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Telephone: Office 685-  
Res. 224-  
GEOLOGY OF EASY AND PESO MINERAL  
CLAIMS

R. H. SERAPHIM ENGINEERING LIMITED  
GEOLOGICAL ENGINEERING

316 - 470 GRANVILLE STREET  
VANCOUVER 2, B.C.

November 14, 1978

MEMO: SILVER STANDARD MINES LTD.

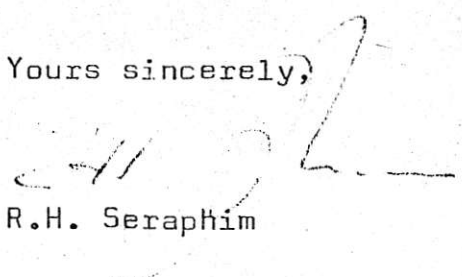
RE: EASY CREEK GOLD PROSPECTS, LIKELY, B.C.

John DeLatre and I examined these gold prospects on October 28 and 29, 1978, under the guidance of Bob Mickle. The showings are on and near 'Easy' Creek, which drains westerly into Poquette Creek approximately a thousand feet south of Poquette Lake, and on road cuts in the general area. Some of the better showings are on a Land Lot near Poquette Valley bottom.

The general area is underlain by volcanic rocks with locally abundant carbonate and graphite. These rocks are Triassic and on the west flank of the sedimentary rock that are the main gold bearing series in the Cariboo belt.

Some, but not all, of the rusty quartz veinlets appear to carry the gold. Assays were provided on a preliminary map and John De Latre is adding assays to a final map. The auriferous veinlets strike mostly easterly, dip steeply, and range from a fraction of an inch to 5 or 6 inches wide. Minor sulfides, chalcopyrite and galena, have been observed. The sampling we completed shows gold content in the 0.03 to 0.1 ounce range in several areas. Higher gold content and greater widths would be necessary to elicit recommendation of more than continued prospecting under current economics.

Yours sincerely,

  
R.H. Seraphim

RHS/LA

GEOLOGY AND SAMPLING  
OF  
EASY AND PESO MINERAL CLAIMS

- LIKELY AREA -  
(93A/12E and 93A/11W)

SUMMARY AND CONCLUSIONS

A northwesterly belt of quartz veins traverses the Permian (1) and Jurassic (3) rocks and is believed to be the source of much of the placer gold in the area. Glacial drift is extensive. The exposures are confined to the deeply cut valleys.

My samples of selected quartz veins and altered andesite-dacite from nine "mineralized" localities in the Easy and Peso claims area assayed less than 0.08 ounces of gold per ton in quartz and less than 0.01 ounces of gold per ton (mostly 0.003 oz./ton) in andesite. It seems likely therefore that both quartz veins and sheared andesite in this area cannot be considered as potential sources of lode gold. However, blasting to take fresh samples at locality 4 N. (north of Gold Creek) could be considered.

All the soils and gravels in the region can be expected to be more or less contaminated with flour gold. Geochemical prospecting for gold is not recommended.

INTRODUCTION

I spent five days from October 28th to November 2nd, 1978 examining and mapping the geology in the Likely area, in particular the Easy claim area.

On October 28th I accompanied Mr. R. Seraphim, consulting geologist, examining and sampling the gold occurrences on Gold Creek (Easy claim). Assistance in the field was given by Messrs. R. Mickle and A. Potter.

Likely is a small logging settlement at the west end of Quesnel Lake, that can be reached by road 75 km. east of Williams Lake on Highway 97.

The Likely area yielded much placer gold in the past (perhaps as much as 150,000 ounces) from Quesnel River (Bullion mine), Caribou River, lower Cedar Creek, lower Spanish Creek, and lower Poquette Creek.

