

DU PONT OF CANADA EXPLORATION LIMITED

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE BAR CLAIM

LIARD MINING DIVISION

LAT. 57°49'N, LONG. 131°50'W

NTS: 104-G-13W



OWNER OF CLAIM: Du Pont of Canada Exploration Limited

OPERATOR: Du Pont of Canada Exploration Limited

L. Eccles

Author: L. Eccles

Date Submitted: 1981 June 8

TABLE OF CONTENTS

	<u>Page No.</u>
I. INTRODUCTION	1
II. GEOLOGY	3
III. GEOCHEMICAL SURVEY	4
IV. COST STATEMENT	6
V. QUALIFICATIONS	8

Appendix A - Geochemical Analytical Procedure
Procedures for Mo, Cu, Cd, Pb, Mn, Ni, Ag,
Zn, As & F analyses.

LIST OF FIGURES

	<u>Behind Page</u>
Figure 1 Location Map	1
Figure 2 Index Map	1
Dwg. AR 80-207 Bar Claim, Geology	In pocket
Dwg. AR 80-208 Bar Claim, Geochemistry: Au in ppb & Ag, Cr, Cu, Mo, Pb, Zn in ppm.	

I

INTRODUCTION(a) Location and Access

The BAR claim is located in northwestern British Columbia within the Liard Mining Division, NTS 104-G-13W. The property is situated immediately north of Limpoke Creek, 2.5 km northwest of its confluence with the Barrington River. It is centered by latitude 57°49'N, longitude 131°50'W.

At present access into the property is via helicopter from Telegraph Creek, 40 km to the northeast.

(b) Physiography

The BAR property is situated within the Boundary Ranges of the Coast Mountains. This geographic province consists of a mountainous and glaciated terrain that exhibits relief up to and in excess of 3000 m. Tree-line varies from 1000-1200 m above sea level. Below this point, particularly within the lower valleys, vegetation predominantly consists of a dense growth of conifers. Active glaciation is prevalent in the area, particularly in terrain above 1500-2000 m.

Elevation over the BAR claim varies from 1800 m along a ridge within the northwest corner of the claim to 715 m above sea level along Limpoke Creek at the legal claim post. The area along Limpoke Creek north to the base of an extensive east-west trending cliff is treed. The ridge above these cliffs occurs above tree-line.

(c) Claim Status

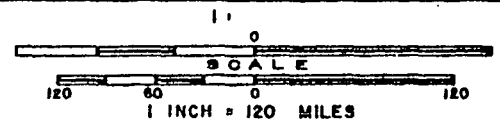
The BAR property consists of one mineral claim constituting 20 units. The extreme southwest corner of the BAR claim is truncated or overlapped by LIMP 2 (Record No.1234). Pertinent data for the BAR claim is outlined below:

BAR	Record No:	1359
(20 units)	Tag No:	55420
	Date Recorded:	June 25, 1980

139° 138° 137° 136° 135° 134° 133° 132° 131° 130° 129° 128° 127° 126° 125° 124° 123° 122° 121° 120° 119° 118° 117° 116° 115°

