Exploration and mining highlights, Northwest Region, 2021

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Overview

The Northwest Region has a long history of mining and is prospective for a wide range of commodities including precious metals, base metals, and coal. Exploration in the region is concentrated in a loosely defined area in the northern part of the region popularly known as the 'Golden Triangle'; several other projects were underway to the southeast. High metal prices in 2021 encouraged financing of many projects.

The Northwest Region contains two operating metal mines (Brucejack and Red Chris). The region also contains five proposed metal mines (Dome Mountain, Galore Creek, KSM, Kutcho, and Red Mountain), and one proposed coal mine (Tenas). There is one mine development project (Premier Gold). In 2021, the region saw numerous active early- to advanced-stage projects that focussed mainly on precious, base metal, and porphyry deposits. Large industrial projects in the region are driving demand for aggregate, and placer gold mining continues throughout the region. Small-scale jade mining, both in-situ and placer, has a long history in the region. However, in 2021 a provincial government Order in Council was announced restricting jade mining until at least May 11, 2023.

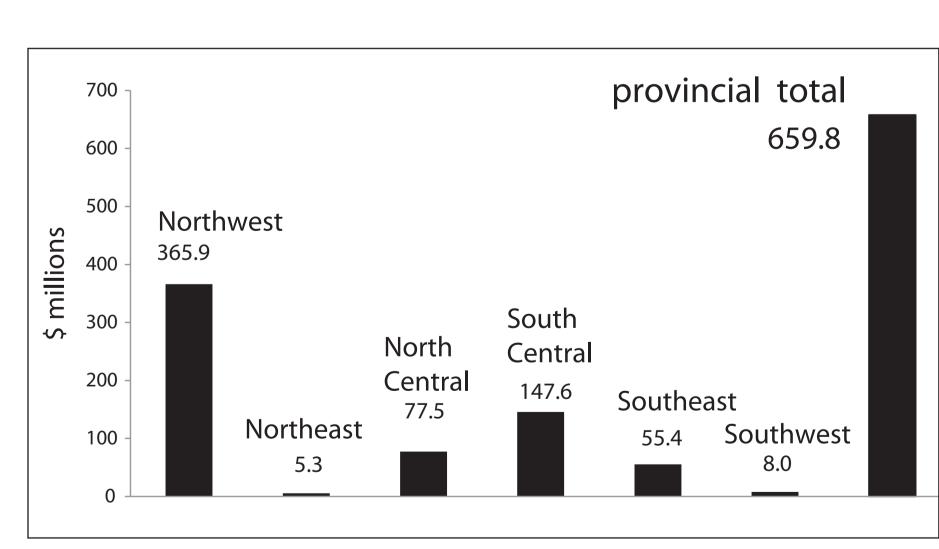
Because of staffing shortages and protocols related to the Covid pandemic, laboratories had difficulty keeping up with the high volume of samples submitted by exploration companies, causing delays in the release of analytical results.

Notable mergers and acquisitions

- Offer by Newcrest Mining Limited to purchase Pretium Resources Inc. for approximately \$3.5 billion.
- Newmont Corporation purchased GT Gold Corp. for an estimated \$456 million. Assets included the **Tatogga** project's Saddle North deposit.
- Hochschild Mining PLC announced their intent to earn a 60% interest in the **Snip Gold** project from Skeena Resources Limited by spending approximately \$100 million during the option period.
- Scottie Resources Corp. and AUX Resources Corporation amalgamated, which consolidated advanced projects in the Stewart mining camp.

