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REPORT ON THE GEOLOGICAL-GEOCHEMICAL PROGRAM

ON THE BIG BAR PROPERTY

BIG BAR CREEK AREA

CLINTON MINING DIVISION

920 - 1 E

By

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G.A. NOEL AND ASSOCIATES, INC.

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SUMMARY

Between August 28th and September 12th, 1979, a three-man crew employed by G.A. Noel and Associates, explored the Big Bar Claims, which are located adjacent to the Fraser River approximately 40 km. west north-west of Clinton, B.C.

A geochemical soil survey was conducted over the western part of the property and a silt sampling program over the remaining part. This work was dictated by severe topography.

Geological mapping was conducted over the claims. All rocks seen are of volcanic origin and include tuffs, breccias and volcanic conglomerates. A prominent feature on the property is a very deeply weathered, kaolinized probable fault zone trending northwesterly through the claims. It appears to be composed of dacite to rhyolite tuffs mineralized with disseminated pyrite.

Numerous narrow quartz-calcite fracture zones occur in the less altered volcanics. These appear to be of limited extent.

An induced polarization survey was conducted over a limited area. While conductivity was good, the I.P. response was slight.

Numerous rock, soil and silt samples were taken. Assays for these are not yet available.

It is concluded that no further work should be done on the Big Bar Claims until all assay results are available. If results are encouraging, then a detailed program is warranted.

INTRODUCTION

G.A. Noel and Associates Inc., between August 28th and September 12th, 1979, conducted a geological mapping - geochemical sampling program on the Big Bar property of Kerr Addison Mines Ltd. This work was carried out by a crew of one geologist and two field assistants.

The purpose of the program was to explore the property for its gold potential. Previous work by a Kerr Addison Mines Ltd. prospecting crew indicated several areas to contain anomalous gold values in quartz-carbonate breccia zones in rhyolitic and dacitic tuffs.

LOCATION AND ACCESS

51° 11' north latitude, 122° 08' west longitude.

The property is located immediately south of the Fraser River at Big Bar Creek, a ferry crossing approximately 40 km. west northwest of Clinton. Excellent access is available by good secondary roads from Clinton to Big Bar Creek.

A ferry must be taken across the river from Big Bar Creek. On the south side of the river the road deteriorates rapidly as it switchbacks up the steep slope. The first 8 km. of this road are very steep, sandy and rough requiring the use of a 4-wheel drive vehicle. The claims are crossed by this road at approximately 2.4 to 4.0 km. from the ferry.

The claims extend approximately 1200 metres west of the road to 2300 metres east of it.

TOPOGRAPHY AND VEGETATION

Topography is very steep over most of the claim. Old river terraces are common at low elevation but give way to steep, rugged terrain at higher levels. Massive cliff outcrops are common along the north western edge of the property while many deeply dissected stream canyons prevail over most of the eastern half of the claims. Elevations range from 300 metres at the river to 1100 metres at the southwest corner of Big Bar Too.

Sparse stands of fir occur along the southern boundary of the property. Elsewhere, grass and sagebrush are common.

PROPERTY

The property consists of two claims. They are Big Bar Claim - 15 units, and Big Bar Too Claim - 6 units.

The claims are owned by Kerr Addison Mines Ltd.

HISTORY

Very little is known about the claims. When mapping it was noted that some of the gossanous outcrops appeared to have been opened up by prospectors many years ago. This could have been in the early 1900's when placer mining was being conducted along the Fraser River.

FIELD WORK

A three-man fly camp was established approximately 8 km. by road south of the ferry crossing. This campsite was located beside an irrigation ditch which transports water to several ranches situated along Ward Creek. (This ditch was originally excavated by Chinese placer miners in the late 1800's).

A soil sampling grid was laid out over Big Bar Too Claim. Lines were run due north at 100 metre intervals. Samples were collected at 50 metre intervals along each line. This grid also continued east for 300 metres on Big Bar Claim. Beyond this line (13 E), the topography was too broken up by gulleys to properly lay out a grid.

Two lines were run down ridges on Big Bar Claim. These were lines 17 & 35 E and 17 & 60 E. Due to the terrain problems, they could not be run due north.

All lines were surveyed using a Silva compass and one hip chain. Slope corrections were made in steep terrain.

Silt sampling was conducted along most of the drainages.

Sample interval was approximately 100 metres but this had to be varied depending on the nature of the drainage, i.e., slides, cliffs, etc.

All samples were sent to Vangeochem Lab for analysis of gold, silver and arsenic.

Geological mapping was also conducted over most of the property. Air photos, borrowed from the B.C. Forest Service in Clinton, were used for mapping control. Using the photos and a hip chain, traverses were made which later could be transferred to a 1:5000 scale base map.

Other than the cliff outcrops to the west edge of the claims, most of the outcrops is exposed in the numerous canyons. Rock along the dry creek beds was examined with relative ease but other outcrops, high on the walls, could not be reached. In these cases, observations were made of the talus.

All geology was plotted on the base maps on a scale of 1:5000. Numerous samples were taken of various mineralized zones. All sample locations are shown on the geology maps and a description of the samples accompanies this report.

Three induced polarization lines were run in the vicinity of two gossan zones exposed along the main access road. Two lines were run north-south and one approximately east-west. Because I.P. responses were weak and the mineralized zones appeared narrow this geophysical work was terminated until the results could be examined by a geophysicist.

GEOLOGY

REGIONAL GEOLOGY

Detailed regional geological coverage in the vicinity of the Big Bar Claims appears to be lacking. The only published information available is a report by Trettin (1961) and a map by Tippe (1978). Both lack detail in this area.

