

# 3294

## GEOCHEMICAL REPORT

ON

THE LORI GROUP OF MINERAL CLAIMS

SQUAMISH AREA

VANCOUVER MINING DIVISION

BY

J. Buchholz, Geologist

A. W. Dean, P. Eng.

CLAIMS:

LORI 1 - 18

LOCATION:

11 miles east of Squamish  
49° 122° N.W.

OWNER:

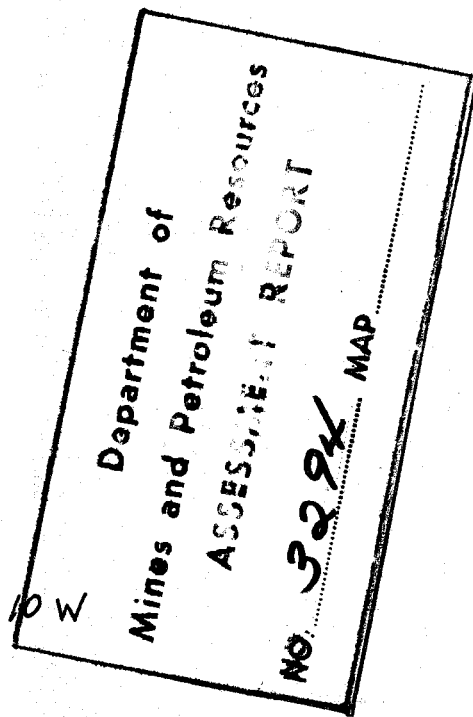
E. B. Peterson

SPONSOR:

Minorex Ltd.

DATES:

August 7th - September 30th, 1971



September 30, 1971

Vancouver, B. C.

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\* \* \* \*

## INTRODUCTION

A soil geochemical survey was completed, during the late summer of 1971, on the Lori 1 to 18 claims held under option by Minorex Ltd., from E. B. Peterson of Vancouver, British Columbia. The survey was prompted by the fact that minor chalcopyrite-molybdenite mineralization was exposed in a road cut within intrusive rocks, located on the Lori group approximately eleven miles east of Squamish, British Columbia. The programme was directed by A. W. Dean of Minorex, and supervised by J. Buchholz of Western Geological Services Ltd. Field work was carried out by employees of Western Geological Services under the supervision of P. Folk, B.A.Sc. The data, gathered and the results of the field work, are discussed in the body of this report.

