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ASSESSMENT REPORT

ROCK GEOCHEMISTRY REPORT

TAR MINERAL CLAIM

WHITESAIL RANGE, (93E/11E)

53° 33' 127° 05.5'

for

Alpine Exploration Corporation
*900, 474 Howe Street,
Vancouver, B.C.

by

T.A. Richards, PhD
Pat Suratt and Rob Reding
Box 4186, Smithers, B.C.
1991

GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,720

TABLE OF CONTENTS

Location and Access	1
Claims and Ownership	1
Previous Work	1
Present Work	5
Regional Geological Setting	5
Geology of the TAR Mineral Claim	6
Mineralization and Alteration	6
Discussion of Results and Conclusions	10
References	10
Statement of Author's Qualifications	13
Statement of Expenses	18

LIST OF FIGURES

1. Location Map	2
2. Regional Location and Access Map	3
3. TAR Mineral Claim	4
4. Geologic Setting and Mineral Deposits of west-central B.C.	6
5. General Geologic Elements of the Whitesail Range	7
6. Geology of the TAR Mineral Claim	9
7. Sample Location Map	11
8. Gold-Silver Values	12

LIST OF TABLES

1. Assay Certificates	14 & 15
2. Rock Sample Descriptions	16

LOCATION AND ACCESS

The TAR 1 mineral claim is located in west-central British Columbia (figure 1), at north latitude 53° 33' and west longitude 127° 05.5' on NTS map sheet 93E/11E (Troitsa Lake, 1:50,000 scale) in the Whitesail Lake map sheet 93E. The claims are centered 5 kilometers south-southwest of Troitsa Peak in the Whitesail Range, 130 kilometers due south of the town of Smithers and 12 kilometers south of the north shore of Tahtsa Reach of the Kemano Power Reservoir.

Access onto the claims is by helicopter from Smithers or from the end of access and logging roads that terminate along the north shore of Tahtsa Reach (figure 2). These roads are open from snow by late spring to mid-late fall.

The claims are at tree-line between 1500 and 1800 meters in elevation.

CLAIMS AND OWNERSHIP

The claim consists of 16 units (4x4), of Record Number 8559. It expires on July 27, 1992, see figure 3. The claim is part of the Cummins Group (52 units), comprising the TAR, Jessie (4571) and the Cummins South (4569) mineral claims.

The claim is owned 100% by Alpine Exploration Corp. of suite 900, 425 Howe Street, Vancouver, B.C.

PREVIOUS WORK

Evidence of precious metal mineralization on the Whitesail Range is indicated by an unspecified occurrence along the south flank on the range in a geologic report by Duffell (1959).

Mineralization on the claim was discovered in 1981 by prospector Pat Suratt with the discovery of a quartz boulder, containing 1.3 opt Au and 298opt Ag in Cummins Creek. Subsequent work (1982-Union Carbide Corp., 1983-Canamax, 1986-87 -Alpine Exploration Corp.) located further quartz veins, to 1.5 meters that contained pockets of fine-grained sulphides (argentite, pyragyrite, chalcocopyrite, pyrite and galena in Cummins Creek. In 1986, numerous quartz boulders were mapped and sampled on the Cummins Group. The claims were mapped by Ms. H. Jamieson for Union Carbide in 1982. Other than mapping, no exploration has been done on the claim since 1982.