Trettin (1961) shows the claims area to be completely underlain by post lower Cretaceous - Pre Oligocene Ward Creek assemblage of volcanic rocks. Tipper (1978) shows the area to be underlain by a wedge of Upper Cretaceous Kingsvale volcanics in fault contacts with Eocene volcanics. His map indicates that the Big Bar Too claim is completely underlain by Kingsvale Group rocks while most of Big Bar Claim is underlain by Eocene rocks.

DETAILED GEOLOGY

Two very distinctive geological divisions occur on the property. These may simply be referred to as the unaltered and altered rocks. While being distinctive on the large scale, they are not necessarily that different geologically. The intense weathering in the altered zone makes it difficult to determine the original rock types within it.

(a) Unaltered Rocks

This term is used for convenience only and is actually a misnomer. It is intended to include most of the rocks which are not intensely weathered.

Rocks in this group occur on the Big Bar Too Claim, the western side of Big Bar Claim, and possibly within the central part of Big Bar Claim within the altered zone.

Rocks in this group are all of extrusive origin. Most are pyroclastic and clastic, but some flow rocks are included. The pyroclastics include light green and purple andesitic tuffs, light brown dacite tuffs, and light gray-white rhyolitic tuffs; green, purple and hematite-red volcanic breccias, the fragments of which vary from a few millimeters to 25 or more centimetres in diameter.

The clastic rocks include volcanic conglomerates, composed of pebbles and boulders, well rounded, up to 20 cm. diameter. These are cemented by a sandy matrix rich in hematite. Some of the dacitic tuffs mentioned above might be pebble volcanic conglomerates.

Chlorite and epidote alteration are common throughout the darker pyroclastics in varying amounts. Most mafic minerals are chloritized. Some tuffs and volcanic breccias have a general chlorite "wash" throughout the entire rock. Epidote generally occurs as a partial alteration of feldspar phenocrysts and clasts.

Hematite is also common in many of the dark volcanics. The purple coloration, in many cases, is due to hematite. As well as being a common constituent of purple flows, tuffs, breccias and conglomerates, it also occurs along fractures in these rocks with calcite.

Calcite is ubiquitous to the area. It coats many fractures in all rock types.

Contacts with the various volcanic units are not obvious. At the northwest corner of the claims, a rhyolite band is distinctive and trends N20E. Elsewhere, hints of attitudes are variable from northwest to northeast.

(b) Altered Rocks

This group includes a wide zone of strongly weathered light coloured rocks trending northwesterly through the center of Big Bar Claim.

These rocks include white rhyolite and rhyolitic tuffs, light brown to light gray-brown dacitic tuff, light pink-white dacitic (?) tuff and light-green volcanic breccia. The rhyolitic to dacitic rocks may also include volcanic conglomerates composed of quartz-feldspar rich pebbles.

These rocks are now strongly kaolinized. Most are well mineralized with disseminated pyrite. In most areas, pyrite cubes are well preserved within the weathered rocks. Iron-rich gossans are not common within these rocks but are restricted to local areas which are probably weathered mineralized veins of shears.

A progression in weathering intensity was noted on the eastern eds of the mapped area. At 800 N, 27 E well bedded whyolitic to dacitic tuffs (or flows?) are exposed in a creek gully. Approximately 5 metres vertically above the floor of the gully outcrops look like coarse fragments, the fine bedding being lost in weathering.

Approximately 300 metres southeast of this location similar while to gray finely bedded tuffs (or flows?) are exposed in a dry creek bed beneath high continuous cliffs. Several metres above the creek bed fracturing and weathering produced a coarse brecciated appearance to the rock. Blocks approximately 15 cm. square occur within a light brown clastic matrix. Bedding is well preserved in each block and the same attitude as the fresher bedrock is retained. At higher levels, in the cliffs, all signs of bedding are lost and only the coarse fragmental texture is retained.

Similar light coloured fragmental textured weathered rocks form the "white bluffs" to the east of the access road (750 - 950 N, 6E - 11E). Faint hints of bedding were seen in an occasional outcrop. The writer assumes that these strongly kaolinized rocks are also tuffaceous.

Within the central part of Big Bar Claim purple andesite, andesitic tuffs and hematite-rich volcanic breccias occur within the strongly altered zone. These rocks are either enclosed within a fold in the rhyolitic-dacitic tuffs, a small fault block within the light coloured rocks, or possibly an unaltered part of the general geology (?).

Extensively weathered rock is present at the headwaters of all gulleys on the eastern half of Big Bar Claim. These rocks are reduced to light gray, light green, light pink, light yellow and hematitic red kaolinized rubble. It is difficult to determine whether there are two distinct geological formations

present on the property (Tippe, 1978) or one formation (Trettin 1961).

(c) Structure

The most obvious feature on the property is the northwest trending alteration zone. It is clearly defined on its northeast side (mostly because a mud slide has obliterated all exposures in this area) but to a lesser degree on the southwest side. This may represent a wide northwest trending fault zone.

Within this possible fault zone attitudes taken on tuff beds are extremely variable in both strike and dip, indicating appreciable tight folding.

Several tight folds were recognized while mapping. Two were open folds, one recumbent.

MINERALIZATION

In the unaltered volcanic rocks mineralization appears to be confined to quartz and calcite veining within fracture zones. A number of quartz-calcite gossanous zones were noted and are shown on the accompanying geology map. Pyrite is the only sulfide seen in these zones. They vary from 5 cm. to several metres in width. The attitudes of these mineralized fracture zones is variable but tend to be northwesterly dipping at moderate angles to both east and west.

Two strongly gossanous zones are exposed on the access road on the western side of Big Bar Claim. These are the most oxidized zones seen anywhere on the property. To the south and west of these road showings five small outcrops were found containing quartz with and without carbonate veining over widths from one to two metres. Some of these veins strike east-west, dip 25 - 30 degree south while others strike north and dip at low angles to the east. All occur within light brown dacitic tuffs (?) but are not as strongly oxidized as the road showings. Pyrite and pyrite casts occur in all exposures.

