

January 21, 2022



# Knauss Creek Property

43-101

**NI 43-101 TECHNICAL REPORT**

**on the**

**KNAUSS CREEK PROPERTY**

Omineca Mining Division, British Columbia

BCGS Map No. 103I088 and NTS. Map No. 103I16W  
North Latitude  $54^{\circ}48'39''$   
West Longitude  $-128^{\circ}24'26''$

Prepared for

Prospect Ridge Resources Corp.

Prepared by:

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## **ITEM 1: SUMMARY**

### **1.1 Property Description and Ownership**

The Knauss Creek Property mineral claims are located in the Omineca Mining Division in British Columbia. The southern portion of the Property is approximately 35 km northeast of the City of Terrace. The Knauss Creek Property covers 3,152 hectares in mineral claims. Knauss Creek Mines Ltd. is the registered owner (100%) of all the claims of the Knauss Creek Property.

### **1.2 Geology and Mineralization**

The property is underlain by a sequence of stratified argillites, sandstones and conglomerates of the Jurassic to Cretaceous age Bowser Lake Group and Jurassic age Hazelton Group. These are intruded by granodioritic units ranging from Cretaceous to Tertiary in age. Hornfels alteration halos occur around the intruding granodioritic bodies. The Knauss Creek Property lies in the "Golden Triangle" area of north western British Columbia where extensively occurring precious and base-metal mineralization have historically been discovered.

In 1912, the Dorreen gold vein was discovered and developed intermittently from 1914 to 1952. Three ore shipments were made; in 1924, 1926 and 1952. In 1924, 80 tonnes of ore was shipped and reportedly assayed 57.26 grams per tonne gold, 205.71 grams per tonne silver, 1.3 per cent copper, 6.2 per cent lead and 5.8 per cent zinc. In 1926, approximately 8 tonnes of similar ore was shipped. In 1952, 476 tonnes of ore was shipped and 3,266 grams of gold, 8,118 grams of silver, 3,137 kilograms of lead and 1,342 kilograms of zinc were recovered. No further development has occurred since 1952.

### **1.3 Conclusions and Recommendations**

There is potential for the discovery of gold-bearing veins similar the veins occurring in the historical Dorreen Mine. The possible sources are considered to be intrusion-related and structurally controlled polymetallic veins. Further work is required to determine the full mechanisms that resulted in the documented gold mineralization and potential new deposits on the Knauss Creek Property.

Recommended future work would include expanded comprehensive geological, geochemical and geophysical surveys. Drilling would be used to confirm the trend of the historical orebody in the Dorreen Mine. The target deposit types have in the past been polymetallic gold veins. The possibility of porphyry type deposits may and should also be considered due to their typical large size. The recommended exploration budget for exploration on the Knauss Creek Property is \$200,000.

## **ITEM 2: INTRODUCTION**

This Technical Report has been prepared for Prospect Ridge Resources Corp. The current Knauss Creek Property was initially staked to cover the historical Dorreen Mine and areas where historical records indicated locations where further exploration work was merited.

The purpose of this report is to provide the current status of the Property, to review historical geological, geochemical and geophysical data available in Ministry of Energy and Mines' Minfiles, mineral claim Assessment Reports and other sources. This author has not visited the Knauss Creek Property. A detailed list of all references cited is in ITEM 27 - References in this report. Chemical abbreviations are used in this report for the elements discussed. These abbreviations and other terms are defined in ITEM 28 – Glossary of Technical Terms and Abbreviations.

This report borrows or quotes from historical government reports of the area, including BCGS Assessment Reports, BC Minister of Mines Annual Reports, Geological Survey of Canada Reports.

## **ITEM 3: RELIANCE on OTHER EXPERTS**

Information regarding historical work in the area of the present Knauss Creek Property was obtained from the BC Government Ministry of Energy And Mines, from their website front counter, Map Place:

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

and from their Minfile Mineral Occurrence Database:

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

and from their online Assessment Report Indexing System (ARIS):

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

and from their online mineral claim staking system Mineral Titles Online:

<https://www.mtonline.gov.bc.ca/mtov/home.do>

Rod Meredith, RPF., (Registered Professional Forester) provided in Mineral Claim Assessment Reports 31459 and 32450, information regarding First Nations interests. This information is quoted in this Technical Report in ITEM 24 - Other Relevant Data and Information.

#### ITEM 4: PROPERTY DESCRIPTION and LOCATION

Mineral claim Tenures grant access to minerals but not to include ownership rights to surface, land, water or forests. Extraction of minerals is governed by permits issued by the Ministry of Energy, Mines and Petroleum Resources.

The Knauss Creek Property mineral claims, owned by Knauss Creek Mines Ltd., are located in the Omineca Mining Division in northwestern British Columbia. The southern portion of the Property is approximately 30 km northeast of the City of Terrace. The geographic coordinates of the Knauss Creek Property are at the abandoned Dorreen Mine:

54°48'39" North Latitude and -128°24'26" Longitude or 538097 m E and 6073903 m N UTM coordinates (NAD 83, Zone 9). The relevant map is: N.T.S. Map No. 103I/16W.



Figure No. 1. Knauss Creek Property Location in British Columbia.



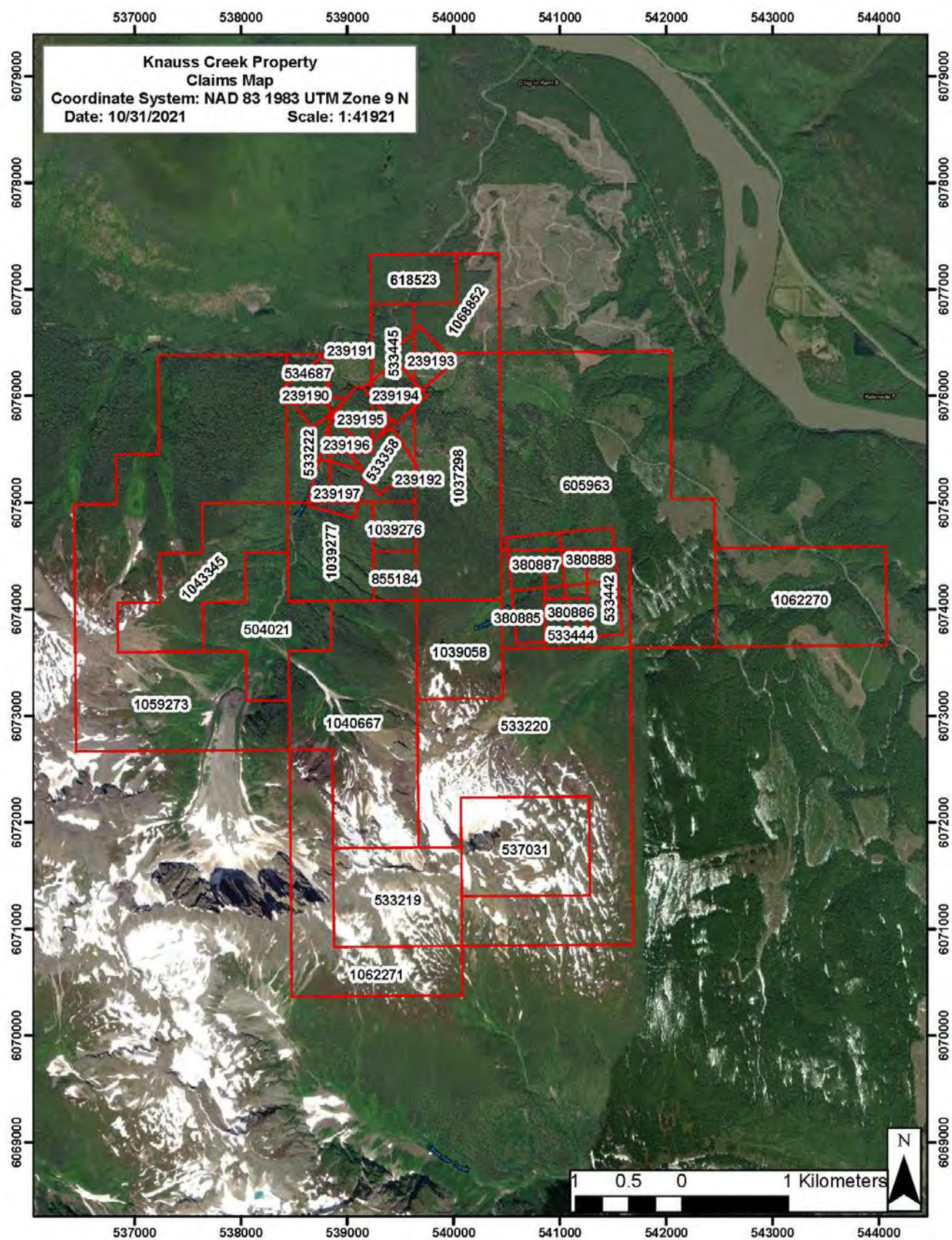


Figure 2 Knauss Creek Property Mineral Tenures.



The Knauss Creek Property consists of the mineral claim tenures illustrated in Figure No. 2 and listed in Table No. 1, acquired and maintained under Mineral Titles Online (MTO), British Columbia's internet-based mineral titles administration system. Table No. 1 provides the list of Knauss Creek mineral claims. Knauss Creek Mines Ltd. (MTO Client ID 201270) is the registered owner (100%) of all the claims.

Claim ID No.	Claim Name	Owner ID No.	Claim Type	Area (ha)	Issue Date	Good To Date	Status
239190		201270 (100%)	Mineral	25.0	1986/JUN/26	2022/NOV/10	GOOD
239191		201270 (100%)	Mineral	25.0	1986/JUN/26	2022/NOV/10	GOOD
239192		201270 (100%)	Mineral	25.0	1986/JUN/26	2022/NOV/10	GOOD
239193		201270 (100%)	Mineral	25.0	1986/JUN/26	2022/NOV/10	GOOD
239194		201270 (100%)	Mineral	25.0	1986/JUN/26	2022/NOV/10	GOOD
239195		201270 (100%)	Mineral	25.0	1986/JUN/26	2022/NOV/10	GOOD
239196		201270 (100%)	Mineral	25.0	1986/JUN/26	2022/NOV/10	GOOD
239197		201270 (100%)	Mineral	25.0	1986/JUN/26	2022/NOV/10	GOOD
380885	MUNIN 1	201270 (100%)	Mineral	25.0	2000/SEP/21	2022/NOV/10	GOOD
380886	MUNIN 2	201270 (100%)	Mineral	25.0	2000/SEP/25	2022/NOV/10	GOOD
380887	MUNIN 3	201270 (100%)	Mineral	25.0	2000/SEP/21	2022/NOV/10	GOOD
380888	MUNIN 4	201270 (100%)	Mineral	25.0	2000/SEP/25	2022/NOV/10	GOOD
504021		201270 (100%)	Mineral	93.2	2005/JAN/17	2022/NOV/10	GOOD
533219	11-ICE	201270 (100%)	Mineral	111.9	2006/APR/30	2022/NOV/10	GOOD
533220	MUN	201270 (100%)	Mineral	373.0	2006/APR/30	2022/NOV/10	GOOD
533222	SAT	201270 (100%)	Mineral	37.3	2006/APR/30	2022/NOV/10	GOOD
533358	CAMILLE	201270 (100%)	Mineral	55.9	2006/MAY/02	2022/NOV/10	GOOD
533442	MTWO	201270 (100%)	Mineral	37.3	2006/MAY/03	2022/NOV/10	GOOD
533444	M THREE	201270 (100%)	Mineral	18.6	2006/MAY/03	2022/NOV/10	GOOD
533445	SAT U	201270 (100%)	Mineral	37.3	2006/MAY/03	2022/NOV/10	GOOD
534687	AUM 8	201270 (100%)	Mineral	18.6	2006/MAY/31	2022/NOV/10	GOOD
537031	AMY	201270 (100%)	Mineral	111.9	2006/JUL/13	2022/NOV/10	GOOD
605963	GALAXY	201270 (100%)	Mineral	391.4	2009/JUN/13	2022/NOV/10	GOOD
618523	ASHLEE1	201270 (100%)	Mineral	37.3	2009/AUG/13	2022/NOV/10	GOOD
855184	OM6	201270 (100%)	Mineral	18.6	2011/MAY/18	2022/NOV/10	GOOD
1037298	SATURN 4	201270 (100%)	Mineral	186.4	2015/JUL/13	2022/NOV/10	GOOD
1039058	CAROL	201270 (100%)	Mineral	74.6	2015/OCT/03	2023/JUN/29	GOOD
1039276	JESS1	201270 (100%)	Mineral	18.6	2015/OCT/13	2022/NOV/10	GOOD
1039277	JESS2	201270 (100%)	Mineral	74.6	2015/OCT/13	2022/NOV/10	GOOD
1040667	K9	201270 (100%)	Mineral	223.7	2015/DEC/22	2022/NOV/10	GOOD
1043345	FREEDOM	201270 (100%)	Mineral	111.8	2016/APR/08	2022/NOV/10	GOOD
1059273	DUTCHY	201270 (100%)	Mineral	466.0	2018/MAR/14	2022/NOV/10	GOOD
1062270	ACE IN THE HOLE	201270 (100%)	Mineral	149.1	2018/AUG/09	2022/NOV/10	GOOD
1062271	KANDY 2	201270 (100%)	Mineral	149.2	2018/AUG/09	2022/NOV/10	GOOD
1068852	ORIGA	201270 (100%)	Mineral	55.9	2019/JUN/02	2022/NOV/10	GOOD
				3,152.2	(total)		

Table No. 1. Mineral Claim Details.

First Nations may have aboriginal interests in the registered mineral tenure area. A further discussion of this is in Item 24 - Other Relevant Data and Information.

This author is not aware of any liabilities that may have potentially resulted from any historical activity that may affect access, title, or the right or ability to perform work on the property. There are no known environmental liabilities to which the Knauss Creek Property is subject. If positive results are made and future drilling is warranted, the necessary permits will be required.

The owner of a mineral claim gains the right to sub-surface minerals covered by that mineral claim as defined in the Mineral Tenure Act of British Columbia. Surface rights and placer rights are not included. Subject to the Mineral Tenure Act, a free miner or an agent of a free miner may legally enter mineral lands to explore for minerals. A free miner may be a company or an individual.

Mineral claims are valid for one year after staking. To maintain the mineral claim in good standing the claim holder must, on or before the anniversary date of the claim, pay a prescribed recording fee and record the exploration and development work that was carried out on that claim during the current anniversary year or pay cash in lieu of work. The value of exploration and development required to maintain a mineral claim for one year is at least:

\$5 per hectare for each of the first and second anniversary years,  
\$10 per hectare for each of the third and fourth anniversary years,  
\$15 per hectare for each of the fifth and sixth anniversary years, and  
\$20 per hectare for each subsequent anniversary year.

Only work and associated costs for the current anniversary year of the mineral claim may be applied toward that claim unit. If the value of work performed in any year exceeds the required minimum, the value of the excess work can be applied to future anniversary years to a maximum of ten years.

An assessment report describing the work done and associated expenditures must be filed, and approved by the BC Ministry of Energy and Mines.

#### **4.1 Ownership**

The mineral claims that make up Knauss Creek Property are in good standing and registered to Knauss Creek Mines Ltd. with 100% ownership.

## **ITEM 5: ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE and PHYSIOGRAPHY**

The Knauss Creek Property is located within the Omineca Mining Division in west-central British Columbia. It is located approximately 35 km north of the City of Terrace, 80 km west of the Town of Smithers and 130 km northeast of the City of Prince Rupert. These resource-based communities can provide most of the services and supplies used in mining exploration. Deep water port and railway connections are at Prince Rupert, and at Kitimat 50 km south from Terrace.

The operating season for the higher alpine regions of the claims is late spring to late summer when there is minimum snow cover (June to August). Lower elevations of the claim block can be worked from early spring to late fall (April to November).

The Property is mountainous with elevations ranging between approximately 400 m and 1,800 m. Some of the Property is alpine where topography is variably moderate and rugged with patchy low vegetation. The climate is west coast rainforest. Lower elevation vegetation is characterized by dense coniferous forest. Precipitation in the region is heavy, as rain in the summer and snow in the winter. The Property is on the northeast side of Knauss Mountain such that mostly northward and eastward flowing streams drain the property.

The Property is accessible on its east side with forest service roads, classified as loose to rough gravel roads. Locally, patches of forest have been clear-cut adjacent to these roads. The roads' drivability has not been thoroughly investigated. The primary access road for north of Terrace is the Yellowhead Highway (British Columbia Hwy 16). It is paved part ways. Three-phase power lines run north-south approximately 25 km west of the Property. The Yellowhead Highway (Hwy 16) runs north-south on the east side of Skeena River, approximately 5 km east of the Property. There are several logging operations through the lower elevations in the northern and eastern portions of the claim block that have that have provided access roads.

Access to the abandoned Doreen Gold Mine on Knauss Creek in 2005 is described in detail by LeBlond in Assessment Report 27937 (2005) thus:

*Entrance was gained via West Fiddler Creek logging road, 20 km North of Terrace, BC on Highway 16 East. Follow the logging road for 21 km to Br 300 sign and park vehicle. The Doreen Gold Mine road is about 20 metres (m) from the sign. Walk West for 1,500m. Road washed out and overgrown for first 500m, a further 1,000m in reasonable shape, then road was abandoned due to large windfalls and bush. New trail located 20m West (down-slope) and flagged for 500m, follow flagging upslope and East to mudslide, cross and follow trail cut and flagged,*

*across mill creek. Mill creek bridge washed away. Follow road/trail a further 50m to the main base station (MBS) for this work. The Doreen Gold Mine mill is located 60m to the West. The road continues to the next creek. No ATV trails available. Roads cut to 2m and trails to 1m.*

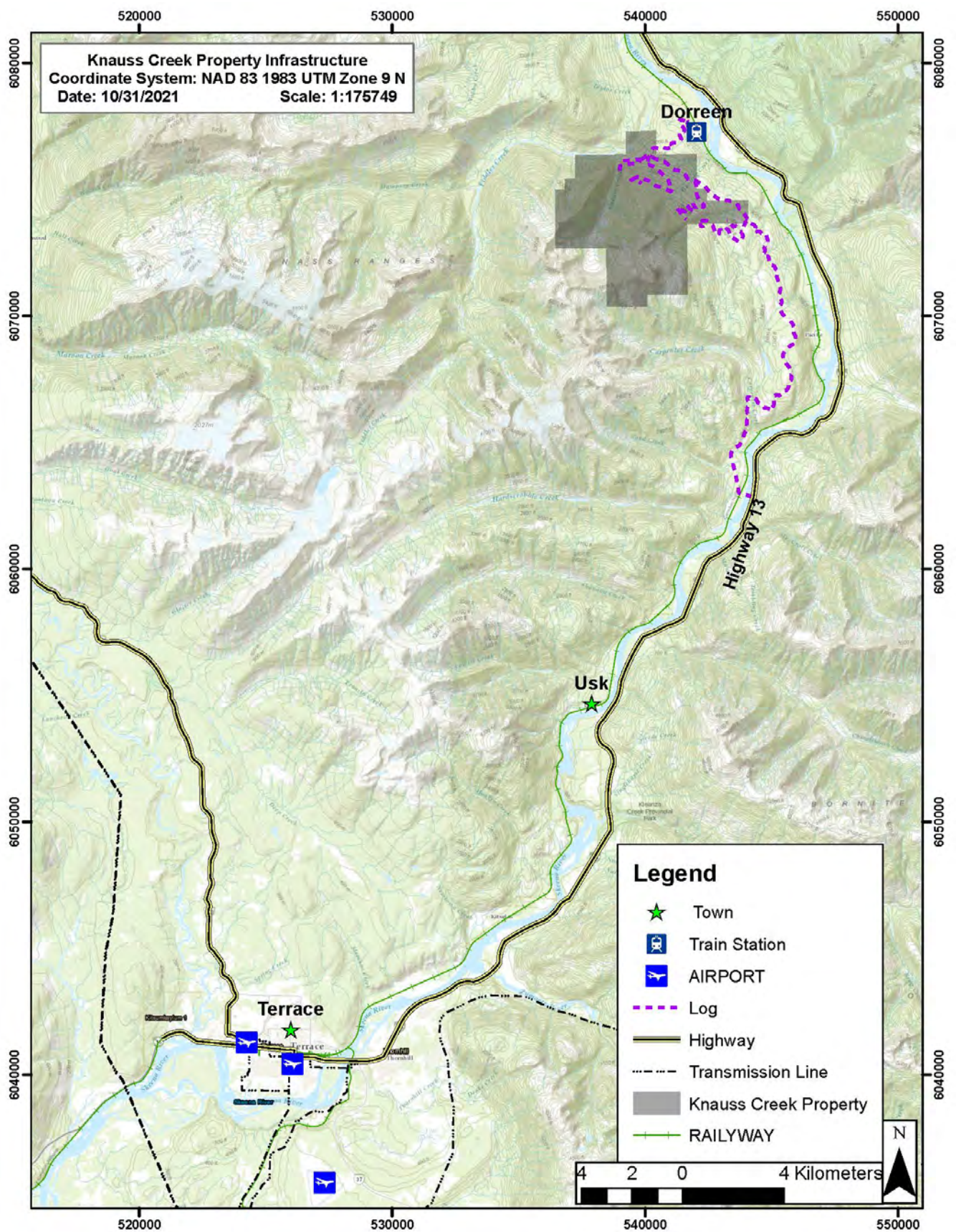


Figure No. 3. Knauss Creek Property Infrastructure.



