

Alpine

Good looking prospect

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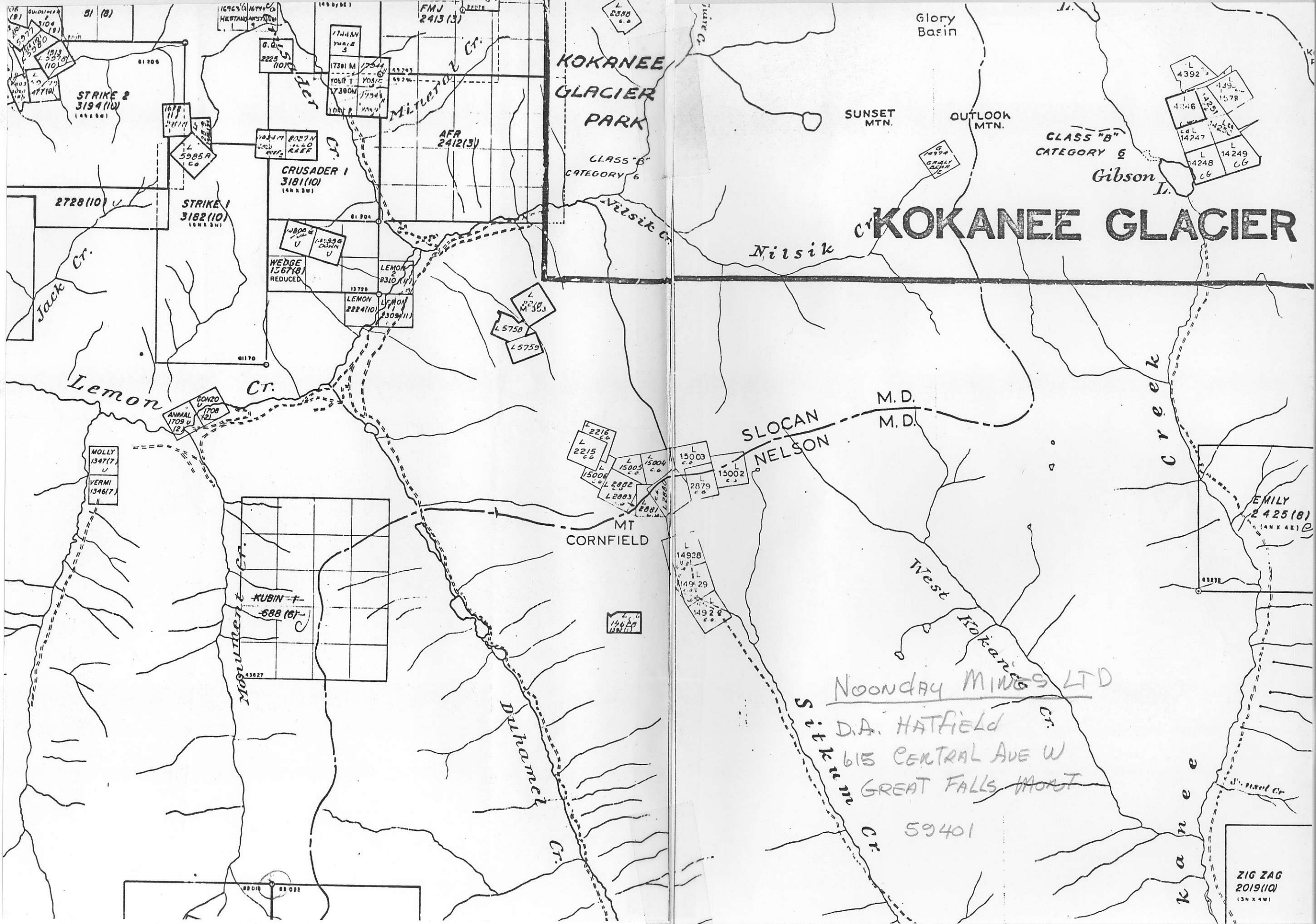
Alpine

082F/11W

Problem - 20°-30° dip  
+ 5 ft fort wall  
Hard to mine. Sect

might be worth a try.