TROITSA PEAK PROPERTY LOCATION MAP

FIGURE 1



BRITISH COLUMBIA

TROITSA
PEAK PROPERTY

FIGURE 2

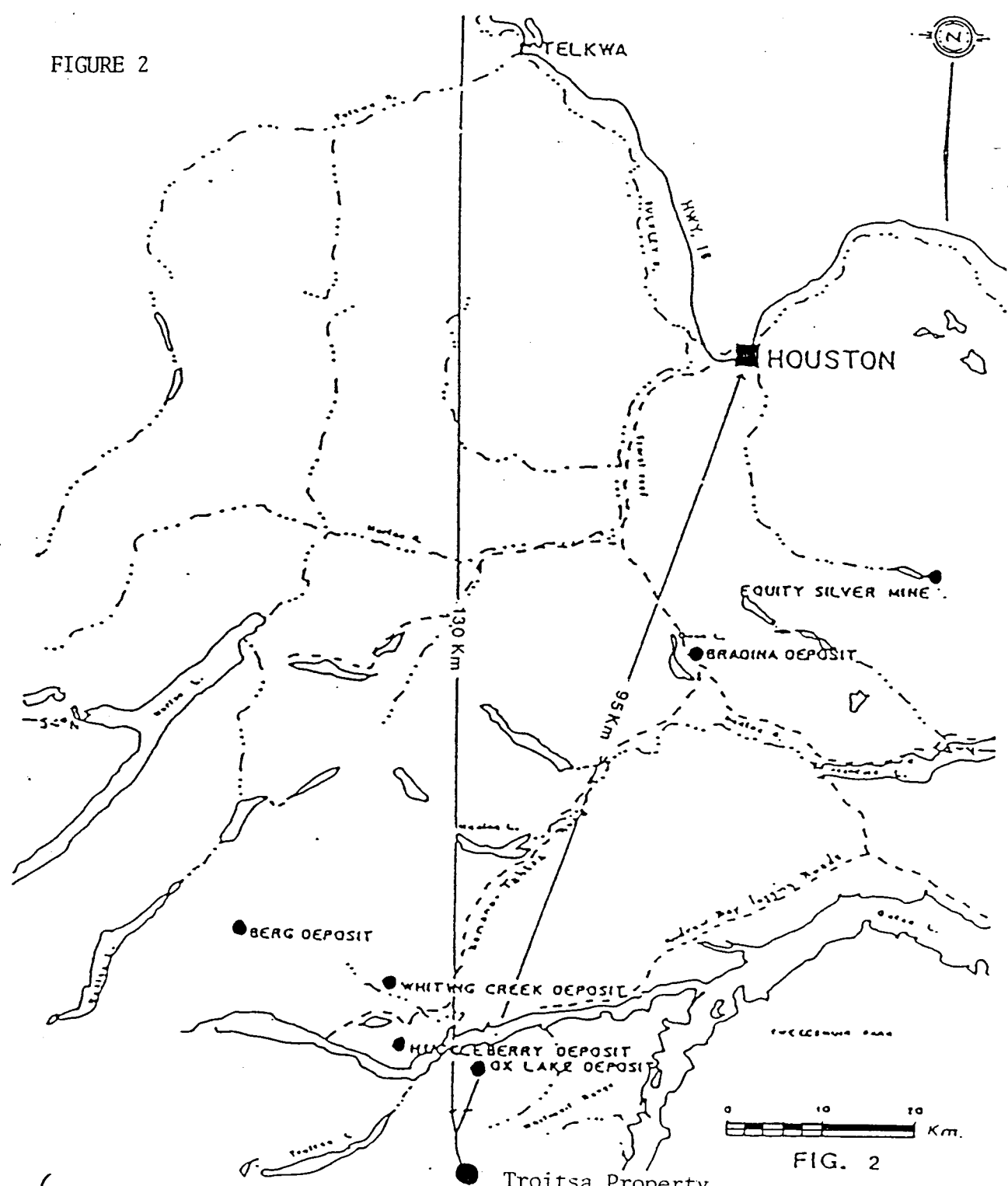


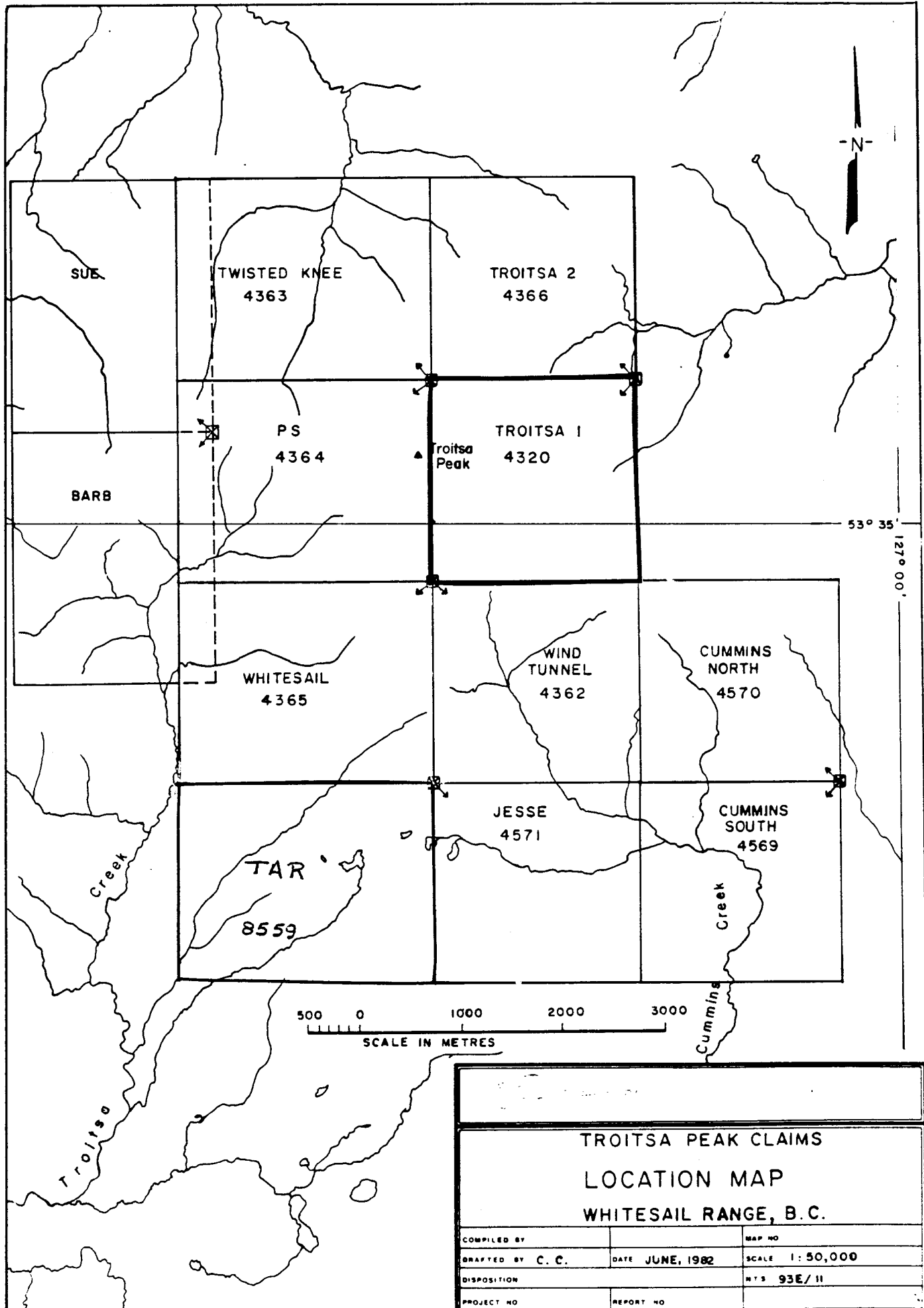
FIG. 2

ALPINE EXPLORATION CORPORATION

Location of the Troitsa Peak Property,
West-Central British Columbia

CENTRAL B.C.
LOCATION MAP

FIG.		N.T.S. 93E / 11
2	Colin Harivel	DATE: FEB. 17, 1988



<p>TROITSA PEAK CLAIMS LOCATION MAP WHITESAIL RANGE, B.C.</p>		
COMPILED BY		MAP NO
DRAFTED BY C. C.	DATE JUNE, 1982	SCALE 1: 50,000
DISPOSITION		N.T.S 93E/ 11
PROJECT NO	REPORT NO	

PRESENT WORK

The work program was designed to take rock samples of quartz veins, stockworks, altered rock and fresh rock to determine the geochemical signature of the mineralized system. 37 rock samples were taken for analysis and 5 gold-pan concentrates from creeks where water was available.

Prospectors Pat Suratt and Rob Reding spent four days each (July 18th to July 21st) collecting samples of the appropriate rocks for analysis. Snow in gulleys hindered complete sampling of appropriate structures.