## LOCATION AND ACCESS

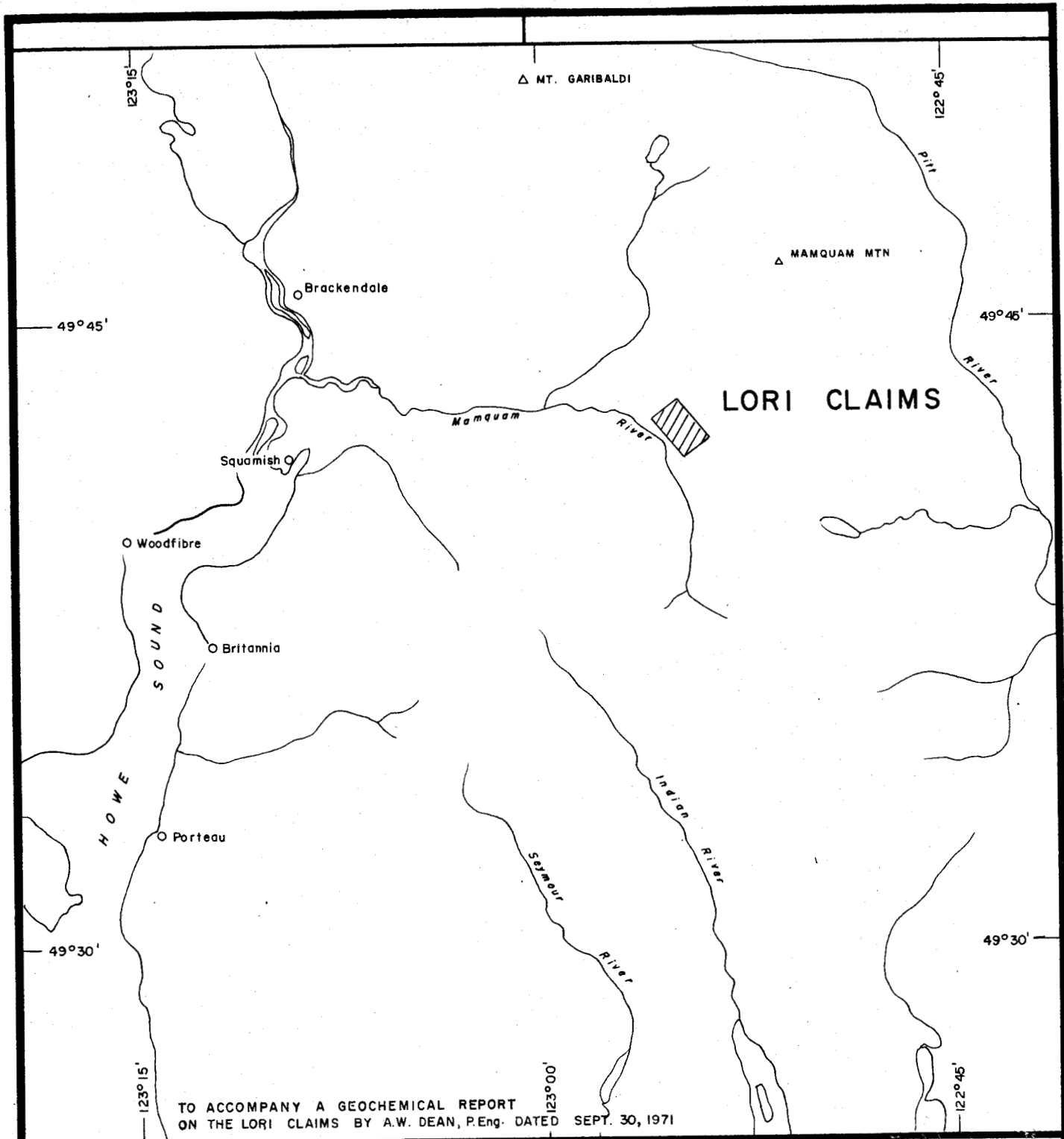
The property is located eleven air miles east of Squamish on the east side of the Mamquam River, between approximate elevations of 2,500 and 4,500 feet. Access to the property is by paved road to Squamish and from there, by good gravel road to the property. Logging is in progress both on, and in the vicinity of the claim block, and numerous access roads traverse the property in a southeast-northwest direction. The terrain is moderately rugged, but steep, with average slopes of 30° or more. Large rock bluffs, difficult to traverse, are located above road M 11.

Various parts of the property have been burned and/or logged; these areas are very difficult to traverse. Due to the logging in progress it is expected that some of the grid lines have already been obliterated.

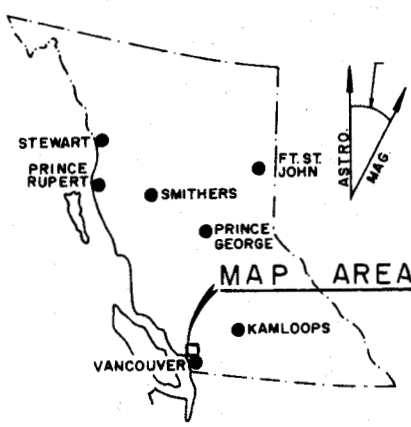
## CLAIMS

The Lori Group comprises a total of eighteen full-size, contiguous claims acquired by staking during the summers of 1970 and 1971. The claims were recorded in Vancouver and subsequently optioned to Minorex Ltd.

Claim names, record numbers and record dates are listed below:



TO ACCOMPANY A GEOCHEMICAL REPORT  
ON THE LORI CLAIMS BY A.W. DEAN, P.Eng. DATED SEPT. 30, 1971



BRITISH COLUMBIA

MINOREX LTD., LORI GROUP OPTION

LOCATION MAP

*Alex Dean  
Sept 30/71*

LORI CLAIMS

SQUAMISH AREA, VANCOUVER MINING DIVISION



SEPTEMBER 30, 1971

FIGURE I

<u>Claim Name</u>	<u>Record Number</u>	<u>Record Date</u>
Lori 1	17888	October 30, 1970
2	17889	October 30, 1970
3	17890	October 30, 1970
4	17891	October 30, 1970
5	17892	October 30, 1970
6	17893	October 30, 1970
7	17917	November 13, 1970
8	17918	November 13, 1970
9	17919	November 13, 1970
10	17920	November 13, 1970
11	18462	July 2, 1971
12	18463	July 2, 1971
13	18464	July 2, 1971
14	18465	July 2, 1971
15	18466	July 2, 1971
16	18467	July 2, 1971
17	18468	July 2, 1971
18	18469	July 2, 1971

Full interest in the above claims is held by E. B. Peterson of Vancouver, British Columbia.