To the west of the above area, at 900 W, 11E, similar dacitic rocks contain veins and masses of calcite. Appreciable iron staining is present. The mineralized zone here is poorly exposed but may be between one to two metres wide.

Similar quartz-carbonate veining is exposed in the creek immediately east of the road. It outcrops intermittently over 150 metres. The best exposures at 485 N, 14 and 50 E where the veining is exposed over at least 2 metres. Both walls are lost in talus or overburden. Pyrite is also exposed here.

Other similar, but narrower, quartz-calcite veining was observed north of the above exposure at location on either side of the creek.

Brecciated rhyolite with quartz veining is poorly exposed in the creek which borders the west side of the "white bluffs" (approximately 850 N, 17 E). Pyrite and pyrite casts occur in the quartz veins. Weak iron oxide stain is also present. This rock unit is intermittently exposed in the creek and may be either outcrop or large blocks stuffed into the creek. Other than in the creek, no more exposures of rhyolite breccia with quartz veining was seen.

Within the light coloured, kaolinized, altered zone, pyrite is common and well preserved. Iron staining is weak to absent.

SAMPLING AND ASSAYING

ROCK SAMPLING

A number of rock samples were taken from various areas on the property. All iron stained quartz-calcite and quartz veins were sampled, as were gossans. A number of samples were also taken from the kaolinized, pyritized tuffaceous rocks. Locations of all samples are shown on the geology map. A description of samples accompanies this report. No assay results were available at the time of writing this report.

SOIL SAMPLING

Soil development was poor over the area sampled. Soils are mostly silty alluvium. On several lines, where cliffs prevented the taking of a soil sample, talus samples were collected. Assay results for the soil samples are not yet available.

GEOPHYSICS

Three induced polarization lines were surveyed in the general vicinity of the mineralized road showings. (Lines 11E, 12E and 9N). These showed a very weak response in the vicinity of narrow quartz-calcite veining in dacitic rocks. Because of the narrow structures and the weak response it was decided to await a geophysical review of the data before continuing this work.

CONCLUSION

The Big Bar and Big Bar Too Claims were examined on a reconnaissance basis and mapping geology and collecting soil, silt and rock samples.

Mineralized zones in relatively unaltered volcanic rocks appear to be restricted to quartz-calcite filled fracture or shears of relatively narrow widths and restricted lengths. No strong, persistent mineralized structure was seen. Pyrite was the only sulfide recognized.

Pyrite appears to be ubiquitous in the strongly weathered kaolinized zone. No other sulfides were recognized.

It is concluded that no further work should be done on the Big Bar and Big Bar Too Claims until all assay results are available. If these results show encouragement, then a more detailed exploration program should be undertaken.

Respectively submitted

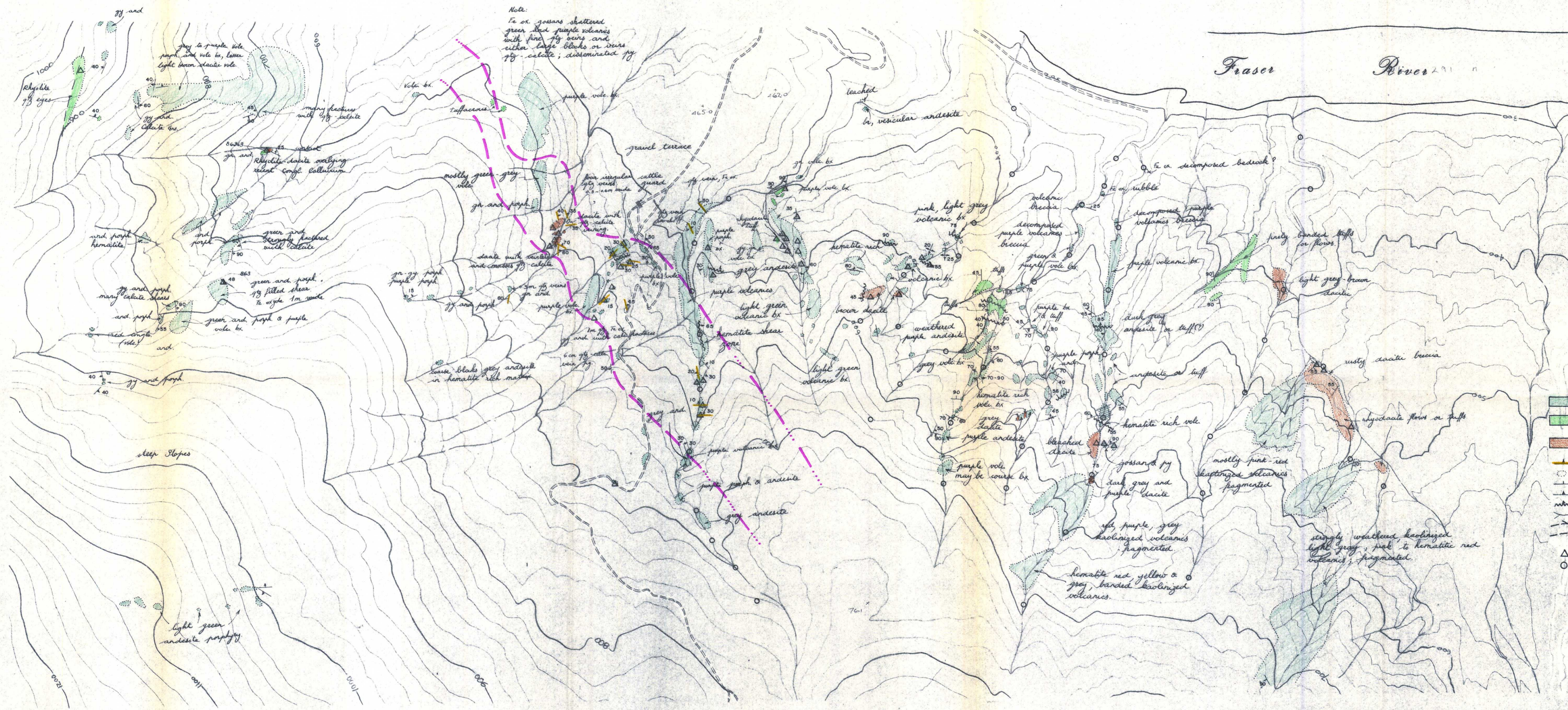
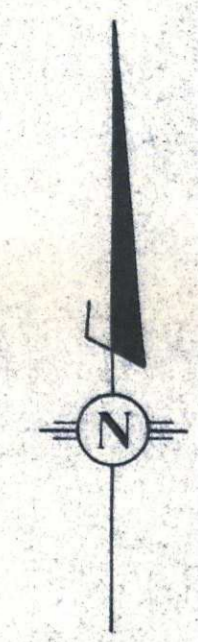
Harold M. Jones, P. Eng.