REGIONAL GEOLOGIC SETTING

The claims lie in the west-central part of the Intermontane belt of the Canadian Cordillera. Strata there comprise Upper Triassic to Middle Jurassic island arc volcanics (Stuhinni and Hazelton Group), Middle and Upper Jurassic fine grained clastics (Ashman Formation of the Bowser Lake Group), Lower Cretaceous fine-grained fluvial and littoral clastics (Skeena Group), and Upper Cretaceous to Eocene continental caldera-related volcanics of the Kasaska Group and the Ootsa Lake Group. Small Stocks and plugs related to the Kasaska and Ootsa Lake Groups are widespread through out the area.

The Ootsa Lake Group volcanics have been dated at 49 Ma, and are the host to the anomalous precious metal mineralization.

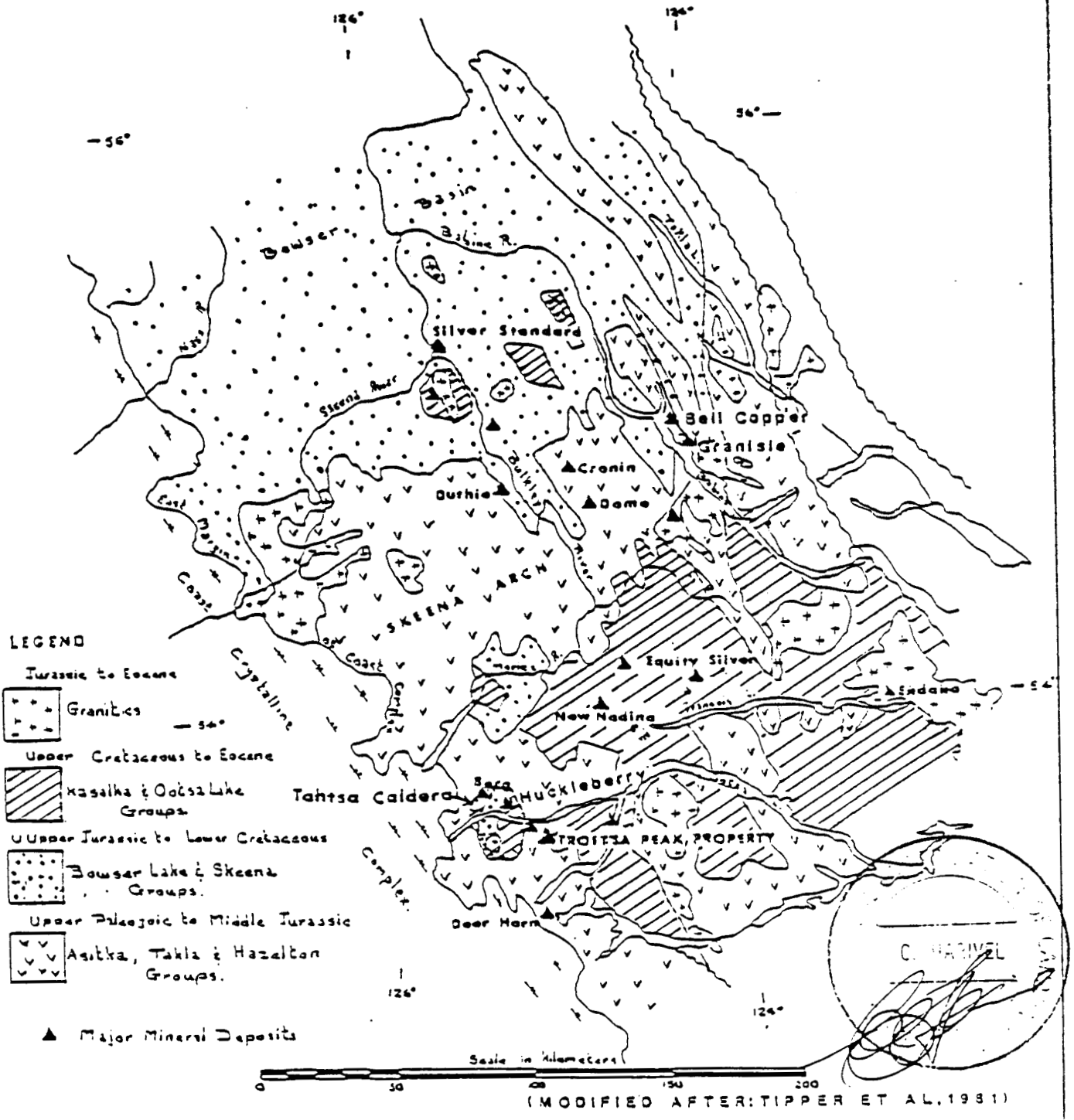
Regional geology has been done by Woodsworth (1980) at 1:250,000 scale and Diakow (1987) at 1:50,000 scale.

