

# Exploration and mining in the Southeast Region, British Columbia



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## 1. Introduction

The Southeast Region (Fig. 1) offers a variety of mining and exploration opportunities accessible by well-developed infrastructure. Four metallurgical coal mines that operated in the Elk Valley in 2020 account for most of Canada's coal production and exports. Several industrial mineral mines produce silica, magnesite, and gypsum. Limestone, smelter slag, rock wool, aggregate, rip rap, railroad ballast, flagstone, dimension stone, sand and gravel are quarried, and placer mining occurs throughout the region. The region hosts many historic producers dating back to the mid-1800s, including the lead-zinc-silver Sullivan Mine, and many small producers from the Rosland, Greenwood, Sheep Creek, and Slocan gold and silver camps. Exploration for base metals and precious metals continues to be a focus. The Trail smelter (Teck Resources Ltd.) is still in operation, and produces approximately 305,000 t of refined Zn, 90,000 t of refined Pb, and 16 to 18 Moz of Ag annually.

Exploration became uncertain in early 2020, with several exploration projects shutting down early in the year as a result of Covid-19. However, investment quickly returned to metals, and activity returned to normal. Mine expansion and exploration continued at coal mines in the Elk Valley and exploration took place throughout the region. Estimates for exploration expenditures, drilling programs, and other metrics were captured in the British Columbia Mineral and Coal Exploration Survey, a joint initiative of the Province of British Columbia Ministry of Energy, Mines and Low Carbon Innovation, the Association for Mineral Exploration in British Columbia, and EY LLP. For the Southwest Region, exploration expenditures were estimated at \$55.4 million and exploration drilling was estimated at approximately 102,920 m (Clarke et al., 2021; EY LLP, 2021).

## 2. Geological overview

The Canadian Cordillera is a collage of allochthonous terranes, parautochthonous terranes, and autochthonous basement, containing diverse rocks and structures. Metallogenic processes generated the varied deposit types that contribute

to the mineral endowment of British Columbia (Nelson et al., 2013).

The Southeast Region (Fig. 1) contains elements of Ancestral North America (Laurentia) including: Archean to Mesoproterozoic basement rocks; Proterozoic rift and intracratonic basin successions (Belt-Purcell and Windermere supergroups); Paleozoic to Jurassic passive-margin, shelf, and slope carbonate, and siliciclastic successions that were deposited on the western flank of the ancient continent (Kootenay terrane, and North American platform); and Jurassic to Cretaceous foreland basin deposits. It also contains parts of the Slide Mountain terrane, which records mid- to late-Paleozoic back-arc extension that split the western flank of Ancestral North America to form the Slide Mountain ocean, and Quesnel terrane (Quesnellia) and its basement (Okanagan subterrane; Nelson and Colpron, 2007; Nelson et al., 2013). Magmatic intrusive rocks such as those formed in the Proterozoic (Moyie intrusions) and Devonian (diatremes and volcanic rocks) represent periods of extension along the margin of Ancestral North America, whereas others (Jurassic and Cretaceous) are related to subduction and crustal thickening. Cenozoic magmatic rocks and exhumation of the normal fault-bounded metamorphic complexes occurred during post-orogenic Tertiary extension.

Historically, the Canadian Cordillera has been divided into five northwest-trending physiographic belts. The Southeast Region includes two of these belts: the Rocky Mountain foreland belt, which consists mainly of unmetamorphosed sedimentary successions that were thrust northeastward in thin-skinned sheets; and the Omineca belt, which includes more deformed and higher grade (greenschist to amphibolite) siliciclastic and volcanic rocks and basement-cored gneiss domes (Monger, 1999). For further details about the geology of the Southeast Region see Katay (2017).

## 3. Mines and quarries

The Southeast Region produces metallurgical coal from four mines in the Elk Valley, and several smaller mines and quarries produce industrial minerals including gypsum, magnesite,



silica sand, mineral wool, dolomite, limestone, flagstone, railroad ballast, rip rap, smelter slag, and aggregate (Fig. 1).

### 3.1. Metal mines

In 2020, no metal mines operated in the Southeast Region.

### 3.2. Coal mines

In the Southeast Region, coal is produced from structurally thickened seams of the Mist Mountain Formation (Kootenay Group; upper Jurassic to lower Cretaceous; Table 1; Figs. 1, 2). Coal remains British Columbia's most valuable mined commodity with sales forecasted at \$2.96 billion USD for 2020, and approximately 41.3% of the mining revenue for the province (British Columbia Geological Survey, 2021). Teck Coal Limited is currently the second largest exporter of steelmaking coal worldwide. They operate four open-pit mines in the Elk Valley (**Fording River**, **Greenhills**, **Line Creek**, and **Elkview**). Pit operations of a fifth mine (**Coal Mountain**) were suspended in 2019, though the plant and load out facilities are being kept on care and maintenance for potential future use. The loss of production from the **Coal Mountain** closure was offset by higher production and improved processing at the other four mines. Approximately 75% of the product is high-quality hard coking coal, though the mines produce lesser quality semi-hard coking coal, semi-soft coking coal, and pulverized coal injection (PCI) products. Thermal coal only accounts for approximately 2% of the sales volumes from the Elk Valley. Coal is shipped via rail to three main terminals on the west coast (Westshore, Neptune, and Ridley), and then by sea to markets in Asia (80%, mainly China and India), Europe and the Americas. Approximately 5% of the coal is shipped eastward for domestic use in North America.

In 2019 and 2020, Teck Coal Limited renegotiated contracts with CN rail that will include infrastructure upgrades to enhance shipment volumes. The current agreement with Westshore Terminals expires at the end of March 2021, and Teck Coal Limited has indicated they will not renew the contract. Teck currently owns a 46% interest in the Neptune Terminal, and in 2018 they began upgrades to increase capacity to around 18.5 Mt. The terminal was shut down for capacity upgrades for five months ending in September. Teck Coal Limited also negotiated an expanded commercial agreement with Ridley Terminals to double their contracted shipping capacity from 3 to 6 Mt, with an option to expand to 9 Mt.

In 2019, steelmaking coal prices averaged \$164 US per tonne US (Teck, 2020). Prices fluctuated markedly in 2020 and dropped to less than \$100 US per tonne near the end of 2020. Approximately 40% of coal product sales from the southeast coal mines are negotiated on a quarterly basis, with the remainder dependent on market price at the time of sale, thus subject to short-term price fluctuations. Annual production volumes and product specifications are adjusted on site to reflect market demands. Total annual production from the mines in the Southeast Region is estimated at 20.9 Mt of metallurgical coal, down from 2019 as a result of weaker demand and reduced

shipping during construction at Neptune.

All mining in the Elk Valley watershed is now subject to conditions laid out in the trans-border Elk Valley Water Quality Plan, which addresses the management of substances released by mining activities in the Elk Valley. It includes water diversion and treatment at mine sites, and establishes water quality targets for selenium, nitrate, sulphate, cadmium, and calcite in the Elk Valley watershed and waters flowing into the Libby reservoir system downstream in Montana. All producing and proposed mine projects are engaged in research to improve technologies for active water treatment facilities and develop alternative and passive treatments. Water quality objectives and target concentrations continue to be the focus of ongoing discussions between provincial, federal, and trans-border working groups.

Teck Coal Limited originally committed to constructing five active water treatment facilities. The first facility has operated at the **Line Creek** mine since February 2016 and is now treating 7.5 million litres of water per day. At **Fording River**, a second facility with a capacity of treating up to 20 million litres of water per day is nearing completion. Passive water treatment trials are underway to reduce the reliance on, and increase the effectiveness of, active water treatment. Saturated rock fill treatment uses biological processes enhanced by the addition of nutrients (methanol and phosphoric acid) to remove nitrate and selenium from the water. The first saturated rock fill pilot project, constructed at **Elkview** in 2018, successfully demonstrated treatment up to 10 million litres of water per day, with near complete removal of nitrate and selenium from mine waters. Teck received government endorsement of the technology in 2019, and approval for expansion at **Elkview**. The expansion was commissioned in Q4 2020, bringing total treatment capacity up to 20 million litres per day (Teck, 2020).

Total capital spending by Teck Coal Limited on water treatment in 2020 was estimated at approximately \$290 million, with additional investment in research for treatment options. Capital costs of a saturated rock fill facility are approximately 20% those of an active treatment facility, and annual operating costs are approximately 50%. With the success of the saturated rock fill technologies, Teck expects that the active water treatment facility at Fording River will be the final full-scale version and plans to incorporate a combination of saturated rock fill and other passive technologies. Teck is currently working on two more saturated rock fill facilities at the north end of the Elk Valley (expected to be operational in 2021) and at Line Creek. Other water quality trials are underway, including capping and reclamation techniques and methods for calcite management (Teck, 2020). Jameson Resources Ltd. (**Crown Mountain**) and North Coal Ltd. (**Michel Coal**) are independently designing and testing water treatment methods for their proposed mine projects.