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KOKANEE  
GLACIER  
PARK

CLASS "B"  
CATEGORY 6

SUNSET  
MTN.

OUTLOOK  
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CLASS "B"  
CATEGORY 6

Gibson I.

KOKANEE GLACIER

Nilsik

SLOCAN  
NELSON

M.D.  
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Noonday Mines LTD

D.A. HATFIELD  
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GREAT FALLS MONT

59401

ZIG ZAG  
2019(10)  
(3N X 4W)

## Nelson Map-Area, West Half, British Columbia

The gangue in the Midnight, Snowdrop, and Jumbo veins is quartz, with some ankerite or calcite. Calcite is present also in the Columbia-Kootenay ores. Pyrite is most abundant in the Midnight veins, and minor galena together with free gold is also present. The R. E. Lee, Richmond, and Hattie ores contain abundant arsenopyrite and pyrite, with marcasite in the first and chalcopryite in the latter two. Pyrrhotite predominates in the Columbia-Kootenay and Jumbo deposits, accompanied by minor chalcopryite and arsenopyrite in the former, and in the latter, by some arsenopyrite, chalcopryite, and molybdenite, and minor pyrite, bismuthinite, and sylvanite(?). The Golden Drip vein comprises soft gouge with minor quartz.

The remaining seven properties, scattered between Sheep Creek and Rossland camps, are of little importance and on three of them there is no geological information. The Lucky Strike and Davne veins occur in phyllite and dolomite of the Nelway formation, and comprise galena, sphalerite, pyrite, and tetrahedrite in a quartz gangue. Chalcopryite also is reported in the Lucky Strike vein. The Bunker Hill quartz veins are in argillaceous quartzite, argillite, and minor limestone of the Laib formation and contain pyrite, molybdenite, minor galena, sphalerite, and possibly bismuth telluride. The Casino Red Cap quartz vein is in greenstone of the Rossland formation. Metallic minerals, if present, have not been reported.

*Alpine (122)*

*References:* Minister of Mines, B.C., Ann. Repts.: 1896, p. 72; 1927, p. 319; 1938, pp. E13-E15; 1942, pp. 61, 62; 1946, p. 150; 1947, pp. 158, 159. Stevenson, 1943, p. 156.

The Alpine group comprises the Kootenay Pass, Rocky fraction, Berne, Highland Chief, Swiss, Nelson, and Crown Point No. 6 Crown-granted claims and others held by location. The group is owned by Alpine Gold, Limited. It is situated at the head of Sitkum Creek on the divide marking the boundaries of the Nelson and Slocan (formerly Slocan City) mining divisions. It is accessible from the Nelson-Balfour highway by a private road 9 miles long up Sitkum Creek valley.

Initial development of the vein was done in 1896 and 1897, but there is no record of further activity until 1927 except for a small shipment of ore in 1915. In 1936, the property was acquired by the Alpine Syndicate which, after construction of a 50-ton flotation mill and aerial tramway in 1940, continued production until 1942. Subsequent shipments were made from 1946 to 1948 by the present owners.

From 1915 to 1948 a total of 17,099 tons of ore was mined and this yielded 11,413 ounces gold, 108,571 pounds lead, 7,087 ounces silver, and 37,667 pounds zinc. The property was examined by the writer in 1948.

The claims are underlain by coarse-grained, porphyritic Nelson granite. This is cut by a few dykes of aplite and several of lamprophyre, the latter being later than the vein. Some normal faults having displacements up to 20 feet were observed in the workings, and these faults offset all dykes and veins.

The workings and 6,925 feet re dips 15° to 30°N exact length was n cliff overlooking t joined by gently c the lower.

The vein has length of more th the average width a few localities is the walls. The o sphalerite.

*References:* Minister 1937, p.

