

# GOLDBRIDGE HOLDINGS LTD.

*(Owner and Operator)*

## GEOLOGICAL ASSESSMENT REPORT

*(Event 5480589)*

*on a*

### STRUCTURAL ANALYSIS

*Work done on*

**Tenure 844114**

*of the 13 Tenure*

**Gold 844114 Claim Group**

**Lillooet Mining Division**

**BCGS Map 092J.086/.096**

**Centre of Work**

**5,638,417N, 505,182E (NAD 83)**

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***Sookochoff Consultants Inc.***

**BC Geological Survey  
Assessment Report  
34607**

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## **SUMMARY**

The Gold 844114 Claim Group is located within 14 kilometres of the producing Bralorne Mine which was discovered near the turn of the 20<sup>th</sup> century, became the largest gold producer in British Columbia yielding over 2.8 million ounces of gold and over seven million ounces of silver. The Pioneer Mine, south of the Bralorne, and situated along the same greenstone belt produced over 1.3 million ounces of gold and 25 million ounces of silver.

Currently, Bralorne Pioneer Gold Mines Ltd. has incorporated all the historic producers into one property which is comprised of 154 Crown Granted Mineral Claims, 2 reverted Crown Grants and 18 metric unit cell claims. Production at the Bralorne property commenced in 2011.

The Cadwallader fault is a major “break” that extends more than 50 kilometers along strike and is tentatively interpreted as a crustal transform fault (Church, 1996). This fault is considered to a controlling structure on the localization of the Bralorne-Pioneer gold deposit because it changes strike abruptly in the immediate area of gold deposits. In addition, all of the gold production came from veins situated between the Cadwallader fault and the Fergusson fault, which may be a splay fault

The Gold 844114 Claim Group are may be a discontinuous northwestward extension of the Bralorne greenstone belt. The northeastern half of the Gold 844114 Claim Group covers a portion of the belt which is in a fault (?) contact with granodioritic rocks to the southwest. The belt coverage is comprised predominantly of Permean ultramafic rocks marginalized by a thrust fault contact and capping sedimentary rocks of the Jurassic to Cretaceous Cayoosh Assemblage and Mississippian to Middle Jurassic marine and sedimentary rocks

In the structural analysis of Tenure 844114 three cross-structural locations were determined. The locations stemmed from the intersection between dominant northerly, westerly, and northeasterly structures; the east-west structures host the productive veins at the historic Bralorne and Pioneer past producers.

Proximal mineral properties to Tenure 844114 host shear zone mineralization within intrusives and/or sediments such as at the east trending shear zones of granodiorite or quartz-diorite at the Jewel and the Little Gem or at the northeast trending Pilot shear zone within sediments.

If structural flexures are a prime control to enhanced mineralization such as at the Bralorne, location C, which shows a similar structural pattern of a Bralorne “flexure”, would be a primary exploratory area; especially along the southwest AC trending structure closer to the intrusive where an intersection with the paralleling CB south trending structure is topographically indicated and where the BCA structures appear as a flexure (Figure 10).

Structural intersection B located within the intrusive, and along a prominent northeast trending fault at the south end of the BCA “flexure”, is a prime target area to explore for surficial geological features to a deep seated porphyry resource. Location A, located within the capping of the Permean ultramafic rocks near the thrust fault contact with the sediments of the Cayoosh Assemblage, warrants exploration for surficial leakage of geological indicators to a mineral resource at or beneath the underlying contact. The ultramafics may have been a dam (as at Bralorne) to deep-seated mineral bearing solutions escaping to the surface via the conduit created by the cross-structure.

The UTM locations of the three cross structures are detailed in Table III.

Excluding other variable geological conditions, the structures are essential in the localization of mineral indicators and/or potentially economic mineralization. For other mineral deposit types that may occur within Tenure 944114 or on the Gold 944114 Claim Group, reference is made to the seven Minfile property descriptions referred to in the report.

## INTRODUCTION

In November 2013 a Structural Analysis was completed on Tenure 844114 of the seven claim Gold 844114 Claim Group ("Property"). The purpose of the program was to delineate structures which may be integral in geological controls to potentially economic mineral zones that may occur on Tenure 844114 or other claims of the Property.

Information for this report was obtained from sources as cited under Selected References and from periodic mineral exploration work the author has performed in the Gold Bridge area since 1985.

**Figure 2. Claim Location**  
(base map from MapPlace & Google Earth)



## PROPERTY LOCATION & DESCRIPTION

### Location

The Gold 844114 Claim Group is located within BCGS Map 092J.086/.096 of the Lillooet Mining Division, 181 air kilometres north-northeast of Vancouver, eight kilometres northwest of Gold Bridge, and 15 kilometres northwest of Bralorne.

Gold Bridge, at the confluence of the Bridge River with its south fork, the Hurley River, is an unincorporated community with a population of less than 100. Gold Bridge began as a freewheeling merchandising and services centre supplementary to the company-run gold mining towns of Bralorne, Brexton, and Pioneer Mine and 80 kilometres west of Lillooet, a town serviced by a railroad with a terminus at Vancouver.

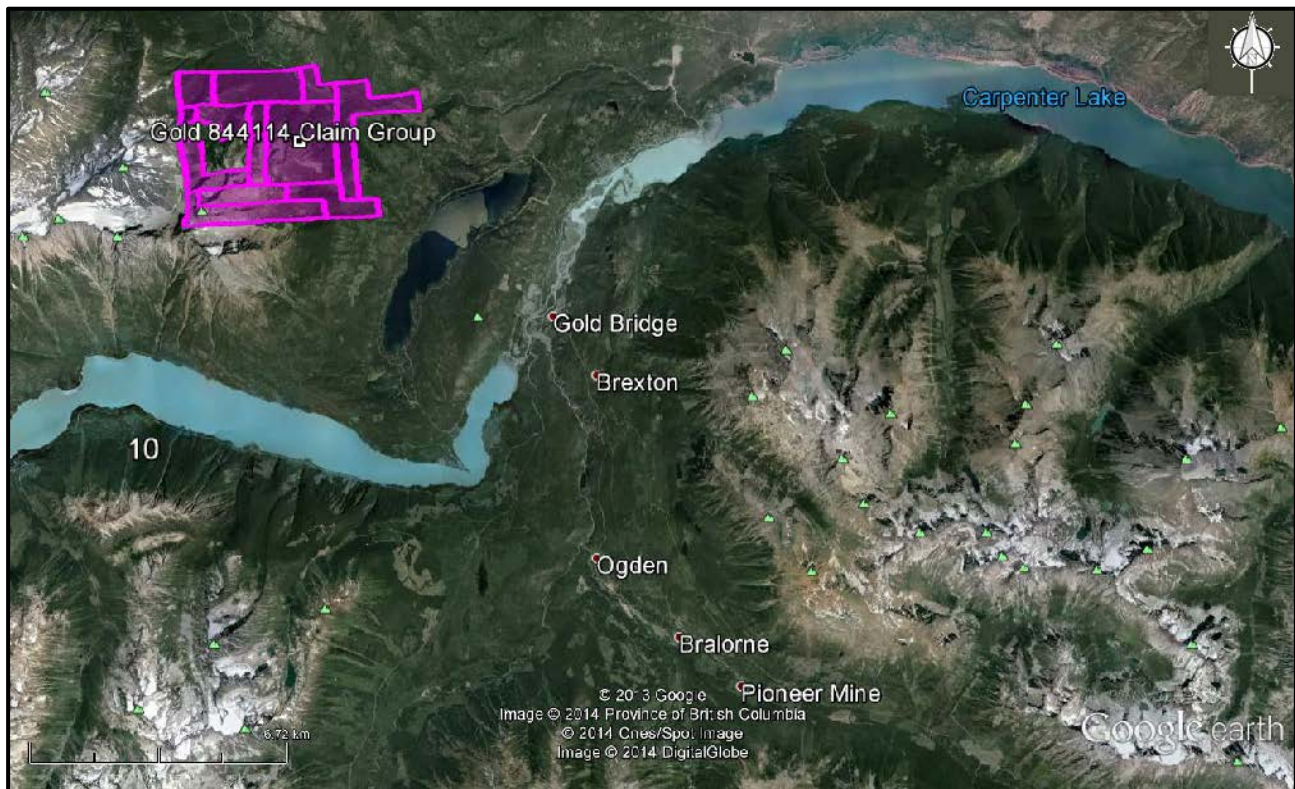
Gold Bridge is the service and supply centre for the upper basin of the Bridge River Valley, which includes recreation-residential areas at the Gun Lakes, Tyaughton Lake, Marshall Creek and the nearby ghost towns of Brexton, Bralorne, and Pioneer Mine.

### Description

The Gold 844114 Claim Group is comprised of 13 contiguous claims covering an area of 1752.9711 hectares.