## ITEM 6: HISTORY

This author cannot verify the quality or accuracy of historical geochemical results or descriptions quoted in this History section or in the References. The historical recommendations made by others do not necessarily accord with this author's.

The BC Ministry of Energy and Mines' approved mineral exploration Assessment Reports are filed by the exploration and mining industry on completion of an exploration program. These reports provide information on geological, geophysical, geochemical, drilling and other exploration-related activities throughout BC. The reports are scanned and available for viewing or printing from the British Columbia Geological Survey website:

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

Significant historical work has been documented on the historical Fiddler Creek Property area, including the historical Dorreen Gold Mine. The area is now covered by the Knauss Creek Property.

The information below derives from the BCGS and GSC publications: (Kindle, 1937, GSC Memoir 212), (Duffel and Souther, 1964, GSC Memoir 329) and (BC Ministry of Mines Annual Report, 1916).

**The Dorreen Gold Mine and ore body** are located at and above the 2,250 foot (686 metre) elevation on the western bank of Knauss Creek. The mineralization was described by Kindle as '*typically grading 1 to 2 percent pyrite, galena, sphalerite and chalcopyrite up to 30% of these sulphides*' (Kindle, 1937). The ore deposit is a bedding-parallel fault controlled a quartz vein system that was developed intermittently from 1914 to 1952. The collective production was approximately 700 tons of ore with grades that reached: gold, 1.67 oz/ton; silver, 6 oz/ton; copper, 1.3% lead, 6.2%; and zinc, 5.8%. [Duffel and Souther, 1964].

The vein was described as *a bedded fissure vein, very regular, persistent and well defined. The vein varies in thickness up to 1.2 metres and [is widest] where in contact with a 100 foot [30 metre] wide steeply dipping, northwest trending, crosscutting, pink porphyritic quartz diorite dyke. It is considered that the vein has been formed from mineralizing agencies set up by granitic dykes. As a rule, where the vein was seen as outcropping, it consisted of quartz, with very little sulphides, but in practically in every case a little development has shown a well-mineralized vein...The present showing of ore on the property are very encouraging; the vein is small but very clean and well defined and the values are decidedly good. If with further development the vein holds up to present*



*indications, then there is no reason why the property should not pay nicely. [MMAR 1916].*

*Historical surface mining and underground mine development work support for the potential for the extension of both the mineralized vein and the diorite dyke. Other vein exposures are reported to outcrop farther southwest along the mountain side. [Kindle, 1937].*

It is stated in BCGS Minfile 103I 048:

*In 1912, the Dorreen gold vein was discovered and developed intermittently from 1914 to 1952. Three ore shipments were made; in 1924, 1926 and 1952. In 1924, 80 tonnes of ore was shipped and reportedly assayed 57.26 grams per tonne gold, 205.71 grams per tonne silver, 1.3 per cent copper, 6.2 per cent lead and 5.8 per cent zinc. In 1926, approximately 8 tonnes of similar ore was shipped. In 1952, 476 tonnes of ore was shipped and 3266 grams of gold, 8118 grams of silver, 3137 kilograms of lead and 1342 kilograms of zinc were recovered. No further development has occurred since 1952.*

#### **6.1 Work done in 1966**

Assessment Report 798 by Murphey, DJ and Richardson, PW:

Work was done by Southwest Potash Corp. on a northern tributary of Carpenter Creek adjacent on the south side of the current Knauss Creek Property claim no. 533220. Geological mapping was done and a total of 48 rock, soil, stream silt and water samples were collected. Further rock and soil sampling was recommended.

#### **6.2 Work done in 1980**

Assessment Report 8374 by Livingstone, KW:

Work done by Prism Resources Corp. included prospecting in the same location as work in Assessment Report 798. Further rock and soil sampling and geologic mapping was recommended.

#### **6.3 Work done in 1981**

Assessment Report 9524 by Livingstone, KW and Carter, NC:

Work done by owner Livingstone included collection of 74 soil and 85 rock samples in the same location as in Assessment Reports 798 and 8374. Further geological mapping and diamond drilling was recommended.

#### **6.4 Work done in 1981**

Assessment Report 10033 by Englund, RJ:

Work done by Canamco Resources Ltd. included an airborne magnetic and VLF electromagnetic survey was done over 206 line kilometres on the Top 1-8 mineral claimgroup covering Knauss Creek, 80 km west of Smithers and 30 km north of Terrace, B.C. The purpose of the survey was to delineate structural anomalies which may relate to known gold and silver prospects on the property. A ground

VLF-EM survey and geological mapping were recommended to follow up conductive anomalies discovered by the airborne survey.

#### **6.5 Work done in 1981**

Assessment Report 10440 by Cooke, DL:

Work was done by Cominco Ltd. in the same location as in Assessment Reports 798, 8374 and 9524 – Womo claims, adjacent south of the current Knauss Creek Property. 201 rock samples were collected and a geological compilation map was made. It was determined *coincident anomalous Cu and Mo areas form a NNW band overlying the biotite quartz feldspar porphyry dike and adjacent sedimentary rocks...The mineralization occurs in the contact area between a Coast biotite granodiorite intrusion and hornfelsic Bowser Group metasedimentary rocks. At least two generations of hypabyssal porphyry dikes are also very abundant along the main regional contact. The biotite quartz feldspar porphyry is pre-mineral and the quartz porphyry is post mineral.* It was recommended that further work was required to determine the continuity of the sampled veins.

#### **6.6 Work done in 1983**

Assessment Report 12625 by LeBlond L:

Work done by owner LeBlond included collection of 53 soil samples on the Saturn and Uranus claims, centered over the abandoned Dorreen Mine near the south end of Knauss Creek. The soil survey covered a magnetic anomaly detected in a previous 1981 work program. Further soil sampling was recommended along with trenching in order to reveal the edge of a diorite dyke.

#### **6.7 Work done in 1985**

Assessment Report 13956 by LeBlond L:

Work by LeBlond included a magnetic geophysical survey done over a total of approximately 3.5 line kilometres along Knauss Creek on the Saturn 2 claimgroup. A linear anomaly was considered to be associated with a granodiorite dyke. Further work to the south was recommended to include geophysical surveying and trenching to expose bedrock in order to determine the cause of the magnetic anomaly.

#### **6.8 Work done in 1985**

Assessment Report 14538 by LeBlond L:

Work by LeBlond included a magnetometer geophysical survey done over a total of approximately 2.3 line kilometres along Knauss Creek on the Saturn claimgroup. Several magnetic anomalies occurred over brown stained quartz exposures. Unspecified further work was recommended.

## **6.9 Work done in 1986**

Assessment Report 15031 by LeBlond L:

Work by LeBlond included a ground VLF=EM electromagnetic survey done on the Saturn claimgroup. Two conductive anomalies were indicated, one alongside a diorite dyke. Unspecified further work was recommended.

## **6.10 Work done in 1987**

Assessment Report 16160 by LeBlond L:

Work by LeBlond included a ground VLF-EM electromagnetic survey done on the Saturn 2 claimgroup over the same grid along Knauss Creek as was done in 1985. Seven mining leases, previously owned by another, were now included in the Saturn 2 group owned by LeBlond. Two conductive anomalies were discovered, one possibly associated with a geological fault. The survey grid was recommended to be extended further to the west and further follow up work to be done.

## **6.11 Work done in 1989**

Assessment Report 19349 by LeBlond L:

Work by LeBlond was done on the Leenev claims adjoining Saturn 3 claim near the northern end of Knauss Creek in the area of the current Knauss Creek Property claim no. 1068852. The work included a ground VLF-EM electromagnetic survey over 4.7 line-km. The purpose of the survey was to determine whether conductive structures on separate claims were associated. It was concluded that the structures on the two properties were similar. It was considered a conductor anomaly on the Leenev conformed with a similar conductor anomaly on the Saturn.

## **6.12 Work done in 1990**

Assessment Report 20344 by LeBlond L:

Work by LeBlond was done on 4.7 line-km, as the previous year, near the northern end of Knauss Creek in the area of reverted crown granted claims, now designated in the current Knauss Creek Property as claim nos. 239193 and 239194. A VLF-EM survey was done along with a self-potential survey done over the same grid and 52 soil samples collected. The following conclusions were drawn:

*The results of all surveys correspond in general with known mineral occurrences on the Saturn 3 claim. The width of the mineralized area known so far, are veins spread over an area of 450 metres wide with one side open. The veins are open both ends on strike. Structure and mineralization on the Saturn 3 claim could lead to an interesting tonnage potential with further exploration.*

### **6.13 Work done in 1991**

Assessment Report 21894 by LeBlond L:

A ground VLF electromagnetic survey was done on the Rey1 claim, within the Sun group adjoining the Saturn 3 claims and Leenev claims, all owned by LeBlond. The work area was located near the northern end of Knauss Creek in the area of reverted crown granted claims, now designated in the current Knauss Creek Property as claim no. 239193. The purpose of the survey was to locate the eastern boundary of the Jen vein system. No new conductive geophysical anomalies were discovered. Further work was recommended to extend the sampling grid westward.

### **6.14 Work done in 1996**

Assessment Report 24688 by LeBlond L:

Work by LeBlond was done on the Hugin Claims at the southern end of Gosling Creek in the area of the current Knauss Creek Property claim no. 1039058. 15 rock samples were collected in the course of prospecting and geological mapping. A VLF-EM survey was conducted over a grid of 440 m. No significant anomaly was discovered. Unspecified follow up work was recommended.

### **6.15 Work done in 1997**

Assessment Report 25603 by LeBlond L:

Work by LeBlond was done on the Dwalis claims between Knauss and Gosling Creeks on the north side of the Hugin claims. This area is in the current Knauss Creek Property claim no. 103798. A VLF-EM survey was conducted over a grid of 440 m. A conductor anomaly was discovered though it was not relatable to any cause at the time. Unspecified follow up work was recommended.

### **6.16 Work done in 1998**

Assessment Report 25758 by LeBlond L:

48 soil and 8 rock samples were collected over a grid on the Saturn 3 claims, previously been known as the 'Brentford Group' and currently as the Knauss Creek Property claim no. 239193. The purpose was to determine the extensions of known veins. 48 soil and 8 rock samples were collected. No important soils anomalies occurred. Further VLF-EM surveying was recommended as well as soil test pits.

### **6.17 Work done in 2000**

Assessment Report 26430 by LeBlond, L:

Work by LeBlond was done on the Hugin claims. 15 rock samples were taken from 'massive' sulphides associated with quartz veins at a geological contact. Unspecified follow up work was recommended.

### **6.18 Work done in 2001**

Assessment Report 26640 by LeBlond, L:

Work by LeBlond was done on the Munin claims, adjacent to the Hugin and Dwalis claims. 15 rock samples were collected in the course of prospecting. Unspecified follow up work was recommended to be performed on shear zones and locations of anomalous gold values.

### **6.19 Work done in 2002**

Assessment Report 27020 by LeBlond, L:

Work by LeBlond included collection of 16 rock samples in the course of prospecting on the Hugin claims. It was considered the mineralization was related to contact metamorphism adjacent to a quartz feldspar porphyry. Unspecified follow up work was recommended.

### **6.20 Work done in 2003**

Assessment Report 27225 by LeBlond, L:

The Saturn 3 claim group had previously been known as the 'Brentford Group.' The work was done in the area of the current Knauss Creek Property claim nos. 239193, 239194 and 239195. Work by LeBlond included collection of 9 rock samples in the course of prospecting done over known mineralization. A VLF-EM survey was conducted over a grid of 330 m. It was considered conductor anomalies coincided with quartz veins in known faults. Unspecified follow up work was recommended in order to achieve a better understanding of the vein systems.

### **6.21 Work done in 2004**

Assessment Report 27676 by LeBlond, L:

Work by LeBlond was done in the headwaters of Knauss Creek on the Kandy claims, on the west side of the Hugin and Dwalis claims. The work was done in the area of the current Knauss Creek Property claim no. 504021. 4 rock samples were collected in the course of prospecting. A quartz vein was found to extend approximately 400 m. A VLF-EM survey was conducted over a grid 330 m. The results of this were inconclusive. Unspecified follow up work was recommended.

### **6.22 Work done in 2004**

Assessment Report 27784 by Salat, HP:

Argonaut Resources Inc. conducted a cursory examination of physiographic conditions, access and geology in the area of the current Knauss Creek Property claim no. 1050273. Follow up recommendations were made thus:

*Work recommendations imply development of road or trail access to the property, followed by thorough mapping, structural mapping and a prospecting program. Owing to the good forest soil development, a soil geochemistry program should reveal dispersion of sub-surface mineralization and could be carried out over a good grid system. The structural mapping can be followed up with an exploratory phase of drilling on defined mineral targets.*

### **6.23 Work done in 2005**

Assessment Report 27937 by LeBlond, L:

Work by LeBlond was done in the headwaters of Knauss Creek in the area of the current Knauss Creek Property claim no. 1059273. The work consisted chiefly of prospecting. 4 rock samples were collected for geochemical analysis. A recommendation was made for further prospecting.

### **6.24 Work done in 2006**

Assessment Report 28567 by R. Meredith, R and L. LeBlond, L:

Work was done by Knauss Creek Mines Ltd. in the area of the current Knauss Creek Property claim no. 1037298. This is on the east side of the old Brentwood group of claims. 11 rock samples and 10 soil samples were collected. A VLF-EM survey was conducted over the Cong grid of 2.7 line-km. Several electromagnetic conductors were discovered, some associated with anomalous soil geochemical results. It was concluded that mineralized rock and likely associated mineralized veins occur underneath a conglomerate bed. Recommended further work included trenching, drilling and geochemical assessment.

### **6.25 Work done in 2006**

Assessment Report 28577 by Meredith, R. and LeBlond L:

The work was done in the area of the current Knauss Creek Property claim nos. 380885 to 380888, formerly the Brentwood group of claims. 24 rock samples and 10 soil samples were collected in the course of prospecting. A VLF-EM survey was conducted over the Munin grid of 2.4 line-km. A large electromagnetic anomaly was detected over a 75 m distance. From the geophysical and geochemical data, the reason for this anomaly was inconclusive. Trenching and drilling was recommended to follow up this anomaly.

### **6.26 Work done in 2006**

Assessment Report 29216 by Cook, RA:

The Patmore showing occurs adjacent to the western side of Knauss Creek Property claim no. 1059273. Work done by Argonaut Resources Inc. included collection of 30 rock samples in the course of prospecting.

Recommendations for further work were *thorough mapping, structural mapping, prospecting and trenching programs. A soil geochemistry program...over a large grid system. Follow up on this was to include drilling on defined targets.*

The GPS location for the Dorreen Mine south adit is provided in Assessment Report 29216 as latitude 54°48'45.1" and longitude 128°24'16.8". The EMPR Minfile 103I 048 provides the location for Dorreen as latitude 54°48'39" and longitude 128°24'26" or UTM 538097E and 6073903N.



### **6.27 Work done in 2007**

Assessment Report 29379 by LeBlond, L:

Work was done by Knauss Creek Mines Ltd. in the area of the Knauss Creek Property claim no. 537031. 28 rock samples and 2 stream sediment samples were collected in the course of prospecting. A VLF-EM survey was conducted over the Amy grid of 1.9 line-km. The Amy VLF-EM survey corresponded to a shear zone on the ground, estimated to have a width of 10 to 20 metres. Unspecified follow up work related to the shear zone was recommended.

### **6.28 Work done in 2007**

Assessment Report 29380 by LeBlond, L:

Work was done by Knauss Creek Mines Ltd. in the area of the Knauss Creek Property claim no. 533220. 5 rock samples were collected in the course of prospecting. A VLF-EM survey was conducted over the Mun grid of approximately 800 m. The Mun VLF-EM survey was located adjacent to the Amy Grid, surveyed the same year. Unspecified follow up work related to the Amy fault was recommended.

### **6.29 Work done in 2008**

Assessment Report 30505 by LeBlond, L:

Work was done by Knauss Creek Mines Ltd. in the area of the Knauss Creek Property claim no. 504021. 6 rock samples were collected in the course of prospecting. A VLF-EM geophysical survey was conducted over 1.0 line-km. It was acknowledged that past panning of a tributary creek of Knauss Creek between grid lines 7 and 8, produced gold in black sands. Recommended further work included a VLF-EM survey to be done on the northwest side of Knauss Creek, extending to the historical Dorreen Mine, focusing on locating mineralized faults.

### **6.30 Work done in 2009**

Assessment Report 31459 by Meredith, R. and LeBlond, L:

Work was done by Knauss Creek Mines Ltd. in the area of the former Brentford claim group, described in BCGS Minfile 103I 188. This is on the eastern side of Knauss Creek, near the creek's confluence with Fiddler Creek. 17 rock samples and 20 stream silt samples were collected in the course of prospecting. A VLF-EM survey was conducted over 6.7 line-km on the Ben Grid. Recommendations for future work were to include further geological, geophysical and geochemical surveys.

### **6.31 Work done in 2010**

Assessment Report 32450 by LeBlond, L. and Meredith, R:

Work was done by Knauss Creek Mines Ltd. primarily at Gosling Creek in the area of the Knauss Creek Property claim no. 605963. 6 rock samples were collected in the course of prospecting. A fault associated with Gosling Creek was considered an important feature of the local geology; consequently a VLF-EM survey was

conducted over 3.2 line-km on the Galaxy Grid. It was concluded '*nothing remarkable was observed in the electromagnetic data or rock samples.*'

### **6.32 Work done in 2015**

Assessment Report 35919 by Ostensoe, E:

The Pitman-Keaper project, owned by Casa Minerals Inc., was located adjacent to the southeastern side of Knauss Creek Property claim no. 533220. It was concluded from the soil sampling results '*the Pitman molybdenite occurrences supports the exploration model that associates molybdenum with leucocratic granitic intrusions and is a useful addition to the exploration database. Further work, including prospecting, soil sampling and detailed geologic mapping, is required.*' It was recommended the sample grid to be enlarged.

### **6.33 Work done in 2016**

Assessment Report 36204 by Beck, R:

The work was done in the area of the current Knauss Creek Property claim nos. and 239194, 1037298 and 533220. The program was designed to revisit a known area of abundant quartz veining in order to observe the veining style and their occurrence. 16 rock samples were collected in the course of prospecting. It was considered the veining system in the northern portion of the property was rich in mineralization, similar to veins sampled in previous exploration programs. Extensive regional and property-scale sampling programs were recommended, along with VLF-EM electromagnetic surveys, followed up by back pack and diamond drilling.

### **6.34 Work done in 2017**

Assessment Report 37349 by Beck, R:

The work was done in the area of the current Knauss Creek Property claim nos. and 239194, 1037298 and 533220. 16 rock samples were collected in the course of prospecting. It was stated '*veins are plentiful; some conjugate many en echelons and with others present as stand-alone. The veins from inside and around the historical adit were heavily mineralized with galena, silver and chalcopyrite all readily observed.*' A much wider-scoped program of prospecting was recommended.

### **6.35 Work done in 2018**

Assessment Report 37775 by Beck, R:

Work by Knauss Creek Mines Ltd. included collection of 17 rock samples in the course of prospecting on the claim nos. 1039277 533445, 533358, 1040667 and 1037298. Results were considered favorable and of worth follow up in future programs. It was stated in the Report:

*Rock samples were taken from a float pile...located at the historical Dorreen Mine Mill site and end of the 1952 tramway. As these were random samples taken to represent what is thought to be material from the Dorreen (Fiddler) vein...sample*

502651 was deemed excellent with 20.2g/t gold assay and elevated zinc, silver and lead. Further investigation at the actual historical adit is necessary to further validate this assumption.

