

# 4705

GEOCHEMICAL REPORT

by

J.R.Deighton

on survey s completed during September 1973

on the

ACE MINERAL CLAIMS  
Golden Mining Division  
50°116' SW  
NTS 82K/1

Department of	
Mines and Technical Surveys	
ATLAS REPORT	
NO.	4705

## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
PROPERTY AND OWNERSHIP	1
LOCATION AND ACCESS	1
PHYSICAL FEATURES	2
GEOCHEMISTRY	3
CONCLUSIONS AND RECOMMENDATIONS	4

STATEMENT OF QUALIFICATIONS

ACE

LIST OF ILLUSTRATIONS

#1 Histogram Total Mercury

following page 3

#2 Histogram Total Zinc

following page 3

#3 Geochemical Soil Survey

1"=500'

in pocket

#4 Claim map

## ACE MINERAL CLAIMS

### INTRODUCTION

The Ace mineral claims were staked in 1970 to cover a base-metal prospect in southeastern British Columbia. The property covers the geologic possibility of massive sulphide mineralization contained in clastic rocks of Precambrian age.

This report details the results of a soil geochemical survey that was undertaken on the claim group to assist in evaluating the economic potential of the prospect. The work was carried out by Texasgulf, Inc. in the period September 3rd to September 8th, 1973.

The survey was conducted by J.R.Deighton.

### PROPERTY AND OWNERSHIP

The property totals 30 claims, named Ace. All the claims were recorded August 26, 1970, and are wholly owned by Texasgulf, Inc.

### LOCATION AND ACCESS

The Ace claim group is in the Golden Mining Division at latitude 50°02', longitude 116°12' and N.T.S. 82K/1. The elevation on the property ranges from 6,000 feet in the Doctor Creek valley to 9,000 feet on the ridge tops. Doctor Creek flows centrally through the property and Echo Lake lies adjacent to the southern boundary. Water resources are plentiful. Timber is limited to the valley floor area.

Major air, rail and trucking services as well as natural gas and hydroelectric power are available 60 miles to the south at Cranbrook which, with a population of 12,000, is the principal supply centre.

Access to the prospect is gained by 26 miles of gravel road from Highway 95 near the community of Canal Flats.

#### PHYSICAL FEATURES

The property lies on the eastern flanks of the rugged Purcell Mountains. The dominant landform in the claim area is a valley with an elevation of approximately 6,000 feet at its lower end and 7,600 feet at its head. The average annual precipitation is 30 inches.

Cirques, hanging valleys, tarn lakes and sharp, well defined continuous ridges characterize the margins of the property. Doctor Creek drains the valley portion of the claim area. It is a relatively straight and fast flowing stream. Five tarn lakes ranging in length from 300 to 2,000 feet are present on or adjacent to the property boundary. These lakes are generally oval in shape and shallow in depth.

A distinct contrast in the visual form of the rock type is readily apparent. The Moyie intrusions appear to be very massive and sheet-like in appearance while the sediments are well defined and uniform in their appearance.

### GEOCHEMISTRY

206 soil samples were collected from the property during the programme. The samples were collected from shallow holes, dug by a mattock at 200' intervals on lines located 500 feet apart.

Soil profiles are poorly developed in this alpine region. The "B" soil horizon was sampled in most cases, but failing that the "C" soil horizon was substituted. The soils appear to be derived from talus slopes.

All samples were placed in Kraft paper envelopes and shipped to Bondar-Clegg and Company Laboratories in North Vancouver for Total Zinc, and Mercury analysis.

