered care and maintenance in 2016 and remained so through 2023. Aggregate operations in the region number in the 100s and only the most prominent (e.g., those producing at least 1 Mty) are reported here.

#### 3.1. Metal mines

##### 3.1.1. Myra Falls (Myra Falls Mine Ltd., Trafigura Mining Group)

The Myra Falls underground Zn-Cu-Pb-Ag-Au mine produced for most of the period from 1966 to present. It operated for most of 2023 but in December, Myra Falls Mine Ltd. (part of Trafigura Group Pte. Ltd.) announced that the mine would be placed on long-term care and maintenance. The company will be seeking creditor protection to allow corporate restructuring. Although a private multinational commodity trading company not required to publish compliant production or reserves figures, Trafigura had a target throughput of 800,000 tpy of ore and estimated the operation has a lifespan of at least 10 years (Table 1). The mine has a history of replacing reserves through exploration, which continued in 2023 with about 33,000 m of drilling completed by year end. The Myra Falls camp hosts Kuroko-type, or bimodal felsic type Zn-Cu-Pb-Ag-Au VMS deposits (Fig. 2) from which more than 30 Mt of ore were mined between 1966 and 2015. Before the recent shutdown, the mine had a workforce of about 450 people.

#### 3.2. Coal mines

There are no producing coal mines in the region. Coal was mined on Vancouver Island between ca. 1849 and 2019.

**Table 1.** Metal mines, Southwest Region.

Mine	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1-Q3)	Reserves	Resource	Comments
<b>Myra Falls</b>	<b>Myra Falls Mine Ltd. (Part of Trafigura Mining Group)</b>	Zn, Cu, Pb, Ag, Au; Kuroko massive sulphide; 092F 330, 71, 72, 73	Not reported. Mill capacity 2400 tpd. Long term target 800,000 tpy of ore.	Not reported but estimated sufficient for 10 years.	Not reported	Estimated drilling by year end of more than 30,000 m in 184 holes for infill and addition to known deposits. Entered care and maintenance in December.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

**Table 2.** Selected industrial mineral mines and quarries, Southwest Region.

Mine	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2023 Production (based on Q1-Q3)	Reserves	Resource	Comments
<b>Bute Inlet</b>	<b>Ironwood Clay Company Inc.</b>	Clay; Sedimentary kaolin or illite	na	na	na	Intermittent mining as needed.
<b>Cabin Group</b>	<b>Northwest Landscape and Stone Supply Ltd.</b>	Landscaping stone	na	na	na	
<b>Cox Station</b>	<b>Mainland Construction Materials ULC</b>	Aggregate; Crushed rock; 092GSE103	Approx. 3-4 Mty	na	na	River and rail access.
<b>CTCT</b>	<b>Vancouver Island Marble Quarries Ltd.</b>	Marble; Limestone; 092E 020	Typically, about 400 t annually	na	na	Supplies Matrix Marble and Stone Inc.
<b>Earle Creek</b>	<b>Lafarge Canada Inc.</b>	Sand and Gravel	Typically, >1 Mty	na	na	Material barged.
<b>Hardy Island</b>	<b>Hardy Island Granite Quarries Ltd.</b>	Dimension stone, building stone; Dimension stone-granite; 092F 425	3000-5000 tpy	na	Approx. 100,000 t	Seasonal quarry.
<b>Imperial Limestone</b>	<b>Imperial Limestone Co. Ltd. (Parent Arcosa Specialty Materials Inc.)</b>	Limestone; Limestone; 092F 394	500,000 tpy chemical grade limestone plus 50,000 t dolostone	na	75 years	Most of the chemical grade product is shipped to parent company in Seattle.

Table 2. Continued.

