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TRAIL PEAK PROPERTY

**Babine Lake Area
British Columbia**

Introduction

The Trail Peak property includes a typical Babine porphyry copper environment. Copper mineralization is associated with distinctive biotite (hornblende)-feldspar porphyries of Eocene age which are identical to the intrusions at Bell Copper, Granisle and 10 other known porphyry deposits and occurrences in the Babine Lake area.

Previous work, undertaken more than 20 years ago, disclosed widespread copper mineralization over a 1200 x 600 metre area in the central part of the present claim. Limited drilling returned values averaging 0.36 - 0.45% copper over significant hole lengths. Recent re-sampling of intervals containing better copper grades in old drill cores yielded average gold grades of 0.18 - 0.21 g/t.

Some anomalous gold values have also been obtained from soils and rocks in the central property area. An untested area to the east with anomalous copper values in soils also yielded anomalous gold values.

Location and Access

Trail Peak is situated 90 km northeast of Smithers in west-central British Columbia (Figure 1). Access is by helicopter from Smithers.

The property is 45 km north of Bell Copper mine (Figure 2) and about 10-20 km from the end of present logging roads which access Morrison Lake to the south and Nilkitkwa River valley to the north. Trail Peak is immediately north of the historic Hudson's Bay trail linking Hazelton with the Omineca gold fields and this route has been used more recently to bring bulldozers into the area from Fort Babine.

Mineral Property

The Trail Peak property consists of one Modified Grid (4-post) mineral claim of 16 units in the Omineca Mining Division and recorded in the name of the writer. The claims are shown on Figure 3 and details are as follows:

<u>Claim Name</u>	<u>Units</u>	<u>Record Number</u>	<u>Date of Record</u>
TRAIL	16	240188	October 16, 1988

Previous Work

Several hand trenches 2 km southeast of Trail Peak expose a polymetallic vein and are evidence of work prior to the investigation of porphyry copper potential by Texas Gulf Sulphur Company between 1968 and 1975. Work by this company included geological mapping, geophysical surveys, soil and rock geochemistry, bulldozer trenching and 1080 metres of diamond drilling in 12 holes (Assessment Reports 1672, 5706).

Work since the location of the present claim has included geological mapping and rock sampling (Assessment Report 19557) and re-sampling of old drill cores (assessment report in preparation).

Regional Geological Setting

The northern Babine Lake area, near the northern margin of the Interior Plateau, features relatively gentle topography, extensive overburden cover and consequent limited bedrock exposure.

The region is within the Intermontane tectonic belt and is underlain principally by Mesozoic volcanic and sedimentary rocks of the Jurassic Hazelton Group. Younger sequences include sedimentary and lesser volcanic rocks of the Bowser Lake Assemblage and Skeena and Sustut Groups which range in age from late Jurassic to early Tertiary. The layered sequences are intruded by granitic rocks of several ages including Lower Jurassic Topley intrusions, Omineca intrusions of early Cretaceous age, late Cretaceous rhyolite and granodiorite porphyries (Bulkley intrusions) and Babine intrusions of early Tertiary (Eocene) age.

Porphyry copper mineralization in the Babine Lake area is well documented and is associated with three ages of intrusive activity (Figure 2). The most significant are the Eocene Babine intrusions which occur as small stocks and dyke

swarms and host more than a dozen known porphyry copper deposits and occurrences including the former Granisle mine and the currently producing Bell Copper mine (1991 production - 25,557 tonnes copper, 116,000 oz. silver and 31,000 oz. gold; limited reserves in the present open pit grade 0.70% copper and 0.01 oz/ton gold).

Property Geology, Geochemistry and Mineralization

Trail Peak is an isolated topographic high rising some 600 metres above an area of gentle relief north of Babine Lake. Much of the northern half of the claim is above tree line which extends to 1450 metres. Bedrock is reasonably well exposed over much of the claim area and 20 year old bulldozer trenches afford good exposures.

The claim is underlain principally by dark grey cherty siltstones which are variably iron-stained due to finely disseminated pyrite. Volcanic tuffs are interbedded with siltstones at the base of Trail Peak (Figure 4). The layered rocks are contained in a northwest trending synform transected by northwest and east-northeast faults which localized the intrusion of small diorite-granodiorite plugs of Cretaceous (104 Ma) age.

The layered rocks have been converted to biotite hornfels marginal to the diorite-granodiorite plugs and both are intruded by predominantly northwest striking dykes of biotite (hornblende)-feldspar porphyry of Eocene (49 Ma) age. These are typical Babine multiphase intrusions and an area of trachytic textured hornblende-feldspar porphyry with crude columnar jointing in the southeast claim area is a late phase, extrusive equivalent of the intrusions.

Both the diorite-granodiorite plugs and porphyry dykes are offset by later movements along faults, particularly the east-northeast fault in the central part of the claim (Figure 4). Copper mineralization, mainly as disseminations of chalcopyrite and lesser bornite on fractures and in quartz veinlets, occurs principally within and marginal to biotite (hornblende)-feldspar porphyries in close proximity to this fault which is marked by abundant tourmaline in quartz stringers and irregular clots. Potassic alteration, as secondary biotite, some K-feldspar and sericite, is coincident with the copper mineralization and a pyrite halo extends outward some 600 - 1200 metres.