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#### Metalliferous Deposits

The workings consist of two adits, No. 7 and No. 10, at elevations of 7,150 and 6,925 feet respectively. They follow the vein which strikes S75°W and dips 15° to 30°N. The lower adit is 1,131 feet long. The upper adit, whose exact length was not measured, is driven through the upper part of the peak to the cliff overlooking the basin of Alpine Creek to the northwest. The two levels are joined by gently dipping stopes that also extend above the upper level and below the lower.

The vein has been traced on the surface by open-cuts and underground for a length of more than 1,200 feet. It ranges in width from 2 feet to nearly 7 feet, the average width being about 3½ feet. The gangue in the vein is quartz which in a few localities is brecciated and cemented by calcite that also forms short veinlets in the walls. The ore minerals are auriferous pyrite and lesser amounts of galena and sphalerite:

#### *Morning Star (143)*

*References:* Minister of Mines, B.C., Ann. Repts.: 1901, p. 1027; 1935, pp. A27, E33; 1936, p. E50; 1937, pp. A38, E50; 1940, p. 81; 1942, p. 73; 1947, p. 172; 1949, p. 192.

The Morning Star claim, held by record, is owned by W. Clements of Slocan City. It is situated on the north side of Springer Creek opposite Dayton Creek, a few hundred feet above their junction. The claim was staked about the turn of the century and nearly all the workings were driven in 1901. There is however no record of production at that time. Four tons of ore was shipped in 1935 by Mr. Clements and small shipments were made in 1936 and 1937 by lessees. G. A. MacMillan of Toronto optioned the property in 1946, 1947, and 1949 and shipped 2 tons of ore. It has remained idle since that time.

During the period 1935 to 1949, production totalled 25 tons of ore containing 42 ounces gold, 114 ounces silver, 1,121 pounds lead, and 913 pounds zinc. The property was examined in June 1950 by A. B. Irwin of the Geological Survey.

The rock underlying the property is mainly medium-grained biotite-hornblende diorite intersected by a few small felsite dykes. Near the veins the diorite is bleached and silicified.

The workings consist of two adits; the lower and more extensive is 410 feet above the mouth of Dayton Creek and N20°E from it. The portal of the upper adit is north of and 100 feet above the lower portal.

The main vein has been traced continuously for 380 feet in the lower working and a branch vein near the south end has been followed for 120 feet (*see* Figure 16). The north part of the main vein strikes N10°W and the south part N30° to 40°W. The branch vein has the same trend as the north part of the main vein. The dip of the vein varies along its length from 55° to 65°W. In the lower level the width of both veins ranges from 1 inch to 3 inches. In the upper level, where it has been stoped, the vein is 1 foot to 2 feet wide for a length of 30 feet, but on either side of the stopes it is 3 inches wide or less. It is terminated at the south end against a fault that strikes N20°E and dips 50°W. What may be the continuation of the main vein is exposed in the back of the lower working from the fault to the portal. There a vein 2 to 6 inches wide and 40 feet long occurs in

determined by the limited exposures, this formation strikes north 50 degrees west, dips vertically or steeply north-east, and is in contact with the phyllite immediately north of sample No. 14, which probably explains the lack of vein strength beyond that point.

Up to 1938, little work has been done on the property since the original development recorded in the 1914 Annual Report, Minister of Mines, with the exception of certain sampling in 1933.

At the present time surface-stripping is almost continuous for the 200-foot length shown on the accompanying map; at the time of examination certain sections, although stripped, were not freshly broken and the weathered surfaces offered no opportunity for accurate sampling.

Two short crosscuts have been driven to intersections with the vein. One of these, 14 feet long, near the southern limit of the stripping, is only about 12 feet below the surface exposure; the other, 59 feet long, near the centre of the stripping, is 24 feet below. In the southerly crosscut the vein ranges in width from 12 to 23 inches, is composed of almost solid quartz seamed by phyllite and is only very slightly mineralized by pyrite and galena. In the longer crosscut, the vein-width is 72 inches, mineralized by bunches of pyrite. Here the foot-wall is well defined, the hanging-wall less so by reason of inclusions of wall-rock.