September 22nd, 1979

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Trettin, H.P. - (1961) - Geology of the Fraser River Valley Between
Lillooet and Big Bar Creek, B.C.D.M. Bulletin No. 44

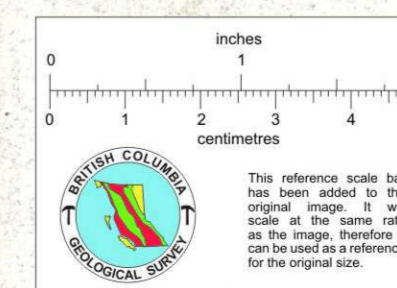
Tippe, H.W. - (1978) - Taseko Lakes (92 0) Map-Area, G.S.C. Open File
534.

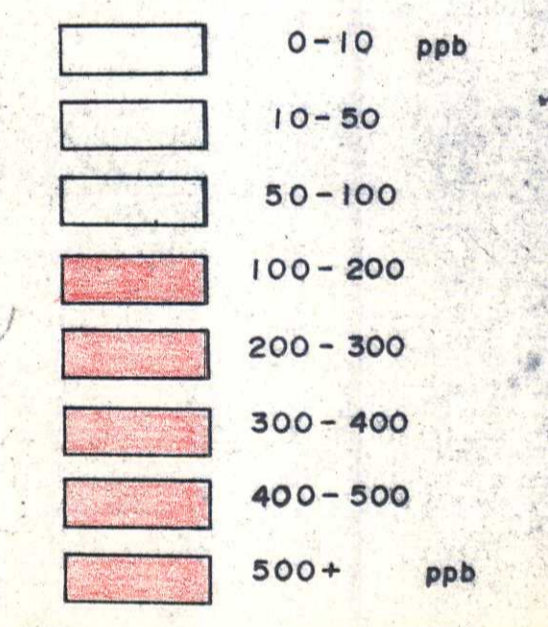
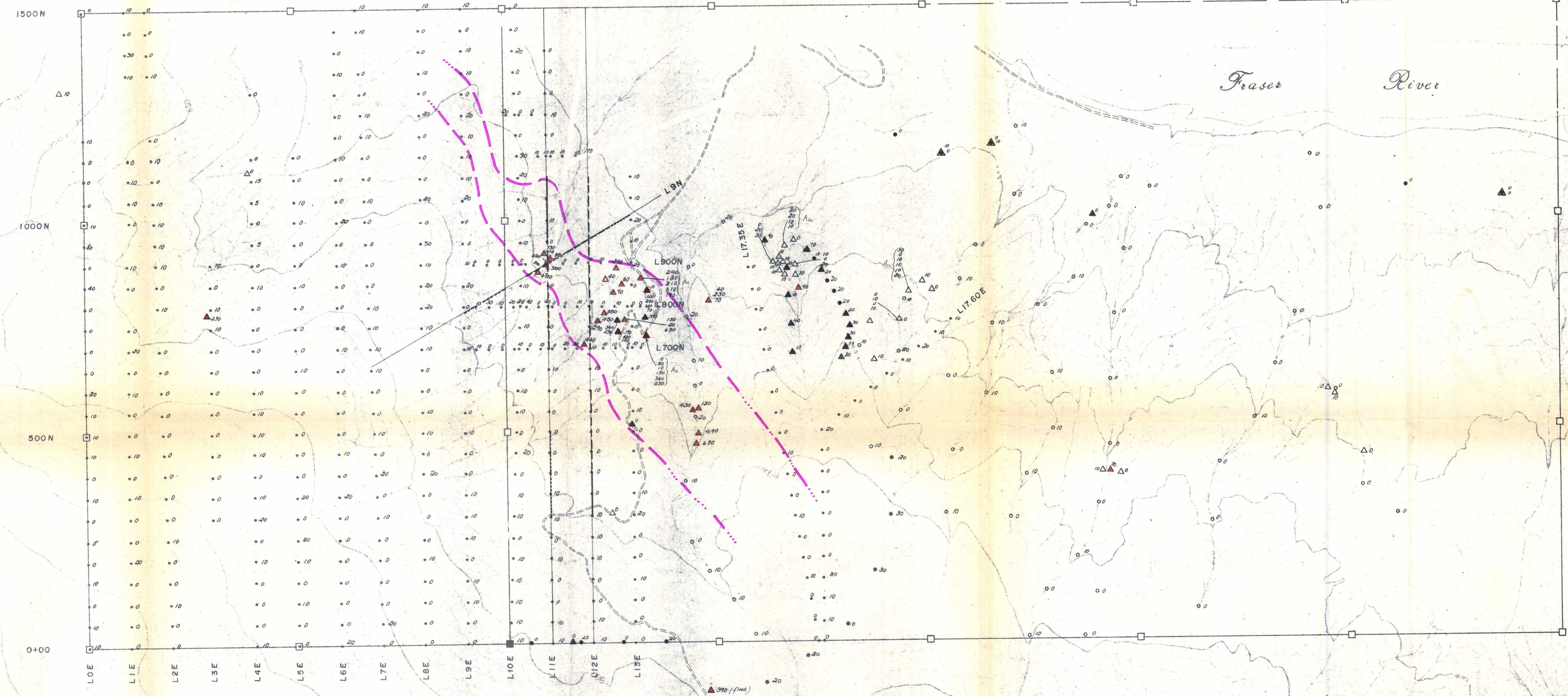
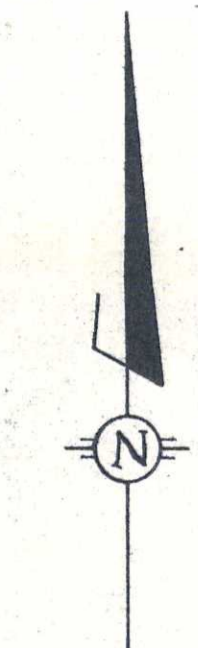


