

# Exploration and mining in the Southeast Region, British Columbia



Kirk Hancock<sup>1, a</sup>

<sup>1</sup> British Columbia Geological Survey, Ministry of Mining and Critical Minerals, Victoria, BC, V8W 9N3

<sup>a</sup> corresponding author: [Kirk.Hancock@gov.bc.ca](mailto:Kirk.Hancock@gov.bc.ca)

Recommended citation: Hancock, K., 2025. Exploration and mining in the Southeast Region, British Columbia. In: Provincial Overview of Exploration and Mining in British Columbia, 2024. British Columbia Ministry of Mining and Critical Minerals, British Columbia Geological Survey Information Circular 2025-01, pp. 145-156.

## 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. 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. In addition, the region saw exploration for metals on the 2024 iteration of the Canadian critical minerals list (NRCan, 2024) including lithium, niobium, rare earth elements (REE), and tantalum. The region hosts several industrial mineral mines and quarries, and placer mining continues. The Trail smelter (Teck Resources Ltd.) refines indium, germanium, and zinc (on the national critical minerals list), lead, and silver. 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 Mining and Critical Minerals, the Association for Mineral Exploration (AME), and EY LLP. For the Southeast Region, exploration expenditures are estimated at \$47.7 million. The estimate for exploration drilling is 96,800 m (Clarke et al., 2025; EY LLP, 2025).

## 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 2024.

### 3.2. Coal mines

Coal remains British Columbia's most valuable mined commodity, typically accounting for more than 50% of the mining revenue for the province. In the Southeast Region, Elk Valley Resources (Glencore Canada Corporation) 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 two main shipping terminals on the west coast (Westshore and Neptune). Total annual production from the mines in the Southeast Region for 2024 is estimated to be 24 Mt of metallurgical coal. Production for Q3 was 5.7 Mt with nine-month sales (2024) of 18 Mt. In 2023, major news for 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\$7.3 billion. The deal closed in July 2024. Terms of the sale include assurances that Glencore plc will continue operations and retain staff and subcontractors in southeast British Columbia.

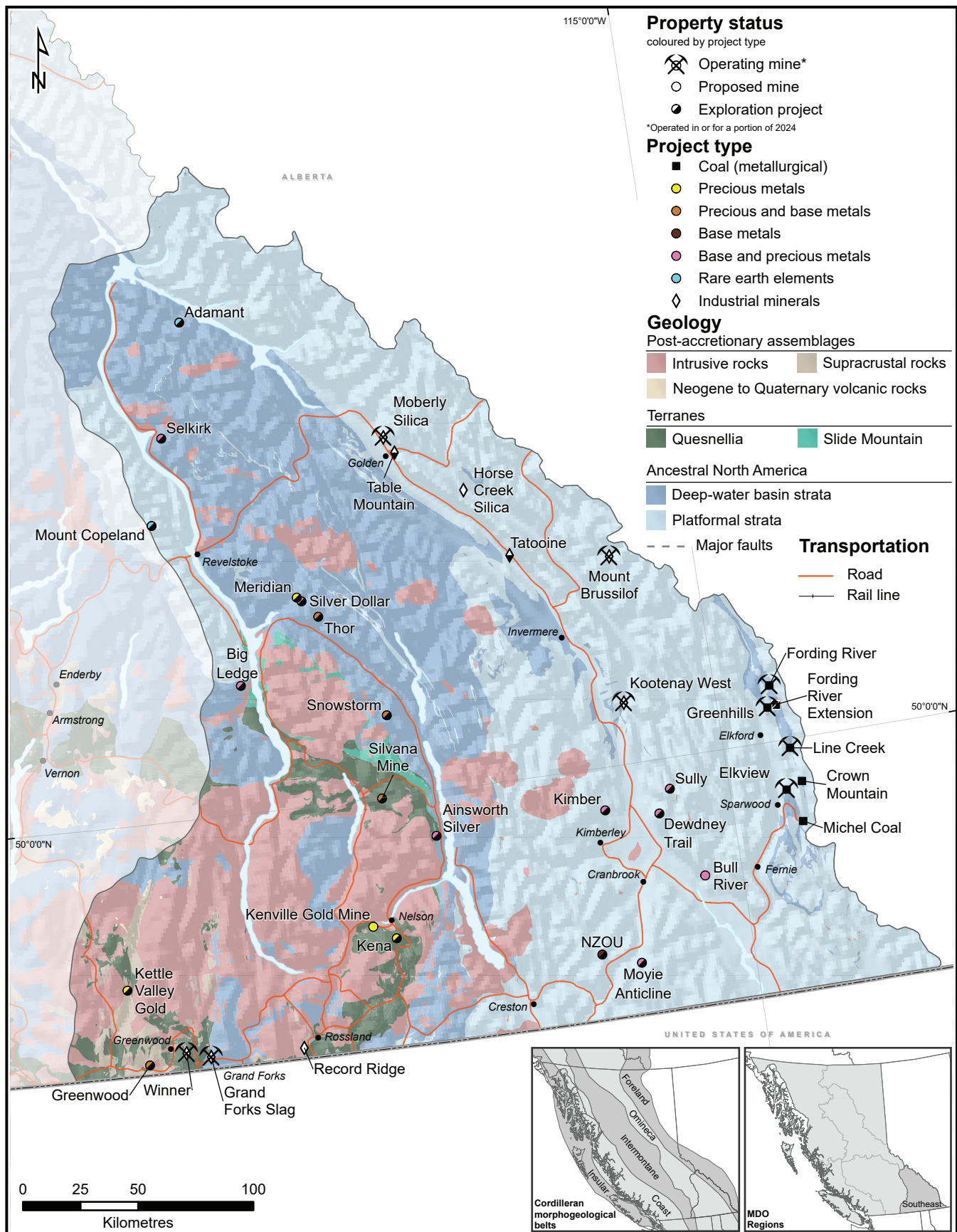


Fig. 1. Mines and selected exploration projects, Southeast Region, 2023. Terranes after Nelson et al. (2013).