### GEOLOGY

The Lori claims overlie intrusive rocks of the coast crystalline complex. Rocks consist in the most part, of heterogenous, uneven textured diorites and quartz diorites with quartz not generally plentiful. Mafic rich inclusions (biotite and hornblende) were observed occasionally, as was sphene, present in small amounts, within the dioritic rocks. Dykes, related to the Garibaldi volcanics, are common, as are greenish (later?) andesitic dykes trending northeast, with steep dips. Some porphyritic rocks were seen, but their relationship to other rock types, or mineralization is not known.

Westerly trending, steeply dipping fault or shear structures were observed locally.

Mineralization consists of pyrite, malachite, chalcopyrite, and molybdenite in fractures and associated with small quartz veinlets. Mineralization appears to trend westerly. Traces of malachite are evident over most of the grid along the "M-11" road.

Chlorite, epidote and secondary K-feldspar alteration occur in the vicinity of the mineralization. Some pyritization was observed in fractures in areas not obviously mineralized.

### GEOCHEMISTRY

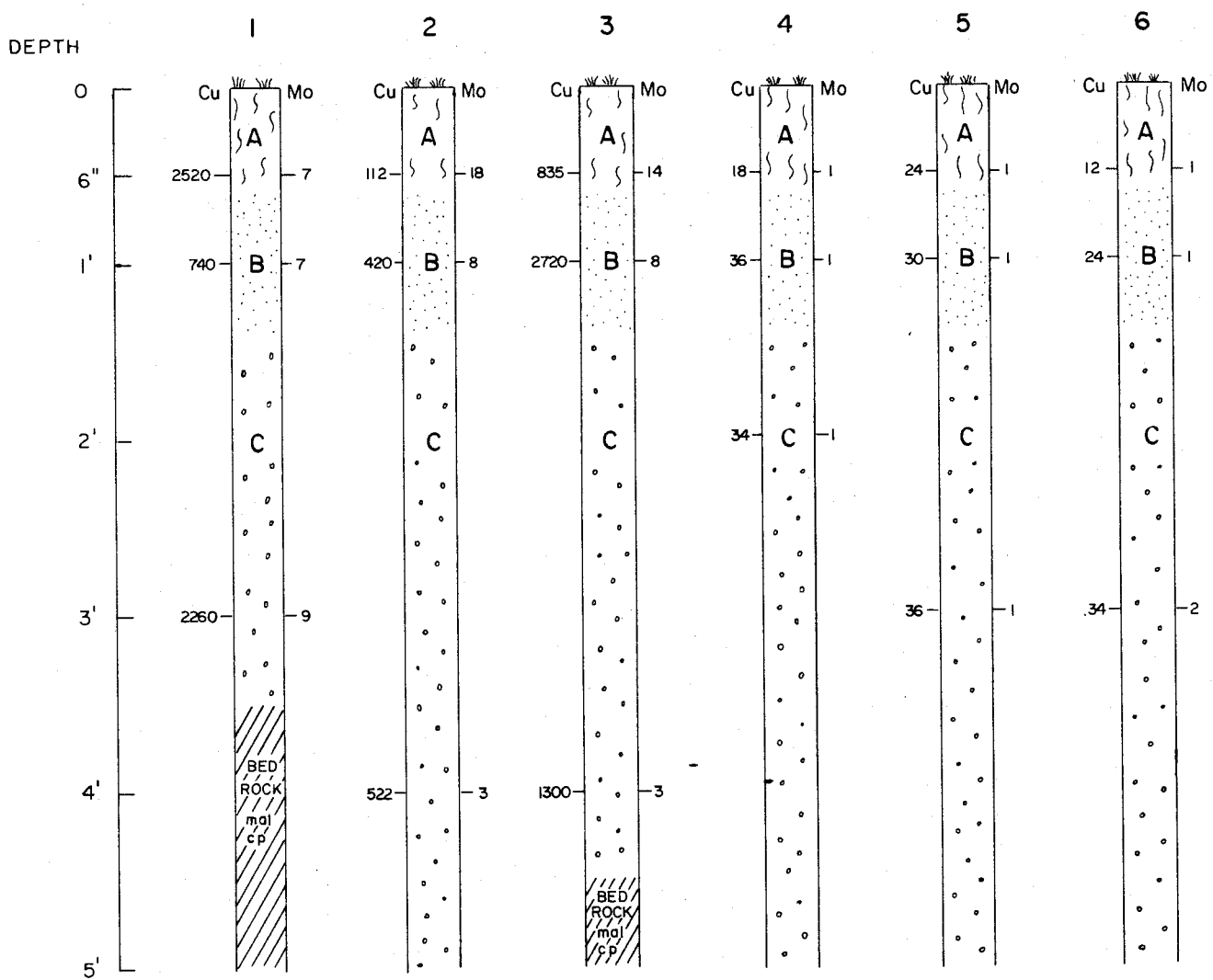
#### Soil Profile

Soil on the Lori claims can be divided into three poorly developed but distinct horizons. The top six inches ("A" horizon) consists of dark brown, humic material, composed of leaves, moss, ash, and decaying vegetation and small rootlets. In some areas, a thin layer of light grey, fine-grained and highly leached soil is present.

The "B" horizon, extending for approximately one foot in depth, is of a light brown colour and contains only fairly large rootlets. This soil contains variable sized, unsorted rock fragments in a fine-grained, silty, slightly reddish brown matrix. The matrix is probably derived from the decomposition of the fine particles of the underlying "C" horizon, indicating that the "B" horizon is the zone of active chemical weathering and soil formation.

The "C" horizon consists of glacial till and bedrock material. The glacial till, which forms thick deposits on the lower portion of the claim group, is a light grey, unsorted layer exhibiting little bedding or weathering. Silt and clay lenses are present, but most of the horizon is made up of sand to boulder sized angular to subrounded fragments.

