


3484

SCHEDULE OF MINERAL CLAIMS

HIXON CREEK, B. C.

CARIBOO MINING DIVISION

Claim Name "K" No. 1 to 84 Incl.
Record Number 61567 to 61650 Incl.
Record Date February ¹³~~16~~, 1971 
Application of Assessment Work 1 year each claim

Claim Name Hixon Quartz 1 to 4 Incl.
Record Number 61413R to 61416R Incl.
Record Date December 16, 1970
Application of Assessment Work 1 year each claim

SUMMARY REPORT

GEOCHEMICAL SURVEY

MINERAL CLAIMS

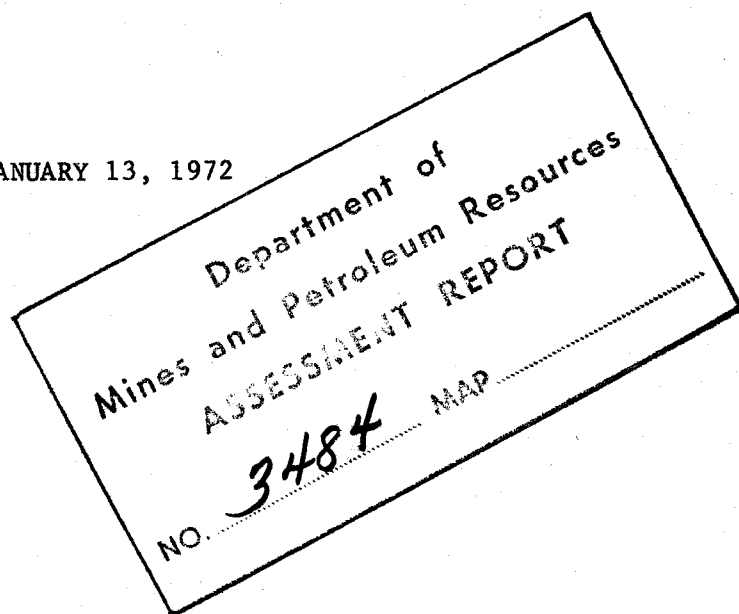
HIXON QUARTZ 1 TO 4 AND "K" 1 TO 84

HIXON CREEK, B. C.

BY

R. E. ANDERSON, P. ENG.

JANUARY 13, 1972



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Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3484 MAP #1

HIXON CREEK PROJECT
 LOCATION PLAN

SUMMARY REPORT

GEOCHEMICAL SURVEY

"K" 1 TO 84 AND HIXON QUARTZ 1 TO 4 MINERAL CLAIMS

HIXON CREEK, B. C.

INTRODUCTION

During the period June 14 to July 30, 1971, a detailed geochemical survey was completed over a group of mineral claims owned by Bethlehem Copper Corporation Ltd. in the Cariboo Mining Division. The survey investigations were conducted over a block of 88 mineral claims covering an area of approximately seven square miles (Fig. 4). Line cutting, chaining and sampling programs were completed by a crew of six men working under the direction of the writer. The field crew, all of whom were employed by Bethlehem Copper, consisted of three line cutters, two geological assistants and a senior geologist.

Results of the survey program together with a claim map of the area are shown in Figs. 1, 2, 3 and 4 which accompany this report.

LOCATION AND ACCESSIBILITY

The claim group is comprised of a contiguous block of 88 unsurveyed mineral claims, situated within the Cariboo Mining Division and located approximately three miles east of the town of Hixon Creek, B. C. Within the boundaries of the surveyed area, the terrain is heavily wooded and mountainous with ground elevation ranging from 2000 to 3000 feet above sea level.

Access to the property from Hixon Creek is provided by gravel road which parallels the bed of Hixon Creek. Hixon Creek flows westerly through the central portion of the property.

SURVEY GRID

Commencing at the intersection of the western boundary of the claim block and the access road, a base line trending N 50° E was established over a distance of 13,000 feet. Picket lines, extending 8500 feet to the north and south of the base line were located at approximately 600 foot intervals on a N 40° W bearing. Sub base lines were established 5000 feet to the north and south of the principal base line in order to provide accurate ground control. Sampling stations were chained and flagged at 500 foot intervals along each of the picket lines.

Total baseline cut and chained	13,000 feet
Total sub baseline cut and chained	21,400 feet
Total picket line cut, chained and sampled	<u>306,000 feet</u>
TOTAL	340,400 feet

SAMPLING PROCEDURE

Soil samples weighing approximately 75 grams per sample were collected from the "B" horizon at each of the stations noted on Fig. 3. The samples were placed in individual waterproof containers and forwarded to Vancouver Geochemical Laboratories where they were assayed for silver, gold and arsenic content.