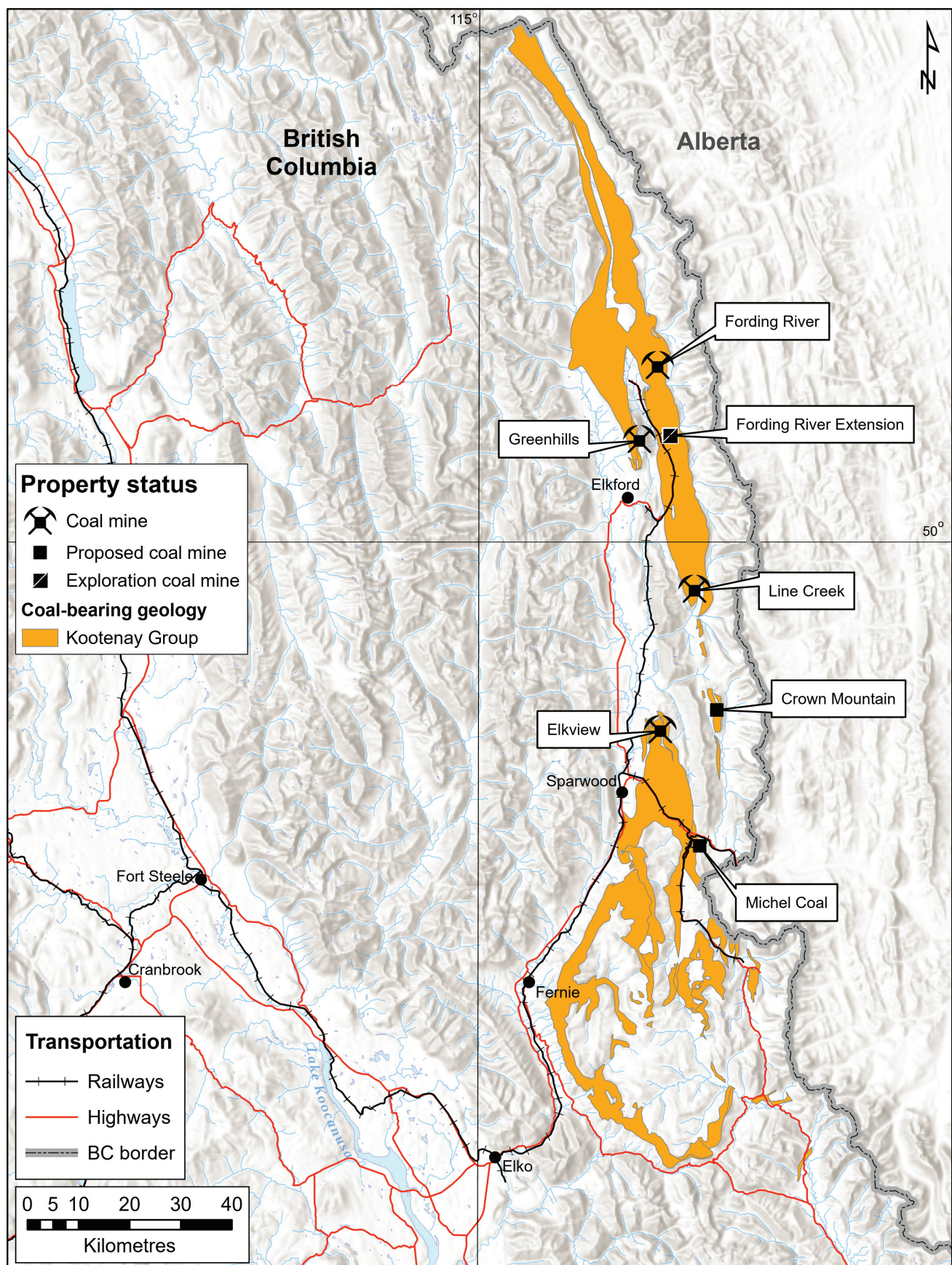


Fig. 2. Map of the Kootenay Group and East Kootenay coalfields, including the major coal mines and projects in southeastern British Columbia.