**Property Location & Description (cont'd)****Figure 2. Claim Location**

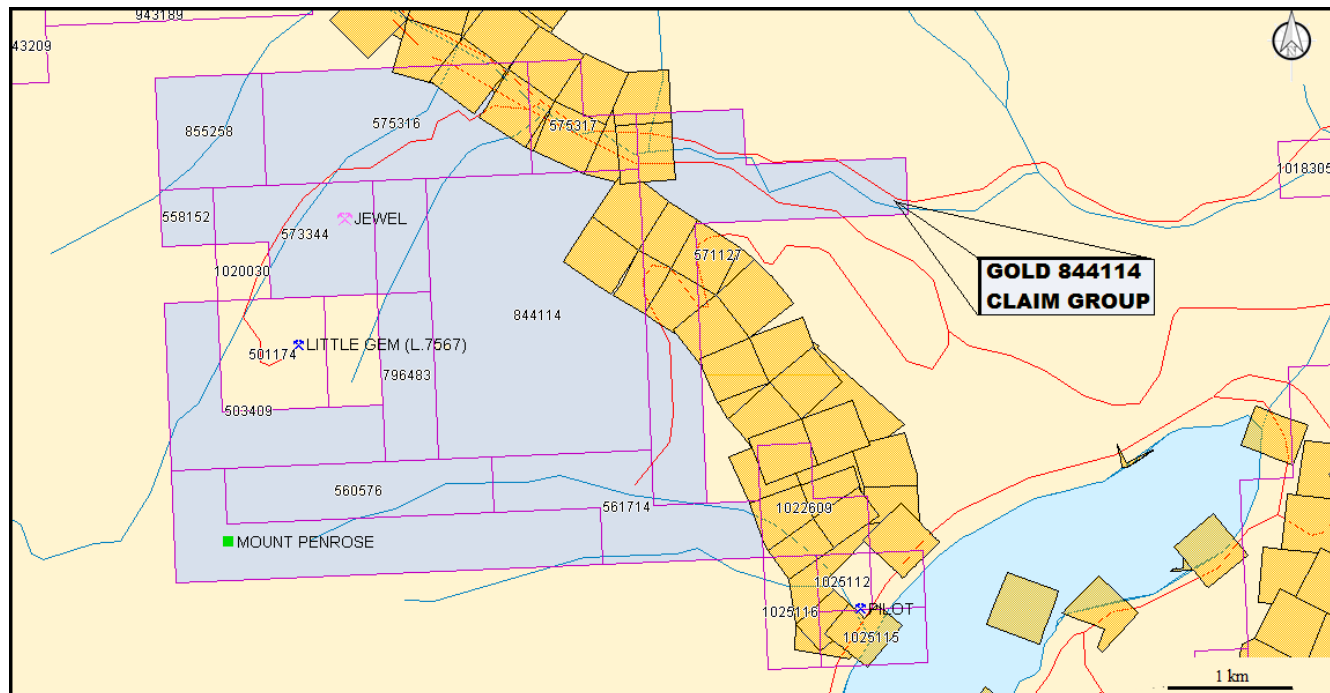
(base map from MapPlace &amp; Google Earth)

**Table I. Mineral Tenures of the Gold 844114 Claim Group**

<u>Tenure Number</u>	<u>Type</u>	<u>Claim Name</u>	<u>Good Until</u>	<u>Area (ha)</u>
<a href="#">503409</a>	Mineral	Little Gem	20141215	122.316
<a href="#">558152</a>	Mineral	JEWEL 2	20141215	20.3799
<a href="#">560576</a>	Mineral	ALL4	20141215	101.9438
<a href="#">561714</a>	Mineral	A&	20141215	122.3374
<a href="#">564599</a>	Mineral	JEWEL 3	20141215	40.7616
<a href="#">571127</a>	Mineral	BRALORNE 4	20141215	244.579
<a href="#">573344</a>	Mineral	JEWEL 1	20141215	101.903
<a href="#">575316</a>	Mineral	JEWEL 4	20141215	203.7726
<a href="#">575317</a>	Mineral	JEWEL 4A	20141215	61.1325
<a href="#">796483</a>	Mineral	GOLDBRIDGE	20141215	61.1556
<a href="#">844114</a>	Mineral	JEWEL 5	20141215	407.6681
<a href="#">845102</a>	Mineral	JEWEL 6	20141215	183.5125
<a href="#">855258</a>	Mineral	OUTSIDE WRAP	20141215	81.5091

**Property Location & Description (cont'd)**

Figure 3. **Claim Map**  
(from MapPlace)



## **ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **Access**

Two access routes from Vancouver are available. One is northward via Pemberton and the Hurley River Forest Access road to Gold Bridge; a distance of some 215 kilometres. The second is eastward via Hope, Lytton, and Lillooet to Gold Bridge; a distance of some 440 kilometres. Although the first route is shorter, the Hurley River road portion is all gravel with steep, switch-backed sections and not maintained during the winter season whereas the second access is via all paved roads except for short sections of gravel from Lillooet to Gold Bridge.

The Gold 844114 Claim Group is some sixteen kilometres from Goldbridge with access from the Slim Creek Forest Service Road which junctions from the Gun Lake West road which junctions with the Carpenter Lake road seven kilometres east of Goldbridge. The two branch roads are taken for nine kilometres to the southern border of Tenure 571127 which is the northeastern Tenure of the Gold 844114 Claim Group.

### **Climate**

Annual precipitation is moderate with generally dry summers. Winter months receive moderate to heavy snowfall with snow accumulations exceeding three meters at the higher elevations. At the property elevation the snow free period would generally be from April to December.

### **Local Resources and Infrastructure**

The general Bralorne area, an historic mining centre, could be a source of experienced and reliable exploration and mining personnel. Goldbridge has suitable accommodations for any exploration and initial development crews. Lillooet, some 80 kilometre distant is serviced by a railroad. Vancouver, a port city on the southwest corner of, and the largest city in, the Province of British Columbia is six hours distant using the all-weather Lillooet route.

A local airport is within five kilometres on the Gun Lake road from its junction with the Carpenter Lake road.

**Accessibility, Local Resources, Infrastructure and Physiography (cont'd)****Physiography**

The region is characterized by mountainous terrain with deeply incised stream valleys and moderate to steep slopes, and relief is 1,180 metres. The elevations range from 1,086 metres within the river valley in the northeast within the southeast of Tenure 571127 to elevations of 2,766 metres on a mountain ridge in the southwest and Tenure 845102.

**WATER and POWER**

Sufficient water for all phases of the exploration program during the summer season should be available from the many lakes and creeks which are located within the confines of the property.

**HISTORY: GOLD 844114 CLAIM GROUP AREA**

The Bridge River area is one of British Columbia's oldest gold camps. Production commenced in 1858 when placer gold was recovered from Bridge River, near its confluence with the Fraser River. The placer gold was followed upstream from the Fraser, and in 1859, a second discovery was made on Gun Creek, near its confluence with the Bridge River, close to the (then) future site of the Minto Mine. Extensive placer operations were also initiated on Tyaughton and Hurley Rivers and on Cadwallader Creek. It wasn't until the late 1800's, however, that an interest emerged in identifying the placer source; this led to the discovery of the Bralorne and the Pioneer deposits near the turn of the century.

The Bralorne Mine became the largest gold producer in the region, yielding over 2.8 million ounces of gold and over 7 million ounces of silver. The Pioneer Mine, south of the Bralorne, and situated along the same greenstone belt, produced over 1.3 million ounces of gold and 25 million ounces of silver.

The history on some of the more significant mineral MINFILE reported occurrences, prospects, and past producers on and peripheral to the Property are reported in the Minfile published records as follows. The distance to the Minfile locations is relative to Tenure 844114 of the Gold 844114 Claim Group.