Most effective further development would be additional stripping south of the present work and driving of a crosscut from a point on the creek which would permit of a right-angled intersection with the vein, approximately 100 feet below the surface exposure near its present northern limit.

Samples taken, and assays thereon, are as follows:—

Sample No.	Gold.	Silver.	Description.
	Oz. per Ton.	Oz. per Ton.	
1	1.10	1.0	Across 16 inches freshly broken, friable quartz, carrying bunchy pyrite, very slight galena and sphalerite.
2	Nil	Nil	Across 11 inches on the foot-wall of the previous sample. Rusty gouge, sheared phyllite seamed by quartz stringers.
3	0.44	0.8	Across 24 inches fresh quartz with inclusions of phyllite. Slight mineralization by pyrite.
4	0.06	Trace	Across 11 inches fresh quartz seamed by phyllite. Slightly mineralized by pyrite.
5	Trace	Trace	Grab sample of quartz, containing only very slight pyrite and galena.
6	0.06	5.0	Across 9 inches practically barren quartz.
7	1.34	0.4	Across 5 inches of fresh quartz slightly mineralized by pyrite.
8	0.25	0.9	Across 21 inches fresh quartz, containing bunches of pyrite.
9	0.02	0.4	Across 13 inches of fresh quartz on the foot-wall of Sample No. 8, well mineralized by galena and slight sphalerite.
10	0.36	1.2	Across 34 inches of rusty quartz, containing bunches of pyrite.
11	0.88	1.2	Across 69 inches of fresh quartz carrying considerable pyrite, slight sphalerite and galena.
12	0.14	0.4	Across 40 inches rusty quartz, very slightly mineralized by pyrite.
13	1.20	0.8	Across 36 inches of quartz, well mineralized by fine-grained pyrite and slight coarse galena.
14	1.02	0.4	Grab sample of fresh quartz with inclusions of phyllite, slightly mineralized by pyrite.
15	0.30	0.3	Across 72 inches of fresh quartz mineralized by bunches of pyrite.
	0.84	0.4	Select sample of pyrite.
	0.86	5.6	Select sample of mixed pyrite, galena, and sphalerite.

Reference should be made to the Annual Report of the Minister of Mines, **Alpine Gold Co., British Columbia**, for 1927, containing a report on this property by B. T. O'Grady. The holdings of the Alpine Gold Company, Limited, consist of the

Crown-granted claims *Crown Point No. 6* and *Nelson No. 5*, and the following located claims: *Alpine Fraction*, *Swiss Fraction*, *Washington*, *Oregon*, *Idaho*, *Meadow Basin*, and *Sitkum*. All the foregoing are held in the name of John B. White, of Spokane, who, in addition, has lease and option from E. Harrop and associates, on the following Crown-granted claims: *Kootenay Pass*, *Rocky Fraction*, *Berne*, *Highland Chief*, and *Swiss*.



The workings are well above the timber-line at the head of Sitkum Creek, on the south-eastern slope of the Lemon Creek divide, at an elevation of 7,000 feet. The area has been subjected to intense erosion, relief is marked but not precipitous. The camp has been built to the east and south-east of the principal workings, in the draw followed by one branch of Sitkum Creek from the Lemon Creek divide. The elevation of the camp is 6,750 feet; of the 189-foot adit reported upon in 1927, 7,150 feet; of a new adit driven this year, 6,925 feet. The trail from the camp to the new adit, north-west of the camp, follows up the draw, whereas that to the old adit traverses directly up the bare slope to the west of the camp. The most noticeable feature of this western slope is the abundance of massive blocks of float rock, amongst which there is a considerable amount of vein-quartz.