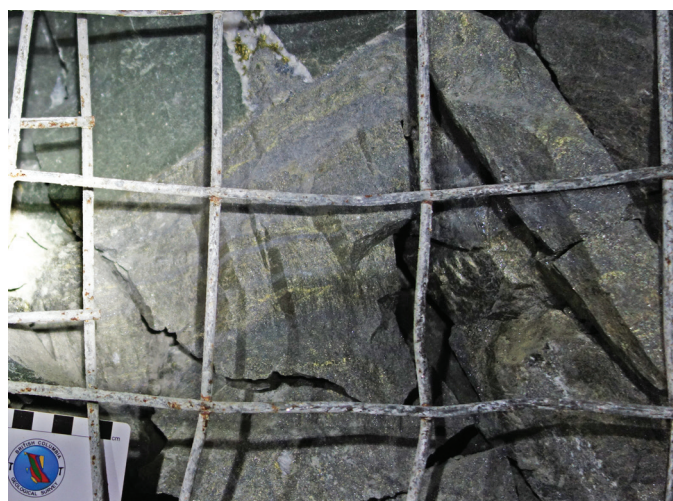
<b>K2 (Ocean Pearl)</b>	<b>K2 Stone Quarries Inc.</b>	Dimension stone, flagstone; Flagstone; 092C 159	15,000-20,000 t annually	na	na	Production number represents material extracted.
<b>Mount Meager Pumice</b>	<b>Great Pacific Pumice Inc.</b>	Pumice; Volcanic ash; 092JW 039	na	na	na	Production as required.
<b>Orca</b>	<b>Polaris Minerals Corporation</b> (Vulcan Materials Company and 'Namgis First Nation partnership)	Sand and Gravel	Up to 6 Mty	na	121.6 Mt initial resource (2005)	Recently 3.5 to 5 Mty. Increase proposed in mine plan. Vulcan Materials Company acquired the previous owner US Concrete Inc. The quarry has a freighter loading facility.
<b>Pitt River</b>	<b>Lafarge Canada Inc.</b>	Aggregate; Crushed rock; 092GSE007	Typically, >1 Mty	na	na	River access for barging.
<b>Sechelt Mine</b>	<b>Heidelberg Materials Canada Limited</b>	Sand and Gravel	Typically, 4-6 Mty	na	Several decades	Freighter loading facility.
<b>Spumoni</b>	<b>Northwest Landscape and Stone Supply Ltd.</b>	Flagstone; Flagstone; 092GNW100	na	na	na	Seasonal quarry.
<b>Sumas Shale</b>	<b>Sumas Shale Ltd.</b>	Shale, clay, sandstone; Residual kaolin; 092GSE024	500,000 t annually	na	50+ years	Approximately 55% shale, 45% sandstone for cement production.
<b>Texada Quarry</b>	<b>Texada Quarrying Ltd. (Lafarge Canada Inc.)</b>	Limestone, aggregate; Limestone; 092F 395	6 Mt including waste.	na	100+ years	Mostly produces limestone for cement manufacture. Freighter loading facility available.
<b>Vulcan/Salal</b>	<b>Garibaldi Pumice Ltd.</b>	Pumice; Volcanic ash; 092JW 039	Typically, 10,000-20,000 m <sup>3</sup>	na	In 2014, 11,396,000 m <sup>3</sup> pumice 4,990,000 m <sup>3</sup> pumicite (fines)	

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

**Table 3.** Selected proposed mines or quarries, Southwest Region.

Project	Operator (partner)	Commodity; Deposit type; MINFILE	Reserves	Resource	Comments
<b>Black Bear</b>	<b>Polaris Materials Corporation</b> (Vulcan Materials Company and 'Namgis First Nation)	Aggregate; Crushed rock	na	20 years (proposed life)	Orca environmental certificate amendment application withdrawn. Proposed 250,000 tpy 4 km from the Orca quarry revised to 3-4 Mtpy. Indicate intention to re-apply under 2018 Act.
<b>BURNCO Aggregate</b>	<b>BURNCO Rock Products Ltd.</b>	Aggregate; Sand and gravel	na	20 Mt	Environmental certificate expired 2023.
<b>Sechelt Carbonate</b>	<b>Ballinteer Management Inc.</b>	Limestone, dolostone, aggregate; Limestone, dolomite, crushed rock; 093GNW031	na	Carbonate rock: 76.1 Mt  Gabbro: >700 Mt	Proponent requests project remain in environmental assessment pre-application stage.

P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred



**Fig. 2.** Interlayered sphalerite and chalcopyrite in an area of former mining (Battle Gap West) at Myra Falls (Myra Falls Mine Ltd., Trafigura Mining Group).