**Table 1.** Coal mines, Southeast Region.

Mine	Operator (partner)	Commodity; Deposit type; MINFILE	Forecast 2024 Production (based on Q1-Q3)	Reserves	Resources	Comments
<b>Elkview</b>	<b>Glencore/ Elk Valley Resources</b> 77%, Nippon Steel Corporation 20%, POSCO 3%)	HCC; Bituminous coal; 082GNE016, 17	na	na	na	Elk Valley Resources estimates a remaining reserve life of approximately 27 years at the current production rate.
<b>Fording River</b>	<b>Glencore/ Elk Valley Resources</b>	HCC; Bituminous coal; 082JSE012	na	na	na	Proven and Probable reserves sufficient for 26 years mine life; increase to 46 years including the Fording River Extension project.
<b>Greenhills</b>	<b>Glencore/ Elk Valley Resources</b> 97%, POSCO 3%	HCC; Bituminous coal; 082JSE007, 10	na	na	na	Proven and Probable reserves are projected to support another 44 years of mining at planned production rates.
<b>Line Creek</b>	<b>Glencore/ Elk Valley Resources</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 12 years.
<b>All mines</b>			26 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

### 3.2.1. Elkview (Glencore Canada Corporation/Elk Valley Resources 77%, Nippon Steel Corporation 20%, POSCO 3%)

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 27 years.

### 3.2.2. Fording River (Glencore Canada Corporation/Elk Valley Resources)

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 2024, production continued from the Eagle Mountain and Swift pits. The focus for development and drilling in 2024 was the **Fording River Extension (FRX)** project. This summer, the company completed a helicopter supported drill program at FRX. 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 45-year life.

### 3.2.3. Greenhills (Glencore Canada Corporation/Elk Valley Resources 97%, POSCO Canada Limited ('POSCAN') 3%)

The **Greenhills** mine consists of 11,800 ha of coal lands and produces mainly metallurgical coal and minor thermal coal. 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 44 years of mining.

### 3.2.4. Line Creek (Glencore Canada Corporation/Elk Valley Resources)

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 12 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 to large international corporations.



**Table 2.** Selected industrial mineral mines, Southeast Region.

Mine	Operator	Commodity; Deposit type; MINFILE	Forecast 2024 Production (based on Q1-Q3)	Reserves	Resources	Comments
<b>Grand Forks Slag</b>	<b>Pacific Abrasives and Supply Inc.</b>	Slag, tailings; 082ESE264	na	na	na	Seasonal operation.
<b>Kootenay West</b>	<b>CertainTeed Gypsum Inc.</b>	Gypsum; Bedded gypsum; 082JSW005, 20	240,000 t	North and South quarries: Total 17 Mt (blended quality of 83% gypsum)	na	240,000 t produced 2024, increasing to designed 400,000 tpy; 43-year mine life. Elkhorn quarry shipped 140,000 t low-grade material to Lafarge for cement production.
<b>Moberly Silica</b>	<b>Vitreo Minerals Ltd.</b>	Silica; Industrial silica; 082N 001	~60 kt product on contract for sales through 2024	na	na	~140 kt of stockpiled material on site from 2019 mining operations. No mining in 2024. Geological mapping beyond developed quarry.
<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. Geologic mapping.
<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

### 3.3.1. 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. The company recovers about 100,000 tpy of slag, crushes and washes the product then delivers it to Pacific Abrasives and Supply Inc. for further processing and sales.

### 3.3.2. Kootenay West (CertainTeed Gypsum Canada Inc.)

The company began mining from its new **Kootenay West** quarry in 2023 with 240,000 t produced this year and is progressing to the designed 400,000 tpy capacity and a 42-year mine life. The company produced 140,000 t of low-grade gypsum from its old Elkhorn quarry and shipped to Lafarge for cement production and will continue through 2025. The deposit is in evaporites of the Burnais Formation (Devonian) in a section 20-25 m thick grading 75-95% gypsum.

### 3.3.3. 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 and continued sales in 2024. 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). The company completed a small geological mapping project beyond the developed quarry.

### 3.3.4. 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. The company completed a geological program, restricted due to wildfires.

### 3.3.5. Winner (Roxul West Inc.)

Gabbro, referred to locally as the "Old Diorite", is quarried from the **Winner** site, crushed and then trucked to Roxul West

Inc.'s Grand Forks plant for processing into mineral wool insulation. The company mines periodically draws from the in-pit stockpile and processes material to manufacture "Roxul" brand mineral wool insulation for residential and commercial markets.

#### 4. Placer operations

Placer mines have operated in southeastern British Columbia since the gold rush of the 1860s. Although activities were not tracked in 2024, 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. In 2024, no mines or quarries were under development in the Southeast Region.

#### 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 one proposed metal mine (**Bull River**), two proposed industrial mineral mines (**Horse Creek Silica**, **Record Ridge**), and two proposed coal mines (**Crown Mountain**, **Michel Coal**) (Fig. 2; Table 3).

##### 6.1. Proposed metal mines

The Southeast Region has two proposed metal mines (**Bull River**, **Kenville Gold Mine**), two proposed industrial mineral mines (**Horse Creek Silica**, **Record Ridge**), and two proposed coal mines (**Crown Mountain**, **Michel Coal**).

##### 6.1.1. Bull River (Canadian Critical Minerals Inc.)

Canadian Critical Minerals Inc. is continuing development of its **Bull River** mine project. The company has had its current mine exploration permit amended to allow shipping of development rock for processing at the New Afton mill of New Gold Inc. near Kamloops. Canadian Critical Minerals Inc. has pre-processed the material through an X-ray ore sorter to provide grade improvement. The company has been shipping the selected material since January. It is expected that the 180 kt stockpile of material will be processed and shipped by year end. About US\$910,000 has been paid to the company from processed material, reported as of October 2024. Typical ROM grade material is reported at 1.39% Cu, 0.29 g/t Au,

and 11 g/t Ag with shipped upgraded ore grade reported at 3.53% Cu, 0.60 g/t Au, and 27.58 g/t Ag. The final mine permit and environmental permit processes are ongoing.