Results of a 1968 soil sampling program are shown on

Figure 5. 679 samples, collected at 200 - 400 ft. intervals, were analyzed for total copper and subsequent statistical analysis indicated a background of 35 ppm or less, thresholds in the 35 - 50 ppm range and anomalous values of +50 ppm. Three principal areas with anomalous copper values of up to 1300 ppm were identified marginal to the east-northeast fault. Scattered anomalous values were occur north and south of the main anomalies.

Notwithstanding the variations in the overburden which is transported glacial drift rather than true soils, "soil" geochemistry appears to work reasonably well on the Trail claim in contrast to most other areas in the general Babine Lake area. No doubt this is due to the relatively thin overburden cover.

The western and central anomalous areas were subsequently investigated by bulldozer trenching and limited diamond drilling. Inclined holes drilled in 1969 were 60 - 75 metres in length and most were drilled in the western or main trench area (Figure 6). Original drill logs for holes 3 and 4 indicated intervals of 24 and 37 metres respectively grading 0.35% copper and included sections in excess of 0.50%. Re-sampling of both these holes in 1992 confirmed the copper grades and indicated the presence of consistent gold values as follows:

<u>Hole Number</u>	<u>Interval(ft.)</u>	<u>Cu(ppm)</u>	<u>Au(ppb)</u>
69-3	12-20	3709	173
"	20-30	4054	170
"	30-40	3703	170
"	40-50	7067	333
"	50-60	3752	188
"	60-70	2261	119
"	70-80	1615	111
"	80-90	2554	180
	78' 48' (12 - 90 ft. - 0.36% Cu, 0.181 g/t Au)		
	(12 - 60 ft. - 0.45% Cu, 0.207 g/t Au)		
69-4	70-90	5046	241
"	90-110	4113	233
"	110-130	2220	122
"	130-150	3276	122
"	150-170	4044	179
	100ft. (70 - 170 ft. - 0.37% Cu, 0.179 g/t Au)		

Hole 69-2 yielded copper grades of between 0.15 and 0.40% and gold grades of 0.06 - 0.27 g/t directly related to copper contents. A 340 metre 1975 hole (11-75), drilled between holes 69-3 and -4, returned copper grades ranging from 0.10 to 0.21% and some 0.10 g/t gold values. This hole, drilled at a steeper (-70) inclination than the 1969 holes, encountered numerous younger, weakly mineralized porphyry phases.

Multiple phases of BFP intrusions were noted in most holes examined - this is a diagnostic feature of the major deposits in the Babine district including Bell Copper and Granisle.

Rock chip sampling at 300 metre centres, undertaken over most of the property in 1973, indicated a central copper zone (including the two trenched areas) with locally anomalous Mo values flanked by higher lead, zinc and silver values, typical of a porphyry environment.

Limited rock sampling in the trenched areas was undertaken in 1988 and 1989 principally to determine if gold was present in the porphyry system. Some of the better copper and gold results for the western or main trench area are shown on Figure 6. Copper ranges up to 1350 ppm; gold values are up to 150 ppb.

Better gold values were obtained from within and near the eastern trench area (Figure 5). Two rock samples from the northern trench returned values of 1910 and 3606 ppm copper and 698 and 1160 ppb gold. A sample from a bedrock exposure in the creek 150 metres north of the trench yielded 1663 ppm copper and 52 ppb gold and a soil sample collected between the trench and the creek returned values of 4100 ppm copper and 1075 ppb gold (subsequent re-analysis showed 2000 ppb gold).

A 400 x 250 metre area with anomalous (+50 ppm) copper values in soils, partially defined by Texas Gulf some 500 metres northeast of the eastern trench area (Figure 5), was not followed up. Limited 1992 work re-established the northern part of this anomaly. A northwesterly trending zone of unknown dimensions contains +100 ppm copper and appears to be flanked on the east and west by +10 ppb gold values.

