'79-#204-# 7239

FRENCH PEAK SILVER PROPERTY

PETROGRAPHIC STUDY

ON

Core From 1976 Drill Program

Claims: SILVER GROUP - Silverado, Eldorado, Silver Iron, Mag Hi, Ute 5-8

OMINECA MINING DIVISION

93M/7W

55° 21' N 126° 48' W

OWNER : SILVERADO MINES LTD.

OPERATOR: MOHAWK OIL COMPANY LTD.

WRITER : A. M. Homenuke, P. Eng. (Geol.)

Submitted: June 6, 1979

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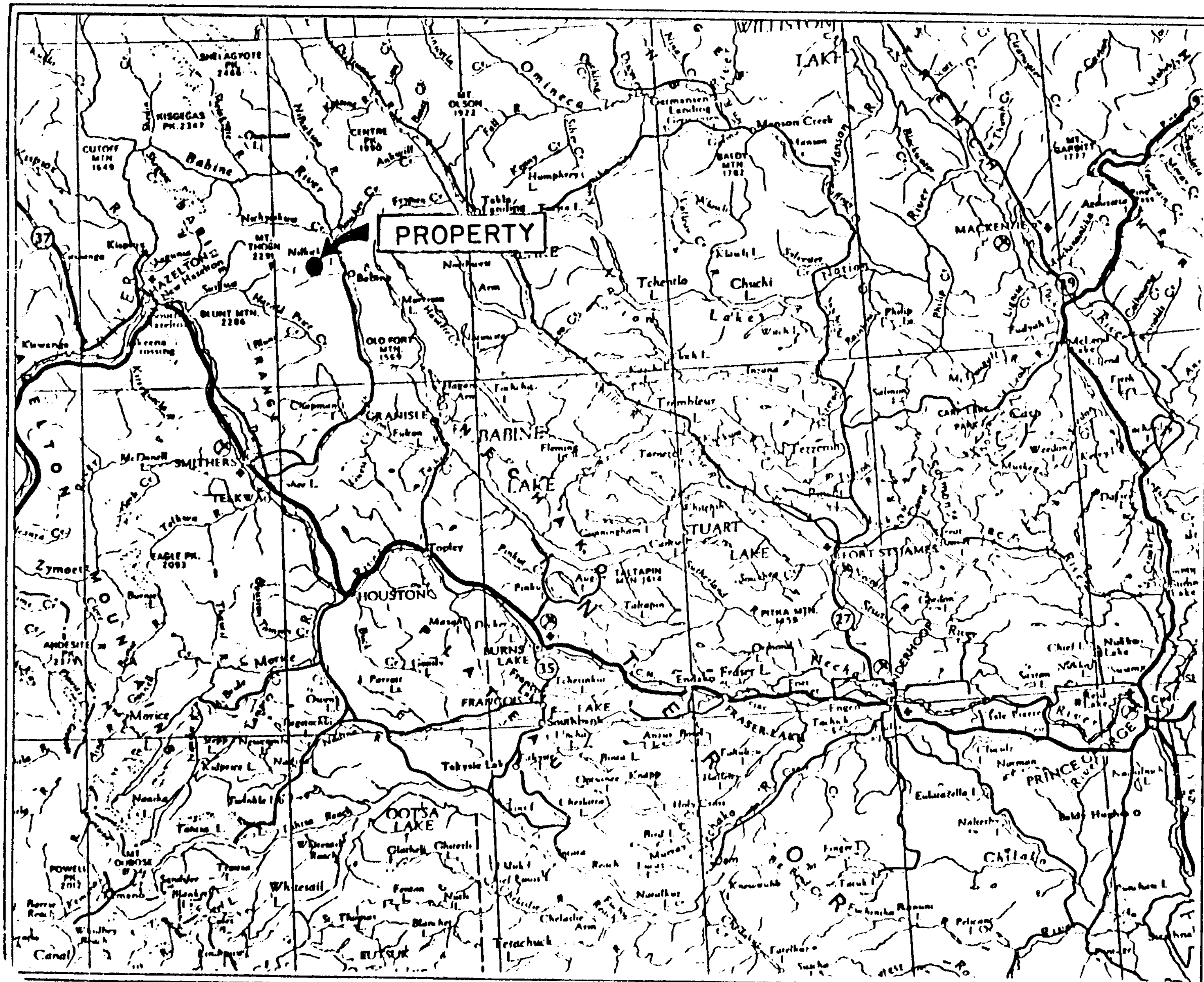
ILLUSTRATIONS



FRENCH PEAK
SILVER PROPERTY

LOCATION MAP

FIG. 1

I. INTRODUCTORY NOTES

LOCATION AND ACCESS

The Silver Group of mineral claims is located on the south-east slope of French Peak (FIG.1) 10 km. west of the north end of Babine Lake and 65 km. northeast of Smithers.