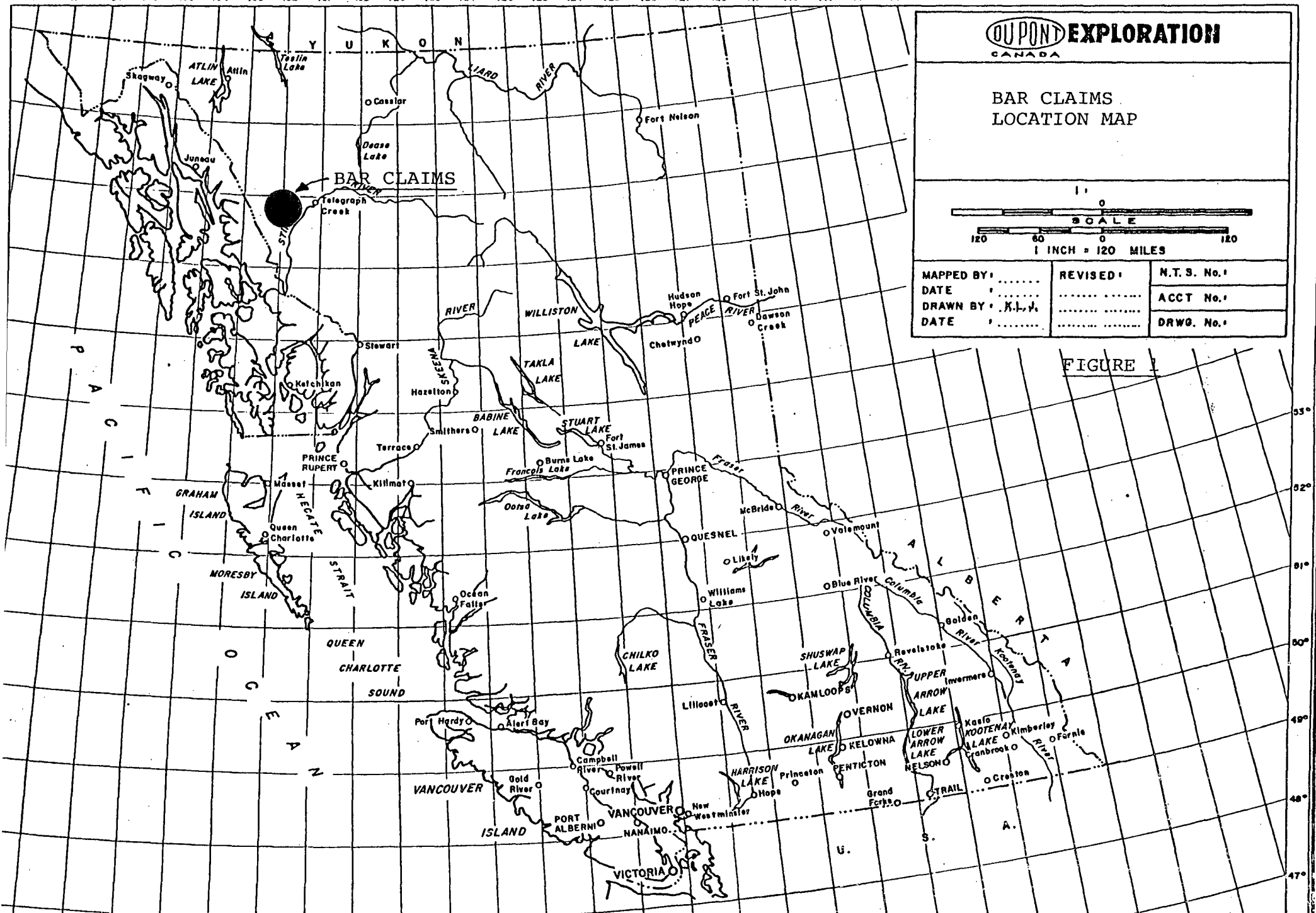
DU PONT EXPLORATION
CANADA

BAR CLAIMS LOCATION MAP



MAPPED BY:	REVISED:	N.T.S. No.:
DATE:	ACCT No.:
DRAWN BY: K.L.V.	DRWG. No.:
DATE:	

FIGURE 1



139° 138° 137° 136° 135° 134° 133° 132° 131° 130° 129° 128° 127° 126° 125° 124° 123° 122° 121° 120° 119° 118° 117° 116° 115° 114° 113° 112°

The BAR claim is owned and operated by Du Pont of Canada Exploration Limited.

(d) History and Economic Assessment of Property

Previous work in the vicinity of the BAR property dates back to at least the 1920's. Since that time several copper or copper-molybdenum showings have been investigated. Occurring at the junction of Limpoke Creek and the Barrington River and south of Limpoke Creek near the headwaters of Spann Creek these prospects are underlain by andesitic volcanics which are intruded by syenitic dykes and in the latter case by a granodiorite stock. Mineralization consists of chalcopyrite-pyrite(-pyrrhotite-molybdenite) and is hosted by andesite and intrusive. No significant economic potential has been developed.

No work has been previously recorded within the BAR claim.

The BAR claim was staked on the basis of a regional stream sediment survey conducted in May-June 1980. The subsequent evaluation programme revealed the ridge to be underlain by a variety of tuffs that exhibit a skarn mineral assemblage. Along the base of the cliffs, immediately north of Limpoke Creek one limited soil traverse revealed several anomalous copper and molybdenum values. Gold and silver values within the soil and rock samples proved negative. No significant mineralization in terms of copper, molybdenum or precious metals has been encountered to date.