## MINERAL RIGHTS

The Easy claims consist of 5 mineral claims as follows:

- Easy (20 units or 500 ha)
- Easy 2 (6 units or 150 ha)
- Easy 3 (15 units or 375 ha)
- Easy 4 (20 units or 500 ha)
- Easy 5 (6 units or 150 ha)

A total of 67 units or 1675 ha. Lode gold showings occur only on the Easy claim.

The Easy claim apparently overstates the JED mineral claim (10 units or 250 ha) which covers much of Gold Creek showings. The JED claim was staked by John Martin on August 11, 1978. The Easy claims were staked by Robert Mickle in September or October 1978. The showings in the lower part of Gold Creek are on land used for dwelling and that portion of Easy claim could be invalid.

The Mariner II mineral claim has 4 units (100 ha) and seems to have most of the gold showings in this area. The Peso mineral claim has about 5 legal units. The exact (surveyed) boundary and legal status between these two claims would have to be determined before considering a work option. To complicate further the situation, the Mariner II-Peso boundary area is covered by two placer leases (PL 1046-1047).

The other Peso mineral claims are as follows:

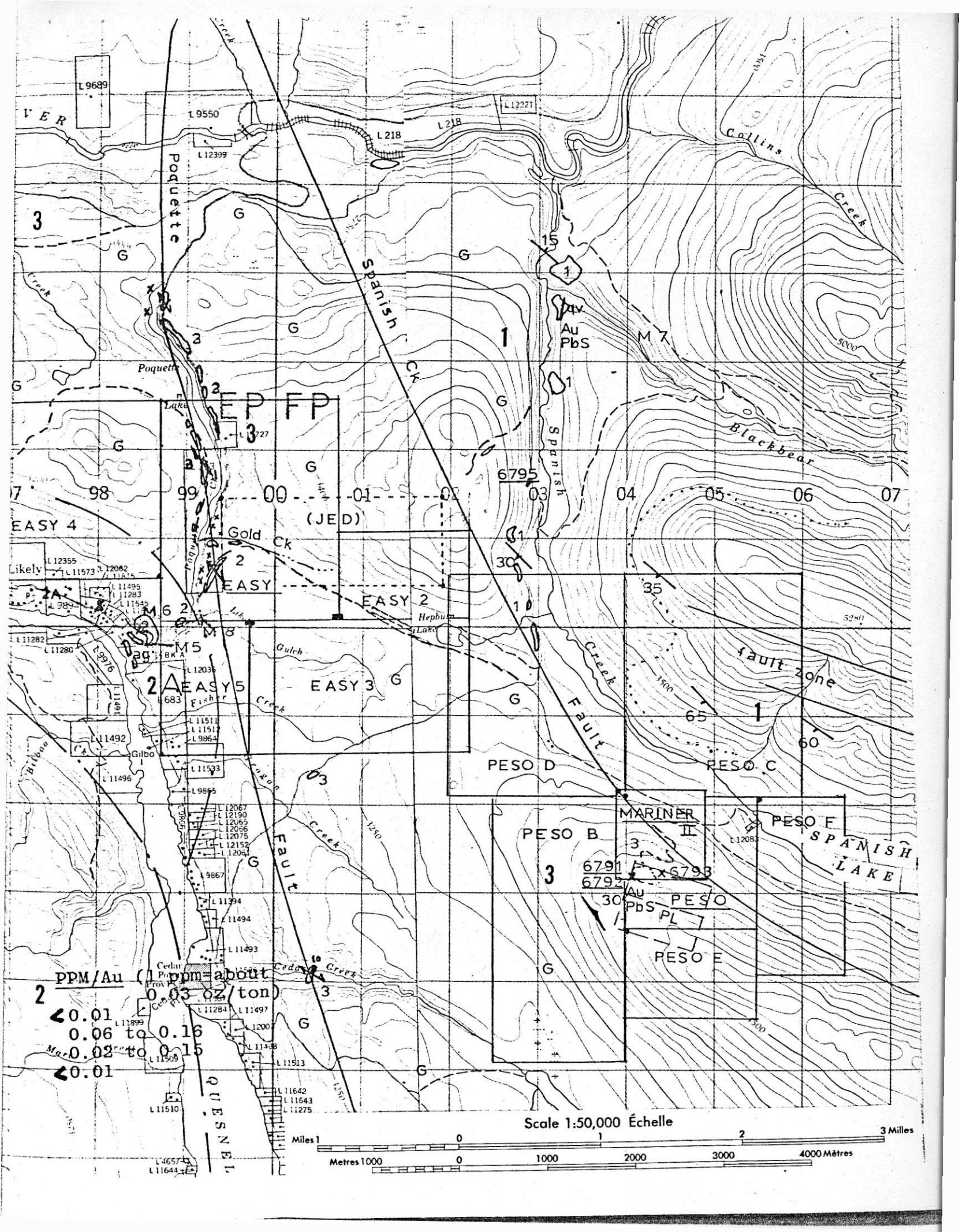
- Peso B (18 units or 450 ha)
- Peso C (20 units or 500 ha)
- Peso D (20 units or 500 ha)
- Peso E ( 6 units or 150 ha)
- Peso F ( 8 units or 200 ha)