The claims lie along the south margin a highly mineralized belt across west-central British Columbia known as the Skeena Ach (figure 4) and includes the mineral deposits of Deer Horn, Equity Silver, Silver Queen, Duthie, Cronin and Dome precious metal deposits and the Granisle, Bell Copper, Berg, and Huckleberry porphyry deposits.

In the immediate regional setting, the claims area underlain by volcanic and intrusions of the Eocene Ootsa Lake Group and the Lower Jurassic Hazelton Group (figure 5). The Ootsa Lake volcanics comprise flows, lahars, breccias, tuffs and correlative high level intrusives. Lower strata of the Ootsa Lake group are mainly basalt and andesite, upper strata are rhyolite and andesite. These unconformably overlie volcanics and sediments of the Lower Jurassic Hazelton Group which form the basement to the Ootsa. The Ootsa Lake Group volcanics appear to have been

Figure 4

GEOLOGIC SETTING, MINERAL DEPOSITS West-central British Columbia



TROI TSA CLAIM GROUP GENERALIZED GEOLOGIC ELEMENTS WHITESAIL RANGE, B.C.

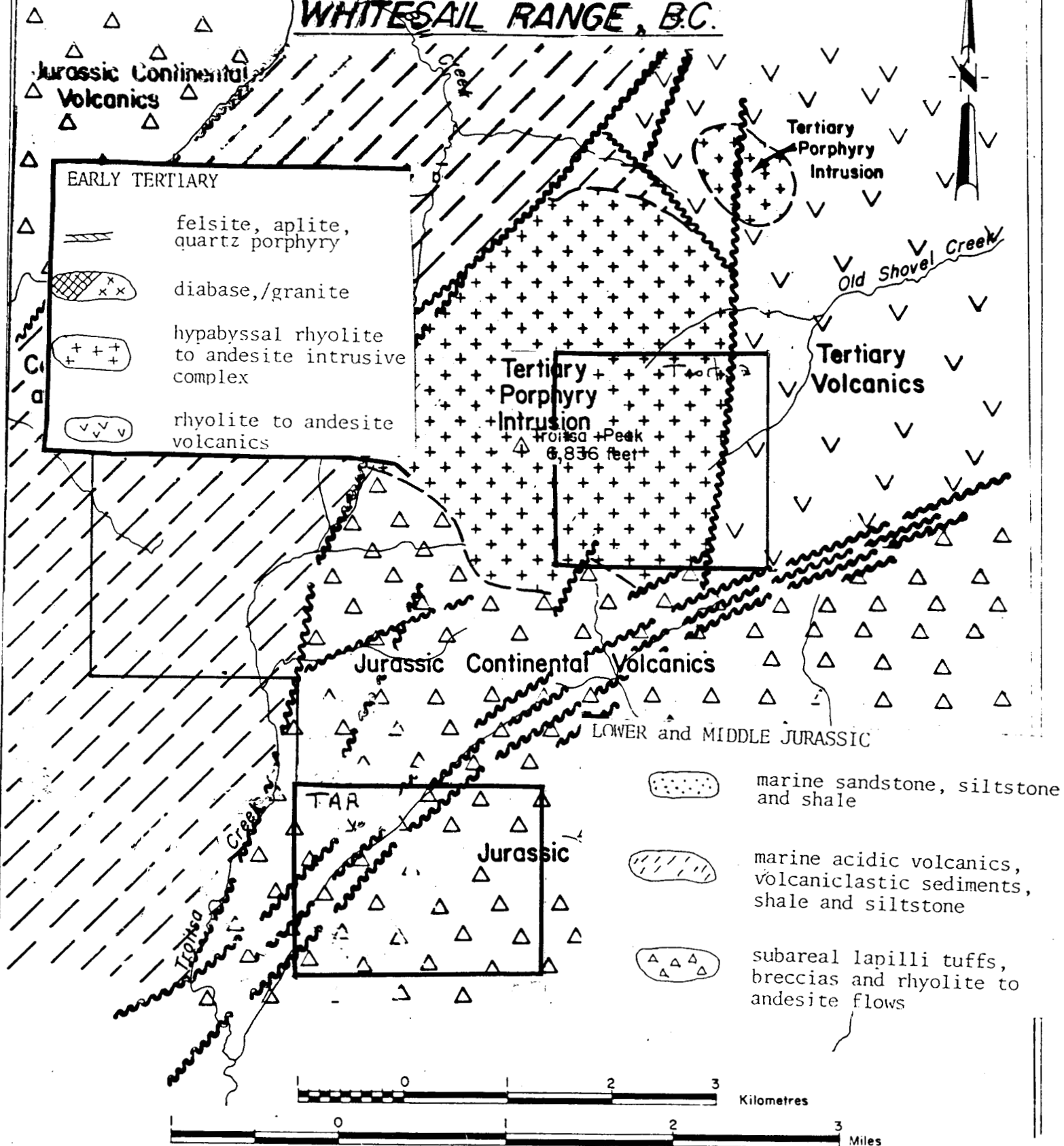
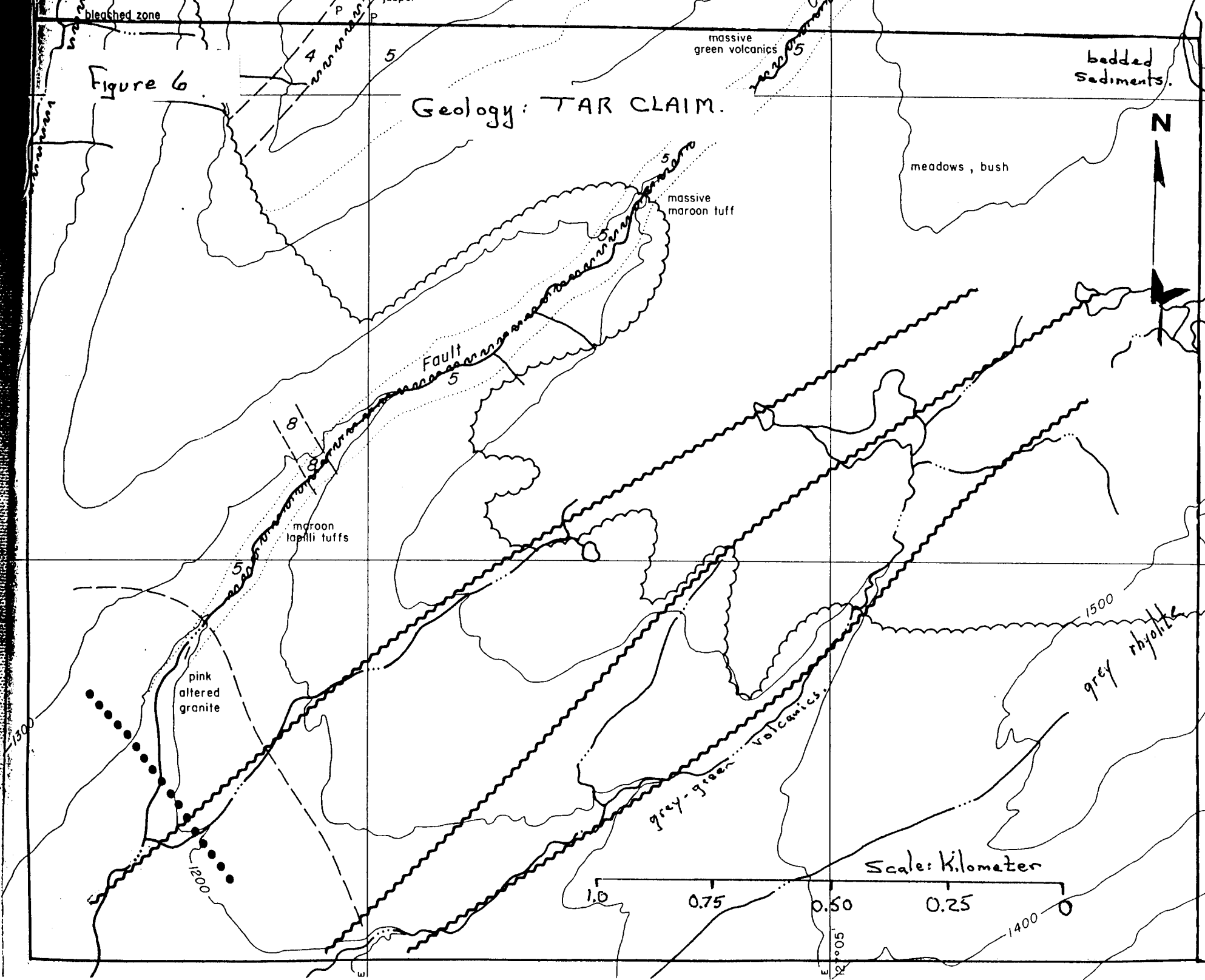


Figure 5

Figure 6

Geology: TAR CLAIM.



deposited within a down-faulted basin, either as a caldera or graben structure into the older Jurassic volcanic basement. Faults bounding the Dotsa Lake volcanic basin from the adjacent older Hazelton volcanics trend 060 and north-south. The claims appear to underlie a feeder complex for the Eocene volcanics.