ANALYTICAL PROCEDURES

1. Sample Preparation - Copper and Silver

- (a) Geochemical soil, silt and rock samples were received in the laboratory in wet-strength 3½ x 6½ Kraft paper bags.
- (b) The wet samples were dried in a ventilated oven.
- (c) The dried soil and silt samples were sifted, using an 80-mesh stainless steel sieve. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.
- (d) The dried rock samples were crushed and pulverized to minus 80-mesh. The pulverized sample was then put in a new bag for later analysis.

2. Methods of Digestion

- (a) 0.50 gram of the minus 80-mesh samples was used. Samples were weighed out by using a toploading balance.
- (b) Samples were heated in a sand bath with nitric and perchloric acids (15% to 85% by volume of the concentrated acids respectively).
- (c) The digested samples were diluted with demineralized water to a fixed volume and shaken.

3. Method of Analysis

Copper and Silver analyses were determined by using a Techtron Atomic Absorption Spectrophotometer Model AA4 or Model AA5 with their respective hollow cathode lamp. The digested samples were aspirated directly into an air and acetylene flame. The results, in parts per million, were calculated by comparing a set of standards to calibrate the atomic absorption unit.

1. Sample Preparation - Arsenic

- (a) Geochemical soil, silt and rock samples were received in the laboratory in wet-strength 3½ x 6½ Kraft paper bags.
- (b) The wet samples were dried in a ventilated oven.
- (c) The dried soil and silt samples were sifted by hand, using an 80 mesh stainless steel sieve. The plus 80 mesh fraction was rejected and the minus 80 mesh fraction was transferred to a new bag for later analysis.
- (d) The dried rock samples were crushed and pulverized, using a pulverizer with ceramic plates, to minus 80 mesh. The pulverized sample was then put in a new bag for later analysis.

2. Method of Digestion

- (a) 0.25 gram of the minus 80 mesh sample was used. Samples were weighed out by using a top-loading balance.
- (b) Samples were heated in a sand bath with concentrated perchloric acid (70 - 72% HClO₄ by weight) at a medium heat for several hours.
- (c) The digested samples were diluted with demineralized water.

3. Method of Analysis

- (a) Potassium iodide and stannous chloride in HCl were added to the digested samples.
- (b) Zinc metal was introduced and the arsenic in solution was gassed off as arsene through a glass wool scrubber plug saturated with lead acetate and into a solution of silver diethyldithiocarbonate in pyridine, forming a red complex with the silver diethyldithiocarbonate.
- (c) The concentration of the arsenic was determined colorimetrically by comparing the intensity of the color of the red complex with a set of known standards prepared in a similar fashion as the samples.

1. Sample Preparation - Gold

- (a) Geochemical rock, soil and silt samples were received in the laboratory in 8" x 13" plastic sample bags, in 4½" x 9" cotton mailing bags or in wet-strength 3½ x 6½ Kraft paper bags.
- (b) The wet samples were dried in a ventilated oven.
- (c) The dried samples were crushed and pulverized, using a pulverizer with ceramic plates, to minus 80 mesh. The pulverized sample was then put in a new bag for later analysis.

2. Method of Digestion

- (a) 10.0 grams of the minus 80 mesh sample was used. Samples were weighed out using a top-loading balance into 100 or 250 ml beakers.
- (b) Samples were digested vigorously on a hot plate, using aqua regia, for several hours.
- (c) The digested samples were filtered and the washed pulps were discarded. The filtrates were passed through ion exchange columns and then discarded.
- (d) The ion exchange resins were dried in crucibles and then ashed in a muffle furnace at 850° C.
- (e) The ashed ion exchange resins were dissolved in aqua regia and then volumes made up to 2 nls.

3. Method of Analysis

Gold analyses were determined by using a Techtron Atomic Absorption Spectrophotometer Model AA5 with a gold hollow cathode lamp. The solution made by digesting the ashed ion exchange resins was aspirated directly into an air-acetylene flame. The results were read out on a Photovolt Varicord Model 43 chart recorder. The gold values, in parts per billion, were calculated by comparing them with a set of gold standards. The detection limit using this method was found to be ten parts per billion of gold.

GEOLOGY

Due to the lack of outcrop, little is known of the rock formations underlying the grid area. Limited exposures in the western section are composed of dioritic rocks and related intrusives while in the central and eastern sections, grey quartzites, phyllites, quartz sericite schists, slates and greenstones predominate. The planes of foliation of the schistose rocks strike approximately 540° E dipping steeply to the northeast and southwest.

Numerous small, discontinuous, quartz veins containing minor amounts of pyrite, tetrahedrite and free gold occur in association with the greenstone members. The showings are exposed locally along the flanks of Hixon Creek and were explored to a limited extent by underground workings during the early 1900's. In recent years small scale, intermittent, placer mining operations have been conducted on the creek gravel beds.