Access is by gravel road from Smithers along the route to Smithers Landing, the Nilkitkwa Forest Access Road and a 4-wheel drive road constructed in 1976, a total distance of 120 km.

PHYSICAL FEATURES

Elevation on the property ranges between 1000 m and 1500 m. Relief is gentle to the north and more abrupt to the south as Tsezakwa Creek, the major drainage in the area, is approached.

Outcrop is generally scarce, with the major exposures being in creek banks and topographic highs. Further exposures have been provided by trenches.

Rainfall is relatively low, but snowfall exceeds 1.5 metres most years and lasts from late October to May or June.

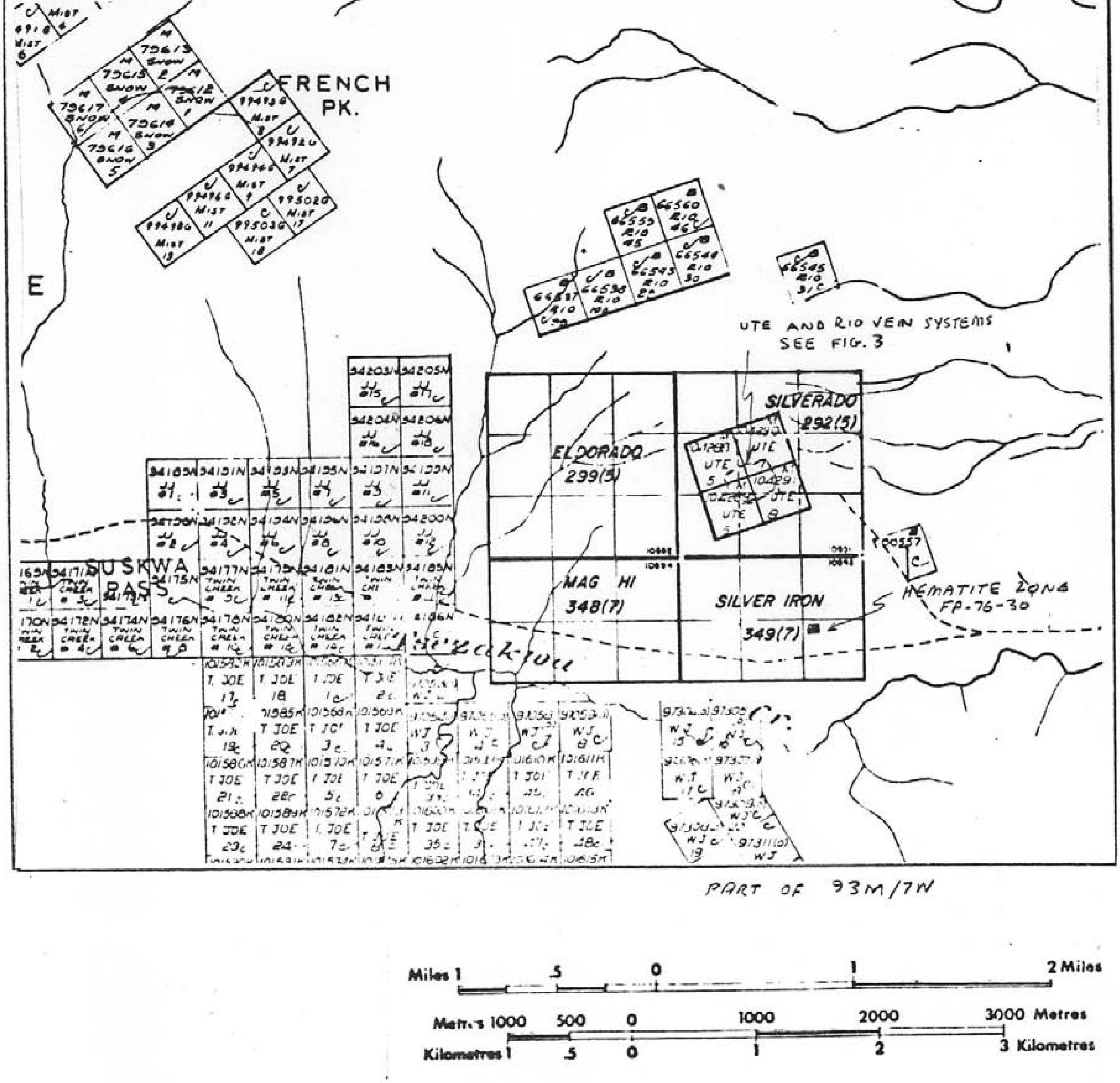
Vegetation consists mainly of subalpine fir with spruce in flatter areas and poplar and alder to the south. Old burnt areas are presently covered with a dense regrowth. Flat areas tend to be swampy.