LEGEND

- Purple & green volcanics - andesite, volc. breccia, conglomerate.
- Rhyolite, rhyolitic tuff and/or breccia
- Dacitic tuff and/or breccia
- Quartz veins
- Limit of outcrop
- bedding or bonding
- Fractures
- Fault
- Stream
- Road
- Contact - possible
- Rock sample location
- Shif sample location

KERR ADDISON MINES LTD, VANCOUVER, B.C.	
BIG BAR & BIG BAR TOO CLAIMS	
CLINTON M.D.	
GEOLOGY	
SCALE - 1:5000	DATE - SEPT. 1979
GEOLOGY, GEOCHEM. - H. JONES - P. Eng.	DATA - H. JONES
DRAWN BY - P. HAILLOT	





Geochemical symbols:
● soil sample
○ silt
△ rock

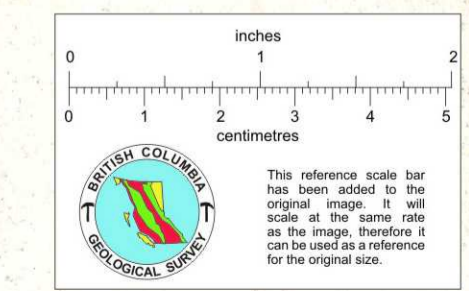
Geophysical line:
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(Frequency effects @ 5 & 0.31 Hz)

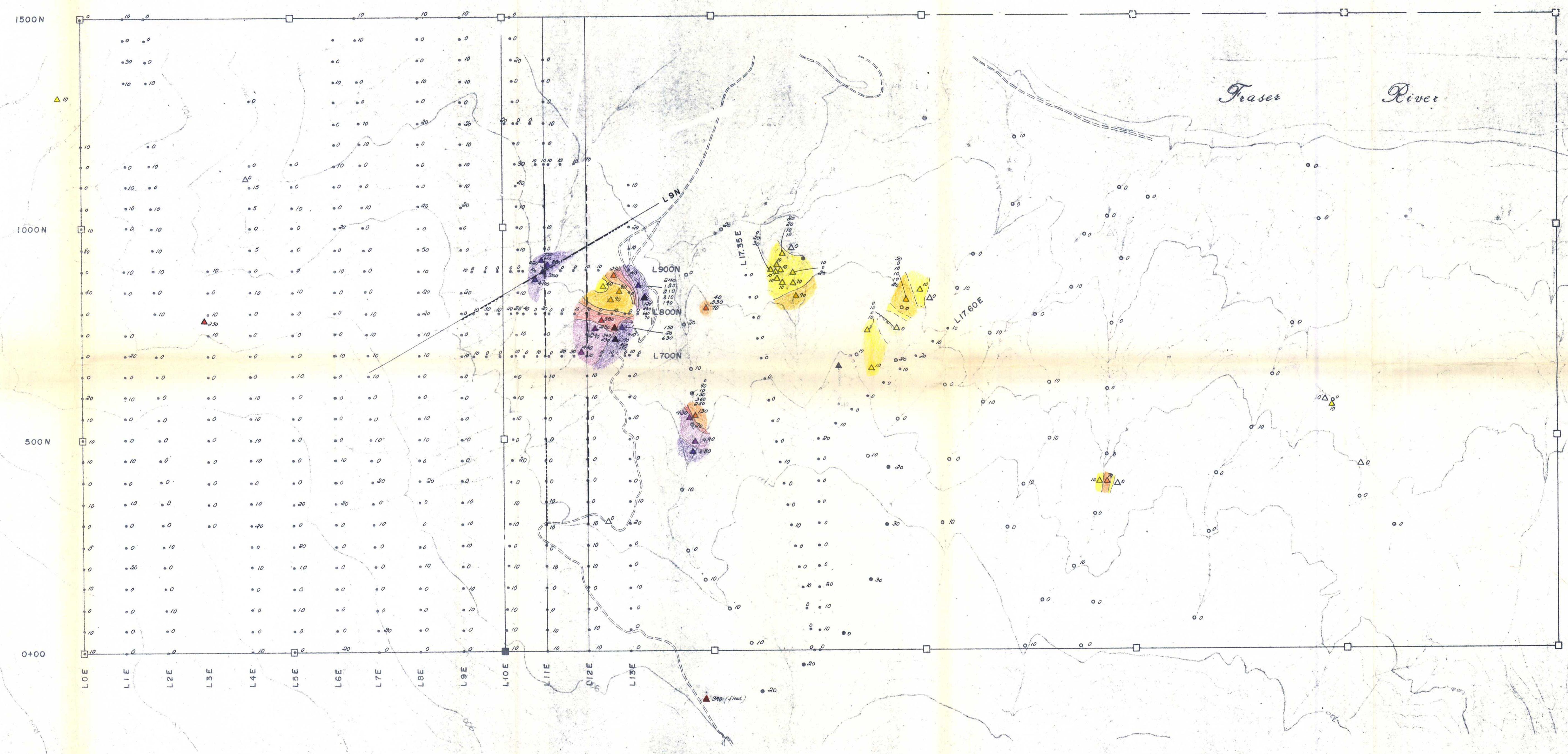
△ H. JONES rock samples
▲ B. PRICE " " " "