It was concluded:

*In previous years...focus had been on the Saturn group of claims in the lower reaches of the property and measurements of these in situ veins provided excellent insight into their possible true length. Samples of in situ quartz veining along the high road, sample# 592638 was an approximate 5 feet in width, vertical and with the same azimuth as the Saturn adit vein; 052 degrees. This would put this vein at over 800m in strike length.*

*Exploration and sampling in the lower reaches of the Saturn claims yielded some valuable information this time around as well; the J1, J2 and J3 veins are all with an azimuth between 052 and 058 degrees with an almost even distribution of 10m – 15m separation. In addition to the en echelon NE-SW striking vein sets we successfully encountered a 2-foot-wide vertical conjugate vein with an azimuth of 150 degrees within the J3 vein area.*

*In conclusion it appears there is much more to uncover throughout this property with isolated focused areas providing a great starting point... The veins exist in situ, many are mineralized, [forming] a pattern...to their presence and location.*

Recommendations for further work were thus:

*The results of the 2018 program were considered excellent and above expectations for their elemental assay results as well as their location and their structural settings. Future field work is warranted, and new "Phase" approaches are described below:*

### **Phase I**

- *Property wide regional mapping program.*
- *Property wide detailed mapping program (where warranted).*
- *Property wide rock sampling program to accompany the mapping program.*
- *Select geochemical soil sampling over top of known sampled mineralized vein systems.*
- *Broader wider spaced geochemical soil sampling over areas [of] intrusives.*
- *Channel sampling of main vein showings and any new showings as generated from Phase I mapping.*

### **Phase II**

- *Complete database compilation of all historical data and all newly acquired data for the purpose of future exploration as well target generation for a drilling program.*

### ***Phase III***

- *Diamond drilling on high interest target areas as generated from Phase I and Phase II.*

***Phase I – total estimated cost is \$450,000***

***Phase II – total estimated cost is \$50,000***

***Phase III – total estimated cost is \$750,000***

#### **6.36 Work done in 2018**

Assessment Report 37955 by Ostensoe, E., Shirvani, F., and Woodworth, A:

Work done by Casa Minerals Inc. included an airborne electromagnetic and magnetic geophysical survey of 223 line-km (35 km<sup>2</sup> area) was done over almost the entire Pitman Property, located adjacent to the southeast side of the Knauss Creek Property. A large conductive zone was outlined on the west side of the Property. Continuing ground based prospecting and technical surveys with drilling follow up were recommended.

#### **6.37 Work done in 2019**

Assessment Report 38731 by Beck, R:

Work done by Knauss Creek Mines Ltd. included collection of 31 rock samples in the course of prospecting. Recommended follow up included further prospecting and collecting a bulk sample of quartz at the known Dorreen adits in order to retrieve and separate the gold for assay. It was also recommended to explore the original Dorreen adit and surrounding outcrops from the vantage point of a helicopter. It was expected that additional quartz veins would be observed that are parallel to the vein that is the Dorreen Mine.

Detailed descriptions of the relevant Minfiles and deposit types in the area are in ITEM 29 - BCGS Minfiles Relevant to the Knauss Creek Property.



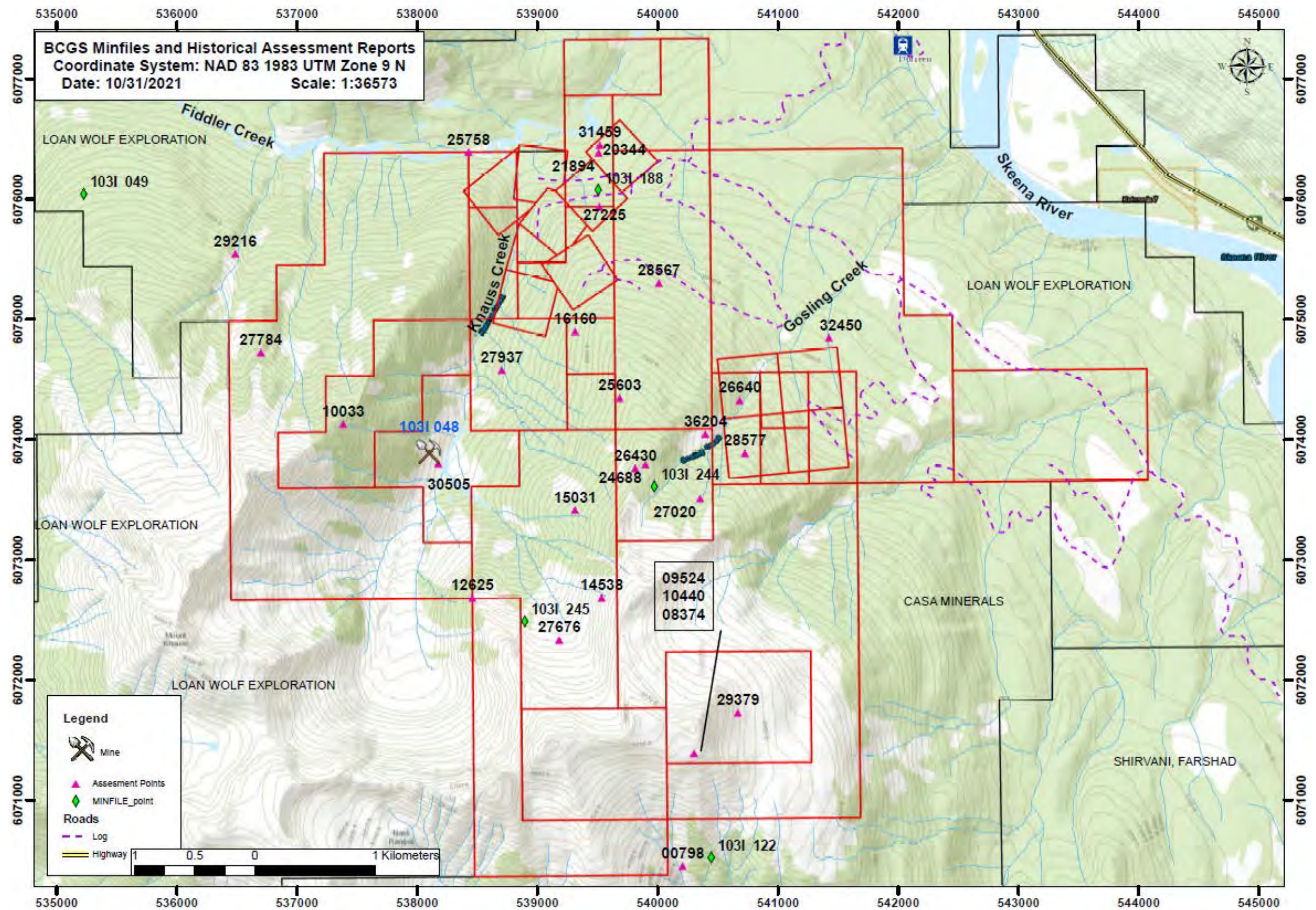


Figure No. 4. BCGS Minfiles and Assessment Reports in Knauss Creek Property Area.



## ITEM 7: GEOLOGICAL SETTING and MINERALIZATION

### Regional Geology

The Knauss Creek Property is situated within the Stikine tectonic terrane (Stikinia) in the "Golden Triangle" area of northwestern British Columbia. The general area around the Property is underlain primarily by stratified sedimentary rocks of the Middle-Jurassic to mid-Cretaceous age Bowser Lake Group and Jurassic age Hazelton Group. These rocks are intruded by granitic rocks of the Mesozoic age Coast Plutonic Complex.

Kyba and Nelson (2015) emphasized the importance the Triassic-Jurassic unconformity contact in northern British Columbia as favourable toward the occurrence mineral deposits. They described the contact as being marked by a distinctive siliciclastic conglomerate unit and by significant faults.

Nelson (2017) stated *"Northerly and westerly fault and lineament sets...are characteristic of, and are apparently confined to, Stikinia. They appear to have exerted strong spatial and, in many cases, genetic control on mineral deposits, by creating conduits for magmas and hydrothermal fluids....Long-lived recurrent uplift of the Stikine and Skeena arches was triggered by differential movement across these deep crustal discontinuities. These discontinuities also likely provided conduits at times of high magmatic flux....Early Jurassic intrusions are interpreted as having evolved...in a structurally controlled permeability corridor corresponding to the Skeena Arch."*

Gagnon, et al. (2012) stated *"The upper Hazelton Group is also of great economic interest in that it contains mid-Jurassic polymetallic massive sulphide deposits."*

Figure No. 5 (next page ) is after a map from the article by J. Nelson in the BCGS publication, Paper 2017-1 (Geological Fieldwork, 2016). It shows the location of the Knauss Creek Property (as a red star added to Nelson's map) in central Stikinia. The Knauss Creek Property is well situated in Stikinia relative to the Skeena Arch, the Eskay Rift and several well-known porphyry, volcanogenic massive sulphide (VMS) and epithermal mines and deposits.



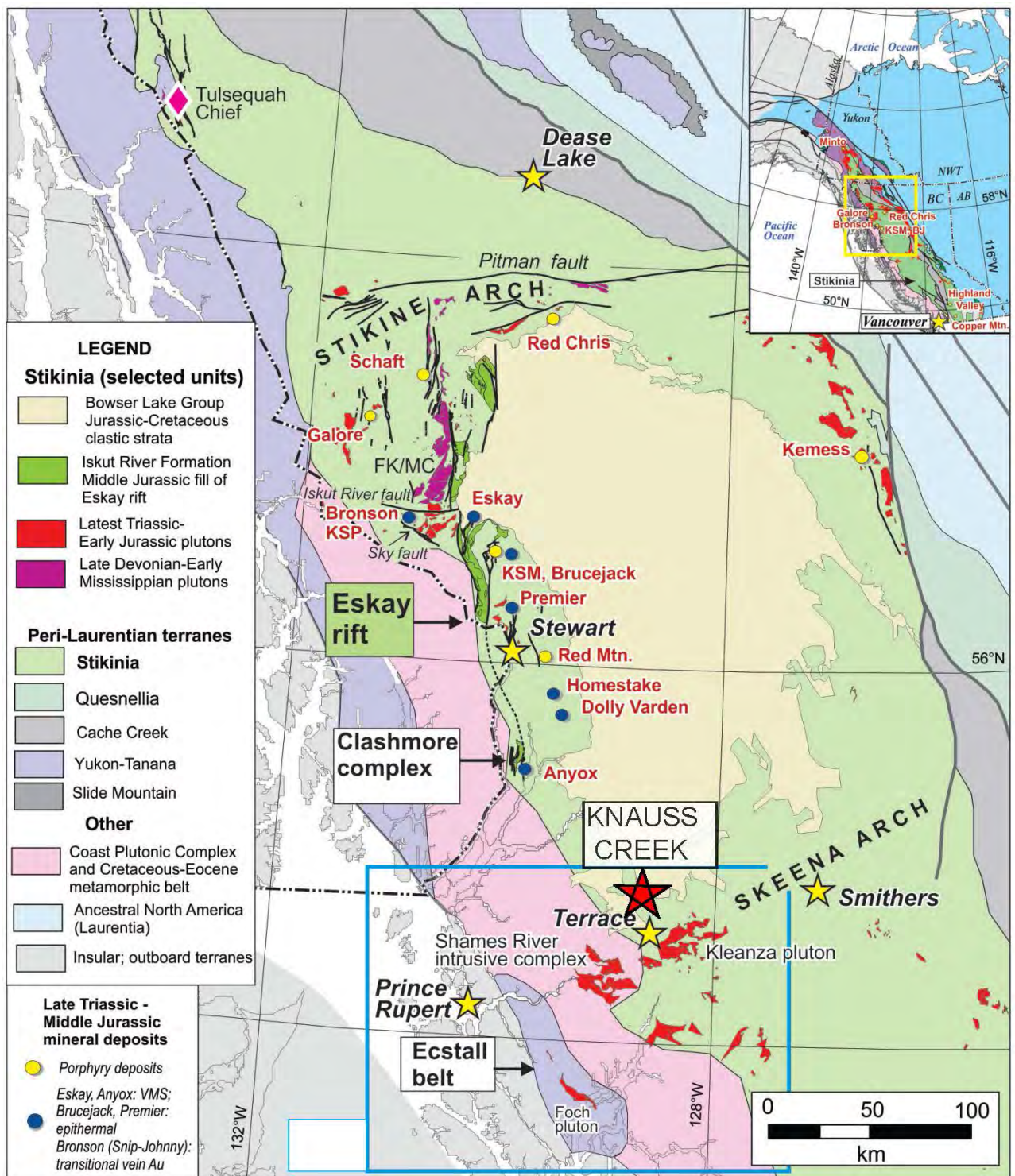


Figure No. 5. Knauss Creek Property Location in Stikinia Terrane. Knauss Creek is located in the vicinity of the intersection of the Eskay rift and Skeena Arch tectonic structures. The map shows Triassic and Jurassic geology and several major porphyry and epithermal occurrences in northern Stikinia. (Map from J. Nelson, 2017).

## **Property Geology and Mineralization**

From LeBlond, 2011, Ass Rpt 32450:

*The fault associated with Gosling Creek is an important feature of the local geology. Mineralized hydrothermal veins are associated with the Gosling Creek fault further up Gosling Creek on other properties held by Knauss Creek Mines Ltd. Within Gosling Creek, itself, the rocks are predominantly shales. A bed of conglomerates running perpendicular to Gosling Creek was studied and previously reported in 2006 by Knauss Creek Mines Ltd, on the Saturn 4 property. Black graphitic sediments were observed within the Galaxy Grid area.*

From Beck, 2019, Ass Rpt 38731:

*The Knauss creek has been interpreted as a fault in the regional geology of historical reports and it is the authors opinion that this fault divides an apparent anticline as the argillite beds of the Dorreen Mine dip northwesterly striking southwesterly while the beds on the east side of Knauss Creek dip easterly with strikes varying from south to southeast.*

*Much of the stratigraphy mapped and noted during the 2019 field season was sediment; be it greywackes, argillites and sandstones, however, we did encounter fine grained dykes, diabase dykes above Gosling creek and feldspar intrusive.*

### **Dorreen Mine**

BC Minister of Mines Report 1914, pgs 138 & 139

The Fiddler Creek section of the Report describes the Brentford and Fiddler groups of claims. Descriptions below are derived from quoted excerpts:

In the Brentford group, there are seven mineral claims and a fraction named Brentford, Hedley, Fiddler, Josie, Nelson, Albana, Royal Sovereign and Dumbo Fraction, owned by J. Burns, J. Williams and R. Doyle. The property is located on the south side of Fiddler Creek. An extensive intrusion of diorite intrudes tuffs and argillites of the Hazelton Formation. These rocks are considerably altered near the contact of the intrusive mass in which the ore-bearing veins occur.

Development work has been all performed on the Hedley claim, and consists of an adit driven on the main vein a distance of 75 feet. Open cuts have sufficiently exposed the vein in several places to warrant the assumption of its persistence for a least a distance of 600 feet, and to an elevation of 25 feet above the adit level. In the open cuts the width of the vein of ore was from ½ foot to 4 feet. The outcropping is 60 feet above the adit level at the face of the drift, and at the farthest point on the surface examined the elevation was 125 feet higher than the adit level.

In the Fiddler group, three mineral claims are named Boulder, Indicator and Intrusive, owned by L.C. Knauss. This claim group is located approximately 2,000 feet from the Brentford group and on the opposite side of a tributary of Fiddler Creek. The orebody is exposed at an elevation of 2,250 feet, in a bedded deposit. The ore is galena, iron pyrites, chalcopyrite, and some tetrahedrite in a quartz gangue. The vein is exposed in several open cuts for a distance of about 800 feet, starting about 200 feet above the creek.

An adit was driven 140 feet on the Boulder claim. The ore body width varied from 2 feet to 4 feet for 60 feet from the portal.

BC Minister of Mines Report 1915, pg 78

Descriptions below are derived from quoted excerpts:

The Fiddler group was enlarged and a concentrator on the property was contemplated. An extensive program for development work was planned for the Brentford group.

BC Minister of Mines Report 1916, pg 90

Descriptions below are derived from quoted excerpts:

26 new mineral claims were made in the Brentford and Fiddler groups' areas. A wagon road was constructed for 4 miles from the railway siding at Doreen to the Fiddler claim group. The shipping of ore in the near future was anticipated.

BC Minister of Mines Report 1925, pgs 131 - 133

Descriptions below are derived from quoted excerpts:

In the Fiddler group, a total of 250 feet of development work was done on the No. 1, No. 2 and No. 3 tunnels, following veins and mineralization including 'good ore.' It was considered that favourable geological conditions combined to make the property attractive.

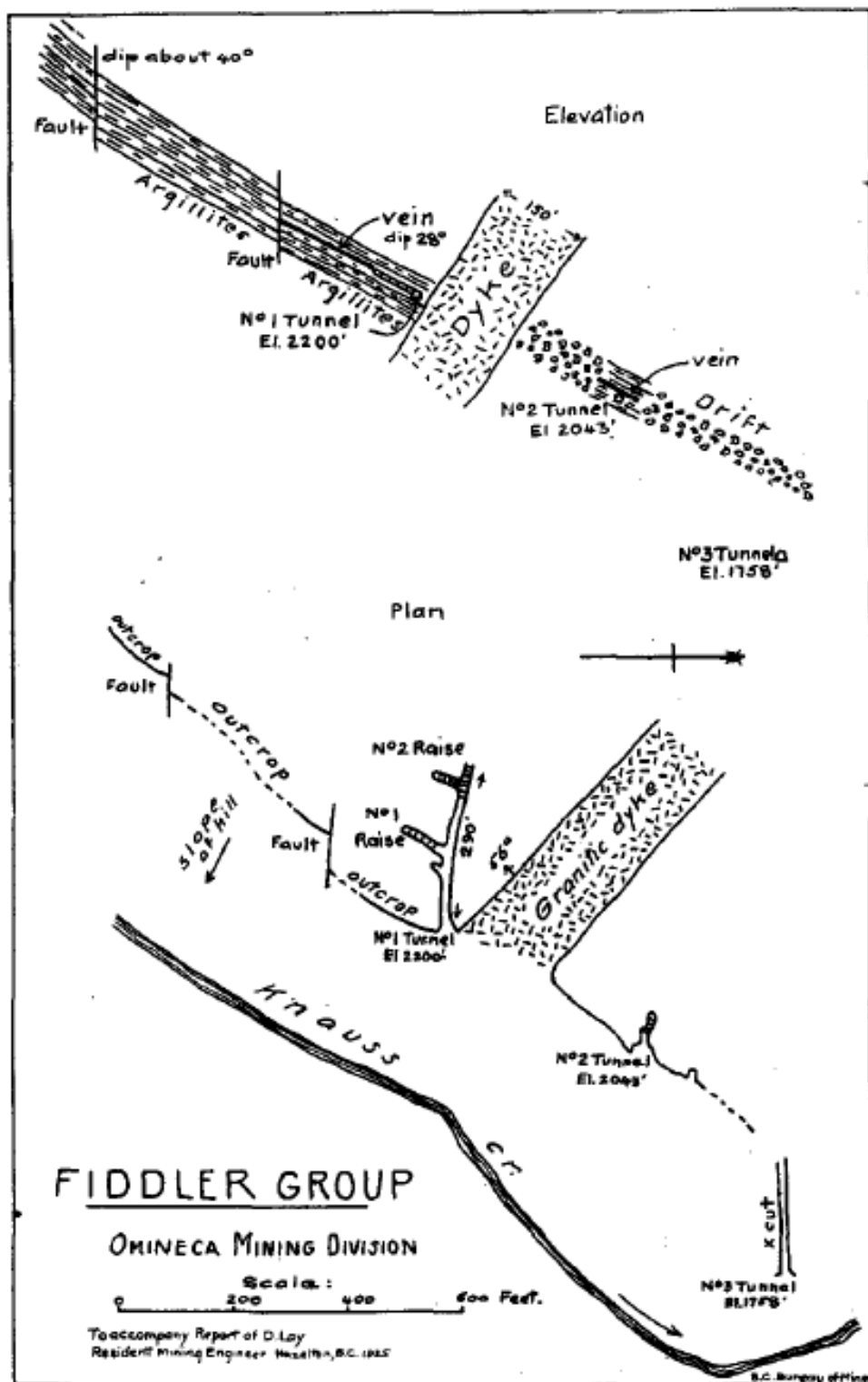


Figure No. 6. Dorreen Mine Layout, 1925. The upper illustration ('Elevation') shows veins oriented primarily parallel with hosting argillite rock units. Perpendicular to these is a granite dyke. The lower illustration shows the map ('Plan') of the area of the No. 1 Tunnel. (BC MMAR, 1925, pg. 132).