CLAIMS AND OWNERSHIP

The Silver Group consists of the following mineral claims totalling 34 units (FIG. 2).

Name		Record No.	Record Date
UTE 5 - 8	(4)	104288-91	September 17
Silverado	(9)	298	May 26
Eldorado	(9)	299	May 26
Mag Hi	(6)	348	July 9
Silver Iron	(6)	349	July 9

The claims are presently under option to Mohawk Oil Company Ltd. with a retained interest by Silverado Mines Ltd. (Silverado holds title)



FRENCH PEAK SILVER PROPERTY

CLAIM & INDEX MAP

FIG. 2

HISTORY

The following list summarizes the history of the property.

1955 - "High-grade" silver mineralization discovered by Rio Tinto Canadian Exploration Ltd.

1956 - Rio Tinto carried out mapping, trenching, sampling, a self potential survey and 1737 feet of diamond drilling in 11 holes.

1964-5 - S. Homenuke and H. Gilleland leased the property and shipped 22 tons of hand sorted ore yielding over 6,000 oz. of silver and over 7,000 lbs. of lead.

1974 - S. Homenuke and J. Sargent, now owners of the property, shipped 28 tons of hand sorted ore. This shipment yielded 3423 oz. of silver, 2 oz. of gold, 8010 lbs. of lead, 2755 lbs. of copper and 1023 lbs. of zinc.

- In July, the writer visited the property and did some preliminary geological and geophysical investigations. This work resulted in Can-ex Resources Ltd. (a private company) optioning the property.

- In the fall, Rennicks Resources Ltd. (N.P.L.) optioned the property from Can-ex and through Tri-Con Exploration Surveys Ltd. carried out a program of mapping, sampling and EM-16 surveying. Some backhoe trenching was also done. Rennicks allowed the option to lapse due to commitments elsewhere.

1976 - Aalenian Resources Ltd. (now Silverado Mines Ltd.) optioned the property and commenced a major diamond drill program. 30 holes were drilled totalling 2646 feet. An access road was constructed and a cabin built. Detailed mapping and magnetometer surveying were done on the main mineralized area. Reconnaissance geochemistry, prospecting and air-photo interpretation were carried out over the rest of the claims and surrounding area. All work to the end of 1976 was summarized in Homenuke (1977).

ECONOMIC ASSESSMENT

The production record and drilling results indicate that the French Peak Silver Property has potential as a high-grade silver producer. Some of the drilling and mapping indicated sulfide mineralization of a conformable nature with some possibly sygenetic features. The present study was undertaken to clarify the nature of the mineralization.

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PRESENT WORK AND DISTRIBUTION

The petrographic study described herein entailed the examination of 50 thin sections, 18 polished sections and 7 polished thin sections. The samples were taken from core drilled in 1976. A map from Homenuk (1977) is reproduced as Fig. 3 to show lithology, structure and drill hole locations. The locations of the sections studied are listed in the appendix. 68 of the samples were from holes on the Ute 5-8 with the remaining 7 being from one hole and hand specimens from the Silver Iron claim.

II. PETROGRAPHIC STUDY

PURPOSE

This study was undertaken to clarify the nature of the sulfide mineralization, its relationship to the host rocks and the nature of the rocks themselves. There are two areas of mineralization shown on Fig. 3, the Ute Vein and the Rio Vein. The Rio Vein exposures and drill intersections showed some conformable features and some possibly syngenetic features. Macroscopic core logging did not permit a detailed assessment of these features primarily due to masking of lithology by alteration.

The sulfide mineralization in these two vein areas differed considerably in appearance and proportion indicating that a paragentic study could be useful in determining the relationship between the two veins.

The third area of sulfide mineralization discovered to date occurs on the Silver Iron claim (see Fig. 2) and is referred to as the "Hematite Zone". Several samples from this area were studied for similar reasons.

The scope of this report did not permit a detailed description of each thin section. For present purposes it was considered sufficient to ascribe a general rock name so that correlation would be possible between drill holes.

DISCUSSION OF RESULTS

1. Rio Vein Area - Lithology

Examination of thin sections from this area indicated that much of the core originally logged as andesite flows was in fact dark green tuffs. This complicated an originally simple correlation between drill holes and led to the preparation of a reconstructed section (Fig. 4). The locations of samples studied are shown on the section. At the east end of the section holes were correlated with a prominent thin black lithic tuff. To the west, a fairly regular sequence of ash tuffs was projected between holes. The eastern area appears to be considerably more complex than to the west, although this may be a function of drill hole spacing. The most significant feature is an abrupt ending of a relatively thick andesite flow between holes 16 and 22. A fault has been inferred in this area.