**BRALORNE** producer (Au-quartz veins)

MINFILE 092JNE001

Fourteen kilometres southwest

*Bralorne Pioneer Gold Mines Ltd., in a joint venture with International Avino Mines Ltd., plans to re-open the historic Bralorne mine encompassing the combined Bralorne, Pioneer (092JNE004) and Loco (092JNE164) properties, following issuance of a Mine Development Certificate in March 1995. Initial underground mining will be from the formerly producing Bralorne 51 vein area where detailed exploration programs, in recent years, have outlined proven, probable and possible reserves of 570,000 tonnes grading 8.22 grams per tonne gold. Proven and probable reserves above the 800 level and readily available for extraction total 432,500 tonnes grading 10.63 grams per tonne gold. There are also reserves of 549,125 tonnes grading 9.26 grams per tonne gold below the 800 level (Information Circular 1997-1, page 20). The nearby Countless vein on the Loco property has 110,000 tonnes probable and possible reserves grading 17.1 grams per tonne gold. The Peter vein was drifted along a strike length of 35 metres on the 800 level, 305 metres below the surface (T. Schroeter, personal communication, 1996)*

*Mining and milling operations are forecast to start at about 100 to 125 tonnes per day, increasing to 400 tonnes per day at a later date. Mill tune-up and production is scheduled for mid-March 1997. Milling machinery, purchased from Zabellos, is being assembled at the property and the mill building has been*

*In 1995, Bralorne Pioneer Gold Mines Ltd., and partner International Avino Mines Ltd., with support from the Explore B.C. Program, carried out an extensive exploration program including trenching and 650 metres of surface diamond drilling in 7 holes on the Maddie zone resulting in the discovery of new veins. Underground work on the 800 level consisting of 233 metres of drifting, 100 metres of crosscuts and 544 metres of diamond drilling in 4 holes traced the Peter and Big Solly veins to and beyond a crossfault (Explore B.C. Program 95/96 - A32).*



*History: Gold 844114 Claim Group Area (cont'd)*

*Figure 4* **Bralorne Town and Mill**

*(BC Archives # C-08636)*



*Figure 5. Bralorne Mine Portal*

*(BC Archives # 1-29085)*



**History: Gold 844114 Claim Group Area (cont'd)****Bralorne producer (cont'd)**

In 2003, Bralorne-Pioneer Gold Mines Ltd resumed construction of a 125 tonne-per-day pilot plant test mill and began construction of a tailings pond. Trenching and drilling were done in the area of the Peter, Cosmopolitan and Big Solly veins on the Loco property. Bralorne also did rehabilitation work on the 800 level in the Bralorne mine. In early 2004, Bralorne plans to mine a 6000 to 8000 tonne bulk sample from the Peter vein, which will be processed in the pilot mill. The drilling program consisted of 15 NQ holes totaling 1751.5 metres and was designed to provide additional information on the Peter vein and associated structures in the area beneath the upper level workings and also along strike to the north and south.

In 2004, Bralorne completed construction of a tailings pond to allow five years of production, and began test milling using a small (approximately 100 tonne-per-day) gravity/flotation pilot plant. As of mid-August more than 10 000 tonnes had been processed through the plant, producing about 141 dry tonnes of concentrate. Most of the material processed was from low-grade stockpiles with some additional material coming from the Upper Peter vein (4230 adit) on the Loco (or Cosmopolitan) property. A small amount of dore gold was produced onsite, and about 20 tonnes of flotation concentrate was shipped.

Bralorne also did underground development to prepare a stope on the Peter vein on the 800 level of the King mine workings, and drove a decline from the 4230 level to access a new level 30 metres deeper. Surface drilling returned encouraging results from the 51B vein in the gap between the Bralorne and Pioneer mine workings, and a new 180-metre long adit is being driven to access this area.

The following resource estimates were reported in *The Northern Miner*, April 4, 2005. It is not known if they are NI-41101 compliant. The measured resource in the Peter vein comprises 3,425 tonnes grading 8.4 grams gold per tonne. The Peter vein has been drifted on top and bottom with samples taken at 1.8 metre intervals across the exposed vein. The upper Peter vein contains another 22,738 tonnes grading 9.7 grams gold in the inferred category. The indicated mineral resource in the 51B FW vein is reported at 17,729 tonnes grading 11 grams gold. The resource was based on 43 diamond drill holes drilled this winter and five historic drill holes.

The 51B FW vein intersected by the Area 51 cross-cut yielded considerably higher grades of up to 21.1 grams gold over 1.5 metres. Another inferred resource of 389,964 tonnes grading 10.4 grams gold sits above the 800-level.

In a June 2009 Technical Report on Bralorne Pioneer Mine Property updated resources were 17,627 tonnes measured grading 16.24 grams per tonne.

**PIONEER** past producer (Au-quartz veins)

MINFILE 092JNE004

Sixteen kilometres southwest

The Pioneer mine has been worked on 27 levels to a depth of 1,020 metres from 5 shafts. Most of the production came out of the main vein until 1944 and the 27 vein until 1960.

The Pioneer property was consolidated with Bralorne Mines in 1959.

**LITTLE GEM** showing (Five-element veins Ni-Co-As-Ag+/- (Bi, U): Au-quartz veins)

MINFILE 092JNE068

500 metres west

The deposits were discovered and staked by William Haylmore and W.H. Ball in 1934. Their interests were bought by J.M. and R.R. Taylor in 1937. The United States Vanadium Corporation optioned the property in 1937 and drove the upper tunnel. All work in Canada was terminated in 1939 by the above named company and the exploratory program on the Northern Gem was not completed. During the winter of 1939 the lower tunnel was driven by contractors for J.M. and R.R. Taylor.

**History: Gold 844114 Claim Group Area (cont'd)****Little Gem showing (cont'd)**

*In 1940 the property was optioned for a short time by Bralorne Mines and the two short raises were driven from the lower tunnel. The lack of a treatment process, and indefinite marketing possibilities at that time, resulted in the option being dropped by Bralorne Mines. In 1952 Estella Mines optioned the property. A switchback road was completed from Gun Creek bridge to the camp and twelve holes were diamond drilled from the lower tunnel. Estella Mines were forced to drop the option when they were unable to meet the due payment in November 1953 and it was not possible to secure an extension from the owners. Northern Gem Mining Corporation was formed in December 1955 for the purpose of acquiring and developing the property. Work was commenced on the road in June, on the camp in August and on the showings shortly thereafter. Work was terminated for the winter October 23rd because of the unusually early arrival of winter snow at the property.*

*Major Resources Ltd. held the property in 1979 and conducted airborne magnetometer, VLF-EM and radiometric surveys. Anvil Resources Ltd. held the property in 1986 and drilled 2 holes totalling 373.8 metres.*

*Ownership of the eight Little Gem claims reverted to the Crown in 2004. The property was acquired by B.N. Church and R.H. McMillan in 2007. Geological, geochemical, and rock sampling evaluations were completed between 2007 and 2009.*

**HISTORY: GOLD 844114 CLAIM GROUP**

**JEWEL** showing (Vein; podiform)

MINFILE 092JNE108

Within Tenure 573344

*There are at least two adits and possibly a third. The Jewel prospect lies directly north of the Little Gem prospect (092JNE068) and some of the workings discussed in older reports may now be included in the Little Gem.*

**GEOLOGY: REGIONAL**

**(after Ball, 2002)**

*The area is situated at a regional tectonic boundary between the Cache Creek and Stikine allochthonous terrane. Diverse rock units of these two terranes are structurally deformed and imbricated in the area, together with large fault-bounded slices of gabbroic and ultramafic rocks. These early structures are cross cut by later northwest and north-trending major faults related to the Fraser- Yalokom regional fault system, and by Late Cretaceous and Tertiary granitic plutons and related dikes (Church, 1996).*

**(after Bellamy, 1984)**

*The productive gold bearing zone in the Bridge River area occurs within a regional northwest striking fault lens that cuts Permian to Jurassic sedimentary volcanic rock units and is known as the Cadwallader fault lens. These units lie between the main Coast Range Batholith and the smaller outlying Bendor plutons. Intruding this fault structure are small granitic to ultrabasic stocks and dykes. The Cadwallader fault lens is an intricate fault system comprised of interlacing reverse, normal and strike-slip faults that form a structural lens approximately two kilometers wide and up to five kilometers long. The gold veins in the fault lens have been mined to a depth of over 1.8 kilometers. The depth persistence of these veins is attributed to the Cadwallader fault system being a deep seated crustal structure that is related to the continental Fraser fault system.*

**GEOLOGY: GOLD 844114 CLAIM GROUP AREA**

The geology on some of the more significant mineral MINFILE reported occurrences, prospects, and past producers peripheral to the Property are reported as follows as copied from the Minfile records. The distance to the Minfile locations is relative to Tenure 844114 of the Gold 844114 Claim Group.

**Geology: Gold 844114 Claim Group Area (cont'd)****BRALORNE** producer (Au-quartz veins)

MINFILE 092JNE001

Fourteen kilometres southwest

The area is underlain by Mississippian-Jurassic Bridge River Complex (Group) and Upper Triassic Cadwallader Group sediments and volcanics which are transected by a major north trending, steeply southwest dipping fault known as the Cadwallader Break. The fault is a deep-seated crustal structure related to the Fraser fault system to the south. The fault is intruded by small granitic to ultramafic stocks and dykes. Diorite to gabbro of the Permian Bralorne Igneous Complex, in which most of the quartz veins are hosted, intrudes the Cadwallader Break as an elongate body. Diorite also intrudes Pioneer Formation (Cadwallader Group) greenstones although at times the contact appears gradational. The diorite and greenstone are in turn "intruded" by sodic granite which may be an apophysis of the Early Tertiary Bendor pluton, the main body of which lies 10 kilometres east. The sodic granite also appears gradational with the diorite and exhibits a migmatitic texture, which has led to the conclusion that it may be a late differentiation of the same magma that formed the diorite. The sodic granite occupies the northwest half of the intrusive belt and narrows out north and south.