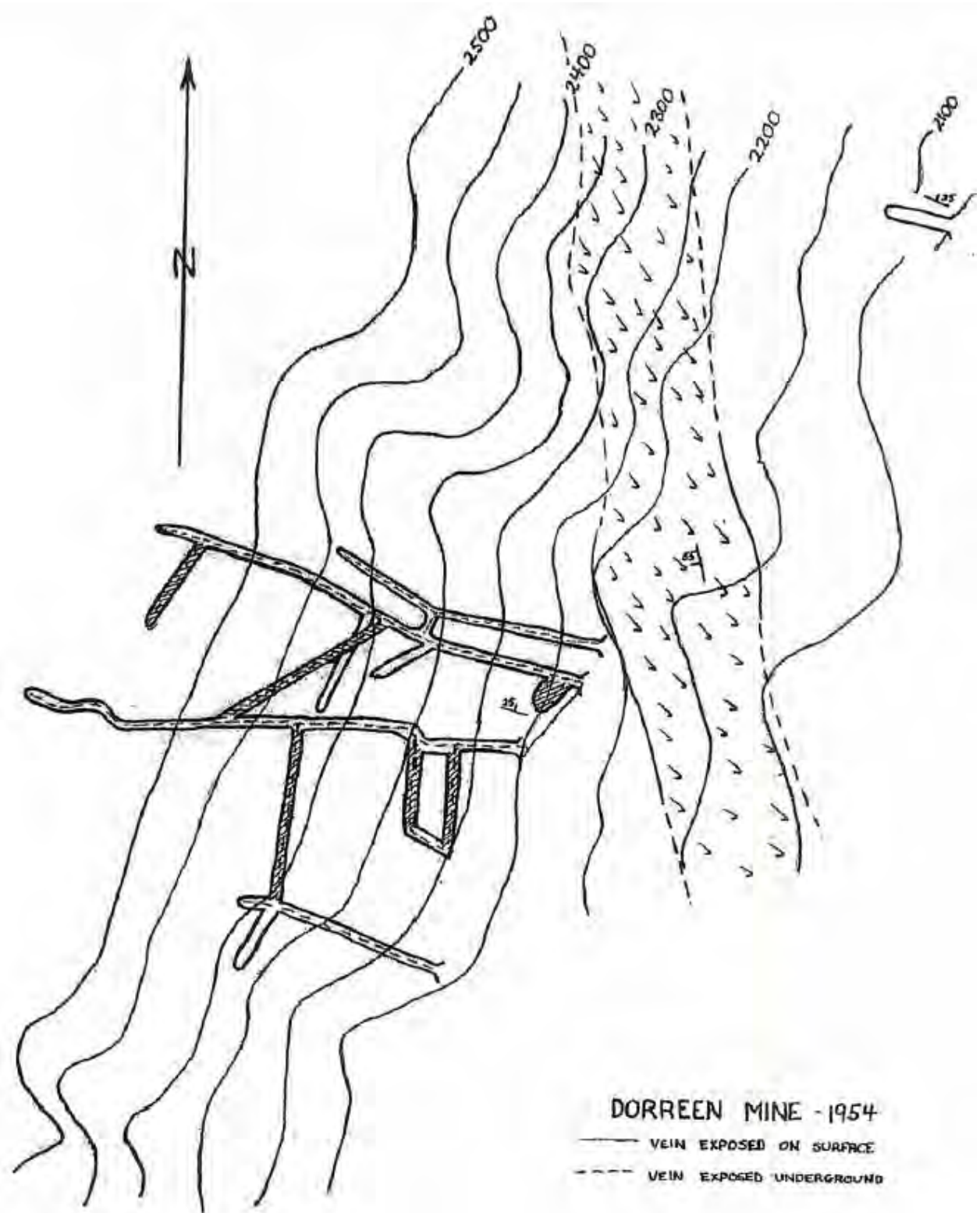


Figure No. 7. Dorreen Mine Layout, 1954. (from Carswell, 1955). Vein exposures and orientation are indicated in mine tunnel levels and inclined raises. The veins' trend and  $25^{\circ}$  dip toward the northeast are indicated. The surface trend of the granite dyke and  $55^{\circ}$  dip toward the southwest are also indicated. The area of this map corresponds with (Figure No. 6, above), the area of the No. 1 Tunnel plan illustrated in the B.C. MMAR, 1925, pg. 132.



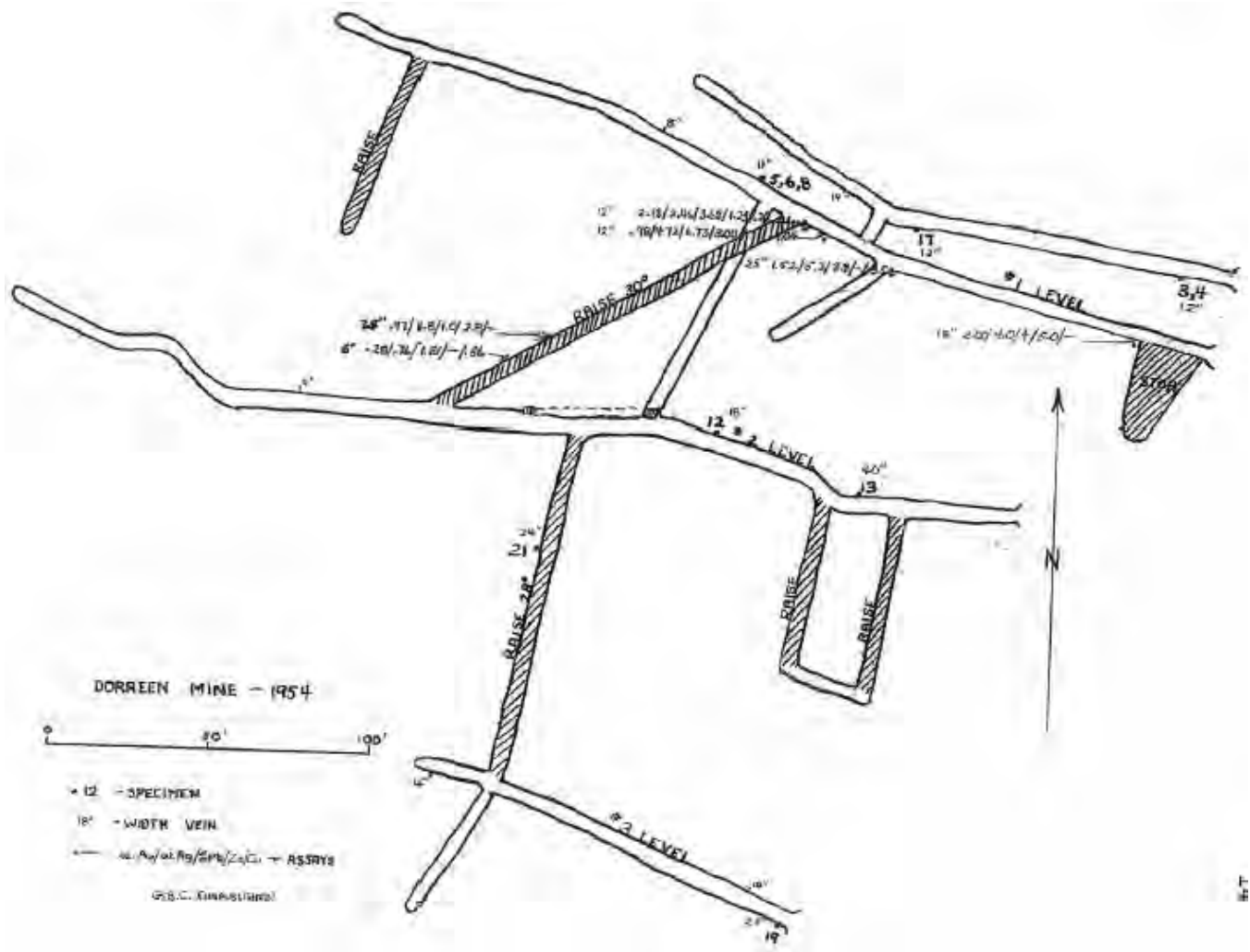


Figure No. 8. Dorreen Mine Interior, 1954. (from Carswell, 1955). Vein widths are indicated in level mine tunnels and inclined raises. The levels are drawn white while the raises are drawn darkened.

By 1932, tunnelling work on Fiddler was discontinued due to low gold values encountered in the targeted veins. It was nevertheless considered by the district geologist that better gold values would likely continue to be found in the area in the vicinity of intrusive rocks.

#### BC Minister of Mines Report 1950, pgs 81 & 82

Descriptions below are derived from quoted excerpts:

During 1950, in preparation for mining, an air-line was laid from the 500-cubic-foot compressor, at the mill, to the mine portal. The mill was designed to treat 30 tons of ore a day. The 5 mile road between Dorreen and Knauss Creek was completed. No actual mining had been done at Knauss Creek since 1926.



BC Minister of Mines Report 1951, pgs 108 & 109

Descriptions below are derived from quoted excerpts:

On the Fiddler property, Dorreen Mines Ltd. conducted mainly surface work. The road from Dorreen railway siding to the mine camp on Knauss Creek was improved and the mill was completed. A bunk-house, change-house, cook-house, office, garage and assay office were built. A tram line of 50-tons-a-day capacity, 2,600 feet long, was built between the mine and mill.

Previous years' work done on the property was summarized as follows:

*The principal underground work done in past years was a drift of about 275 feet long and two raises on the vein. The vein is bedded in argillite and dips at about 25 degrees. The vein is of mining width at the portal and is up to 3 feet wide for the first 50 feet of the drift. It is narrower in the rest of the drift and is also narrow in the raises. In the greater part of the workings it is less than 1 foot wide. A sample was taken on the main, No. 1, level, about 85 feet from the portal; the vein was 11 inches wide at this point and appeared typical. The sample assayed: Gold, 0.39 oz. per ton; silver, 1.3 oz. per ton; copper 0.2 per cent; lead, 2.0 per cent; zinc, 0.7 per cent. In places the vein contains a small percentage of galena and sphalerite.*

*Underground work done by the company consisted of 353 feet of drifting and 100 feet of raising. A drift was collared close to the portal of No. 1 level and at about the same elevation, and it was driven to follow a deflection of the vein along a large dike. It is reported that some ore was found in this drift. Another drift was driven on the vein 50 feet vertically above No. 1 level. It was planned to continue underground work through the winter.*

BC Minister of Mines Report 1952, pg A 85

Descriptions below are derived from quoted excerpts:

In 1952, 252 feet of drifting, 113 feet of crosscutting, 166 feet of raising, and 1,400 feet of diamond drilling were done. A vein recently discovered above the top entry to the mine was followed for 48 feet by a drift at 2,466 feet elevation. During operation of the mill from May 23rd to August 28th, 525 tons of ore was milled. Approximately 20 tons of bulk concentrate shipped to the Trail smelter assayed: Gold, 5.25 oz. per ton; silver, 13.05 oz. per ton; lead, 17.3 per cent; zinc, 7.4 per cent; copper, 2.6 per cent.

BC Minister of Mines Report 1954, pg A 64

Descriptions below are derived from quoted excerpts:

The valleys of Lorne and Fiddler Creeks, tributary to the Skeena River near Dorreen, were prospected, and a heavily pyritized dyke was found on high ground at the head of Lorne Creek.



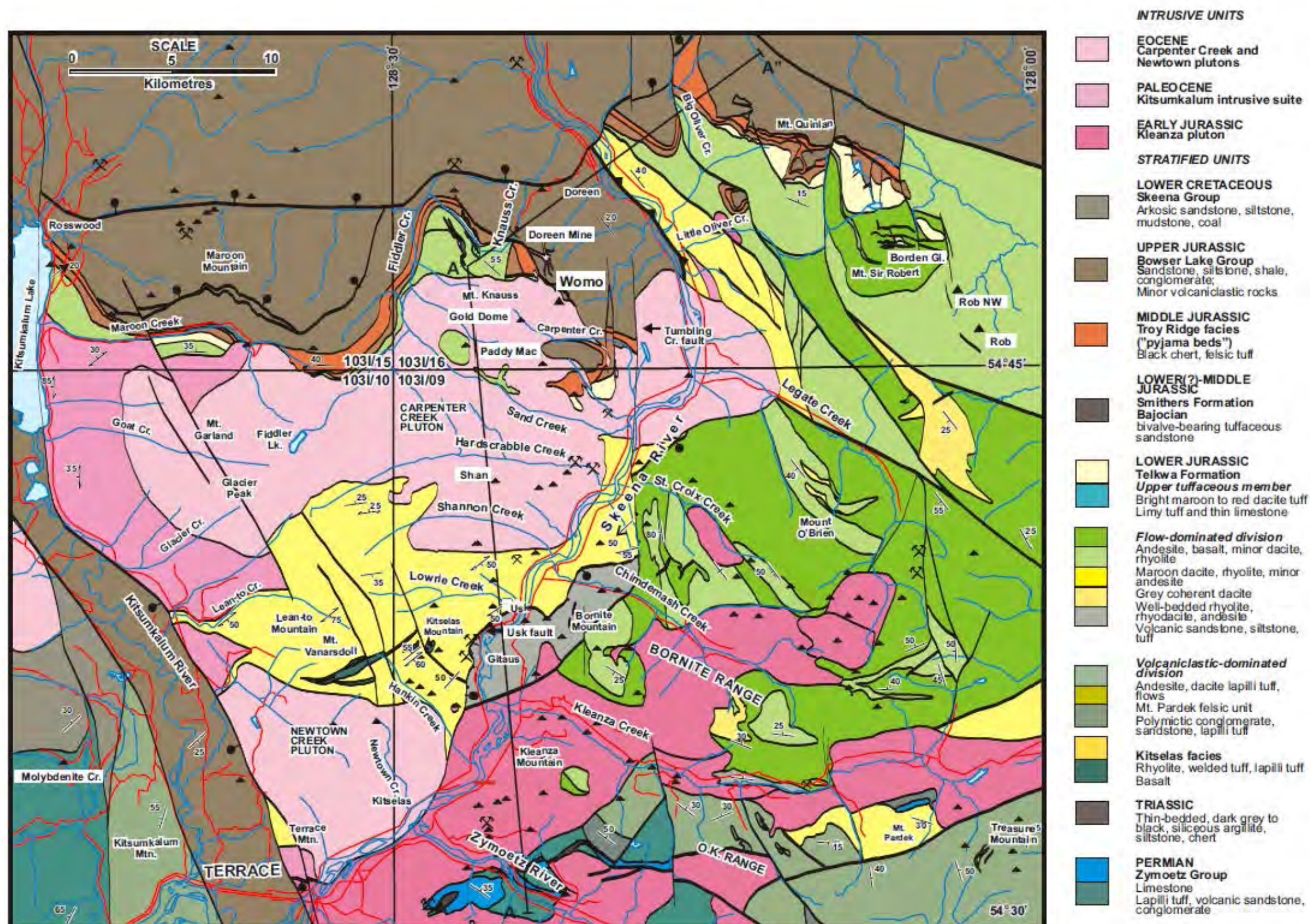


Figure 2. Geology of the Usk (NTS 103I/09), southern Doreen (NTS 103I/16) and eastern Terrace (NTS 103I/10) map areas, from field mapping in 2005 and 2006, compilation from 1:100 000 maps of G. Woodsworth (pers comm) and extrapolation of some faults and contacts.



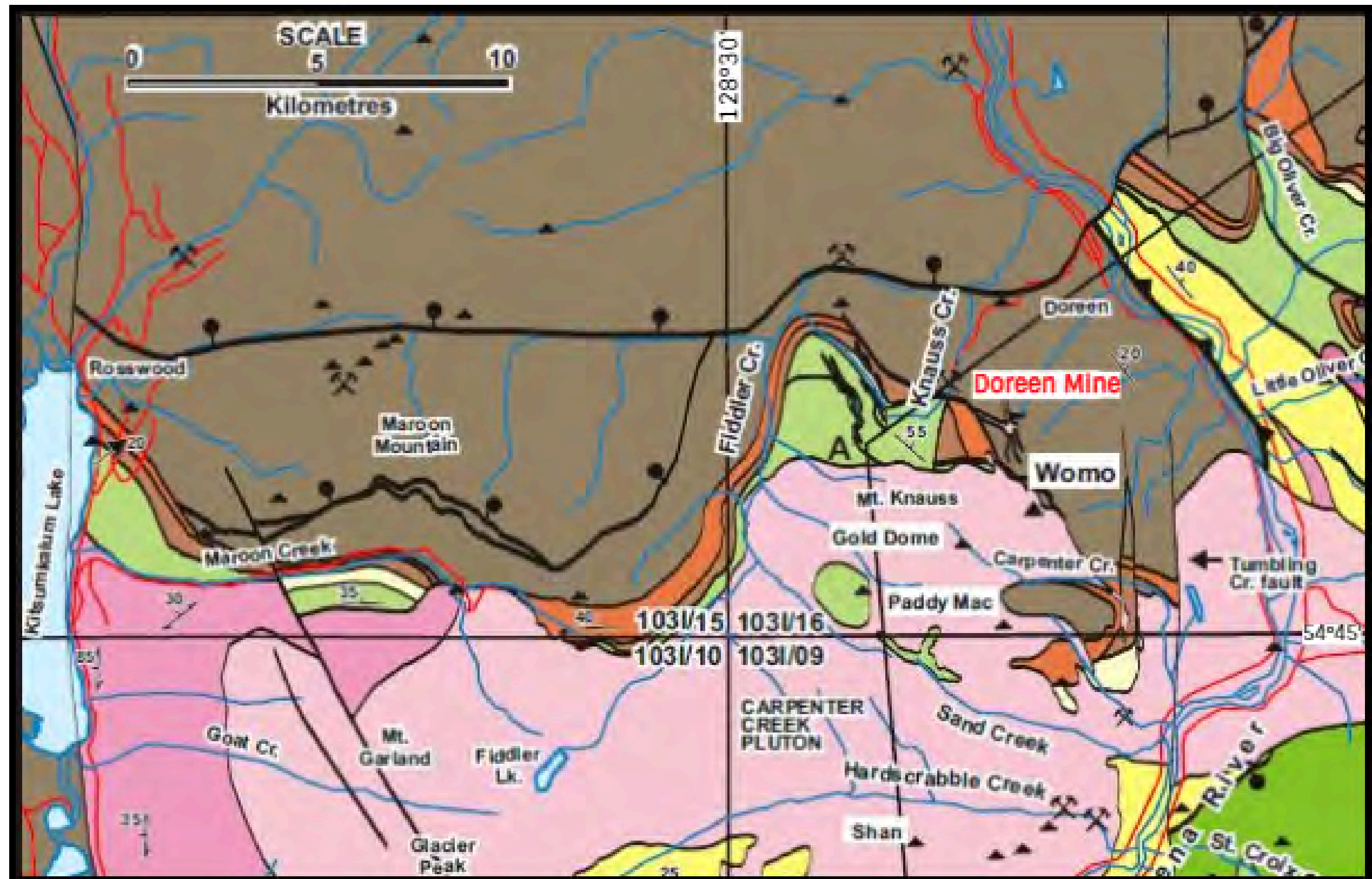


Figure No. 10 Knauss Creek Property Geology, showing Dorreen Mine Location. (From Nelson and Kennedy (2007), Geological Fieldwork 2006 BCGS Paper 2007-1, Pg. 151).

## ITEM 8: DEPOSIT TYPES

The Knauss Creek Property is being explored for polymetallic veins and potential associated skarn and porphyry mineralization within an orogenic geological environment. Placer deposits were mined in creeks adjacent, west and east, to the Knauss Creek Property during the early part of the 20<sup>th</sup> century.

### 8.1 Orogenic Epigenetic Veins

The orogenic class of gold deposit is defined here as syn-tectonic quartz-carbonate veins and wall rock replacement associated with regional-scale fault or shear zones. Orogenic ores form at convergent plate margins in accretionary and collisional orogens. Such orebodies are surrounded by carbonate-sericite-pyrite alteration. Gold, silver, antimony and arsenic occur in the ore fluids along with tungsten, boron, tellurium and bismuth.

HP Salat, P.Eng., (in Assessment Report 27784) states: *In these types of crustal breaks, it is not uncommon to find large epigenetic mineralized vein structures which are the surface expression of deep seated channel-ways for mineralizing fluids with a preference for precious metals (gold and silver). The Dorreen Mine is a good example of such a deposit...The stratabound control to the mineralized quartz veins at the Dorreen Mine...give great promise for the delineation of large economic tonnage. The presence of bonanza precious metal grades in the Dorreen Mine and the expansive quartz veined character of a metallically mineralized, almost brecciated, quartz diorite sill indicates great economic promise to the property.*

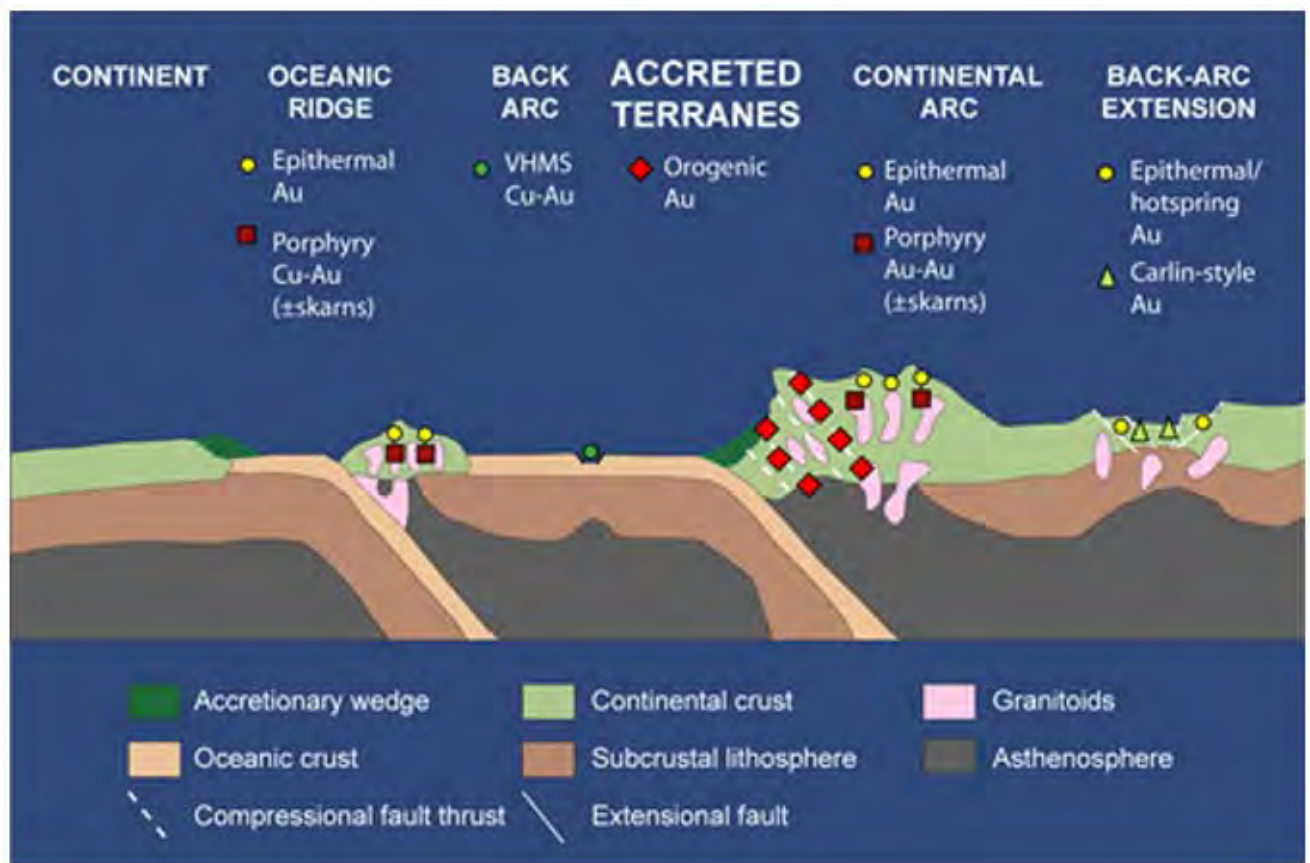


Figure No. 11. Tectonic Settings of locations of various types of gold deposits. Orogenic Au deposits (red symbols in above illustration) occur in accretionary tectonic terranes in the western North American Cordillera. The Knauss Creek Property is considered to be associated with an oceanic or island arc geological terrane.