DISCUSSION OF RESULTS

Assay determinations were completed on a total of 579 field samples with results reported in parts per million arsenic and silver.

Sixty-three of the samples were also tested for gold content with results reported in parts per billion. As a check, duplicate field samples were collected at 337 locations and rerun for arsenic and silver.

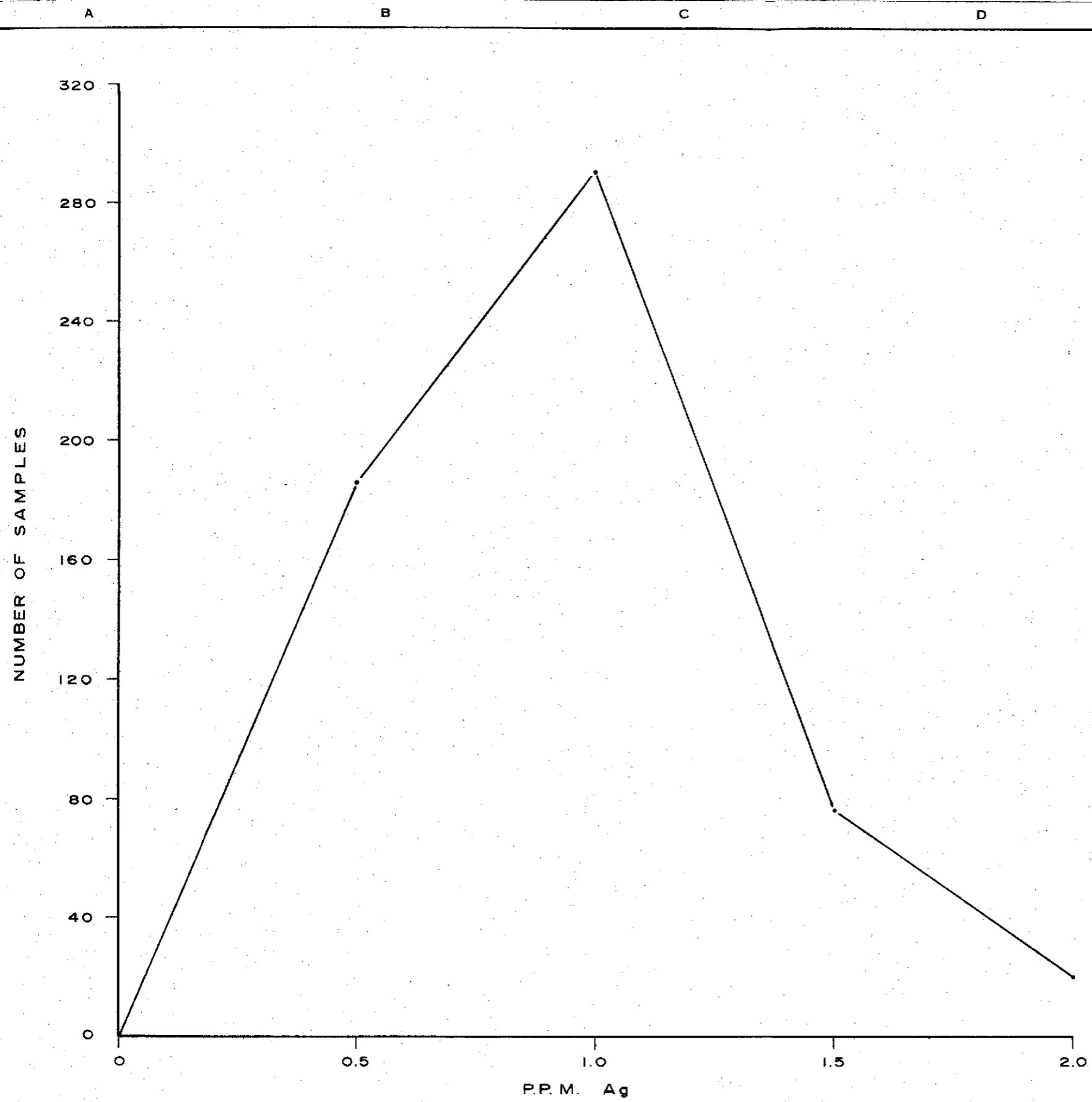
Histogram plots of the assay results indicate values in excess of 8 ppm As and 1.5 ppm Ag are anomalous (Figs. 1 and 2). Several coincident arsenic and silver "highs" situated in the south-eastern corner of the grid and extending northerly from Pedley Lake warrant further examination.