### 3.3. Industrial minerals and aggregates

Large quarries on the coast (Table 3) serve the Lower Mainland, Vancouver Island, and U.S. Pacific northwest markets by barge. Those with access to freighter loadout facilities can also supply eastern Pacific international markets and Hawaii. Aggregates are an important part of the mining industry on the south coast, generating many more jobs in the region than other mining activities. The area hosts some of the largest aggregate pits and quarries in Canada. Most quarries serve local markets. General sales and production trends follow those of the construction industry. Lafarge Canada Inc., Heidelberg

Materials Canada Limited, Vulcan Materials Company, and Mainland Construction Materials ULC, a subsidiary of Summit Materials LLC, doing business as Mainland Sand and Gravel Ltd., are the largest participants in the coast area, although hundreds of pits and quarries produce in the region.

One of the largest aggregate-only operations is the **Sechelt** mine, operated by Heidelberg Materials Canada Limited. The company no longer makes production figures public, but volumes have been in the 4-6 Mt range in recent years. The mine is permitted for up to 7.5 Mty, and the company expect reserves to last several more decades. Barges handle most shipments. There is also a loading facility capable of accommodating Panamax-class freighters.

In addition to the **Texada Quarry**, Lafarge Canada operates two of the largest aggregate quarries in the region each of which typically produces more than 1 Mty and use rivers and tidewater for efficient transportation. The **Pitt River** quarry produces a crushed rock product, and **Earle Creek** produces both crushed rock and natural sand and gravel.

Polaris Materials Corporation, a subsidiary Vulcan Materials Company, operates the **Orca** quarry near Port McNeill, in partnership with the 'Namgis First Nation, which holds a 12% interest. The owner-operator partnership is Orca Sand and Gravel LP. The quarry produces sand and gravel mainly for export to California. The operation was originally permitted for up to 6 Mty. Production has recently ranged from 3-5 Mty. Polaris plans eventual production of more than 8 Mty. In 2017, Polaris applied to the British Columbia Environmental Assessment Office for an amendment to its Orca project certificate to allow for producing aggregate at a site approximately 4 km from

current operations. The new site was previously known as the **Black Bear** project. In 2020, Polaris revised the proposal to 3-4 Mty, then withdrew from the environmental assessment process with the stated intention of re-applying under new legislation.

The **Cox Station** quarry, on the north side of Sumas Mountain, is operated by Mainland Sand and Gravel Ltd. More than 95% of the crushed quartz diorite product goes to the Lower Mainland market via barge on the Fraser River. The quarry also has two CN Rail spur lines, which allow shipment by rail. Production and shipments have recently been about 2-4 Mty.

Small operations produce building stone on Vancouver Island. Island Stone Landscape Supply is a producer and supplier of flagstone, as is San Juan Quarries. Vancouver Island Marble Quarries Ltd. continues to quarry marble on Vancouver Island and fabricate a line of products including countertops, sinks, and tiles at Matrix Marble and Stone Inc. They quarry marbles referred to as ‘Tlupana Blue Grey’ and ‘Vancouver Island White’ near Hisnit Inlet (**CTCT** quarry). In addition to the original Port Renfrew Ocean Pearl stone, K2 Stone Quarries Inc. quarries and processes other Vancouver Island products.

Landscaping stone and dimension stone is quarried in the Squamish-Whistler corridor. The largest operator is Northwest Landscape and Stone Supply Ltd., with the **Spumoni** quarry and their **Cabin Group** property, which now has a Mines Act quarry permit. Others active in the area include Bedrock Granite Sales Ltd., Citadel Stone Ltd., and Alpine Mining Ltd.

Hardy Island Granite Quarries Ltd. produces up to 5000 tpy seasonally from a Coast Plutonic complex granodiorite unit. Like Haddington Island, it is an historic quarry that mainly serves the local market. Hardy Island has opened another quarry on Valdes Island that supplies sandstone from the Nanaimo Group, another rock type common to many older buildings in Vancouver and Victoria.

### 3.3.1. Bute Inlet (Ironwood Clay Company Inc.)

Ironwood Clay Company Inc. mines glacial marine clay on the

central coast. Until 2015, production was from the **De Cosmos Lagoon** south of Bella Bella (Fig. 1). The company has a site at the head of **Bute Inlet**, which is mined intermittently. Ironwood manufactures cosmetic products using the clay at its Richmond plant, a business that has continued for 30 years. Glacial Bay Organic Clay Inc. has also extracted material by hand near the head of Bute Inlet. Other individuals and companies supply the cosmetic clay market at smaller scales from locations on the central coast (**Kisameet Bay**) and Vancouver Island. Generally, Mines Act permits are not required where material is collected by hand, and these glacial marine clay operations are unreported.