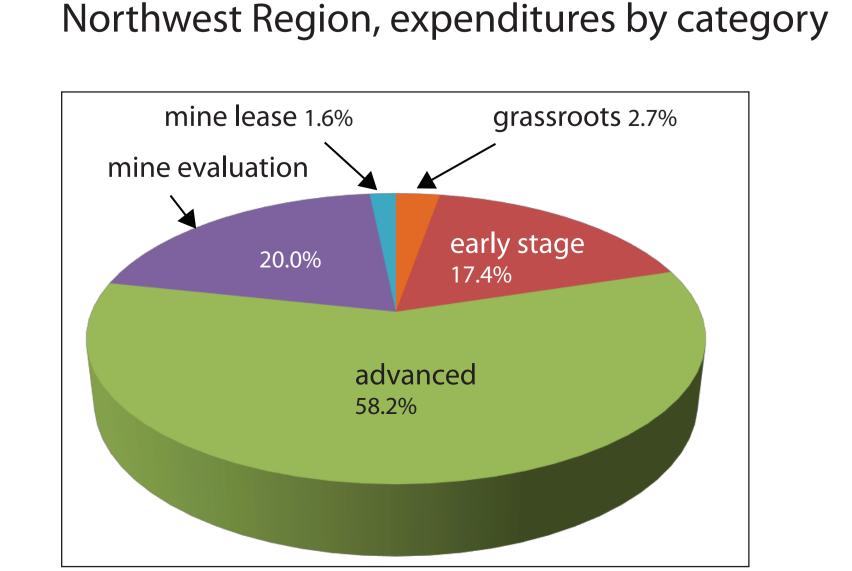
Exploration and drilling estimates

Province, expenditures by region



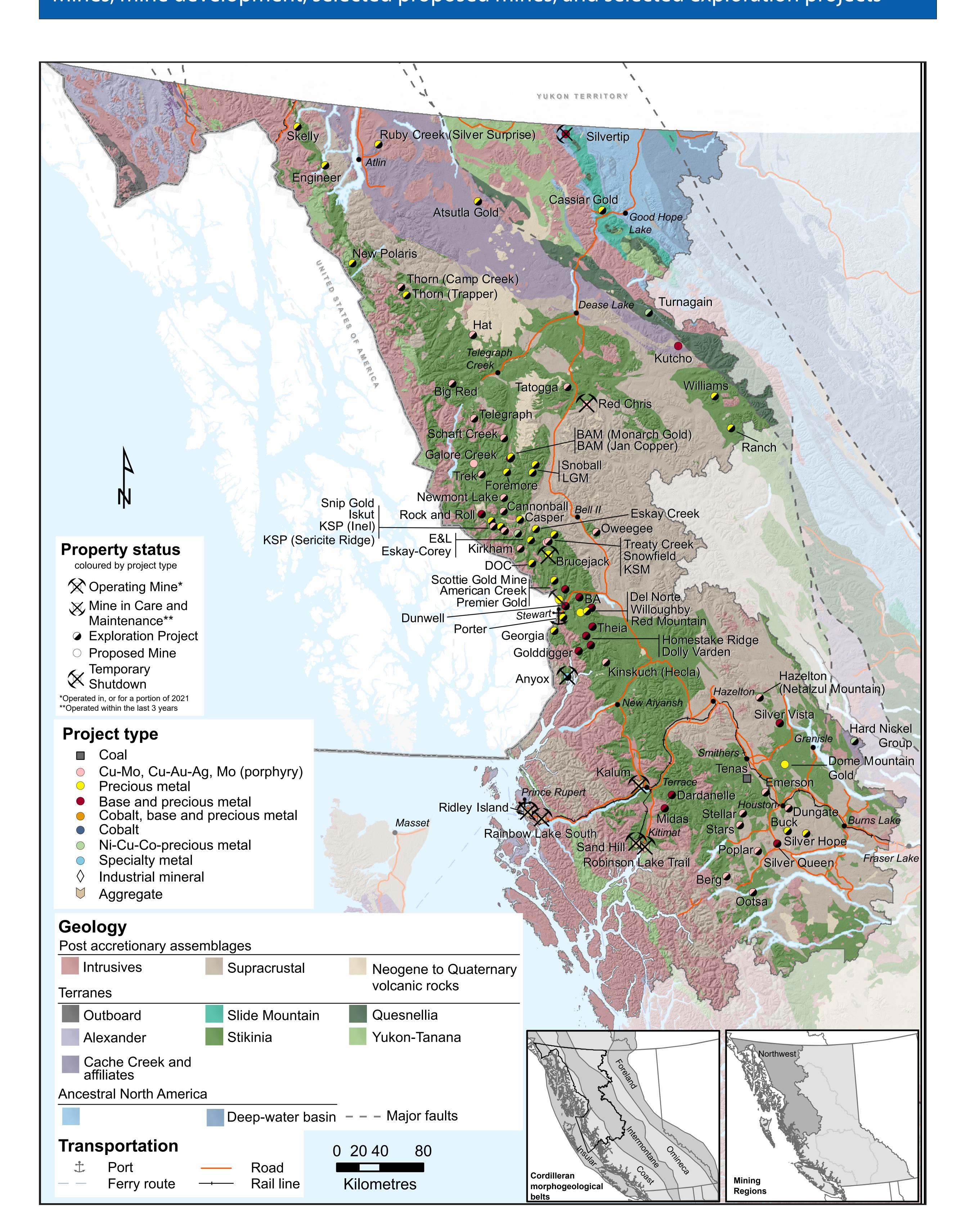
Total British Columbia:

