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REPORT  
ON THE PROPERTY OF  
GOLD EAGLE MINES LTD. (N.P.L.)  
by  
GEORGE E. APPS, P.ENG.

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- Fig. 1 - Claim Map - attached
- Fig. 2 - Plan & Profile of Vain - attached
- Fig. 3 - Detail of north cuts - attached

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1014 SLUGGETT ROAD

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REPORT  
ON THE PROPERTY OF  
GOLD EAGLE MINES LTD. (N.P.L.)

EXAMINATION:

The property of Gold Eagle Mines Ltd. was examined by the writer on July 31 and August 1, 1965. These two days were spent in making a preliminary examination of the vein over its full exposed length, in running a tape and compass traverse along the vein, in mapping in detail a portion of the vein, and in cutting 21 samples.

The purpose of the examination and of this report is to assess the results of the work done to date and to make recommendations for further exploration and development of the vein, if justified.

Mr. T.D. McEwan of Gold Eagle Mines Ltd. accompanied and assisted the writer. Travel to and from the property was by helicopter.

## SUMMARY:

Gold Eagle Mines Ltd. have acquired property formerly known as the Golden Eagle and B & K groups and have prospected the "high grade vein" of the B & K group by open cut work and stripping. This work has extended the known length of the vein structure to some 1500 ft. and has shown widths of vein material and gold and silver values which warrant further work. All exposures are in partially oxidized material and samples are therefore not completely trustworthy. Deepening of cuts by a few feet should produce fresh unoxidized vein material, and an extended program of open cut work to further prospect the vein and to determine values with some assurance is recommended. Cost of the program is estimated to be \$9000.00. If ore grades over mining widths are confirmed by this work, further exploration by underground work and diamond drilling would be justified.

## HISTORY:

The vein being explored by Gold Eagle Mines is high on the slope of Mt. McQuillan, at the headwaters of China Creek.

Placer gold is reported to have been taken from China Creek as early as 1862. By the late 1890's, prospectors searching for the source of this gold had found veins in the valley below the vein now being explored, and on two other tributaries of China Creek.

Two unsuccessful attempts (1898 & 1936) were made to operate a small mill on one of these properties on Mineral Creek. Some ore was shipped from a property on McQuillan Creek in 1939. Extensive underground work was done on the old Golden Eagle property in the valley below the present workings, but no production is reported.

The vein now being explored was probably discovered in the late 1930's. Dr. Stevenson of the B.C. Dept. of Mines examined it in 1941 and reports "The vein ---- has been exposed --- for 130 ft. A sample across 5 inches --- assayed Gold 3.84 oz. per ton, Silver 3.2 oz. per ton. Toward the south the vein pinches -- toward the north it goes under heavy overburden and has not been prospected. --- There is some doubt as to whether this vein is on the B & K --- or Golden Eagle ground."

Possibly this doubt was a deterrent to further exploration of the vein at that time. The present Company was formed in 1965 to acquire and develop the claims embracing this vein. This Company, and the principals of the Company have, in 1964 and 1965, cleaned up and re-sampled the old exposures on the vein, have made new exposures extending this section some 50 ft. further north, have exposed and sampled a length of vein some 600 to 700 ft. north of this original section, and in a few places in between to indicate continuity, and have exposed a displaced section of this vein, or another vein some 400 ft. still further north.

## LOCATION AND ACCESS:

The property is located on the eastern slope of Mt. McQuillan, at the headwaters of China Creek, approximately 14 miles S.E. of Port Alberni.

The principal vein outcrops at an elevation of about 4500 on the steep upper slope of the mountain. Roads have been built to within a few miles of the property in valleys to the north and south. The ascent from the head of either of these valleys to the saddle below the workings is very steep and the cost of a road to serve the early stages of exploration would be prohibitive. A brief aerial reconnaissance indicates that a cat-road from the valley to the south would be practical to serve a later stage of development of the prospect.

The writer has not determined whether the vein is on the west side of the old Crown Granted Claims or on the adjacent claims held by location. The accompanying claim map has been supplied by the Company.