#### 3.2.1. Fording River (Teck Coal Limited)

The **Fording River** mine (Fig. 2) consists of approximately 23,000 ha of coal lands. It produces primarily metallurgical



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

Mine	Operator (partner)	Commodity; deposit type; MINFILE	Forecast 2020 Production (based on Q1-Q3)	Reserves	Resource	Comments
<b>Coal Mountain</b>	<b>Teck Coal Limited (100%)</b>	PCI; Bituminous coal; 082GNE001	na	na	PCI M: 56.8 Mt I: 22.9 Mt Inf: 4.8 Mt	Mineable reserves at CMO depleted in 2019; facilities to be placed on care and maintenance; reclamation of the mine has begun; Coal Mountain Phase II (CMO2, Marten Wheeler) would use facilities from CMO, but project currently remains on hold.
<b>Elkview</b>	<b>Teck Coal Limited (95%);</b> Nippon Steel & Sumitomo Metal Corporation (2.5%), POSCO (2.5%)	HCC; Bituminous coal; 082GNE017	6.672 Mt clean	HCC P: 11.9 Mt Pr: 258.0 Mt	HCC M: 320.9 Mt I: 146.8 Mt Inf: 219.0 Mt	Baldy Ridge Extension (BRE) approved (2016); exploration drilling in active pits and expansion areas; coal quality testwork; P+Pr reserves expected to support approximately 36 more years at current production rate.
<b>Fording River</b>	<b>Teck Coal Limited (100%)</b>	HCC; Bituminous coal; 082JSE012	6.156 Mt clean	HCC P: 74 Mt Pr: 191.2 Mt	HCC M: 418.3 Mt I: 921.6 Mt Inf: 711.3 Mt	Exploration drilling in active pits and Castle Mountain expansion area; coal quality testing; geophysical work; Project description submitted for provincial and federal environmental assessment reviews of Castle Mountain project; water treatment facility commissioned in Q4; P+Pr reserves are projected to support 43 years of mining at current production rate.
<b>Greenhills</b>	<b>Teck Coal Limited (80%);</b> POSCAN (20%)	HCC; Bituminous coal; 082JSE007	4.918 Mt clean	HCC P: 11.6 Mt Pr: 283.4 Mt	HCC M: 179.5 Mt I: 227.6 Mt Inf: 168.5 Mt	Cougar Pit Expansion (CPX) approved (2016); exploration drilling in expansion areas; coal quality testing; P+Pr reserves are projected to support another 50 years of mining at current planned production rates.
<b>Line Creek</b>	<b>Teck Coal Limited (100%)</b>	HCC, TC; Bituminous coal; 082GNE020	3.170 Mt clean	HCC P: 3.2 Mt Pr: 41.9 Mt  TC P: 0.5 Mt Pr: 12.7 Mt	HCC M: 305.1 Mt I: 405.3 Mt Inf: 417.9 Mt  TC M: 7.2 Mt I: 5.8 Mt Inf: 3.3 Mt	Burnt Ridge Extension (BRX) approved (2016); exploration drilling and coal quality test work in expansion areas; first active water treatment facility commissioned (2016); P+Pr reserves at Line Creek are projected to support another 15 years of mining at planned production rates.

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

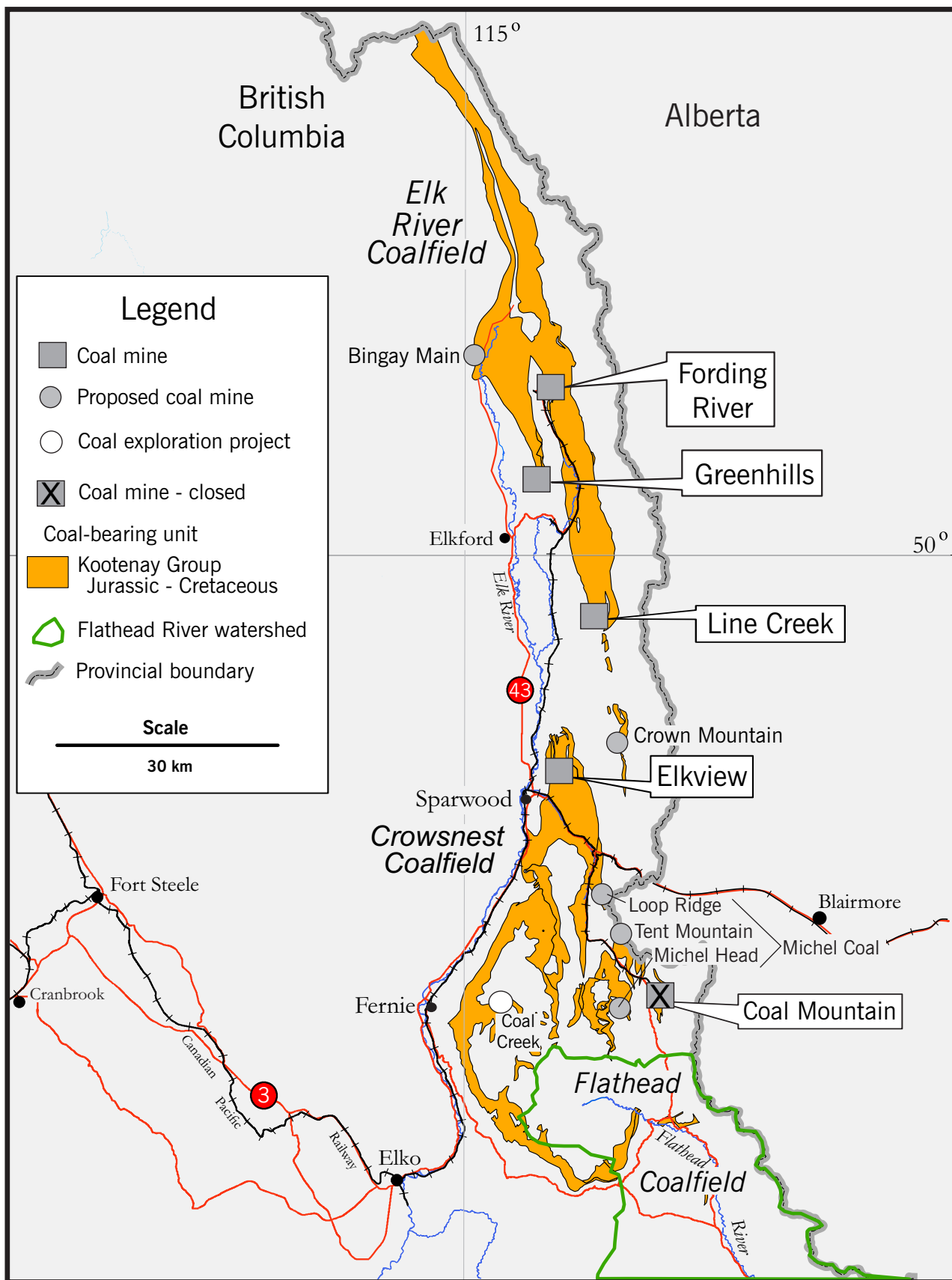


Fig. 2. Map of the Kootenay Group and East Kootenay coalfields, including the major coal mines and projects in southeastern British Columbia. From British Columbia Geological Survey (2021).

coal, with lesser amounts of lower grade hard coking coal. The current annual production capacity of the mine is 9 Mt; the preparation plant has a capacity of 9.5 Mt. In 2020, production at **Fording River** was mainly from the Eagle Mountain and Swift pits. The focus for exploration drilling in 2020 was in the Castle Mountain area, but Teck also did exploration drilling, along with large-diameter core drilling, in their producing pits. Teck carried out bulk sampling on seams in Castle Mountain area for coal quality testing. Proven and Probable reserves at the mine are from the Eagle Mountain, Swift, Turnbull, and Castle Mountain areas, and are projected to support a further 43 years at planned production rates.

The Castle Mountain expansion is southeast of the main **Fording River** area. It would require an extension of the existing Fording mine boundary by approximately 2550 ha, but would use the existing Fording plants, transmission lines, and rail load out facilities. The expansion project will undergo both provincial and federal reviews, with proposed construction beginning in 2023. Teck Coal Limited submitted an initial project description to the British Columbia Environmental Assessment Office in April and to the Impact Assessment Agency of Canada in October. Exploration on the Castle area began in 1969, and the area has been included in the reserves reporting at Fording since 2010. Following depletion of the existing pits at Fording, it is expected that the bulk of production at **Fording River** would eventually come from the Castle Mountain area, with an annual production of 10 Mt extending the mine life by several decades.

### 3.2.2. Greenhills (Teck Coal Limited 80%; POSCO Canada Limited ('POSCAN') 20%)

The **Greenhills** mine, which produces mainly metallurgical coal and lesser thermal coal, consists of approximately 11,800 ha of coal lands. Coal seams generally grade in rank from medium-volatile bituminous in the lower parts of the section to high-volatile-A bituminous at higher intervals. Currently, the annual production capacity is 5.9 Mt from the mine and 5.4 Mt from the preparation plant. To improve operational efficiency, some of the coal from **Greenhills** is processed at **Fording River**. Production is mainly from the Cougar pit area; Proven and Probable reserves are projected to support another 50 years of mining at planned production rates.

The Cougar Pit Extension project is the expansion area for Greenhills Operations. Approved in 2016, it lies immediately north of the existing operations and, at full development, it will merge with the Fording River Swift expansion. Exploration drilling in 2020 included both in-pit drilling to update structural and seam quality models, and further step-out drilling in their permitted extension areas.

### 3.2.3. Line Creek (Teck Coal Limited)

The **Line Creek** mine (Fig. 2), consisting of approximately 8200 ha of coal lands, produces mainly metallurgical coal and lesser thermal coal. Coal seams are predominantly medium-volatile bituminous in rank, with some high volatile-A

bituminous coals near the top of the section. The current annual production capacity of the mine and preparation plant is approximately 4.0 Mt.

In 2020, production was mainly from the Burnt Ridge extension (BRX), Mount Michael (MTM), and Mine Services extension (MSX) pits. Exploration drilling was mainly in active pits, and at the Burnt Ridge extension (BRX) and Mount Michael. Proven and Probable reserves at Line Creek are projected to support planned production rates for a further 15 years.

First commissioned in 2016, an active water treatment facility has been redesigned to optimize treatment techniques. The facility is now fully operational, but further passive water treatment methods, including a planned saturated rock fill, will be used.

### 3.2.4. Elkview (Teck Coal Limited 95%; Nippon Steel & Sumimoto Metal Corporation 2.5%; POSCO 2.5%)

The **Elkview** mine (Fig. 2) produces mainly high-quality mid-volatile hard coking coal from thrust repetitions of seams in a southwest-plunging syncline. The mine site consists of approximately 27,100 ha of coal lands. In 2020, work was completed that increased the annual production capacity of the mine and preparation plant from 7.4 to 9.0 Mt. Teck estimates a remaining reserve life of approximately 36 years at the current production rate. In 2020, drilling continued in their active pits and expansion areas; production was primarily from the Baldy Ridge, Natal Ridge, Adit Ridge expansion areas.

