

1972 Geological Report

PEACH LAKE CU PROPERTY (Coranex Option;  
Tim 69-74 incl. and 76 claims)

Located 13 air-miles NE of LacLaHache, B.C.  
Latitude 51°56' Longitude 121°15' 92 P 14  
Clinton Mining Division

By G.H. Leary and J.F. Allan, P.Eng. (B.C.)  
for Amax Exploration, Inc.

Work was carried out during  
July 1 to 18, 1972

92P/14E, 14W

4030

# 4030

1972 Geological Report

TITLE	Peach Lake Cu Property (Coranex Option; Tim Claims)
AUTHORS	G.M. Leary and J.F. Allan, P.Eng. (B.C.)
DATE	November, 1972
COMMODITY	Cu
LOCATION-Area	Peach Lake
-Mining Division	Clinton
-Coordinates	Latitude 51°56' Longitude 121°15'
-NTS	92 P 14

MAX Vancouver Office

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. <b>4030</b>	MAP.....

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## SUMMARY

The Peach Lake Copper Property is located within rolling terrain of the Interior Plateau, near Lac La Hache, in south-central British Columbia. The property consists of two separate claim blocks, comprising 86 claims, owned by Coranex and presently under option to Amax Exploration, Inc. Claim blocks cover copper showings on which intermittent exploration has been carried out since 1966. This report covers results of geological mapping conducted by AMAX in 1972 on the Tim claim block (i.e. seven claims) located four miles southeast of Peach Lake.

Regionally the Tim claims are situated within a narrow belt of Upper Triassic Nicola Group rocks near the western margin of the Quesnel Trough. Claims occupy part of the southern segment of a large annular magnetic high that largely lies peripheral to a monzonite stock. The magnetic high coincides with areas underlain by Nicola strata and syenodiorite intrusions.

The Tim claims are underlain by an indicated moderately to steeply northeasterly-dipping sequence of Nicola volcanic rocks locally intruded by syenodiorite intrusive(?) breccia bodies and by northeast or northwest trending syenodiorite dykes. A few northeast and northwest trending shears and faults are known.

Copper mineralization occurs as disseminations and in vein and fracture stockworks spatially related to shear zones and syenodiorite dykes. Three such showings are known (i.e. Tim 1, 2 and 3) all of which appear to be tabular zones up to maximum widths of 200 feet. Up to 5% pyrite occurs disseminated and along fractures in syenodiorite intrusive(?) breccia bodies.

## INTRODUCTION

The Peach Lake Copper Property is located within the Interior Plateau of south-central British Columbia, 13 air-miles northeast of Lac La Hache (Figures 1 and 2). It is readily accessible via gravel road. Copper showings discovered in the area by Coranex in 1966 were subsequently staked and explored to 1968. American Smelting & Refining Co. and Amax Exploration, Inc. respectively optioned the property in 1969 and 1972.

The property consists of two separate claim blocks comprising a total of 86 claims (Figure 2). One block of 79 claims (Peach, Pit and WC claims; West and East Groups) adjoins the south side of Peach Lake, whereas, another block of seven claims (Tim claims; New Tim Group) is located four miles southeast of Peach Lake. This report covers the results of geological mapping on the Tim claims in 1972.