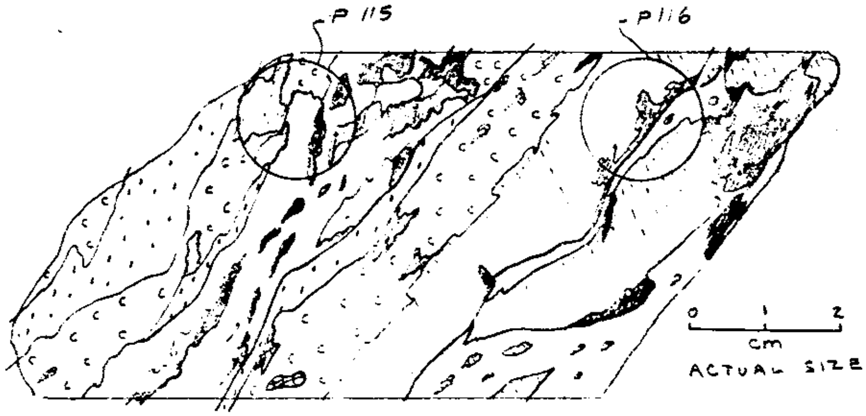
The rocks in this area consist of a submarine deposited pyroclastic sequence of dacite to andesite composition topped by an andesite flow. Whether they were subaerially or subaqueously erupted was not determined. The center part of the section consists of a regular thickness of fine to medium grained ash tuffs. Below this unit are coarser tuffs varying from purely crystal to purely lithic with minor lapilli and vitric fragments. Some ash tuffs are also present. Identification is hampered by pervasive alteration, primarily argillic, and probably deuteric in nature. Some secondary carbonate, quartz and pyrite indicates areas of weak hydrothermal overprinting.

Within the ash tuff layer, alteration is far more intense with widespread silicification. To the east in the section there is increased interlayering with lithic crystal tuffs indicating possible mixing from different source areas or coeval deposition of waterlain airfall ash tuff with other pyroclastic flows from the same source. Some of the alteration could be of hot spring origin. A small layer of intravolcanic argillite (volcanic mudstone?) was intersected in hole 15.

Above the ash layer in the eastern part of the section is a prominent marker tuff. This rock has a black (hand specimen) matrix with medium to very coarse lithic fragments.

Rock units are discontinuous above the ash layer. Certainly some of the discontinuity is due to faulting as shown on the section. Other causes may be related to paleoslope or vent proximity. Discussion of this will be continued under mineralization. This disruption is also shown by geological mapping (Fig. 3) and magnetometer surveying (Homenuke - 1977).

All sample rejects were stained for potassium. The only major potash feldspar bearing rock was in hole 18 where a crystal-lithic tuff was found to contain about 20% relict orthoclase or sanidine.



Sketch of NQ Core sample from UTE VEIN

- Euhedral Pyrite in sericite-chlorite gouge
- Siderite
- Chalcopyrite-tetrahedrite
- Tetrahedrite
- Galena
- Quartz