In 2020, **Elkview** also received approval to expand their pilot saturated rock fill project after successful trials.

### 3.2.5. Coal Mountain (Teck Coal Limited)

**Coal Mountain** (Fig. 2), consisting of approximately 3000 ha of coal lands, produced mainly pulverized coal injection (PCI) and thermal coal. Originally opened around 1905, the mine has now reached the end of its reserve life. It produced a small amount in the first half of 2019 but was placed on care and maintenance later in the year. Reclamation of the mine is well underway on the final lifts of the dry stacked tailings facility and waste dump spoils. The wash plant (with an annual capacity of approximately 3.5 Mt) and load out facilities will be kept operational. Teck Coal Limited plans to maintain production levels by optimizing and expanding production at their other metallurgical coal mines, and from recently approved expansion areas.

## 3.3. Industrial mineral mines and quarries

The Southeast Region hosts several industrial mineral mines, the largest of which are in the Rocky Mountain foreland belt, where upturned strata are exposed and easily mined (Fig. 1). Throughout the region are a variety of smaller mines and quarries (Table 2).

### 3.3.1. 4J (Georgia-Pacific Canada Limited)

Georgia-Pacific Canada Limited operates the **4J** gypsum

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

Mine	Operator	Commodity; deposit type; MINFILE	Forecast 2020 Production (based on Q1-Q3)	Reserves	Resource	Comments
4J	Georgia-Pacific Canada Limited	Gypsum; Bedded gypsum; 082JSW009	na	na	Estimated: 20 Mt	Care and maintenance.
Elkhorn	CertainTeed Gypsum Inc.	Gypsum, anhydrite; Bedded gypsum; 082JSW021	Gypsum 300,000 t Anhydrite 120,000 t	na	na	Mine expected to remain open until 2023; the company will replace production by developing the Kootenay West mine (EAO certificate granted in 2018).
Horse Creek Silica	HiTest Sand Inc.	Silica; Silica sandstone; 082N 043	na	na	Estimated: 3 Mt at 99.5% silica (1987)	Seasonal quarry; variety of aggregate and industrial use products; amending quarry permits; mine planning; geotechnical and environmental baseline studies.
Moberly Silica	Vitreo Minerals Limited	Silica; Industrial use silica, frac sand; 082N 001	na	20 to 140 mesh frac sand (dry) P: 8.9 Mt of 64% frac sand + Pr: 4.6 Mt of 64% frac sand (2014)	M + I: 30 to 140 mesh frac sand (dry): 37.5Mt at 70% frac sand + 11.3 Mt silica as frac sand residues (2016)	Care and maintenance; transfer of ownership.
Mount Brussilof	Baymag Inc.	Magnesite; Hydrothermal sparry magnesite; 082JNW001	230,000 t	P: 50 Mt	na	MgO, and MgOH; sediment-hosted sparry magnesite.
Winner	Rockwool Inc.	Gabbro/basalt; Crushed rock for mineral wool; 082ESE265	Quarrying feed stock for mineral wool plant	na	na	Crushing, screening, stockpiling; environmental monitoring.

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

mine and a rail load-out facility southeast of Canal Flats. The deposit is in Burnais Formation evaporites (Middle Devonian). The quarry is currently on care and maintenance.

### 3.3.2. Elkhorn (CertainTeed Gypsum Inc.)

The **Elkhorn** mine produces gypsum from evaporitic strata of the Burnais Formation (Middle Devonian). Now nearing the end of its reserve life for gypsum, the mine acquired a market interest in a product blended with anhydrite, which was once left behind as waste. This realignment will allow the mine to continue production until 2023. The company plans to replace gypsum production after mine closure with their new

**Kootenay West** mine (see section 5.1.), which is currently under construction.

### 3.3.3. Horse Creek Silica (HiTest Sand Inc.)

At the **Horse Creek Silica** mine, HiTest Sand Inc. operates a seasonal quarry in Mount Wilson orthoquartzites. The orthoquartzites are more consolidated than at Moberly, and HiTest Sand Inc. produces industrial-use and aggregate products. In 2020, the company began amending their quarry permits and updating their mine designs for increased production and completed environmental baseline and geotechnical work.

### 3.3.4. Moberly Silica (Vitreo Minerals Limited)

The **Moberly Silica** mine was placed on care and maintenance this year while the company amended permits. The deposit has been mined since the early 1980s for silica sand, glass making, and other industrial uses. The silica deposit is in regionally extensive orthoquartzites of the Mount Wilson Formation (Middle to Upper Ordovician). At Moberly Mountain, the formation is ~99% SiO<sub>2</sub>, partially de-cemented, and friable along a fault zone. At the mine, the unit is nearly vertical, about 300 m thick, and extends along strike for 800 m.

### 3.3.5. Mount Brussilof (Baymag Inc.)

Baymag Inc. produces magnesite at the **Mount Brussilof** mine from a deposit in Cambrian carbonate rocks of the Cathedral Formation. The deposit displays characteristics similar to Mississippi Valley-type mineralization (Paradis and Simandl, 2017), and sulphides (mainly pyrite) are removed as impurities from the product. The mine has been in production since 1981, and magnesite ore is transported by truck to the company's processing facilities in Exshaw Alberta. Annual magnesite production is approximately 230 kt.

### 3.3.6. Winner (Rockwool Inc.)

Rockwool Inc. operates two small seasonal quarries, extracting gabbro from **Winner**, and basalt from **Friday** (North Fork). The material is trucked to the Rockwool Inc. manufacturing plant in Grand Forks, where it is blended with other mineral material to make mineral wool insulation, construction board, blankets, and pipe covering. The product is naturally fire-retardant.

## 4. Placer operations

Placer mines have operated in southeastern British Columbia since the gold rush began in 1864. Although activities were not tracked in 2020, several placer areas have operations under active Mines Act permits. Prospective placer creeks are generally linked to areas with hard rock exploration for gold.

## 5. Mine development

In addition to the coal mine expansion projects in the Elk Valley, one new gypsum mine, **Kootenay West** (Certainteed Gypsum Inc.) is currently under construction (Table 3).

### 5.1. Kootenay West (Certainteed Gypsum Inc.)

The **Kootenay West** mine (Certainteed Gypsum Inc.), is currently under construction. The project was approved by the Environmental Assessment Office in January 2018 and the company has been working through design modifications and conditions in the approval. The quarry will have two pits that mine gypsum from a deformed section of the Burnais Formation. Mineable beds are 20-25 m thick and contain 75-95% gypsum. The mine is expected to produce 16.9 Mt of gypsum at an average blended quality of 83.2%, with a full production rate of 400,000 tpy. The current projected mine life is 42 years. Gypsum would be drilled, blasted, and crushed, then transported by truck to Exshaw, Alberta or Washington State, or by rail to Vancouver. Initial construction, with estimated capital costs of \$20 million, began in 2019, and the company has been working on environmental baseline studies and geotechnical work for updated mine plans.

## 6. Proposed mines and quarries

The Southeast Region has three proposed coal mines, **Bingay Main** (Centermount Coal Ltd.), **Crown Mountain** (NWP Coal Canada Limited), **Michel Coal** (North Coal Ltd.), and two industrial mineral mines, **Black Crystal** (Eagle Graphite Corp.) and **Driftwood Creek** (MGX Minerals Inc.) (Table 4).

### 6.1. Proposed metal mines

There are currently no proposed metal mines in the region.

### 6.2. Proposed coal mines

There are currently three proposed coal mines in the Southeast Region. In various phases of environmental assessment, each must demonstrate how they will meet the guidelines set out in the Elk Valley Water Quality Plan.

#### 6.2.1. Bingay Main (Centermount Coal Ltd.)

Centermount Coal Ltd. is proposing an open-pit mine on the **Bingay Main** property (Fig. 2). The mine would produce approximately 1 Mtpy during an estimated 15-year lifespan, with a total resource of approximately 13 Mt. At **Bingay**, the coal-bearing Mist Mountain Formation is preserved in a tight, asymmetric syncline in the immediate footwall of a west-dipping thrust fault (Bourgeau thrust). The coal is medium-volatile to high volatile-A bituminous in rank. Although the

**Table 3.** Selected mine development projects, Southeast Region.

Project	Operator (partner)	Commodity; deposit type; MINFILE	Reserves	Resource	Comments
<b>Kootenay West</b>	<b>Certainteed Gypsum Inc.</b>	Gypsum; Evaporitic bedded gypsum; 082JSW005, 20	na	North and South quarries: Total 16.9 Mt (at average quality of 83-85% gypsum)	Mine construction; granted a conditional EA certificate in January, 2018; environmental baseline and geotechnical work, permitting, and modifications to mine design; construction began in 2019; 400,000 tpy; 43-year mine life.