## GEOLOGY:

The rock in, and in the vicinity of the cuts is a fine grained dark green andesite, which has been mapped by Stevenson (B.C. Dept. of Mines, 1941) as the China Creek andesite. Higher up on the mountain the volcanics contain beds or lenses of chert which strike northerly and dip to the west.

About 1/4 mile to the west, Stevenson's mapping shows a northerly trending body of diorite approximately 1/2 mile wide and some 5 miles long. It is probable that the hydrothermal solutions giving the vein deposits originated in the same deep seated source as did this intrusive.

The vein shear is a well defined, strong structure generally containing sheared andesite and a quartz vein exhibiting a banded structure. The quartz contains varying amounts of glena, pyrite, and minor chalcopyrite. Free gold has been reported in the vein.

In the more northerly exposures there are generally two vein shears and veins separated by from a few inches to four feet of andesite. Where the veins are close together the andesite may be bleached and altered and contain fine grained pyrite. The wider sections are relatively unaltered. Cross fractures pass from one shear to the other and short branches extend from the main breaks to pinch out in the walls. Separate quartz veins from 1 to 20 inches in width are usually found in each of the shears with a few inches to a foot of sheared andesite accompanying the vein. Sampling has indicated that the intermediate andesite does not carry gold values and that the sheared andesite carries at best only minor values. The sampling showed no conclusive relationship between gold content and the amount of sulfide in the veins. Any such relationship should show when fresher vein material is sampled.

No geological features were recognized that should limit the persistence of the shear or vein in length or depth. The rock on the mountain side below the vein outcrop were not examined.

#### SAMPLING & VALUES:

Twenty-one samples were cut during the examination. Eighteen samples containing vein material (and generally adjacent sheared andesite) ranged from .04 to 1.30 oz. per ton in gold. Three samples of inter-vein andesite or sheared andesite ranged from trace to .04 oz. per ton of gold. Silver values approximately equalled the gold content. No attempt was made to re-sample the south end section of the vein which has been sampled in some detail by others, and samples cut in other parts of the vein were not closely enough spaced to give a representative average grade. All assays of samples taken, and some averages of previous sampling by others are shown on the attached plans.

The cuts on the vein have been well dug and cleaned out, which facilitated the examination and sampling. The cuts do not penetrate the zone of surface weathering and oxidation, although in most, some fresh sulfides were present in the vein. The effect of weathering and oxidation on gold values is not predicted as the nature and association of gold in the vein has not been determined.

The samples taken do indicate that the vein carries interesting amounts of gold over the considerable length that it has been prospected. Deeper cuts will be necessary to determine the grade with any degree of assurance, and this need be done before the Company is justified in making the large expenditures on access road, underground development, and diamond drilling, which would be required if ore grades over mining widths and stopping lengths can be indicated on the vein.

A rough estimate of probable costs and operating conditions suggests a minimum or cut-off grade for a well managed, small tonnage mining and milling operation on the property would be 0.8 oz. gold per ton over a 2 ft width, and to achieve a profit commensurate with the risks involved, a grade of 1 oz. per ton over a 2 ft. width could be considered a minimum objective.

Two sets of samples have been cut by or for the Company on the well mineralized section at the southern part of the vein. One set of seven samples over a 100 ft. length averaged 1.57 oz. per ton over 15.4 inches in width, which is 1.01 oz. per ton over a 2 foot width. Another set of fourteen samples over the same 100 ft., cut by a different sampler averaged 1.13 oz. per ton over 10.4 inches, which is 0.48 oz. per ton over a 2 ft. width. This variation from ore grade to an uncommercial grade in separate sampling points up the need for heavy sampling in unoxidized vein material.

CONCLUSIONS:

The vein displays good continuity, widths, and persistence of gold values, and deserves a more extensive program of exploration.

Sampling to date in the shallow cuts has given some good gold values. However, for assurance of grades, it will be necessary to sample below the surface weathering effects.