Initially, and for orientation purposes, P. W. Dunsford collected six soil sample profiles (18 samples) from both mineralized and unmineralized areas in order to determine the most suitable soil horizon to be sampled. Results of this orientation work (see Fig. 4) indicated that the upper part of the "B" horizon would be most suitable for copper determinations and that the lower part of the "A"



VALUES IN p.p.m.

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3294 MAP #2

MINOREX LTD., LORI GROUP OPTION

LORI CLAIMS  
SOIL PROFILES

*Alex D.*  
*Sept 30/71*

SQUAMISH AREA, VANCOUVER MINING DIVISION

TO ACCOMPANY A GEOCHEMICAL REPORT  
ON THE LORI CLAIMS BY A.W. DEAN, P.Eng. DATED SEPT. 30, 1971

SEPTEMBER 30, 1971

FIGURE 4

horizon would be most suitable for molybdenum determinations. Since chalcopyrite mineralization is more prevalent than molybdenite mineralization, it was decided to sample the upper part of the "B" horizon.

#### Field Method

Soil samples were collected at intervals of 200 feet along flagged grid lines (spaced 400 feet apart), and at depths of 6 - 18 inches in the upper part of the "B" horizon. A total of 328 samples were collected by means of small, narrow bladed hand shovels obtained for this purpose; placed in standard-size, heavy duty paper envelopes; partially dried, and shipped to Bondar-Clegg and Company Ltd., North Vancouver, British Columbia, for analysis. Samples were collected during lay-out of the grid, by P. Folk, B. Corrigan and M. Maybury.

#### LABORATORY PROCEDURE

Samples received by Bondar-Clegg were oven dried, screened to minus 80 mesh, and analyzed for copper and molybdenum employing standard  $\text{HNO}_3$  - HCl acid solutions and atomic absorption spectrophotometry techniques. The atomic absorption unit consists of three major components: a hollow cathode lamp (separate lamps for each element); a burner-atomizer; and a monochromator. The test solution is aspirated directly into the burner-atomizer and the respective transmittancy is read directly on a scale expansion unit on the monochromator. A permanent "print-out" chart is retained for cross-check purposes. The respective metal contents are calculated by comparing the transmittancy with standard curves. Results of the method are accurate to 1 ppm for copper and molybdenum.