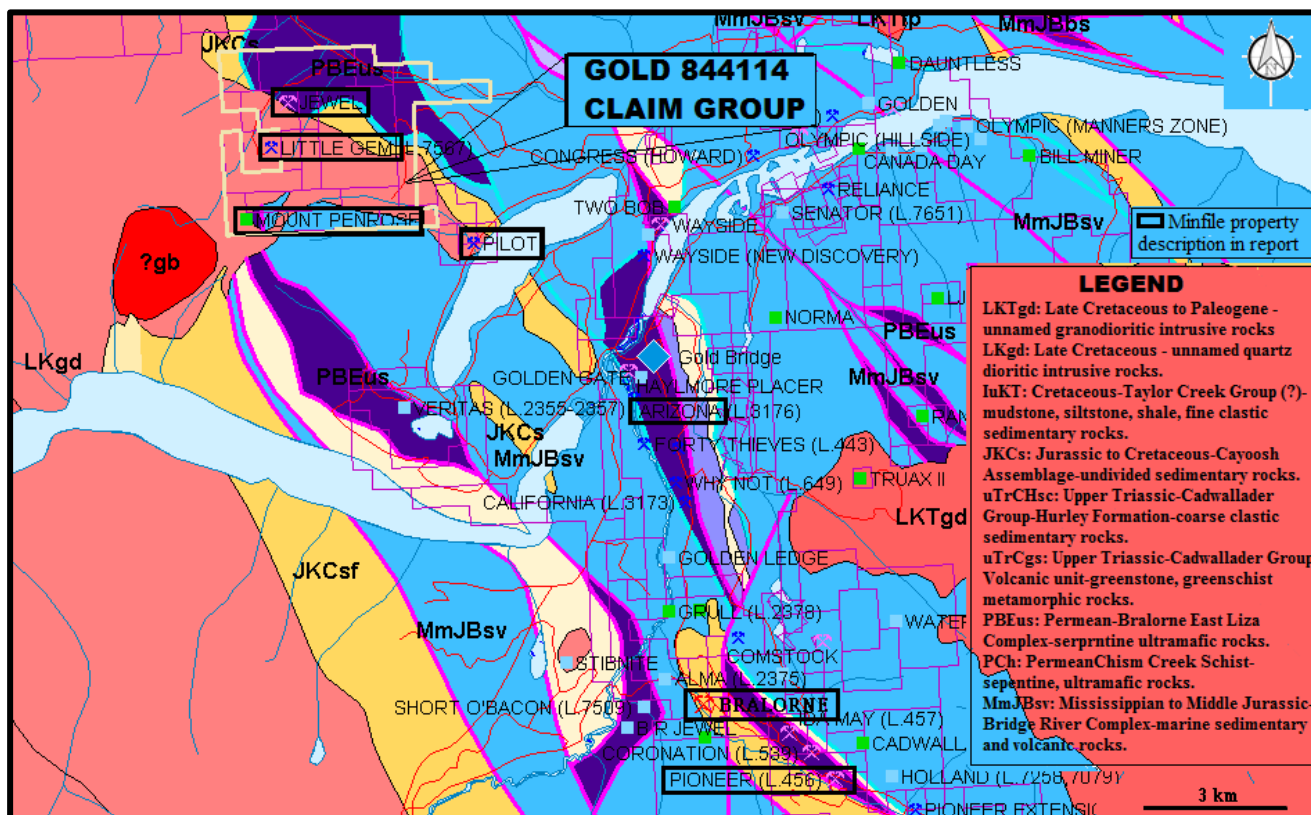
A 60-metre wide belt of serpentinite (Bralorne Igneous Complex) borders the diorite on the southeast at the contact with the Noel Formation (Cadwallader Group).

Finally, the intrusive belt is intruded by albitite dykes which often follow the chilled margin of the sodic granite, and where associated with quartz veins, the dykes are altered to platy quartz-sericite schist.

The principal host rock is the diorite, and an abnormal richness in gold was noted when veins neared the serpentinite; it has been suggested that the serpentinite acted as a dam to mineralized solutions.

**Figure 7. Gold 844114 Claim Group Area Geology**

(base map from MapPlace)



**Geology: Gold 844114 Claim Group Area (cont'd)****Bralorne producer (cont'd)**

The veins also followed the albitite dykes and vein structures extend into other rock types (greenstones and sodic granite).

The age of the mineralization is constrained by three sets of isotope data; a zircon from a pre-syn mineralization albitite dike returns 91.4 +/- 1.4 Ma, while a K/Argon from a hornblende and the containing whole rock from a syn-post mineralization hornblende porphyry dike is 85.7 +/- 3 Ma.

Argon/Argon step heating of associated mariposite gives a minimum age of mineralization of 70 - 80 Ma (Bulletin 108, page 47-48).

The lens hosting quartz veins is five kilometres long by 2 kilometres wide and has a complex interlacing fault system. The main producing veins generally strike east and dip varying degrees to the north, in reverse fault zones extending from the Fergusson fault (northeast dipping) to the Cadwallader fault (southwest dipping). This zone between the faults grows wider with depth, and veins are persistent, having been mined to nearly a 2 kilometre depth. Diagonal "crossover" veins host many secondary veins which are commonly brecciated.

The Bralorne mine is divided into 3 main sections, the Crown, Empire and King. The principal veins in the Crown and Empire sections are known as the 51 and 77 veins, their faulted extensions, the 55 and 53 veins respectively, and crossover veins 59, 73, 75 and 79. The main veins in the King section are the North, Shaft, King, Alhambra and C veins.

For descriptive purposes, the 51 (and 55) and 77 (and 53) veins are treated separately, under the names of the original mines, before amalgamation into Bralorne Mines. These are the Ida May mine (Empire and Blackbird) for the 51 vein - see 092JNE002, and the Coronation mine (Little Joe and Countless) for the 77 vein - see 092JNE007. The most prolific vein was the 77.

Generally, the veins average 1.5 metres in width and range up to 6 metres. They are often tabular, well-ribboned or partly ribboned, and partly massive or brecciated. All types have hosted ore, although the best values came from ribboned veins. The gangue minerals are quartz, calcite, mariposite, talc and scheelite. The principal sulphides are pyrite, arsenopyrite and sphalerite, which along with native gold, galena, chalcopyrite, pyrrhotite and tetrahedrite occupy less than one per cent of the veins. Carbonate alteration (siderite) is widespread with albite occurring along vein shears. The Bralorne mine was accessible by 4 main shafts and worked on 44 levels.

**Bralorne Area Geology (from Ball, 2002)**

The local geological setting is characterized by fault-bounded blocks of various litho-tectonic units of the Cadwallader and Bridge River Terranes (Figure 3). The central block is comprised of steeply dipping turbidite, argillite, and basaltic andesite of the Cadwallader Terrane, intruded by hornblende, diorite and sodic granite of the Bralorne intrusions dated at 263 to 290 Ma (Church, 1996). This block is bounded to the southwest by the Cadwallader fault, along which slivers of serpentinized ultramafic rocks occur. Sedimentary and volcanic units of the Cadwallader Terrane also occur southwest of this fault. The Fergusson fault bounds the Cadwallader Terrane on the northeast, and separates it from ribbon chert, argillite and basalt of the Bridge River Terrane.

All these units have been metamorphosed at sub- to lower greenschist grade (Leitch, 1990). In addition, a swarm of mafic to felsic dikes intrudes all of the units, and includes hornblende porphyry dated at 85.7 Ma, albitite dated at 86-91 Ma, plagioclase porphyry and lamprophyre (Leitch, 1989). Table 1 shows the local table of stratigraphic units used in this report.

The Cadwallader fault is a major "break" that extends more than 50 kilometers along strike and is tentatively interpreted as a crustal transform fault (Church, 1996). This fault is considered to a controlling structure on the localization of the Bralorne-Pioneer gold deposit because it changes strike abruptly in the immediate area of gold deposits. In addition, all of the gold production came from veins situated between the Cadwallader fault and the Fergusson fault, which may be a splay fault.