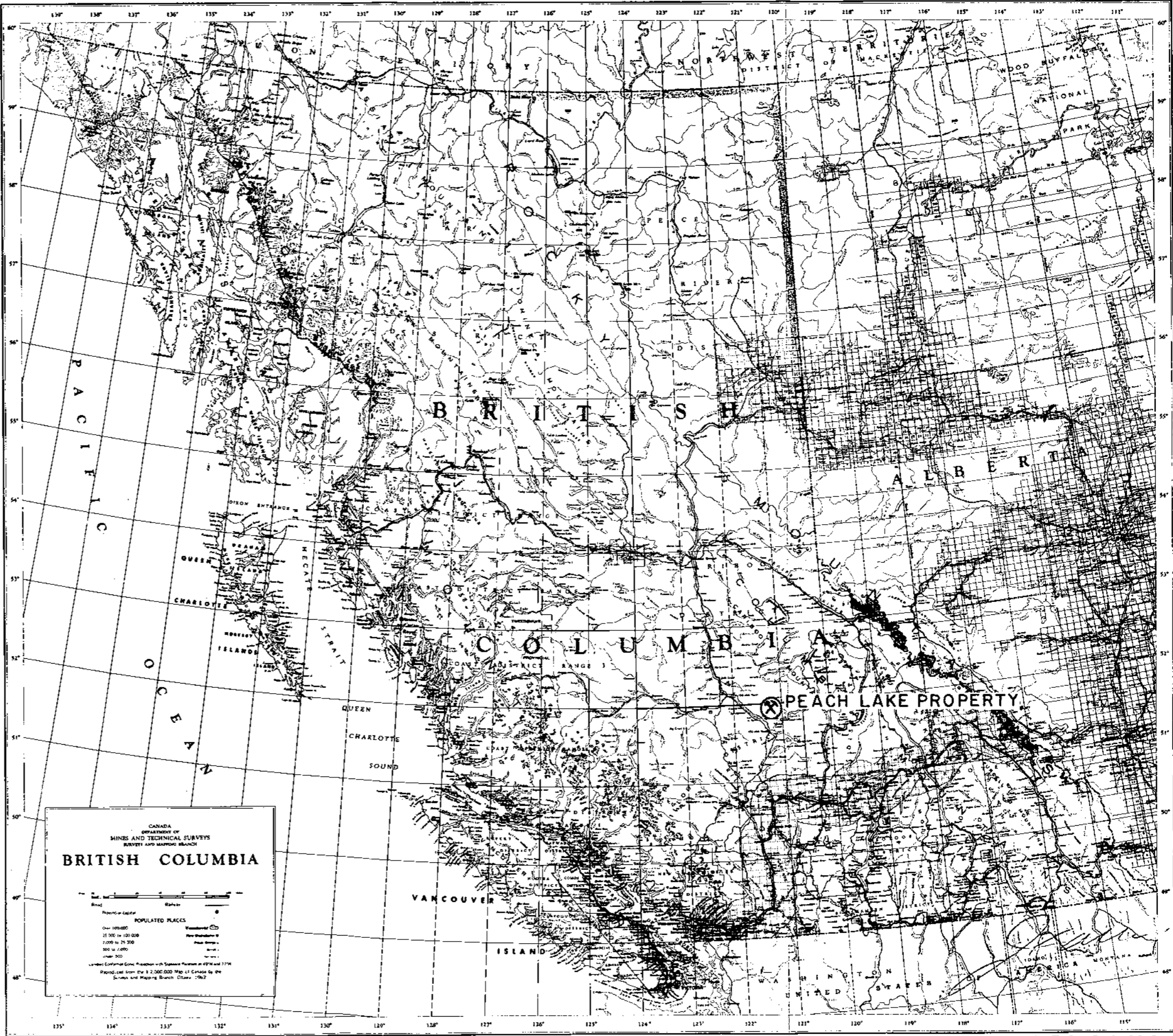
Physiography of the region covered by the Tim claims is characterized by a moderately to thickly timbered gentle easterly slope. Altitudes range from 4300 to 4900 feet. Thin glacial sediment cover only occurs locally.

## REGIONAL GEOLOGIC AND AEROMAGNETIC SETTING

The Peach Lake Property is regionally situated within a northwest to northsouth trending belt of Upper Triassic Nicola Group volcanic and sedimentary rocks, up to ten miles wide, located near the western margin of the Quesnel Trough (Figure 3). The belt lies between the Jurassic Takomkane batholith on the east and overlying Miocene plateau basalts to the west. Nicola rocks locally are intruded by diorite to monzonite and occasionally syenite stocks and dykes. Several such intrusive bodies with associated copper showings are present within the Peach Lake Property.

Aeromagnetically the property occupies part of the southern segment of a regional annular magnetic high that largely

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 ASSESSMENT REPORT  
 No. **4030** MAP #1



CANADA  
 DEPARTMENT OF  
 MINES AND TECHNICAL SURVEYS  
 SURVEY AND MAPPING BRANCH

**BRITISH COLUMBIA**

Scale: 1:500,000

POPULATED PLACES

Over 100,000	100,000 to 250,000	25,000 to 100,000	5,000 to 25,000	1,000 to 5,000	Under 1,000
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Legend:  
 Province Capital: Victoria  
 Populated Places: (various symbols for different population ranges)  
 Railway: (dashed line with cross-ticks)  
 Road: (solid line)  
 Water: (blue shading)  
 Contour Lines: (dashed lines with elevations)