### 3.3.2. Imperial Limestone (Imperial Limestone Co.)

The **Imperial Limestone** quarry near Van Anda on Texada Island (Figs. 1, 3) expects to produce about 500,000 tonnes of mostly chemical grade limestone in 2023. A 99%  $\text{CaCO}_3$  product is shipped to their parent company, Arcosa Specialty Materials Inc. in Seattle. About 50,000 t of dolostone is shipped to Ash Grove Cement Company in Portland. Imperial Limestone Co. also stockpiles limestone that meets specifications for cement, though they do not currently have customers. Quarrying at the Imperial site dates to the 1930s. The company anticipates reserves will last about 75 years.

### 3.3.3. K2 Ocean Pearl (K2 Stone Quarries Inc.)

K2 Stone is a natural stone product supplier with a quarry near Port Renfrew on Vancouver Island (**K2**). They extract 15,000-20,000 t annually. The rock is trucked to Nanaimo for processing into masonry and landscaping products. The company has additional sources near Nanaimo and Courtenay, producing sandstone and a salt-and-pepper granite (granodiorite).

### 3.3.4. Mount Meager Pumice (Great Pacific Pumice Inc.)

Great Pacific Pumice Inc. produces smaller quantities of pumice than its neighbouring quarry (Vulcan/Salal) but has stockpiles in Squamish from which they can ship year-round.



Fig. 3. Imperial Limestone quarry on Texada Island (Imperial Limestone Co.).

The pumice is dacitic ejecta of the Pliocene to recent Mount Meager volcanic complex.

### 3.3.5. Sumas Shale (Sumas Shale Ltd.)

The **Sumas Shale** quarry of Sumas Shale Ltd., operated by contractor Fraser Pacific Enterprises Inc., delivers sandstone and shale product to the Lafarge and Heidelberg Materials cement plants in Richmond and Ash Grove in Seattle. Production and shipments have been approximately 500,000 tpy or more in recent years. Mining plans include an average 475,000 tpy of approximately 55% shale and 45% sandstone. Because Clayburn's brick and refractory products plant in Abbotsford closed, fire clay is no longer produced separately.

### 3.3.6. Texada Quarry (Texada Quarrying Ltd.)

The largest limestone quarry on the coast is the **Texada Quarry** operation near Gillies Bay (Figs. 1, 4). Texada Quarrying Ltd. is a subsidiary of Lafarge Canada Inc. The quarry also produces aggregate, mainly from quartz monzonite to gabbro dikes and sills, which would otherwise be waste rock. The site also hosts a white carbonate quarry, one of only a few sources on the coast. The quarry, which has operated for more than 60 years, has extensive reserves and, at current rates of 3.5 to 6 Mt annually, could produce for more than 100 years.

### 3.3.7. Vulcan/Salal Quarry

Garibaldi Pumice Ltd. produces 15,000-20,000 m<sup>3</sup> of pumice annually from their quarry (**Vulcan/Salal**). Like the neighbouring Mount Meager quarry, the product is Pliocene to recent dacitic volcanic ejecta of the Mount Meager volcanic complex.

## 4. Placer gold

Historic placer camps include the Lower Fraser River, Leech River, and China Creek. Although short lived, a gold rush in the Fraser Canyon, which began in 1858 at Hills Bar, led miners farther up the Fraser River into the Chilcotin and Cariboo; the Lillooet River camp was also on an historic route to the Cariboo. Both camps continue to be worked. In 1864, reports of gold in the Leech River on southern Vancouver Island led to another brief gold rush; it too remains an active placer camp.

## 5. Mine development

Mine development projects are those for which a decision to

produce has been made, key government approvals are in place, and on-site construction has begun. The Southwest Region has no such large-scale projects.

## 6. Proposed mines

Proposed mines are feasibility-stage projects for which proponents have begun the environmental certification process (in the case of large projects) or have submitted applications for Mines Act permits (in the case of projects below British Columbia Environmental Assessment Act thresholds) or are waiting for existing permit amendments. Projects that have permits in place but have yet to obtain financing to begin site construction are also considered to be at the proposed stage. The Southwest Region had three such projects in 2023 (Table 3); several small-scale and inactive larger projects are not covered in this report.

### 6.1. Proposed metal mines

The Southwest Region had no proposed major metal mine projects active in 2023.