**Geology: Gold 844114 Claim Group Area (cont'd)****Bralorne producer (cont'd)**

*The Fergusson fault appears to splay off the main break south of the productive area, cuts across the internal angle in the bend of the Cadwallader fault, and rejoins the Cadwallader fault north of the area of mining. Church (1996) interpreted this area as a left lateral shear couple, in which gold-quartz veins formed within extension and shear fractures between the bounding faults.*

**Bralorne Geological Model (from Ball, 2002)**

*The Bralorne-Pioneer gold deposit is comprised of 30 separate gold-quartz veins developed over a strike length of 4.6 kilometers (2.9 miles) and a vertical extent of 1900 meters (6200 feet). The vein system was exploited from three separate mine areas of shaft and drift level development. These included, from north to south, the King, Bralorne and Pioneer mine areas (Figure 4). The outstanding feature of this deposit is the vertical continuity of the veins. The largest vein mined was the Ida May, Empire vein or 51 vein, which was 1480 meters in strike length and 854 meters in vertical extent. The Main vein was developed over 1140 meters in strike and 1074 meters in vertical extent (Church, 1995).*

*The great vertical continuity of the vein system and individual veins is one of the main contributing factors to the large size of the Bralorne-Pioneer gold deposit. The veins are composed of quartz with minor carbonate, sericite, sulphides, scheelite and native gold. The gold contains 10 to 20% silver and less than 4% mercury.*

*Sulphides average 1 to 3% of the veins and include pyrite, arsenopyrite, chalcopyrite and sphalerite, with minor pyrrhotite, galena and tetrahedrite. Talc and fuchsite occur within veins and their alteration haloes close to serpentinite. The veins are commonly ribbon-banded, with numerous septa of altered wall rock.*

**Bralorne Area Geology (from Ball, 2002) (cont'd)**

*These features are typical of quartz veins formed by the "crack-seal mechanism" (Ramsey, 1980) of repeated episodes of brittle hydraulic failure, related to periods of supralithostatic fluid pressures, during regional progressive deformation (Sibson and others, 1988).*

*Brecciation within the veins has been attributed to post-mineral reactivation of the vein structures. Wall rock alteration is commonly developed as meter to decimeter-scale envelopes to the veins. The alteration grades outwards from quartz-sericite-carbonate- albite-pyrite to epidote -chlorite-calcite. In the historic operations, up to 75% of the gold was recovered by gravity concentration. The remaining gold was recovered in a flotation concentrate, later replaced by cyanidation and local refining.*

**PIONEER past producer (Au-quartz veins)**

MINFILE 092JNE004

Sixteen kilometres southwest

*The veins are hosted mainly in Pioneer Formation greenstone of the Upper Triassic Cadwallader Group and in sodic granite, either associated with the Permian Bralorne Igneous Complex, or the Cretaceous to Tertiary Bendor pluton. The soda granite extends as a narrow tongue along the northwest border of the Bralorne diorite, which hosts the Bralorne deposits (092JNE001) directly north. At the Pioneer mine, the diorite pinches out between soda granite and the serpentinite in the Cadwallader break.*

*The main vein structure strikes between 280 and 285 degrees and dips steeply north. The vein is 1 metre wide and has a strike length of 1140 metres.*

**FORTY THIEVES developed prospect (Au-quartz veins)**

MINFILE 092JNE023

Nine kilometres southeast

*The Forty Thieves vein is hosted in andesites of the Upper Triassic Pioneer Formation, Cadwallader Group which is closely associated with diorite of the Permian Bralorne Igneous Complex; the rocks interfinger complexly and the diorite is suggested to be replacing the andesite rather than intruding it. The indistinct boundary between andesite-diorite is intruded by a Late Tertiary (?) 30 metre wide dacite porphyry dyke.*

**Geology: Gold 844114 Claim Group Area (cont'd)****Forty Thieves** developed prospect (cont'd)

*The western boundary of the andesite-diorite is a west-dipping fault contact with a narrow belt of serpentinized peridotite of the President Ultramafics (correlative with the Permian and older Shulaps Ultramafic Complex).*

**ARIZONA** developed prospect (Au-quartz veins; Intrusion-related Au pyrrhotite veins)

MINFILE 092JNE024

Eight kilometres southeast

*The Arizona workings follow two main fissures formed in augite diorite of the Bralorne Igneous Complex and greenstone of the Upper Triassic Pioneer Formation, which are intruded by dykes and stock-like masses of soda granite and granodiorite. To the east, Pioneer greenstone is in fault contact with serpentinized President Ultramafics (correlative with the Permian and older Shulaps Ultramafic Complex) consisting of pyroxenite and peridotite.*

*The North adit follows a fault fissure trending west and dipping north which contains a well-defined, ribboned quartz-pyrite-calcite vein up to 0.6 metre wide. Sulphides present are pyrite, galena, sphalerite and chalcopyrite with gold and silver values. The South or main adit follows a north dipping fissure which trends generally northwest, then curves to west-northwest. A 30-metre wide soda granite dyke forms the footwall of the shear; the hanging wall is in augite diorite except at the southeast end of the main level where massive greenstone is encountered. Molybdenite is reported as grains and streaks in the vein and as disseminations in the soda granite.*

**PILOT** developed prospect (Au-quartz veins)

MINFILE 092JNE027

Two kilometres southeast

*Hornblende-biotite quartz diorite, a basic phase of the Cretaceous to Tertiary Bendor pluton, occurs in a northwest trending tongue across the property, intruding Mississippian to Jurassic Bridge River Complex (Group) sediments. Quartzite, silicified argillite and foliated tuffs are metamorphosed to lower greenschist grade. The "Pilot shear" hosting the deposit trends southeast at the contact between silicified tuff of the Upper Triassic Noel Formation, Cadwallader Group quartz diorite and Bridge River sediments.*

**LITTLE GEM** showing (Five-element veins Ni-Co-As-Ag+/- (Bi, U): Au-quartz veins)

MINFILE 092JNE068

500 metres west

*The Little Gem prospect, a hypothermal cobalt-sulpharsenide uranium and gold vein, 2.3 kilometres east northeast of Dickson Peak, lies within the margin of the Jurassic to Tertiary Coast Plutonic Complex (Cretaceous Penrose lobe pluton). Host rocks consist of granodiorite, minor hornblende-biotite-quartz diorite, diorite and gabbro, which are intruded by feldspar porphyry dykes. A broad, east trending and steeply south dipping fault zone cuts the granodiorite near the eastern contact with older sedimentary and volcanic rocks of the Mississippian to Jurassic Bridge River Complex (Group).*

*Shears in the zone contain two parallel ore shoots ranging in width from a few centimetres to a few metres. Irregular lenses of almost solid sulphides contain cobalt and gold values in association with danaite, loellingite, safflorite, arsenopyrite, scheelite and minor molybdenum. Uranium, in the form of uraninite, occurs in the gangue along with coarse-grained allanite, apatite, feldspar, quartz, chlorite, sericite, calcite, erythrite and limonite. Gold occurs mainly as microscopic veinlets of the native metal within and adjacent to the sulpharsenide minerals. Surrounding the ore, strongly bleached and sericitized granodiorite containing disseminated sulphides, residual quartz, feldspar and kaolin grades into unaltered granodiorite. The metallic minerals occur with the gangue in coarsely crystalline masses but are in general younger than most of the gangue minerals. The combination of the batholithic host rocks and the association of uraninite with hornblende, biotite, apatite, allanite, monazite, orthoclase, cobalt sulpharsenides, arsenopyrite and molybdenite is indicative of high temperature, possibly magma-derived, hydrothermal fluids.*

## **GEOLOGY: GOLD 844114 CLAIM GROUP**

As indicated by the BC government supported MapPlace geological maps (Figure 15), the southern half of the Gold 844114 Claim Group is underlain by Late Cretaceous granodioritic rocks (LKgd). To the northeast, the granodiorite is in a northwesterly trending fault (?) contact with a narrow northwesterly trending belt of Jurassic to Cretaceous Cayoosh Assemblage, Mississippian to Middle Jurassic Bridge River Complex of marine sedimentary and volcanic rocks (MmJBsv), in a thrust fault contact with an overlain (transported?) fault bounded block of the Permian Bralorne East Liza Complex of serpentinite ultramafic rocks (PBEus) with portions of the eastern contact of this fault bounded block within the easternmost portion of the Gold 844114 Claim Group.

**JEWEL** showing (Vein; podiform)

MINFILE 092JNE108

Within Tenure 573344

*Massive serpentinite, probably correlative with the Permian and older Shulaps Ultramafic Complex, is cut by several east trending and steeply south dipping diorite and quartz diorite dykes related to the nearby Cretaceous to Tertiary Bendor pluton. Irregular fissure veins with an average width of 15 centimetres occur most commonly along the dyke contact as well as branching into the serpentinite. Streaks and pods of pyrite, arsenopyrite and chalcopyrite occur in sheared siliceous gangue with occasional quartz and calcite streaks. Oxidation is pronounced to over 15 metres depth.*

**MOUNT PENROSE** showing (Ultramafic-hosted asbestos)

MINFILE 092JNE070

Within Tenure 845102

*Asbestos occurs as dark green to yellow green cross fibre chrysotile in short veinlets that pinch and swell abruptly. The veinlets occur in parallel swarms in scattered parallel zones 20 to 60 centimetres wide. The zones are widely spaced and strike north across a small irregularly elongate serpentinite mass, 240 metres wide by 600 metres long, that is probably correlative with the Permian and older Shulaps Ultramafic complex. The serpentinite is cut by numerous thin irregular granodiorite dykes; the surrounding rock is predominantly granodiorite of the Jurassic to Tertiary Coast Plutonic Complex except for small patches of sediments reported to the southeast. The average fibre length of the chrysotile is 0.32 centimetres, with rare 1.27 centimetre material. The overall fibre content of the serpentinite is considered very low*

## **MINERALIZATION: GOLD 844114 CLAIM GROUP AREA**

The mineralization on some of the more significant mineral MINFILE reported showings, prospects, and past producers on and peripheral to the Property are reported as follows. The distance to the Minfile locations is relative to Tenure 844114 of the Gold 844114 Claim Group.