R. E. Anderson
P. Eng., British Columbia

REA/rb

January 13, 1972



Department of
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ASSESSMENT REPORT
NO. **3484** MAP

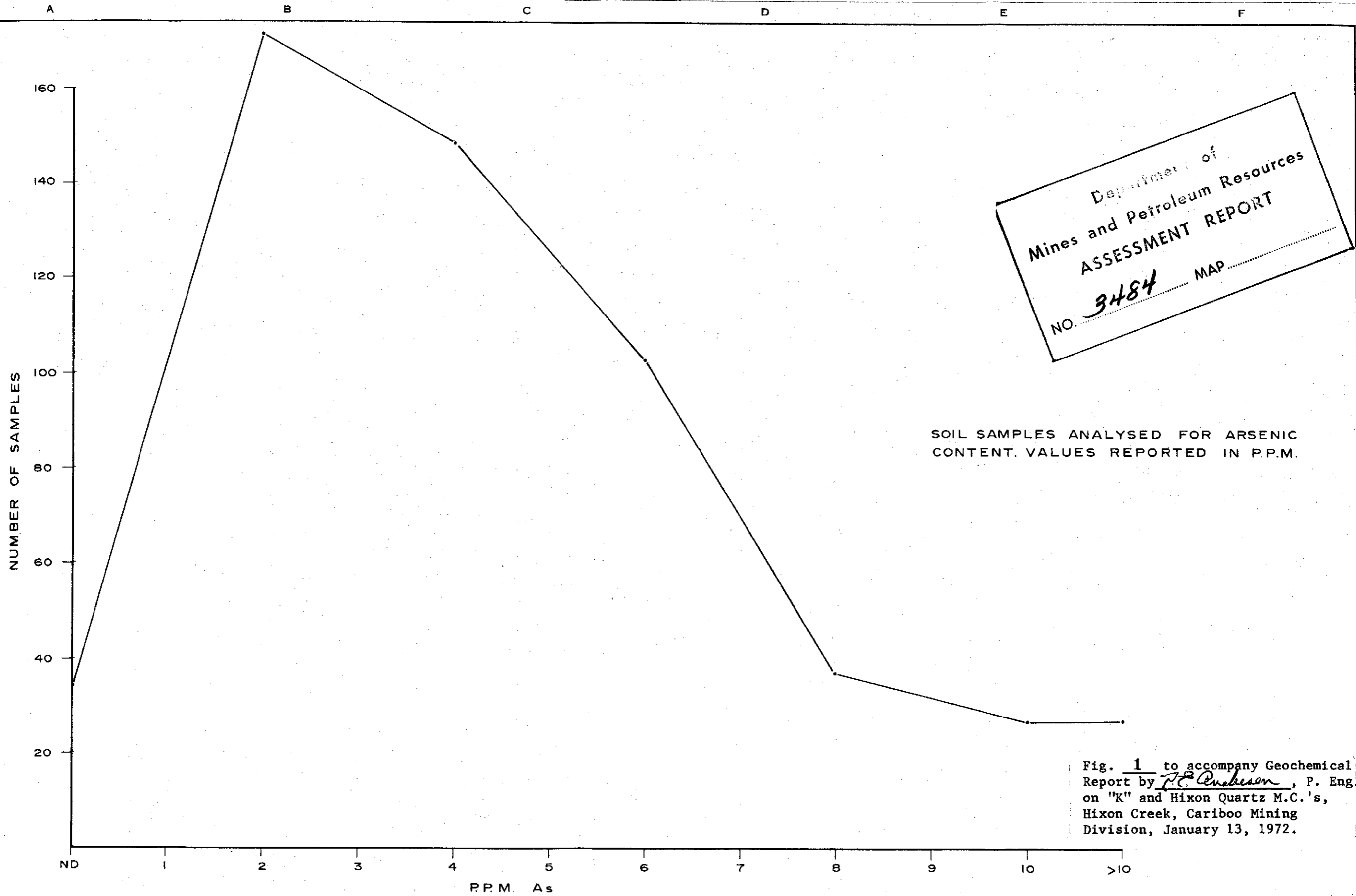
SOIL SAMPLES ANALYSED FOR SILVER
CONTENT. VALUES REPORTED IN P.P.M.

Fig. 2 to accompany Geochemical
Report, by R.C. Anderson, P.Eng.
on "K" and Hixon Quartz M.C.'s,
Hixon Creek, Cariboo Mining
Division, January 13, 1972.

DATE REVISED	BY	DEPT. - EXPLORATION
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		CHECKED - E.A.
		APPROVED -
		DATE - Dec. 1971
		SCALE -



TITLE - HIXON CREEK PROJECT HISTOGRAM - Ag	
FILE NUMBER -	DRAWING NUMBER -



Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. 3484 MAP

SOIL SAMPLES ANALYSED FOR ARSENIC CONTENT. VALUES REPORTED IN P.P.M.

Fig. 1 to accompany Geochemical Report by P. C. Anderson, P. Eng. on "K" and Hixon Quartz M.C.'s, Hixon Creek, Cariboo Mining Division, January 13, 1972.