Fresh vein material can probably be exposed by blasting a very few feet into the vein. The shallow overburden and steep sidehill make it practical to expose the vein to this depth in open cuts.

The 500 feet along the projection of the vein between the north and south strippings is prime prospecting ground. This and some further extension to the north can be tested by open cuts. The work can be done without the heavy expense of building an access road to the property, as only hand tools and a gasoline drill are required.

RECOMMENDATIONS:

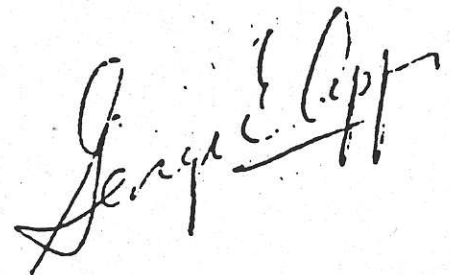
1. The vein between the north and south stripping be trenched, initially at intervals of not more than 75 ft., and where widths and values warrant, additional trenches be cut at 12½ ft. centres, and that these be cut into fresh vein material, a minimum of 4 ft. into bedrock.
2. Cuts into fresh vein material be blasted into the presently exposed vein sections at 12½ ft. intervals.
3. The vein in all cuts be sampled, using best channel sampling procedure and cutting not less than 7 lbs. per ft. of width.
4. Some prospect cuts be made on the extension of the vein north of the talus slope, and on the parallel vein showing at a higher elevation.
5. The route for a cat road to the property be investigated on foot for feasibility.
6. A bulk sample of representative ore be taken for metallurgical tests.
7. Upon completion of the work, the results be examined to determine whether ore grade values over mining width and stoping lengths occur on the vein, and that the decision to proceed to underground development work be made on these results.

The estimated cost of the above program, which will provide up to 60 open cuts made or deepened is:

Labour - 3 men, 2 months, including board, transportation, etc. -----	\$6000.00
Drill Rental, Steel, Powder, including freight -----	\$1000.00
Assaying, Testing, Engineering -----	\$1000.00
Administration -----	\$1000.00
<b>TOTAL ---</b>	<b>\$9000.00</b>

Respectfully submitted,

George E. Apps, P.Eng.  
August 26, 1965.



The writer did not take any samples of the vein-matter, but assays up to \$103 per ton in gold from well mineralized material have been reported (Annual Report, Minister of Mines, British Columbia, 1894, page 773).

The workings consist of one long exploratory crosscut, and four short drifts on the vein.

The crosscut, elevation 2,270 feet, was driven south-westerly for 2,100 feet and is in fine-grained andesite throughout its length. At 130 feet from the portal a cross-working was driven 60 feet south-easterly, and at 1,000 feet from the portal a cross-working was driven north-westerly for 85 feet. These workings intersect a few small stringers of unmineralized quartz but do not cut any material that resembles the main vein of the upper adits, in attitude or vein-matter.

Four short drifts have been driven on the main vein.

No. 1 drift, elevation 2,675 feet, 1,200 feet up-stream southerly from the cross-cut adit, has been driven south 30 degrees west for 45 feet on the vein which is 5 feet wide at the portal and 3 feet wide at the face.

No. 2 drift, elevation 2,790 feet and 70 feet south-westerly from No. 1, has been driven south-westerly for 65 feet on the vein. The vein-matter consists of 2 feet of ribbon-quartz that contains a small amount of sulphides.

No. 3 adit, elevation 2,870 feet and 60 feet south-westerly from No. 2, has been driven 46 feet south-westerly on the vein. The vein is 3 feet wide at the portal, narrows to 2½ feet half-way in and, 10 feet back from the face, it splits, one branch, 3 inches wide, going south-westerly to the face, and the other branch, 1 foot wide, going westerly into the wall.

No. 4 adit, elevation 2,990 feet and 200 feet south-westerly from No. 3, has been driven 22 feet at south 42 degrees west and 15 feet at north 60 degrees west to the face. At 15 feet from the face a working has been driven 12 feet south-westerly. At the portal the vein consists of a 2-foot shear-zone with a few stringers of quartz, but both the shear and vein-matter narrow to a single unmineralized shear 12 feet from the portal.