**BRALORNE** producer (Au-quartz veins)

MINFILE 092JNE001

Fourteen kilometres southwest

**MINERALIZATION** (from Beacon Hill Consultants, 2012)

*The gold-quartz veins form an approximate en echelon array. They have strike lengths of as much as 1500 m between bounding fault structures, and extend to at least 2000 m in depth, with no significant changes in grade or style of mineralization recorded. Ores consist mainly of ribboned fissure veins with septa defined by fine-grained chlorite, sericite, graphite or sulphide minerals. Massive white quartz tension veins also comprise some of the ore, although thinner connecting cross-veins are generally sub-economic. The fissure veins tend to be larger, thicker, and host the higher gold grades. The most conspicuous alteration mineral is bright green, chrome-bearing phyllosilicate that occurs in basaltic and ultramafic host rocks, composed of fuchsite, mariposite or Cr-illite.*



**Mineralization: Gold 844114 Claim Group Area (cont'd)****Bralorne producer (cont'd)**

Most veins are 0.9 to 1.5 metres wide - ranging up to 6 metres in a few places, and are composed of quartz with minor carbonates, talc, mica, sulphides, scheelite and native gold. The quartz is milky white and usually banded with numerous partings and septa of grey wallrock included in the veins (Church and Jones, 1999).

Veins are dominantly composed of quartz, with minor carbonate minerals, mainly calcite and ankerite, and lesser amounts of chlorite, sericite, clay altered mariposite, talc, scheelite and native gold. Sulphides are present and, although locally abundant, make up less than 1 % of total vein volume. Pyrite and arsenopyrite are the most abundant sulphides with lesser marcasite, pyrrhotite, sphalerite, stibnite, galena, chalcopyrite and rare tetrahedrite. In the historic mining operations, approximately 35% of the productive veins were ore grade above a 4.7 Aug/t cutoff.

**Mineralization (from Beacon Hill Consultants, 2012) (cont'd)**

Three types of veins are recognized on the property; fissure, tension and cross veins. Fissure veins are the richest and most continuous in the camp and include the 51, 55 and 77 veins at Bralorne, the Main Vein at Pioneer and the Peter Vein. They have been traced continuously for up to 1500 metres along a 110° to 145° strike and to a depth of 1800 metres down a steep northerly dip. The fissure veins are commonly ribbon-banded. They have an average width of 1 to 1.5 metres but often pinch and swell, ranging from centimetres to seven metres in width. Tension veins are generally less continuous than the fissure veins with maximum strike lengths of 500 metres and similar dip extensions. They are characterized by massive white quartz with erratic high gold values, open-spaced filling textures, commonly including pockets of drusy to cockscomb quartz between widely spaced and slickensided septae.

They are usually not as rich as fissure veins and are hosted in fault sets that strike roughly 70° and dip about 75° northwest. These tension veins form oblique splays off of the fissure veins. They include the 75 and 83 veins at Bralorne and the 27 vein at Pioneer. Cross veins are sub economic and are interpreted to be connecting structures between the fissure and tension veins (Ash, 2001).

The historic King, Bralorne and Pioneer mines all lay within the current Bralorne-Pioneer property (Figure 7-5). These mines developed a total of 30 veins through a number of shafts and 80 kilometers of tunnels on 44 levels, the deepest of which traced the 77 vein to a depth of 1900 meters (Church and Jones, 1999). The areas between these mines were not controlled by the main producing companies at the time the mines were operated, so these gap areas were never developed. Since the mine workings extend to the limits of the old claim boundaries, it is reasonable to expect mineralization to occur in the gap areas, with the same potential frequency of gold mineralization as that found in the mined areas. The current company controls the mineral claims covering these gap areas and has realized success so far in exploring these areas.

**PIONEER past producer (Au-quartz veins)**

MINFILE 092JNE004

Sixteen kilometres southwest

The Pioneer veins are composed of mainly quartz gangue with fractures filled with calcite and ankerite. Small shoots of scheelite occur in the main vein and tourmaline is said to occur in cavities in the 27 vein. The quartz ribbons separate streaks containing chlorite, sericite, mariposite, gouge sulphides and gold. The principal sulphides, arsenopyrite and pyrite, occur as disseminations in massive quartz or in the ribbon partings. Massive arsenopyrite is often associated with free gold. Other sulphides include sphalerite, galena, chalcopyrite, pyrrhotite, marcasite and stibnite. Wallrocks are intensely altered and contain quartz, sericite, mariposite, kaolin, alunite, calcite and arsenopyrite. Low grades of gold are sometimes found in the wallrocks.

An assay was reported as 24 grams per tonne gold at the 25 level (600 metre long drift, average over 412 metres by 15 metres width) (Property File - Report by J.S. Stevenson, 1947).

**Mineralization: Gold 844114 Claim Group Area (cont'd)****FORTY THIEVES** developed prospect (Au-quartz veins)

MINFILE 092JNE023

Nine kilometres southeast

*The vein follows the main structural trend, striking northwest and dipping northeast along a 600-metre long fissure (reverse fault) through the andesite, diorite and dacite porphyry. The vein consists of long lenses of quartz with a width of about 1 metre averaged along the shear. Pyrite, tetrahedrite and lesser chalcopyrite occur as streaks and disseminations, with malachite and azurite staining. In other parts, cloudy grey quartz surrounds altered wallrock inclusions containing stockworks of ankerite, sericite, chlorite and pyrite. The average assay obtained from vein quartz assays less than 0.34 gram gold per tonne, with similar values for wallrock samples (Minister of Mines Annual Report 1946, page 111). The Forty Thieves vein is reported to be very similar to the Arizona vein located nearby (see 092JNE024).*

**ARIZONA** developed prospect (Au-quartz veins; Intrusion-related Au pyrrhotite veins)

MINFILE 092JNE024

Eight kilometres southeast

*A quartz scheelite vein in the soda granite, just below the diorite contact is rich in tungsten (0.25 per cent WO<sub>3</sub>) and low in gold (0.72 gram per tonne) whereas siliceous sheared veins in the diorite above the granite contact are higher in gold (4.1 grams per tonne) and lower in tungsten (0.02 per cent WO<sub>3</sub>). A sample from a 2.7-metre wide shear assayed 1.5 grams per tonne gold and 0.34 per cent tungsten (Assessment Report 7949). Generally, gold values range from 0.34 to 1.71 grams per tonne and increase to 25.7 grams per tonne where fissures intersect (Kelly, 1977 - Property File).*

**PILOT** developed prospect (Au-quartz veins)

MINFILE 092JNE027

Two kilometres southeast

*The 3-metre wide shear contains a number of narrow, parallel quartz veins altered with sericite and kaolinite. Gold and silver values are continuous along this structure for 300 metres northwest. A chip sample taken over 0.9 metre assayed 11.1 grams per tonne gold and 56.9 grams per tonne silver (Assessment Report 11877). Another similar vein is reported to occur along the same trend about 150 metres west of the Pilot shear. A well maintained portal to the Pilot vein is located near the mouth of Walker Creek on Gun Lake.*

**LITTLE GEM** showing (Five-element veins Ni-Co-As-Ag+/- (Bi, U): Au-quartz veins)

MINFILE 092JNE068

500 metres west

*Two adits follow the ore shoots. The upper adit, sampled over 36 metres and 90 centimetres width, graded 26.2 grams per tonne gold, 0.39 per cent uranium and 3.1 per cent cobalt; the lower adit, sampled over 1.8 metres, graded 54.8 grams per tonne gold, 0.3 per cent uranium, and 3.2 per cent cobalt (Rutherford, 1952 - Property File). Allen (1955), in Property File, reports an indicated resource of 4740 tonnes, grading 23.04 grams per tonne gold, 2.974 per cent cobalt and 0.212 per cent uranium (0.2499 per cent U<sub>3</sub>O<sub>8</sub>). In 1979, reserves were calculated at 27,705 tonnes grading 21.74 grams per tonne gold, and 2.045 per cent cobalt (George Cross News Letter No. 87, 1979). Stevenson, in 1948, estimated probable ore of 894 tonnes grading 0.18 per cent uranium (Property File). The Canadian Mines Handbook 1974-75 records 18,140 tonnes averaging 22.64 grams per tonne gold, 3.0 per cent cobalt and 0.2 per cent uranium (Canadian Mines Handbook 1974-75, page 251). Arsenic grades 25 to 27 per cent (Assessment Report 15451).*