DATE REVISED	BY	DEPT. - EXPLORATION		TITLE - HIXON CREEK PROJECT HISTOGRAM - As	
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		CHECKED - E. A.			
		APPROVED -			
		DATE - Dec. 1971			
		SCALE -			

TITLE
 FILE NO.
 DRAWING NO.

DOMINION OF CANADA:
 PROVINCE OF BRITISH COLUMBIA.
 To Wit:

In the Matter of

Expenditures incurred by Bethlehem Copper Corporation Ltd. in completing a geochemical soil sampling survey of K 1 to 84 inclusive and Hixon Quartz 1 to 4 M.C.'s, Cariboo Mining Division.

I, R. E. Anderson, P. Eng.
 of Bethlehem Copper Corporation Ltd.
 2100 - 1055 West Hastings Street
 Vancouver 1, B. C.

in the Province of British Columbia, do solemnly declare that

PERSONNEL

R. E. Anderson, Supervisor - June 10 - 12, July 1-9	(12 days)	\$ 667.00	
K. Kirkland, Geologist - June 18 to July 23	(36 days)	923.00	
F. Day, Linecutter - June 14 to 28	(15 days)	350.00	
G. Evans, Linecutter - June 14 to July 31	(47 days)	1,025.00	
M. McCracken, Geol. Assist. - June 18 to July 23	(36 days)	577.00	
S. Donahue, Geol. Assist. - June 30 to July 13	(14 days)	212.00	
I. Oliver, Linecutter - July 1 to 12	(12 days)	173.00	
E. Andersen, Map Preparation - August 6 to 10	(5 days)	112.00	\$4,039.00

BOARD AND ROOM

167 days @ \$8.00/day/man 167 x \$8.00 1,336.00

ASSAY COSTS

Vancouver Geochemical Laboratories Ltd., Vancouver, B. C.			
Au - 63 samples		157.50	
Ag - 916 "		1,050.45	
As - 915 "		1,423.95	2,631.90

EQUIPMENT RENTAL

3/4 Ton Ford Pickup - 4 wheel drive	47 days @ \$15.00/day	705.00	
Chain Saw	47 days @ \$ 5.00/day	235.00	
Misc. equipment, flagging, chains, stakes, etc.		200.00	1,140.00