The rock in these four drift-adits is feldspar porphyry.

This property was examined by the writer in September, 1941.

References: Annual Report, Minister of Mines, B.C.—1893, 1080; 1894, 773; 1895, 651; 1896, 556, 557; 1897, 566; 1898, 1132; 1899, 607, 779, 785; 1901, 1190; 1902, 230, 257.

This group consists of the *B. and K. Nos. 1 to 6*, staked in 1933, the *B. and K. Panorama No. 1* staked in 1939, and the *I am Alone* staked in 1940, belonging to the estate of Angus Beaton (deceased).

The *K.C. Nos. 1 to 4*, and *B.C. Nos. 1 and 2* mineral claims, staked in 1940 and owned by Ed. Keisig, of Alberni, are adjacent on the south to the *B. and K.* group and have been prospected in conjunction with that group.

These claims have not been surveyed and their exact position relative to the adjacent *Golden Eagle* group is not known. Some of the showings described in this report may therefore be on *Golden Eagle* ground, which see.

These claims are on the divide between China Creek and the East Fork of the Nitinat River, and extend from Summit Lake, the source of China Creek, southerly for several thousand feet along the eastern slopes of the ridge between the West and East Forks of the Nitinat River.

With the exception of a small amount of relatively flat ground around Summit Lake, the slopes are steep and consist mainly of rock bluffs and intervening grassy areas with clumps of small evergreens.

No production has been reported from the property.

The camp cabin and showings at Summit Lake are reached from the *Golden Eagle* cabin by a climb of 1,500 feet along a steep and narrow foot-trail 1¼ miles long. The workings on the hillside above the lake are reached by poorly-defined foot-trails.



The showings consist of many widely scattered, narrow quartz veins in tuffs and basalt. The veins range from a knife-edge to 8 inches in width and consist mainly of quartz with small amounts of pyrite. The richest vein found consists of quartz with abundant banded sulphides.

At the north end of Summit Lake three small veins have been prospected by trenches and strippings. The widest of these is exposed in a cross-trench 130 feet north-easterly from the cabin and in a small pit 40 feet northerly from the trench. This vein consists of a shear-zone with a maximum width of 8 feet, which contains three quartz stringers ranging from 1 inch to 8 inches in width. The quartz does not carry any easily recognizable amount of sulphides. The shear-zone strikes northerly along the contact of purple, amygdaloidal lava on the west and light green tuffs and black chert on the west.

A group of three open-cuts, beginning at a point 175 feet northerly from the cabin and extending 70 feet farther north, expose a leached quartz vein from 2 to 8 inches thick, strike north-westerly and dip 20 degrees south-westward.

At the south end of the lake, between 400 and 500 feet southerly from the cabin, a group of veins has been exposed by trenching.

One vein, strike north 10 to 20 degrees west and vertical, has been exposed by four trenches over a length of 100 feet. This vein is 8 inches wide and consists mainly of quartz with very little pyrite.

Another vein, 20 feet easterly from the first, has been exposed by two open-cuts in a length of 60 feet. This vein, strike north 30 degrees east and vertical, is only 2 inches wide and consists mainly of quartz.

A quartz vein, strike north 25 degrees east and vertical, and 2 to 8 inches wide, is exposed in the bed of a northerly flowing creek where the creek flows past the north end of the workings. Two samples from this vein assayed: Gold, 2.56 oz. and 2.26 oz. per ton respectively. Fifteen feet farther up-stream a 6-foot zone of quartz stringers is exposed. These stringers strike north-easterly and range from 1 to 5 inches in width.

Two small stringers of quartz have been found 400 and 520 feet farther up-stream.

The rocks in the workings at the south end of the lake are light greenish tuff with small areas of dense, black chert, all of which strike north-westerly and are vertical. Close to the veins the tuffs are strongly carbonatized by ankeritic carbonate and weather a buff colour.