Exploration Potential

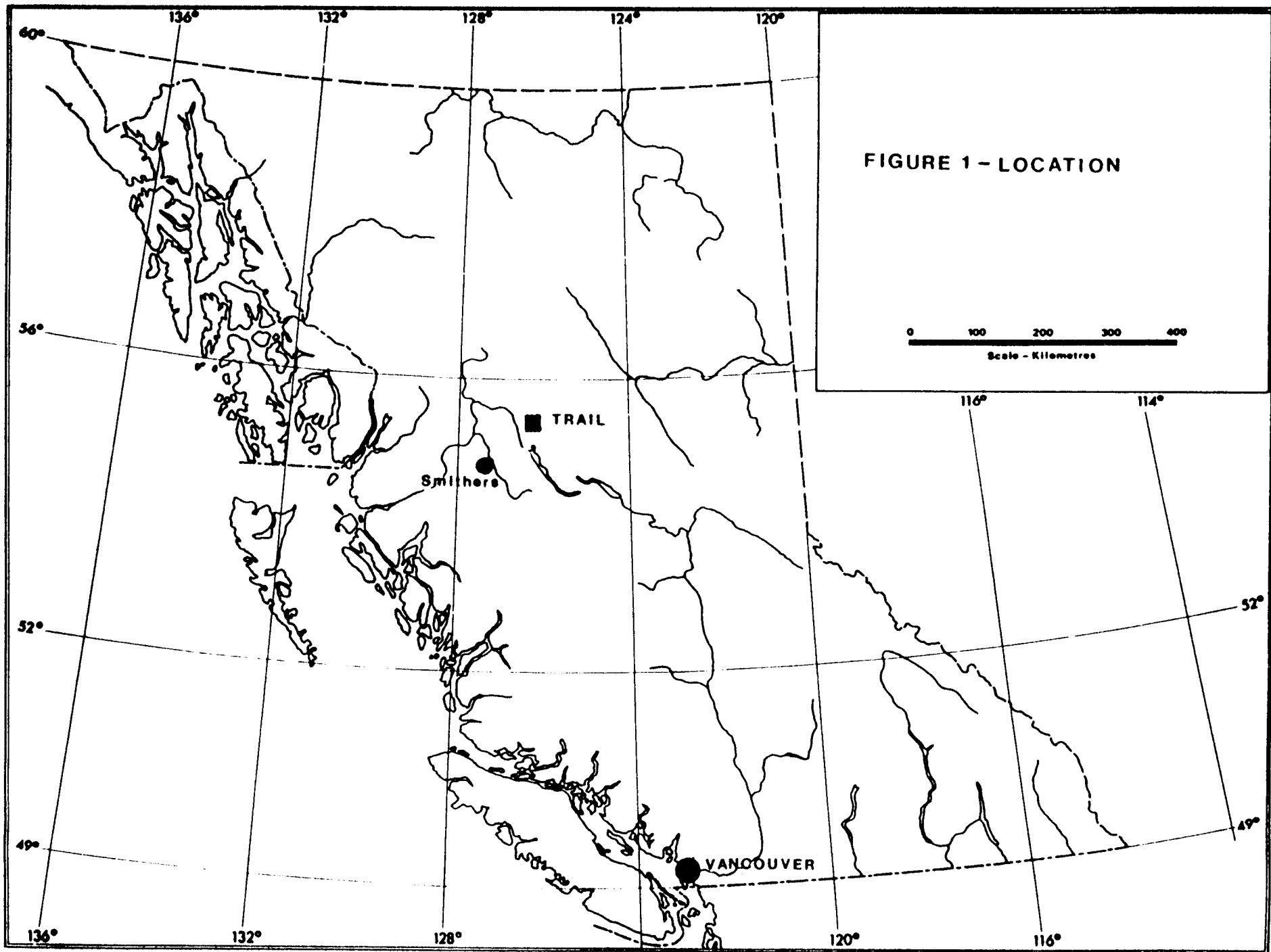
Previous work on the Trail Peak property has indicated the presence of porphyry copper mineralization in a geological setting typical of the Babine Lake district. Principal host rocks are crowded biotite (hornblende)-feldspar porphyries of Eocene age which range in composition from quartz diorite to granodiorite. Multiple intrusion is evident and secondary biotite is widespread within a central potassic alteration zone which grades outward to a quartz-sericite-pyrite zone best developed in the sediments underlying