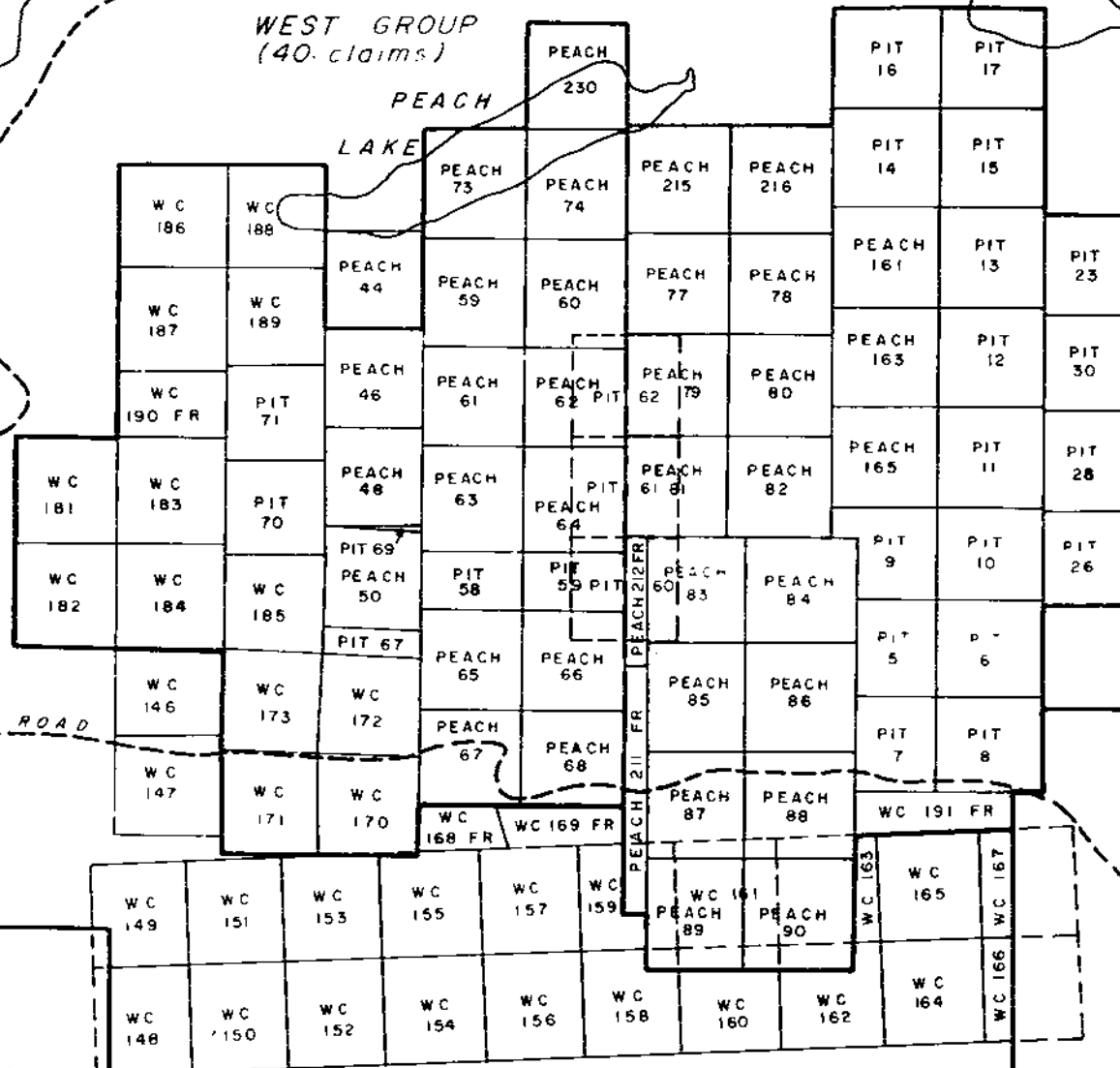
Source: Compiled from the 1:500,000 Map of Canada by the Survey and Mapping Branch, Ottawa, 1967.