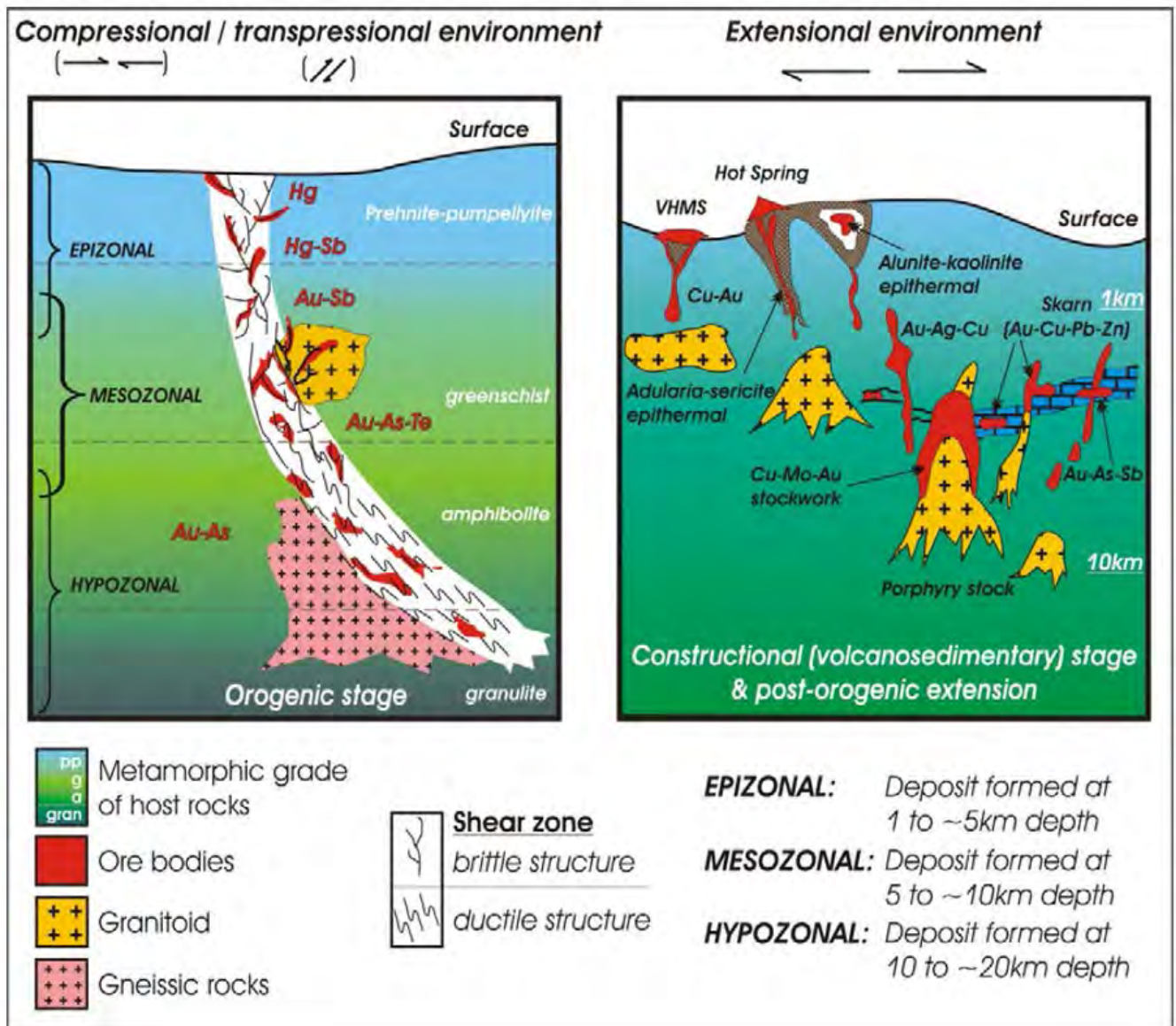


Figure No. 12. Orogenic Gold Deposits had previously mainly been called epithermal gold deposits. The newer concept is that these and related ore bodies occur throughout the middle to upper crust and are related to major shear zones. "Orogenic" is now somewhat an umbrella term for different depth-related gold deposits from intrusion related, mesothermal, shear zone hosted to epithermal. As such, orogenic gold deposits include porphyry, volcanogenic massive sulphide, epithermal and other sub-classes, potentially large deposits which include gold.

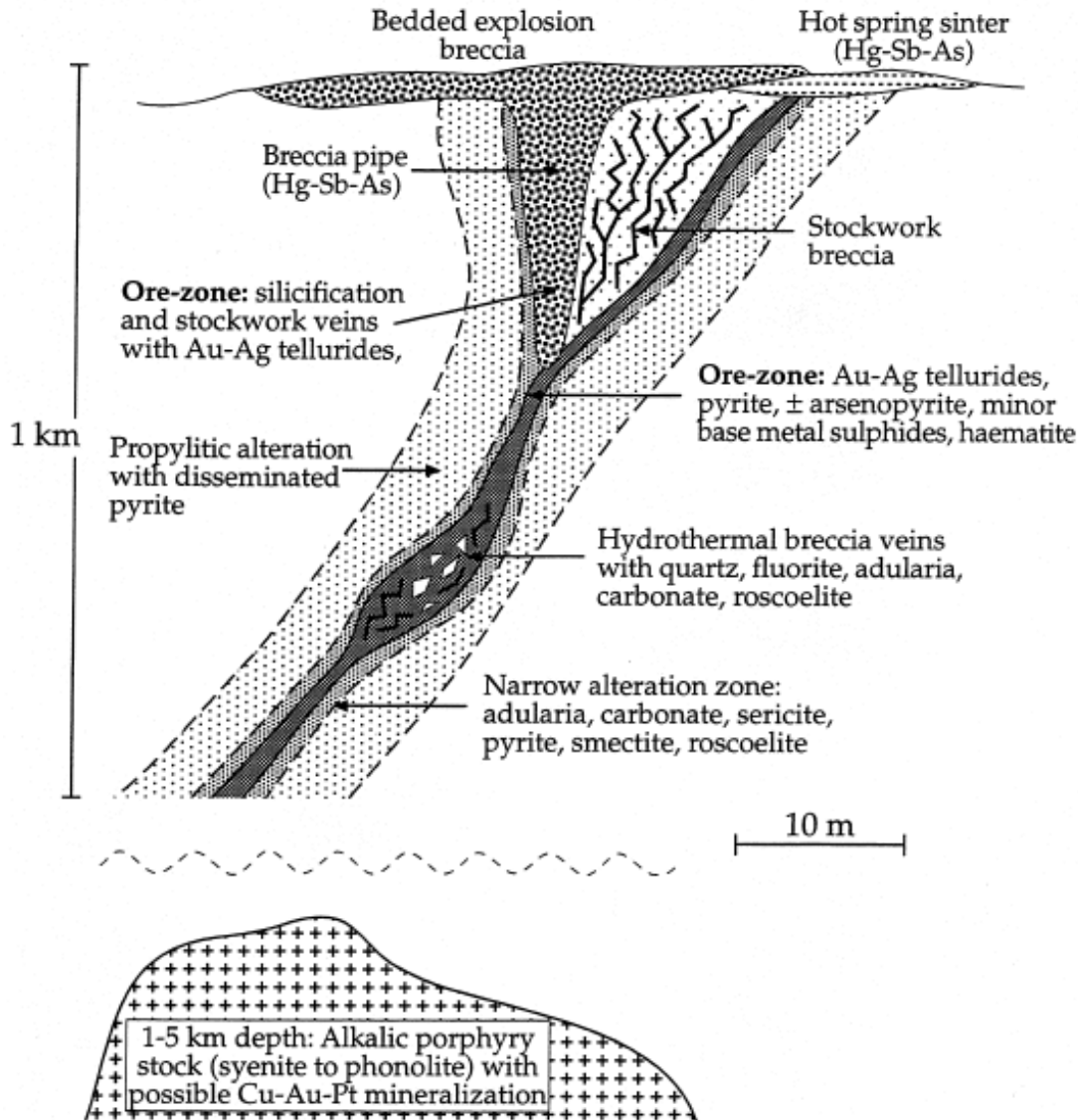


Figure No. 13. Schematic Model of an epithermal epigenetic gold system associated with an intrusive stock.

Deposit types historically explored for in the Knauss Creek area are primarily Deposit Type I05 – Polymetallic veins Ag-Pb-Zn +/- Au.

With respect to the possible association of the Dorreen Mine ores with an intrusive porphyry source:

Earth Sciences (earthsci.org):

*The major products from porphyry copper deposits are copper and molybdenum or copper and gold. The term porphyry copper now includes engineering as well as geological considerations; It refers to large, relatively low grade, epigenetic, intrusion-related deposits that can be mined using mass mining techniques.*



*Geologically, the deposits occur close to or in granitic intrusive rocks that are porphyritic in texture. There are usually several episodes of intrusive activity, so expect swarms of dykes and intrusive breccias. The country rocks can be any kind of rock, and often there are wide zones of closely fractured and altered rock surrounding the intrusions.*

*As is described following, this country rock alteration is distinctive and changes as you approach mineralization. Where sulphide mineralization occurs, surface weathering often produces rusty-stained bleached zones from which the metals have been leached; if conditions are right, these may redeposit near the water table to form an enriched zone of secondary mineralization.*

## **ITEM 9: EXPLORATION**

### **Economic Target and Work Done**

No significant work has been done on the Knauss Creek Property since 2019. The majority of historical exploration done in the area of the Knauss Creek Property has included the mining of polymetallic quartz veins including gold at the now abandoned Dorreen (Fiddler) gold mine, located on Knauss Creek Property current claim no. 504021, in the south portion of Knauss Creek.

## **ITEM 10: DRILLING**

This Item is not applicable. No drilling has been done in the historical work or more recently.

## **ITEM 11: SAMPLE PREPARATION, ANALYSIS and SECURITY**

This Item is not applicable. The known work done on the Knauss Creek Property is historical in nature.

## **ITEM 12: DATA VERIFICATION**

Certain past assessments made on adjacent properties are historical in nature and were made before NI 43-101. The historical results have not been independently analyzed and therefore they should not be relied upon. This author believes these historical results may help to provide an indication of the potential of the Knauss Creek Property and are relevant to ongoing exploration. The author has been unable to verify the historical information and that the information is not

necessarily indicative of the mineralization on the Knauss Creek Property.

This writer has not visited the Knauss Creek Property to verify described geology or work done. Work done on the property is essentially historical, including small scale mining done between 1914 and 1952. Due to the early stage nature of the investigation of the Knauss Creek mineral tenures, no data verification procedures were implemented.

#### **ITEMS 13 to 22:**

These Items are not applicable. No part of the Knauss Creek group of mineral tenures has been advanced to the stage where mineral processing or metallurgical testing would be appropriate. Similarly, resource and mineral reserves estimates cannot be calculated at this time.

#### **ITEM 23: ADJACENT PROPERTIES**

Casa Creek Minerals' large Pitman-Borden Property encompassed several historical prospects including the Womo, adjacent on the south and southeast side of the current Knauss Creek Property. The Womo prospect is located approximately 4 km southeast of Knauss Creek's, Fiddler (Dorreen) mine and 6 km northwest of the Pitman prospect.

From Assessment Report 30900 (Payie, G. and Ostensoe, EA., Technical Report, Pitman-Borden Properties, October 20, 2009):

*The WoMo porphyry-style molybdenite zone is, speculatively, in the opinion of government geoscientists, possibly continuous with similar prospects exposed in nearby stream drainages. It has apparent dimensions of 1000 by 800 metres (MINFILE data) and comprises molybdenite and chalcopyrite mineralization in disseminations and quartz veins at and near the sheared and altered contact between granodiorite and hornfelsed sediments...The zone and its possible continuations should be prospected, geologically mapped and explored by magnetic, induced polarization and resistivity surveys to determine the relationship between WoMo and nearby mineral zones. Diamond drilling will almost certainly follow.*

From an excerpt from the BC Geological Survey, Geological Field Work 2006, Paper 2007-1 by Nelson and Kennedy, 2007, pgs. 149-162: It describes the Womo prospect, currently owned by Casa Minerals Inc., adjacent on the south side of the Knauss Creek Property and its relevance to the historical Dorreen Mine: *The...target of interest is a mineralized system on the southern slopes of Mt. Knauss, north of Carpenter Creek...It is centred by the Womo Mo-porphyry showings (MINFILE 103I 122). This area was mapped and sampled in 1966*

*[Murphy and Richardson, 1966 - Assessment Report 798] and was the subject of a limited geochemical sampling program in 1981 [Livingston, 1980; Livingston and Carter, 1981 - Assessment Reports 8374; 9524]...In our brief traverses across it, we encountered a classic porphyry system located at the margin of the Carpenter Creek pluton. There is evidence of local shearing that involves late porphyritic phases of the granite, as well as the country rocks of the Bowser Lake Group. Conceivably, this structure could extend farther north to the area around the Doreen Mine and south to the high-grade veins at Paddy Mac and Gold Dome: they would represent the peripheral Au–Ag–base metal enrichments to the main porphyry system. In the core of the system along Rosette Creek [a south-flowing tributary of Carpenter Creek – Womo showing] (see Murphy and Richardson, 1966), we encountered a zone 200 by 1100 m of intense clay-sericite alteration with chalcopyrite and molybdenite in quartz vein stockworks...This system is open downslope in the steep, timbered gullies to the south. The core of the altered and mineralized system is partially surrounded to the northeast by a strong pyritic halo in the Bowser Lake clastic strata that measures 300 by 2000 m. This property is currently held by Knauss Creek Mines, who have been focusing their exploration efforts on the veins in Knauss Creek.*

## **ITEM 24: OTHER RELEVANT DATA and INFORMATION**

Regarding First Nations interests within the Saturn 3 claims area, the information below are excerpted from Assessment Reports 31459 and 32450:

From Assessment Report 32450:

### **FIRST NATIONS**

#### **Traditional Territories Within Saturn 3 Property Area**

*Two First Nations groups claim traditional territory within the Galaxy Property Area; Gitxsan and Kitselas. MEMPR notification of the Gitxsan and Kitselas First Nations interests can be found in [Appendix 5].*

*No Culturally Modified Trees (CMT's) can be found within Mineral Claim 605963. [Assessment Report 32450].*

*Culturally Modified Trees (CMT's) can be found within Mineral Claim 239194. [Assessment Report 31459].*

*The CMT's are predominantly tapered bark-strip scars on large 1.2 metre diameter monumental old growth cedar trees. Visually they appear to be pre-European contact (1846 ) CMT's. The VLF electromagnetic ground survey work did not conflict with any of the observed CMT's. [Assessment Report 31459].*

## **Gitxsan**

*The Lax'skiik, a house of the Gitxsan, claim traditional territory over the entire Galaxy Property area. Since the early 1980's, Leon LeBlond has met to discuss mineral showings, mining opportunities and spirituality with various Lax'skiik and Gitxsan representatives. Until the early 1980's, access to the Saturn 3 Property and the Lax'skiik traditional territory was limited to boat across the Skeena or CNR train to Dorreen.*

*In the mid 1980's forest development and road access to the Skeena West area started to occur. Logging started once construction of the Skeena West bridge across the Skeena River was completed. When forest road construction reached the Bonser Flats, which is the Western edge of the Lax'skiik territory, the Lax'skiik initiated numerous road blocks that eventually lead to the preparation of a collaborative Ministry of Forests, Kalum Forest District and Lax'skiik forest management plan for the Skeena West area. The plan is titled, " The Skeena West Total Resource Plan ". The plan guides forest development activities in accordance with Lax'skiik values and interests.*

*While Knauss Creek Mines Ltd. has had some initial conversations with various Gitxsan and Lax'skiik representatives, these conversations have centred around how they might be involved in developing the Saturn 3 Property. We believe Gitxsan and Lax'skiik representative are aware of our ongoing field season programs on our other contiguous properties within their traditional territories, and have no objection to these annual electromagnetic and prospecting field data collection programs.*

**Additionally From Assessment Report 31459:**

*On August 14, 2009 Calvin Hyzims (Simi Diiks) and 3 other Lax'skiik representatives visited the Saturn 3 Property with a Knauss Creek Mines Ltd representative. The group hiked down the electromagnetic survey Ben Grid) baseline. The purpose of the electromagnetic survey was discussed. The group then went to the Hedley showing and discussed some of the previous mining history that occurred within the Saturn 3 Property. The Lax'skiik shared some of the their traditional knowledge of the Fiddler area. The Lax'skiik observed some of the Culturally Modified Trees (CMT's) that have been identified by forestry crews working in the area. Some of the CMT's occur on large, monumental cedar which have highly significant traditional and spiritual value to the Lax'skiik. The tour was concluded by Simi Diiks leading the singing of a Gitxsan traditional song which was sung in traditional language.*

*Recently, discussions between Knauss Creek Mines Ltd, Calvin Hyzims (Simi Diiks) and the Gitxsan Treaty Office have centered around a Knauss Creek Mines Ltd offer to Calvin Hyzims, Simi Diiks (See Appendix 4). The objective of the offer is for the Lax'skiik to drill the Saturn 3 Property and eventually assume Saturn 3*

*Property ownership through an Options Agreement. Discussions are ongoing. To date, neither party has entered into a legally binding agreement.*

***Kitselas***

*The Kitselas claim traditional territory over the entire Galaxy Property area.*

*To date, Knauss Creek Mines Ltd. has not had any discussion with Kitselas regarding their aboriginal interests.*

[From Appendix 5 in Assessment Report 32450, Regarding Tenure No. 605963 and First Nations interests]:



**Mineral Titles Branch  
Energy, Mines and Petroleum Resources**

Report Date: October 14, 2011 1:50 PM

Disclaimer : The information contained in this report is valid from the time the report was executed. This report will be posted to your bulletin board and emailed to the email address supplied in MTO.

**Claim Acquisition details:**

Tenure Number: 605963

Event Number: 5074848

Issue Date: June 13, 2009

Good to Date: June 13, 2021

Type: Mineral Claim

Area (ha): 391.371

Mapsheet: 103I

Please follow this link to see a map of your new tenure. For more detailed information please view your tenure in Mineral Titles Online (MTO).

**The following is for information purposes:**

For more information about the content of this tenure report please visit the Mineral Titles Branch website:

<http://www.empr.gov.bc.ca/Titles/MineralTitles/Pages/default.aspx>

## **Your tenure overlaps with the following First Nations interests:**

Based on current government information, the following First Nations may have aboriginal interests in your registered mineral tenure area. In the event that you wish to contact First Nations, this information is being provided to assist you in informing First Nations of your activity as part of your planning for a successful project. Go to the Mineral Titles Branch website to develop further understanding of the principles supporting First Nations engagement and to access information, resource materials and useful links. Please note that this is a preliminary First Nations contact list and should not be considered conclusive.

The information in this report is not intended to create, recognize, limit or deny any aboriginal or treaty rights, including title, that First Nations may have, or impose any obligations on the Province or alter the legal status of resources within the Province or the existing legal authority of British Columbia. The Province makes no warranties or representations regarding the accuracy, timeliness, completeness or fitness for use of any or all data provided in this report.