Trail Peak. A 10 cm wide quartz vein near the periphery of the alteration zone 1 km southeast of the main trenches contains sphalerite, tetrahedrite and galena. Similar polymetallic veins are known peripheral to the Granisle and Bell Copper deposits.

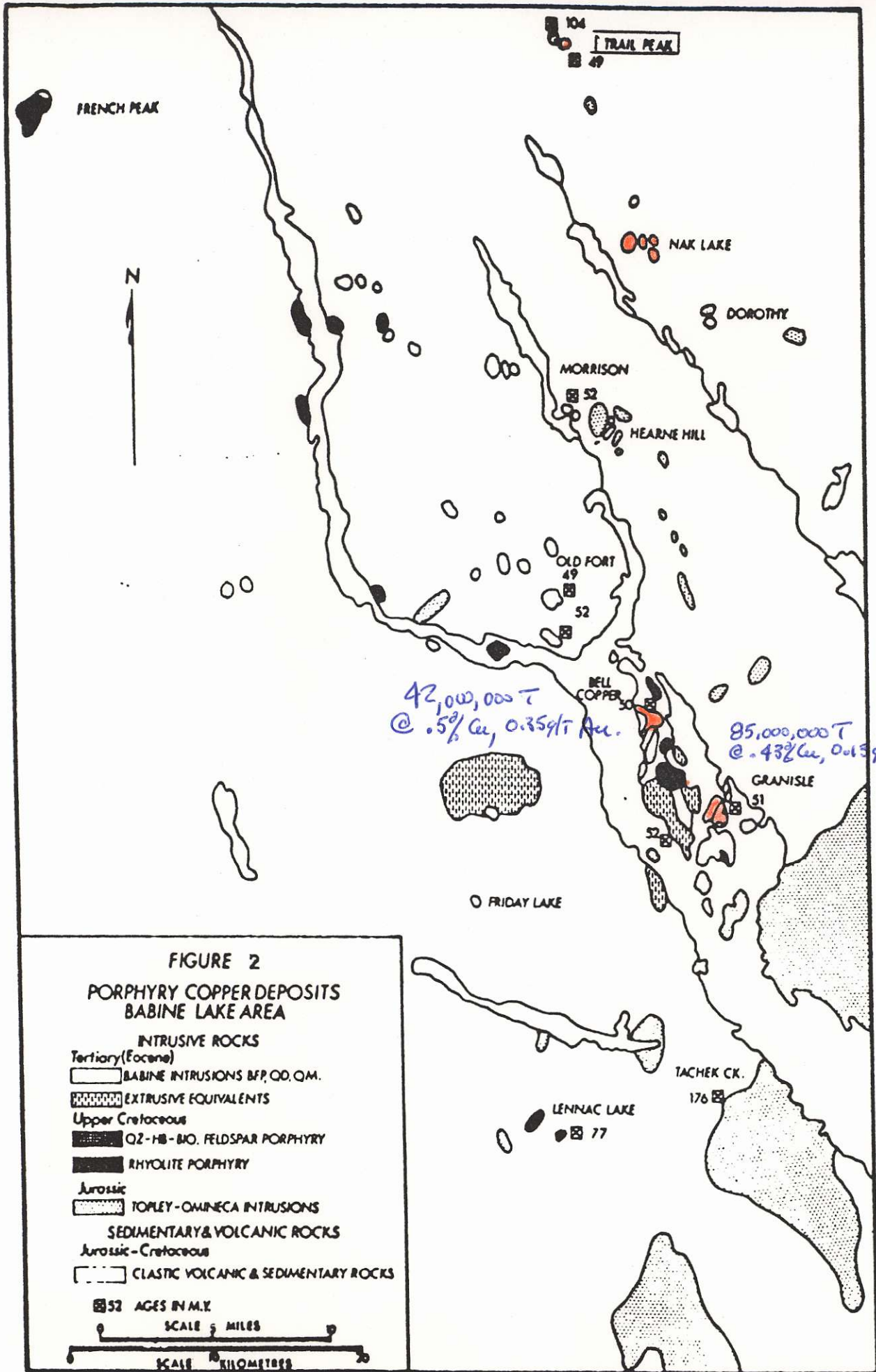
Recent rock and soil sampling and re-sampling of old drill core indicate that the Trail Peak porphyry copper system is gold-bearing. Drill core samples yielded gold values similar to those present at the Bell and Morrison deposits and much higher than recovered values at Granisle.

