

# 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).

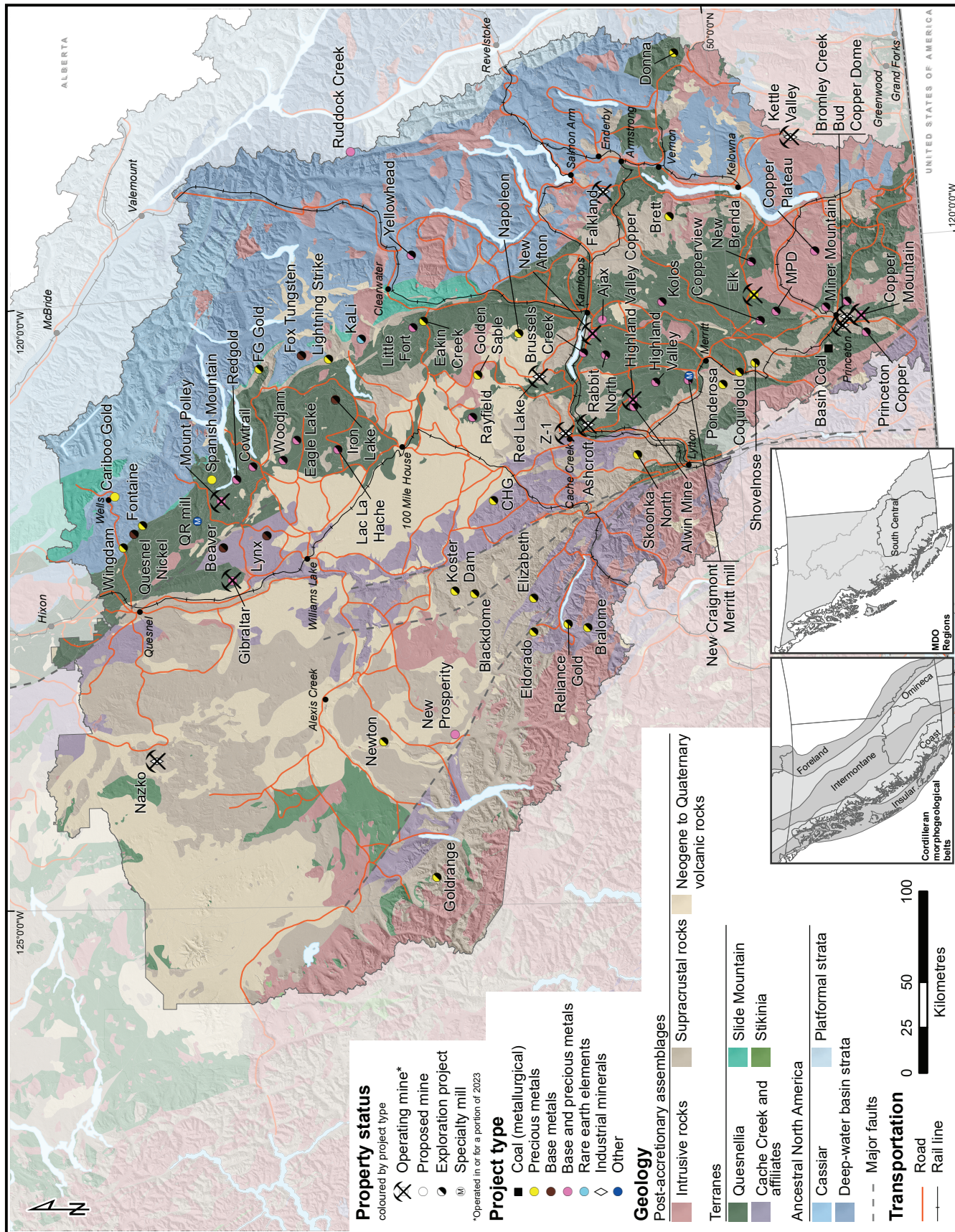


Fig. 1. Mines, proposed mines, and selected exploration projects, South Central Region, 2023. Terranes after Nelson et al. (2013).

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 T̄silhqot'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 T̓silhqot̓in 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	<p>Aurizon Inf: 1.99 Mt 2.32 g/t Au, 0.6% Cu, 5.37 g/t Ag</p> <p>Spout zone open pit I: 6.5 Mt 0.33% Cu, 1.34 g/t Ag, 0.05 g/t Au, 11.62% magnetite</p> <p>Inf: 7.66 Mt 0.27% Cu, 0.99 g/t Ag, 0.04 g/t Au, 9.5% magnetite</p> <p>Spout zone u/g Inf: 0.39 Mt 1.0% Cu, 2.58 g/t Ag, 0.13 g/t Au, 10.33% magnetite</p> <p>G1 u/g Inf: 1.71 Mt 1.25% Cu, 6.45 g/t Ag, 0.19 g/t Au, 30.94% magnetite</p>	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

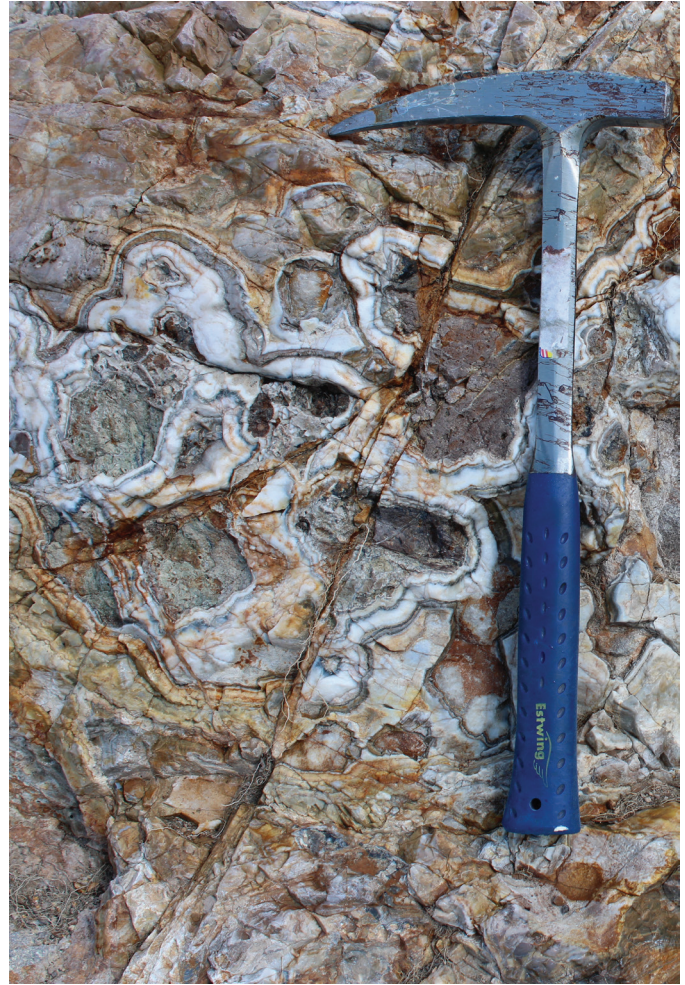


Fig. 4. Banded chalcidonic silica on breccia fragments at Franz zone, Shovelnose project (Westhaven Gold Corp.).

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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