Indian Reserve: None

First Nations Treaty Lands: None

Consultative Areas: First Nation: Gitxsan Hereditary Chiefs

Contact: None

Title: Lands and Resources Manager

Organization: Gitxsan Hereditary Chiefs' Office

PO Box 229, 1650 Omineca Street

Address: Hazelton, BC

VOJ 1Y0

Phone: 250-842-6780

Fax: 250-842-6709

Email: info@gitxsan.com

First Nation: Kitselas First Nation - Traditional Territory

Contact: None

Title: Chief and Council

Organization: Kitselas First Nation

Site 44 Comp 24 RR2, 5500 Gitaus Road

Address: Terrace, BC

V8G 3Z9

Phone: 250-635-5084

Fax: 250-635-5335

Email: None



**Your tenure overlaps with the following Legal and Administrative interests:**

Reserve(s): 329578 - TERRACE DPLA - SCHEDULE E , Placer - Desig. lease  
Regional District: KITIMAT-STIKTNE  
Agricultural Land Reserve: None  
Parks/Protected Areas: None

***Note: Please be aware that Regional and Municipal parks are not listed but may still exist. Ensure you check with the Regional District and Municipality for parks that may exist in the area.***

Municipality: None  
Land Title District: PRINCE RUPERT  
Forest District: Kalum Forest District

**Your tenure overlaps with the following tenures:  
Sub-surface (does not include crown grants):**

Mineral: 380887, 380888  
Placer: None  
Coal: None

**Surface (does not include Private Land):**  
Crown Land leases: None

Landowner Notification requirements specify that a person must not begin a mining activity until eight days after giving notice to the owners of the surface area where the activity will take place. The notice must state when the activity will occur and include the names and addresses of the free miner or recorded holder and of the on-site person responsible for the operations. The notice must also describe the activity that will be conducted, state approximately how many people will be on site and include a map or written description of where the activity will take place. Notices may be mailed, e-mailed, sent by facsimile transmission or hand delivered to the owner.

**Your tenure overlaps with the following other resource interests:**

Ungulate Winter Range: None  
Wildlife Habitat Area: 6-066 - Coastal Tailed Frog  
Wildlife Management Area: None

## **Mineral Titles inquiries can be made to:**

### **Mineral Titles Branch**

1-866-616-4999

Mineral.Titles@gov.bc.ca  
300-865 Hornby Street,  
Vancouver, BC  
V6Z 2G3

For detailed information on tenure maintenance please visit our website and related legislation:

<http://www.empr.gov.bc.ca/Titles/MineralTitles/Pages/default.aspx>

An approved mineral or placer Notice of Work and Reclamation Program is required prior to conducting surface disturbance by mechanical means. For more information on Notices of Work and the Mineral Exploration & Mining regional office near you please visit our website. [ Mines Act - section 10 ] and [ Notice of Work Form & Schedules]

Mineral Titles Branch appreciates your participation in the mineral development of British Columbia and we look forward to serving you again.

## **ITEM 25: INTERPRETATION and CONCLUSIONS**

During the historical mining of the Dorreen Mine, exploration of the orebody was advanced by driving a tunnel along the known veins. Also, considering the historical price of gold, only high grade vein deposits were viable. Such veins could be sourced from porphyry-type deposits which were of insufficient grade to have been economic in historical times. As well, porphyry-type deposits were an unrecognized type of ore deposit before approximately 1955. *The first significant large-scale production from a recognized porphyry deposit did not begin until 1955.* (Sinclair, 2007).

The favourable geology and Dorreen Mine history of the Knauss Creek Property warrant more extensive and intensive comprehensive surveys than have been done.

## **ITEM 26: RECOMMENDATIONS**

### **Recommended future work**

A systematic exploration program consisting of prospecting, drone surveys, geologic mapping, geophysics and hand trenching and rock chip/channel sampling is recommended to follow up on the historical discoveries in preparation for follow-up drilling. Prospecting should be done to expand on areas of known mineralization. Drone surveys would aid in prospecting and geological mapping. Geological mapping is recommended to be carried out on discovered mineralized bedrock exposures in conjunction with chip and channel sampling. Some of the potential work areas would be road-supported. Those areas which cannot be accessed by road would be so by helicopter.

Small scale 'packsack' or Winkie drilling during the above early stages would be used in helping early determination of the location, width and trend of the historical vein system at the Dorreen Mine.

The above work would be done in preparation for subsequent diamond drilling. The expected target deposit type would be polymetallic gold veins, as has been in the past. Porphyry-type is also feasible and important due to their typical large size.

### **Recommended Budget**

This author recommends an initial budget of \$200,000 for early-stage exploration on the Knauss Creek Property.

## ITEM 27: REFERENCES

BC Minister of Mines Annual Reports between 1914 and 1954 are the primary source for historical information related to historical work done during those years in the relevant area and adjacent.

<https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geologicalsurvey/publications/annual-report-to-the-minister>

Relevant to the Knauss Creek Property area are:

BC Minister of Mines Annual Report 1914, pgs 138 & 139  
BC Minister of Mines Annual Report 1915, pg 78  
BC Minister of Mines Annual Report 1916, pg 90  
BC Minister of Mines Annual Report 1925, pgs 131 - 133  
BC Minister of Mines Annual Report 1950, pgs 81 & 82  
BC Minister of Mines Annual Report 1951, pgs 108 & 109  
BC Minister of Mines Annual Report 1952, pg A 85  
BC Minister of Mines Annual Report 1954, pg A 64

BCGS Minfiles and mineral claim Assessment Reports are the best primary source for historical information related to historical work done on the Knauss Creek Property and adjacent. Relevant Minfiles are provided in ITEM 29 - BCGS Minfiles Relevant to the Knauss Creek Property Area.

Figure No. 4 shows the locations of historical work associated with BCGS Assessment Reports. The assessment reports' ID numbers on the map locate their work areas.

Assessment references below are for those which describe work done on the present Knauss Creek Property and adjacent areas.

BCGS Minfile references are fully presented in ITEM 29 in this report. These were downloaded at the Ministry of Energy, Mines and Petroleum Resources' website:

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

Mineral Claim Assessment Reports listed below are available for free download at the Ministry of Energy, Mines and Petroleum Resources' website for the Assessment Report Indexing System (ARIS):

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

Assessment Reports associated with work done on relevant mineral claims are listed below in order of Assessment Report number and thus approximately in order of the dates the work was performed:

Assessment Report 798

Murphey, DJ and Richardson, PW. Knauss Mountain Claims, Dug Group (August 15, 1966).

Assessment Report 8374

Livingstone, KW. Womo#1, Womo#2 Mineral Claims, Carpenter Creek Area – Prospecting Report on Geology. (July 1980).

Assessment Report 9524

Livingstone, KW and Carter, NC. Geochemical Report on Womo#1, Womo#2, (July 1981).

Assessment Report 10,033

Englund, RJ. Assessment Report on the Airborne Magnetic and VLF Electromagnetic Survey on the Top 1-8 Mineral Claim Group, Mount Knauss Area. (February 20, 1982).

Assessment Report 10440

Cooke, DL. Assessment Report, Rock Geochemistry, Trenching and Chip Sampling on the Womo Claims, Carpenter Creek Area. (May, 1982).

Assessment Report 12625

LeBlond, L. Geochemical Anomaly over VLF Magnetic Anomaly to Pick Up Mineralization for Further Exploration. (July, 1984).

Assessment Report 13956

LeBlond, L. [no title] a summary of a magnetometer survey geophysical on the Saturn 2 claim. (July 17, 1985).

Assessment Report 14538

LeBlond, L. [no title] a summary of a magnetometer geophysical survey on the Saturn claim. (August 29, 1985).

Assessment Report 15031

LeBlond, L. [no title] a summary of a VLF-EM geophysical survey on the Saturn claim group. (August 22, 1986).

Assessment Report 16160

LeBlond, L. [no title] a summary of a VLF-EM geophysical survey on the Saturn 2 claim. (July 18, 1987).

Assessment Report 19349

LeBlond, L. [no title] a summary of a VLF-EM geophysical survey on the Saturn 3 claim. (November 16, 1989).

Assessment Report 20344

LeBlond, L. [no title] a summary of a VLF-EM and self-potential geophysical and soil sampling surveys on the Saturn 3 claim. (September 4, 1990).

Assessment Report 21894

LeBlond, L. [no title] a summary of a VLF-EM geophysical survey on the Sun claim, (December 4, 1991).

Assessment Report 24688

LeBlond, L. [no title] a summary of a VLF-EM geophysical survey and geological mapping on the Hugin Claims 1 to 4. (December 23, 1996).

Assessment Report 25603

LeBlond, L. [no title] a summary of a VLF-EM geophysical survey and geological mapping on the Dwalis 1 and 2 claims. (August 7, 1998).

Assessment Report 25758

LeBlond, L. [no title] a summary of a soil sampling survey over Fault Zone on the Saturn 3 claim group. (December 10, 1998).

Assessment Report 26430

LeBlond, L. [no title] a summary of Mapping a Mineralized Quartz Vein and Sampling. (December 29, 2000).

Assessment Report 26640

LeBlond, L. [no title] a summary of Prospecting Report on Munin Claims 1 to 4. (September 2, 2001).

Assessment Report 27020

LeBlond, L. [no title] a summary of Prospecting, Geological and Geophysical Report on the Hugin 1 and 4 claims. (December 27, 2002).

Assessment Report 27225

LeBlond, L. [no title] a summary of Assessment Report, Ground VLF-EM Survey and Physical Work on the Saturn 3 claim group and the Brentford claim group. (September 12, 2003).



Assessment Report 27676

LeBlond, L. [no title] a summary of Prospecting and Ground VLF-EM surveys on the Kandy claims. (March 14, 2005).

Assessment Report 27784

Salat, HP. Report on the Geological Reconnaissance of the Coffee and Cup Claims. (May 17, 2005).

Assessment Report 27937

LeBlond, L. Prospecting, Geological, Geochemical Report, OM claim. (October 19, 2005).

Assessment Report 28567

Meredith, R. and LeBlond L. Report for Mineral Tenure Saturn 4, Cong Survey Grid, Geological, Geophysical, Geochemical, Prospecting, Preparatory/Physical. (October 4, 2006).

Assessment Report 28577

Meredith, R. and LeBlond L. Report for Mineral Tenures Munin 1,2,3,4, Survey Grid, Geological, Geophysical, Geochemical, Prospecting, Preparatory/Physical. (October 17, 2006).

Assessment Report 29216

Cook, RA. Report on the Fiddler Creek Property and the Geology of the Patmore Showing, B.C. (July 5, 2007).

Assessment Report 29379

LeBlond, L. Technical and Geochemical Report for Amy Claim, Preparation, Prospecting Geophysical, Geochemical. (January 21, 2008).

Assessment Report 29380

LeBlond, L. Technical and Geochemical Report for Mun Claim, Preparation, Prospecting Geophysical, Geochemical. (January 21, 2008).

Assessment Report 30505

LeBlond, L. Technical and Geochemical Report for Snowball Claim, Preparation, Prospecting Geophysical, Geochemical. (January 23, 2009).

Assessment Report 31459

LeBlond, L. and Meredith, R., Ground VLF Electromagnetic Survey on [Ben Grid] Saturn 3 Property. (October 12, 2010).

Assessment Report 32450

LeBlond, L. and Meredith, R. Ground VLF Electromagnetic Survey on [Galaxy Grid] Galaxy Property. (October 21, 2011).

Assessment Report 35919

Ostensoe, E. Technical Report - Pitman and Keeper Properties. (April 14, 2016).

Assessment Report 36204

Beck, R. 2016 Technical Assessment Report on Sampling Saturn 4 Property. (September 2016).

Assessment Report 37349

Beck, R. 2017 Technical Assessment Report on Sampling the Knauss Creek Property. (September 2017).

Assessment Report 37775

Beck, R. 2018 Technical Assessment Report on Sampling and Prospecting the Knauss Creek Property. (November 2018).

Assessment Report 37955

Ostensoe, E., Shirvani, F., and Woodworth, A. Technical Report Geophysical Survey, Pitman Property. (February 12, 2019).

Assessment Report 38731

Beck, R. 2019 Technical Assessment Report on Mapping and Sampling of the Knauss Creek Property. (December 2019).

Other publications:

Bourbon, Abe, Prospecting & Rockhounding Guide, Terrace Volume 1 South & East, Kemano, Kitimat, Usk, Pacific, Dorreen & Cedarvale; published by WR Design Services, Clinton, B.C. (2001).

Carswell, HT, (1955). Mineralographic Study of the Ores of Dorreen Mine, BC, University of British Columbia.

Duffel, S. and Souther, JG., (1964). Geology of the Terrace Area, British Columbia (103I E½); Geological Survey of Canada, Memoir 329.

Gagnon, JF, et al., Stratigraphy of the upper Hazelton Group and the Jurassic evolution of the Stikine terrane, British Columbia; Canadian Journal of Earth Science, Vol. 49, 2012.

Holland, SS., Placer Gold Production of British Columbia, Ministry of Energy, Mines and Petroleum Resources; Bulletin No. 28, 1950, reprinted 1983.

Kindle, ED., Mineral Resources, Usk to Cedarvale, Terrace Area, Coast District, British Columbia; Geological Survey of Canada Memoir 212, 1937.

Lowell, JD and Guilbert, JM, (1970). Lateral and Vertical alteration-Mineralization Zoning in Porphyry Ore Deposits; Economic Geology, Vol. 65 No. 4.

Kyba, J. and Nelson, J., Stratigraphic and Tectonic Framework of the Khyber-Sericite-Pins Mineralized Trend, Lower Iskut River, Northwestern British Columbia; Geological Fieldwork 2014, BCGS Paper 2015-1.

McKeown, M., Nelson, J. and Friedman, R. (2008). Newly Discovered Volcanic-Hosted Massive Sulphide Potential within Paleozoic Volcanic Rocks of the Stikine Assemblage, Terrace Area, Northwestern British Columbia (NTS 103I/08); BC Geological Survey, Geological Fieldwork 2007, Paper 2008-1, p. 103-116.

Massey NWD and Alldrick, DJ (1999). Potential for Subaqueous Hot-spring (Eskay Creek) Deposits in British Columbia; BC Ministry of Energy and Mines, Open file 1999-14.

Nelson, JL, Barresi, T, Knight, E and Boudreau, N. (2006). Geology and Mineral Potential of the Usk Map Area (NTS103I/09), Terrace, British Columbia; Geological Fieldwork 2005, BC Ministry of Energy Mines and Petroleum Resources, Paper 2006-12.

Nelson, JL and Kennedy, R (2007). Terrace Regional Mapping Project Year 2: New Geological Insights and Exploration Targets (NTS 103I 16S, 10W), West Central British Columbia; BC Ministry of Energy Mines and Petroleum Resources, Geological Fieldwork 2006 BCGS Paper 2007-1.

Nelson, J., Composite pericratonic basement of west-central Stikinia and its influence on Jurassic magma conduits: Examples from the Terrace-Ecstall and Anyox areas, Geological Fieldwork 2016, BCGS Paper 2017-1.

Sinclair, WD, (2007). Porphyry Deposits; Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 223-243.

BC Minister of Mines Reports:

BC Minister of Mines Report 1914, pgs 138 & 139

BC Minister of Mines Report 1915, pg 78

BC Minister of Mines Report 1916, pg 90

BC Minister of Mines Report 1925, pgs 131 - 133

BC Minister of Mines Report 1950, pgs 81 & 82

BC Minister of Mines Report 1951, pgs 108 & 109

## ITEM 28: GLOSSARY OF TECHNICAL TERMS AND ABBREVIATIONS

Adit	An entrance to an underground mine which is horizontal by which the mine can be entered, drained of water, ventilated, and minerals extracted at the lowest convenient level
Ag	Silver.
Al	Aluminum.
Anomalous	Chemical and mineralogical changes and higher than typical background values in elements in a rock resulting from reaction with hydrothermal fluids or increase in pressure or temperature.
Anomaly	The geographical area corresponding to anomalous geochemical or geophysical values.
As	Arsenic.
ATV	All-terrain vehicle
Au	Gold.
Background	The typical concentration of an element or geophysical response in an area, generally referring to values below some threshold level, above which values are designated as anomalous.
BCGS	British Columbia Geological Survey
cm	Centimetre.
Cu	Copper.
DDH	Diamond drill hole.
Dyke	A subvertical sheet-like intrusion of magma.
EM	Electromagnetic.
EMPR	The British Columbia government Ministry of Energy, Mines and Petroleum Resources.
Fe	Iron.
Float	Loose rocks or boulders; the location of the bedrock source is not known.
GPS	Global Positioning System. A satellite-based radionavigation system. It provides geolocation to a GPS receiver anywhere on the Earth where there is an unobstructed line of sight to GPS satellites. Obstacles such as mountains and buildings can block the relatively weak GPS signals.
Grab sample	A sample of a single rock or selected rock chips collected from within a restricted area of interest.
g/t	Grams per metric tonne. 34.286 g/t (grams per metric tonne) = 1.00 oz/T (Troy oz per short ton)
Ha	Hectare - an area totaling 10,000 square metres, e.g., an area 100 metres by 100 metres.

Hectare	An area of 10,000 square metres.
Hg	Mercury.
HLEM	Horizontal loop electromagnetic geophysical survey.
Hornfels	A set of contact metamorphic rocks that have been baked and hardened by the heat of intrusive igneous masses.
ICP-AES	Inductively-coupled plasma atomic emission spectrometry. An ALS Labs geochemical analysis procedure.
ICP-MS	Inductively-coupled plasma mass spectrometry. An ALS Labs geochemical analysis procedure.
Intrusive	A magmatic rock that cuts into and alters older rocks and may be the source of minerals deposited into the rocks intruded, creating skarn or porphyry type mineral deposits.
IP	Induced polarization geophysical survey.
K	Potassium.
kg	Kilogram.
km	Kilometre.
LIDAR	An acronym of light detection and ranging. It is a surveying method that measures distance to a target by illuminating the target with laser light and measuring the reflected light with a sensor.
m	Metre.
Mag/vlf	Combined magnetic and VLF-EM geophysical surveys.
Max-min	An HLEM technique to test for resistivity and conductivity of rocks.
ME-ICP	Multiple elements inductively-coupled plasma. An ALS Labs geochemical analysis procedure.
MEMPR	Ministry of Energy and Mines and Petroleum Resources.
ME-MS	Multiple elements mass spectrometry. An ALS Labs geochemical analysis procedure.
µm	Micron, micro-metre, one millionth of a metre.
Minfile	BCGS Mineral deposit profiles provide brief summaries of the types of mineral deposits found in British Columbia. They include descriptions of host rocks, mineralogy, alteration, tectonic setting, associations, genetic models, and exploration guides, and give typical examples with grades and tonnages.
Mg	Magnesium.
MMAR	Minister of Mines Annual Report.
Mn	Manganese.
Mo	Molybdenum.
MS-REE	Mass spectrometry rare earth elements. An ALS Labs geochemical analysis procedure.
Na	Sodium.
N.T.S.	National Topographic System
NW-SE	Northwest - southeast.
OG	Ore grade samples analysis method particular to each element. An ALS Labs geochemical analysis procedure.

Orogenic	The physical manifestations of the process of mountain building. Orogens are usually long, thin, arcuate tracts of rock that are geologically active and have a pronounced linear structure resulting in geological terranes.
oz/T	Ounces per short ton (Imperial measurement). 34.286 g/t (grams per metric tonne) = 1.00 oz/T (Troy oz per short ton).
oz/st	Ounces per short ton (Imperial measurement, same as oz/T). 1.00 oz/T (Troy oz per short ton = 34.286 g/t (grams per metric tonne).
Pathfinder	Elements that occur in anomalous amounts together with the economic element being explored for.
PGM-ICP	Platinum group metals inductively-coupled plasma. An ALS Labs geochemical analysis procedure.
Pb	Lead.
Placer	A deposit of sand or gravel in the bed of a river, containing particles of gold.
Pd	Paladium.
Porphyry	A deposit where primarily Cu-bearing minerals occur in disseminated grains or veinlets through a large volume of rock within or in close association with intrusive igneous rocks. Au and Mo are also important products of porphyry deposits.
Propylitic alteration	Alteration of rocks due to hot fluids that have a high sodium ion composition. It typically results in epidote–chlorite–albite alteration with pyrite.
Potassic alteration	Typical of porphyry copper and lode gold deposits, results in production of micaceous, potassic minerals such as biotite in iron-rich rocks, muscovite mica or sericite in felsic rocks, and orthoclase (adularia) alteration, often quite pervasive and producing distinct salmon-pink alteration zones.
ppb	Parts per billion.
ppm	Parts per million (1 ppm = 1,000 ppb = 1 g/t)
Pt	Platinum.
Rh-MS	Rhodium mass spectrometry. An ALS Labs geochemical analysis procedure.
S	Sulphur.
Sb	Antimony.
Showing	Visible mineralization in a rock outcrop.
Skarn	Forms by chemical metasomatism of rocks in the contact zone of intrusive rocks with rocks often containing carbonate minerals. Skarns in the igneous environment are associated with hornfels and wider zones of calc-silicate rocks. Skarns are often hosts for copper, lead, zinc, iron, gold, molybdenum, tin, and tungsten ore deposits.