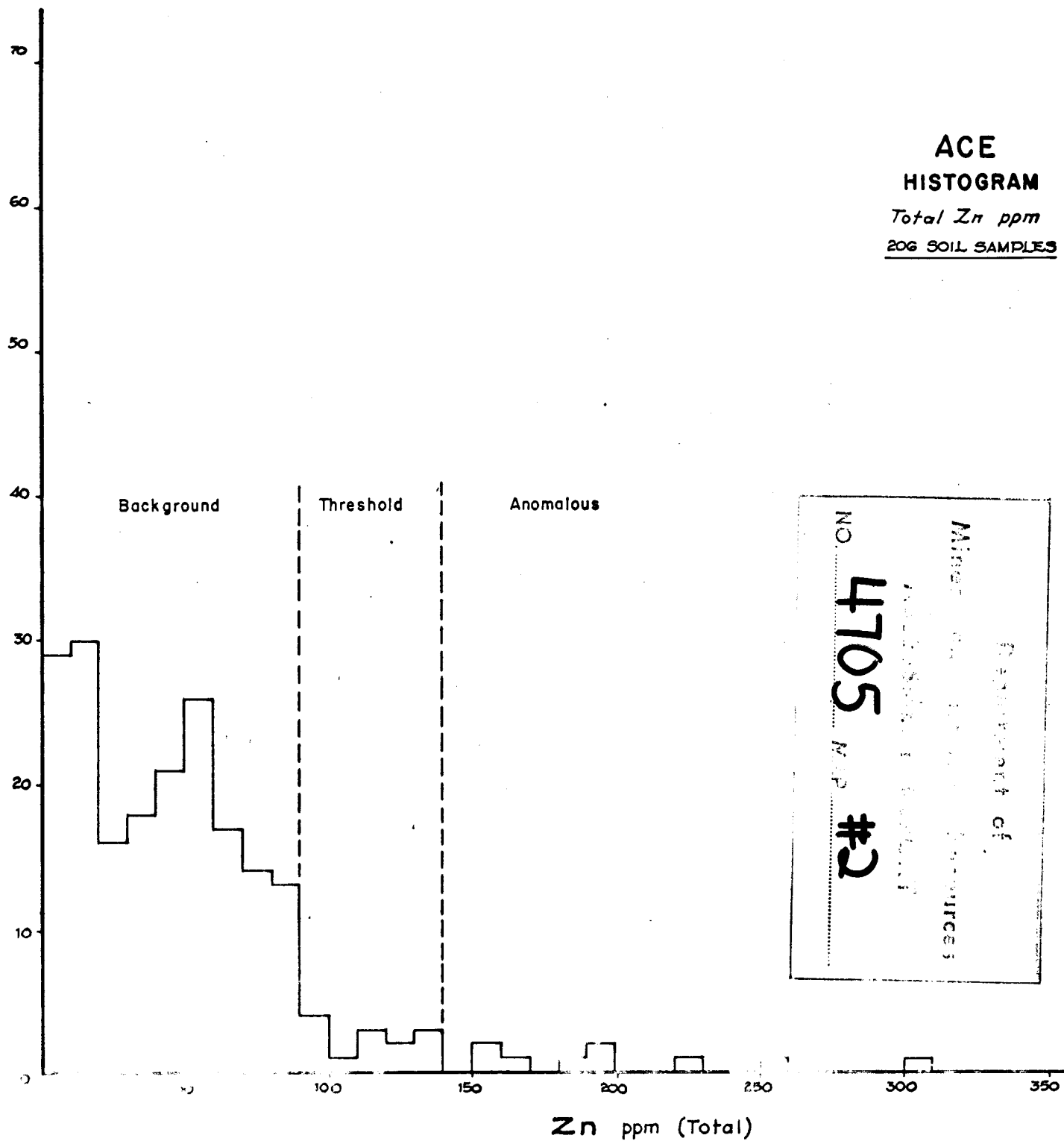
The analytical techniques are summarized as follows:-

For zinc the samples are dried and sieved to -80 mesh and then a  $\frac{1}{2}$  gram portion is weighed out. This portion is digested with hot aqua regia solution for three hours, then diluted to 20% acid concentration. The solutions are homogenized then allowed a uniform settling period. They are then run by atomic absorption with constant comparisons with synthetic and matrix standards. The results are permanently recorded on chart paper.

For mercury the samples are dried under low heat and sieved to -80 mesh and a  $\frac{1}{2}$  gram portion is weighed out. This portion is then digested by a three step hot aqua regia process. All the mercury in the soil is reduced to a vapour state and passed through a closed cell and measured by atomic absorption with constant comparisons with synthetic and matrix standards. The results are permanently recorded on chart paper.