##### 6.1.2. Kenville Gold Mine (Ximen Mining Corp.)

Ximen Mining Corp. received its permit for work onsite at 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. Ximen is working towards completing all engineering and environmental requirements before underground mine construction can start.

#### 6.2. Proposed coal mines

Two coal mine proposals are currently in the Environmental Review process. NWP Coal Canada Ltd.'s **Crown Mountain** and North Coal Canada Ltd.'s **Michel Coal** mine projects.

##### 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 2023. The proposed mine has a production capacity of 3.7 Mty for a life of 16 years.

##### 6.2.2. Michel Coal (North Coal Limited)

The **Michel Coal** project proposed by North Coal Limited has been in the Pre-Application phase since 2015 with the Environmental Assessment Office. The company has proposed a mine with a production capacity of 2.3-4 Mty and a mine life of 30 years. Public engagement and the application process are ongoing.

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

Two industrial mineral mine proposals **Horse Creek Silica** and **Record Ridge** are currently in the Environmental Review process.

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

At the **Horse Creek Silica** mine, Sinova Global is redeveloping a seasonal quarry in Mount Wilson orthoquartzites. In 2024, the company withdrew its permit application for the purpose of making changes to the application. 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.

##### 6.3.2. Record Ridge (West High Yield/W.H.Y. 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.

**Table 3.** Selected proposed mines, Southeast Region.

<b>Project</b>	<b>Operator (partner)</b>	<b>Commodity; Deposit type; MINFILE</b>	<b>Reserves</b>	<b>Resources</b>	<b>Comments</b>
<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. Shipped selected stockpiled material that was upgraded using an X-ray ore sorter and recovered ~US\$910,000 (to October 2024). Permitting ongoing.
<b>Crown Mountain</b>	<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>Kenville Gold Mine</b>	<b>Ximen Mining Corp.</b>	Au; Au-quartz veins; 082FSW086	na	na	Installation of battery electric storage unit for site power, surface works. Working towards completing all engineering and environmental requirements before the underground mine construction can start.
<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 Mtpy for 23 years.
<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> ). Planned up to 400,000 tpy. Permit application withdrawn to make changes.
<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, continued Mines Act permit application, revised production to 75,000 t or less to avoid triggering full EAO review.

HCC = hard coking coal; PCI = pulverized coal injection; TC = thermal coal;  
P = Proven; Pr = Probable; M = Measured; I = Indicated; Inf = Inferred

The company has revised its proposed production target to less than 75,000 tpy. The company is proceeding with a revised application for a Mines Act permit with the British Columbia Mines Development Review Committee. The company has a Cooperation Agreement with the Osoyoos First Nations Band.

### 7. Selected exploration activities and highlights

In 2024, numerous precious metal, polymetallic base and precious metal, and industrial mineral projects were active in the Southeast Region (Table 4).

**Table 4.** Selected exploration projects, Southeast Region.

<b>Project/Property</b>	<b>Operator (partner)</b>	<b>Commodity; Deposit type; MINFILE</b>	<b>Resources (NI 43- 101 operator compliant unless indicated otherwise)</b>	<b>Comments</b>
<b>Adamant</b>	<b>Eagle Plains Resources Ltd.</b>	Rare earth elements; Nepheline syenite; 082M 173		Geological mapping, prospecting, sampling, 23 rock and 2 stream-silt. Scintillometer survey. Multi-year exploration permit received.
<b>Ainsworth Silver</b>	<b>Goldcliff Resource Corporation</b>	Ag, Pb, Zn ±Au; Polymetallic veins, Polymetallic manto; 082FNE025		Geological mapping, rock and soil sampling, ground geophysics (VLF).
<b>Big Ledge</b>	<b>Stuhini Exploration Ltd.</b>	Ag, Pb, Zn, Cu; Sedimentary exhalative Zn- Pb-Ag; 082LSE012	108 Mt 4% Zn (1980 historical non 43-101)	Geological mapping, prospecting, and soil sampling.
<b>Dewdney Trail</b>	<b>PJX Resources Inc.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn- Pb-Ag; 082GNW094		Diamond drilling (16 holes, 5100 m) intersected semi-massive to massive sulphide layers (3-30 cm thick).
<b>Greenwood</b>	<b>Grizzly Discoveries Inc.</b>	Cu; Cu skarn; 082ESE034		Acquired Motherlode Crown grants (Motherlode, Sunset, Sunrise, and Greyhound mines).
<b>Kena</b>	<b>West Mining Corp.</b>	Ag, Au, Pb, Zn, Cu; Polymetallic veins Ag-Pb- Zn ±Au; 082FSW237	I: 32 kt 0.544 g/t Au  Inf: 177 kt 0.468 g/t Au (2021)	Resampling of drill core in preparation for new mineral resource estimate.
<b>Kettle Valley Gold</b>	<b>Goldcliff Resource Corporation</b>	Au; Au-quartz veins		Drill trail extension, two pads for future drilling.
<b>Kimber</b>	<b>Double Deuce Exploration Corp.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn- Pb-Ag; 082GNW100		UAV geophysics, geological mapping, hand trenching, and sampling.
<b>Meridian</b>	<b>New Gold Inc.</b>	Ag; Polymetallic veins Ag-Pb- Zn ±Au; 082KNW064		Diamond drilling (5 holes, 1431 m), rock sampling, lidar.
<b>Mount Copeland</b>	<b>Volt Carbon Technologies Inc.</b>	Rare earth elements; Pegmatite; 082M 002		Twenty-two rock samples collected. Best samples: 2340 ppm Nb and 2.5% Mo; 2050 ppm Ce; 1925 ppm Ce.
<b>Moyie Anticline</b>	<b>Kootenay Resources Inc.</b>	Pb, Zn, Ag; Sedimentary exhalative Zn- Pb-Ag; 082GSW092		Helicopter ZTEM geophysical over the property, 16,500 ha.
<b>NZOU</b>	<b>DLP Resources Inc.</b>	Zn, Pb, Ag; Sedimentary exhalative Zn- Pb-Ag		Diamond drilling, re-entered 2023 hole 441 m.
<b>Selkirk</b>	<b>Rokmaster Resources Corp.</b>	Pb, Zn, Cu, Ag; Besshi massive sulphide Cu-Zn; 082M 089		Geological mapping, prospecting, rock, and soil sampling. Applied for drill permit on Keystone and Downie parcels.