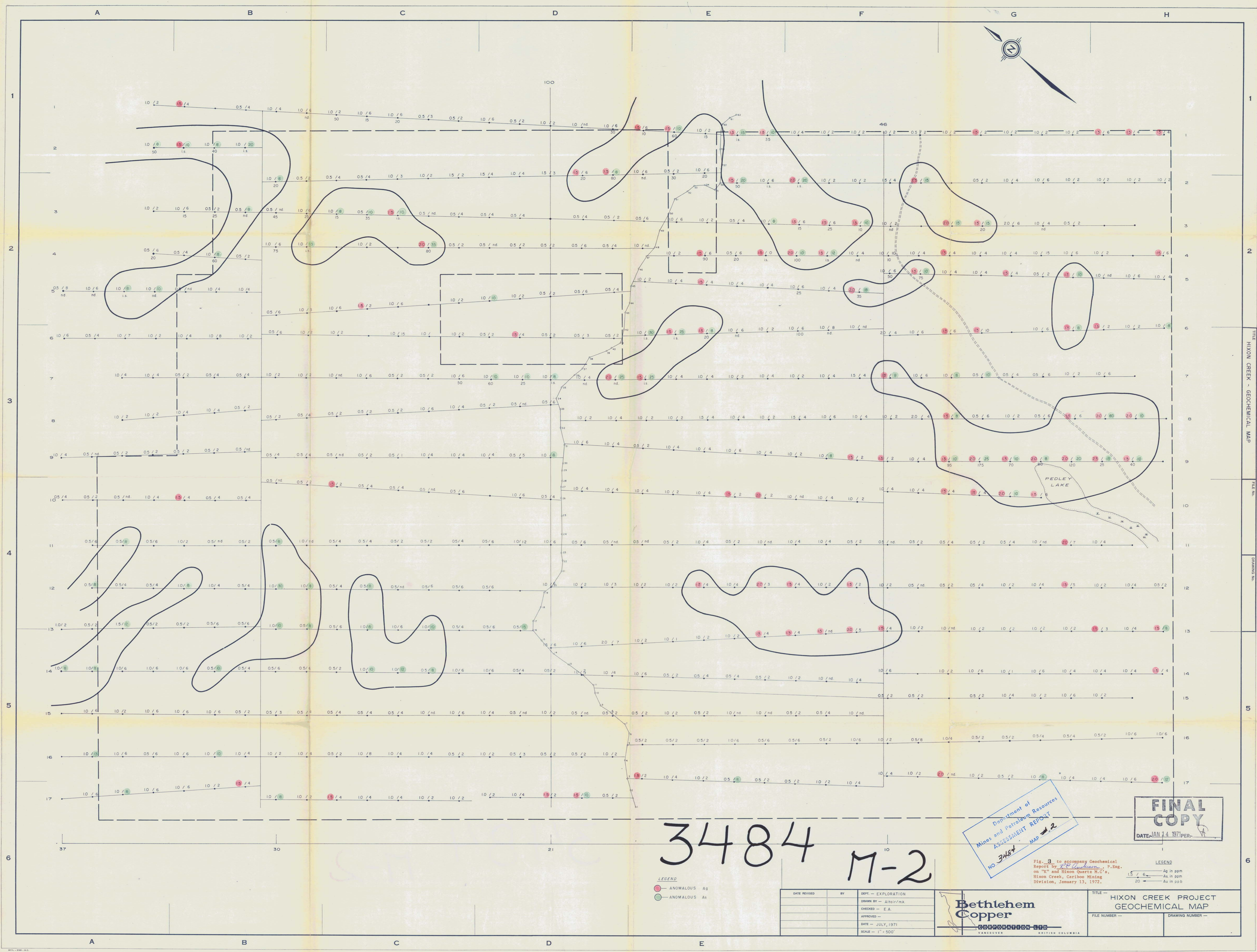
TOTAL \$9,146.90

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the *City*
 of *Vancouver*, in the
 Province of British Columbia, this *14th*
 day of *January, 1972*

R. E. Anderson
 A Commissioner for taking Affidavits within British Columbia or
 A Notary Public in and for the Province of British Columbia

D W J SPECH T



TITLE HIXON CREEK - GEOCHEMICAL MAP
FILE NO.
DRAWING NO.

3484 M-2

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 NO. 3484 Map #2

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Fig. 3 to accompany Geochemical Report by *R.E. Anderson, P.Eng.* on "X" and Hixon Quartz M.C.'s, Hixon Creek, Cariboo Mining Division, January 13, 1972.

LEGEND
 ● - ANOMALOUS Ag
 ● - ANOMALOUS As

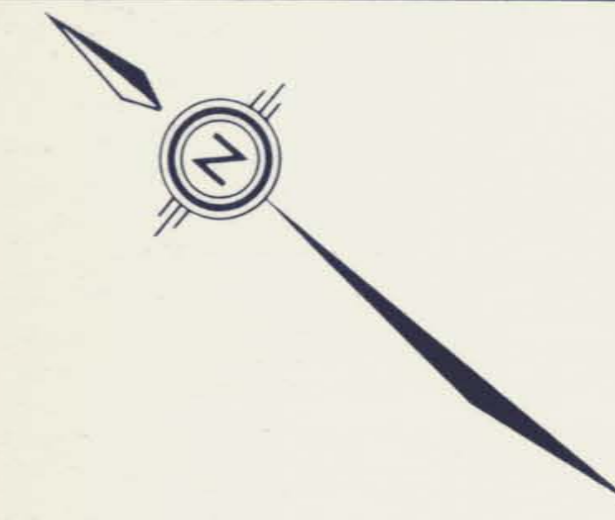
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		APPROVED -
		DATE - JULY, 1971
		SCALE - 1" = 500'



TITLE - HIXON CREEK PROJECT GEOCHEMICAL MAP	
FILE NUMBER -	DRAWING NUMBER -

LEGEND
 15 / 6 - Ag in ppm
 20 - As in ppm
 20 - As in ppb

A B C D E F G H



1
2
3
4
5
6



FINAL COPY
DATE - JAN 14 1972

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Mineral and Petroleum Resources
ANALYST'S REPORT
No. 3484 Map 45

Fig. 4 to accompany Geotechnical Report by R.P. Anderson, Eng. on "K" and Hixon Quartz H.C.M., Hixon Creek, Cariboo Mining Division, January 13, 1972.