PARAGENETIC SEQUENCE WITHIN UTE VEIN

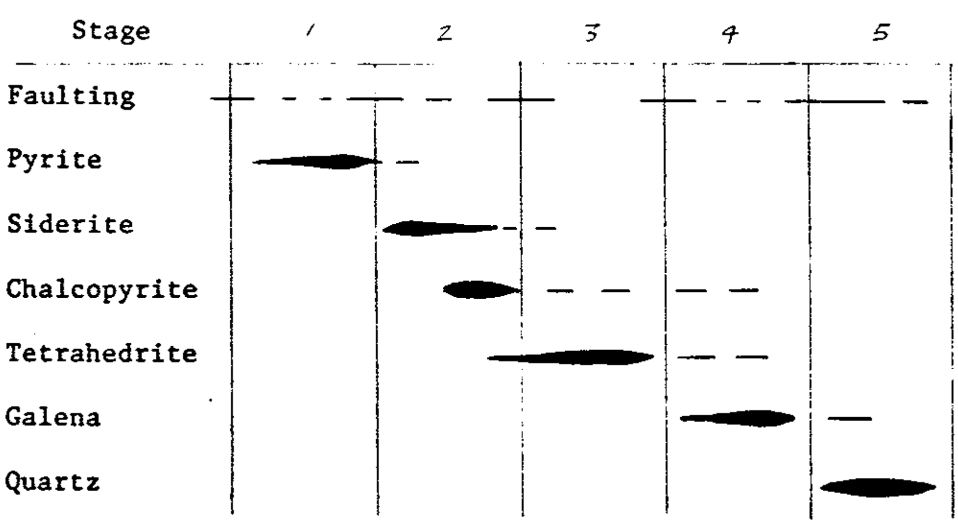


FIG. 5

2. Ute Vein Area - Lithology

Above the andesite flow in the Rio Vein Area the rocks consist of a sequence of predominantly purple to mauve clastic units. Graded bedding is common and most of the rocks exhibit some degree of layering. Grain size varies from extremely fine ash to coarse, completely lithic units. Some units contain lapilli, vitric fragments and crystals. It is inferred that this sequence consists of interlayered pyroclastic and volcaniclastic units, subaerially erupted and subaqueously deposited. Granular quartz predominates in some units and the composition probably varies from rhyolite to dacite. In hole 28 a rhyolite flow with altered sanidine phenocrysts was intersected. In hole 10 a unit of mostly granular quartz was of interest as it contained disseminated tetrahedrite. The unit is somewhat porous due its well sorted nature. The average grain size is 0.08 mm.

3. Sulfide Mineralization

A specimen of core from the Ute Vein was examined in detail, both macroscopically and microscopically. A sketch of the specimen and the paragenetic sequence of the mineralization are shown on Fig. 5. Five major stages are recognized with economic mineralization mainly in stages 2 - 4. Stages 3 and 4 appear to be confined to the Ute Vein System. Some sphalerite is also present in various drill intersections but was not recognized in this specimen. The highest grade silver mineralization occured at stage 3, however, significant tetrahedrite is present in stage 2 and argentite was recognized in some of the galena of stage 4.

Stage 1 and 2 predominate in the Rio Vein System. A small amount of owyheeite (sulfantimonide of lead and silver) was identified as an accessory to pyrite of stage 1.

Within the ash tuff host rock of the Rio Vein there exists several conformable to sub-conformable hands of pyrite, hematite and magnetite. It was originally thought that these might be syngenetic iron formation deposits, however, polished section studies indicated that they are most probably epigenetic. Reinforcing the thought that they might be syngenetic was the occurence in the argillaceous unit in hole 15 of grains of iron sulfide which were definitely bedded as they followed slump structures and were quite rounded. Polished section study showed these sulfides to be accretionary marcasite, a normal occurence in argillaceous sediments. There still exists a problem in determining an origin for the iron rich bands. As they are laterally quite extensive and conform to the ash tuff layer it is postulated that they were deposited within a zone of thrust faulting along bedding planes.

In the vicinity of hole 13 in the Rio Vein System chalcopyrite and tetrahedrite of stage 2 are deposited both in conformable shears and in small cross-cutting fissures. Most of the copper-silver mineralization in the Rio Vein system occurs within the area from hole 13 to hole 22 (see Fig. 4). Minor amounts occur to the west of this area, always with carbonate gangue and related to small fractures.

The control on mineralization is probably a combination of the intersection of the thrusted zone with a northwesterly trending high angle shear zone (possibly the pathway for mineralizing fluids) and the lithology (texture, chemistry) of the host rock.

4. The Hematite Zone

Due to limited outcrop and only one drill hole little is known about this area. It is 1100 metres southeast of and 150 metres lower in elevation than the Rio and Ute Vein Systems. Thin sections of the core from hole 30 show the rocks to be pyroclastic ranging from ash to lithic and crystal tuffs of intermediate composition. Chalcopyrite and tetrahedrite occurs with contorted bands of hematite and fracture fillings and disseminations of pyrite. The area appears to be broadly similar to the area of the Rio Vein system, however, more information is needed for a detailed interpretation.

CONCLUSIONS

The silver-base metal mineralization on the Silver Group is epigenetic vein type. Five general stages of mineralization are recognized with the highest grade silver stage being restricted to th the Ute Vein System. Lower grade chalcopyrite-tetrahedrite is present in most mineralized structures. The thin section study permitted reconstruction of the depositional sequence and clarified the nature of the host rocks. The information gained from this study should be applied to relogging of all drill core. Sections could then be prepared which would allow a more complete interpretation of the area of the Ute and Rio Vein Systems. This would in turn lead to a better understanding of the structure and related mineralization and allow for more efficient layout of future drilling programs.

REFERENCE

Homenuke, A.M., 1977, French Peak Silver Property, Compilation Report (A private report to Aalenian Resources Ltd.)

CERTIFICATE OF QUALIFICATIONS

I, ALEXANDER M. HOMENUKE, DO HEREBY CERTIFY:

1. THAT I am a member in good standing of the Association of Professional Engineers of British Columbia.

2. THAT I received the Degree of Bachelor of Science in Geological Engineering from the Colorado School of Mines in 1974.