Talus	A collection of rock fragments at the base of crags or mountain cliffs, that has accumulated through rock fall from adjacent cliff faces. Also called scree.
Te	Tellurium
Terrain	An arbitrarily defined geographic location.
Terrane	A major crustal block with a particular geologic history.
UTM	Universal Transverse Mercator positioning system.
VLF-EM	Very low frequency electromagnetic. A geophysical survey method for detection of metallic conductors.
VMS	Volcanogenic massive sulphide.
VHMS	Volcanic-hosted massive sulphide. Same as VMS.
W	Tungsten.
Zn	Zinc

### **Certificate of Qualified Author**

To accompany the report titled: "NI 43-101 Technical Report on the Knauss Creek Property, Omineca Mining Division, British Columbia" dated effective November 3 , 2021 (the "Technical Report").

I, Rein Turna, B.Sc., P.Geo. do hereby certify that:

1. I am a geological consultant, independent of the issuer, Knauss Creek Mines Ltd. as described in section 1.5 of National Instrument 43-101.
2. My address and email are:  
5818 Falcon Road  
West Vancouver, B.C., Canada, V7W 1S3  
  
Email: geocon002@shaw.ca
3. I graduated with a degree Bachelor of Sciences in Geological Sciences from the University of British Columbia in 1975.
4. I am a registered member of the Association of Professional Engineers and Geoscientists of British Columbia.
5. I have worked as a geologist, in field and office, over 40 years since graduation from university. I worked primarily in British Columbia, Yukon and Ontario and also in Saskatchewan, Northwest Territories and Arizona. The work involved exploration for precious and base metals in epithermal, sedimentary exhalative, volcanogenic massive sulphide, skarn, porphyry and shear zone-hosted deposits.
6. I am a "Qualified Person" as defined in Part 1.1 of National Instrument 43-101.
7. I have had no prior involvement with the property that is the subject of the Technical Report.
8. I am responsible for all Items of the Technical Report.
9. I have read National Instrument 43-101 and Form 43-101F1. The Technical Report has been prepared in compliance with that instrument and form.

10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

-- Signed and Stamped --Dated this 3d Day of November, 2021



---

**Signature: Rein Turna, B.Sc., P.Geo.**

## Consent of Qualified Author

Rein Turna, B.Sc., P.Geo.

5818 Falcon Road, West Vancouver, B.C., Canada, V7W 1S3

Email: geocon002@shaw.ca

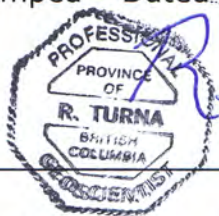
To: Securities Regulatory Authorities:

\_\_\_\_\_TSX Venture Exchange

I, Rein Turna, P.Geo., do hereby consent to the public filing of the Technical Report titled "NI 43-101 Technical Report on the Knauss Creek Property, Omineca Mining Division, British Columbia" and dated November 3, 2021 (the "Technical Report").

I acknowledge that the Technical Report will become part of the Issuer's public record.

-- Signed and Stamped --Dated this 3d Day of November, 2021



*Rein Turna*

Signature: **Rein Turna, B.Sc., P.Geo.**

## **ITEM 29: BCGS MINFILES RELEVANT to the KNAUSS CREEK PROPERTY**

BCGS Minfiles are available for free download at the Ministry of Energy, Mines and Petroleum Resources' website below.

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

Below are brief summaries excerpted from the British Columbia Geological Survey (BCGS) Minfiles on the Knauss Creek Property area and within 5 km from the property. The relevant BCGS deposit types are:

Deposit Type I05 – Polymetallic veins Ag-Pb-Zn +/- Au

Deposit Type J01 – Polymetallic manto Ag-Pb-Zn

### **Minfile 103I 048 (Fiddler, Dorreen) – Past Producer**

Located on Knauss Creek Property, Tenure No. 504021

Polymetallic Veins Ag-Pb-Zn+/-Au

*The Dorreen gold mine is located...is situated on Knauss Mountain, 6 kilometres west of the Canadian National railroad and the Skeena River, about 35 kilometres north-northeast of Terrace.*

*The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata are comprised of laminated argillites, bedded tuffs and interbedded andesite flows. The rocks ... are intruded by a...quartz diorite dike.*

*The Fiddler quartz vein occurs along a bedding fault plane in argillite, below an andesite bed and near the intrusion. The lens-shaped vein has been traced for 100 metres and is up to 1.7 metres wide.*

*Mineralization consists of chalcopyrite, covellite, galena, pyrite, sphalerite, tetrahedrite and arsenopyrite.*

*In 1912, the Dorreen gold vein was discovered and developed intermittently from 1914 to 1952. Three ore shipments were made; in 1924, 1926 and 1952. In 1924, 80 tonnes of ore was shipped and reportedly assayed 57.26 grams per tonne gold, 205.71 grams per tonne silver, 1.3 per cent copper, 6.2 per cent lead and 5.8 per cent zinc. In 1926, approximately 8 tonnes of similar ore was shipped. In 1952, 476 tonnes of ore was shipped and 3266 grams of gold, 8118 grams of silver, 3137 kilograms of lead and 1342 kilograms of zinc were recovered. No further development has occurred since 1952.*

*In 1981, Canamco Resources completed a program of airborne geophysical surveys, totaling 206 line-kilometres, on the area as the Top 1-8 claims. In 2004 and 2006, Argonaut Resources Inc. completed programs of prospecting and geological mapping on the area as the Coffee and Cup claims. During 2005 through 2008, Knauss Creek Mines Ltd. conducted exploration programs that consisted of geophysical surveys, geochemical sampling and geological mapping. This work was centered on the eastern side of Knauss Creek. In 2012, Argonaut Exploration Inc. gained control of the mineral rights to the Dorreen Mine after 60-year old Crown grants that held the mineral rights expired and reverted to the British Columbia government, who then assigned the mineral rights to the overlying mineral tenure holders.*

### **Minfile 103I 049 (Patmore)**

Located on Loan Wolf property. (Tenure No. 1083299)

Polymetallic Veins Ag-Pb-Zn+/-Au

*The Patmore occurrence is located on the lower north-northwestern slope of Mount Knauss, approximately 750 metres south of Fiddler Creek.*

*The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata are comprised of laminated argillites, bedded tuffs and interbedded andesite flows.*

*Locally, Cretaceous quartz diorite sills and dikes cut argillites and tuffs of the Jurassic to Cretaceous Bowser Lake Group. The intrusives contain quartz veins mineralized with galena, sphalerite and lesser pyrite and chalcopyrite.*

*The No. 1 showing is located at 778 metres elevation and contains quartz veins averaging 15 centimetres in width and 15 metres in length.*

*The No. 2 showing, 365 metres to the west, occurs in a quartz diorite sill within argillites...Additional mineralized exposures are reported 60 metres down slope and to north of the No.2 showing.*

*In 1981, Canamco Resources completed a program of airborne geophysical surveys, totalling 206 line-kilometres, on the area as the Top 1-8 claims. In 2004 and 2006, Argonaut Resources completed programs of prospecting and geological mapping on the area as the Coffee and Cup claims.*

**Minfile 103I 122 (Womo, Dug)**

Located on Casa Minerals property. (Tenure No. 1000162)

L05 : Porphyry Mo (Low F- type)

L04 : Porphyry Cu +/- Mo +/- Au

*The Womo occurrence is located in the north eastern head waters of Carpenter Creek, on the south eastern slopes of Mount Knauss.*

*The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata are comprised of laminated argillites, bedded tuffs and interbedded andesite flows. These have been intruded by granitic to dioritic rocks of the Eocene Carpenter Creek Plutonic Suite.*

*Locally, a zone of molybdenite-bearing quartz veins, measuring 100 metres by 800 metres, straddles a regional contact between quartz diorite to granodiorite rocks of the Cretaceous to Tertiary Coast Plutonic Complex and hornfelsic siltstones of the Jurassic to Cretaceous Bowser Lake Group. A 50- to 150- metre wide, northwest- trending biotite-quartz feldspar dike cuts the sediments.*

*Molybdenite and chalcopyrite occur as disseminations and as fracture and shear zone fillings within the fractured, silicified and carbonatized areas of the porphyry and sediments. The mineralization is associated with east-west striking quartz veins. Later intense shearing and carbonatization, with a consistent north-south trend, have locally truncated and redistributed the mineralized structures.*

*In 2018 a 223 line kilometre airborne combined versatile time domain electromagnetic (VTEM) and aeromagnetic survey was conducted over the Pitman property (including WoMo) for Casa Minerals Inc. In addition, a structural analysis was conducted on the property as well as investigations in the high elevation Gold Dome/WoMo area.*

**Minfile 103I 188 (Brentford, Hedley, Payne, Paine, Saturn 2, Saturn, Saturn 3, Jen, J1, J2, J3)**

Located on Knauss Creek Property, Tenure No. 239194

Polymetallic Veins Ag-Pb-Zn+/-Au

*The Brentford occurrence is located on the lower north- north eastern slope of Mount Knauss, approximately 900 metres east- south east of the junction of Knauss and Fiddler creeks, approximately 38 kilometres northeast of Terrace, B.C. The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata is comprised of laminated argillites, bedded tuffs and interbedded andesite flows.*



*Locally, three parallel quartz veins (J1, J2 and J3), approximately 75 metres apart in total, occur in a small diorite intrusive which cuts tuffs and argillites of the Jurassic to Cretaceous Bowser Lake Group.*

*In 1981, Canamco Resources completed a program of airborne geophysical surveys, totalling 206 line-kilometres, on the area as the Top 1-8 claims. In 1985, a ground magnetometer survey was done on the area as the Saturn claims. During 1987 through 2010, Knauss Creek Mines completed programs of prospecting, geochemical sampling and ground electromagnetic surveys, totalling 11.7 line-kilometres, on the area as the Saturn 3 claim.*

*In 2016, Knauss Creek Mines Ltd. performed a quartz vein sampling program within the Saturn 4 claim, centred approximately 400 m east of Brentford. The objective was to revisit a known area of abundant quartz veining while getting new eyes on the property to observe the veining style and their style of occurrence. The veins are plentiful; some conjugate, many en-echelon and others stand-alone.*

#### **Minfile 103I 206 (FIDDLER CREEK) – Past Producer**

Located on J2 Syndicate property. (Tenure No. 1066101)

Surficial placers

*The area is underlain by argillites of the Jurassic to Cretaceous Bowser Lake Group. Auriferous quartz veins are probable sources for placer gold along Fiddler Creek.*

#### **Minfile 103I 244 (Hugin 1, Hugin 1-4)**

Located on Knauss Creek Property, Tenure No. 1039058

Polymetallic Veins Ag-Pb-Zn+/-Au

*The Hugin 1 occurrence is located in the head waters of Gosling Creek, at an elevation of approximately 1260 metres.*

*The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata are comprised of laminated argillites, bedded tuffs and interbedded andesite flows.*

*Locally, a fractured gossanous zone between a quartz-feldspar intrusive and meta-sediments hosts quartz veins with massive...sulphides. The sulphide mineralization consists of pyrite, arsenopyrite, galena and scorodite. The mineralized fracture zone is reported to be 65 metres wide by 175 metres long and open at both ends.*

*During 1996 through 2002, the area was prospected as Hugin 1-4 claims. This work included geological mapping, geochemical sampling and 2.6 line-kilometres of ground electromagnetic surveys.*

**Minfile 103I 245 (Kandy)**

Located on Knauss Creek Property, Tenure No. 1040667

Vein, Breccia and Stockwork

Polymetallic Veins Ag-Pb-Zn+/-Au

*The Kandy occurrence is located in the north eastern head waters of Knauss Creek, at an elevation of approximately 1400 metres.*

*The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata are comprised of laminated argillites, bedded tuffs and interbedded andesite flows. These have been intruded by granitic to dioritic rocks of the Eocene Carpenter Creek Plutonic Suite. Locally, a quartz vein in shales and schists hosts sulphide mineralization.*

*During 1996 through 2004, the area was prospected as the Kandy claims.*

**Minfile 103I 272 (Gosling)**

Located on Knauss Creek Property, Tenure No. 1039058

Polymetallic Veins Ag-Pb-Zn+/-Au

*The Gosling showing is in the upper reaches of Gosling Creek, a north flowing tributary of Fiddler Creek, west of the settlement of Dorreen on the Skeena River. The showing is approximately 35 kilometres northeast of Terrace, B.C.*

*The upper Gosling Creek area was prospected and sampled...by Knauss Creek Mines Ltd. in 2019. Nine samples were taken directly within or along the upper reaches of Gosling creek. Samples consisted of quartz float, in situ quartz veins, and sandstone both altered and non-altered...parallel quartz veins set within a shear zone that ran up the middle of Gosling creek.*

**Minfile 103I 296 (Knoll)**

Located on Knauss Creek Property, on Tenure No. 239194

Polymetallic manto Ag-Pb-Zn

*The Knoll occurrence is located on the lower north- north eastern slope of Mount Knauss, approximately 1 kilometre east- northeast of the junction of Knauss and Fiddler creeks. It is situated approximately 2 kilometres west of the settlement of*

*Dorreen on the west side of Skeena River, approximately 38 kilometres northeast of Terrace, B.C.*

*The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata is comprised of laminated argillites, bedded tuffs and interbedded andesite flows.*

*The Knoll occurrence was discovered in 2019 during a prospecting and rock sampling program on Knauss Creek Mines Ltd.'s Saturn claims over an EM anomaly target.*

Minfiles relevant in the Knauss Creek area, from the BCGS website are on the following pages.

## Ministry of Energy, Mines and Petroleum Resources

[MINFILE Home page](#) [ARIS Home page](#) [MINFILE Search page](#) [Property File Search](#)

### MINFILE Record Summary

#### MINFILE No 103I 048

[XML Extract](#) / [Production Report](#) / [Inventory Report](#)

File Created: 17-Oct-1986 by Larry Jones (LDJ)

Last Edit: 13-Aug-2018 by George Owsiacki (GO)

### SUMMARY

<b>Name</b>	FIDDLER, DORREEN	<b>NMI</b>	<u>103I16 Au1</u>
		<b>Mining Division</b>	Omineca
		<b>BCGS Map</b>	103I088
<b>Status</b>	Past Producer	<b>NTS Map</b>	103I16W
<b>Latitude</b>	054° 48' 39"	<b>UTM</b>	09 (NAD 83)
<b>Longitude</b>	128° 24' 26"	<b>Northing</b>	6073903
		<b>Easting</b>	538097
<b>Commodities</b>	Gold, Silver, Lead, Zinc, Copper	<b>Deposit Types</b>	I05 : Polymetallic veins Ag-Pb-Zn+/-Au
<b>Tectonic Belt</b>	Intermontane	<b>Terrane</b>	Bowser Lake

**Capsule Geology** The Dorreen gold mine is located 20.8 kilometres north of the Cordillera mine site (103I 040) and is situated on Knauss Mountain, 6 kilometres west of the Canadian National railroad and the Skeena River, about 35 kilometres north-northeast of Terrace.

The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata are comprised of laminated argillites, bedded tuffs and interbedded andesite flows. The rocks strike 130 degrees and dip 25 degrees northeast and are intruded by a 45-metre wide quartz diorite dike, which strikes 150 degrees and dips 55 degrees southwest.

The Fiddler quartz vein occurs along a bedding fault plane in argillite, below an andesite bed and near the intrusion. The lens-shaped vein has been traced for 100 metres and is up to 1.7 metres wide. A 30-centimetre channel sample assayed 33.6 grams per tonne gold, 161.8 grams per tonne silver, 6.73 per cent lead, 3 per cent zinc

and 1.04 per cent copper (Geological Survey of Canada Memoir 212). Mineralization consists of chalcopyrite, covellite, galena, pyrite, sphalerite, tetrahedrite and arsenopyrite.

A smaller vein assaying 32.2 grams per tonne gold, 19.2 grams per tonne silver, 1.28 per cent lead and 0.24 per cent copper over 0.2 metre occurs 21 metres stratigraphically above the main vein (Geological Survey of Canada Memoir 212).

In 1912, the Dorreen gold vein was discovered and developed intermittently from 1914 to 1952. Three ore shipments were made; in 1924, 1926 and 1952. In 1924, 80 tonnes of ore was shipped and reportedly assayed 57.26 grams per tonne gold, 205.71 grams per tonne silver, 1.3 per cent copper, 6.2 per cent lead and 5.8 per cent zinc. In 1926, approximately 8 tonnes of similar ore was shipped. In 1952, 476 tonnes of ore was shipped and 3266 grams of gold, 8118 grams of silver, 3137 kilograms of lead and 1342 kilograms of zinc were recovered. No further development has occurred since 1952.

In 1981, Canamco Resources completed a program of airborne geophysical surveys, totalling 206 line-kilometres, on the area as the Top 1-8 claims. In 2004 and 2006, Argonaut Resources Inc. completed programs of prospecting and geological mapping on the area as the Coffee and Cup claims. During 2005 through 2008, Knauss Creek Mines Ltd. conducted exploration programs that consisted of geophysical surveys, geochemical sampling and geological mapping. This work was centred on the eastern side of Knauss Creek. In 2012, Argonaut Exploration Inc. gained control of the mineral rights to the Dorreen mine after 60-year old Crown grants that held the mineral rights expired and reverted to the British Columbia government, who then assigned the mineral rights to the overlying mineral tenure holders.

**Bibliography** EMPR AR 1914-139-141; 1915-78; \*1916-90,101-105; 1917-101; 1919-369; 1922-98; 1923-105; 1924-93; 1925-131-133; 1926-125; 1927-397; 1940-45; 1949-94; 1950-81,82; 1951-108,109; 1952-85  
EMPR ASS RPT 10033, 12625, 14538, 27784, 27676, 27937, 29216, 30505  
EMPR MAP 69-1; 8  
EMPR PF (\*Mine Plans, 1922; Turner, J.R., 1925; Lay, D., 1937)  
EMR MP CORPFILE (Fiddler Creek Gold Mining Company, Limited; Dorreen Gold Mines Limited; Dorreen Mines Ltd.)  
.GSC MAP 11-1956; 1136A; 278A; 1385A  
.GSC MEM \*212, pp. 41-44; 329, pp. 90-92  
.GSC P \*36-20, pp. 41-43; 36-17  
PR REL Argonaut Exploration Inc., Dec.\*14, 2012  
EMPR PFD  
18037, 18038, 18039, 18040, 18041, 18042, 18043, 700080, 600252, 671670

## Ministry of Energy, Mines and Petroleum Resources



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[ARIS Home page](#)
[MINFILE Search page](#)
[Property File Search](#)

### MINFILE Record Summary

**MINFILE No 103I 049**

XML Extract / Inventory Report

File Created: 17-Oct-1986 by Larry Jones (LDJ)

Last Edit: 21-May-2015 by Karl A. Flower (KAF)

#### SUMMARY

<b>Name</b>	PATMORE	<b>NMI</b>	103I16 Au4
		<b>Mining</b>	Omineca
		<b>Division</b>	
		<b>BCGS</b>	103I088
		<b>Map</b>	
<b>Status</b>	Showing	<b>NTS Map</b>	103I16W
<b>Latitude</b>	054° 49' 49"	<b>UTM</b>	09 (NAD 83)
<b>Longitude</b>	128° 27' 06"	<b>Northing</b>	6076043
		<b>Easting</b>	535224
<b>Commodities</b>	Silver, Lead, Zinc, Gold	<b>Deposit</b>	I05 : Polymetallic veins Ag-
		<b>Types</b>	Pb-Zn+/-Au
<b>Tectonic Belt</b>	Intermontane	<b>Terrane</b>	Bowser Lake

**Capsule** The Patmore occurrence is located on the lower north-northwestern slope of Mount Knauss, approximately 750 metres south of Fiddler Creek.

**Geology** The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata are comprised of laminated argillites, bedded tuffs and interbedded andesite flows. Locally, Cretaceous quartz diorite sills and dikes cut argillites and tuffs of the Jurassic to Cretaceous Bowser Lake Group. The intrusives contain quartz veins mineralized with galena, sphalerite and lesser pyrite and chalcopyrite.

The No. 1 showing is located at 778 metres elevation and contains quartz veins averaging 15 centimetres in width and 15 metres in length. A representative sample assayed 4.1 grams per tonne gold, 78.2 grams per tonne silver, 1.00 per cent lead and 1.05 per cent zinc (Geological Survey of Canada Memoir 212).

The No. 2 showing, 365 metres to the west, occurs in a quartz diorite sill within argillites that strike east and dip 40 degrees north. A 15 centimetre channel sample assayed 4.8 grams per tonne gold, 91.9 grams per tonne silver and 2.92 per cent lead (Geological Survey of Canada Memoir 212). Additional mineralized exposures are reported 60 metres down slope and to north of the No.2 showing.

In 2006, a sub-crop float sample (AGP6-01) of pyrite and galena bearing quartz vein, from above the No.1 showing at an elevation of 850 metres, assayed 1.2 grams per tonne gold, 112 grams per tonne silver, and 2.75 per cent lead (Assessment Report 29216).