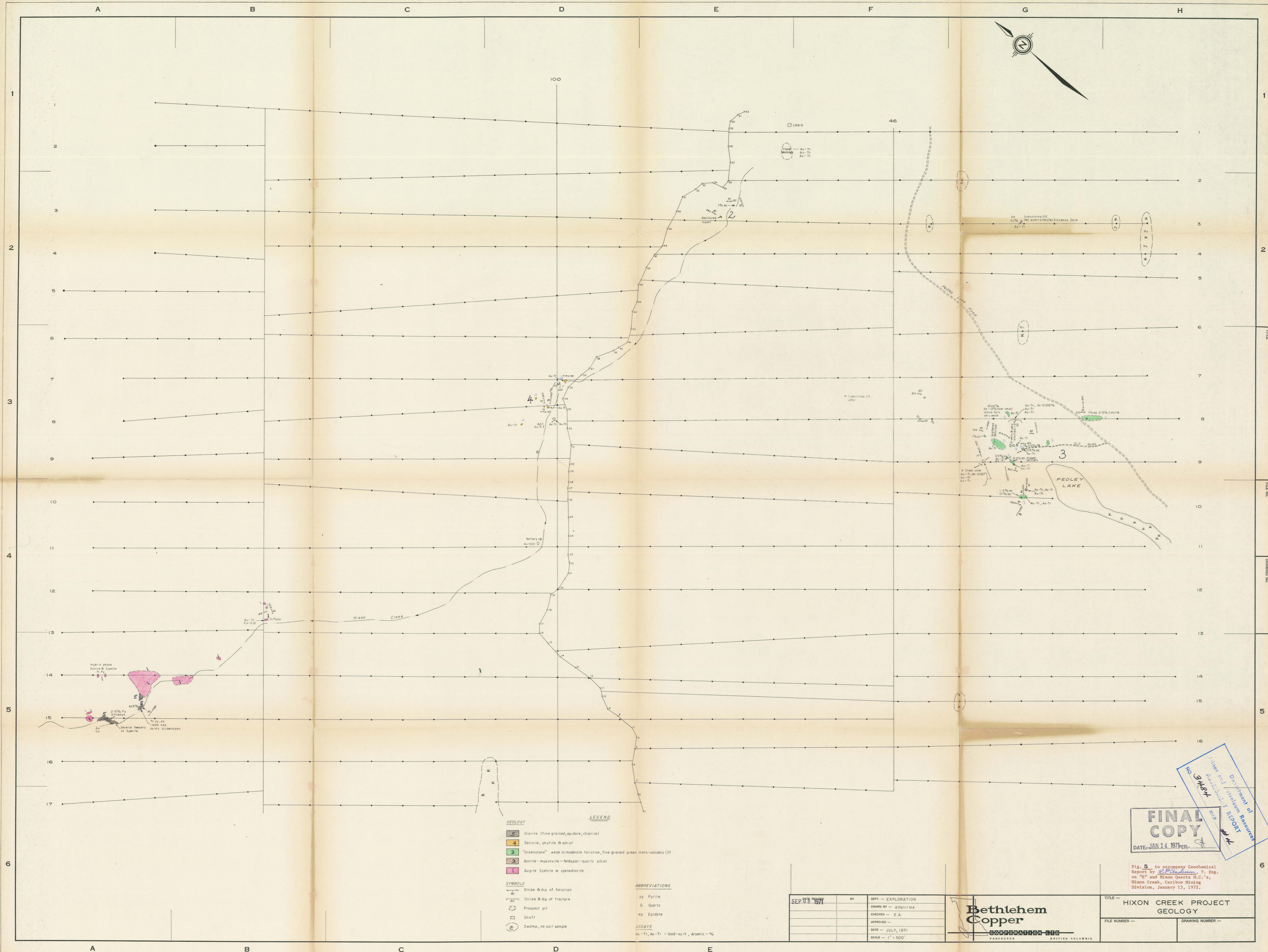
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		APPROVED -
		DATE - DEC. 1971
		SCALE - 1" = 500'



TITLE - HIXON CREEK PROJECT MINERAL CLAIMS

FILE NUMBER - DRAWING NUMBER -

A B C D E



- GEOLOGY**
- 5 Diorite (fine grained, epidote, chlorite)
 - 4 Sericite, phyllite & schist
 - 3 "Greenstone" weak to moderate foliation, fine grained green meta-volcanic (?)
 - 2 Biotite-muscovite-feldspar-quartz schist
 - 1 Augite Syenite or syenodiorite
- SYMBOLS**
- Strike & dip of foliation
 - Strike & dip of fracture
 - Prospect pit
 - Shaft
 - ⊗ Swamp, no soil sample
- ABBREVIATIONS**
- py Pyrite
 - Q Quartz
 - ep Epidote
- ASSAYS**
- Au-Tr, As-Tr + Gold-oz/t, Arsenic-%