**Table 4.** Selected proposed mines, Southeast Region.

Project	Operator (partner)	Commodity; deposit type; MINFILE	Reserves	Resource	Comments
<b>Bingay Main</b>	<b>Centermount Coal Ltd.</b>	Coal; Bituminous coal; 082JSE011	na	na	Pre-application stages of EA; letter submitted for project to remain in EA.
<b>Black Crystal</b>	<b>Eagle Graphite Corp.</b>	Graphite; Crystalline flake graphite; 082FNW260, 283	na	Regolith + calc-silicate; M + I: 19.23 Mt at 1.35% fixed carbon  Inf: 23.92 Mt at 1.3% fixed carbon (2018)	Research and development; possible application for Li-ion batteries.
<b>Crown Mountain</b>	<b>NWP Coal Canada Limited</b> (Jameson Resources Limited (80%), Bathurst Resources Limited (20%))	Coal (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)	Pre-application of EA (2014); Application Information Requirements (AIR; 2018); water quality and treatment studies; engineering studies and mine design; bankable feasibility study; 15-year mine life; 3.7 M tpy.
<b>Driftwood Creek</b>	<b>MGX Minerals Inc.</b>	Magnesite; Sparry magnesite; 082KNE068	na	M + I: 7.847 Mt grading 43.27% MgO  Inf: 55.8 Mt (2016; using cutoff grade of 42.5% MgO)	1200 tpd quarry proposed; 169,700 t of MgO, average grade of 43.27% MgO, 19-year mine life; environmental baseline and engineering studies; preliminary test work indicates recovery rates of 93.4% reverse flotation and removal of up to 70% silica and 30% calcium oxides; bulk of resource is within 100 m of surface.
<b>Michel Coal</b>	<b>North Coal Ltd.</b>	Coal (HCC and PCI); Bituminous coal; 082GSE050	na	HCC: M: 44.6 Mt I: 42.5 Mt; open-pit and underground (2015)	Entered pre-application of EA in 2015; received AIR requirements in September 2020; geotechnical studies and updates to mine design; coal quality testing indicates coal has similar characteristics to Elk Valley hard coking coal; environmental baseline and mine design.

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

project has been delayed, in 2020 the company requested that it remain in the environmental assessment process.

#### 6.2.2. Crown Mountain (NWP Coal Canada Limited)

The **Crown Mountain** property is along strike with **Line Creek** (Fig. 2) but separated by complex geology and thrust faults. The property contains seven major Mist Mountain Formation coal seams, with combined average thicknesses of 15 to 35 m. NWP Coal Canada Limited is jointly owned by Jameson Resources Limited (80%) and Bathurst Resources Limited (20%). The project entered the environmental assessment process in 2014 and received Application Information Requirements in April 2018. Environmental baseline and mine design work progressed in 2020, with

planned submissions for environmental assessment to both federal and provincial agencies in early 2021. A bankable feasibility study completed this year indicates that the project could produce 3.7 Mtpy during a mine life of 15 years and has an estimated net present value of \$217 million with an internal rate of return of 27.2%.

Coal quality test work indicates that approximately 84% of the coal is hard coking coal, the remainder PCI coal. Environmental baseline work and geotechnical drilling continued, as did engineering work on spoil pile design and water treatment. The company is exploring the use of biological processes in anoxic waste rock piles as one means to sequester and manage selenium runoff.

### 6.2.3. Michel Coal (North Coal Ltd.)

North Coal Ltd., a wholly owned subsidiary of CoalMont Pty Ltd., received the Application Information Requirements (AIR) for their **Michel Coal** project (Fig. 2) in September 2020. The project will undergo both federal and provincial reviews, and will include their Loop Ridge, Loop South, Tent Mountain, and Michel Head areas, with two open pits. The project is expected to produce between 2.3 and 4 Mt annually, with a 30-year mine life.

In 2020, work on environmental baseline and monitoring, permitting, and mine design continued, in addition to some trail construction for further drilling. Water treatment options being explored will use diversion, and active and passive techniques to ensure that water quality objectives can be met. Coal seams are 5 to 20 m thick and are characteristic of Elk Valley hard coking coals (HCC). Variations in coal quality characteristics in their different mining areas will allow them flexibility in blending product to client specifications. Structure and spacing of the seams give the project a low (~6:1) strip ratio. The resource estimate (2018) includes 44.6 Mt Measured and 42.5 Mt Indicated (open-pit and underground).

### 6.3. Proposed industrial mineral mines

The **Black Crystal** graphite quarry (Eagle Graphite Corp.) is on care and maintenance while the company focusses on product research and development. MGX Minerals Inc.'s **Driftwood Creek** project is a proposed magnesite mine. Several small quarries and pits for dimension stone, flagstone, and sand and gravel are not considered here.

#### 6.3.1. Black Crystal (Eagle Graphite Corp.)

Eagle Graphite Corp. operates the **Black Crystal** flake graphite open-pit quarry on Hodder Creek and a processing plant 10 km west of Passmore. The property is underlain by Paleozoic upper amphibolite-grade gneisses that were exhumed during Tertiary extension. Disseminated fine- to coarse-flake graphite is distributed along foliation in organic-rich calcsilicates and marbles, across an area of about 500 m<sup>2</sup>. At the quarry location, the graphitic horizon is 30–40 m thick, immediately underlying overburden, and dips sub-parallel to topography. Graphite is in two zones: a 'hard rock' zone, and an overlying 'regolith' zone. The regolith zone, reflecting near-surface weathering, averages 2–4 m thick and has grades of up to 6.95% carbon. Most of the deposit is friable, and blasting is not required. Sand and aggregate are by-products.

#### 6.3.2. Driftwood Creek (MGX Minerals Inc.)

At the **Driftwood Creek** property, cliff-forming, steeply dipping beds of sparry magnesite are interlayered with dolostones and dolomitic limestones of the Mount Nelson Formation (Proterozoic). The deposit is 100 to 300 m wide, extends to a depth of approximately 110 m, and continues along strike for 2000 m. The proposed quarry is a 1200 tpd operation that would produce 169,700 t of MgO at an average grade of 43.27% MgO, with a 19-year mine life. In 2020, the company

continued environmental baseline studies, engineering design work, and work on a Preliminary Economic Assessment.

### 7. Selected exploration activities and highlights

Exploration continued in the Southeast Region in 2020 for numerous targets, including base and precious metals, industrial minerals, and coal (Fig. 1; Table 5).

#### 7.1. Selected precious metal projects

Exploration for precious metals is ongoing in the Southeast Region for vein (epithermal and mesothermal), porphyry-related, and skarn systems.

##### 7.1.1. Gold Shear (PJX Resources Inc.)

PJX Resources Inc. continued work at the **Gold Shear** property in 2020. Steeply dipping north-northeast shear zones on the property cut quartzites and siltstones of the middle Aldridge Formation (Mesoproterozoic; Purcell Supergroup). Multiple phases of quartz veins and carbonate and sericite alteration occur within and adjacent to the main David shear zone. Mineralization occurs as pyrite, galena, chalcopyrite, and sphalerite and includes rare visible gold. The David zone, a gold-mineralized quartz vein, was discovered in 1990 (MINFILE 082FSE108) and has since been traced along strike for 1600 m and 150 m downdip, along with several other splays and veins. High-grade gold mineralization, up to 54.76 g/t, occurs in the main shear, and coincides with increased sulphide mineralization, and/or dilations in the shear zone. VLF ground geophysics done by PJX identified a large conductive target area down-dip of the David zone, below the depth of historical drilling. In 2020, PJX Resources Inc. released results from drilling that tested the downdip extension of the vein to 100 m below surface. Vein intersections were 1.2 to 4.5 m wide, with 2.5 m grading 25.07 g/t Au, 2.1 m grading 14.06 g/t Au, and 1.2 m grading 19.85 g/t Au. Mapping and prospecting in 2020 identified four separate mineralized parallel shear zones along strike with the David zone. Grab samples from two of the veins returned values of up to 250 g/t Au.

##### 7.1.2. Ore Hill (Apex Resources Inc.)

The **Ore Hill** property is in the historic Sheep Creek gold mining camp. Late Jurassic mineralization (pyrite, pyrrhotite, chalcopyrite, galena, sphalerite, and rare visible gold) occurs in steeply dipping quartz veins along northeast-trending structures. Between 1906 and 1940, a total of 3335 t of ore was mined, from which 115,671 g of Au (34.7 g/t), 202,307 g of Ag (60.7 g/t), 93,985 kg of Pb, and 88,639 kg of Zn were recovered (MINFILE 082FSW053).

Gold mineralization occurs in a 10 m wide breccia zone along a north-trending fault that extends for more than 1500 m across the Summit and Ore Hill claims. North-trending magnetic anomalies from an airborne Heliogeotem survey in 2009 coincide with soil anomalies and surface mineralization across an area 950 m by 150 m. In 2020, Apex Resources Inc. followed up on 2019 drilling that intersected zones including

Table 5. Selected exploration projects, Southeast Region.