X A quartz-sulphide vein, known as the "high-grade vein," is exposed  $\frac{3}{4}$  mile south-westerly from Summit Lake, at an elevation of 4,500 feet and within 200 feet of the top of the ridge. There is some doubt as to whether this vein is on the *B. and K.-K.C.* ground or *Golden Eagle* ground. The vein, strike north 4 degrees west and dip 65 degrees westward, has been exposed by five open-cuts for a length of 130 feet. The vein, 5 to 8 inches wide, consists of both ribbon- and comb-quartz and abundant sulphides. A sample across 5 inches of this vein-matter near the north end of the vein assayed: Gold, 3.84 oz. per ton; silver, 3.2 oz. per ton; copper 0.06 per cent. Towards the south the vein pinches to a shear and towards the north it goes under heavy overburden and has not been prospected. The wall-rock is dark green andesite. X

A striking feature of the rocks on the hillside is a northerly trending zone of strongly carbonatized andesite that ranges from 6 to 25 feet in width. Because of the iron in the carbonate, the rock in the zone of alteration weathers a strong buff colour.

Near the south end of this zone, about  $\frac{3}{4}$  mile south of the "high-grade vein," two open-cuts at elevations 3,340 and 2,270 feet in the bed of a creek have been driven on a small amount of pyrite, galena, and sphalerite contained in narrow veinlets in the carbonatized rock.

Between the "high-grade vein" and Summit Lake, at an elevation of 3,820 feet, an open-cut has been driven 15 feet north along two parallel shears 18 inches wide, on either side of a 6-foot feldspar-porphry dyke. A few nodules of quartz, mineralized

with galena and pyrite, were found in the shears; a sample across the east shear of such material assayed: Gold, 0.82 oz. per ton; silver, 0.7 oz. per ton.

There are no previous published descriptions of the *B. and K.* group and adjacent claims.

The property was examined by the writer in September, 1941.

This company, in the name of Herbert F. Hewitt, liquidator, holds the *Havilah Gold Mines, Ltd. Storm Nos. 1 to 4* mineral claims under the "Free Miners' Exemption Act." These claims are at the head of McQuillan Creek and are reported to include the ground mined by the company during the period of its operations between 1936 and 1940.

The workings are reached by motor-road from Port Alberni up China Creek for 12½ miles to the mouth of McQuillan Creek; thence for 2½ miles to a base camp, elevation 2,400 feet, at the head of the creek. From the base camp a pack-horse trail, ¾ mile long, leads to the mine camp, elevation 3,400 feet. During the period of active mining the company operated a high-line tram for ore and supplies between the base camp and the mine camp.

The main workings are on the Gillespie vein between elevations of 3,400 and 3,611 feet on the west side, and near the mouth, of a northerly-trending cirque. The upper workings, not so extensive as the lower, are on the Alberni and McQuillan veins between elevations of 4,200 and 4,370 feet and are 1,700 feet southerly by trail up the cirque from the lowest adit on the Gillespie vein. The workings on the Alberni and McQuillan veins and on a vein on the easterly side of the cirque have been described by the writer in the Annual Report, Minister of Mines, B.C., 1936, pages F 32-33. As very little work has been done since that time on the Alberni and McQuillan veins the reader is referred to the 1936 report.

Although the McQuillan vein was prospected by an open-cut and short adit as early as 1895, most of the work on the vein was done between 1936 and 1940 by Havilah Gold Mines, Limited. The work on the upper showings was done in 1936 and most of that on the lower showings—namely, the driving of the three drift-adits—was done in 1938 and 1939.

Production from the property has been as follows: In 1936, 7 tons containing 7 oz. of gold and 6 oz. of silver; in 1939, 1,039 tons containing 244 oz. of gold and 1,323 oz. of silver.