(e) Summary of Work

The BAR claim was staked on June 7, 1980. On August 7 a 2 person crew conducted a follow-up programme entailing geological mapping along the main ridge and one line of soil sampling at the base of the cliffs in the south-east sector of the claim. The geological mapping was plotted at a scale of 1:10 000 (Dwg. AR 80-207). A total of 3 rock and 9 soil samples were obtained and analyzed.

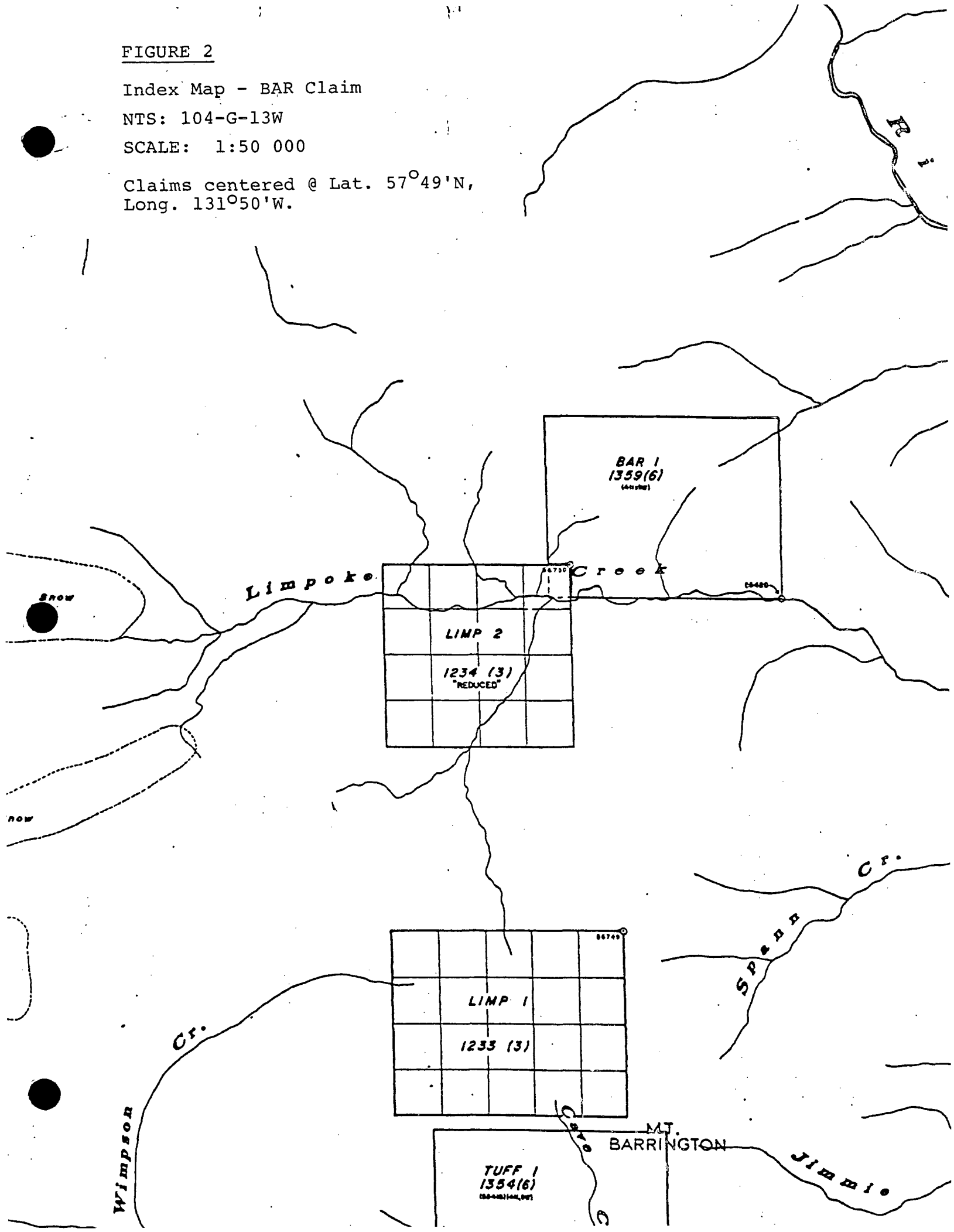
FIGURE 2

Index Map - BAR Claim

NTS: 104-G-13W

SCALE: 1:50 000

Claims centered @ Lat. $57^{\circ}49'N$,
Long. $131^{\circ}50'W$.