The Peso claims have a total of 77 units or 1925 ha.

## REGIONAL GEOLOGIC SETTING

The Likely area as shown on the accompanying map at the scale of 1:50,000 covers about 220 sq. km.

There are three main geologic divisions:



L 9689

L 9550

L 12221

3

V E R

Collins Creek

Poquette Creek

Spanish CK

Au PbS

M 7

EP FP

2

3

L 1277

7 98 99 00 01 02 03 04 05 06 07

EASY 4

Gold Ck

2

(JED)

EASY

EASY 2

Hepburn Lake

30

10

6795

35

5240

Blackbear Creek

L 12355

L 11573

L 12092

L 11495

L 11283

L 11545

L 983

M 6

M 2

M 8

M 5

EASY 5

Gulch Creek

Fisher Creek

L 12036

L 11511

L 11512

L 9864

L 11492

L 11496

L 11593

L 9855

L 12067

L 12190

L 12055

L 12056

L 12075

L 12152

L 12051

9867

L 11394

L 11494

L 11493

L 11284

L 11497

L 1200

L 11348

L 11513

Gilbo

1320

1350

1250

1300

1300

PESO D PESO C

MARINER II

PESO B

3

6791

6792

30

Au PbS

PESO PL

PESO E

3

6793

L 1208

PESO E

SPANISH LAKE

1

60

PPM/Au (1 ppm = about 0.03 oz/ton)

2

0.01

0.06 to 0.16

Mark 0.02 to 0.15

0.01

Cedar Prov. Park

Cedar Creek

1200

11509

11510

11642

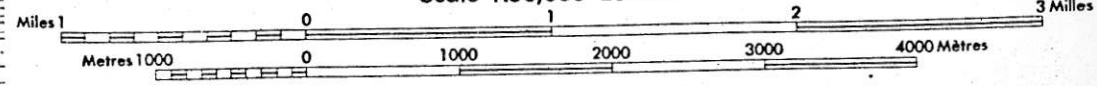
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11275