#### DISCUSSION OF RESULTS

The results of the geochemical survey are plotted on the accompanying soil survey maps; Figs. 2 and 3. Results of the orientation profiles are plotted on Fig. 4.

Results of the soil sampling indicate the following:

- 1) Correlation between anomalous Cu and Mo values is good.



- 2) Maximum values obtained, probably reflect within reasonable limits, the grade of the sulphide mineralization present. Anomalous values for copper range from 200 to 7,250 ppm; anomalous values for molybdenum range from 10 to 63 ppm.
- 3) The correlation of the Cu and Mo results indicate that a soil sample survey, if properly interpreted, gives a valid estimation of the position and size of the sulphide mineralization on the Lori claims.
- 4) Structural trends, associated or related to the mineralization are clearly defined by the survey.
- 5) Mineralization appears to be localized at intersections of two structural trends - one striking in a northerly direction; one at right angles to this strike.
- 6) Anomalous copper values were found in all areas where copper mineralization is exposed on surface.

#### CONCLUSIONS AND RECOMMENDATIONS

Geochemical analyses of soil samples taken from both mineralized and unmineralized areas accurately reflect the extent and distribution of sulphide mineralization on the Lori claims. Good correlation between Cu and Mo analyses coincide with surface mineralization observed in place. A pronounced structural trend in a westerly direction and one at right angles to this is evident on the plot for Cu results. The Mo results indicate a moderately strong trend in a westerly direction. Mineralization is probably restricted to these 'breaks' which appear to have localized pyrite-chalcopyrite-molybdenite at their intersections.

Geological mapping, prospecting and sampling, and limited diamond drilling should be considered as additional and useful work during the next phase of exploration.

  
 \_\_\_\_\_  
 J. Buchholz

  
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 A. W. Dean

September 30, 1971

Vancouver, B. C.

Sept 30/71

ASSESSMENT DETAILS

PROPERTY: Lorf Claims  
OWNER: E. B. Peterson  
SPONSOR: Minorex Ltd.  
LOCATION: Squamish Area  
TYPE OF WORK: Soil sampling &  
Grid Preparation  
OPERATING MAN DAYS: 13  
SUPERVISORY MAN DAYS: 5  
DRAUGHTING MAN DAYS: 2

MINING DIVISION: Vancouver  
PROVINCE: British Columbia

DATE STARTED: August 7, 1971  
DATE FINISHED: September 30, 1971  
TOTAL NO. OF READINGS:  
328 - Grid Stations  
18 - Soil Profiles

TOTAL MAN DAYS: 44

TOTAL NO. OF LINE MILES: 11.2

SUPERVISION: Western Geological Services Ltd.

PERSONNEL & DAYS WORKED

ADDRESSES

J. Buchholz	5	2219 Kelly Avenue, Port Coquitlam, B. C.
P. W. Dunsford	3	2564 Panorama Drive, North Vancouver, B. C.
P. Folk	13	2858 - 128 Street, White Rock, B.C.
B. Corrigan	10-1/2	c/o 1015 - 470 Granville St., Vancouver, B.C.
M. Maybury	8-1/2	c/o 1015 - 470 Granville St., Vancouver, B.C.
C. Moodie	2	2862 Highbury Street, Vancouver 9, B. C.

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DRAUGHTING: Versatile Industries Ltd.

TOTAL COST OF SURVEY: \$3,540.82

Including Grid Preparation, Analyses, Accommodation, Supplies, Vehicle Rental  
(Per Western Geological Services Ltd. Invoice)

*Alfred Dunsford*  
Sept 30/71

C E R T I F I C A T E

I, A. W. Dean, of the City of Burnaby, in the Province of British Columbia, hereby certify as follows:

1. That I am a Registered Professional Engineer of the Province of British Columbia and reside at 5 North Springer Avenue, Burnaby 2, British Columbia.
2. That I am a graduate of Michigan Technological University with a Bachelor of Science in Geological Engineering, having practised my profession since 1958.
3. That I have no interest either directly or indirectly in the claims known as the Lori group nor do I expect to receive any.
4. That the information contained herein was prepared by John Buchholz, Geologist, and senior partner of Western Geological Services Ltd. The claims were optioned by Minorex Ltd., and the work supervised by me during 1971, at which time I visited the property on several occasions.