II GEOLOGY

(a) Regional Geology

The Boundary Ranges of the Coast Mountains occur along the contact of the Intermontane and Coast Crystalline geologic provinces. The latter, the bulk of which occurs across the border in the Alaskan Panhandle consists of Tertiary and Cretaceous quartz monzonite and quartz diorite.

The Intermontane Belt in the vicinity of the Stikine-Chutine River area consists of Upper Triassic andesitic-basaltic volcanics to the west abutting the crystalline complex and Stuhini Group sediments and volcanics to the east. Lenticular exposures of Permian limestone and lesser Carboniferous and Permian schists and gneisses are noted in the area. Intruding this assemblage are Tertiary-Jurassic quartz monzonite and quartz diorite and Triassic diorite and gabbro.

Pliocene to recent aerial volcanism extruded rhyolites, basalts and tuffs in the Level Mountain area to the north and Edziza Peak to the east.

(b) Property Geology

The BAR claim, as indicated by GSC Map 1418A (1974), is underlain by Upper Triassic Stuhini Group undifferentiated sedimentary and volcanic rocks. Immediately south of Limpoke Creek a 7 by 5 km Jurassic or Cretaceous granodiorite stock is intruded.

Geological mapping on the property has been restricted to the ridge which occurs across the northern portion of the property. Work to date has indicated this area to be underlain by massive tuffs, crystal tuffs and cherty tuffs. The crystal tuffs exhibit pyroxene, feldspar and quartz phenocrysts.

Almost across the entire area development of a skarn mineral assemblage is evident. This is further discussed under 'Mineralization'.

An exposure of andesite occurs above the north facing cliffs adjacent to the eastern boundary of the claim.

(c) Mineralization

Development of a skarn mineral assemblage, specifically manganese, hematite, magnetite, garnet, pyrrhotite and pyrite, is apparent with a varying degree across the area investigated. In addition calcite and epidote veins are prevalent. Pyrrhotite and pyrite represent the only sulphides observed on the claim and appear to be concentrated in the vicinity of the skarn rocks. No significant base or precious metal mineralization has been encountered. Three rock samples were obtained and assayed for gold. Results, which are shown below, proved negative.

<u>Sample No.</u>	<u>Au (oz/ton)</u>
4286	0.001
4287	0.003
4288	0.002

(d) Conclusions

The northern portion of the BAR claim is underlain by skarn-altered tuffs. No quartz veining or significant mineralization except for that associated with the skarn has been observed. No intrusive bodies have been encountered on the property.

III GEOCHEMISTRY

(a) Procedure

A total of 9 soil and 3 rock samples were obtained from the BAR claim.

The soil samples were collected from an east-west sidehill traverse at the base (1030 m a.s.l.) of an extensive south facing cliff. Samples were obtained at 100 m intervals. Each sample was placed in numbered wet-strength sample envelopes and the various locations were flagged indicating their respective numbers.

The samples were shipped to Min-En Laboratories in North Vancouver for preparation and analysis. The rock samples were crushed, split, pulverized, sieved to -100 mesh, and assayed for gold (oz/ton). The soil samples were sieved to -80 mesh and analyzed for Au (ppb). Subsequent determinations through Riocanex Laboratory were performed for Ag (ppm), Cr (ppm), Cu (ppm), Mo (ppm), Pb (ppm), and Zn (ppm).

(b) Results

Drawing AR 80-208 denotes the various sample locations and their respective results.

The soil samples were obtained in an attempt to define the source of anomalous gold concentrations (-20 mesh: 420 ppb) obtained during the regional survey. This regional sample was obtained from a south draining tributary of Limpoke Creek.

Results obtained from this line of soil samples returned background values with regard to Au, Ag, Cr, Pb and Zn (except sample #6476 and 6477). Samples 6476 and 6477 analyzed 871 and 490 ppm zinc.

Although somewhat erratic anomalous concentrations in copper and molybdenum are apparent. Copper varies from 216-619 ppm whereas molybdenum ranges up to 81 ppm.