LOCATION MAP

AMAX EXPLORATION INC.  
(CORANEX OPTION)

WEST GROUP  
(40 claims)

EAST GROUP  
(39 claims)



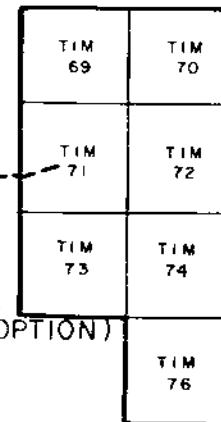
AMAX  
POTASH  
LIMITED

BETHLEHEM  
COPPER  
CORP.  
LTD.

C. GUNN

AMAX POTASH LIMITED

AMAX EXPLORATION INC.  
NEW TIM GROUP (CORANEX OPTION)



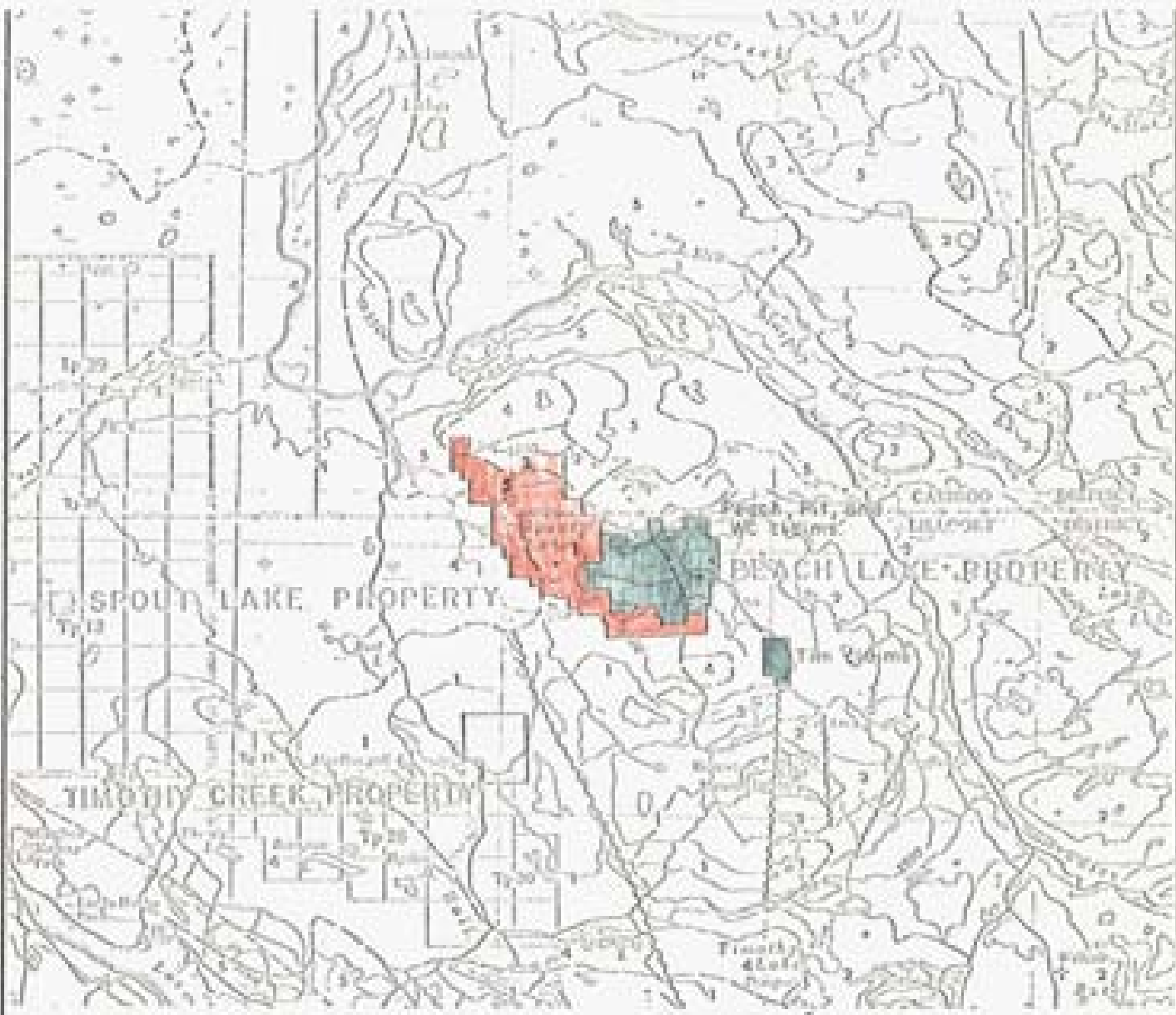
Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4030 MAP #2