Alex. Dean

A. W. Dean, P. Eng.

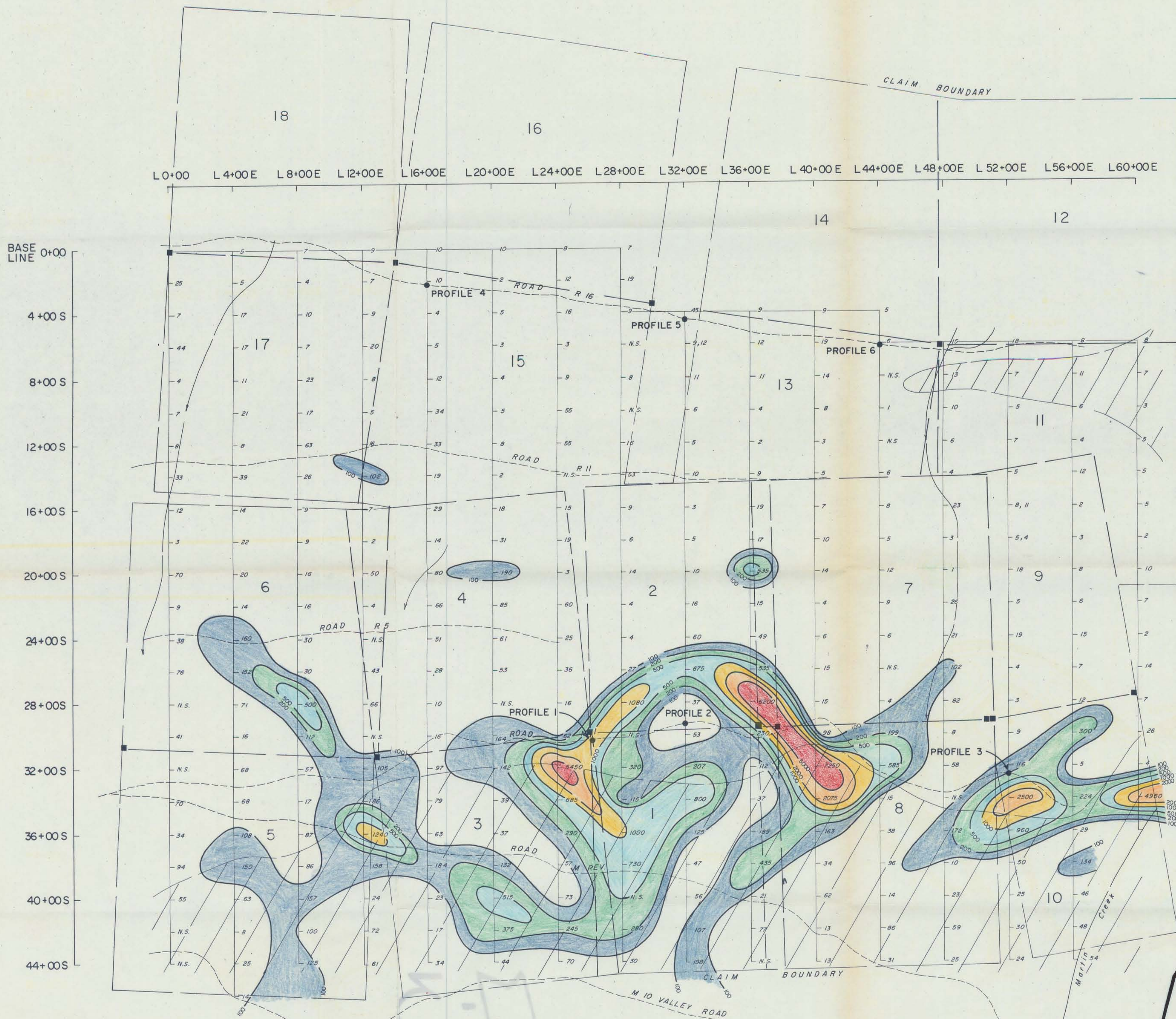
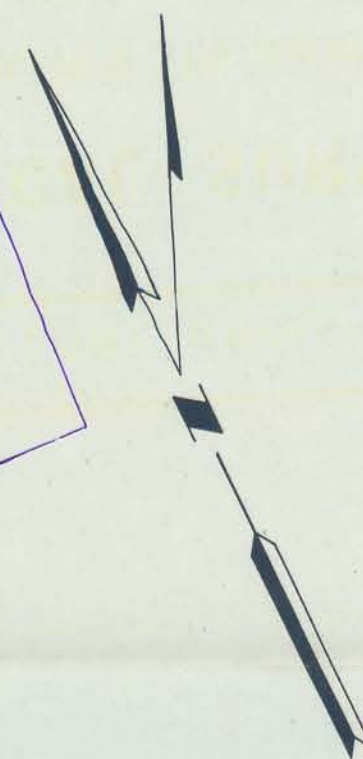
Sept 30/71