To summarize, the limited nature of the geochemistry performed precludes any significant conclusion. Taking into account property geology, the Cu-Mo occurrences in the area and the copper and molybdenum values in the soil samples, a Cu-Mo potential maybe indicated. Results obtained from the geological mapping and the rock and soil geochemistry have not indicated the source of the gold values obtained during the regional stream sediment survey.

IV COST STATEMENT(a) Wages

	<u>Rate/ day</u>	<u>Spec. dates</u>	<u>No. days</u>	<u>Cost</u>
1 jr. geol.	\$ 50.82	Aug.7/80	1	\$ 50.82
1 field asst.	46.58	Aug.7/80	1	46.58
1 geologist	146.92	Apr.16,20,21/81	2	293.84
				<hr/>
				\$ 391.24

(b) Room and Board

Per diem rate of \$36.70 - based on 2 person days \$ 73.40

(c) Transportation

Terr-Air Rotary Ltd.

Terr-Air C.T.#925 (0.9 hours) \$ 329.40
(Billed on invoice #030)

(d) Analytical Services

Min-En Laboratories Invoice #7140

9 soil samples - prep. (@ \$0.60 each)	\$	5.40
9 soil samples - Au (@ \$4.25 each)		38.25
3 rock samples - prep. (@ \$2.50 each)		7.50
3 rock samples - Au (@ \$7.50 each)		22.50
	<hr/>	
	\$	73.65

Riocanex Laboratory

9 soil samples - Ag,Cr,Mo,Cu,Pb,Zn (@ \$4.75 ea) \$ 42.75

Total analytical services expenses: \$ 116.40

(e) Report Preparation

	<u>Rate/ day</u>	<u>Dates</u>	<u>No. days</u>	
Drafting	\$127.00	Apr.16,20/81	2	\$ 254.00
Typing	64.80	Apr.20,21/81	1.5	97.20
				<hr/>
				\$ 351.20

(f) Miscellaneous

Transportation re: camp equipment, personnel
and fuel:

Air North Inv.#6391 (Jul.29-30/80):	\$5,840.95
Air North Inv.#25312	891.44

\$6,732.39

Room and Board for cook and pilot 2 x 13 days @ \$36.70:	\$ 954.20
---	-----------

Cooks wages - 13 days @ \$80/day	\$1,040.00
----------------------------------	------------

Total	\$8,726.59
-------	------------

BAR portion of miscellaneous costs:	\$ <u>459.29</u>
-------------------------------------	------------------

GRAND TOTAL	<u><u>\$1,720.93</u></u>
-------------	--------------------------

V. QUALIFICATIONS

I, Louise K. Eccles, do hereby certify that:

1. I am a geologist residing at 782 West 22nd Avenue, Vancouver, British Columbia and was employed by Du Pont of Canada Exploration Limited at the time of the programme.
2. I am a graduate of the University of British Columbia with a B.Sc. (Honours) degree in geology.
3. I have practised my profession in geology continuously for the past four years in British Columbia, Ontario, the Yukon and Northwest Territories.
4. Between 1980 June 25 - August 31, I directed/ supervised a field programme on the BAR property on behalf of Du Pont of Canada Exploration Limited.



Louise K. Eccles

APPENDIX A*MIN-EN Laboratories Ltd.**Specialists in Mineral Environments*

Corner 15th Street and Bewicke

705 WEST 15th STREET

NORTH VANCOUVER, B.C.

CANADA

ANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORKPROCEDURE FOR GOLD GEOCHEMICAL ANALYSIS.

Geochemical samples for Gold processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95° C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

A suitable sample weight 5.0 or 10.0 grams are pre-treated with HNO_3 and HClO_4 mixture.

After pretreatments the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

At this stage of the procedure copper, silver and zinc can be analysed from suitable aliquote by Atomic Absorption Spectrophotometric procedure.

Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction of gold with Methyl Iso-Butyl Ketone.

With a set of suitable standard solution gold is analysed by Atomic Absorption instruments. The obtained detection limit is 5 ppb.