AMAX EXPLORATION INC.  
PEACH LAKE PROPERTY  
CORANEX OPTION  
CLINTON MINING DIVISION — BRITISH COLUMBIA

CLAIM MAP

SCALE 1" = 1/2 MILE

Revised Nov. 2, 1972



LEGEND

QUATERNARY

5 Glacial deposits and alluvium.

TERTIARY

4 Plateau basalts.

3 KANLOOPS GROUP - Basic to acid volcanic rocks.

JURASSIC

2 TAKOMKANE BATHOLITH - Basic to acid granitic rocks.

UPPER TRIASSIC - LOWER JURASSIC

1 NICOLA GROUP - Volcanic and sedimentary rocks.

4030

M-3

AMAX EXPLORATION INC

PEACH LAKE PROPERTY  
CORANEX OPTION

CLINTON KING DIVISION - BRITISH COLUMBIA

REGIONAL GEOLOGICAL MAP

Scale 1 : 250,000

*J. A. ...*



0204

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4030 MAP #3

CM



lies peripheral to a hornblende monzonite stock. The aeromagnetic high largely coincides with areas underlain by Nicola strata and syenodiorite and associated intrusions (re. Sutherland-Brown, A. 1968; Dept. of Mines Annual Report, pp 155-159).

Locally, the region of the magnetic high is covered by a thin veneer of Miocene plateau basalts.

## PROPERTY GEOLOGY

### Introduction

Geological mapping of all trenches, roads and along most grid lines (i.e. Tim Grid) was carried out on the Tim claims in 1972 (Figure 4). Outcrops are scarce over the northern portion of the claim block. Here, angular float was occasionally used as evidence of bedrock material. Areas underlain by Nicola volcanic rocks denoted as UNv (i.e. undifferentiated Nicola volcanic rocks) were not mapped by the writer. This data was taken from Coranex geological sketch maps.

Terminology and numbering sequence of rock units on the Tim claims corresponds to that as applied in a previous assessment report on the Peach and Pit claims lying adjacent the south side of Peach Lake (i.e. Geological and Geochemical Report, Peach Lake Copper Property (Coranex Option) by G.M. Leary and T.J.R. Godfrey, 1972).

### Summary Statement

The Tim claims are underlain by massive andesitic volcanic rocks intruded locally by possible syenodiorite intrusive breccia bodies and by northeast or northwest trending syenodiorite dykes. Also, a few northeast and northwest trending shears and faults are known.

Copper mineralization occurs as disseminations and in vein and fracture stockworks spatially related to shear zones and syenodiorite dykes. Three such showings are known (i.e. Tim

1, 2, and 3) all of which are of minor significance due to restricted size. Pyrite occurs disseminated and along fractures in syenodiorite intrusive breccia bodies.

#### Description of Rock Units

##### Nicola Group

Nicola Group volcanic strata appear to strike northwesterly and dip moderately to steeply to the northeast across the Tim claims. Two stratigraphic units are recognized including a lower syenodiorite volcanic breccia unit (Unit 3) and an upper massive andesitic volcanic unit (Unit 4b).

Unit 3 is only exposed outside the claims to the west. It consists of abundant angular to rounded fragments of syenodiorite and epidotized volcanic material up to 2 to 3 inches across in a dense, fine grained andesitic groundmass. Sparse pyrite locally occurs disseminated in breccia.

Unit 4b dominantly consists of massive, dark green andesitic tuffs and flows. Tuffs commonly contain minor amounts of breccia fragments of syenodiorite and epidotized volcanic material similar to fragments in Unit 3. Typical Unit 3 breccias locally are interbedded with Unit 4b. Flows are commonly porphyritic with up to 20 - 30% partially epidotized feldspar phenocrysts.

Undifferentiated Nicola volcanic rocks (UNv) are located on Tim 69 and 70 claims. This data was taken from Coranex geological sketch maps.