3. THAT I received a Diploma of Technology in Mining from the B.C. Institute of Technology in 1969.

4. THAT I have been employed in various aspects of mining exploration for 10 years and am presently employed by Tri-Con Mining Ltd. of 1540-1066 W. Hastings Street, Vancouver, B. C.

5. THAT I presently reside at 29825 Harris Road, Mt. Lehman, British Columbia.

6. THAT this report is based on work supervised or conducted by myself.

Dated at Vancouver, B. C. this 6th day of June, 1979.

A. M. HOMENUKE, P. Eng.
Geological Engineer

COST STATEMENT

Fees A. M. Homenuke, P. Eng. April 5 to May 25, 1979

Petrographic Study 55 hours at $30 per hour	$1650.00
Report Preparation 2½ days at $250 per day	625.00
Section Preparation 75 samples	654.50
Drafting, Secretarial, Materials	150.00
Microscope Rental 2 months at $120 per month	240.00
	$3319.50

APPENDIX

DESCRIPTIONS AND LOCATIONS OF PETROGRAPHIC SECTIONS STUDIED

T - Thin section   P - Polished Section   PT - Polished Thin section

NUMBER	DRILL HOLE	DEPTH FEET (METRES)	NOTES
T 101	FP-76-22	17	Crystal-lithic tuff.
T 102	22	40	Andesite flow; 40% plagioclase laths.
T 103	22	71	Waterlain ash tuff.
T 104	22	75 }	Black marker tuff.
T 105	22	75.5 }	Altered lithic fragments to 2 cm.
P 106	22	85	Euhedral pyrite in siderite.
T 107	22	93	Crystal tuff; secondary quartz, chalcedony, carbonate.
T 108	22	99	Ash Tuff.
T 109	22	99+	Ash Tuff.
P 110	22	105	Coarse euhedral pyrite vein filling.
P 111	22	105+	Pyrite with minor chalcopyrite and tetrahedrite in fractures.
T 112	22	105++	Ash Tuff.
T 113	22	109	Crystal tuff.
T 114	22	115	Crystal-lithic-lapilli tuff.
P 115	1	53	See Fig. 5
P 116	1	53	See Fig. 5
T 117	NOT DONE		
T 118	4	21	Ash Tuff.
T 119	4	47	Lithic Tuff.
PT 120	8	49	Dacite dyke; siderite
T 121	8	49	veinlet with tetrahedrite