*MIN-EN Laboratories Ltd.**Specialists in Mineral Environments*Corner 15th Street and Bewicke
705 WEST 15th STREET
NORTH VANCOUVER, B.C.
CANADAANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORKPROCEDURES FOR Mo, Cu, Cd, Pb, Mn, Ni, Ag, Zn, As, F

Samples are processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95°C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized by ceramic plated pulverizer.

1.0 gram of the samples are digested for 6 hours with HNO_3 and HClO_4 mixture.

After cooling samples are diluted to standard volume. The solutions are analyzed by Atomic Absorption Spectrophotometers.

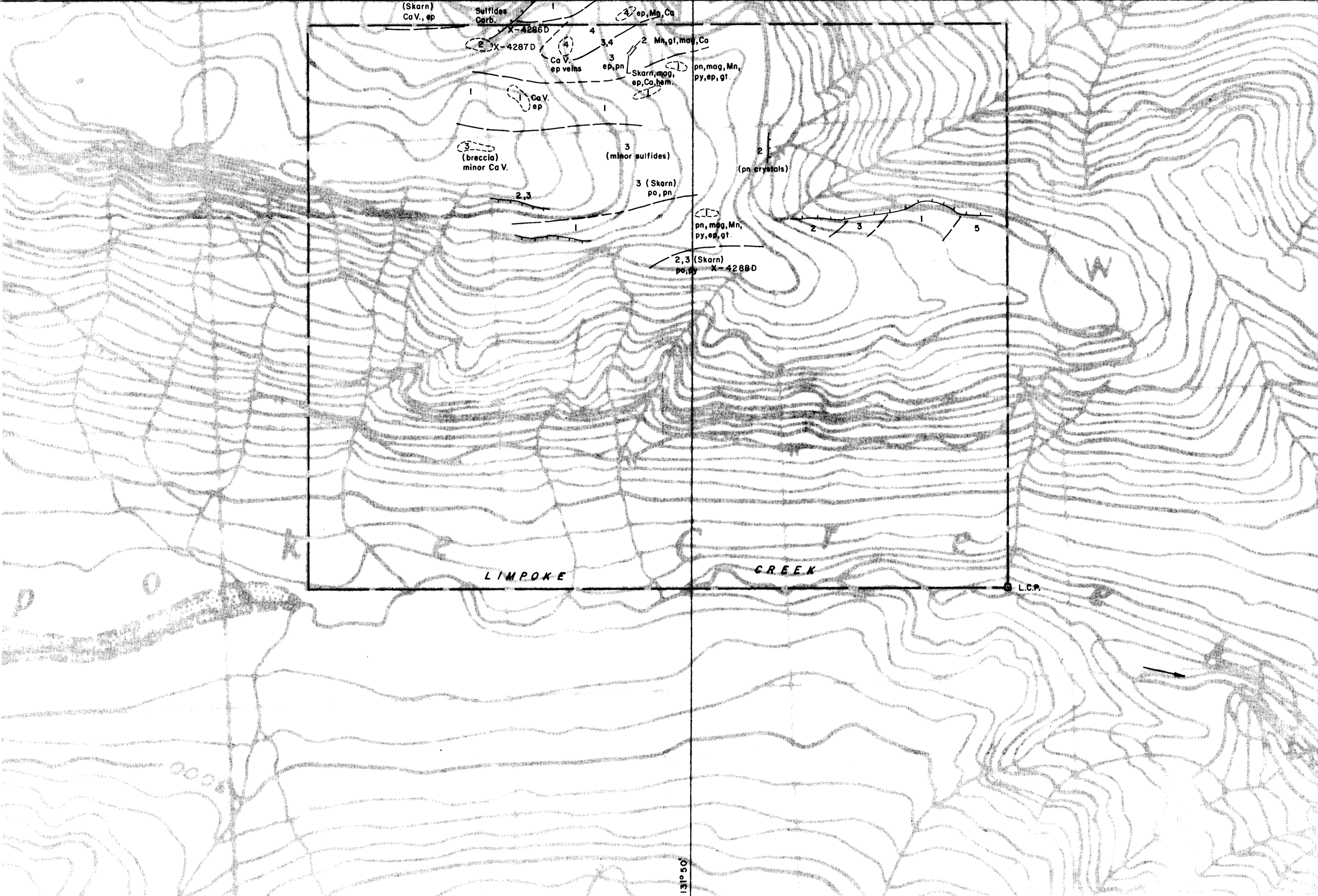
Copper, Lead, Zinc, Silver, Cadmium, Cobalt, Nickel and Manganese are analysed using the CH_2H_2 -Air flame combination but the Molybdenum determination is carried out by C_2H_2 - N_2O gas mixture directly or indirectly (depending on the sensitivity and detection limit required) on these sample solutions.