Table 4. Continued.

<b>Silvana Mine</b>	<b>Klondike Silver Corp.</b>	Ag, Pb, Zn; Polymetallic veins Ag-Pb-Zn $\pm$ Au; 082FNW050		Underground drilling (2 holes).
<b>Silver Dollar</b>	<b>Forty Pillars Mining Corp.</b>	Au, Ag, Zn, Pb; Polymetallic veins Ag-Pb-Zn $\pm$ Au; 082KNW041		Prospecting, sampling.
<b>Snowstorm</b>	<b>Eagle Plains Resources Ltd.</b>	Polymetallic veins Ag-Pb-Zn $\pm$ Au; 082KSW086		Geological mapping, prospecting, sampling.
<b>Sully</b>	<b>Coast Copper Corp.</b>	Polymetallic veins Ag-Pb-Zn $\pm$ Au; 082GNW057		Reconnaissance sampling, 11 rock, 22 stream, 27 soil, 2 moss mat.
<b>Table Mountain</b>	<b>Troy Minerals Inc.</b>	Silica; Silica sandstone; 082N 099		Geological mapping, sampling.
<b>Tatooine Silica</b>	<b>Homerun Resources Inc.</b>	Silica; Silica sandstone; 082KNE012		Sample sent to UC Davis for research.
<b>Thor</b>	<b>Taranis Resources Inc.</b>	Base metals; Polymetallic manto Ag-Pb-Zn; 082KNW030	I (total): 1139 kt 0.75 g/t Au, 152 g/t Ag, 1.9% Pb, 3.1% Zn  Inf (total): 599 kt 0.66 g/t Au, 117 g/t Ag, 1.6% Pb, 3.3% Zn (2024)	Diamond drilling (14 holes, 4243 m). New mineral resource estimate.

M = Measured; I = Indicated; Inf = Inferred

## 7.1. Selected precious metal projects

This section includes projects for which precious metals are the main commodities sought.

### 7.1.1. Kettle Valley Gold (Goldcliff Resource Corporation)

The company continued development of its **Kettle Valley Gold** project, extended a drill trail and establishing two drill pads for planned 2025 drilling. The target is gold mineralization in quartz-carbonate altered Eocene rhyolitic volcanic rocks of the Marron Formation.

### 7.1.2. Meridian (New Gold Inc.)

The company completed drilling (5 holes, 1400 m) this fall on its **Meridian** project. Rock sampling and lidar surveying was also done on the property. Targets are gold-bearing quartz veins that strike northwest in metasedimentary rocks of the Broadview Formation (lower Paleozoic, Lardeau Group).

## 7.2. Selected precious and base metal projects

### 7.2.1. Ainsworth Silver (Goldcliff Resource Corporation)

The company returned to work on its **Ainsworth Silver** project, site of the No. 1 Mine, a former producer of silver, lead, and zinc mined from the 'No. 1 Limestone'. Mineralization is in polymetallic veins and carbonate mantos within the Mississippian-Pennsylvanian Milford Group metasedimentary package. Work included geological mapping, prospecting, rock and soil sampling, and ground geophysics.

### 7.2.2. Big Ledge (Stuhini Exploration Ltd.)

Stuhini exploration crews conducted geological mapping, prospecting, and soil sampling at its **Big Ledge** project, focusing on a 2-km section east of Pingston Creek. A zinc soil anomaly is coincident with historic IP geophysics and stretches across the explored area. The project is road accessible and extends across 5093 ha. Mineralization consists of sphalerite, pyrite, pyrrhotite, galena, with lesser chalcopyrite and marcasite in a

folded assemblage of marble and quartzite known as the ‘Ledge Unit’ in the Shuswap metamorphic complex of the Monashee Group (Proterozoic).

### 7.2.3. Greenwood (Grizzly Discoveries Inc.)

The company has acquired the full rights of the Motherlode Crown grants that hold the historic Motherlode, Sunset, Sunrise, and Greyhound mines in the **Greenwood** area. The company has drill permits for the Motherlode area and is awaiting drilling permits for its Robocop project.

### 7.2.4. Kena (West Mining Corp.)

The company is doing extensive core resampling at the **Kena** project Kena and Daylight properties. Resampling results will be integrated and re-evaluated in a proposed new mineral resource estimate.