## MINERALIZATION: GOLD 844114 CLAIM GROUP

**JEWEL** showing (Vein; podiform)

MINFILE 092JNE108

Within Tenure 573344

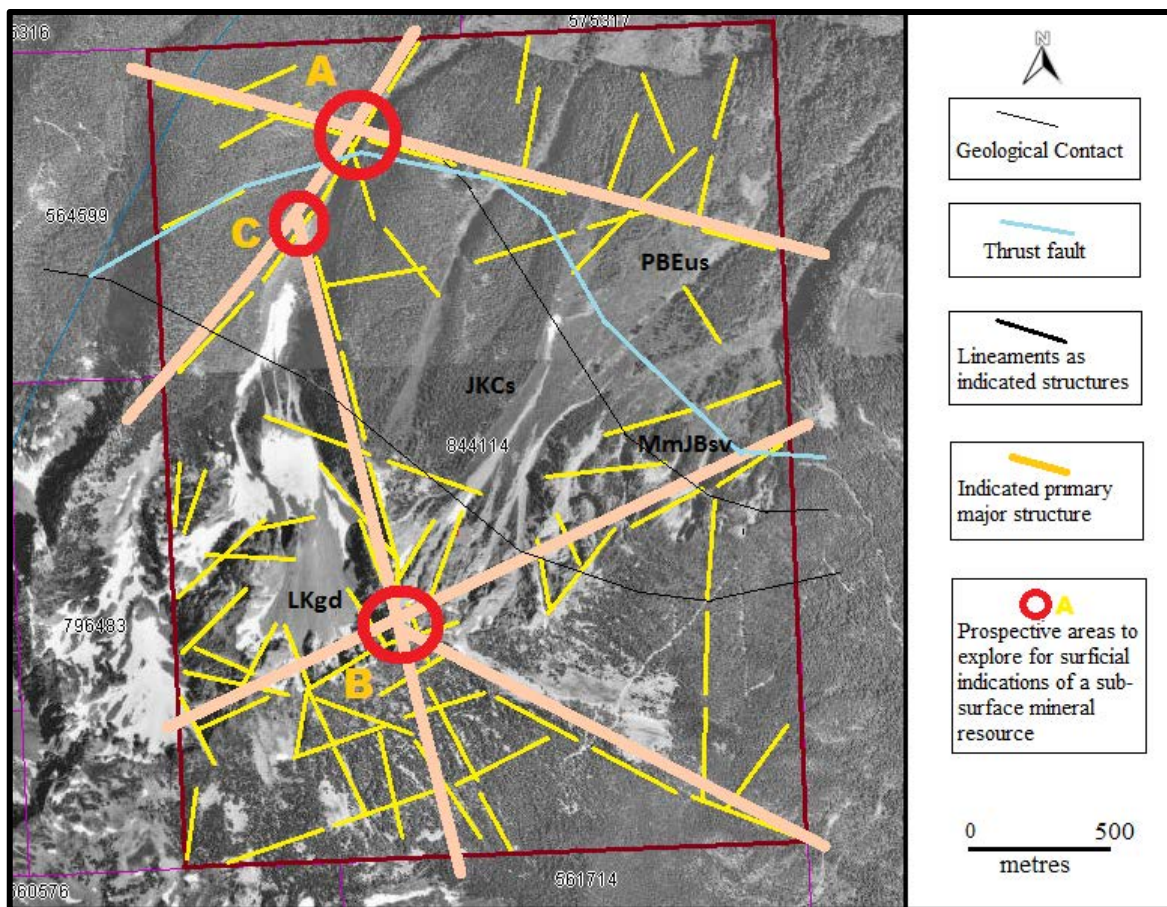
*One assay gave a high of 75.4 grams per tonne gold; another sample assayed 54.2 grams per tonne gold and 34.3 grams per tonne silver (Minister of Mines Annual Report 1937, page F9). From 1938 to 1940, 51 tonnes of ore was processed yielding 3732 grams of gold, 404 grams of silver and 199 kilograms of copper.*

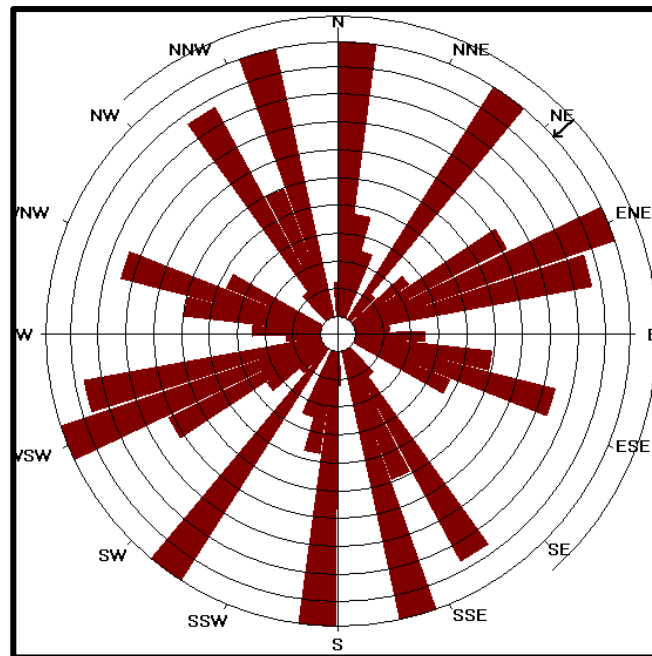
## STRUCTURAL ANALYSIS

The Structural Analysis was accomplished marking the observed lineaments on a DEM Hillside Shade map of Tenure 844114. A total of 81 lineaments indicated as structures were located as shown on Figure 8. A Georient 32v9 software program was used to create a Rose Diagram reflecting the grouping of the 81 lineaments into an individual 10 ° class sector angle interval as shown on Figure 9.

The centre of the work area is 5,638,417N, 505,182E (NAD 83)

**Figure 8. Indicated Lineaments and Cross-Structures on Tenure 844114**  
(Base map: MapPlace & Google)



**Structural Analysis (cont'd)****Figure 9. Rose Diagram from Lineaments of Tenure 844114****STATISTICS***(for Figure 5)**Axial (non-polar) data**No. of Data = 81**Sector angle = 8°**Scale: tick interval = 1% [0.8 data]**Maximum = 9.9% [8 data]**Mean Resultant dir'n = 048-228**[Approx. 95% Confidence interval = ±90.0°]**(valid only for unimodal data)**Mean Resultant dir'n = 047.7 - 227.7**Circ. Median = 035.0 - 215.0**Circ. Mean Dev. about median = 42.0°**Circ. Variance = 0.48**Circular Std. Dev. = 66.00°**Circ. Dispersion = 83.38**Circ. Std Error = 1.0146**Circ. Skewness = 0.48**Circ. Kurtosis = -0.58**kappa = 0.14**(von Mises concentration param. estimate)**Resultant length = 5.70**Mean Resultant length = 0.0704**'Mean' Moments: Cbar = -0.0067; Sbar = 0.0701**'Full' trig. sums: SumCos = -0.5409; Sbar = 5.6747**Mean resultant of doubled angles = 0.1741**Mean direction of doubled angles = 152**(Usage references: Mardia & Jupp,**'Directional Statistics', 1999, Wiley;**Fisher, 'Statistical Analysis of Circular Data',**1993, Cambridge University Press)**Note: The 95% confidence calculation uses**Fisher's (1993) 'large-sample method'*