Available information suggests that copper-gold mineralization in the western trench area may be limited in size with possible extensions within an untested area to the east. The best untested target appears to be in the central and eastern property area immediately north of an intrusive-extrusive porphyry complex which is flanked on the south by polymetallic vein mineralization.

References

- BCMEMPR - Geology Exploration and Mining in British Columbia 1969, pp.110-112
- Bulletin 64, 1981, pp.68-74
- Assessment Reports 1672
5706
19557





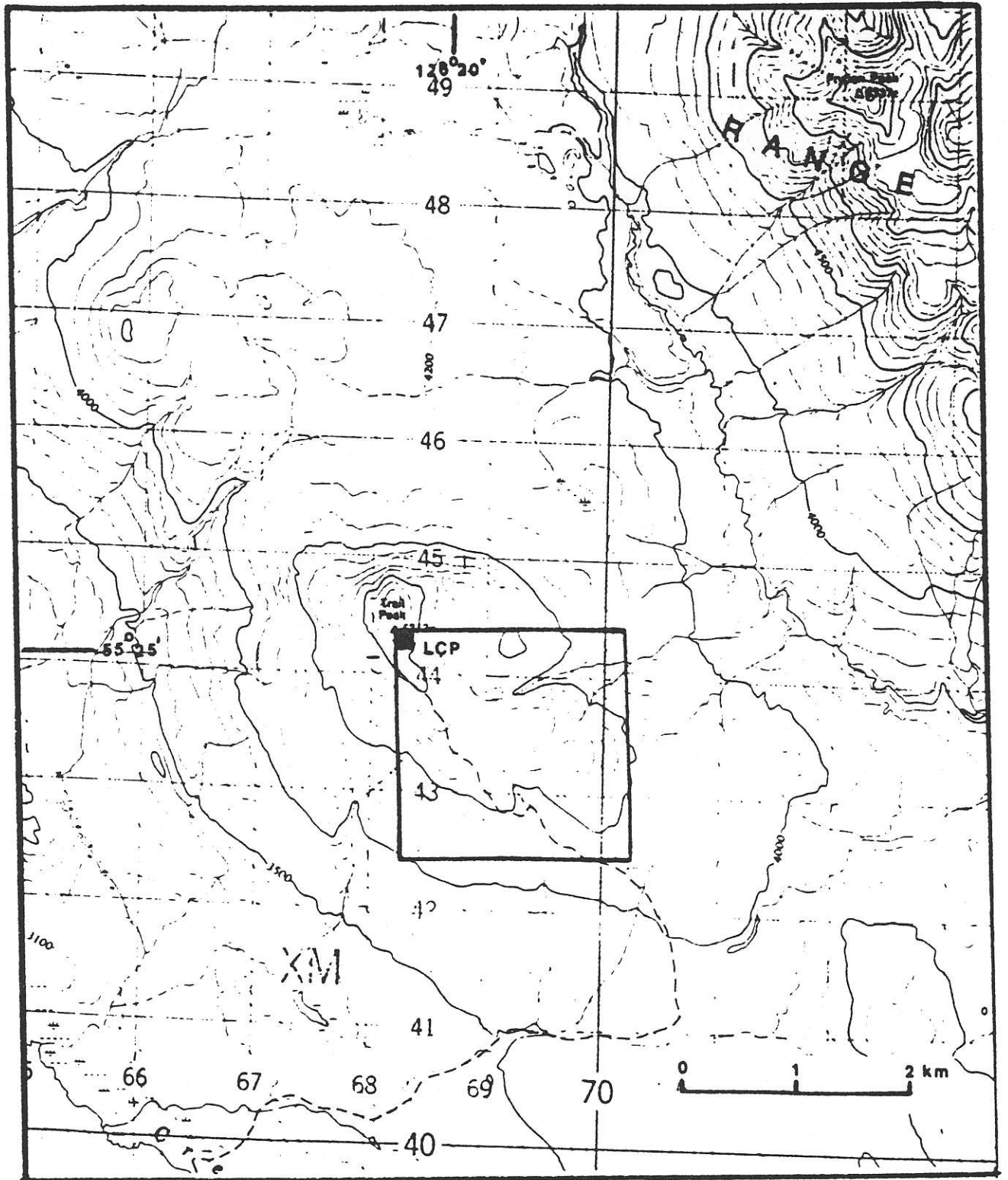


FIGURE 3 - TRAIL MINERAL CLAIM

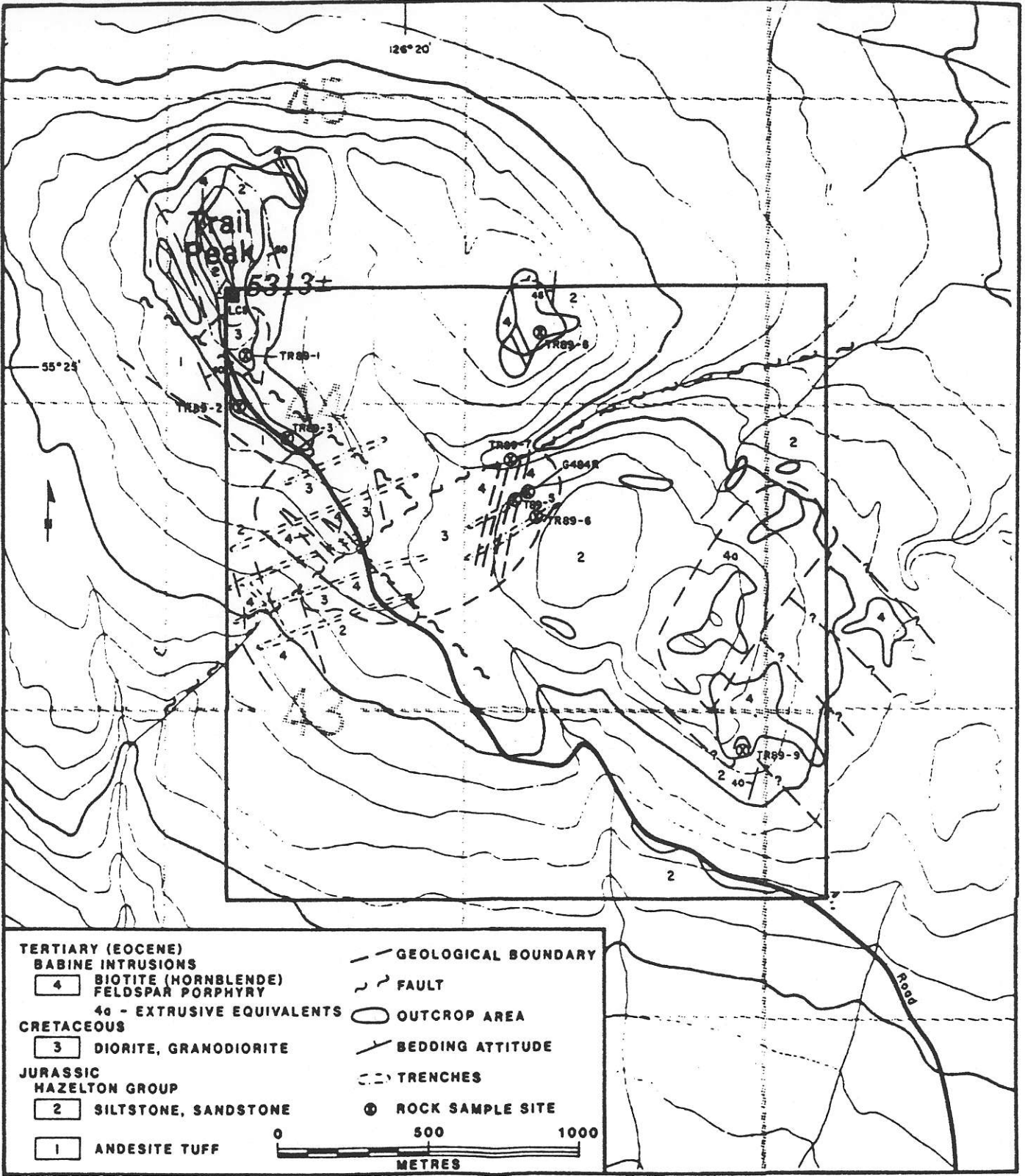
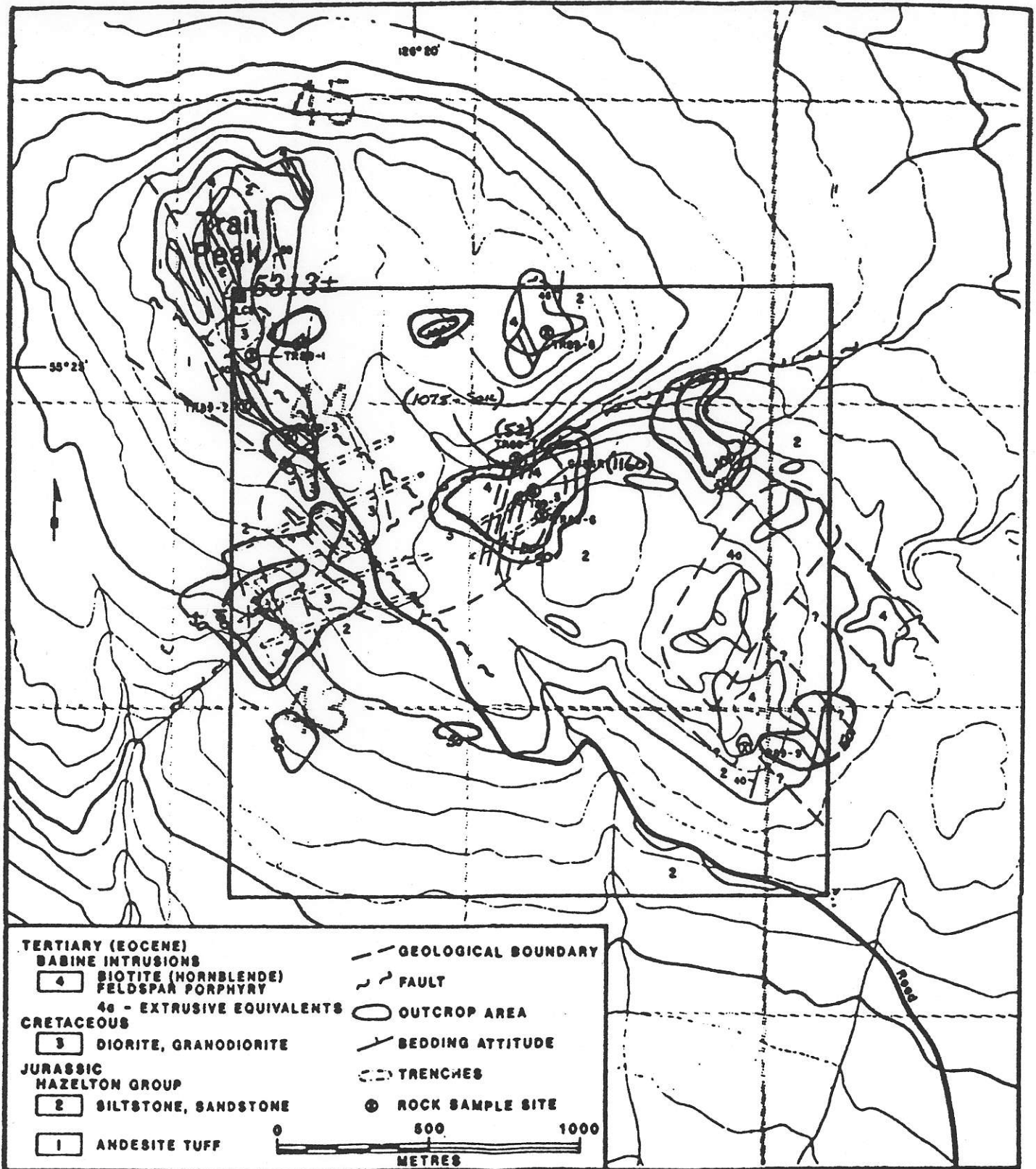