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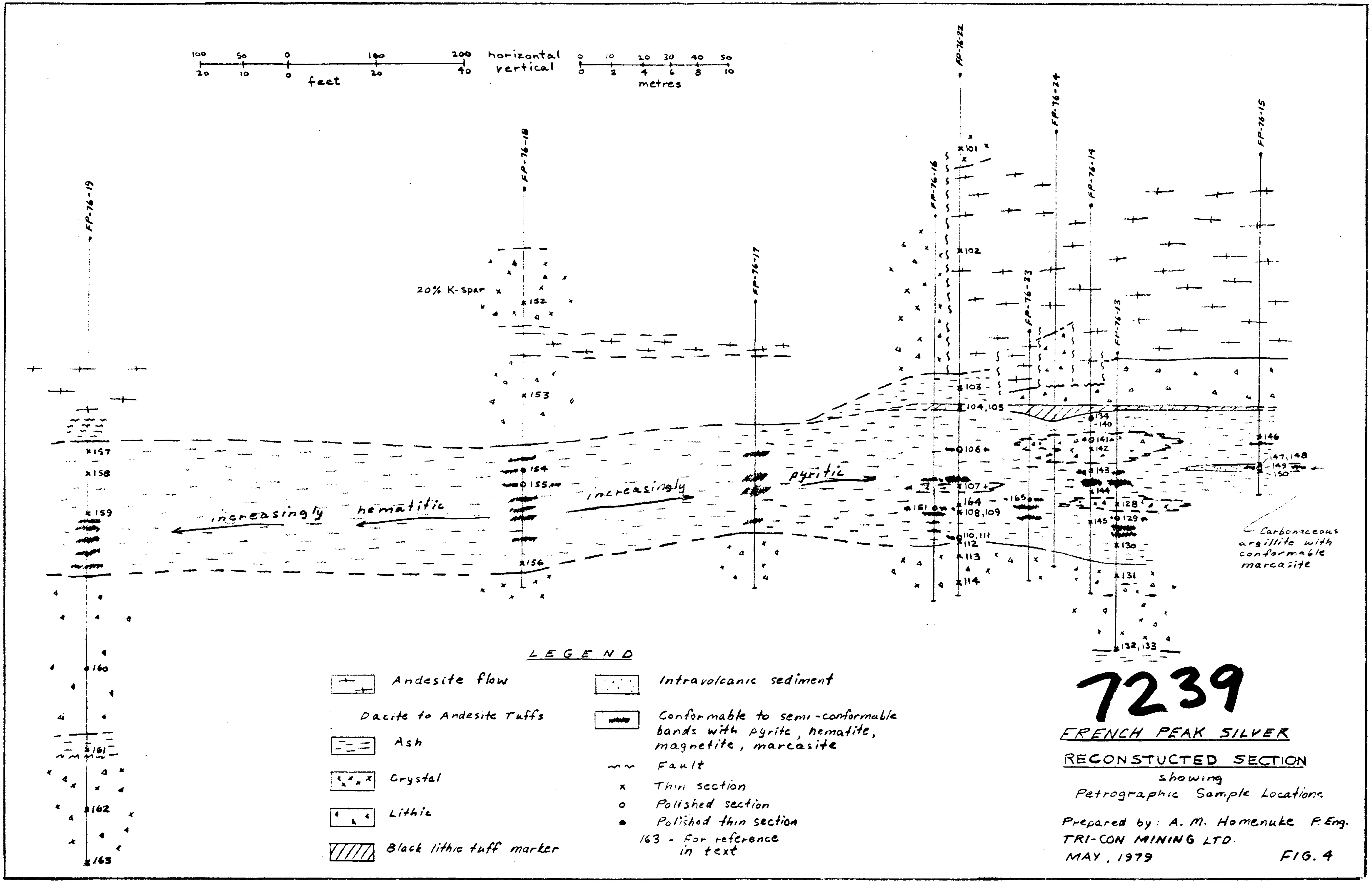
NUMBER	DRILL HOLE	DEPTH FEET (METRES)	NOTES
T 122	8	53	Conglomerate on fine grained bedded volcanic-lastic.
PT 124	10	46	Felsic lithic tuff with disseminated pyrite and tetrahedrite.
PT 125	12	100	Same but brecciated.
T 126	12	122	Lithic-crystal tuff.
T 127	12	144	Crystal tuff.
T 128	13	34	Fine to medium grained volcaniclastic;graded bedding.
P 129	13	37	Tetrahedrite replacing chalcopyrite and enargite; earlier pyrite.
T 130	13	43	Welded ash tuff.
T 131	13	50	Crystal-Lapilli tuff.
T 132	13	67	Crystal Tuff.
T 134	14	48	
T 135	14	48	
PT 136	14	48	Euhedral sphalerite and pyrite in conformable carbonate vein in ash tuffs.
PT 137	14	48	
T 138	14	48	
T 139	14	48	Sphalerite to 1 cm. contains exsolved chalcopyrite; 1 very small tetrahedrite crystal identified.
P 140	14	48	
P 141	14	53	Euhedral pyrite in siderite, trace of owyheeite.
T 142	14	55	Lithic-crystal-vitric tuff.
P 143	14	60	Pyrite in siderite with later owyheeite.
T 144	14	65	Ash tuff - few lithic fragments.
T 145	14	71.5	Ash Tuff.
T 146	15	64	Ash Tuff.
T 147	15	70	Argillaceous finely laminated sediment, with conformable bands of accretionary marcasite.
T 148	15	70	
P 149	15	71	
T 150	15	71.5	

NUMBER	DRILL HOLE	DEPTH FEET (METRES)	NOTES
P 151	16	66	Euhedral pyrite with later chalcopyrite, tetrahedrite and minor galena and sphalerite.
T 152	18	26	Crystal-lithic tuff; 20% relict K-Feldspar.
T 153	18	47	Lithic tuff.
PT 154	18	64	Ash Tuff.
P 155	18 18	67	Corroded pyrite in chalcedony.
T 156	18	85	Ash Tuff.
T 157	19	48	Ash tuff - few crystals.
T 158	19	53	Ash tuff-secondary silica.
T 159	19	62	Ash tuff-secondary quartz-carbonate, chalcedony.
PT 160	19	97	Welded lapilli tuff; pyrite with chalcopyrite and tetrahedrite in siderite.
T 161	19	116	Ash tuff.
T 162	19	129	Crystal-lithic tuff.
T 163	19	147	Crystal-lithic tuff.
T 164	22	97	Ash tuff - purple.
P 165	23	38	Pyrite replaced by magnetite pseudo after bladed hemtite.
T 166	28	60	Rhyolite flow; sanidine phenocrysts.
P 167	28	97	Galena replacing tetrahedrite with earlier pyrite.
T 168	28	39	Lithic tuff.
T 169	30	50	Ash tuff-secondary quartz-carbonate, chalcedony.
T 170	30	53	Crystal tuff.
P 171	30	86	Pyrite and siderite in fractures.
T 172	30	108	Ash tuff.
T 173	30	108	Chalcopyrite replacing hematite and pyrite;minor magnetite.
P 174	Hand Spec. Rio Vein		Tetrahedrite replacing chalcopyrite and magnetite.
T 175	Hand Spec. Hematite Zone		Pyrite in fractues in ash tuff with secondary chalcedony and siderite.
P 176	Hand Spec. Hematite Zone		