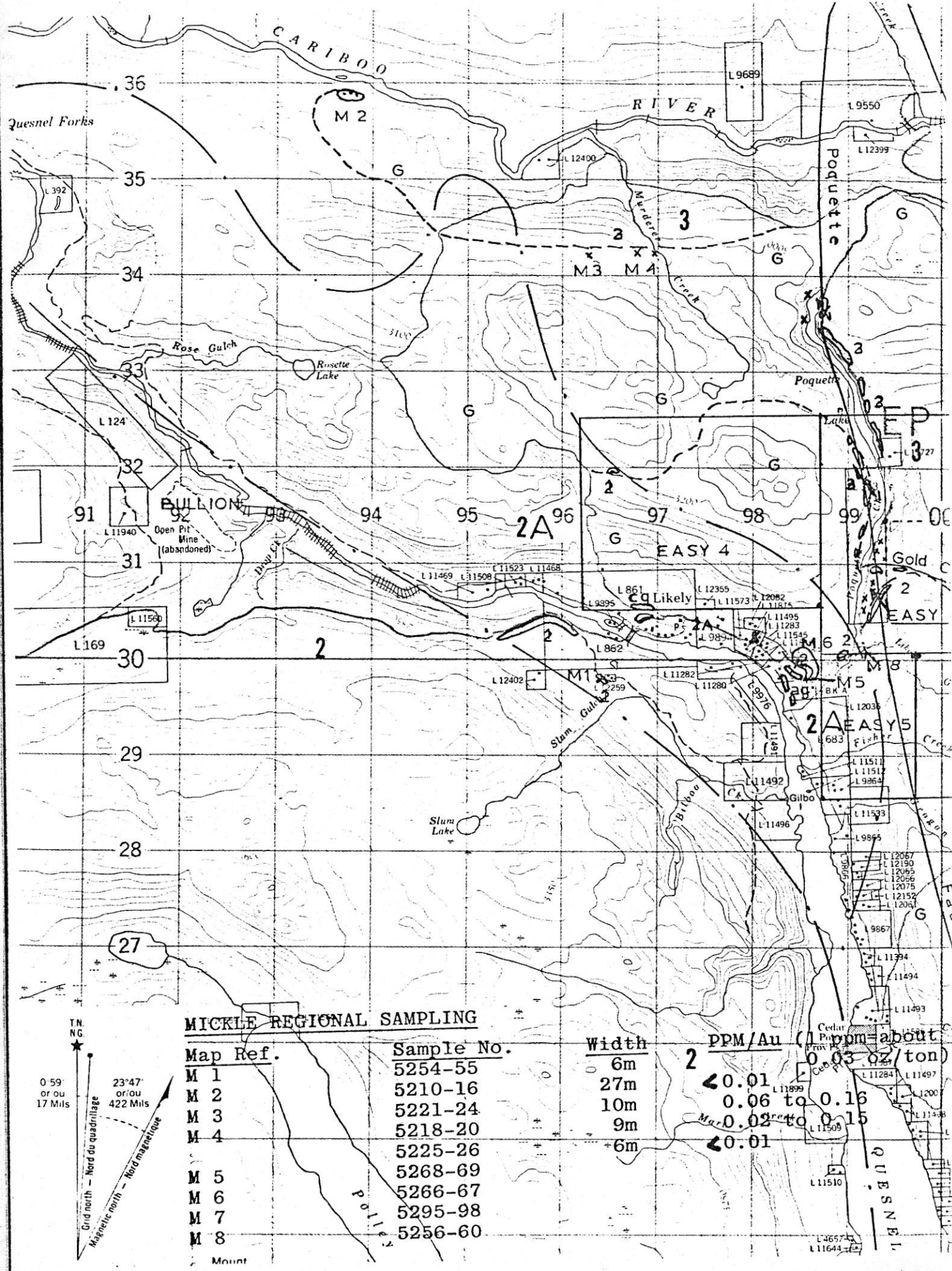
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QUESNEL

Scale 1:50,000 Échelle

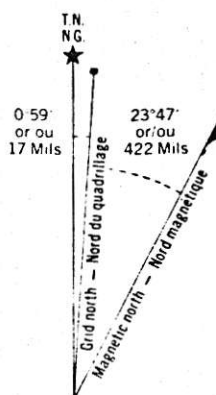






**MICKLE REGIONAL SAMPLING**

Map Ref.	Sample No.	Width	PPM/Au (1 ppm = about 0.03 oz/ton)
M 1	5254-55	6m	2
M 2	5210-16	27m	< 0.01
M 3	5221-24	10m	0.06 to 0.16
M 4	5218-20	9m	0.02 to 0.15
M 5	5225-26	6m	< 0.01
M 6	5268-69		
M 7	5266-67		
M 8	5295-98		
M 8	5256-60		



Cedar  
Prov. P.  
Geo. C.