GEOLOGY OF THE TAR CLAIM

The geology of the claims has been outlined by Jamieson (1981) as part of the mapping of a larger, contiguous claim group then held by Union Cabide Exploration Corp. (figure 6).

The dominant rock type underlying most of the claim block red, green and grey volcanics of the Jurassic Hazelton Group. Massive to well bedded bedded, flows, ash and lapilli welded tuff and bedded tuff comprise the major extrusive units. Massive units, of very highly variable thickness are rhyolitic and likely represent flow-domes. Propylite to early argillic altered rocks are found adjacent quartz veins and in shears zones now occupied by linear valleys.

The Whitesail Fault, a major, east-northeast trending structure cuts across the property, and forms a set of parallel faults across a 4 kilometer wide zone on the claims. These, and splays off the individual faults within the Zone host numerous quartz veins, some of which contain anomalous mineralization, including argentite, pyrrhotite, chalcocite, and pyrite. Most of the quartz veins comprise vuggy quartz.

MINERALIZATION AND ALTERATION

All the mineralization noted on the TAR claim comprises quartz veins (2 cm to 2 meters width), quartz stringers and stockworks hosted in propylite to early argillic altered volcanics of the Hazelton Group. Numerous veins and boulders of quartz were and have been noted traceable 6000 meters across the TAR, Jessie and Culmmins South mineral claims. These occur as commonly as east-northeast trending and mainly northerly trending veins and boulders. Most of the veins sampled are sulphide poor, with some minor sulphides, mainly pyrite and chalcocite noted.

Analysis were done by Min En Laboratories of 705 West 15th Street, North Vancouver, B.C. Analytical values are shown in table 1.

DISCUSSION OF RESULTS AND CONCLUSIONS

Two areas containing anomalous metal values in rock were noted.

PS-112 to 114, located on the northeast corner of the TAR claim gave gold values of 1435, 465 and 111 ppb accompanied by 33,815, 13,833 and 1724 ppm arsenic in a quartz vein (minimum 0.4 m width in poor exposure). Antimony accompanies the arsenic. Silver showed low values.

PS-127 to 132 consists of subcrop with anomalous gold and silver. Anomalous gold to 742 ppb and silver to 57.2 ppm (PS-132) and PS-127 gave 76.6 ppm silver were the main anomalous values. PS-130 gave 2757 ppm and PS-132 640 ppm molybdenum.

Five pan concentrates (samples RR-101, 103-105 and 020) from five different locations gave flat values.

REFERENCES

- Diakow, L. and Mihalynuk, M., (1987), Geology of Whitesail Reach and Troitsa Lake Areas, 93E/10W and 93E/11E, B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1987/4
- Duffel, S. (1959), Whitesail Lake Map Area, Geo. Surv. of Canada, Memoir 299
- Jamieson, H. (1982), Geology of the Troitsa Peak Area, Internal Report, Union Carbide Exploration Corp.
- Woodsworth, G. (1986) Geology of Whitesail Lake Map Area (93E), 1:250000 Scale. Geol. Surv. of Canada, Open File 708

STATEMENT OF THE AUTHOR'S QUALIFICATIONS

I, Tom Richards, of box 436, Hazelton, B.C., have been involved in geologic mapping and exploration in the B.C. Cordillera since 1963.

I hold a BSc (1965) and a PhD (1971) from the University of British Columbia, and am a Fellow of the Geological Association of Canada.

I am presently a director and hold shares in the company holding the TAR Mineral Claim.

I wrote the report, Geochemical Rock Sampling of the TAR Claim, Cummins Group with prospectors Pat Suratt and Rob Reding.