### 7.2.5. Selkirk (Rokmaster Resources Corp.)

The Company conducted prospecting, rock sampling, and soil sampling in the fall of 2024 on the Keystone and Rift parcels of the **Selkirk** project to follow up on previous programs. Replacement and vein-hosted sphalerite and galena mineralization are present throughout the parcels in deformed dolostone of the Index Formation. Best samples from new showings at Keystone yielded 657 g/t Ag, 14.61% Pb, and 11.46% Zn and 459 g/t Ag, 28.10% Pb, and 4.38% Zn. The company has applied for drilling permits.

### 7.2.6. Silvana Mine (Klondike Silver Corp.)

The company deepened two underground holes that had been drilled part of the distance to the ‘Carnation hanging wall’ and ‘Footwall lodes’ at the past-producing **Silvana** mine. Silver-lead-zinc mineralization is in a structurally bound carbonate-quartz breccia in interbedded black argillite and quartzite of the Slocan Group.

### 7.2.7. Silver Dollar (Forty Pillars Mining Corp.)

The company retained Coast Mountain Geological Ltd. to do exploration work on the **Silver Dollar** property. Targets are gold-bearing quartz veins that strike northwest in metasedimentary rocks of the Broadview Formation (lower Paleozoic, Lardeau Group). Two veins, the Mohawk and Fresno, cut the metasedimentary rocks and contain galena, sphalerite and pyrite.

### 7.2.8. Snowstorm (Eagle Plains Resources Ltd.)

The company contracted TerraLogic Exploration Inc. to map and prospect on the **Snowstorm** property. Mineralization comprises polymetallic quartz-calcite veins with gold-silver-lead-zinc mineralization.

### 7.2.9. Sully (Coast Copper Corp.)

The company completed reconnaissance sampling at the **Sully** property for its base and precious metal potential. A

total of 11 rock, 22 stream, 27 soil, and 2 moss matt samples were collected over the course of a 5-day program. Soil sample SU2024S-005 yielded 4.23 ppm Ag, 460.5 ppm Cu, 1138.6 ppm Pb, and 456 ppm Zn. Rock sample Su2024R03 yielded 0.94 g/t Au, 118 g/t Ag, 1.93% Cu, and 0.19% Zn, and SU2024R04 yielded 1.81 g/t Au, 295 g/t Ag, 4.29% Cu, and 0.38% Zn. Samples from near the Jolly Molly (082GNW057) occurrence had elevated copper, molybdenum, and tungsten near a mapped intrusion.

### 7.2.10. Thor (Taranis Resources Inc.)

The company continued drilling at **Thor**, which was delayed due to a large wildfire across the property. The company is targeting deep mineralization below the Thor zone and adjacent to the former Broadview mine area, focusing on MT geophysical targets. Ten holes were completed on the Thor zone of which one was lost in bad ground and two holes were short to confirm unexpected mineralization in a previous program. Seven deep holes were completed to test below known epithermal mineralization. Total length completed was 3860 m with approximately 865 samples of various types. Three short holes with a total of 274 m were drilled at the nearby, little explored Horton Road zone. Finally, a single 109-m drill hole was completed in the Great Northern mine area. Other work this summer included ground VLF and ground magnetometer surveys, soil sampling, and boulder sampling in the Horton Road area. The company reported a new mineral resource estimate.

## 7.3. Selected base metal projects

### 7.3.1. Kimber (Double Deuce Exploration Corp.)

The company’s first exploration program at **Kimber** was performed by RIO Minerals Limited and consisted of a property-wide UAV-borne geophysical survey (type unspecified), geological mapping of known mineralized horizons, geochemical sampling, and hand trenching.

### 7.3.2. NZOU (DLP Resources Inc.)

The company re-entered last year’s **NZOU** drill hole, but results have not been reported. Most of the property is underlain by Aldridge Formation greywackes (Mesoproterozoic Belt-Purcell Supergroup) that are cut by gabbroic Moyie sills.

## 7.4. Selected base and precious metal projects

### 7.4.1. Dewdney Trail (PJX Resources Inc.)

The company completed its first drill program at the **Dewdney Trail** project (16 holes, 5100 m), identifying 16 semi-massive to massive sulphide mineralized layers, 3-30 cm thick, in the upper half of the stratigraphy drilled. Drilling also identified breccias that the company considers might represent proximity to vents. Mineralization comprises pyrrhotite and pyrite with local chalcopyrite. Surface mapping identified outcrops of breccia above the level of drilling. The property is adjacent to the old Estella mine site near Fort Steele.

#### 7.4.2. Moyie Anticline (Kootenay Resources Inc.)

In October, the company initiated an airborne ZTEM over its **Moyie Anticline** project. This is a follow-up on previous geophysical and sampling programs. The 16,500 ha property extends across a significant part of the Moyie anticline, host to several past-producing mines and known prospects of lead-zinc  $\pm$  silver. The targets are structurally controlled base and precious metal veins in Purcell Supergroup metasedimentary rocks and associated Moyie gabbro sills.