**ACE**  
**HISTOGRAM**  
*Total Zn ppm*  
206 SOIL SAMPLES

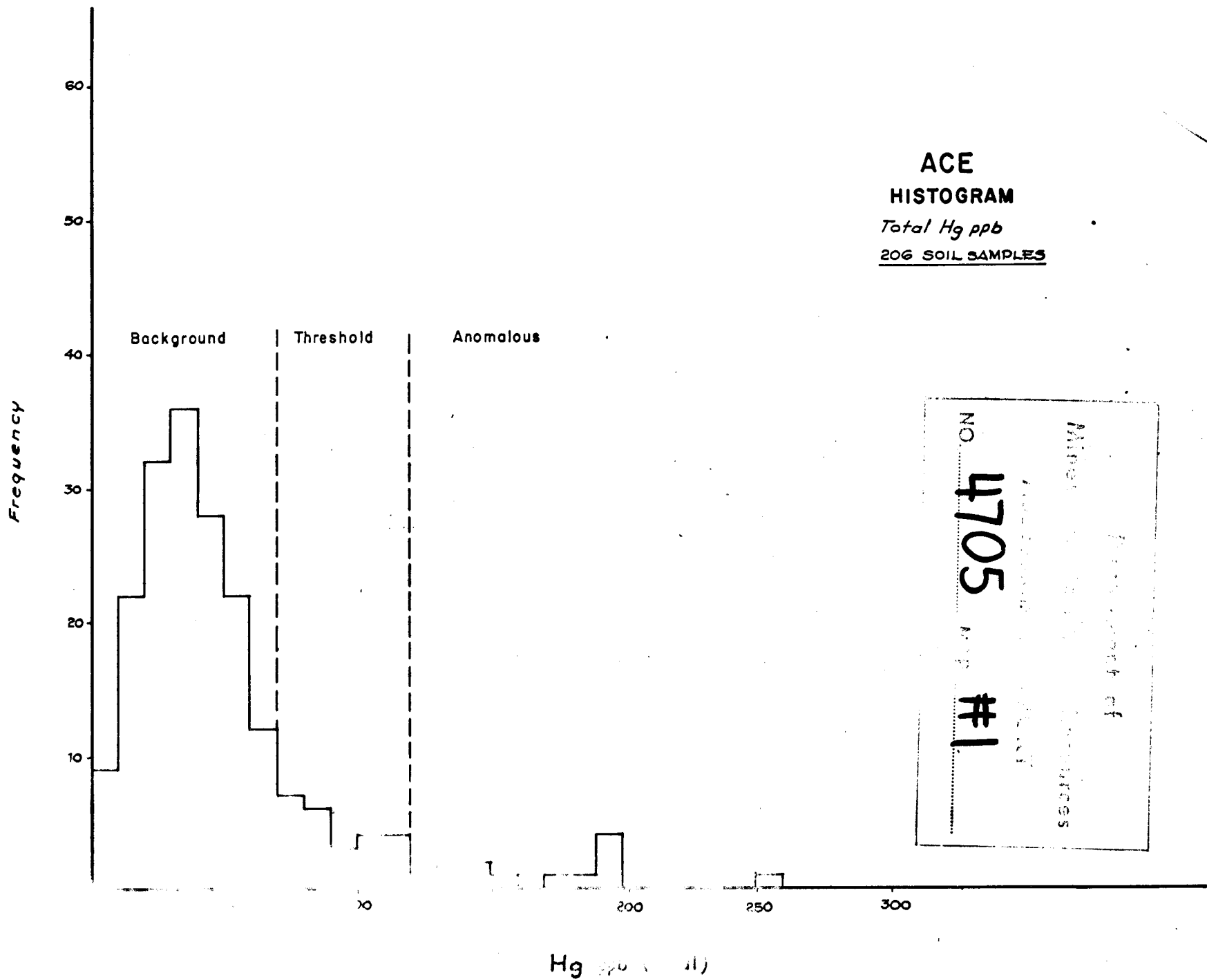
Frequency



# ACE HISTOGRAM

Total Hg ppb

206 SOIL SAMPLES



Project of  
Mineral Resources  
Department of  
NO. 4705  
#1



Histograms were prepared from the analytical data. The total zinc histogram (see following) forms an unusual pattern. There appear to be two populations imposed on one another. These populations are both of low strength and because they overlap they have been classified in this report as one population. The background value thus ranges from 0-<sup>90</sup>~~140~~ ppm; threshold from <sup>90</sup>~~141~~-<sup>140</sup>~~200~~ ppm and anomalous <sup>> 140</sup>~~200~~ ppm total zinc.