### 6.2. Proposed coal mines

The region has no active proposed coal mine projects.

### 6.3. Selected proposed industrial minerals mines

Proposed mines include the **BURNCO Aggregate** project and the **Sechelt Carbonate** project, which has been inactive apart from a request by the owner to remain in the provincial environmental assessment process. The **Black Bear** aggregate project near Port McNeill was the subject of an application to amend the Orca Environmental Certificate. The application was withdrawn with a request for review under new legislation.

#### 6.3.1. Black Bear (Polaris Materials Corporation)

Polaris Materials Corporation included the **Black Bear** project near its **Orca** sand and gravel quarry in an Environmental Certificate amendment for Orca. If the project proceeds, it will be a source of up to 3-4 Mty of crushed basalt, an increase over the 250,000 tpy proposed in a 2017 project description. Mine life would be extended from 10 to 20 years. This application was withdrawn with a request by the proponent to re-apply under the 2018 Environmental Assessment Act. A 2022 engagement plan between the Province of British Columbia and the Kwakiutl First Nation describes the nature of the Nation's participation



Fig. 4. Texada Quarry on Texada Island (Lafarge Canada Inc.).

in the Environmental Assessment Office's amendment process. Polaris submitted an engagement plan detailing their proposed engagement activities for the Orca quarry with the Kwakiutl First Nation.

### 6.3.2. BURNCO Aggregate (BURNCO Rock Products Ltd.)

The **BURNCO Aggregate** project in the McNab Creek Valley (Fig. 1) received environmental certification in 2018. Fisheries and Oceans Canada also concluded that the project is unlikely to cause significant environmental harm. The environmental certificate expired in 2023. The proposed sand and gravel mine would ramp up to a 1.6 Mtpy operation, initially barging product to BURNCO Rock Products Ltd.'s ready-mix concrete plants in South Burnaby and Port Kells.

### 6.3.3. Sechelt Carbonate (Ballinteer Management Inc.)

Ballinteer Management Inc. now holds the property comprising the **Sechelt Carbonate** project. They filed engineering, archeological, and baseline environmental studies for assessment in 2016; activity was not reported for 2017-22, other than maintenance of tenures. The property contains resources of calcite- and dolomite-bearing carbonate rock and gabbroic rock for potential use as aggregate. The original proposal was for a 4-6 tpy carbonate quarry producing both limestone and dolostone. Product was to be shipped from a barge load out on Sechelt Inlet.

## 7. Selected exploration activities and highlights

Exploration projects are categorized as grassroots, early stage, advanced, and mine evaluation, depending upon the nature of recent work. Work directed at discovering new resources away from ore bodies in an existing mine plan can be considered mine-lease or on-site exploration. The Southwest Region had few large exploration programs in 2023 (Table 4), however, it has several small programs.

### 7.1. Selected precious metal projects

This section includes projects for which precious metals are the main commodities sought.

#### 7.1.1. Harrison Gold (Bear Mountain Gold Mines Ltd.)

Bear Mountain Gold Mines Ltd. continued underground rehabilitation at **Harrison Gold** and conducted laser-based ore sorting tests that were based on quartz content. Gold mineralization occurs in narrow (1-30 cm) quartz+pyrrhotite veins in unmineralized quartz diorite (Fig. 5) and tests indicate it is amenable to sorting. The company is considering the possibility of accessing underground targets with minimal disruption to nearby communities. An historical (1989, restated 2002) resource estimate has 1.845 Mt grading 2.79 g/t Au in the indicated category and 0.6 Mt grading 2.8 g/t Au in the inferred category. Bear Mountain has made the site available to post-secondary institutions for educational purposes. Bear Mountain has an option to acquire 100% of the property from Omineca Mining and Metals Ltd.



Fig. 5. Gold-bearing quartz-pyrrhotite veins in quartz diorite at Harrison Gold (Bear Mountain Gold Mines Ltd.).

#### 7.1.2. Mineral Creek (Theia Gold Corp.)

Theia Gold Corp. conducted a drill program at **Mineral Creek**, following geochemical surveys and geophysics. Theia is currently a private company and has not reported details. Karus Gold Corp. announced a binding letter of intent to acquire Theia in a reverse takeover of Karus by Theia. Mineral Creek is an orogenic-type gold vein prospect hosted by Sicker Group volcanic rocks (Paleozoic).