#### 7.5. Selected rare earth element projects

##### 7.5.1. Adamant (Eagle Plains Resources Ltd.)

Eagle Plains, through contractor TerraLogic Exploration Ltd., mapped and sampled at **Adamant** to extend nepheline syenite and pegmatite dike swarms and other targets known from previous work. Work included sampling (23 rock, 2 stream silt), a scintillometer survey plus compilation of historic work. The company received a Multi-Year Area Based Permit (MYAB) that includes provisions for geophysics, mechanical trenching, and diamond drilling).

##### 7.5.2. Mount Copeland (Volt Carbon Technologies Inc.)

Volt Carbon Technologies Inc. completed surface sampling near the former **Mount Copeland** mine site. Twenty-two chip samples were examined for rare earth elements and molybdenum. Best sample results included 2340 ppm Nb and 2.5% Mo (east edge of area); 2050 ppm Ce (Glacier zone); and 1925 ppm Ce (Marble ridge).

#### 7.6. Selected industrial mineral projects

##### 7.6.1. Table Mountain Silica (Troy Minerals Inc.)

The company did geological mapping and sampling to extend a previously reported high-grade silica zone in quartzites of the Mount Wilson Formation (Ordovician) at **Table Mountain**.

##### 7.6.2. Tatooine (Homerun Resources Inc.)

A sample of quartz from the **Tatooine** project was sent to the University of California at Davis for testing. The company is working in partnership with UC Davis using proprietary advanced femtosecond laser techniques to upgrade the raw quartz. The Tatooine project is at the old Brisco quarry north of Radium.

#### 8. Geological research

Graham et al. (2025) initiated a province-wide project to evaluate the contents of accessory metals (including critical metals) in SEDEX and other deposit types found in sedimentary successions to consider the potential for by- or co-product production. The project started with bulk rock chemistry of archived samples from the past-producing Sullivan mine and the Cirque project stored in the British Columbia Geological Survey collection. Using U-Pb dolomite geochronology on Paleozoic carbonate shelf deposits, McCormick et al. (2024) estimated the timing of hydrothermal dolomitization, which has been related to Mississippi Valley-type mineralization in eastern

British Columbia and is considered coeval with the Burgess Shale Formation lagerstätte. Rukhlov et al. (2025) continued a project started by Rukhlov et al. (2024) to guide exploration for niobium, tantalum, rare earth elements (REE), and other critical minerals in carbonatites and alkaline silicate rocks of the British Columbia alkaline province. Breasley et al. (2024) described the rare mineralogy and zonation of the Prof pegmatite (north of Revelstoke), which contains Li and Nb-Ta oxides. Abdale et al. (2024a) examined the Mount Grace carbonatites layered in the Monashee gneiss complex and confirmed previously suggested ideas of an origin by shallow marine volcanism on the western flank of Ancestral North America, and Abdale et al. (2024b) started a study to examine possible relationships between the Mount Grace carbonatites and the Cottonbelt lead-zinc deposit on the northwest flank of the Frenchman Cap dome. Maps at a 1:50,000 scale were released for the Rossland-Trail map sheet (Höy and Jackaman, 2024a) and the Castlegar map sheet (Höy and Jackaman, 2024b). Hadlari et al. (2024) reported a new precise U-Pb zircon age from the Windermere Supergroup, providing a new constraint on the transition from syn-rift to post-rift sedimentation along the margin of Laurentia. Lee et al. (2024) used magnetotelluric data to evaluate electrical and geologic anisotropies along the Rocky Mountain trench near Valemount and consider the implications for geothermal exploration. Anderson et al. (2024) and Webster and Caron (2024) reported further studies examining fauna preserved in the Burgess Shale Formation lagerstätte. Wassenaar et al. (2024) used hydrogen and oxygen isotopic data to better understand the near-surface hydrology of areas near coal mining operations in the Elk 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 decreased since 2023 but the demand for metallurgical coal remains strong. Overall, the number of exploration projects has decreased since last year. The recent discovery of lead-zinc mineralization at the Dewdney Trail project sparked some claims staking and interest by several companies.

#### Acknowledgments

Thanks to the company personnel who provided information on their projects. Gordon Clarke provided editing.

#### References cited

- Abdale, L., Russell, J.K., and Groat, L.A., 2024a. The volcanic architecture and tectono-magmatic framework of the Mount Grace carbonatites, southeastern Canadian Cordillera. *Canadian Journal of Earth Sciences*, 61, 985-1013.  
<<https://doi.org/10.1139/cjes-2024-0001>>
- Abdale, L., Nelson, J., and Groat, L.A., 2024b. Testing the relationship between the Cottonbelt Pb-Zn deposit and the carbonatite-syenite province of the Frenchman Cap dome area, southeastern British Columbia (NTS 082M/6, 7, 10). In *Geoscience BC Summary of Activities, 2023*, Geoscience BC, Report 2024-01, pp. 3-10.