--- Limit of I.R. Survey anomalies

KERR ADDISON MINES LTD., VANCOUVER, B.C.
BIG BAR & BIG BAR TOO CLAIMS
GEOCHEMISTRY - Au

SCALE - 1:5,000 DATE - JULY to NOVEMBER, 1979
DRAWN BY - P. HAILLOT DATA - B. PRICE, H. JONES
M.T.S - 92-0-1, YALAKOM RIVER





Rock contours:

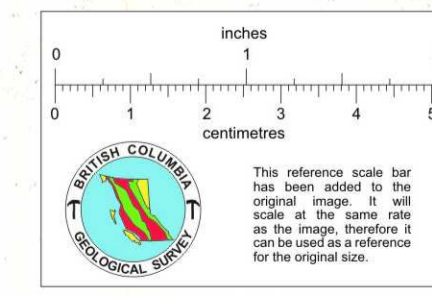
White	0-10 ppb
Yellow	10-50
Orange	50-100
Red-orange	100-200
Red	200-300
Purple	300-400
Dark purple	400-500
Black	500+ ppb

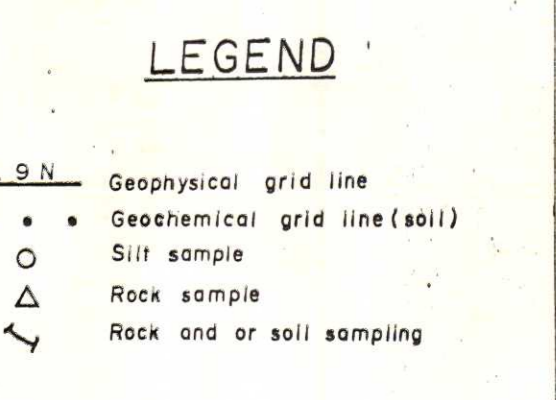
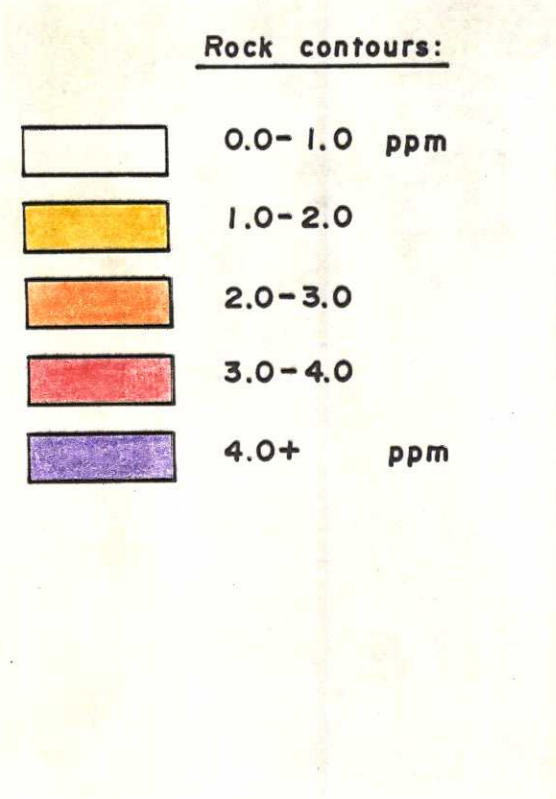
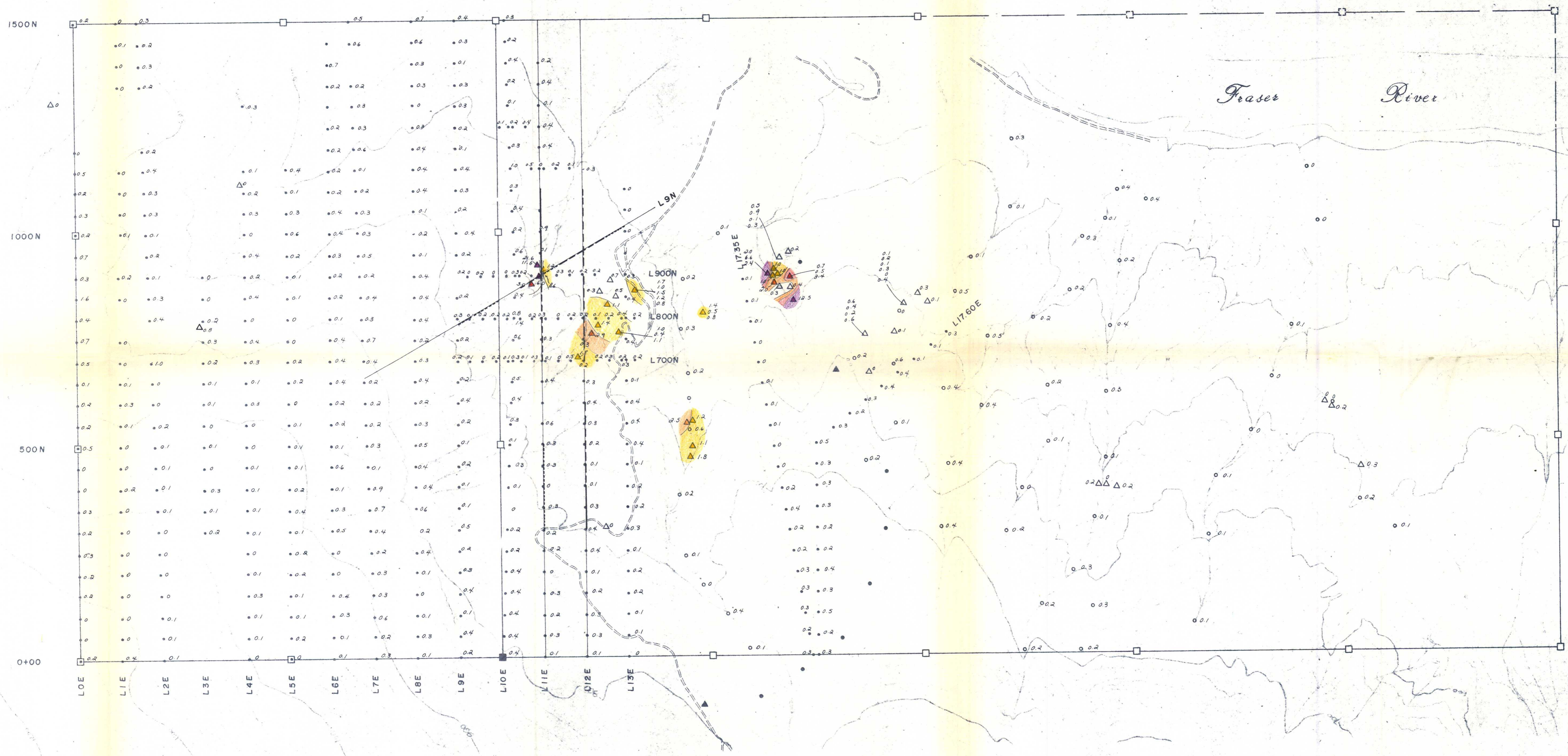
LEGEND