FIGURE 4 - TRAIL CLAIM - GEOLOGY



**FIGURE 5 - TRAIL CLAIM -
GEOCHEMISTRY**

50 Soil - ppm Cu
 (1160) Rock - ppb Au

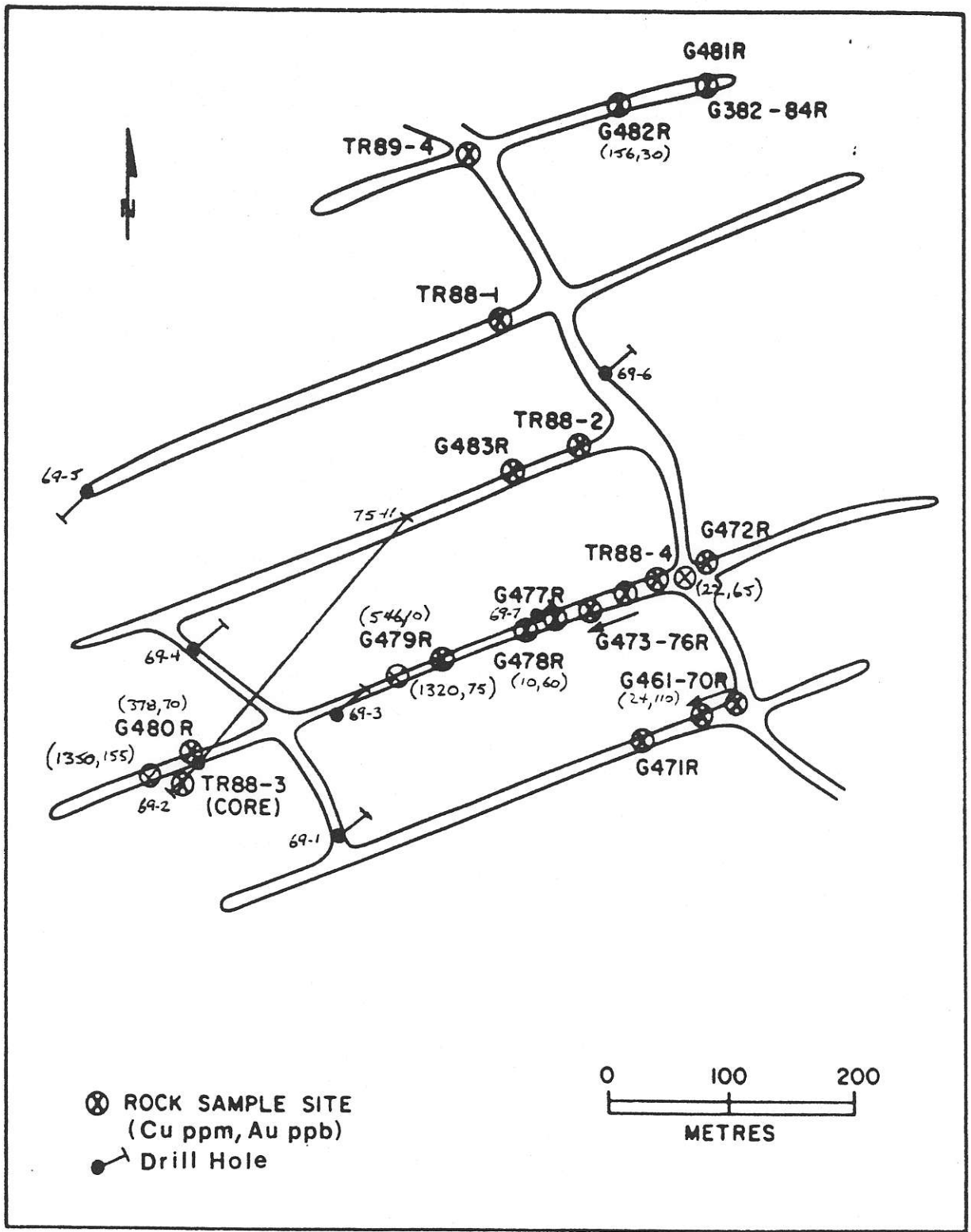


FIGURE 6 - TRAIL CLAIM - MAIN TRENCH AREA

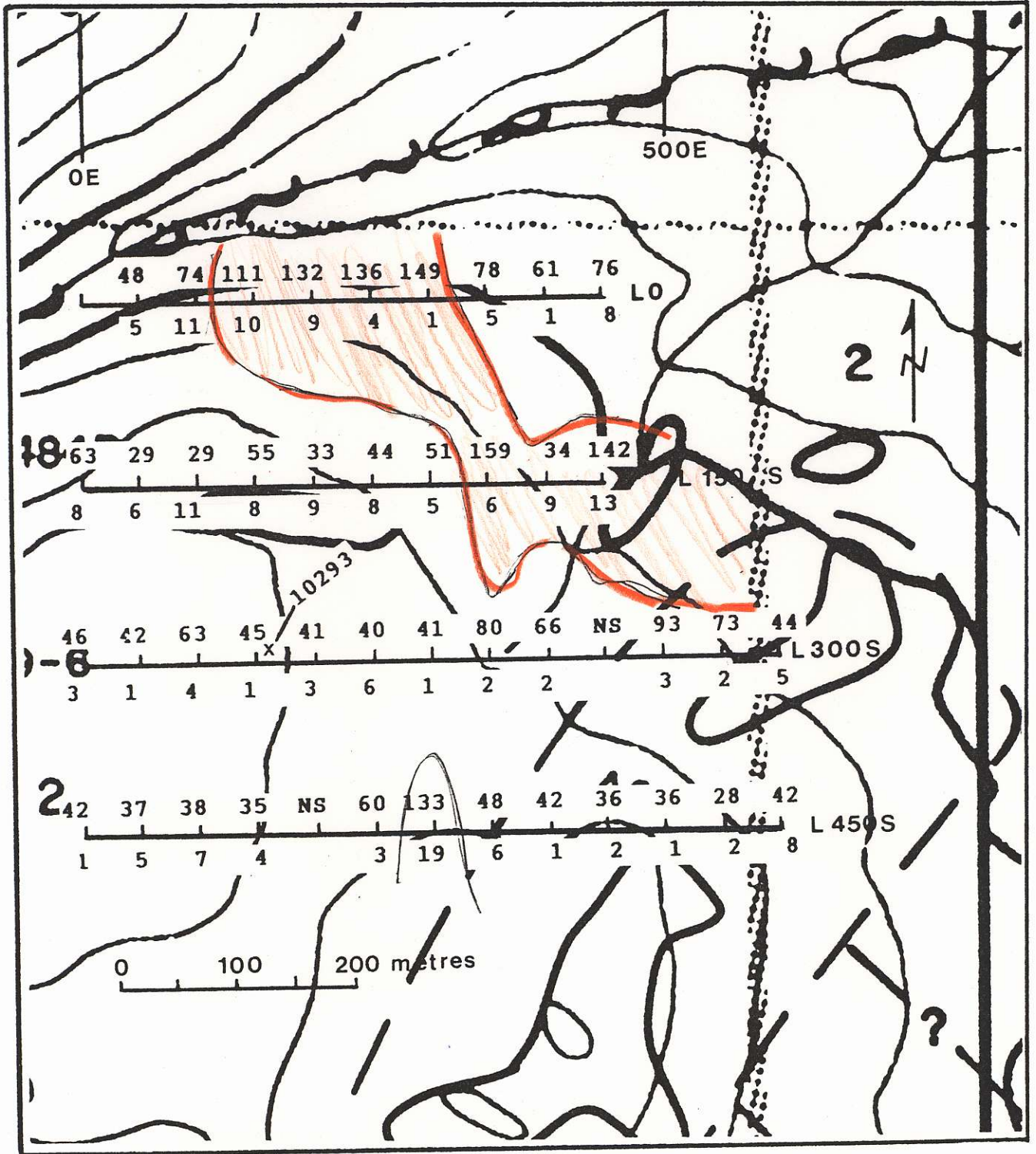
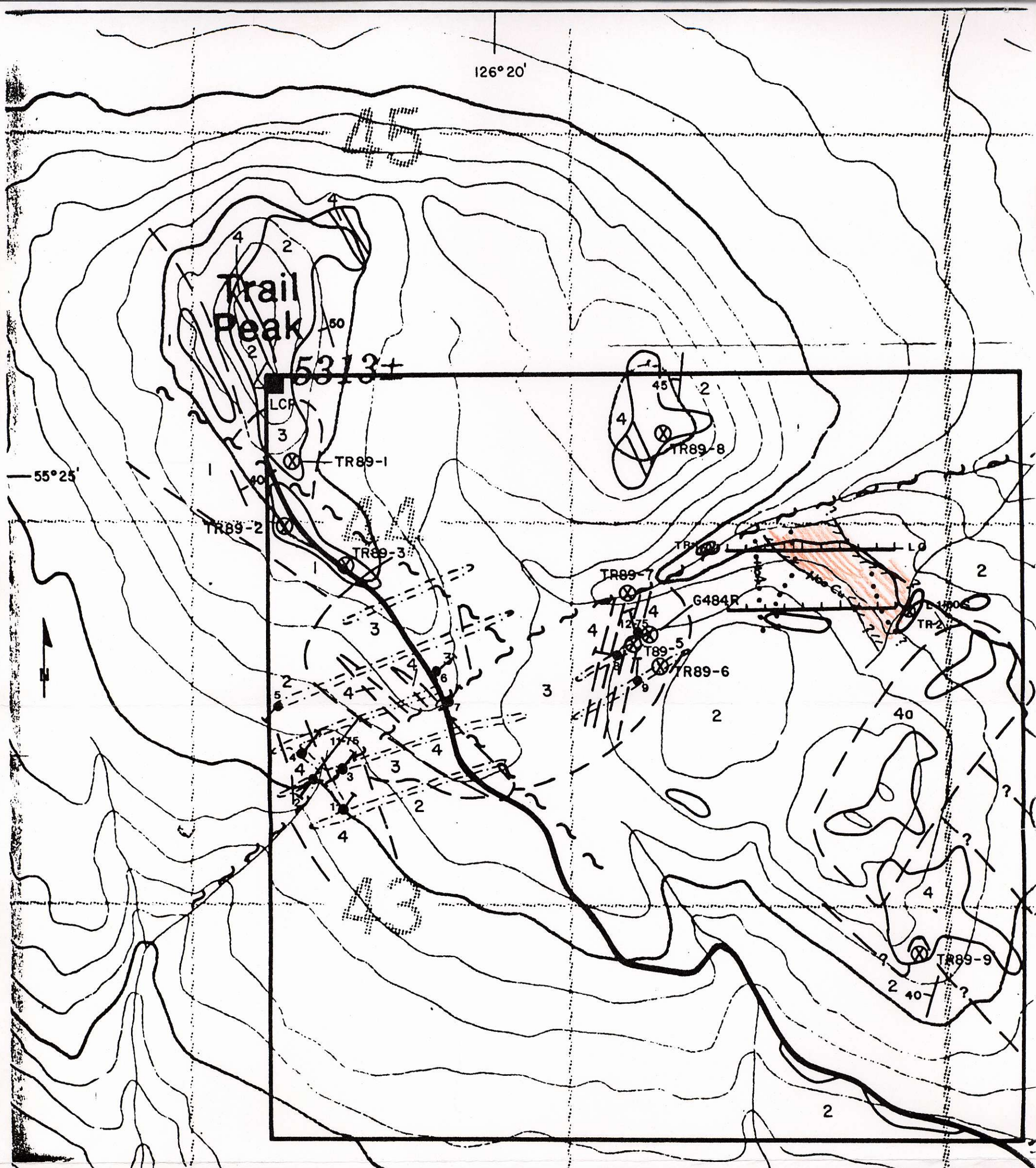


FIGURE 6 - SOIL GEOCHEMISTRY

133	Cu (ppm)
19	Au (ppb)



TERTIARY (EOCENE)	--- GEOLOGICAL BOUNDARY
BABINE INTRUSIONS	- - - FAULT
4 BIOTITE (HORNBLENDE) FELDSPAR PORPHYRY	○ OUTCROP AREA
4a - EXTRUSIVE EQUIVALENTS	— / — BEDDING ATTITUDE
CRETACEOUS	- - - TRENCHES
3 DIORITE, GRANODIORITE	⊙ DD Hole
JURASSIC	⊗ ROCK SAMPLE SITE
HAZELTON GROUP	
2 SILTSTONE, SANDSTONE	
1 ANDESITE TUFF	

0 500 1000
METRES

FIGURE A - TRAIL CLAIM - GEOLOGY