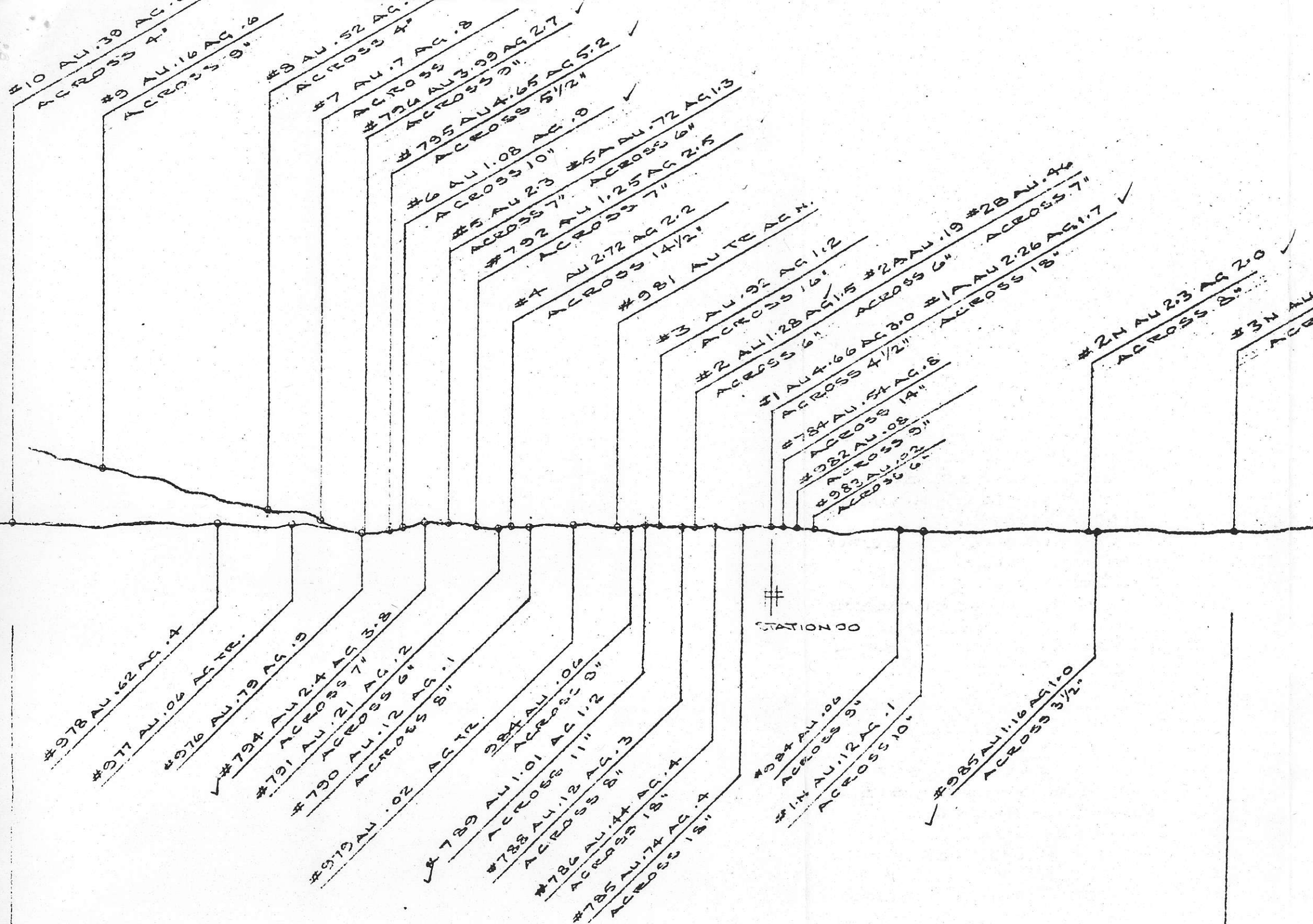
The hillside in the vicinity of all the workings is very steep. The lower slopes are covered with scrub fir and snow-brush and the upper slopes with heather and large talus boulders.

The Gillespie vein strikes north 8 degrees east and dips from 65 to 80 degrees eastward, but between Nos. 1 and 3 adits it dips, on the average, 75 degrees eastward.