The property can now be reached by 8 miles of truck-road, following up Sitkum Creek on a 12-per-cent. grade, leading from the main highway along the West Arm of Kootenay Lake at a point some 8 miles north-east of the city of Nelson. This road leads to the lower part of the claims and an additional half mile of steeper tractor-road has been built to the camp-site. Sufficient ground is held at lower elevations beside the road to supply all timber necessary during the life of any operation at the property. Water sufficient for any future milling operations is available from Sitkum Creek. A new bunk-house, cook-house, and combination compressor-house and blacksmith-shop have been built at the property during the past two seasons. Accommodation is adequate for fifteen men.

The state of development of the deposit is essentially as described in 1927, with the addition of the new low level, or No. 10 adit. As exposed, the area is underlain by granite of the Nelson batholith, host to the quartz vein under investigation. The vein strikes approximately south 75 degrees west and dips 20 to 30 degrees to the north. The small amount of development and the flatness of the vein make these figures of strike and dip open to possible later adjustment in the light of further exposure. Apparently lenticular in habit, the vein may be traced for several thousand feet on the surface by means of irregular natural exposures on the barren hillside. Widths of 5 feet were noted in such surface exposures, and one sample underground was over 82 inches without reaching the foot-wall, but such figures must be considered as above the probable average width of vein over its length. The quartz lies commonly between well-defined walls, is rust-stained in many of the exposures and fractured parallel to the walls, and is mineralized by irregular concentrations of pyrite and a slight amount of galena and sphalerite. A narrow width of hydrothermal leaching of the ferro-magnesian minerals from the granite is more pronounced on the foot-wall than on the hanging-wall. Underground development exposes mica-lamprophyre dykes up to 16 feet in width, younger than the vein, which strike across it at from north 10 degrees east to north 50 degrees west and dip steeply east or west.

Surface-stripping has been limited principally to slight additional work at locations where the vein was previously exposed by natural causes.

Principal underground development consists of the drift-adit described in the 1927 Report, upon which no work has been done since, and the drift-adit driven this year at a point 770 feet north-eastward from and 225 feet below the old tunnel.

For 60 feet from the portal of the old tunnel, driven at south 75 degrees west, the vein is strong, extending from back to floor. Three samples, taken at 20-foot intervals along this section, assayed: 0.49 oz. gold per ton over 44 inches, 1.29 oz. gold per ton over 45 inches, and 0.05 oz. gold per ton over 56 inches. Between 60 and 116 feet from the portal, the adit crosscuts three mica lamprophyre dykes all striking between north 10 degrees east and north 50 degrees west, dipping steeply east or west; the width of the first is 13 feet, of the second 2 feet, and of the third, 17 feet. Between the first and second of these dykes the vein is displaced by downward block-faulting for a distance of 3 feet; in this 7-foot section it has been considerably disturbed and calcite is prominent as gangue. Between the second and third dykes the vein regains its normal strike and dip, is but sparsely mineralized, and has an average width of at least 72 inches. A sample taken at the centre of this 17-foot section assayed: Gold, trace; silver, trace. For 35 feet beyond the third dyke to the face of the drift-adit, the working is all in granite. Just short of the face a crosscut was driven due south for 20 feet; the vein was intersected in the floor at 4 feet from the south wall of the drift. It dips 30 degrees to the north, reaches the back at the face of the crosscut, and exposed across a full width of 56 inches. The indicated faulted down-throw on the



west side of the third dyke is some 8 to 10 feet. From the face of the crosscut a drift extends 19 feet south-westward. From the 56-inch width at the face of the crosscut the vein narrows rapidly along the strike to the south-west, and at the face of the drift is evidenced by two bands of quartz separated by granite; the stronger of the two quartz bands has a width of 11 inches. A sample taken 10 feet back from the face, over 26 inches of vein-quartz containing considerable mica and included granite, but practically no sulphide, assayed: Gold, trace; silver, 0.2 oz. per ton.