## 7.2. Selected precious and base metal projects

This category includes projects for which precious metals represent the primary target commodities, with base metals as significant potential co- or by-products.

#### 7.2.1. Empire Mine (Coast Copper Corp.)

Coast Copper Corp. reported an updated resource estimate, identified four exploration targets a new showing to the south of the resource area. The 2023 Inferred resource estimate has 594,000 t grading 3.52 g/t Au and 0.50% Cu at a \$30 net smelter return cut off. The deposits are Cu-Fe skarns in Vancouver Group and lower Bonanza Group rocks intruded by diorite to gabbro of the Island Plutonic suite. Coast Copper has an option to acquire 100% interest in the central part of the property from Mirva Properties Ltd.

#### 7.2.2. New Sunro Copper (New Sunro Copper Ltd.)

The company mapped and prospected on its **New Sunro Copper** (a.k.a. **Jordan River**) project. Eocene mineralization occurs in veins and lenticular bodies mainly in basalts at contacts with gabbro of the Metchosin Igneous Complex. The Sunro mine produced Ag, Au and Cu between 1962 and 1977.

## 7.3. Selected base and precious metal projects

Jurassic porphyry mineralization is a target on Vancouver Island. Southwestern British Columbia also has several advanced Eocene to Miocene porphyry copper targets. Base and precious metals targets can include other deposit types such as VMS and mafic-ultramafic hosted mineralization.

**Table 4.** Selected exploration projects, Southwest Region.

<b>Project</b>	<b>Operator (partner)</b>	<b>Commodity; Deposit type; MINFILE</b>	<b>Resource (NI 43-101 compliant unless indicated otherwise)</b>	<b>Comments</b>
<b>Bakar</b>	<b>Sherpa II Holdings Corp.</b> (District Metals Corp.)	Cu, Ag; Volcanic redbed Cu; 102I 010, 7, 6, 15, 16, 17, 092L 080, 462, 247	na	Airborne geophysics (continued from 2022).
<b>Castle Rock</b>	<b>Trailbreaker Resources Ltd.</b>	Au, Cu; Vein, possible porphyry; 092L 399, 398, 288	na	Soil and rock sampling, geological mapping.
<b>Ebb</b>	<b>Neotech Metals Corp.</b>	Cu, Ni, Co, Ag; Mafic-ultramafic; 092C 141, 222, 89	na	Prospecting, mapping rock and soil sampling, ground geophysics.
<b>Empire Mine</b>	<b>Coast Copper Corp.</b>	Au, Ag, Cu, Fe, Co; Fe skarn, Cu skarn; 092L 044, 45, 46	Inf: 594,000 t 3.52 g/t Au, 0.50% Cu	Updated resource estimate, identified new targets.
<b>Fire Mountain</b>	<b>Cascade Copper Corp.</b>	Cu, Au, Ag; Porphyry; 092GNE004, 3 2, 42	na	Porphyry mineralization identified, highlight sample 14.96 g/t Au, 1.58% Cu and 52 g/t Ag.
<b>Harrison Gold</b>	<b>Bear Mountain Gold Mines Ltd.</b>	Au, Ag; Au-quartz veins; 092HSW092	Historical 2002 I: 1.845 Mt 2.79 g/t Au  Inf: 0.6 Mt 2.8 g/t Au	Underground rehabilitation, ore sorting tests.
<b>Mineral Creek</b>	<b>Theia Gold Corp.</b>	Au, Ag; Au-quartz veins; 092F 079, 331	na	Induced polarization and drilling. Theia is a private company, proposed reverse takeover by Karus Gold Corp.
<b>Mount Sicker</b>	<b>Sasquatch Resources Corp.</b>	Cu, Au, Ag, Pb, Zn; Kuroko massive sulphide Cu-Pb-Zn; 092B 040, 76, 110, 1	na	Portable drilling with highlight interval of 7.55 m grading 5.4 g/t Au, 7.5% Cu, 125 g/t Ag and 5.9% Zn. Also evaluating historical waste and tailings. Ground-based gravity survey.
<b>New Sunro</b>	<b>New Sunro Copper Ltd.</b>	Cu, Au, Ag; Tholeiitic intrusion hosted; 092C 073	na	Geological mapping and prospecting.



Table 4. Continued.