Project	Operator (partner)	Commodity; deposit type; MINFILE	Resource (NI 43-101 compliant unless indicated otherwise)	Comments
<b>Aldridge 1 &amp; 2</b>	<b>DLP Resources Inc.</b>	Pb-Zn-Ag±Au; Polymetallic veins, SEDEX	na	<b>Aldridge 1:</b> Drilling (2 DD holes, 2477 m); encountered 200 m of hydrothermally alteration and disseminated sulphides; <b>Aldridge 2:</b> Drilling (1 DD hole; 482 m).
<b>Athelstan-Jackpot</b>	<b>Belmont Resources Inc.</b>	Au, Ag, Cu, talc; Polymetallic veins Ag-Pb-Zn±Au, Carbonate-hosted talc; 082ESE047	na	Data compilation, mapping, sampling, lidar, drone-based magnetic survey; ground IP.
<b>Bull River mine</b>	<b>Braveheart Resources Inc.</b>	Cu-Ag-Pb-Zn±Au; Polymetallic veins; 082GNW002, 6, 15	I: 1.51 Mt grading 1.91% Cu, 0.41 g/t Au, 15.6 g/t Ag at 1% CuEq cut-off Inf: 0.34 Mt grading 1.58% Cu, 0.36 g/t Au, 10.7 g/t Ag at 1% CuEq cut-off (2018)	Drilling (5 DD holes, 831 m); environmental baseline studies; updating mine plan and permitting; design work on the TSF; drill results include 4.24 m grading 1.39% Cu, 1.33 g/t Au, and 9.51 g/t Ag.
<b>Come by Chance</b>	<b>Belmont Resources Inc.</b>	Au-Ag-Pb-Zn±Cu; Cu skarn, Au-epithermal, polymetallic veins; 082ESE261, 183, 131	na	Data compilation, mapping, sampling, lidar, drone-based magnetic survey.
<b>DD</b>	<b>DLP Resources Inc. (PJX Resources Inc.)</b>	Pb-Zn-Ag±Au; Polymetallic veins, SEDEX; 082FSE110, 082GSW077	na	Drilling (1 DD hole) extended from 1425 to 1711 m; magnetotelluric survey (33 line-km); encountered 24.8 m of distal-style SEDEX mineralization with trace sphalerite.
<b>Gold Drop</b>	<b>GGX Gold Corp.</b>	Au, Ag, Te; Alkaline intrusion-associated Au; 082ESE055, 150, 152, 153, 285, 286, 287	na	Drilling (24 DD holes, 2700 m) at C.O.D vein and C.O.D West; trenching; mapping, rock sampling. Two new veins discovered. Results up to 10.15 g/t Au and 142 g/t Ag from trenching at C.O.D South.
<b>Golden Crown</b>	<b>Golden Dawn Minerals Inc.</b>	Au-Ag-Pb-Zn±Cu; Cu-Au-Ag skarns, polymetallic veins, epithermal Au-veins, porphyry; 082ESE041, 42, 32, 45, 20, 130, 116	Golden Crown M+I: 163,000 t grading 11.09 g/t Au, 0.56% Cu (2016)	Trenching (2000 m); mapping; sampling.
<b>Golden Hornet</b>	<b>Talisker Resources Ltd.</b>	Au, Ag, Cu; Polymetallic veins; 082ESE293, 104, 168, 217	na	Mapping, sampling, soil geochemistry; results include grab samples grading 26.1 g/t Au and 12g/t Au.
<b>Gold Shear</b>	<b>PJX Resources Inc.</b>	Au, Cu, Pb, Zn; Polymetallic veins, Au-quartz veins; 082FSE108	na	David zone; vein target 1.2 to 4.5 m width; results include 2.5 m grading 25.07 g/t Au, 2.1 m grading 14.06 g/t Au, and 1.2 m grading 19.85 g/t Au; mapping and sampling identified four parallel mineralized shear zones, traced along strike for 1600 m; grab samples returned up to 250 g/t Au.

Table 5. Continued.

<b>Heino Gold</b>	<b>MGX Minerals Inc.</b>	Au-Ag-Pb-Zn; Skarn; 082FNW234, 294, 295, 296, 297, 220	na	Heino-Money and Tillicum zones; data compilation; lidar; mapping; metallurgical test work (94.1% recovery of Au); sample results up to 207 g/t Au.
<b>Iron Range</b>	<b>Private partner (Eagle Plains Resources Ltd.)</b>	Pb-Zn-Ag±Cu, Au; Vein, breccia, IOCG; 082FSE014, 15, 16, 17, 18, 19, 20, 21, 22, 23	na	Drilling (10 DD holes, 1000 m); mapping, sampling.
<b>Kenville</b>	<b>Ximen Mining Corp.</b>	Ag-Au-Cu±Pb, Zn, Cd, W; Au-veins, polymetallic veins, porphyry; 082FSW086, 87, 85, 254, 354	M: 3312 t grading 31.72 g/t Au I: 21,312 t grading 18.84 g/t Au Inf: 522,321 t grading 23.01 g/t Au (2009; non-compliant)	Rehabilitation of 257 portal; metallurgical testwork indicates up to 98.5% recovery of Au using gravity-flotation; Permitting for underground decline, drilling, and bulk sampling; ML/ARD test work; environmental baseline studies.
<b>Ket 28</b>	<b>Grizzly Discoveries Inc.</b>	Au; Au-veins; 082ESW210	na	Drilling (15 DD holes, 1975 m); initial results include 3.08 m grading 7.37 g/t Au.
<b>Kettle Valley Gold</b>	<b>Goldcliff Resource Corporation</b>	Au; Au-quartz veins	na	Mapping, sampling; results include 0.25 g/t Au, with values up to 2.38 g/t Au and 43.49 g/t Ag.
<b>Ore Hill</b>	<b>Apex Resources Inc.</b>	Au±Ag, Pb, Zn; Au-quartz veins, polymetallic veins; 082FSW040, 48, 50, 51, 52, 53 082FSE 030, 31, 34, 25	na	Drilling (1600 m, 12 DD holes); mapping, rock sampling; two magnetic anomalies coincident with soil geochemical anomalies and historic production; results include 0.30 m grading 32.9 g/t Au; assays pending.
<b>Providence</b>	<b>Ximen Mining Corp.</b>	Au±Ag, Pb, Zn; Au-quartz veins, polymetallic veins; 082ESE001, 135, 165	na	Drilling (6 DD holes, 1172 m); mapping, grab and chip sampling, soil geochemistry; two grab samples assayed 884 g/t Ag and 1.36 g/t Au; 436 g/t Ag and 4.4 g/t Au.
<b>Radpath</b>	<b>KG Exploration (Canada) Inc.</b>	Au-Cu-Pb-Zn-Ag±Mo; Cu-Au-Ag skarn, VMS, polymetallic veins, Au-vein, porphyry; 082ESE077, 57, 146, 158	na	Drilling (4 DD holes, 1200 m); mapping, sampling, soil geochemistry; following up on targets identified on ground magnetics and airborne geophysics; rock sample results include up to 11.9 g/t Au.
<b>Regal</b>	<b>Affinity Metals Corp.</b>	Ag-Pb-Zn±Au; Polymetallic veins, SEDEX; 082N 004, 3, 16	Regal 590,703 t grading 71.6 g/t Ag, 2.66% Pb, 1.26% Zn, 1.1% Cu, 0.13% Sn and 0.015% W (1982; non-compliant)	Drilling at the Allco (19 DD holes, 3443 m); results from 2019 drilling include 11.1 m grading 143.29 g/t Ag.



Table 5. Continued.

<b>Revel Ridge</b>	<b>Rokmaster Resources Corp.</b>	Ag-Pb-Zn±Au; SEDEX, Irish-type carbonate-hosted, polymetallic veins; 0825M 003	Main Zone M+I: 4.2 Mt grading 5.59 g/t Au, 53.4 g/t Ag, 1.87% Pb, 3.43% Zn Inf: 4.562 Mt grading 4.36 g/t Au, 61.8 g/t Ag, 1.88% Pb, 2.59% Zn  Yellowjacket Zone I: 771 kt grading 0.9 g/t Au, 62.6 g/t Ag, 2.6% Pb, 9.93% Zn Inf: 23 kt grading 0.11 g/t Au, 55.4 g/t Ag, 2.65% Pb, 7.68% Zn	J&L mine; rehabilitation of portal and underground workings at the Main Zone; underground drilling began late in the year, continuing into 2021 (6000 m, 20 DD holes completed); mapping and sampling; metallurgical test work; updated resource estimate; environmental baseline and monitoring; began an updated PEA; grab samples results up to 6.57 g/t Au, 311 g/t Ag, 9.53% Zn, and 7.02 % Pb; chip sample results include 0.3 m grading 5.6 g/t Au, 173 g/t Ag, 0.72% Zn, and 6.65% Pb.
<b>Robocop</b>	<b>Grizzly Discoveries Inc.</b>	Co-Cu-Ag; Sediment-hosted; 082GSW019, 20, 1	na	Airborne geophysics (VTEM, magnetics); grab samples of up to 1.46% Cu and 0.036% Co.
<b>Rosland Gold</b>	<b>Accelerate Resources Ltd.</b> (Currie Rose Resources Ltd.)	Au±Ag, Cu, Pb, Zn; Au-quartz veins; 082FSW093, 195, 102, 135	na	Drilling (2 DD holes, 150 m); mapping, sampling, VLF-EM survey; option agreement.
<b>Silvana</b>	<b>Klondike Silver Corp.</b>	Ag-Pb-Zn±Au; Polymetallic veins; 082FNW050, 13, 082KSW006	na	Underground drilling (10 DD holes); facility upgrades; environmental monitoring; mill on care and maintenance; environmental baseline work.
<b>Thor</b>	<b>Taranis Resources Inc.</b>	Ag-Pb-Zn±Au; Polymetallic veins and breccia, stratiform volcanogenic massive sulphide; 082KNW030, 31, 60, 61	I: 640,000 t grading 0.88 g/t Au, 187 g/t Ag, 0.14% Cu, 2.51% Pb, and 3.51% Zn; Inf: 424,000 t grading 0.98 g/t Au, 176 g/t Ag, 0.14% Cu, 2.26% Pb, and 3.2% Zn (2013)	Drilling (8 DD holes, 1200 m); mapping; sampling; geophysics; update of geological model; environmental baseline studies; permitting for 10,000 t bulk sample; channel sample results at Scab zone include: 3.05 m grading 3.72 g/t Au, 345 g/t Ag, 0.07% Cu, 2.24% Pb and 0.38% Zn; and 2.52 m grading 1.29 g/t Au, 72 g/t Ag, 0.02% Cu, 1.40% Pb and 0.71% Zn; initial drill results from the first drill hole include: 0.76 m grading 3.96 g/t Au, and 2.9 m grading 0.5 g/t Au, 252.5 g/t Ag, 0.14% Cu, 1.64% Pb, and 5.3% Zn.
<b>Vine</b>	<b>PJX Resources Inc.</b>	Pb-Zn-Ag±Au; Polymetallic veins, SEDEX; 082GSW050, 49, 35	1.3 Mt grading 2.2 g/t Au, 36.3 g/t Ag, 3.12% Pb, 3.12% Zn, 0.11% Cu (1990 on Vine vein; non-compliant)	Drilling (1 DD hole); downhole geophysics; geophysical and geological modeling; drilling on deep magnetotelluric anomaly.
<b>Vulcan</b>	<b>Eagle Plains Resources Ltd.</b>	Pb-Zn-Ag±Au; Polymetallic veins, SEDEX; 082FNE103, 101, 102, 104, 93, 160	na	Mapping, sampling, soil geochemistry, geophysical (IP and MT) survey; chip sample 1.6 % Pb+Zn, and 10g/t Ag for 1.5 m.