The total mercury histogram forms a classic bell curve. Background values for mercury are placed from 0-70 ppb; threshold from 71-120 ppb and anomalous values 120 ppb total mercury.

The results of this survey show no obvious anomalies for mercury or zinc. Clusters of anomalous and threshold values of both mercury and zinc are present but the significance of these broad clusters of values is not apparent. They may reflect (low ?) metal content in the underlying bedrock but this cannot be said with conviction.

#### CONCLUSIONS AND RECOMMENDATIONS

1. Geochemical methods of prospecting do not appear to indicate carrying out further soil sampling of the property.
2. The significance of several broad clusters of higher values of both mercury and zinc present on the claim group is not apparent.
3. No further geochemical soil sampling for mercury and zinc is warranted.



J.R. Deighton

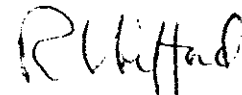
STATEMENT OF QUALIFICATIONS

J.R.Deighton, B.Sc. 1 is a fellow of the Canadian Institute of Mining and Metallurgy and of the Geological Association of Canada; graduated from U.B.C. in 1965 with a B.Sc. in Geology; has worked for Texasgulf, Inc. since 1970 as an Exploration Geologist.

CERTIFICATION

I, Robert G. Gifford certify that:

1. I am a practising geological engineer with residence at 1256 Alderside Road, Port Moody, B.C.
2. I am a graduate of the University of British Columbia with a degree of Bachelor of Applied Science.
3. I am a member of the Association of Professional Engineers of British Columbia, and have been engaged continuously in mining and exploration geology for fifteen years.
4. I supervised the evaluation programme for the Ace Claim Group, Golden Mining Division near Doctor Peak, British Columbia in the period from September 3 - 8, 1973.



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R.G.Gifford, P.Eng.

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

In the Matter of Assessment work carried out  
on the Ace Mineral Claims situated on Doctor  
Creek, in the Golden Mining Division.

I, J.R. Deighton

of 701-1281 West Georgia Street, Vancouver 5, B.C.

in the Province of British Columbia, do solemnly declare that during the period September 1973, I caused assessment work to be done on the Ace Mineral Claims to the value of \$1,752.35. The expenses were incurred as follows:-

Geochemical Survey

J.R. Deighton	7 days @ \$65	455.00
J. Plommer	5 days @ \$30	150.00
206 geochemical analyses		787.35
Room and board		100.00
Transportation		160.00
Supervision, report, drafting etc.		<u>100.00</u>