- Exploration expenditures: \$ 657.9 million
- Drilling: 1,437,300 m
- Northwest Region: highest ever recorded
- Exploration expenditures: \$365.9 million Drilling: 992,200 m





Mines, mine development, selected proposed mines, and selected exploration projects



Exploration drilling highlights

BAM project (Jan Copper): 39.25 m grading 0.01 g/t Au, 1.10% Cu including 9.15 m grading 0.04 g/t Au, and 3.23% Cu.

Big Red (Libero Copper & Gold Corporation):118.7 m grading 0.26% Cu, 0.06 g/t Au, and 1.83 g/t Ag within 510.0 m grading 0.18% Cu, 0.04 g/t Au, and 1.23 g/t Ag.

Buck (Sun Summit Minerals Corp.): 4.0 m grading 31.6 g/t Au and 109 m grading 1.07 g/t Au.

Cassiar Gold (Cassiar Gold Corp.): Taurus 23.2 m grading 3.56 g/t Au, 13.1 m grading 3.53 g/t Au, and 37.8 m grading 1.8 g/t Au; drilling Cassiar South 4.8 m grading 35.1 g/t Au and 6.4 m grading 12.6 g/t Au.

Del Norte (Decade Resources Ltd.): 3.05 m grading 13.77 g/t Au, and 2661 g/t Ag within 9.91 m grading 4.28 g/t Au, 1091.6 g/t Ag; and base metals.

Dolly Varden (Dolly Varden Silver Corp.): 1,532 g/t Ag, 0.44 g/t Au, 2.11 % Pb, and 1.07% Zn along 1.22 m in a brecciated sulphide-rich quartz vein hosted within a broader pyrite stockwork breccia zone of 17.50 m averaging 214 g/t Ag, and 0.47% Pb.

Eskay Creek (Skeena Resources Ltd.): 8.20 m intersection grading 3.99 g/t Au and 71 g/t Ag; air rotary drilling of historic waste site, 22.80 m grading 4.16 g/t Au, and 204 g/t Ag and 16.77 m grading 5.90 g/t Au and 317 g/t Ag.

New Polaris (Canagold Resources Ltd.): 6.6 m grading 24.2 g/t Au, 3.9 m grading 30.8 g/t Au, 17.8 m grading 11.1 g/t Au, and 8.4 m grading 17.1 g/t Au.

Newmont Lake (Enduro Metals Corporation): 331.43 m grading 0.35 g/t Au, 5.5 g/t Ag, 0.29% Cu, and 0.49% Zn.

Ootsa (Surge Copper Corp.): 495 m grading 0.25% Cu, 0.21 g/t Au, 3.4 g/t Ag, and 0.021% Mo.

Ranch (Thesis Gold Inc.): 34 m grading 19.56 g/t Au, including 7 m grading 82.48 g/t Au, and 25 m grading 9.53 g/t Au.

Scottie Gold Mine (Scottie Resources Corp.): 10.0 m grading 16.5 g/t Au, 4.94 m grading 28.8 g/t Au, and 6.05 m grading 12.0 g/t Au.

Silver Queen (Equity Metals Corp.): 0.3 m grading 14,035g/t Ag, 0.1 g/t Au, 0.5% Cu, 1.3% Pb, and 3.3% Zn in a 7.7 m interval grading 919g/t Ag, 0.1g/t Au, 0.1% Cu, 1.3% Pb, and 1.8% Zn; also 1.4 m grading 1,097g/t Ag, 0.1g/t Au, 0.2% Cu, 0.5% Pb, 2.2% Zn, and 3.7 m grading 1,143g/t Ag, 0.1% Zn.