—	Geophysical grid line
•	Geochemical grid line (soil)
○	Silt sample
△	Rock sample
↖	Rock and/or soil sampling

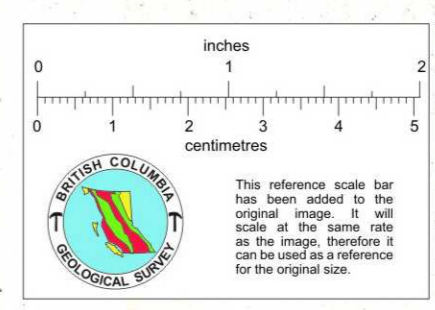
very weak to weak anomaly
(Frequency effects @ 5 & 0.31 Hz)

KERR ADDISON MINES LTD, VANCOUVER, B.C.
BIG BAR & BIG BAR TOO CLAIMS
GEOCHEMISTRY - Au
SCALE - 1 : 5 000
DATE - JULY to NOVEMBER, 1979
DRAWN BY - P. HAILLOT
DATA - B. PRICE, H. JONES
N.T.S. - 92-0-1, YALAKOM RIVER





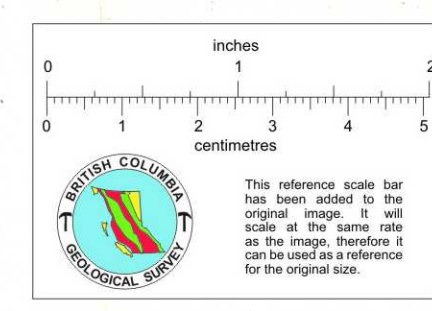
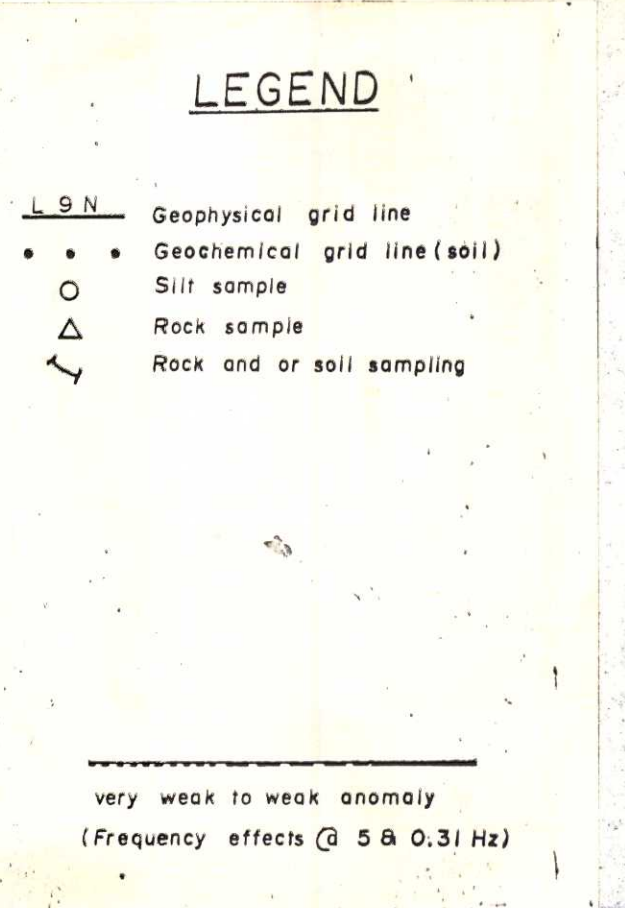
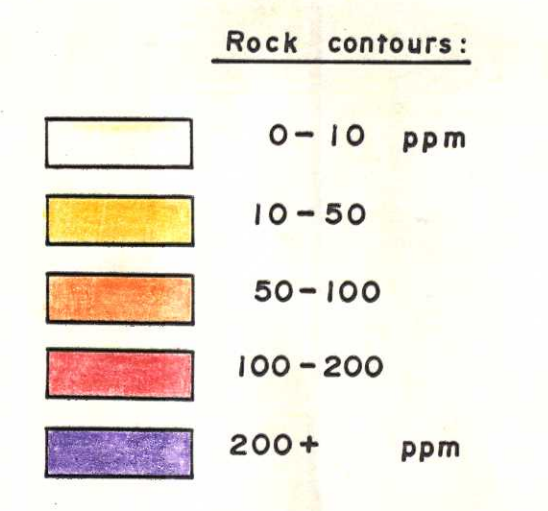