Total expenditures \$ 1,752.35

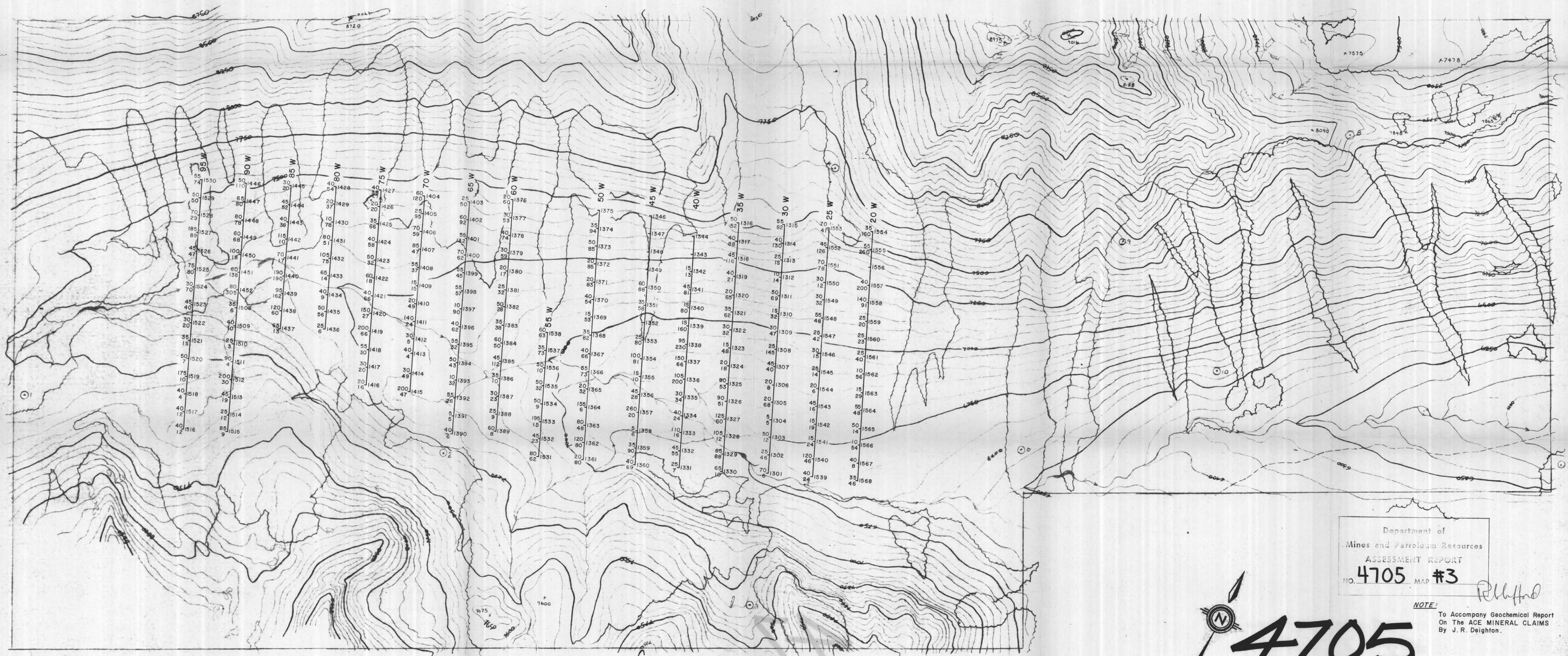
And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the *City*  
of *Vancouver*, in the  
Province of British Columbia, this *19th*  
day of *November, 1973*, A.D.



*Jan Paul* SUB-MINING RECORDER  
A Commissioner for taking Affidavits for British Columbia or  
A Notary Public in and for the Province of British Columbia.





Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4705 MAP #3

NOTE:  
To Accompany Geochemical Report  
On The ACE MINERAL CLAIMS  
By J. R. Deighton.