##### Small Vent Intrusions(?)

Small possible volcanic vent intrusions (Unit 5a) are located on Tim 69-72 claims. Two such bodies are known. They appear to be elongate oval-shaped bodies trending northeasterly or northwesterly measuring up to 600 feet wide and at least up to 1400 feet long. They are very similar to Unit 3 breccia except for the following features:

1. The western body is discordant to Unit 4b andesitic rocks and within 400 feet or more of the contact andesitic rocks are fractured and mineralized (i.e. pyrite).

2. The groundmass in vent intrusions locally exhibits fine to medium grained augite and/or plagioclase crystals.

3. The western body consists in part of massive augite porphyry basalt containing variable amounts of syenodiorite fragments.

4. Augite porphyry basalt fragments are also relatively common in vent intrusions.

5. Vent intrusions commonly contain up to 5% disseminated and fracture controlled pyrite.

#### Alkalic Intrusive Complex

Several dykes of syenodiorite (Unit 6) occur within the claims intruding all above rock types. They are commonly narrow (i.e. up to 200 feet wide). Most dykes trend north-easterly, whereas, one dyke on Tim 73 claim trends northwesterly. Dykes are leucocratic and contain phenocrysts of hornblende and/or pyroxene and plagioclase laths in an aphanitic or fine grained feldspathic groundmass. Phenocrysts are commonly aligned and exhibit a weak foliation in dykes.

One very narrow dyke of pinkish-orange porphyritic hornblende syenite (Unit 8) was noted cutting syenodiorite and volcanic rocks on Tim 73 and 74 claims.

#### Structure

Structural elements recognized within and adjacent the Tim claims include bedding, intrusive contacts, faults, shears, foliation, joints, fractures and veinlets. Structure of the Nicola sequence and intrusive bodies has been discussed previously.

Faults and shears trending northeasterly are recognized in the northwestern portion of the claim group. They are

characterized by intensely fractured rock and gouge across widths up to at least 100 feet.

A northwesterly trending fault is inferred adjacent a syenodiorite dyke on Tim 73 claims on the basis of a straight, steep-sided gulley and local shearing in nearby outcrops.

Jointing and fracturing are most intense at and in the vicinity of Tim 1 to 3 Cu Showings where they have controlled veining and sulphide mineralization. Fracturing is intense within the western-most syenodiorite intrusive breccia (Unit 5a) body partially exposed on Tim 69 and 71 claims. Joints and vein sets at copper showings commonly strike northwesterly or northeasterly.

#### Veining and Alteration

Veining was only observed within the Tim claims as vein sets and stockworks at the Tim 1, 2 and 3 Copper Showings. Minerals characteristic of veinlets include potash feldspar, epidote, magnetite, chalcopyrite and pyrite. Minor associated quartz occurs in veinlets at the Tim 1 Showing.

Veinlets commonly range from hairline to 1" wide (average 1/8" - 1/4"). Vein frequency varies from one to six veins per foot.

No significant alteration, other than weak pervasive bleaching and epidotization of feldspar phenocrysts in the main syenodiorite dyke at the Tim 1 Showing, is known within the Tim claims.

#### MINERALIZATION

Pyrite, chalcopyrite and bornite were the only sulphide minerals recognized on the Tim claims. They occur in veinlets, along fractures and disseminated. Three copper showings within the Tim claims are known (i.e. Tim 1, 2 and 3 Copper Showings). All showings are spatially related to syenodiorite dykes. Two are also spatially related to shear zones.

The Tim 1 Showing is exposed in a trench on the boundary

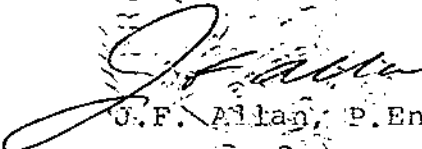
of Tim 71 and 72 claims. The showing occurs at the western contact of a northeasterly trending syenodiorite dyke and has an apparent width of approximately 50 feet. It consists of a fracture and vein stockwork containing pyrite, chalcopyrite and minor bornite with associated epidote, potash feldspar and quartz. Minor sulphides also occur disseminated.

The Tim 2 Showing consists of two separate showings located 750 feet apart in trenches adjacent a northwesterly-trending syenodiorite dyke and inferred fault on Tim 73 claim. Showings consist of intense potash feldspar, epidote, calcite and magnetite vein stockworks across a few feet containing chalcopyrite and minor pyrite. Minor veining and mineralization occurs within the syenodiorite dyke and adjacent volcanic rocks between the two main showings.