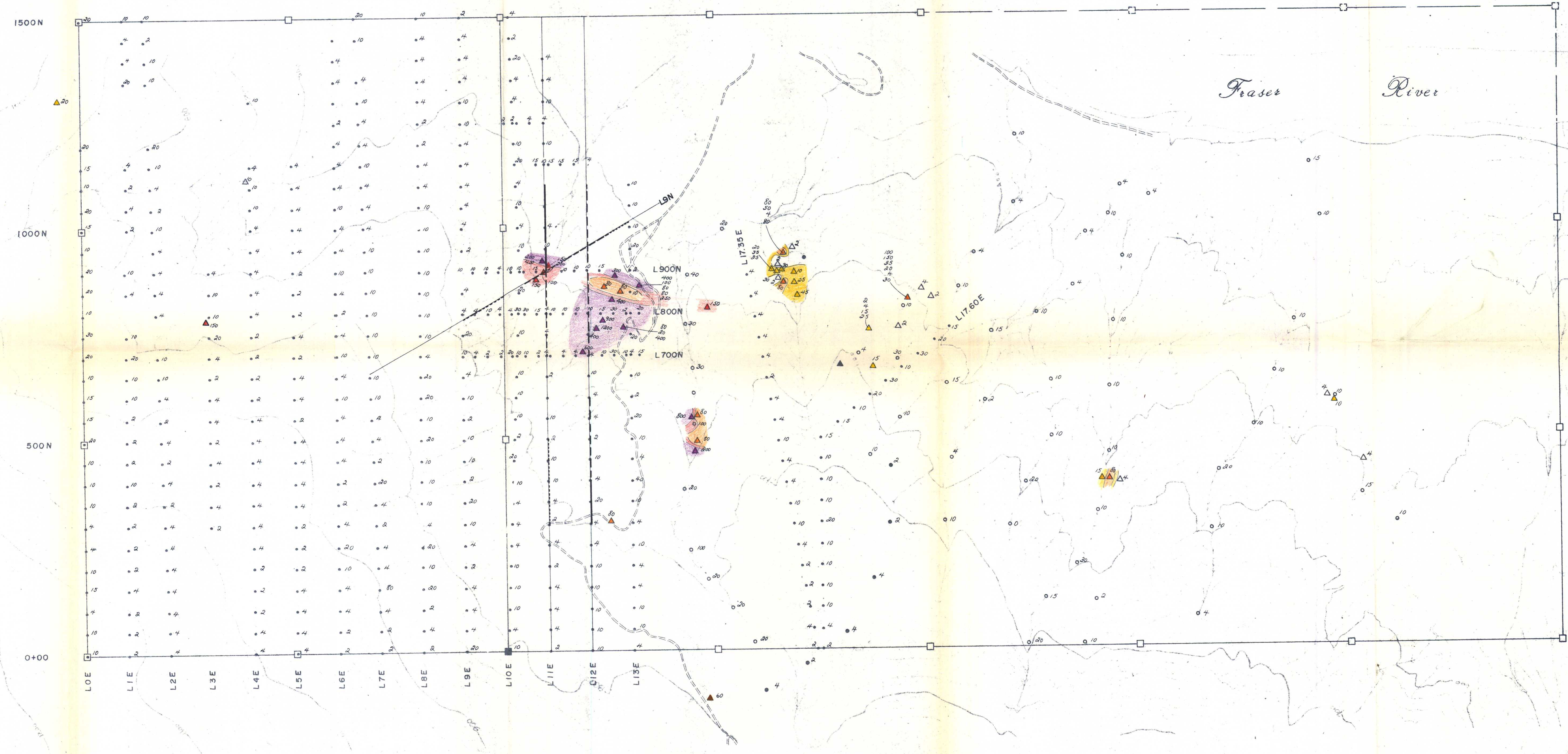
very weak to weak anomaly
(Frequency effects @ 5.0, 0.31 Hz)



KERR ADDISON MINES LTD, VANCOUVER, B.C.
BIG BAR & BIG BAR TOO CLAIMS

GEOCHEMISTRY - Ag

SCALE - 1 : 5 000
DATE - JULY to NOVEMBER, 1979
DRAWN BY - P. HAILLOT
DATA - B. PRICE, H. JONES
M.T.S - 92-0-1, YALAKOM RIVER



KERR ADDISON MINES LTD., VANCOUVER, B.C.
BIG BAR & BIG BAR TOO CLAIMS

GEOCHEMISTRY - As

SCALE - 1:5 000 DATE - JULY to NOVEMBER, 1979
DRAWN BY - P. HAILLOT DATA - B. PRICE, H. JONES
N.T.S - 92-0-1, YALAKOM RIVER