<b>North Island</b>	<b>Northisle Copper and Gold Inc.</b>	Cu, Au, Mo, Re; Porphyry Cu±Mo±Au; 092L 185, 240, 200	I: 527,344,000 t 0.20% Cu, 0.24 g/t Au, 0.008% Mo, 0.31 ppm Re  Inf: 417,272,000 t 0.15% Cu, 0.18 g/t Au, 0.006% Mo, 0.29 ppm Re	Drilling (year-end estimate of more than 10,000 m, 24 holes) and ground magnetic survey. Highlight from Northwest Expo 130 m grading 1.65 g/t Au and 0.33% Cu. Resource estimate (2020) combines Hushamu and Red Dog.
<b>Okeover</b>	<b>Alpha Copper Corp.</b>	Cu, Mo; Porphyry Cu±Mo±Au; 092K 008, 57, 168	Inf: 86.8 Mt 0.31% Cu, 0.014% Mo	Mineralized intervals included 78.67 m 0.27% Cu 0.02 g/t Au, 1.00 g/t Ag, 82.8 ppm Mo, and 134.5 m 0.20% Cu, 0.01 g/t Au, 0.84 g/t Ag, 40.7 ppm Mo.
<b>Redonda</b>	<b>Stamper Oil &amp; Gas Corp.</b>	Cu, Mo; Porphyry Cu±Mo±Au; 092K 092, 183, 39, 2	na	Mobilized for drilling late in fall, completing 850 m in 5 holes.
<b>Rogers Creek</b>	<b>Cascade Copper Corp.</b>	Cu, Mo, Au, Ag; Porphyry Cu±Mo±Au; 092JSE033, 34, 35, 36	na	Permitting, reported results of lidar and orthophoto imaging surveys.
<b>Vent</b>	<b>Vital Battery Metals Inc.</b>	Cu, Mo; Porphyry Cu±Mo±Au; 092F 229, 482	na	Geological mapping, prospecting, soil survey, ground geophysics.

M = Measured; I = Indicated; Inf = Inferred

### 7.3.1. Bakar (District Metals Corp. 20%, Sherpa II Holdings Corp. 80%)

To date, the District Metals Corp.-Sherpa II Holdings Corp. joint venture has been unable to obtain a permit for proposed drilling at **Bakar**. Airborne VTEM, and magnetic surveys begun in late 2022 were processed and filed for assessment in 2023. Known mineralization includes Cu-Ag veins and volcanic-hosted redbed copper. Porphyry copper mineralization is also a target.

### 7.3.2. Castle Rock (Trailbreaker Resources Ltd.)

Trailbreaker reported soil sampling, rock sampling, and geological mapping at its **Castle Rock** property in 2023, following up on a gold-in-soil anomaly and a channel sample taken in 2022 at the Heart showing, a brecciated granodiorite dike with chalcopyrite and historic and recent gold assay values.

### 7.3.3. Ebb (Neotech Metals Corp.)

Neotech Metals (formerly Caravan Energy Corp.) reported prospecting, mapping, rock and soil sampling, and ground magnetic and VLF surveys at **Ebb**. The target is copper-

nickel-cobalt mineralization in mafic-ultramafic rocks of the Westcoast Crystalline complex. Neotech has an option to earn 100%. The owner is Geomap Exploration Inc.

### 7.3.4. Fire Mountain (Cascade Copper Corp.)

Cascade Copper reported reconnaissance work at its recently acquired **Fire Mountain** property. A recent discovery of porphyry mineralization and alteration returned values of 14.96 g/t Au, 1.58% Cu and 52 g/t Ag in quartz-magnetite-chalcopyrite-epidote veins. Most of the property is subject of an option agreement with vendor Torr Resources Corp.

### 7.3.5. Mount Sicker (Sasquatch Resources Corp.)

Sasquatch Resources Corp. reported results of portable drilling, including 7.55 m grading 5.4 g/t Au, 7.5% Cu, 125 g/t Ag and 5.9% Zn. A gravity survey was scheduled for November. The company is also investigating reprocessing waste rock and tailings from historic mining. **Mount Sicker** hosts several past-producing VMS deposits hosted by Sicker Group volcanic rocks (Paleozoic) and Mount Hall gabbro (Triassic).