M = Measured; I = Indicated; Inf = Inferred

0.30 m grading 289.97 g/t Au. They drilled 12 holes (1600 m) along a 500 m zone of the soil anomaly, and encountered 0.3 m grading 32.9 g/t, with assays pending from eight more holes.

### 7.1.3. Kenville (Ximen Mining Corp.)

Ximen Mining Corp. continued work on the **Kenville** property in 2020. The area is mainly underlain by mafic volcanic rocks of the Eagle Creek plutonic complex (Jurassic) which may be co-magmatic with volcanic rocks of the Elise Formation (Rossland Group). Nelson granodiorites (Late Jurassic) and Tertiary intrusive rocks are common in the area. The predominant regional structural features are broad, north-trending, east-vergent folds. The original past-producing **Kenville** mine, also known as the Granite-Poorman mine (Au-Ag-Pb-Zn-Cu), is a gold-quartz vein deposit and consists of five north-northwest trending veins that can be traced for at least 500 m with an average thickness of 0.6 m. It was the first underground lode gold mine in British Columbia and operated intermittently between 1890 and 1954. Historic production totalled 180,740 t averaging 9.07 g/t Au and 3.96 g/t Ag. In total, the mine produced 65,236 oz of Au, 27,686 oz of Ag, 51,782 lbs of Pb and 33,393 lbs of Zn (MINFILE 082FSW086). Exploration of the property since 1992 included soil sampling, airborne EM geophysics, and both surface and underground drilling to test the southern extension of the veins and to define new targets.

Work in 2020 consisted of rehabilitation work on the 257 portal for a planned new decline and underground exploration work. Expected mine grades are about 17.2 g/t Au and 35.6 g/t Ag. A composite sample of low- and high-grade zones was collected to roughly match the expected grades and sent for metallurgical testing. Approximately 98.85% of the gold was recovered in gravity and flotation circuits. Environmental baseline work and waste characterization is underway for permitting and bulk sampling.

### 7.1.4. Rossland Gold (Accelerate Resources Ltd., Currie Rose Resources Inc.)

In 2020, Currie Rose Resources Inc. completed an initial geophysical (VLF-EM) survey at the **Rosland Gold** property. The property was then optioned to Accelerate Resources Ltd., who continued exploration work and began drilling late in the year. The Rossland area is underlain by upper Paleozoic (Mount Roberts Formation) and Lower Jurassic (Rossland Group, Elise Formation) volcanic and sedimentary rocks, and Early Jurassic to Eocene intrusive rocks (Rossland monzonite, Rainy Day pluton, Trail pluton, and Coryell suite; lamprophyres and serpentinites). With numerous historical producers, the Rossland camp produced more than 84,000 kg of Au and 105,000 kg of Ag between 1894 and 1941. Three main deposit types occur within the camp: 1) copper-gold veins with minor lead and zinc in fracture zones; 2) gold veins in high-grade shoots; and 3) molybdenum-tungsten, in fractures of the Trail pluton on Red Mountain (Fyles, 1984).

### 7.1.5. Radpath (KG Exploration (Canada) Inc.)

KG Exploration (Canada) Inc. (a wholly owned subsidiary of Kinross Gold Corporation) is targeting epithermal, skarn, and VMS mineralization in the northern extensions of the Republic and Toroda graben. At the **Radpath**, the area is underlain by: Knob Hill complex (Paleozoic) volcanic and sedimentary rocks and serpentinites; Brooklyn Formation (Triassic) rocks, including angular chert pebble conglomerate ('sharpstone conglomerate'), calcareous siltstones, limestones, and pyroclastic rocks; and Cretaceous and Eocene intrusions. Eocene sedimentary rocks of the Kettle River Formation and volcanic flows of the Marron Formation unconformably overlie the older rocks. The company began mapping, geophysical and sampling on the property in 2016. In 2020, they drilled 1200 m (4 DD holes) to follow up on 2019 drilling and targets identified on airborne geophysics, ground magnetics, geological mapping, and sampling. Rock samples assayed up to 11.9 g/t Au, with the highest values in rocks along the margins of intrusive rocks that appear as magnetic highs on ground geophysics.

### 7.1.6. Gold Drop (GGX Gold Corp.)

GGX Gold Corp. continued drilling and trenching at the **Gold Drop** property. The property is underlain by metamorphic rocks of the Knob Hill complex (Paleozoic) intruded by granodiorite and diorite of the Nelson Plutonic suite and by biotite syenite and diorite/andesite dikes of the Coryell suite. The property hosts numerous north-trending, easterly dipping gold-bearing veins, 10 cm to 2 m thick, in steeply dipping strike-slip and normal faults. The veins post-date the Nelson intrusions, pre-date the Coryell suite, and are truncated by low-angle detachment faults. Between 1919 and 1941, the area saw small-scale production (Gold Drop, North Star, Amandy, and Rhoderick Dhu veins), from underground workings.

In 2020, the company drilled a second hole to test a 1834 by 1377 m anomaly from their 2019 airborne geophysics. The first hole encountered calc-silicate altered rocks and magnetite mineralization, with elevated copper, zinc, and iron, interpreted to be weak skarn mineralization. The anomaly is interpreted as an intrusive body at depth, located at the intersection of three structural zones. Trenching uncovered two new quartz veins (the Perky, and Lively) at the COD West area, and at the southern extension of the COD vein samples assayed up to 10.15 g/t Au and 142 g/t Ag. The company drilled at the COD vein to test mineralization at depth and at their new COD West zone. In total, 24 DD holes (2700 m) were drilled. Mapping and chip sampling were also done at the Gold Drop, North Star, Silent Friend, Ken, and Highland Valley veins to determine the next phases of drilling.

### 7.1.7. Ket 28 (Grizzly Discoveries Inc.)

Grizzly Discoveries Inc. owns a large land package (approximately 61,000 ha) in the Greenwood area and has been actively exploring the area since around 2008 for copper-gold skarns, auriferous VMS sulphides, and polymetallic and epithermal veins. The **Ket 28** property, on their Rock Creek

claim block, is underlain by metasedimentary and metavolcanic rocks of the Anarchist Group (Carboniferous to Permian), and intrusive rocks (Jurassic; Eocene). Gold mineralization occurs in quartz veins and veinlets along northeast- and east-trending structures, and in altered sericite-chlorite-pyrite quartz veined greenstones. In 2020, the company mapped, sampled, and drilled 15 holes (1975 m) to follow up on historic results of 11 m grading 2.77 g/t Au and 3 m grading 8.75 g/t Au, with a higher-grade zone of 2 m grading 11.90 g/t Au. They drill tested the main gold zone and southern faulted extension, encountering variable sericite-pyrite alteration, quartz veins, and silicification. Preliminary results for the first six holes included 3.08 m grading 3.37 g/t Au.

#### 7.1.8. Golden Crown (Golden Dawn Minerals Inc.)

Golden Dawn Minerals Inc. has been evaluating several historic mineralized areas near Greenwood. Their claims cover approximately 15,400 ha, and include the May Mac, **Golden Crown**, Lexington, and Phoenix historic mines, and the Lexington (Greenwood) mill. The area is underlain by rocks of the Knob Hill and Anarchist groups (Paleozoic), the Brooklyn Formation (Triassic), and the Penticton Group (Eocene); Jurassic, Cretaceous, and Eocene intrusions occur throughout the area. Mineralization includes: Cu-Au-Ag skarn; Au-Ag epithermal; Ag-Pb-Zn±Au shear-hosted carbonate replacements, stockworks, and breccias; and alkalic porphyry Cu-Au-Ag.

In 2020, the company focussed exploration at the **Golden Crown**. They mapped, sampled, and trenched along strike between the **Golden Crown** and the JD where numerous steeply dipping sulphide-quartz veins occur in a northwest-trending shear system across an area 130 by 800 m. Trenching was to follow up on 2017 chip sample results of up to 5.87 g/t Au along 4 m, and drill intersections of 4.6 m grading 7.66 g/t Au, 0.13% Cu, and 7 m grading 5.14 g/t Au, 1.18% Cu.

#### 7.1.9. Providence (Ximen Mining Corp.)

Ximen Mining Corp. acquired the **Providence** property in 2019, and continued work in 2020. Located near the town of Greenwood, the property is underlain by: highly deformed Paleozoic Knob Hill complex volcanic and sedimentary rocks; Attwood Group (Permo-Carboniferous) black argillites, conglomerates, greywackes, limestone lenses, and metavolcanic rocks; and Brooklyn Formation (Triassic) chert pebble conglomerate ('sharpstone conglomerate'), calcareous siltstones, limestones, and volcanic breccias; and Penticton Group (Eocene rocks). Numerous small stocks (ultramafic, granite to diorite, and syenites; Triassic to Tertiary) occur along fault zones. At the historic **Providence** mine, northeast-trending veins contain pyrite, galena, sphalerite, chalcopyrite, tetrahedrite, proustite, native silver and free gold, in quartz-carbonate gangue. The mine operated intermittently from 1893 to 1973 and produced 183 kg of Au, 42,552 kg of Ag, 183 t of Pb, 118 t of Zn and minor Cu, from 10,426 t mined (MINFILE 082ESE001).

In 2020, the company drilled 6 holes (1172 m), mapped, sampled, and conducted soil geochemistry to locate extensions of the vein system. Two grab samples tested 884 g/t Ag and 1.36 g/t Au, and 436 g/t Ag and 4.4 g/t Au.