- Anderson, T.B., James, M.J., and McNeil, P., 2024. The Burgess Shale lagerstätte at the Walcott Quarry, Yoho National Park, Canada. In: Clary, R.M., Pyle, E.J., and Andrews, W.M., (Eds.), *Geology's Significant Sites and their Contributions to Geoheritage*. Geological Society of London Special Publication 543, pp. 77-84. <<https://doi.org/10.1144/SP543-2022-337>>
- Breasley, C.M., Groat, L.A., Martinsen, T., Linnen, R.L., Larson, K.P., and Henry, R.E., 2024. Mineralogy and petrology of the petalite-subtype Prof pegmatite, Revelstoke, British Columbia, Canada. *Mineralogical Magazine*. <<https://doi.org/10.1180/mgm.2024.49>>
- Clarke, G., Northcote, B.K., Corcoran, N.L., Pothorin, C., Heidarian, H., and Hancock, K., 2025. Exploration and Mining in British Columbia, 2024: A summary. In: *Provincial Overview of Exploration and Mining in British Columbia, 2024*. British Columbia Ministry of Mining and Critical Minerals, British Columbia Geological Survey Information Circular 2025-01, pp. 1-60.
- EY LLP, 2025. British Columbia mineral and coal exploration survey 2025 report, in press.
- Graham, A.C., Wearmouth, C.D., Northcote, B., and Ootes, L., 2025. A preliminary assessment of companion critical elements in SEDEX deposits of eastern British Columbia: Examples from the historic Sullivan mine and the Cirque project. In: *Geological Fieldwork 2024*, British Columbia Ministry of Mining and Critical Minerals, British Columbia Geological Survey Paper 2025-01, pp. 141-152.
- Hadlari, T., Rayner, N.M., Poulton, T.P., and Arnott, R.W.C., 2024. Syn-rift volcanism (ca. 670 Ma) in the lower Windermere Supergroup, southern Canadian Cordillera: New constraints on the syn- to post-rift transition for northwestern Laurentia. *Precambrian Research*, 414, article 107604. <<https://doi.org/10.1016/j.precamres.2024.107604>>
- Höy, T., and Jackaman, W., 2024a. Geology of the Rossland-Trail map sheet (NTS 082F/04). *Geoscience BC Map 2024-02-01*, British Columbia Ministry of Mining and Critical Minerals, British Columbia Geological Survey Open File 2024-12, 1:50,000 scale.
- Höy, T., and Jackaman, W., 2024b. Geology of the Castlegar map sheet (NTS 082F/05). *Geoscience BC Map 2024-02-02*, British Columbia Ministry of Mining and Critical Minerals, British Columbia Geological Survey Open File 2024-13, 1:50,000 scale.
- Lee, B., Unsworth, M., Finley, T., Kong, W., and Cordell, D., 2024. Electrically anisotropic structure of the Rocky Mountain Trench near Valemount, British Columbia inferred from magnetotellurics: implications for geothermal exploration. *Canadian Journal of Earth Sciences*. 61, 730-749. <<https://doi.org/10.1139/cjes-2023-0086>>
- McCormick, C.A., Corlett, H., Roberts, N.M.W., Johnston, P.A., Collom, C.J., Stacey, J., Koeshidayatullah, A., and Hollis, K., 2024. U-Pb geochronology reveals that hydrothermal dolomitization was coeval to the deposition of the Burgess Shale lagerstätte. *Communications Earth and Environment*, 5, article 318. <<https://doi.org/10.1038/s43247-024-01429-0>>
- Monger, J.W.H., 1999. Review of the geology and tectonics of the Canadian Cordillera: Notes for a short course, February 24-25. British Columbia Geological Survey Branch and Geological Survey of Canada, 72 p.
- Nelson, J.L., and Colpron, M., 2007. Tectonics and metallogeny of the British Columbia, Yukon and Alaskan Cordillera, 1.8 Ga to the present. In: Goodfellow, W.D., (Ed.), *Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods*. Geological Association of Canada, Mineral Deposits Division, Special Publication 5, pp. 755-791.
- Nelson, J.L., Colpron, M., and Israel, S., 2013. The Cordillera of British Columbia, Yukon, and Alaska: Tectonics and metallogeny. In: Colpron, M., Bissig, T., Rusk, B.G., and Thompson, J.F.H., (Eds.), *Tectonics, Metallogeny, and Discovery: The North American Cordillera and Similar Accretionary Settings*, Society of Economic Geologists, Special Publication 17, pp. 53-110.
- NRCAN, 2024. Canada's critical minerals. <<https://www.canada.ca/en/campaign/critical-minerals-in-canada/critical-minerals-an-opportunity-for-canada.html>>
- Rukhlov, A.S., Cui, Y., Cunningham, Q., Fortin, G., and Anderson, C., 2024. Geochemical signals of carbonatite-related critical metals in provincial stream sediments. In: *Geological Fieldwork 2023*, British Columbia Ministry of Energy, Mines and Low Carbon Innovation, British Columbia Geological Survey Paper 2024-01, pp. 97-122.
- Rukhlov, A.S., Ootes, L., Creaser, R.A., Cunningham, Q.F., de Waal, F.S., and Wenger, D.K., 2025. British Columbia carbonatites revisited: New whole rock Sr-Pb-Nd isotopic insights and drainage prospectivity trends. In: *Geological Fieldwork 2024*, British Columbia Ministry of Mining and Critical Minerals, British Columbia Geological Survey Paper 2025-01, pp. 119-139.
- Wassenaar, L.I., Hendry, M.J., and Carey, S., 2024. Isotope hydrology of the intermontane Elk Valley, British Columbia: An assessment of water resources around coal mining operations. *Isotopes in Environmental and Health Studies*, 60, 485-509. <<https://doi.org/10.1080/10256016.2024.2375324>>
- Webster, M., and Caron, J.-B., 2024. Trilobites of the Cranbrook Lagerstätte (Eager Formation, Cambrian Stage 4), British Columbia. *Journal of Paleontology*. <<https://doi.org/10.1017/jpa.2023.89>>