### 7.3.6. North Island (Northisle Copper and Gold Inc.)

Northisle Copper and Gold Inc. reported drilling at the Northwest Expo, Goodspeed, and Pemberton Hills targets, with results including 130 m grading 1.65 g/t Au and 0.33% Cu at Northwest Expo and conducted a late 2023 round of drilling (year-end estimate of more than 10,000 m in 24 holes) and ground magnetic surveys at Northwest Expo and Goodspeed. Of more than seven Cu-Au-Mo±Re porphyry targets and deposits spanning approximately 40 km west-northwest of the past-producing Island Copper mine, two central deposits have resource estimates. Hushamu has an Indicated resource of 472.9 Mt grading 0.20% Cu, 0.23 g/t Au, 0.008% Mo, and 0.35 ppm Re plus a large Inferred resource. Red Dog has an Indicated resource of 54.5 Mt grading 0.22% Cu, 0.31 g/t Au, and 0.004% Mo.

### 7.3.7. Okeover (Alpha Copper Corp.)

Alpha Copper Corp. reported results from 2000 m of drilling done at the North Lake zone of the **Okeover** project in late 2022. Longer mineralized intersections included 78.67 m 0.27% Cu, 0.02 g/t Au, 1.00 g/t Ag, 82.8 ppm Mo, and 134.5 m 0.20% Cu, 0.01 g/t Au, 0.84 g/t Ag, and 40.7 ppm Mo. Alpha terminated its option agreement, but subsequently closed a new deal with Northwest Copper Corp. for 100% of the property in 2023. The North Lake zone is at the northern end of a north-northwest trending string of porphyry Cu-Mo targets related to younger intrusions in Cretaceous diorite-granodiorite of the Coast Plutonic complex.

### 7.3.8. Redonda (Stamper Oil & Gas Corp.)

**Redonda** is a porphyry copper-molybdenum occurrence at the western edge of the Coast Plutonic complex, a setting similar to **Okeover**. It has seen little exploration since Teck Corporation drilled it in 1979. Stamper has an option to acquire 100% of the property under a 2021 agreement with Homegold Resources Ltd. The company mobilized for drilling in the late fall, completing 850 m in 5 holes.

### 7.3.9. Rogers Creek (Cascade Copper Corp.)

Cascade Copper Corp. proposed drilling following a data compilation and review to refine targets. As of late 2023, their Notice of Work was in process. The company also reported results of lidar and orthophoto imaging surveys.

### 7.3.10. Vent (Vital Battery Metals Inc.)

Vital Battery Metals announced mapping, prospecting, soil sampling, and ground geophysical work at its **Vent** copper project, which has porphyry Cu-Mo showings. The company has an option to acquire up to 100% interest in the property from owner Geomap Exploration Inc.

## 8. Geological research

Canil and Morris (2023) presented new U-Pb zircon ages, rock geochemistry, and field observations in the Bonanza Arc of Vancouver Island, identifying three separate, distinct periods of

arc development from latest Triassic through middle Jurassic. Providing large-n U-Pb LA-ICP-MS zircon crystallization ages from pre-, syn- and post-kinematic intrusions, Wang et al. (2023) documented large-scale sinistral motion along the western flank of the Coast mountains from at least 114 to 101 Ma and suggested kinematic links between the Insular and Intermontane superterranes as early as 114 Ma.

Harris et al. (2023) presented <sup>40</sup>Ar/<sup>39</sup>Ar ages and chemical data to refine understanding of four separate episodes of mafic volcanism in the northern Garibaldi volcanic complex in the last 4500 years and Borch et al (2023) mapped the Cheakamus lavas north of the Garibaldi complex and presented geochemical, <sup>40</sup>Ar/<sup>39</sup>Ar, and paleomagnetic data, distinguishing three phases of continuous effusive eruption during the early stages of the Fraser glaciation while major drainages were ice free. Several studies related to the geothermal potential of the Mount Meager volcanic complex were published in the last year: Hanneson et al. (2023) developed an electrical resistivity model beneath Mount Meager using magnetotelluric data; Hormozzade et al. (2023) used resistivity modelling and other rock property data to determine the relationship between electrical resistivity and fluid flow in an active volcanic system; Chen et al. (2023) tested ground surface temperature monitoring as an exploration tool for geothermal resources; Chai et al. (2023) developed an in-situ stress model for the prospective geothermal resource area; and Muhammad et al. (2023) examined the structural geology of the complex with a view towards better understanding geohazards. Fischer et al. (2023) used spectral reflectance data to differentiate tourmaline subspecies at the Giant Copper deposit, testing tourmaline as a possible guide to mineralization.

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