In 1981, Canamco Resources completed a program of airborne geophysical surveys, totalling 206 line-kilometres, on the area as the Top 1-8 claims. In 2004 and 2006, Argonaut Resources completed programs of prospecting and geological mapping on the area as the Coffee and Cup claims.

#### **Bibliography**EMPR AR 1934-C5

EMPR ASS RPT 10033, 27784, \*29216

EMPR MAP 69-1; 8

GSC MAP 1136A; 11-1956; 278A; 1385A

GSC MEM \*212, pp. 44,45; 329, pp. 92,93

GSC P \*36-20, pp. 43,44; 36-17



## Ministry of Energy, Mines and Petroleum Resources



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[Property File Search](#)

### MINFILE Record Summary

**MINFILE No 103I 122**

XML Extract / Inventory Report

File Created: 20-Oct-1986 by Larry Jones (LDJ)

Last Edit: 27-May-2021 by Del Ferguson (DF)

### SUMMARY

<b>Name</b>	WOMO, DUG	<b>NMI</b>	103I16 Cu1
		<b>Mining</b>	Omineca
		<b>Division</b>	
		<b>BCGS</b>	103I079
		<b>Map</b>	
<b>Status</b>	Showing	<b>NTS Map</b>	103I16W
<b>Latitude</b>	054° 46' 49"	<b>UTM</b>	09 (NAD 83)
<b>Longitude</b>	128° 22' 16"	<b>Northing</b>	6070523
		<b>Easting</b>	540448
<b>Commodities</b>	Molybdenum, Copper, Gold, Silver, Zinc, Lead	<b>Deposit</b>	L05 : Porphyry Mo (Low F- type)
		<b>Types</b>	L04 : Porphyry Cu +/- Mo +/- Au
<b>Tectonic Belt</b>	Intermontane	<b>Terrane</b>	Stikine

**Capsule** The Womo occurrence is located in the north eastern head waters of Carpenter Creek, on the south eastern slopes of Mount Knauss.

**Geology** The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata are comprised of laminated argillites, bedded tuffs and interbedded andesite flows. These have been intruded by granitic to dioritic rocks of the

## Eocene Carpenter Creek Plutonic Suite.

Locally, a zone of molybdenite-bearing quartz veins, measuring 100 metres by 800 metres, straddles a regional contact between quartz diorite to granodiorite rocks of the Cretaceous to Tertiary Coast Plutonic Complex and hornfelsic siltstones of the Jurassic to Cretaceous Bowser Lake Group. A 50- to 150- metre wide, northwest- trending biotite-quartz feldspar dike cuts the sediments.

Molybdenite and chalcopyrite occur as disseminations and as fracture and shear zone fillings within the fractured, silicified and carbonatized areas of the porphyry and sediments. The mineralization is associated with east-west striking quartz veins. Later intense shearing and carbonatization, with a consistent north-south trend, have locally truncated and redistributed the mineralized structures.

In 1966, rock chip samples yielded values up to 0.064 per cent molybdenum and 0.20 per cent copper (Assessment Report 00798).

In 1981, chip sampling returned a value of 0.049 per cent molybdenum over 2.4 metres and 0.53 per cent copper with 8.3 grams per tonne silver over 4.5 metres (Assessment Report 10440).

In 2007, samples 17 and 18 assayed 0.042 and 0.045 per cent molybdenum, respectively (Assessment Report 29151).

In 2010, a grab sample (WO-14-10) assayed 3.71 grams per tonne gold, greater than 100 grams per tonne silver, 0.131 per cent lead and 0.225 per cent zinc. Three other grab samples (WO-21-10 through WO-23-10) yielded values ranging from 0.557 to 0.749 per cent copper and 0.109 to 0.154 per cent molybdenum (Assessment Report 31853).

In 1966, Amax Explorations completed a program of geological mapping and water, rock, silt and soil sampling on the area as the Dug claims. In 1979 and 1980, International Prism Resources prospected and sampled the area as the Womo 1-2 claims. In 1981, Cominco completed a program of rock sampling and geological mapping. In 1994, the area was prospected as the Copper Top claim. In 2007, El Toro Mining completed a program of photo-geological interpretations on the area. During 2008 through 2013, Casa Minerals Inc. completed programs of prospecting, geological mapping, geochemical (rock and soil) sampling and ground magnetometer surveys on the area as the Pitman property. In 2014, Abcana Capital Inc. entered into an agreement with Casa Minerals to acquire the Pitman property. During 2015 through 2017, Abcana and Casa Minerals completed programs of prospecting, reconnaissance

geological mapping, and soil and rock sampling on the Pitman property. In 2018 a 223 line kilometre airborne combined versatile time domain electromagnetic (VTEM TM) and aeromagnetic survey was conducted over the Pitman property (including WoMo) for Casa Minerals Inc. (Assessment Report 37955). In addition, a structural analysis was conducted on the property as well as investigations in the high elevation Gold Dome/WoMo area (Assessment Report 37735).

- Bibliography** EMPR ASS RPT \*798, 8374, 9524, \*10440, 23766, \*29151, 30900, \*31853, 32596, 34330, \*37735, 37955  
E.EMPR EXPL 1980-400  
E.EMPR OF 2007-4  
E.EMPR P 2007-1 pp.149-162  
E.EMPR MAP 8; 69-1  
G.GSC MAP 11-1956; 278A; 1136A; 1385A  
G.GSC MEM 329  
O.Ostensoe, E.A., Payie, G. (2011-05-04): Technical Report – Pitman Property  
P.Payie, G. (2012-01-10): Technical Report – Pitman Property  
P.Payie, G. (2012-07-06): Technical Report – Pitman Property  
P.Payie, G., Ostensoe, E.A. (2014-11-18): Technical Report – Pitman Property  
O.Ostensoe, E.A., Johnston, R. (2017-09-12): Technical Report – Pitman Property

## Ministry of Energy, Mines and Petroleum Resources



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### MINFILE Record Summary

**MINFILE No 103I 188**

XML Extract / Inventory Report

File Created: 17-Oct-1986 by Larry Jones (LDJ)

Last Edit: 27-May-2021 by Del Ferguson (DF)

### SUMMARY

<b>Name</b>	BRENTFORD, HEDLEY (L.6324), PAYNE, PAINE, SATURN 2, SATURN, SATURN 3, JEN, J1, J2, J3	<b>NMI</b> 103I16 Ag5 <b>Mining</b> Omineca <b>Division</b>
<b>Status</b>	Showing	<b>BCGS</b> 103I089
<b>Latitude</b>	054° 49' 49"	<b>Map</b>
<b>Longitude</b>	128° 23' 06"	<b>NTS Map</b> 103I16W
<b>Commodities</b>	Silver, Gold, Lead, Zinc, Copper	<b>UTM</b> 09 (NAD 83)
<b>Tectonic Belt</b>	Intermontane	<b>Northing</b> 6076078
		<b>Easting</b> 539506
		<b>Deposit</b> I05 : Polymetallic veins Ag-
		<b>Types</b> Pb-Zn+/-Au
		<b>Terrane</b> Stikine

**Capsule** The Brentford occurrence is located on the lower north- north eastern  
**Geology** slope of Mount Knauss, approximately 900 metres east- south east of the  
junction of Knauss and Fiddler creeks, approximately 38 kilometres  
northeast of Terrace, B.C.

The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata is comprised of laminated argillites, bedded tuffs and interbedded andesite flows.

Locally, three parallel quartz veins (J1, J2 and J3), approximately 75 metres apart in total, occur in a small diorite intrusive which cuts tuffs and argillites of the Jurassic to Cretaceous Bowser Lake Group. The veins, which strike 030 degrees and dip steeply east, are 1 to 2 metres wide and are mineralized with pyrite, chalcopyrite, galena, and sphalerite.

A 30 centimetre sample assayed 1.7 grams per tonne gold, 261 grams per tonne silver, and 1.1 per cent copper (Minister of Mines Annual Report 1914) and a selected sample from a dump assayed 1.4 grams per tonne gold, 377 grams per tonne silver, 11 per cent lead, 8 per cent zinc, and 1 per cent copper (Minister of Mines Annual Report 1932).

In 2003, two samples (S615 and S616) from the J1 vein assayed 1.54 and 18.54 grams per tonne gold, 541 and 109 grams per tonne silver, and 0.665 and 1.43 per cent lead, respectively. A sample (S613) of the J2 vein assayed 29.54 grams per tonne gold, 415 grams per tonne silver, 0.185 per cent copper, 4.17 per cent lead and 0.121 per cent zinc (Assessment Report 27225).

In 2010, a sample (B 38 R) assayed 240 grams per tonne gold, 145.2 grams per tonne silver, 0.598 per cent copper, 0.207 per cent zinc and greater than 1.0 per cent lead (Assessment Report 31459).

In 1981, Canamco Resources completed a program of airborne geophysical surveys, totalling 206 line-kilometres, on the area as the Top 1-8 claims. In 1985, a ground magnetometer survey was done on the area as the Saturn claims. During 1987 through 2010, Knauss Creek Mines completed programs of prospecting, geochemical sampling and ground electromagnetic surveys, totalling 11.7 line-kilometres, on the area as the Saturn 3 claim.

In 2016, Knauss Creek Mines Ltd. performed a quartz vein sampling program within the Saturn 4 claim, centred approximately 400 m east of Brentford. The objective was to revisit a known area of abundant quartz veining while getting new eyes on the property to observe the veining style and their style of occurrence. The veins are plentiful; some conjugate, many en-echelon and others stand-alone. Of the 12 rock samples obtained, 11 returned values ranging from 106 to 1644 grams per tonne Ag, 0.05 to 7.87 grams per tonne Au, 0.02 to 0.96 per cent Cu,

0.91 to 5.02 per cent Pb and 0.085 to 13.88 per cent Zn.

**Bibliography** E.EMPR AR \*1914-138-139; 1915-78; 1916-90; 1920-349;  
1925-133; \*1932-84-85; 1967-83  
EMPR ASS RPT 10033, 13956, 16160, 19349, 20344, 21894, 25758,  
\*27225, 28567, \*31459, \*36204  
E.EMPR EXPL 1987-C351  
E.EMPR OF 2007-4  
E.EMPR P 2007-1 pp.149-162  
E.EMPR MAP 8; 69-1  
E.EMPR OF 1994-14  
G.GSC MAP 11-1956; 278A; 1136A; 1385A  
G.GSC MEM 329  
G.GSC P 36-17

**MINFILE Record Summary**
**MINFILE No 103I 206**

XML Extract

File Created: 29-Sep-1986 by Larry Jones (LDJ)

Last Edit: 01-Jan-0001 by BC Geological Survey (BCGS)

**SUMMARY**

<b>Name</b>	FIDDLER CREEK	<b>NMI</b>	<b>Mining Division</b> Omineca
<b>Status</b>	Past Producer	<b>BCGS Map</b>	103I088
<b>Latitude</b>	054° 50' 29"	<b>NTS Map</b>	103I16W
<b>Longitude</b>	128° 27' 06"	<b>UTM</b>	09 (NAD 83)
<b>Commodities</b>	Gold	<b>Northing</b>	6077279
		<b>Easting</b>	535214
<b>Tectonic Belt</b>	Intermontane	<b>Deposit Types</b>	C01 : Surficial placers
		<b>Terrane</b>	Bowser Lake

**Capsule** The area is underlain by argillites of the Jurassic to Cretaceous Bowser  
**Geology** Lake Group. Auriferous quartz veins are probable sources for placer gold  
along Fiddler Creek.

**Bibliography** E.EMPR AR 1927-65  
E.EMPR BULL 28, pp. 43,44  
E.EMPR MAP 8; 69-1  
G.ESC MAP 11-1956; 278A; 1136A; 1385A  
G.GSC MEM 329, pp. 69,71  
G.GSC SUM RPT 1923A, p. 42



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## MINFILE Record Summary

**MINFILE No 103I 244**

XML Extract / Inventory Report

File Created: 08-May-2015 by Karl A. Flower (KAF)

Last Edit: 21-May-2015 by Karl A. Flower (KAF)

### SUMMARY

<b>Name</b>	HUGIN 1, HUGIN 1-4	<b>NMI</b>	
		<b>Mining Division</b>	Omineca
		<b>BCGS</b>	103I089
		<b>Map</b>	
<b>Status</b>	Showing	<b>NTS Map</b>	103I16W
<b>Latitude</b>	054° 48' 29"	<b>UTM</b>	09 (NAD 83)
<b>Longitude</b>	128° 22' 41"	<b>Northing</b>	6073610
		<b>Easting</b>	539974
<b>Commodities</b>	Gold, Silver, Lead, Zinc	<b>Deposit</b>	I05 : Polymetallic veins Ag-
		<b>Types</b>	Pb-Zn+/-Au
<b>Tectonic Belt</b>	Intermontane	<b>Terrane</b>	Bowser Lake

**Capsule** The Hugin 1 occurrence is located in the head waters of Gosling Creek, at  
**Geology** an elevation of approximately 1260 metres.

The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata are comprised of laminated argillites, bedded tuffs and interbedded andesite flows.



Locally, a fractured gossanous zone between a quartz-feldspar intrusive and meta-sediments hosts quartz veins with massive, up to 5 to 10 centimetres wide, sulphides. The sulphide mineralization consists of pyrite, arsenopyrite, galena and scorodite. The mineralized fracture zone is reported to be 65 metres wide by 175 metres long and open at both ends (Assessment Report 27020).

In 1996, a chip sample (H2) assayed 2.68 grams per tonne gold (Assessment Report 24688). In 2000, a sample (H94) assayed 1.29 grams per tonne gold, 222.0 grams per tonne silver, 8.10 per cent lead and 1.73 per cent zinc (Assessment Report 26430). In 2002, a sample (H112) assayed 2.69 grams per tonne gold, 42.5 grams per tonne silver, 1.31 per cent lead and 2.71 per cent zinc (Assessment Report 27020). During 1996 through 2002, the area was prospected as Hugin 1-4 claims. This work included geological mapping, geochemical sampling and 2.6 line-kilometres of ground electromagnetic surveys.

**Bibliography** EMPR ASS RPT  
12625, 14538, 15031,\*24688, 25603,\*26430, 26440,\*27020, 28577  
, 29380  
E.EMPR EXPL 1987-C351  
E.EMPR MAP 8; 69-1  
E.EMPR OF 1994-14  
G.GSC MAP 11-1956; 278A; 1136A; 1385A  
G.GSC MEM 329  
G.GSC P 36-17

**MINFILE Record Summary**
**MINFILE No 103I 245**

XML Extract / Inventory Report

File Created: 08-May-2015 by Karl A. Flower (KAF)

Last Edit: 21-May-2015 by Karl A. Flower (KAF)

**SUMMARY**

<b>Name</b>	KANDY	<b>NMI</b>	
		<b>Mining Division</b>	Omineca
		<b>BCGS</b>	103I079
		<b>Map</b>	
<b>Status</b>	Showing	<b>NTS Map</b>	103I16W
<b>Latitude</b>	054° 47' 53"	<b>UTM</b>	09 (NAD 83)
<b>Longitude</b>	128° 23' 42"	<b>Northing</b>	6072487
		<b>Easting</b>	538895
<b>Commodities</b>	Silver, Copper, Gold	<b>Deposit Types</b>	I : VEIN, BRECCIA AND STOCKWORK
<b>Tectonic Belt</b>	Intermontane	<b>Terrane</b>	Bowser Lake

**Capsule** The Kandy occurrence is located in the north eastern head waters of Knauss Creek, at an elevation of approximately 1400 metres.

The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata are comprised of laminated argillites, bedded tuffs and interbedded andesite flows. These have been intruded by granitic to dioritic rocks of the Eocene Carpenter Creek Plutonic Suite.

Locally, a quartz vein in shales and schists hosts sulphide mineralization. In 2004, a sample (K4) assayed 0.31 gram per tonne gold, 119.0 grams per tonne silver, and 1.12 per cent copper (Assessment Report 27676). During 1996 through 2004, the area was prospected as the Kandy claims.

**Bibliography**E.EMPR ASS RPT

12625, 14538, 15031, 24688, 25603, 26430, 26440, 27020,  
\*27676, 28577

E.EMPR EXPL 1987-C351

E.EMPR MAP 8; 69-1

E.EMPR OF 1994-14

G.GSC MAP 11-1956; 278A; 1136A; 1385A

G.GSC MEM 329

G.GSC P 36-17

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**MINFILE Record Summary**
**MINFILE No 103I 272**

XML Extract / Inventory Report

File Created: 26-May-2021 by Del Ferguson (DF)

Last Edit: 27-May-2021 by Del Ferguson (DF)

**SUMMARY**

<b>Name</b>	GOSLING	<b>NMI</b>	
		<b>Mining Division</b>	Omineca
		<b>BCGS</b>	103I089
		<b>Map</b>	
<b>Status</b>	Showing	<b>NTS Map</b>	103I16W
<b>Latitude</b>	054° 48' 26"	<b>UTM</b>	09 (NAD 83)
<b>Longitude</b>	128° 22' 43"	<b>Northing</b>	6073527
		<b>Easting</b>	539932
<b>Commodities</b>	Silver, Gold, Copper, Lead	<b>Deposit</b>	I05 : Polymetallic veins Ag-
		<b>Types</b>	Pb-Zn+/-Au
<b>Tectonic Belt</b>	Intermontane	<b>Terrane</b>	Stikine

**Capsule** The Gosling showing is in the upper reaches of Gosling Creek, a north flowing tributary of Fiddler Creek, west of the settlement of Dorreen on the Skeena River. The showing is approximately 35 kilometres northeast of Terrace, B.C.

The upper Gosling Creek area was prospected and sampled (21 rock samples) by Knauss Creek Mines Ltd. in 2019. Nine samples were taken directly within or along the upper reaches of Gosling creek. Samples consisted of quartz float, insitu quartz veins, and sandstone both altered

and non-altered. Samples KN037- KN040 returned elevated Au results ranging from 0.27 to 3.58 grams per tonne with arsenic values greater than 10,000 parts per million. Samples KN053 and KN057 were parallel quartz veins set within a shear zone that ran up the middle of Gosling creek. These samples returned gold values of 0.38 and 1.86 grams per tonne respectively (Assessment Report 38731).

## **Bibliography**

EMPR ASS RPT  
10033, 13956, 16160, 19349, 20344, 21894, 25758, 27225, 28567, 31459,  
36204, \*38731  
EMPR EXPL 1987-C351  
EMPR OF 2007-4  
EMPR P 2007-1 pp.149-162  
EMPR MAP 8; 69-1  
EMPR OF 1994-14  
GSC MAP 11-1956; 278A; 1136A; 1385A  
GSC MEM 329  
GSC P 36-17

**MINFILE Record Summary**
**MINFILE No 103I 296**

XML Extract / Inventory Report

File Created: 26-May-2021 by Del Ferguson (DF)

Last Edit: 27-May-2021 by Del Ferguson (DF)

**SUMMARY**

<b>Name</b>	KNOLL	<b>NMI</b>	
		<b>Mining Division</b>	Omineca
		<b>BCGS</b>	103I089
		<b>Map</b>	
<b>Status</b>	Showing	<b>NTS Map</b>	103I16W
<b>Latitude</b>	054° 50' 11"	<b>UTM</b>	09 (NAD 83)
<b>Longitude</b>	128° 22' 48"	<b>Northing</b>	6076750
		<b>Easting</b>	539819
<b>Commodities</b>	Silver, Gold, Zinc, Lead	<b>Deposit</b>	J01 : Polymetallic manto
		<b>Types</b>	Ag-Pb-Zn
<b>Tectonic Belt</b>	Intermontane	<b>Terrane</b>	Stikine

**Capsule** The Knoll occurrence is located on the lower north- north eastern slope of Mount Knauss, approximately 1 kilometre east- northeast of the junction of Knauss and Fiddler creeks. It is situated approximately 2 kilometres west of the settlement of Dorreen on the west side of Skeena River, approximately 38 kilometres northeast of Terrace, B.C.

The area is underlain by Lower Jurassic volcanics of the Hazelton Group and Upper Jurassic sediments of the Bowser Lake Group. The strata is comprised of laminated argillites, bedded tuffs and interbedded andesite flows.

The Knoll occurrence was discovered in 2019 during a prospecting and rock sampling program on Knauss Creek Mines Ltd.'s Saturn claims over an EM anomaly target. Two samples taken at either end of a bedrock knoll in the lower Gosling Creek area had significant elevated results of 0.45 and 3.1 grams per tonne Au, 26.2 and 22.7 grams per tonne Ag and 2.04 and 1.07 per cent Zn (Assessment Report 38731).

**Bibliography** EMPR AR \*1914-138-139; 1915-78; 1916-90; 1920-349; 1925-133;  
\*1932-84-85;  
1967-83  
EMPR ASS RPT  
10033, 13956, 16160, 19349, 20344, 21894, 25758, 27225, 28567,  
31459, 36204, \*38731  
EMPR EXPL 1987-C351  
EMPR MAP 8; 69-1  
EMPR OF 1994-14, 2007-4  
EMPR P 2007-1 pp.149-162  
GSC MAP 11-1956; 278A; 1136A; 1385A  
GSC MEM 329  
GSC P 36-17