The lower, new adit was begun at the outcrop farthest north-east, a few feet below the vein exposure. Between the two workings the vein is exposed irregularly. The new adit was driven westward for a distance of 260 feet in granite, generally following a series of strong fractures filled by gouge and crushed granite, on several of which there has been considerable movement. Originally this working nowhere intersected the vein. At 155 feet from the portal the fractures diverge, and two of the strongest swing to the left wall of the adit. They strike south 75 degrees west, and dip 65 and 80 degrees southward respectively. A third, the main fracture, continues due west, dipping at 80 degrees to the south. The main working has followed the west striking fracture to the present face. The two branching fractures have been followed for 15 feet into the left wall. After the completion of the adit to 260 feet, at 150 feet from the portal the back was broken upward to a height of 17 feet above the rail. Vein material exposed there consists of 23 inches of white quartz containing slight coarse pyrite at the top of the backswipe, succeeded below by 15 inches of similar quartz, included in which are fragments of rock darker than the usual granite; below again is exposed 18 inches of strong quartz, well-mineralized by coarse-grained pyrite. A sample over the upper 23 inches and a second from the centre 15 inches assayed: Gold, *nil*; silver, *nil*. From across the lowest 18 inches a sample assayed: Gold, 1.34 oz. per ton; silver, 0.5 oz. per ton. The vein exposure was not very satisfactory at the time of examination, it permitted only an approximation of strike and dip and limited information regarding possible faulting on the fractures. As read, the strike is south 70 degrees west, dip 30 degrees northward. Where the back is taken down, the principal fracturing is confined to one strong width on the right-hand side of the working and the vein appears to be faulted on it; only a few feet farther west the divergence of the fracturing takes place. In an effort to determine which of the branches of the fracturing controls the faulting of the vein, the back of the short tunnel to the left has been broken upward to a height varying from 10 to 15 feet, but no evidence of the vein in place was found as at the first location in the main tunnel. The only possible indication of vein material in this branch working, at the time of examination, were stringers of quartz within the fracture farthest south on its foot- and hanging-walls. As evidenced at this location, this branch fracture is sufficiently strong and wide, with marked signs of movement, to be better termed a fissure; within it, between the quartz stringers, is a 10-inch width of the darker rock noted as included in the quartz in the vein. Examination shows this to be definitely acidic and high in plagioclase, probably one phase of the main granitic intrusion. By evidence of quartz stringers within its mass, embayments of quartz from the two wall concentrations and general silicification, this rock is placed as older than the mineralization. At the face of the branch tunnel the fracture has regained its normal narrower width and contains no such included rock or quartz. Further development at this level must be directed not only to the determination of the vein to the north of the faulting but toward its location to the south of the fracture system and west of the present exposure in the back of the main adit.

#### CRANBROOK AREA.

These holdings, known also as the *Golden Egg* group, consist of the *Golden Anderson Group*. *Egg*, *Lucky Strike*, *Gold Brick*, *Twilight*, *Sunset*, and *Black Bear* claims, all held on location by J. J. Rollheiser, of Kimberley. At the present time the group is under lease for five years, from 1938, to the Hall Brothers, of Marysville. The property is on the north-west side of Perry Creek, and on the east side of Sawmill Creek, between elevations of 5,000 and 6,000 feet. Access from the main Perry Creek road is by some 2 miles of good road leading directly to the present workings. No camp buildings have been constructed on the property.



**Euphrates.\***

The discoveries made by the Terzian Bros. on the eastern side of the Salmo river, about 9 miles south of Nelson, were described in the Annual Report for 1926. More ground has been staked, so that the property now consists of some sixteen claims owned by S. Terzian, E. Terzian, A. Pashgian, and G. Pashgian. A small amount of work has been done on a new quartz-filled fissure-vein discovered this year on the L.T. claim. This vein also coincides in strike with the enclosing schists of the Rossland volcanic series, which is from S. 40° E. to S. 45° E. up the hill, but dips steeply to the north-east, cutting across the schistosity of the rocks. As exposed in shallow surface cuts this vein, which is well defined between smooth walls, varies in width from a few inches up to 2 feet, and contains pockets of oxidized decomposed material carrying high values in free gold. In places where there is less oxidation in evidence the mineralization consists of small amounts of disseminated galena, zinc-blende, and pyrite in the quartz gangue.