For Arsenic analysis a suitable aliquote is taken from the above 1 gram sample solution and the test is carried out by Gutzeit method using $\text{Ag CS}_2\text{N} (\text{C}_2\text{H}_5)_2$ as a reagent. The detection limit obtained is 1.2 ppm.

Fluorine analysis is carried out on a 200 milligram sample. After fusion and suitable dilutions the fluoride ion concentration in rocks or soil samples are measured quantitatively by using fluorine specific ion electrode. Detection limit of this test is 10 ppm F.

57° 50'

57° 50'



LEGEND

- 5 ANDESITE
- 4 CHERT PEBBLE CONGLOMERATE
- 3 CHERTY TUFF
- 2 CRYSTAL TUFF
- 1 MASSIVE TUFF

SYMBOLS

- OUTCROP (LOCATIONS APPROXIMATE)
- CONTACTS, APPROXIMATE
- CONTACTS, ASSUMED
- CLIFF
- X-4288D ROCK SAMPLE LOCATION & No.
- CLAIM LINE & LEGAL CORNER POST
- Ca V. CALCITE VEINING
- ep EPIDOTE
- gt GARNET
- hem HEMATITE
- Mn MANGANESE STAINING
- mag MAGNETITE
- pn PYROXENE
- po PYRRHOTITE
- py PYRITE