The Tim 3 Showing occurs in and immediately adjacent a northerly to northeasterly trending syenodiorite dyke exposed on the boundary of Tim 73 and 74 claims. Here, fracture and vein stockworks containing minor chalcopyrite and pyrite with associated epidote, potash feldspar and magnetite occur over a strike length of up to 1200 feet and across widths up to 200 feet. Locally, malachite occurs abundantly along fractures and joint surfaces.

In addition to the above showings, sparse amounts of chalcopyrite occurs associated with epidote and pyrite along fractures and disseminated in and adjacent to the western-most body of syenodiorite intrusive(?) breccia on Tim 69 and 71 claims. Up to 5% pyrite occurs locally within the intrusive body.

November 1972  
AMAX Vancouver Office

G.M. Leary  
  
J.F. Allan, P.Eng. (B.C.)

APPENDIX I

STATEMENT OF COSTS

Expenses incurred on the Tim 69-74 inclusive and 76 claims  
between July 1 and July 18, 1972.

Summary of Work

Geological Mapping - 1 square mile

Personnel and Salaries

G.M. Leary, M.Sc. Geologist I/C, 601-535 Thurlow Street, Vancouver 5, B.C. 7 days @ \$60.00/day	\$420.00
G.C. Stock, Jr. Assistant, 1725 West 16th Avenue, Vancouver 9, B.C. 7 days @ \$22.00/day	154.00

Room and Board

14 man days @ \$10.00/day	140.00
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Vehicle

7 days @ \$20.00/day	140.00
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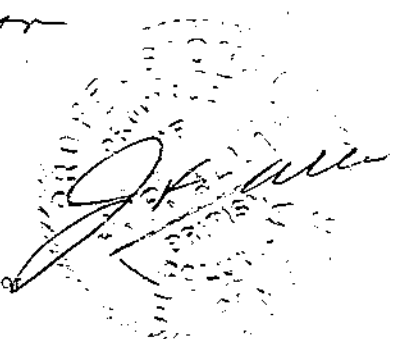
Report Preparation and Drafting

	<u>150.00</u>
	\$1,004.00
	=====

This work is to be applied for one year's assessment  
on Tim 69-74 inclusive and Tim 76

Declared before me at the City  
of Vancouver, in the  
Province of British Columbia, this 10  
day of Nov 1972, A.D.

Jim Turner  
Commissioner for taking Affidavits within British Columbia or  
A Notary Public in and for the Province of British Columbia.  
Sub-mining Recorder