Silver Vista (Norseman Silver Inc.): 47.82 m grading 37 g/t Ag and 0.21% Cu. and 46 m grading 48 g/t Ag and 0.62% Cu.

Snip Gold (Hochschild Mining PLC): 3.22 m grading 155.76 g/t Au, 4.41 m grading 110.22 g/t Au, and 12.5 m grading 27.04 g/t Au.

Thorn (Camp Creek) (Brixton Metals Corporation): 821.25 m grading 0.24% Cu, 0.10 g/t Au, 2.44 g/t Ag, and 174 ppm Mo, with a 318.25 m interval grading 0.42% Cu, 0.17 g/t Au, 3.87 g/t Ag, and 294 ppm Mo.

Thorn (Trapper) (Brixton Metals Corporation): one hole 139 m grading 2.14 g/t Au, with 11.0 m interval grading 19.25 g/t Au; second hole 146 m grading 0.74 g/t Au with 31 m interval grading

Treaty Creek (Tudor Gold Corp. 60%, Teuton Resources Corp. 20%, American Creek Resources Ltd. 20%): 556.5 m grading 0.73 g/t Au, 6.27 g/t Ag, and 0.489% Cu and 1320 m grading 0.67 g/t Au, 3.70 g/t Ag, and 0.216% Cu.

Willoughby (Strikepoint Gold Inc.): 6.16 m grading 7.34 g/t Au, 202.84 g/t Ag.

Mining highlights

Brucejack: production for the first three quarters totalled 259,551 oz of Au at a head grade of 8.4 g/t Au and 347,956 oz Ag. The mill throughput in the first nine months of the year totalled 3735 tpd for a total of 1,019,563 t milled. As of January 1, 2021, Pretium reported Indicated and Measured mineral resources totalling 22.5 Mt grading 10.0 g/t Au and 67.5 g/t Ag, and Proven and Probable mineral reserves totalling 14.4 Mt grading 8.3 g/t Au and 63.8 g/t Ag. Resource expansion underground diamond drilling was carried out north of the Valley of the Kings deposit in a new area referred to as the North Block zone. Numerous high-grade intersections were reported including: 1 m grading 2,100.0 g/t Au; 12.0 m grading 80.7 g/t Au with a 1.0 m intersection grading 941.0 g/t Au; and 15.0 m grading 493.2 g/t Au, with a 1.0 m intersection grading 7,360 g/t Au. A new high-grade discovery was made in exploration drilling 3.5 km north of the mine at the Marmot zone. Highlights included intersections of 53.5 m grading 72.5 g/t Au, including 6,700 g/t Au along 0.5 m, 5.8 m grading 46.1 g/t Au, and 38.0 m grading 22.8 g/t Au.



Red Chris: production to the end of the third quarter of 2021 totalled 46,550 oz Au and 50.7 Mlbs Cu. A new mineral resource estimate was released with 980 Mt of Measured and Indicated, grading 0.41 g/t Au, 0.38% Cu, and 190 Mt of Inferred, grading 0.31 g/t Au, 0.30% Cu. Diamond drilling near the ore body discovered new zones of high-grade mineralization. Results included 198 m grading 0.89 g/t Au, and 0.83% Cu, and 254 m grading 1.0 g/t Au and 1.1% Cu. Further studies were ongoing to assess opportunities close to the mine.

Further information

Clarke, G., 2022. Exploration and mining in the Northwest Region, British Columbia. Provincial Overview of Exploration and Mining in British Columbia, 2021. British Columbia Ministry of Energy, Mines and Low Carbon Innovation, British Columbia Geological Survey, Information Circular 2022-01, pp 43-65.

EY LLP, 2022. British Columbia Mineral and Coal Exploration Survey 2021 Report.

Clarke, G., 2022. Exploration and mining highlights, Northwest Region, 2021. British Columbia Ministry of Energy, Mines and Low Carbon Innovation British Columbia Geological Survey GeoFile 2022-02 (poster).