The vein-matter consists of ribbon-quartz (Plate IV., A) and a moderate amount of sulphides. The quartz ribbons are separated by thin laminae of sheared rock which is commonly replaced by the sulphides. The ribboning of the quartz is made more striking by the marked tendency of the vein to slab-off along the partings of sheared rock. Angular fragments of wall-rock, now largely carbonatized and replaced by mariposite and sulphides, may be recognized in the vein in places. Veinlets of late comb-quartz cut the ribbon-quartz in a few places. The sulphides are mainly pyrite, with small amounts of arsenopyrite, sphalerite, and galena.

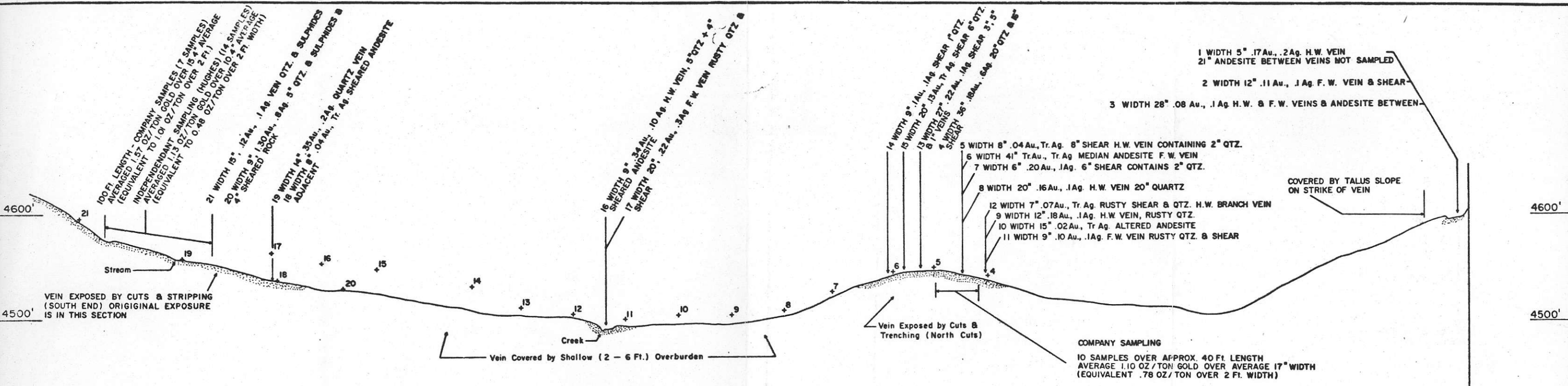
Although the vein was not systematically sampled, thirteen samples were taken from different places along the vein in the three adits. Assays ranged from 0.02 to 0.4 oz. gold per ton over widths ranging from 6 to 33 inches.

The wall-rock consists of lava, of andesitic composition. It is massive, fine-grained, amygdaloidal in places, and mainly dark green in colour; however, purple amygdaloidal lava is found on the west wall of the lower adit for a distance of 500 feet back from the face.