#### 7.1.10. Athelstan-Jackpot, Come by Chance (Belmont Resources Inc.)

Belmont Resources Inc. worked on their properties in the Greenwood area, including the **Athelstan-Jackpot** and **Come by Chance**. At the **Athelstan-Jackpot** property, ultrabasic rocks and diorite dikes are the main rocks exposed, with talc-carbonate lenses (listwanites) and serpentinites in shear zones. Gold mineralization is in silica-altered zones and quartz veins in the listwanites. Belmont Resources Inc. conducted initial mapping and sampling and flew lidar, a drone magnetic survey, and a ground IP survey. The mineralized trend of the Athelstan and Jackpot historic producers (MINFILE 082ESE047) coincides with resistivity and chargeability anomalies on IP, and the company has prioritized targets for drilling next year.

At **Come by Chance**, the area is underlain by Attwood Group (Permo-Carboniferous) and Brooklyn Formation (Triassic) rocks, and intrusions (diorite; Jurassic and Cretaceous). Compilation of the historic data and field work identified skarn, epithermal, and massive sulphide vein mineralization in outcrop and drilling. The company mapped, sampled, and flew lidar and a drone-based magnetic survey, which revealed several structural features and anomalies for further work.

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

Goldcliff Resource Corporation entered into an option agreement to purchase the **Kettle Valley Gold** property, a newly discovered epithermal gold-silver showing. The area is underlain by Penticton Group volcanic flows (Marron Formation; Eocene) in northern extensions of the Rock Creek graben. Low-sulphidation epithermal-style indicators were mapped in the Marron Formation including widespread chalcedony, quartz and carbonate breccias, sericite alteration, bladed calcite, quartz pseudomorphs, and clay alteration zones. The zone is approximately 800 m long and 400 m wide. Several samples exceeded 0.25 g/t Au, with values up to 2.38 g/t Au and 43.49 g/t Ag.

#### 7.1.12. Golden Hornet (Talisker Resources Ltd.)

Talisker entered into an option agreement for the **Golden Hornet** property in 2020, which is contiguous with their Bluejay claims. The area is underlain by mafic volcanic and metasedimentary rocks of the Wallace Formation (late Paleozoic; Anarchist Group), and Eocene rocks including Kettle River sandstones and alkalic volcanic rocks of the Marron Formation. Intrusive dikes include Jurassic and Eocene granites and granodiorites, and Eocene feldspar porphyry and diabase. Previous work identified a zone of northwest-trending sheet veins, with trench sample results including 2 m grading 27 g/t Au; 5.2 m grading 22.1 g/t Au; 14 m grading 4.17 g/t Au; and 17 m grading 1.32 g/t Au. In 2020, the company completed

soil geochemistry surveys. Grab sampling of the veins returned values of 26.1 g/t Au and 12 g/t Au. The company has submitted applications for drilling.

#### 7.1.13. Heino Gold (MGX Minerals Inc.)

In 2020, MGX Minerals Inc. entered into an option agreement for the **Heino Gold** property, which includes the Tillicum, Heino-Money, and East Ridge showings. The property is on Tillicum Mountain and underlain by a metavolcaniclastic rocks (Upper Paleozoic to Triassic; Slocan and Milford Groups) that are partly overlain by metavolcanic basaltic-andesitic flows and lapilli tuffs (early Jurassic; Elise Formation), and structurally controlled intrusive stocks and sills (Jurassic, Cretaceous) and dikes (Tertiary). Calc-silicate skarn mineralization (with disseminated pyrrhotite, pyrite, sphalerite, galena, and traces of chalcopyrite and tetrahedrite) is in zones 2 to 60 m wide along intrusive contacts. Free gold occurs as fine to coarse disseminations and fracture fillings and in quartz sulphide veins (MINFILE 082FNW234).

In 2020, MGX Minerals Inc. compiled historical data and completed a lidar survey. Extensions of the ore zones surrounding historic workings were sampled, with grab sample results of up to 207 g/t Au. Metallurgical test work of composite samples taken from historic drill core and from outcrop indicated recoveries of 94.1% Au in gravity-flotation. The company has applied for drill permits for 2021.

### 7.2. Selected polymetallic base and precious metal projects

Base metals are explored for throughout the Omineca belt as sedimentary exhalative (SEDEX,) volcanic massive sulphide (VMS), manto, and replacement deposits, and along structures in vein and fault systems.

#### 7.2.1. Vine (PJX Resources Inc.)

PJX Resources Inc. continued drilling at the **Vine** property early this year, targeting SEDEX mineralization. The property is in the Belt Purcell basin, and is underlain by turbiditic argillites and quartzites of the Aldridge Formation. Drilling and geological modeling on the property identified graben structures, soft-sediment deformation structures, isopach changes suggesting syn-depositional faulting, and disseminated and bedded massive sulphides. Gravity, magnetic, and magnetotelluric surveys have identified target zones that are interpreted to have potential for massive sulphide (Pb-Zn-Ag±Au) mineralization. In 2019, drilling encountered a 5.5 m massive sulphide zone with anomalous zinc, copper, lead, and silver. This zone correlates with a 3.4 m zone in a hole drilled 700 m to the south in 1991 that graded 5.6% Pb, 2.7% Zn and 1.2 oz/t Ag for 3.4 m. The 2020 drilling targeted a deep magnetotelluric anomaly, but the program was shut down early in the year due to Covid-19. The company plans to continue drilling and using downhole geophysics to target the massive sulphide zone for greater concentrations of zinc, lead, copper and silver.

#### 7.2.2. DD (DLP Resources Inc., PJX Resources Inc.)

DLP Resources Inc. entered an option agreement with PJX Resources Inc. to acquire a 75% interest in the **DD** property in 2020. The area is underlain by Purcell Supergroup rocks, with extensive stratabound and discordant fragmental units and widespread albite-tourmaline-chlorite-sericite alteration. Recent focus in the Purcell anticlinorium has been on geophysical methods to further identify structures and thickness variations in the Aldridge Formation that may indicate sub-basin development and potential SEDEX mineralization. In 2020, the company re-entered a drill hole that was drilled in 2018 on a magnetotelluric anomaly. They deepened the hole from 1425 to 1711 m and intersected the Sullivan horizon at the base of a faulted contact with a gabbro sill. The zone was moderately to intensely altered, with sericite, garnets, silicification, chlorite and minor albite. Trace sphalerite was noted in a 24.8 m interval. The company optioned additional claims to the east and extended the magnetotelluric survey by an additional 33.7 line-km.

#### 7.2.3. Aldridge 1 and Aldridge 2 (DLP Resources Inc.)

The **Aldridge 1** and **Aldridge 2** properties are underlain by Mesoproterozoic Belt-Purcell basin rocks of the Aldridge Formation in a northerly trending fault system, referred to as the 'Leadville corridor'. In 2019, the company completed a magnetotelluric survey over the properties. In 2020, the company drilled 2 DD holes (2477 m) on the **Aldridge 1** and encountered 200 m of moderate to intense hydrothermally altered (quartz-albite) sedimentary rocks with albite, garnet, silicification and trace tourmaline, along with disseminated and veinlets of sphalerite and abundant pyrrhotite. At the **Aldridge 2** they drilled one DD hole (482 m) on another target from the magnetotelluric survey late in the year.

#### 7.2.4. Iron Range (Eagle Plains Resources Ltd.)

In 2020, Eagle Plains Resources Ltd. optioned the **Iron Range** property to a private company who could earn up to 80% in the property. The property consists of 70,472 ha along the north-trending Iron Mountain fault zone. The zone hosts Ag-Pb-Zn±Au,Cu mineralization along a 90 km strike length. Mineralization occurs with brecciation, tourmalinization, albitization, and intense hydrothermal alteration, including: chloritization, silica flooding and replacement, hematite-magnetite-albite, sericite-carbonate overprinting, and intense argillic alteration. The property is also underlain by felsic intrusive rocks. Some showings display hematite, albite and chlorite, and characteristics of precious metal enriched iron oxide copper gold (IOCG) mineralization (MINFILE 082FSE014; Duncan, 2014). The company has identified three main target zones: Talon/Canyon, O-Ray, and Car. The private company began drilling (10 DD holes, 1000 m) at the O-Ray zone late in the year to further test a zone that returned 7.0 m grading 51.52 g/t Au in 2008 drilling.



### 7.2.5. Vulcan (Eagle Plains Resources Ltd.)

Eagle Plains Resources Ltd. continued work on their **Vulcan** property in 2020. The property is underlain by argillites and quartzites in the lower and middle parts of the Aldridge Formation, and hosts numerous SEDEX showings. Historic drilling encountered pyrite-pyrrhotite laminations, albite-tourmaline alteration, and fracture/vein-controlled lead-zinc mineralization. A chip sample from the Hilo 3 mineral occurrence (MINFILE 082FNE103) returned 1.6% Pb+Zn and 10 g/t Ag along 1.5 m. In 2020, the company drilled (2 DD holes, 977 m) on targets identified by soil geochemistry and a high-resolution VTEM airborne geophysical survey. They encountered indicators of hydrothermal alteration. The property was subsequently optioned to Brascan Gold Corp. late in the year.

### 7.2.6. Bull River mine (Braveheart Resources Inc.)

In 2019, Braveheart Resources Inc. purchased the **Bull River mine**, which had been on care and maintenance since 2009. The property is in fault-bounded blocks of the Aldridge Formation. Copper-silver mineralization is in a network of east-trending, near-vertical, sulphide-bearing quartz-carbonate veins, in sheared and brecciated host rocks. The main vein structure and stringer zones range from a few cm to 30 m wide. Mineralization occurs as pyrite, pyrrhotite, and chalcopyrite, with minor galena, sphalerite, arsenopyrite, cobaltite, and traces of tetrahedrite and native gold. The historic Dalton mine operated between 1971 and 1974, and produced 7260 t of Cu, 6354 kg of Ag, and 126 kg of Au from 471,900 t milled (MINFILE 082GNW002) from open pits. The property has existing infrastructure, including a 750 tpd conventional mill, 21,000 m of underground development, assay and metallurgical laboratories, tailings impoundment, waste dumps, and two open pits. Historic ore stockpiles on surface currently contain 165 kt grading 1.7% CuEq. In 2020, the company drilled 831 m (5 DD holes) of a planned 3000 m underground drill program but ceased activities in March because of Covid-19. The holes were all drilled from the lowest mine level and tested mineralization down-dip of the south vein. Results include 4.24 m (true width) grading 1.39% Cu, 1.33 g/t Au, and 9.51 g/t Ag. The company began design work to upgrade the tailings storage facility and obtain permits to process the stockpiled ore and move towards a mine restart.