**Structural Analysis (cont'd)**Table II. **Summary of Minfile properties included in report**

<i>Property</i>	<i>Geology</i>	<i>Structure</i>	<i>Mineralization</i>
<b>Bralorne</b> (producer)	Principal host rock is a diorite of the Bralorne Igneous Complex	Main producing veins generally strike east and dip north	Veins are tabular, well-ribboned or partly ribboned, and partly massive or brecciated; best gold values from ribboned veins
<b>Pioneer</b> (past producer)	Greenstone of the Pioneer Formation and sodic granite	Structures 280 and 285 degrees and dip steeply north	Arsenopyrite and pyrite occur as disseminations in massive quartz or in the ribbon partings
<b>Forty Thieves</b> (developed prospect)	Andesites of the Pioneer Formation	NW striking NE dipping vein follows the structural trend	Pyrite, tetrahedrite, and lesser chalcopyrite occur as streaks and disseminations. Average assay is less than 0.34 grams gold
<b>Arizona</b> (developed prospect)	Augite diorite and Pioneer Formation greenstone	Fault fissures trending west and northwest dipping north	Ribboned quartz-calcite-pyrite vein with pyrite, galena, sphalerite, and chalcopyrite with gold and silver values
<b>Pilot</b> (developed prospect)	Silicified tuff of the Noel Fm; Qtz diorite and Bridge River sediments	Three metre wide southeast trending Pilot shear	A number of parallel, narrow quartz veins contain gold and silver values
<b>Little Gem</b> (showing)	Granodiorite intruded by feldspar porphyry dykes	East trending and steeply south dipping shear zone	Irregular lenses of almost solid sulphides contain cobalt and gold values. Indicated resource of 4,740 tonnes grading 23.04 grams gold (1955)
Mount Penrose (showing)	Serpentinite cut by numerous thin irregular granodiorite dykes		Asbestos occurs as dark green to yellow green cross fibre chrysotile in short veinlets that pinch and swell abruptly.
Jewel (showing)	Serpentine cut by diorite and quartz-diorite dykes	Irregular fissure veins averaging 15 cm wide along contact East trending and steeply south dipping	From 1938 to 1940, 51 tonnes of ore was processed yielding 3732 grams of gold, 404 grams of silver and 199 kilograms of copper.

Figure 10. Structural intersections on Tenure 844114

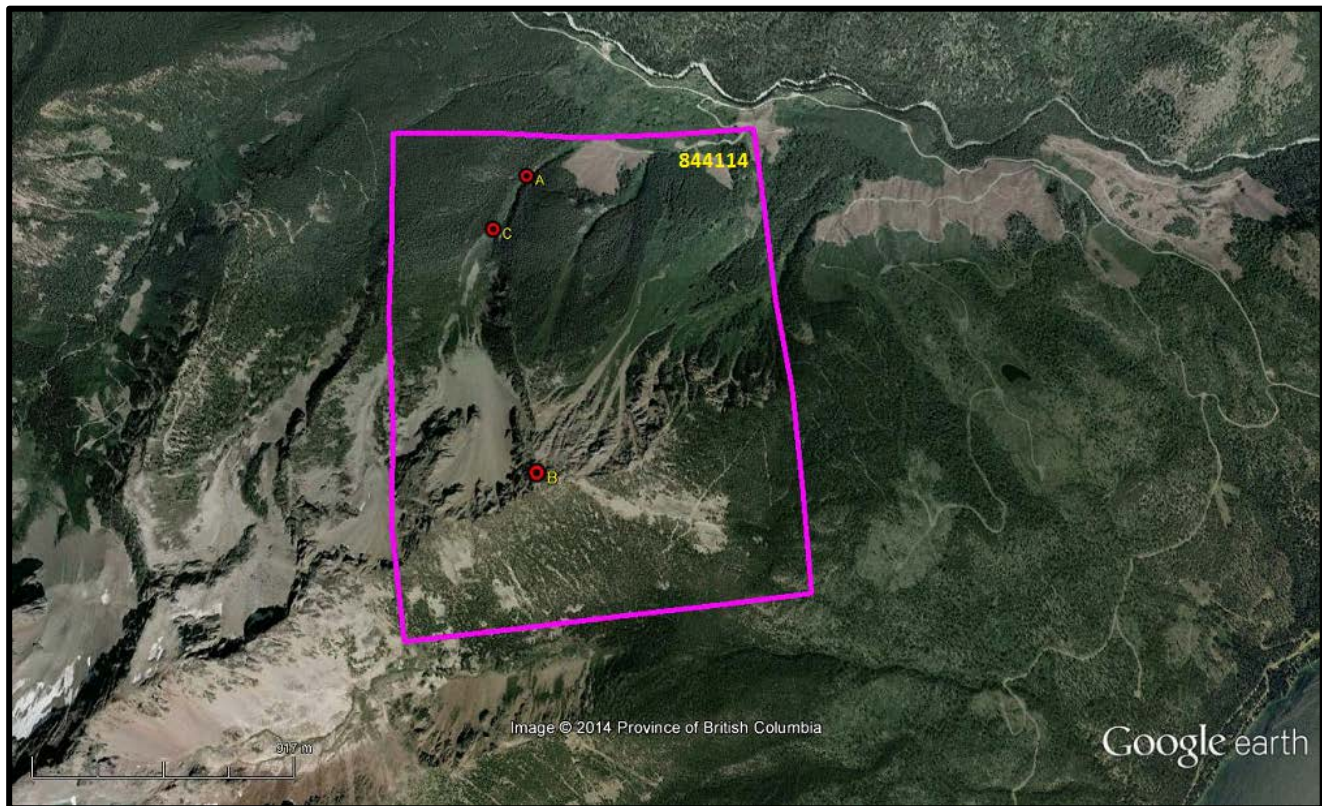


Table III. **Approximate location of Figure 7 cross-structures**  
(UTM-NAD 83)

Area	UTM East	UTM North	Elevation
A	504,901	5,639,405	1,342
B	504,927	5,637,945	2,190
C	504,744	5,639,110	1,533

## INTERPRETATION and CONCLUSIONS

Three cross-structural locations, which would be prime localities to explore for indications of a potential economic resource, were determined on Tenure 844114. The locations stemmed from the intersection between northerly, westerly, and northeasterly dominant structures; the east-west structures host the productive veins at the historic Bralorne and Pioneer past producers.

Proximal mineral properties host mineralization within intrusives and/or sediments such as at the east trending shear zones of granodiorite or quartz-diorite at the Jewel and the Little Gem or the at the northeast trending Pilot shear zone within sediments.

If structural flexures are a prime control to enhanced mineralization such as at the Bralorne, location C, which shows a similar structural pattern of a Bralorne “flexure”, would be a primary exploratory area; especially along the southwest AC trending structure closer to the intrusive where an intersection with the paralleling CB south trending structure is topographically indicated and where the BCA structures appear as a flexure (Figure 10).

***Interpretation and Conclusions (cont'd)***

Structural intersection B located within the intrusive, and along a prominent northeast trending fault at the south end of the BCA "flexure", is a prime target area to explore for surficial geological features to a deep seated porphyry resource. Location A, located within the capping of the Permian ultramafic rocks near the thrust fault contact with the sediments of the Cayoosh Assemblage, warrants exploration for surficial leakage of geological indicators to a mineral resource at or beneath the underlying contact. The ultramafics may have been a dam (as at Bralorne) to deep-seated mineral bearing solutions escaping to the surface via the conduit created by the cross-structure.

The UTM locations of the three cross structures are detailed in Table III.

Excluding other variable geological conditions, the structures are essential in the localization of mineral indicators and/or potentially economic mineralization. For other mineral deposit types that may occur within Tenure 944114 or on the Gold 944114 Claim Group, reference is made to the seven Minfile property descriptions referred to in the report.

Respectfully submitted

Sookochoff Consultants Inc.



***Laurence Sookochoff, PEng***

## ***SELECTED REFERENCES***

**BC Archives** - Bralorne and Pioneer Mines & Ogden & Bradian. The Early Years.

[www.cayoosh.net/bralorne.html](http://www.cayoosh.net/bralorne.html)

**MapPlace** – Map Data downloads

**Marshak, S., Mitra, G.** – Basic Methods of Structural Geology. pp 258-259, 264\*.Prentice-Hall Inc. 1988.

**MtOnline** - MINFILE downloads.

**Sookchoff, L.** – Exploration Progress Report on the Reliance Property for Menika Mining Ltd. July 15, 1985. *AR 14,019.*

**Sookchoff, L.** – Geological Assessment Report on Tenure 600923 of the Trout 600923 Claim Group for Goldbridge Holdings Ltd. November 1, 2013.



**STATEMENT OF COSTS**

Work on Tenure 8444114 of the Gold 844114 Claim Group was done from November 18, 2013 to November 25, 2013 to the value as follows:

Laurence Sookochoff, PEng. 3 1/2 days @ \$ 1,000.00/day -----	\$ 3,500.00
Maps ----- --	850.00
Report ----- --	<u>3,750.00</u>
	\$ 8,120.00
	=====

**CERTIFICATE**

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist and principal of Sookochoff Consultants Inc. with an address at 120 125A-1030 Denman Street, Vancouver, BC V6G 2M6.

I, Laurence Sookochoff, further certify that:

- 1) I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
- 2) I have been practicing my profession for the past forty-six years.
- 3) I am registered and in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.
- 4) The information for this report is based on information as itemized in the Selected Reference section of this report and from periodic mineral exploration work the author has performed in the Gold Bridge area since 1985.
- 5) I have no interest in the Property as described herein.



***Laurence Sookochoff, P. Eng.***