DESCRIPTION OF ANALYSED ROCKS

- PS-105 quartz vein, to one meter, mainly vuggy quartz + pyrite, trending 158, dip east, moderate
- PS-106 float, rusty quartz + pyrite, vein margin
- PS-107 off large block of crystalline quartz vein, with silicified rock and pyrite
- PS-108 rusty quartz vein, abundant pyrite, dark grey seams, 15-20 cm, trending NS
- PS-109 float, vuggy quartz, minor pyrite
- PS-110 float, near 109, quartz + pyrite + minor chalcopryite other float in immediate area
- PS-111 float, 20x30x25 cm quartz float, vuggy with weathered out carbonate
- PS-112 quartz vein, at least 40 cm width, greyish quartz + fine-grained pyrite
- PS-113 as above,
- PS-114 as above, less grey than 112
- PS-115 float, rusty, drusy quartz + minor pyrite, rare chalcopryite
- PS-119 dark green propylite + pyrite and rare chalcopryite and quartz stringers
- PS-120 bleached rock + quartz + carbonate + pyrite
- PS-121 sugary quartz + carbonate + pyrite
- PS-122 float, several pieces, andesite lapilli tuff, minor pyrite
- PS-123 float, bleached andesite + crystalline quartz veinlets + pyrite
- PS-124 15-20 cm vein, striking 120, quartz crystal + pyrite + wall rock
- PS-127 subcrop, chalcedonic quartz + pyrite
- PS-128 subcrop, pyritic rhyolite
- PS-129 subcrop, rusty weathered rock
- PS-130 subcrop, vuggy quartz + abundant pyrite in dark grey rock
- PS-131 float, small piece of proximal quartz + pyrite + chalcopryite
- PS-132 float, chalcedonic quartz, vuggy, small pyrite cubes
- PS-133 float, quartz + silicified rock + pyrite
-
- RR-102 disseminated pyrite + malachite in weakly bleached feldspar porphyry
- RR-106 float, quartz boulder, coarse vuggy quartz, minor pyrite
- RR-107 as above
- RR-108 float, as above, coxcomb, coarse vuggy quartz in propylite altered volcanic
- RR-109 quartz vein, to one meter, white, vuggy quartz, traceable for 50 meters, striking 200, dipping steeply, with pyrite + chalcopryite
- RR-010 float, coarse-grained quartz, grey highly pyritic altered rock
- RR-011 float, chloritic, pyritic altered granitic

- RR-012 outcrop, 5% disseminated pyrite, argillic altered parallel stringers of vuggy quartz
- RR-018 argillic altered rock with quartz veins, pyritic
- RR-019 outcrop, very argillic altered pyritic rock, porphyry?
- RR-021 float, quartz vein, 2-4 cm, vuggy, with chalcopyrite
- RR-022 vuggy quartz + minor pyrite and galena
- RR-023 float, quartz breccia with pyrite + chalcopyrite

STATEMENT OF EXPENSES

Man-time:

Prospector, P. Suratt	1250	
Prospector, R. Reding	1000	2250

Transportation

Helicopter, 2.5hrs	\$1750	
Truck, one day	50	1800

Geochemical Analysis,		800
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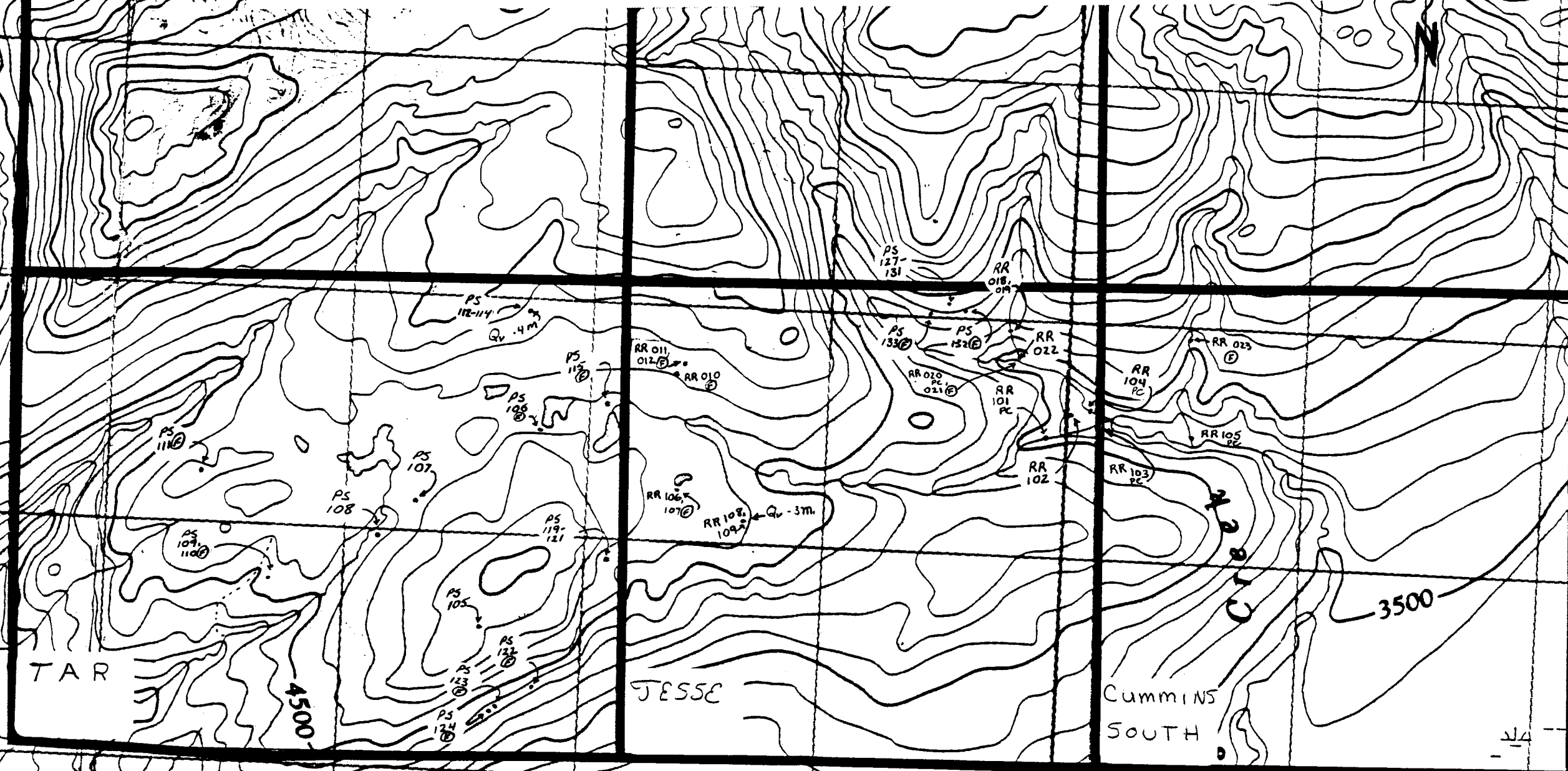
Supplies and Equipment