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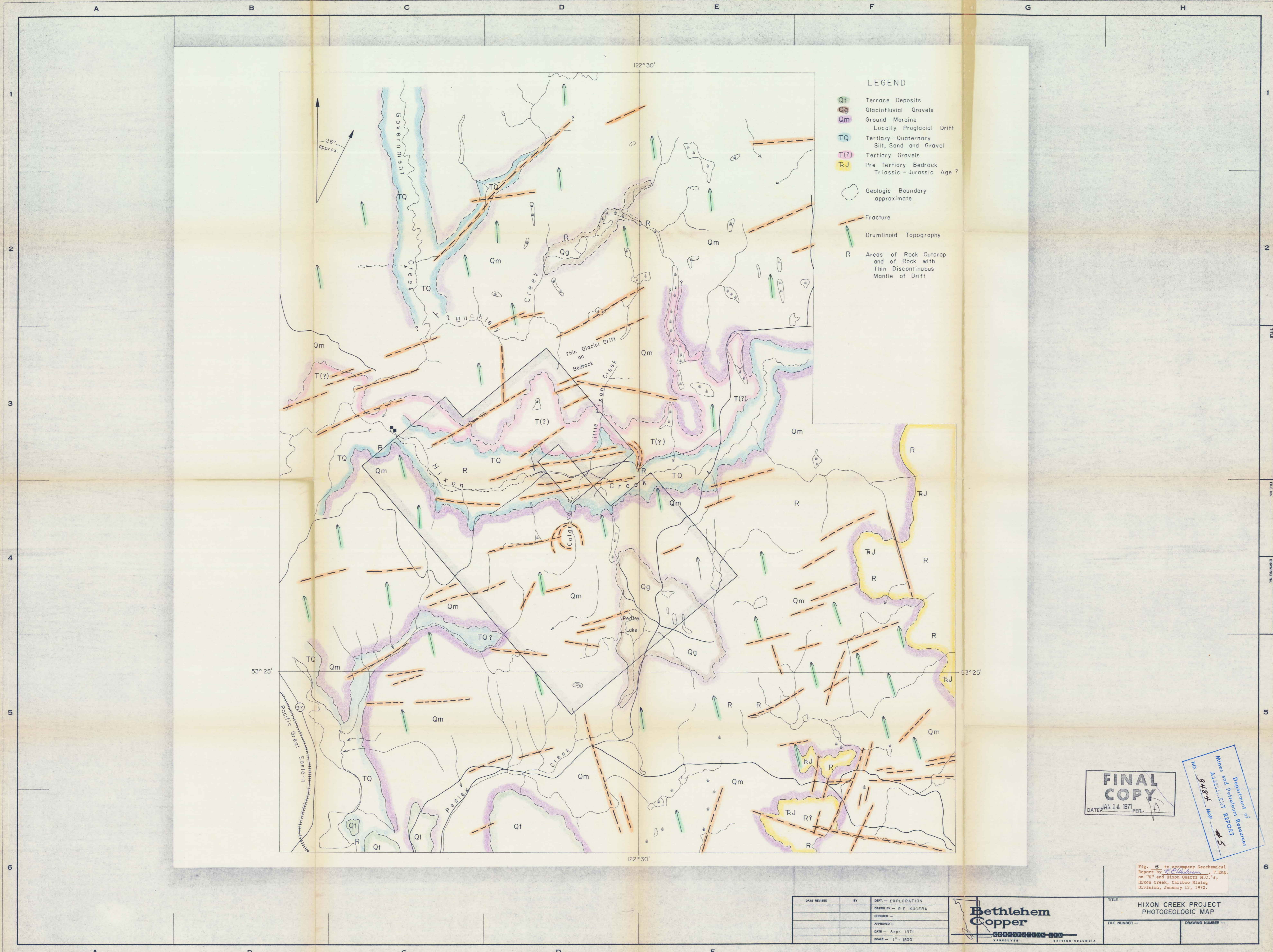
Bethlehem Copper
CORPORATION LTD.
VANCOUVER BRITISH COLUMBIA

TITLE - HIXON CREEK PROJECT GEOLOGY	
FILE NUMBER -	DRAWING NUMBER -

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DATE: JAN 14 1972 PER: [Signature]

Fig. 5 to accompany Geochemical Report by [Signature], P. Eng. on "H" and Hixon Quartz H.C.'s, Hixon Creek, Cariboo Mining Division, January 13, 1972.

Division of
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 Geological Resources
 No. 344
 2-2-72
 REPORT
 M.M.P.



- LEGEND**
- Q1 Terrace Deposits
 - Qg Glaciofluvial Gravels
 - Qm Ground Moraine
 - TQ Tertiary-Quaternary Silt, Sand and Gravel
 - T(?) Tertiary Gravels
 - R J Pre Tertiary Bedrock Triassic-Jurassic Age ?
 - Geologic Boundary approximate
 - - - Fracture
 - ↑ Drumlinoid Topography
 - R Areas of Rock Outcrop and of Rock with Thin Discontinuous Mantle of Drift

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 DATE: JAN 14 1971 PER: [Signature]

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 NO. 3484
 NEW 5

Fig. 6 to accompany Geochemical Report by [Name], P. Eng. on "M" and Hixon Quartz H.C.'s, Hixon Creek, Cariboo Mining Division, January 13, 1972.

DATE REVISED	BY	DEPT. - EXPLORATION
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		CHECKED -
		APPROVED -
		DATE - Sept. 1971
		SCALE - 1" = 1500'



TITLE -	HIXON CREEK PROJECT PHOTOLOGIC MAP
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