1. Cambrian black pelitic rocks (Midas Formation) in the northeast of the map area. These rocks contain quartz veins with minor sulphides and gold.
2. Upper Triassic and Lower Jurassic volcanic and sedimentary rocks in the southwest part of the map area. The volcanic rocks are dark pyroxene basalt-andesite flows with predominant iron-rich flow breccia in at least the upper part. This northwesterly (310 degrees) mafic belt shows clearly on the aeromagnetic map (1533 G).
- 2A A thick bed of polymict cobble conglomerate (over 100 m. thick) overlain by minor thin-bedded black argillite (striking 340 degrees and dipping 60 to 80 degrees east) and argillaceous limestone, lies on the north hillside of Likely. These sedimentary rocks are overlain by a mafic, iron-rich flow breccia, a relatively thin flow extending north of Quesnel River. Both sedimentary and volcanic rocks are intruded by dykes of altered syenitic-monzonitic rocks.

These rocks (2 and 2A) do not appear to contain much quartz or any gold.

3. Middle Jurassic to Cretaceous volcanic rocks, mostly porphyritic augite andesite flows and andesite tuffs, in the central part of the map-area. These rocks are separated from the Midas Formation by the Spanish Creek fault. These rocks contain quartz veins with very minor sulphides and gold.

A major shear zone (Poquette fault) trending northerly with low-angle dips east and northeast, extends from Cedar Creek to the north end of Poquette Lake.

- G. Glacial drift is widespread, especially above 3000 feet elevation (900 m.).

Geological boundaries (aeromagnetics)

#### GEOLOGY AND SAMPLING OF EASY CLAIM

The Gold on Easy Creek area is underlain by andesitic to dacitic tuffs ranging in texture from very fine grained rocks that resemble slate or graphitic schist when weathered to coarse

lithic tuff. Quartz veinlets occur in fairly numerous small propylitised zones of graphitic-carbonate material. Pyrite amount to only 2 or 3 percent.

A zone of discontinuous quartz veinlets runs east-west on the south side of Gold Creek. This zone has very low gold values (0.003-0.005 oz. Au/ton).

Near the mouth of Gold Creek is a zone of quartz veinlets striking 105 degrees and dipping vertically. The zone is about 5 to 10 m. wide and 25 m. long. In this zone the quartz average 0.076 oz. Au/ton (sample 6776). Selective sampling across 3 m. (S 6) returns 0.112 oz. Au/ton and across 10 cm. (P 2) returns 0.518 oz. Au/ton. The altered andesite tuff has 0.003 oz. Au/ton (sample 6790).

The andesite is weathered and poorly exposed 150 m. south of Gold Creek. The quartz (very scarce) assays 0.036 oz. Au/ton and the weathered andesite 0.003 Au. oz./ton.

Shears with very minor quartz in altered andesite is exposed for 250 m. along Road 1300 (400 m. south of Lower Gold Creek). Assays of selective sampling across 0.75 to 2.10 m. sections (S8-9 and P 4) give 0.003 to 0.02 oz. Au/ton.

On the Sawmill Road, about 800 m. NNW of Gold Creek, there is a corrugated zone of propylite at least 300 m. wide. Samples of propylite and a sample of the quartz veins all assay 0.003 oz. Au/ton or less.

At last, about 350 to 400 m. north of Lower Gold Creek, along an old bushroad, there are a number of small exposures of weathered, broken andesite tuffs. At locality 4 N a chip sample across 3 m. assays 0.212 oz. Au/ton. Contamination is probable as the rock is directly under the soil. As this zone is poorly exposed, blasting in order to sample fresh material could be considered. *follow-up* \*

It is to note that only the oxidized surface material has been sampled and is liable to have an enrichment of free gold. Despite this, material sampling is extremely low (0.003 oz. Au/ton) and material sampling (quartz-andesite) shows that it is a gold quartz veins situation of no economic possibility (0.036 to 0.076 oz. Au/ton).