sample bags, filament, ribbon	15	
Camp/25/day/man	200	
Food/	200	415

Report, preparation, drafting secretarial		400
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Total Expenses		4665
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Figure 7: Sample Location: Tar Claim
Cummins Group.

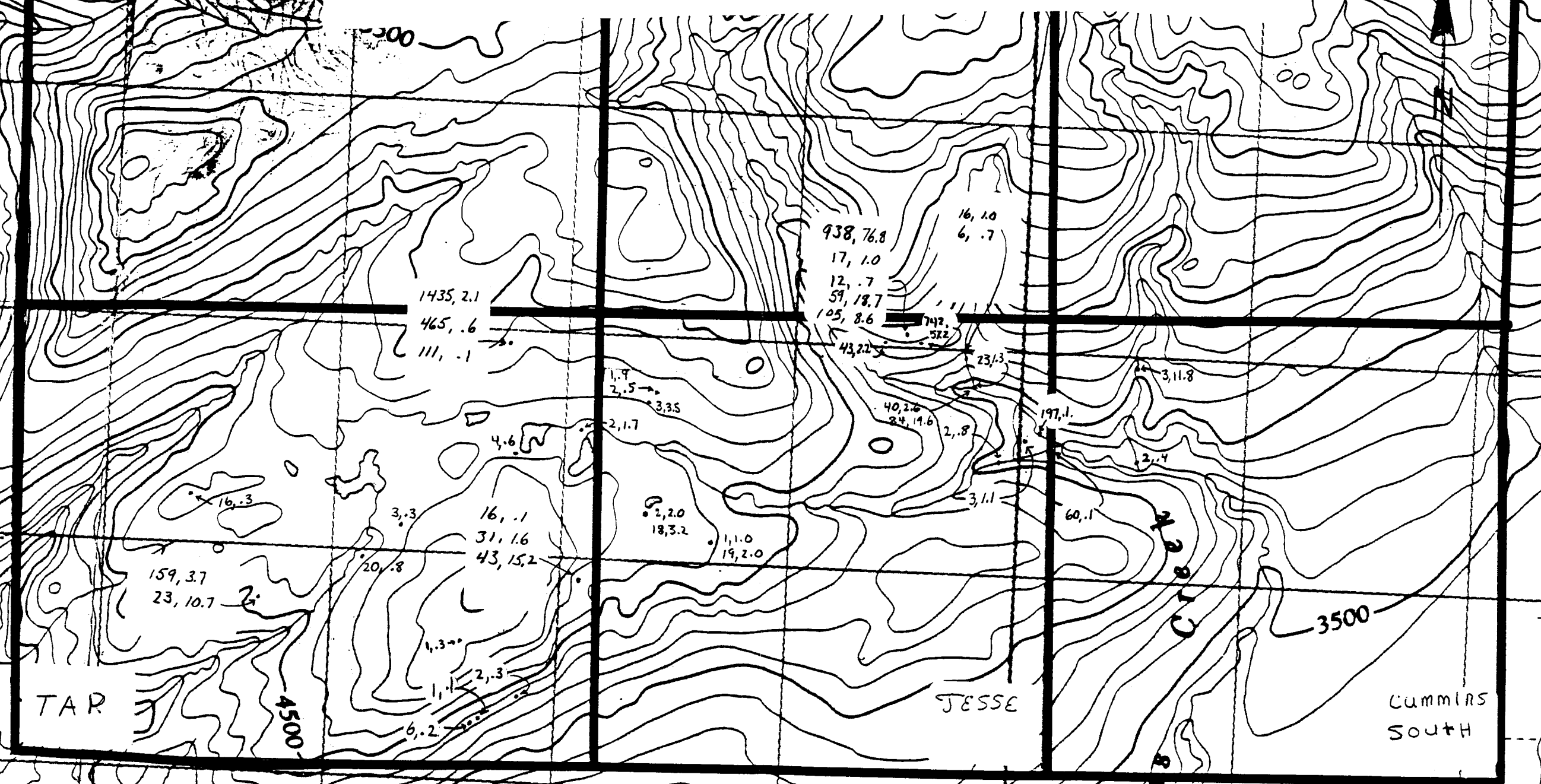


Legend.
PC - pan Concentrate
Ⓢ Float
Qv quartz vein.

Scale: Kilometers

11
38
37
36
35
34
33

Figure 8: Gold-Silver Geochemistry: TAR Claim.



PPb	PPm
122, .5	↓
Au	Ag

Scale in Kilometers.

0 1 2 3