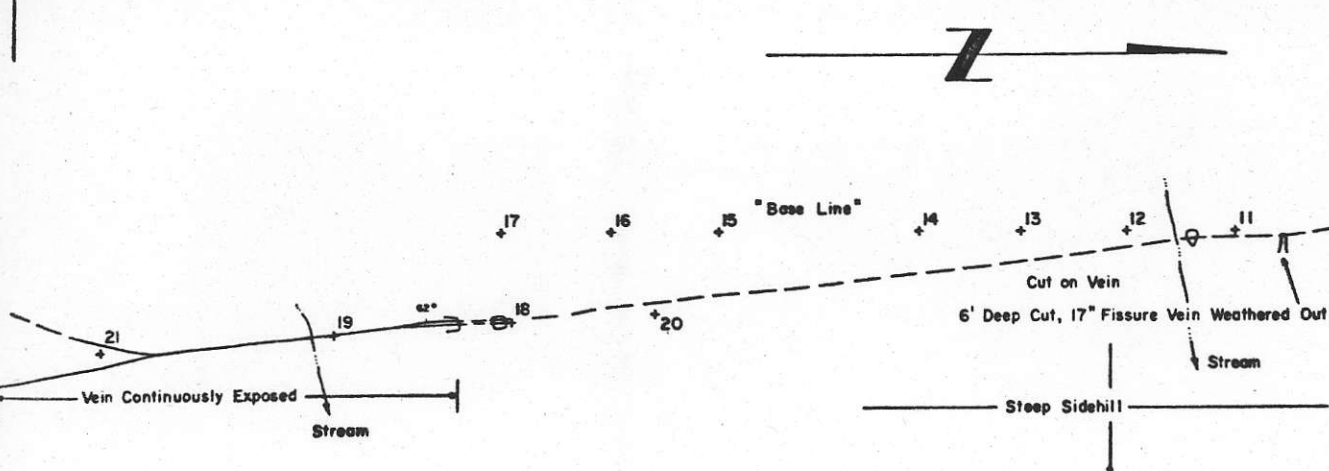
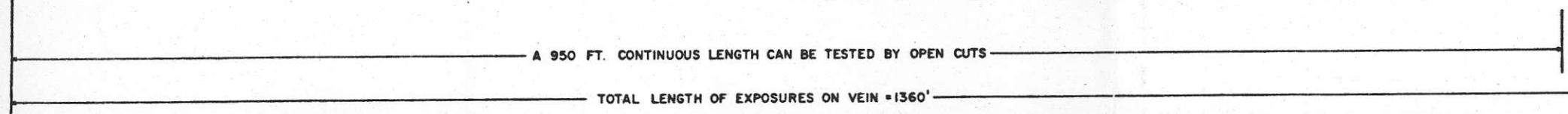


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- 1 HEAVY SULPHIDES
- 1A SELVEGES-LEACHED H.E
- 2 QUARTZ CENTER OF VE
- 2A RUSTY QUARTZ - H WALL
- 2B RUSTY QUARTZ
- 3 RUSTY QUARTZ & SULPH
- 4 MINERALIZED
- 5 QUARTZ
- 5 QUARTZ - DISCOLORED
- 6 QUARTZ - MINERALIZE
- 7 QUARTZ - WELL MINERA
- 8 " " " "
- 9 " " " "
- 10 " " " "
- 12 LEACHED QUARTZ
- 24 HEAVY SULPHIDES
- 34 QUICK GRAB SAMPLE
- 976 BANDED QTZ - OXIDIZED
- 977 QUARTZ - SHEAR
- 978 BANDED QTZ
- 979 SHEARED ROCK - OXIDIZE
- 980 " " " "
- 981 OXIDIZED VEIN MATERIA
- 982 SHEARED ROCK - OXIDIZE
- 983 " " " NO QUARTZ
- 984 " " " "
- 985 BANDED QUARTZ



Longitudinal Section on Strike of Vein



Plan

JAN RESOURCES LTD.

B & K PROSPECT  
 CHINA CREEK AREA, VICTORIA M. D.  
 BRITISH COLUMBIA

**GOLD EAGLE VEIN**  
 PLAN & SECTION

THIS PLAN IS COPIED FROM AN ORIGINAL BY GEORGE E. APPS, P. ENG. PREPARED FOR GOLD EAGLE MINES LTD. IN AUG. 65

DATE JUNE 1980

DRAWN BY: C. L. CORY

GEORGE E. APPS. B.A.Sc., P.Eng.

MINING ENGINEER

1014 SLUGGETT ROAD

BRENTWOOD BAY, B.C.

VOS 1A0

TELEPHONE 652-1317

August 23, 1965.

**TO WHOM IT MAY CONCERN:**

I am a Professional Engineer, having graduated from the University of British Columbia in Mining Engineering in 1952, and been granted registration in the Association of Professional Engineers of British Columbia in 1957.

The attached report is based on an examination of the property of Gold Eagle Mines Ltd. made on July 31st and August 1st, 1965.

I have no interest in Gold Eagle Mines Ltd., and will not receive any in payment for the examination and report.

*George E. Apps*