Exposures are scarce on the rest of the claim as they are limited to the valleys and road cuts.

Easy 2 is reported by R. Mickle to have some exposures of tuffs and granitic rocks (north of Hepburn Lake).

Easy 3 is apparently all glacial drift.

Easy 4 is virtually all overburden. The south half is underlain by sedimentary and mafic volcanic rocks of Unit 2A which is unfavourable for gold. The same applies to Easy 5 (See Map 1:50,000).

#### GEOLOGY AND SAMPLING OF PESO - MARINER II

I spent only half a day, October 30th, in the Peso-Mariner II claim area on account of the ground being covered with snow.

The area appears to be underlain predominantly by porphyritic augite andesite-dacite. Small graphitic shears are fairly common. Large cubes of pyrite (carrying about 1 ppm Au according to sample 5140) are quite common.

There are two types of quartz veins:

1. Large, flat-lying veins of bull quartz.
2. Quartz veinlets associated with shears and that carry minor sulphides (arsenopyrite, pyrite, chalcopyrite and galena) and free gold.

All the prospects are on quartz veins of the two types.

The best prospect according to R. Mickle is the trench Peso 3, a shear zone of altered andesite with fairly numerous quartz veinlets. Two chip samples of the andesite (6791) and the quartz (6792) across 15 m. assay 0.003 oz. Au/ton. Sample 18845 (0.172 oz. Au/ton) taken by A. Potter across ~~90 cm.~~ is supposed to come from this showing.

10' FROM A TRENCH ABOVE  
A.O.T.

Another sample (6793) of small quartz veins in a 4 cm. long trench (300 or 400 m. east of Peso 3) assays also 0.003 oz. Au/ton.

It appears that the free gold is very erratic and that selective sampling across very narrow widths may provide some encouraging values. The prospects appear to have so little valuable material in place that further work is not warranted.



## GEOCHEMICAL PROSPECTING FOR GOLD AND LATENT MESOTHERMAL VEINS

In the Likely area placer gold was found in preglacial, glacial and interglacial gravels, as well as in post-glacial gravels and soil as a result of superficial re-concentrations. The Likely area has many creeks where one can still find some flakes of gold when properly panned.

For this reason, a geochemical soil sampling program for gold, especially in an area of gold quartz veins, will be largely contaminated. The results of such a survey would be highly unreliable. The results of a line of geochemical soil sampling in the lower part of Gold Creek proves the point.

Chip samples across 3 to 5 m. of tillite (with considerable carbonate and quartz) at lower Gold Creek (6796) and along Spanish Creek (6795), assay respectively 0.18 and 0.003 ounces gold/ton. Till and tillite is probably extensive between Spanish Creek and Poquette Creek and is another potential source of placer gold.

Other prospecting areas for latent gold quartz veins are

- (a) in the sheared area on Cedar Creek, 1.5 km. from its mouth;
- (b) in the vicinity of the mouth of Black Bear Creek where auriferous galena and other sulphides are reported in veins.

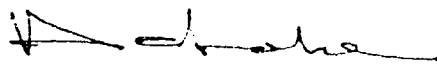
Rich placer ground with coarse, lumpy gold, and much pyrite in concentrates laid below the localities in question, which are open for mineral claim staking.

Geochemical soil prospecting for Cu-Zn-Pb could be of some value in locating fairly rich gold quartz veins.

Another possible area for gold quartz veins or replacements, but not necessarily good prospecting ground, is the fault zone in Cambrian pelites north of Spanish Lake.

All these potential areas would require pre-field research and the field procedures would have to be clearly defined.

Respectfully submitted,



J.S. De Latre  
Geologist