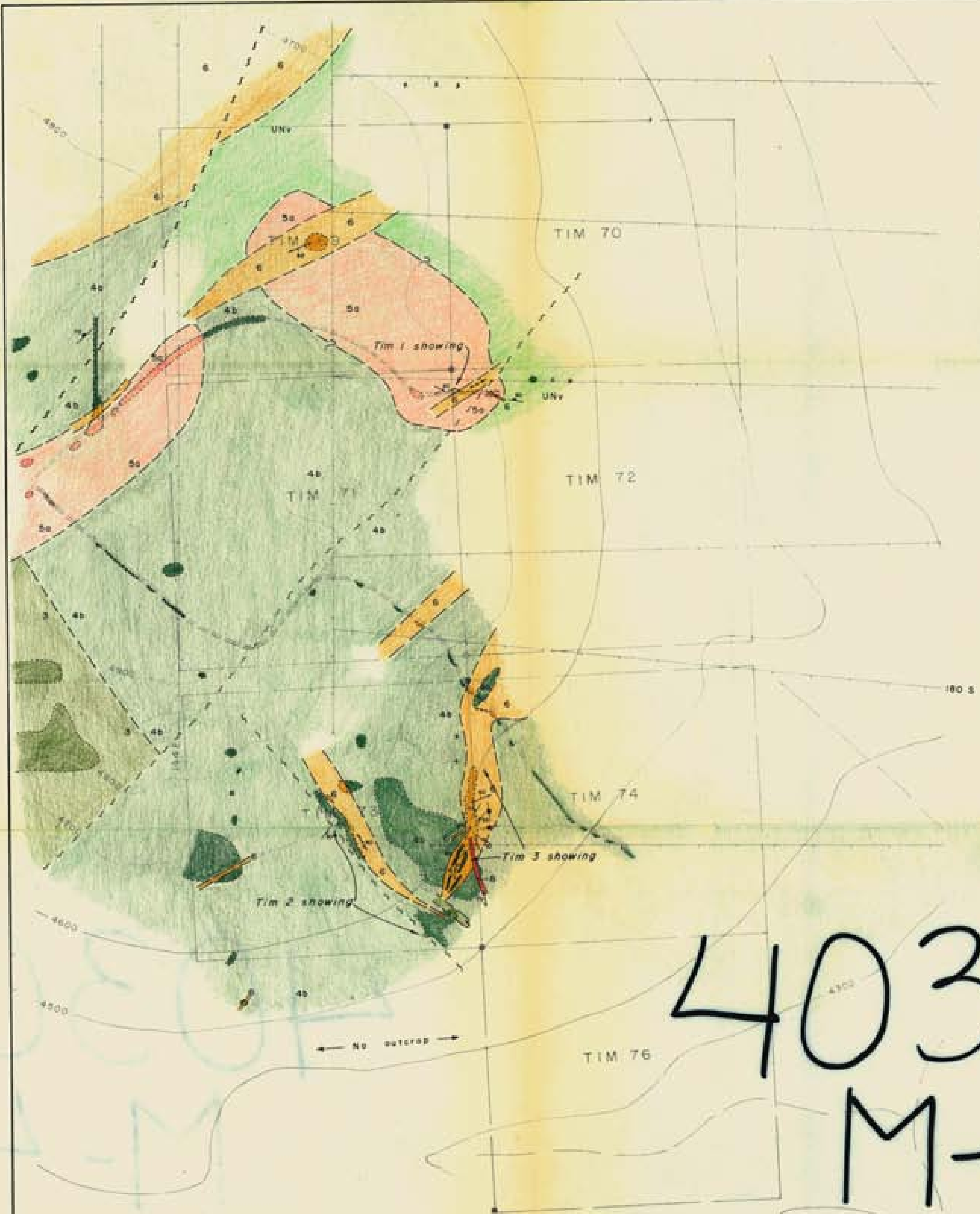
APPENDIX II

CLAIM DATA

<u>Claim Name</u>	<u>Record Number</u>	<u>Recording Date</u>	<u>Anniversary Date</u>
Tim 69	14106	October 14, 1966	October 14, 1980
Tim 70	14107	October 14, 1966	October 14, 1980
Tim 71	14108	October 14, 1966	October 14, 1980
Tim 72	14109	October 14, 1966	October 14, 1980
Tim 73	14110	October 14, 1966	October 14, 1980
Tim 74	14111	October 14, 1966	October 14, 1979
Tim 76	14113	October 14, 1966	October 14, 1979

Claims are all part of the New Tim Group





LEGEND

- UPPER TRIASSIC
- ALKALIC INTRUSIVE COMPLEX.
    - Pink syenite dykes
    - Syenodiorite.
  - SMALL VENT INTRUSIONS (?).
    - Syenodiorite intrusive breccia.
  - NICOLA GROUP.
    - Undifferentiated volcanic rocks.
    - Massive andesitic flows and tuffs.
    - Syenodiorite and volcanic breccia.

SYMBOLS

- Outcrop.
- Geological contact (defined, approximate).
- Fault.
- Vein set (inclined, vertical).
- Jointing (inclined, vertical).
- Foliation (inclined, vertical).
- Bedding (inclined, vertical).
- Claim post, location line.
- Claim boundary.
- Topographic contour (contour interval 100').
- Road.
- Stream.
- Swamp, swamp boundary.
- Trench.

4030  
M-4

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NO. 4030 MAP #4

AMAX EXPLORATION INC.  
PEACH LAKE PROPERTY  
TIM CLAIMS  
CLINTON MINING DIVISION — BRITISH COLUMBIA  
**GEOLOGICAL MAP**

DATE REVISION	DATE PRINTED	Drawn by F.J.F. Date Nov. 8, 1972	FIG. 4
		N.T.S. File 92 P 14	

To accompany "1972 GEOLOGICAL REPORT ON THE PEACH LAKE PROPERTY - TIM CLAIMS" by G.M. Leary and J.F. Allen, P. Eng.