ROCK ASSAYS	
Tag No.	Au ozs/ton
4286D	0.001
4287D	0.003
4288D	0.002

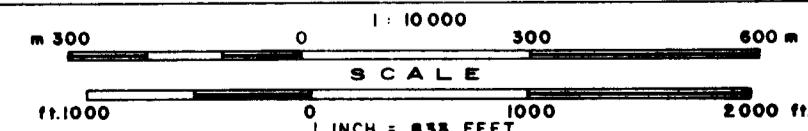
7113

L. Keeles

UPON EXPLORATION
CANADA

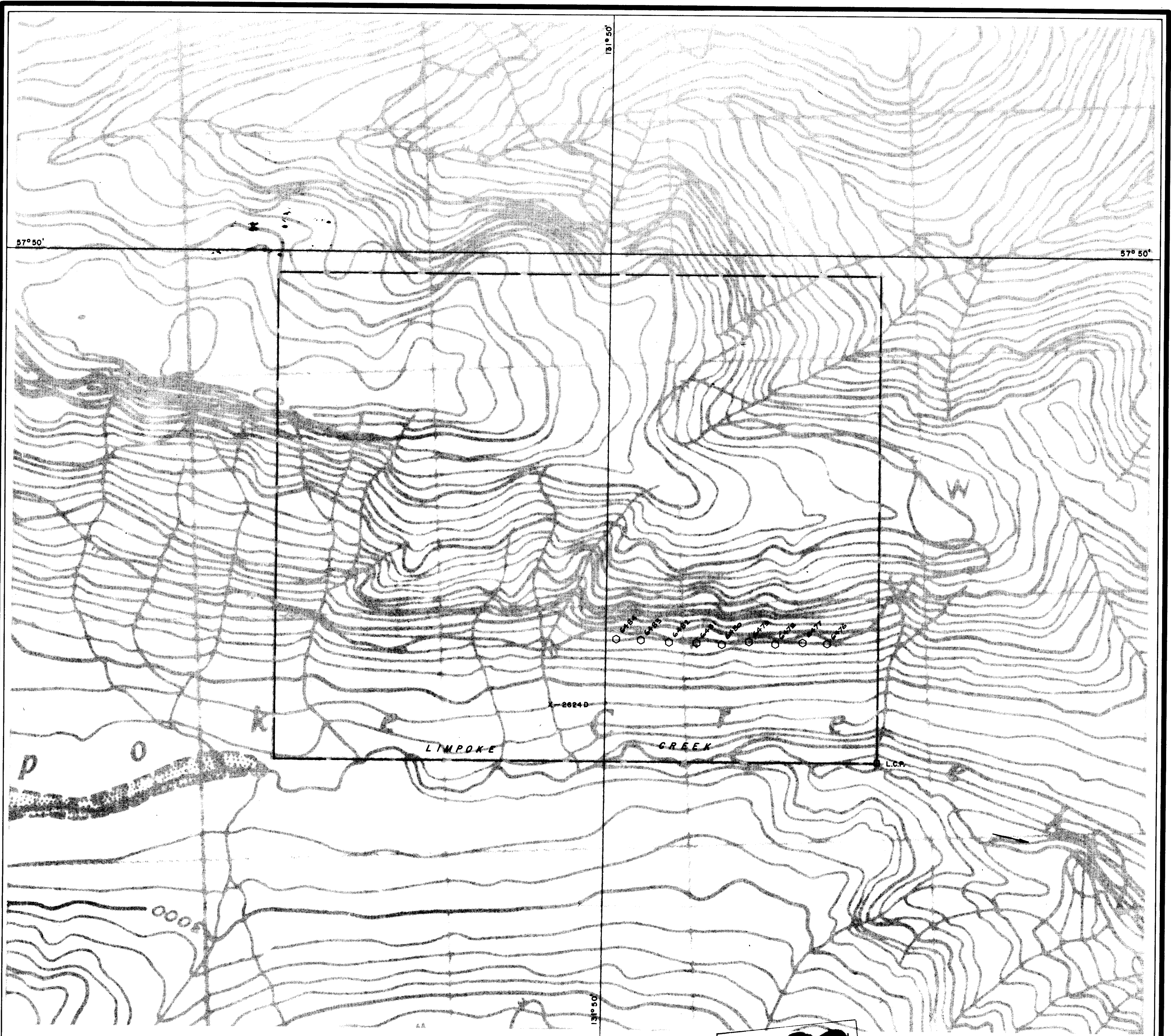
**ARGONAUT PROJECT
BAR CLAIM
GEOLOGY**

TELEGRAPH CR. AREA, BRITISH COLUMBIA



MAPPED BY: L.K.E.	REVISED:	N.T.S. No.: 104 @ 13W
DATE: 80.08.07		ACCT No.: 347-27
DRAWN BY: K.L.J.		DRWG. No.: AR. 80-207
DATE: 81.04.20		





LEGEND

- 6482 O STREAM SEDIMENT SAMPLE LOCATION & No. ('D' SERIES)
- X- 2624D ORIGINAL STREAM SEDIMENT SAMPLE LOC. & No.

ORIGINAL SAMPLE RESULTS

Tag No.	Mesh	Au P.P.B.	Hg P.P.B.	Pb P.P.M.	Cu P.P.M.	Ag P.P.M.	% H.M.
2624 D	- 20	420	-	52	260	2.1	6.55
	-100	35	58	36	133	1.6	-

FOLLOW-UP SOIL SAMPLE RESULTS -80 MESH

Tag	Au P.P.B.	Ag P.P.M.	Cr P.P.M.	Cu P.P.M.	Mo P.P.M.	Pb P.P.M.	Zn P.P.M.
6476	5	0.6	37	216	17	8	871
6477	5	0.4	45	390	9	69	490
6478	10	0.2	36	445	8	11	111
6479	5	0.4	44	325	4	10	86
6480	<5	0.3	58	273	3	18	115
6481	5	0.3	41	287	4	17	93
6482	10	0.9	38	619	81	10	150
6483	5	0.6	51	256	2	14	107
6484	<5	0.5	17	269	18	8	171

9193



L. Kelly

**ARGONAUT PROJECT
BAR CLAIM
GEOCHEMISTRY**

Au IN PPB. & Ag, Cr, Cu, Mo, Pb, Zn IN PPM.
TELEGRAPH CR. AREA, BRITISH COLUMBIA

1:10000 SCALE

1 INCH = 833 FEET

MAPPED BY: L.K.E.	REVISED:	N.T.S. No.: 104-13W
DATE: 80.08.07		ACCT No.: 347-27
DRAWN BY: K.L.J.		DRWG. No.: AR. 80-208
DATE: 81.04.16		

Note Regarding Original Sample Results:
The results of the analysis of the heavy mineral concentrate from the -20 (-20 +100 mesh) fraction are not weighted.