Vancouver, B. C.

September 30, 1971



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ASSESSMENT REPORT  
MAP # 3  
No. 3294



**LEGEND**

- 775 — SOIL SAMPLE STATION
- CLAIM BOUNDARY
- - - LOGGING ROAD
- ~ CREEK
- /// APPROXIMATE AREA COVERED BY GREATER THAN 25 FEET OF GLACIAL DEPOSIT
- N.S. - NO SAMPLE

**CONTOURS - p.p.m.**

- 100
- 200
- 500
- 1000
- 2000
- 5000

*A.W. Dean*  
Sept 30/71

FIGURE 2

M-3  
3294

Prepared for  
**MINOREX LTD., LORI GROUP OPTION**  
Title  
**GEOCHEMICAL SURVEY**  
Cu VALUES IN p.p.m.  
SQUAMISH AREA, VANCOUVER MINING DIVISION

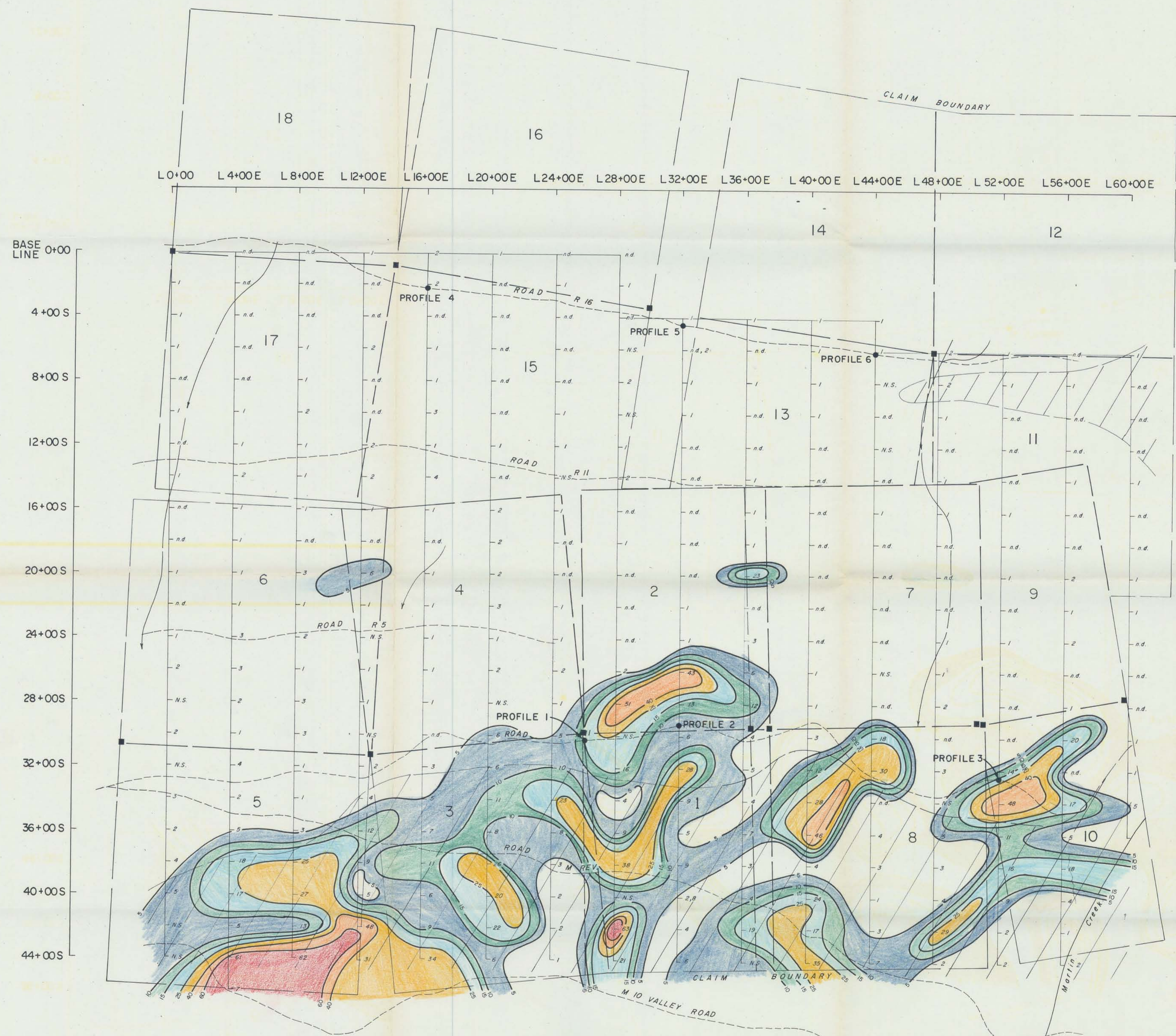
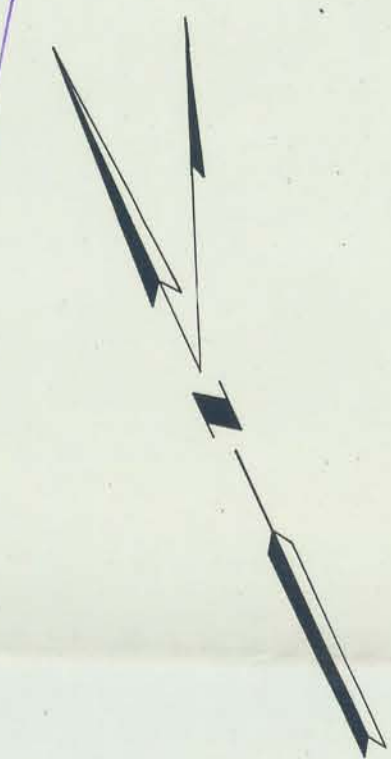
Scale 1 inch = 400 Feet	Survey by P. FOLK	Drawn by VERSATILE INDUSTRIES LTD.	Date SEPTEMBER 30, 1971
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**WESTERN GEOLOGICAL SERVICES LTD.**  
SUITE 1015 470 GRANVILLE ST. VANCOUVER 2, B.C. PHONE 688-2305