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

Taranis Resources continued work at the **Thor** property, which has several targets and showings, including the True Fissure, Great Northern, Broadview, and Blue Bell (Fig. 3) past-producing mines. The **Thor** property is underlain by a thick succession of folded and faulted metasedimentary and metavolcanic rocks of the Badshot Formation and Lardeau Group. Mineralization (Ag-Pb-Zn-Au-Cu) extends along a 2 km strike length, both stratabound and within shear zones along a northwesterly trending anticline. Drilling suggests zonation of the deposit from base-metal enriched lower parts,



Fig. 3. Massive sulphide mineralization at the Blue Bell zone.

grading vertically to more gold-rich zones in vuggy quartz veins higher up. The deposit overlies a magnetic anomaly at depth. Drilling has encountered intersections of weakly mineralized quartz-feldspar porphyry, and it is interpreted that the magnetic anomaly may be an intrusive body at depth. Recent updates to the geological model indicate that mineralization may be epithermal. In 2020, the company drilled eight DD holes (1200 m) at the True Fissure target, and intersected semi-massive to massive sphalerite, tetrahedrite, and pyrite. Initial results from the first hole encountered an upper gold zone (0.76 m grading 3.96 g/t Au), and two zones with lower grades of gold but higher silver, lead and zinc (2.9 m grading 0.5 g/t Au, 252.5 g/t Ag, 0.14% Cu, 1.64% Pb, and 5.3% Zn). The company also completed additional mapping, sampling, and geophysics at the Ridge target for drilling in 2021. Mapping and channel sampling was done at the Scab zone, with results of 3.05 m grading 3.72 g/t Au, 345 g/t Ag, 0.07% Cu, 2.24% Pb, and 0.38% Zn; and 2.52 m grading 1.29 g/t Au, 72 g/t Ag, 0.02% Cu, 1.40% Pb, and 0.71% Zn. Taranis also continued environmental baseline work, tailings storage design work, and other requirements for a 10,000 t bulk sample permit.

### 7.2.8. Silvana (Klondike Silver Corp.)

Klondike Silver Corp's **Silvana** project consists of 25,000 ha in the silver-rich historic Slocan mining camp, with production that dates back to 1891. The area is underlain by sheared and brecciated metasedimentary rocks of the Slocan Group (Late Triassic) that are cut by granodiorite and quartz monzonite dikes at the edge of the Nelson batholith (Middle Jurassic). Ag-Pb-Zn mineralization occurs in a series of east- to northeast-trending, shear zone-hosted polymetallic veins and as replacements in Slocan Group limestones. Klondike's holdings include 68 past producers in the Sandon, Hewitt, Silverton Creek, Cody Creek, Payne, and Jackson Basin camps, including the **Silvana**, Wonderful and Hinckley past producers. The main vein at **Silvana** is in an eight km-long structure that yielded about 242 t Ag, 28,691 t Pb, 26,299 t Zn and 72 t Cd from 510,964 t mined between 1913 and 1993, at an average grade of 13.87 oz/t Ag,

5.62% Pb, and 5.15% Zn (Hedley, 1952). Data compilation and 3D modeling of the past-producers in the Sandon camp suggests mineralized potential between the mined zones of the historic producers, offset by late-stage post-mineral faulting.

In 2017, the company began rehabilitating the 4625 portal at **Silvana**. They drifted 80 m to construct underground drill stations and began drilling in 2019. In 2020, they continued drilling and drifted an additional 29 m (of a planned 80 m) before the program was suspended because of Covid-19. They encountered sphalerite and galena in every hole, with results including 0.8 m grading 71.73 g/t Ag, 1.09% Pb and 0.21% Zn. Environmental baseline work, monitoring, and engineering upgrades to the tailings facility and mill are ongoing as the company updates their mine plan and permit. The company's mill at Sandon is a 100 tpd flotation mill that operated at an average rate of 40 tpd and has been on care and maintenance since 2003.

### 7.2.9. Revel Ridge (Rokmaster Resources Corp.)

Rokmaster Resources Corp. entered an option agreement to acquire 100% of the **Revel Ridge** project, which includes the historic J&L mine site, facilities and claims, including more than 3 km of underground workings. The property is at the north end of the Kootenay arc and is underlain by metasedimentary and metavolcanic rocks of the Hamill and Lardeau groups. Mineralization is in the Hamill Group (Badshot and Mohican formations), which consists of sheared and intensely folded impure quartzites, quartz sericite, sericite, chlorite schists and phyllites, and grey banded to carbonaceous limestones. The Main zone is a shear-hosted, sheeted Au-Ag-Pb-Zn vein deposit that averages 2.5 m in thickness. Historical underground drilling and drifting defined the zone along a 1.5 km strike length and for 850 m down dip; on surface the zone has been traced for more than 3 km. The Yellowjacket zone sub-parallel and is in the immediate hanging wall of the Main zone. Stratabound Ag-Pb-Zn is currently interpreted as being a structurally controlled, contact-related replacement deposit. Mineralization occurs at contacts between limestone and metavolcanic rocks. Intense deformation of the J & L deposit has destroyed most original textures and ore-wall rock relationships, and overprinted tectonic fabrics, make interpretation of the timing and environment of deposition difficult (MINFILE 082M 003). Metallurgical test work completed in 2014 indicates recoveries for the Main Zone of approximately 93% Au, 70% Ag, 74% Pb, and 80% Zn; and 94% Ag, 88% Pb, and 93% Zn at Yellowjacket Zone.

In 2020, the company compiled the historical data and updated the NI 43-101 resource estimate. They began mapping and sampling early in the season and rehabilitated the 830 and 832 portals and underground workings at the Main zone. They began underground drilling late in the year and completed over 6000 m (20 DD holes) to test extensions of the Au-Ag zones. Additional metallurgical test work was completed on several samples to improve procedures and grades of gold, silver, zinc and lead in the concentrates. The company began work on a

Preliminary Economic Assessment and environmental baseline and monitoring work for permitting. Initial results from surface mapping include grab samples with up to 6.57 g/t Au, 311 g/t Ag, 9.53% Zn, and 7.02% Pb, and results from a 0.3 m chip sample grading 5.6 g/t Au, 173 g/t Ag, 0.72% Zn, and 6.65% Pb.

### 7.2.10. Regal (Affinity Metals Corp.)

In 2020, Affinity Metals Corp. continued drilling at their **Regal** project (previously known as Allco). The area is underlain by lower Paleozoic quartzites, argillites, and limestones of the Badshot Formation and Lardeau Group. Galena, sphalerite, chalcocopyrite, tetrahedrite, and pyrite are in numerous showings as stratiform bodies, replacements, and veins. The property hosts several past producing mines including Regal, Allco and Snowflake, which operated intermittently between 1936 and 1953 following vein structures. Reported reserves (1982; non-compliant) were 590,703 t grading 71.6 g/t Ag, 2.66% Pb, 1.26% Zn, 1.1% Cu, 0.13% Sn and 0.015% W (MINFILE 082N 004).

In 2020, the company focussed their efforts at the Allco property to follow up on drilling in 2019, which intersected 11.1 m grading 143.29 g/t Ag, including 0.55 m grading 2612.0 g/t Ag. Mineralized intersections from the drill program consisted mostly of argentiferous galena, sphalerite, and tetrahedrite in quartz veins and breccias. In 2020, further mapping and sampling was done for several km along a northwest-southeast fault contact. Several gold- and silver-bearing outcrops were mapped along a mineralized trend that coincides with a northwest-trending geophysical anomaly. Drilling was completed late in the year (19 DD holes, 3443 m).

### 7.2.11. Robocop (Grizzly Discoveries Inc.)

Grizzly Discoveries Inc. entered into an option agreement to acquire the **Robocop** project in 2018. The property is underlain by siliciclastic and carbonate rocks of the Sheppard Formation and volcanic rocks of the Nicol Creek (Purcell Supergroup; Proterozoic). Mineralization includes sediment-hosted Co-Cu-Ag, and polymetallic veins (Ag-Pb-Zn±Au). Soil geochemistry outlined areas of anomalous copper-cobalt-silver, and historic drilling (1990-2000) yielded sample results of up to 1 m grading 0.18% Co, 0.28% Cu, 4.1 ppm Ag; and 1.23 m grading 0.134% Co, 1.19% Cu and 33.8 ppm Ag. Sampling by the company in 2018 returned grades of up to 1.46% Cu and 0.036% Co in grab samples around areas of historic drilling and trenching. In 2020, the company conducted a helicopter-borne VTEM and magnetic survey (approximately 400 line-km) over the property in order to define targets for further exploration.

## 8. Geological research

Höy et al. (2020) continued research and mapping in the Boundary region and outlined new potential for epithermal style mineralization. Slack (2020) and Slack et al. (2020) released papers focussed on Sullivan-style mineralization in

the Purcell anticlinorium, and Rioseco et al. (2020) released a paper on the age of metamorphism in rocks at the interface between the Kootenay arc and the Purcell anticlinorium.

## 9. Summary

In 2020, exploration and mining continued in the Southeast Region. Major mine development, expansion plans, and projects in the East Kootenay coalfields continue to advance. The Kootenay West gypsum mine is currently under construction. Exploration for SEDEX base metals continued in the Purcell anticlinorium and for precious and base metals throughout the region. Uncertainty around Covid-19 shut down a few exploration programs early in the year. Nonetheless, exploration resumed, and several drill programs continued late into the year.

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