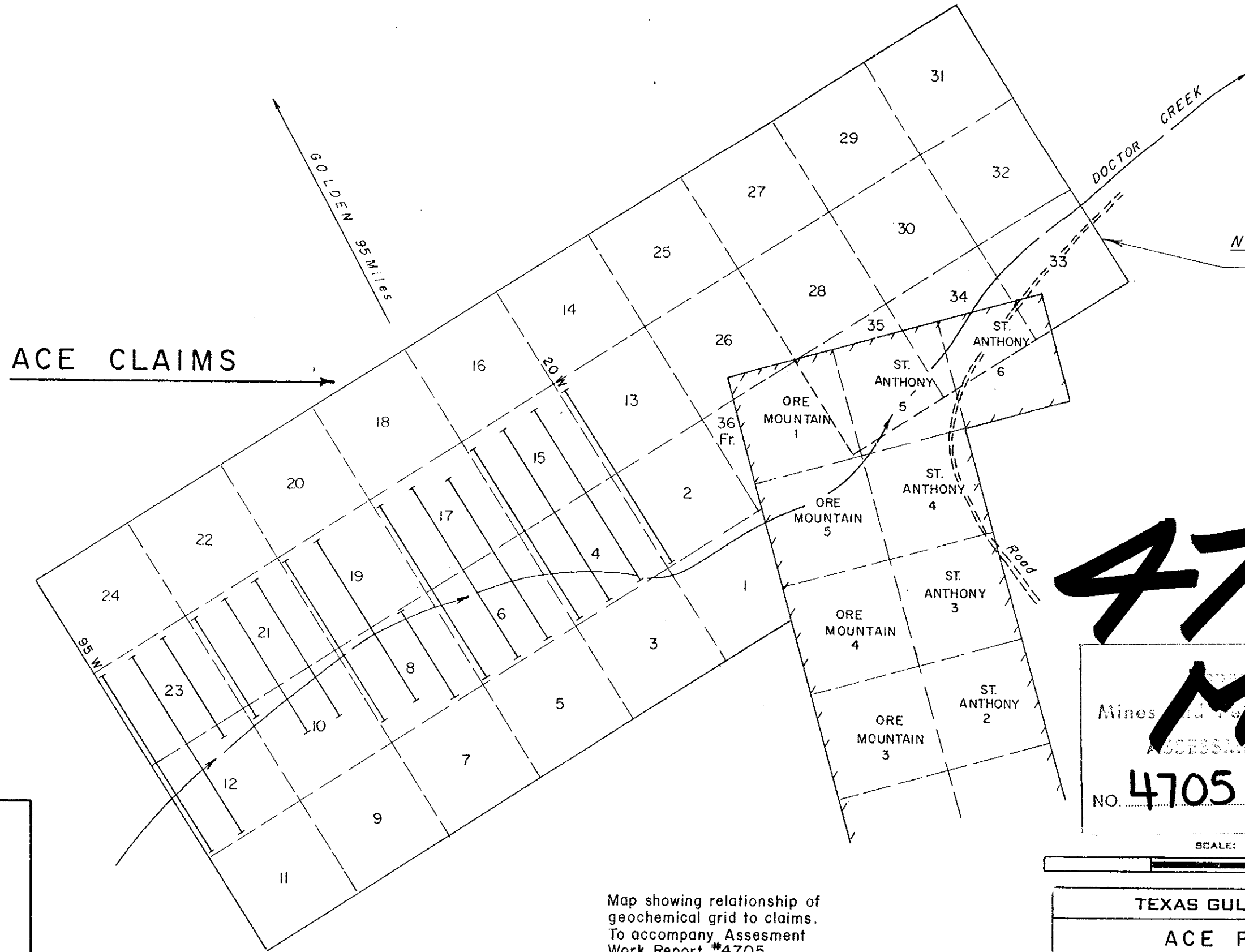
**4705**  
**M3**

LEGEND  
MERCURY (ppb) | SAMPLE NO  
ZINC (ppm) |

500' 0' 500' 1,000' 2,000'

TEXASGULF INC.		
ACE PROPERTY		
GEOCHEMICAL SOIL SURVEY		
(TOTAL Hg/Zn)		
NTS 82/K-1 GOLDEN MINING DIVISION		
WORK BY	DRAWN BY	DATE
J. R. DEIGHTON	L. BELL	SEPTEMBER, 1973





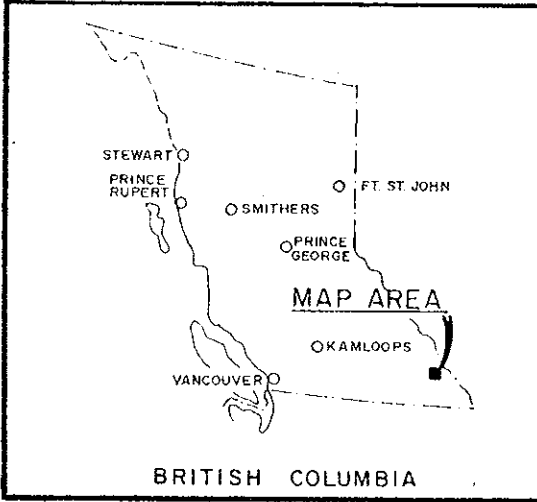
**4705**

**M4**

Mines and Minerals  
ASSESSMENT REPORT  
NO. **4705** MAP **#4**

Map showing relationship of geochemical grid to claims. To accompany Assessment Work Report #4705.

*McNeill*



TEXAS GULF SULPHUR CO.		
ACE PROPERTY CLAIM MAP		
NTS. 82 K-1		GOLDEN MINING DIVISION
WORK BY	DRAWN BY	DATE
D. E. M.		AUGUST 28, 1971