TO ACCOMPANY A GEOCHEMICAL REPORT ON THE LORI CLAIMS,  
BY A.W. DEAN P.Eng., DATED SEPTEMBER 30, 1971



Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3294 MAP 4



**LEGEND**

- 25 SOIL SAMPLE STATION
- CLAIM BOUNDARY
- - - LOGGING ROAD
- ~ CREEK
- /// APPROXIMATE AREA COVERED BY GREATER THAN 25 FEET OF GLACIAL DEPOSIT
- N.S. NO SAMPLE

**CONTOURS - p.p.m.**

- 5
- 10
- 15
- 25
- 40
- 60

*A.W. Dean*  
SEP 30/71

FIGURE 3

Prepared for <b>MINOREX LTD., LORI GROUP OPTION</b>			
Title <b>GEOCHEMICAL SURVEY</b>			
Mo VALUES IN p.p.m.			
SQUAMISH AREA, VANCOUVER MINING DIVISION			
Scale 1 inch = 400 Feet	Survey by P. FOLK	Drawn by VERSATILE INDUSTRIES LTD.	Date SEPTEMBER 30, 1971
<b>WESTERN GEOLOGICAL SERVICES LTD.</b> SUITE 1015 470 GRANVILLE ST. VANCOUVER 2, B.C. PHONE 688-2305			

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