Samples across 3 and 4 inches of decomposed vein-matter assayed respectively: Gold, 16.52 oz. to the ton; silver, 7.2 oz. to the ton; and: Gold, 19.12 oz. to the ton; silver, 9 oz. to the ton. A grab sample from seventy sacks of this ore assayed: Gold, 11.84 oz. to the ton; silver, 6.5 oz. to the ton. Seven tons of similar material are reported to have been put through the *Golden Age* 20-stamp mill across the river, from which gold bullion to the approximate value of \$1,500 was recovered.

Farther up the mountain the old *Lost Cabin*, consisting of the *Queen Mary* and *Lost Cabin*, was acquired and included in the *Euphrates*. The old underground workings on the *Lost Cabin*, consisting of some short tunnels and two shafts, were all caved and inaccessible when visited by the writer. Open-cuts indicate elongated lenses of quartz coinciding in strike and dip with the enclosing schistose rocks of the Rossland volcanic group, the mineralization consisting chiefly of disseminated pyrite, with occasional spots of galena and zinc-blende.

Samples taken in open-cuts across 3 feet and 7½ feet, respectively, assayed: Gold, 0.28 oz. to the ton; silver, 0.4 oz. to the ton; lead, 0.6 per cent.; zinc, 0.9 per cent.; and: Gold, 0.26 oz. to the ton; silver, 0.4 oz. to the ton; lead, 1 per cent.; zinc, 1.1 per cent.

Work done this year includes the construction of a water-power supply line, 7,000 feet in length, from Clearwater creek to operate a small compressor which has recently been installed, under a head of 300 feet, the water being utilized through a 5-foot Impulse wheel designed and built by the Nelson Iron Works.

The owners of the property propose to incorporate a company to develop the property.

The *Alpine* group consists of the following Crown-granted claims: *Kootenay Pass*, Lot 2882; *Berne*, Lot 2881; *Swiss*, Lot 2879, all owned by E. Harrop *et al.* The property is situated at the head of Sitkum creek, which flows

into the West arm of Kootenay lake, on the eastern slope of the Lemon Creek divide. A trail 9 or 10 miles in length connects the property with the wagon-road near Bourke's ranch at Crescent bay. The elevation of the old cabin, below the workings, is 6,750 feet according to a survey of the claims. The formation is composed of granitic rocks of the Nelson batholith. Basic lamprophyre dykes striking north-westerly cut the granite in places.

Some open-cuts and two tunnels trace the outcrop of a quartz-filled fissure-vein for several thousand feet. The average width of the vein is about 4½ feet. The ore-minerals consist of auriferous pyrite associated in places with small amounts of galena and zinc-blende. Visible free gold is found in the oxidized portion of the vein, which is considerably decomposed and stained with iron oxide in places. The vein strikes westerly, climbing diagonally up the steep mountain-side, and dips flatly to the north or into the hill.

The principal working is a tunnel 189 feet in length at an altitude of about 7,150 feet. This tunnel is driven westerly along the strike of the vein. Samples taken at 10-foot intervals for the first 50 feet show an average of \$14.20 gold a ton over an average width of 54 inches. At about 60 feet in from the portal of the tunnel a mica-lamprophyre dyke 12 feet wide cuts north-westerly across the vein. Beyond the dyke the vein is picked up again without apparent displacement and followed for a length of about 28 feet to where it is cut and faulted on another basic lamprophyre dyke also striking north-westerly. The dip of this dyke is about 77° to the south-west. Between the two dykes samples of the vein showed average values of \$8.40 across an average width of 69 inches.