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FRENCH PEAK SILVER

RECONSTUCTED SECTION

showing

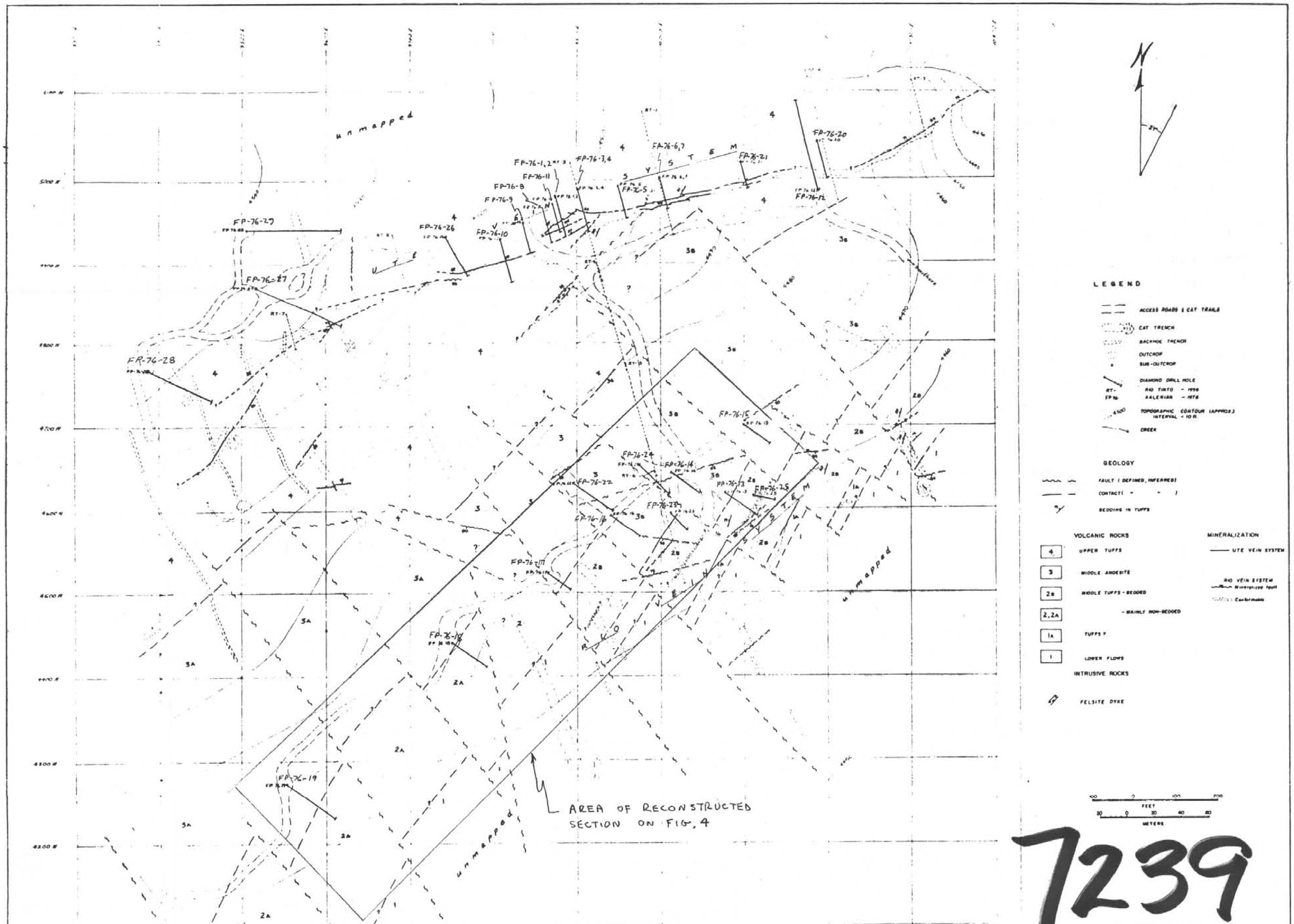
Petrographic Sample Locations

Prepared by: A. M. Homenuke P. Eng.

TRI-CON MINING LTD.

MAY, 1979

FIG. 4



AALENIAN RESOURCES LTD.

FRENCH PEAK SILVER PROPERTY

GEOLOGY of the UTE & RIO VEIN SYSTEMS

Prepared by - A M Homenuke, P Eng — Nov 1976 — FIG. 3

TRI-CON Exploration Surveys Ltd