Beyond the fault the vein is not exposed in the tunnel, which continues along the general direction of the strike of the vein for a short distance and then turns south for some 40 feet.



On the surface the vein is exposed in a short tunnel and open-cuts for several hundred feet on each side of the 189-foot tunnel, the width of the vein varying from 3½ to 5 feet. A sample taken across 42 inches in an open-cut 150 feet westerly from the portal of the main tunnel assayed \$10.20 gold a ton.

The highest point on the outcrop of the vein is an open-cut at about 7,300 feet on the *Kootenay Pass*. At the easterly end of the outcrop there are two open-cuts on the *Swiss*, a short distance north-easterly from the cabin and at about 6,800 feet altitude. The cabin is situated on gently sloping ground. The vein can therefore be developed for a length of between 4,000 and 5,000 feet and through a vertical range of 500 feet by drift-tunnels.

In conclusion, it may be said that the small amount of superficial work done so far indicates that the vein is strong and well defined and contains ore-shoots in places showing good milling values over a workable width.

The above report was made in accordance with the provisions in aid to prospectors under subsections (a), (b), and (c) of section 10 of the "Mineral Survey and Development Act."

#### KOOTENAY LAKE.

A brief report on the Associated Company's holdings is contained in the Annual Associated Mining Report for 1926, but since then the property has again been visited in order and Milling Co., to examine the workings, which had been cleaned out and made accessible since the writer's first inspection. The company, with registered offices in Trail, was incorporated during 1926 to acquire and operate mining properties near Ginol Landing on the east side of Kootenay lake. W. Frampton is president and field manager and the directorate includes business and professional men of Trail. The Associated Mining and Milling Company, Limited, is understood to control the United Lode Mining Company, Limited, also of Trail, which has acquired some old claims on Akokli (Goat) creek between Ginol and Boswell. The property of the United Lode Mining Company is described separately at the end of this report.

A considerable amount of exploratory work, scattered over a large area, was done between 1895 and 1902 by individuals and companies who subsequently abandoned the camp. Some twenty-six or twenty-seven years ago the Valparaíso Gold Mines, Limited, and the Imperial Mines, Limited, were operating the Valparaíso and Maratt properties respectively. The old Maratt group is now known as the Sarah 2nd. These two properties constitute the nucleus of the present property of the Associated Mining and Milling Company.

So far as the official records are concerned, the Associated Company holds, at the time of writing, three Crown-granted and twenty-one other mineral claims, but, in addition, about sixty claims have been located in the vicinity of Ginol Landing during the last two years by officials, employees, and others connected with the company.

Reverted Crown-granted mineral claims which have been acquired are: Valparaíso, Lot 4907; Government, Lot 4908; Martilda, Lot 3870; Schmilka, Lot 3871; Starter, Lot 4912; No. 3, Lot 4911; Kootenay, Lot 3798; Vancouver, Lot 3797. The first three are registered in the name of the Associated Mining and Milling Company and the last five in the name of W. Frampton.

In view of the large number of above-mentioned new claims located around and among the claims of the Associated and United Lode Mining Companies, and in view of the absence of any reliable survey plans, the boundaries of these companies' properties are somewhat obscure. Therefore the following report may not be confined entirely to the companies' present holdings and may inadvertently include showings on claims held by other parties. The area involved is large, but as far as is known the showings hereinafter described form the principal development.

The writer examined the principal veins and showings, which are briefly as follows:—

#### Valparaíso Lode.

The Valparaíso-Government vein is a well-defined quartz-filled fissure striking northerly along the contour of the mountain-side and from 1,900 to 2,400 feet above the level of Kootenay lake. The vein dips easterly, or into the hill, at about 40°. The country-rocks consist of granitic rocks of the Nelson batholith. On the surface the quartz is mineralized in places with pyrite, arsenopyrite, and occasional specks of galena, the values being in gold and silver. Commercial values are apparently confined to streaks and narrow bands in which the sulphides are concentrated in places.

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