

# 4509

GEOLOGICAL AND GEOCHEMICAL REPORT

by

P.R.DeLancey, M.Sc.

and

J.M.Newell, P.Eng.

on surveys completed July 1973

on the

PACKSACK & GUNNYSACK CLAIMS

situated on the Ecstall River

in the Skeena Mining Division

53°N 129°W

NTS 103H/14W

and owned by

Texasgulf, Incorporated

Department of Mines and Petroleum Resources ANNUAL REPORT NO. 4509 M.P.
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GEOLOGICAL AND GEOCHEMICAL REPORT  
PACKSACK & GUNNYSACK MINERAL CLAIMS,  
SKEENA MINING DIVISION

INTRODUCTION

The Packsack and Gunnysack claims are underlain by a sequence of late Palaeozoic(?) schists which host a massive sulphide body. Previous work including diamond drilling and an electromagnetic survey in the area of the showings, indicated a sub-economic sulphide body. Geological mapping and a geochemical soil survey was conducted on the claim group with the hope of extending the known sulphide body or discovering new bodies.

LOCATION, ACCESS AND OWNERSHIP

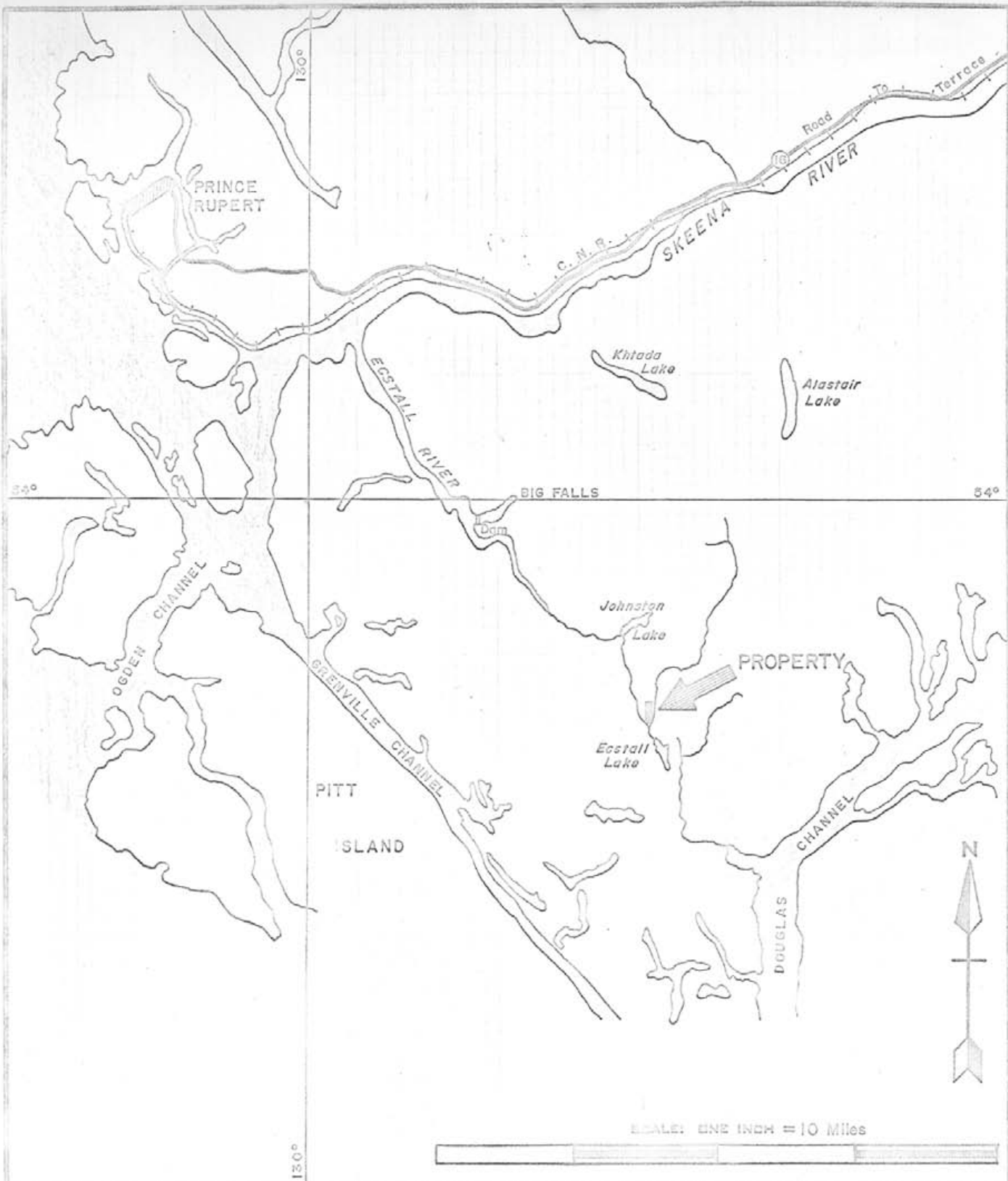
The Packsack and Gunnysack group, comprising 16 mineral claims (Packsack 1-8 inclusive and Gunnysack 1-8 inclusive), were staked on July 26, 1972 and recorded in the name of Texas Gulf, Inc., on July 26, 1972.

The property is situated 9 miles north and 5½ miles west of Kitkiata Inlet on Douglas Channel at latitude 53°46'9" north, longitude 129°26'25" west.

The topography is quite rugged with elevations ranging from 200 feet to 2000 feet. Dense undergrowth and steep cliffs make working conditions quite hazardous. Best access is by helicopter from Prince Rupert or Terrace.

REGIONAL GEOLOGY

The Ecstall River area is underlain by metamorphic and igneous rocks. The metamorphic rocks are a series of steeply dipping



Department of  
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NO. 4509 MAP #1

TEXAS GULF, INC.  
**PROPERTY LOCATION**  
PACKSACK &  
GUNNYSACK CLAIM GROUP

WORK BY	DRAWN BY	DATE
P. R. DeLancey	L. Bell	July, 1973

foliated schists, gneisses and metasedimentary rocks. These have been intruded by rocks of the Coast Range Intrusions. Basic dykes are the youngest known rocks in the area.

#### PROPERTY GEOLOGY

The area is underlain by a series of well foliated chlorite to quartz-sericite schists which strike approximately north-south and dip steeply to the east. A massive sulphide horizon is found within quartz-sericite schists. Meta-argillite (phyllite) and siltstone are found in the western part of the claim group where they are in contact with a chlorite diorite. Quartz segregations are frequent in the metamorphic rocks. Hornblende lamprophyre dikes are the youngest rocks in the area. These units are described below:

#### Lithology and Mineralization

Chlorite-sericite Schist - Because of the difficulty in distinguishing chlorite schists from chlorite-sericite schists and chlorite-quartz-sericite schists in the field, these rocks have been lumped together as chlorite-sericite schists. This rock unit is exposed over much of the claim group and appears as a well foliated green to pale green-grey schistose rock. The chlorite-sericite schists are frequently pyritic adjacent to quartz-sericite rocks.

Quartz-sericite Schist - This unit includes sericite schist, quartz-sericite schist and quartz-sericite-chlorite schist; sericite is generally in excess of the amount of quartz. The rock is characteristically white to buff brown in colour. Since the quartz-sericite schists are stratigraphically related to the deposition of the massive sulphides, they are frequently pyritic. Although it is difficult

to obtain a clear picture of the stratigraphic geometry of this unit, it would appear that the quartz-sericite schists occur as irregular lens like bodies stretched out along the north-south foliation direction.

Sulphides - The two showings of massive pyrite are exposed in creeks. The massive sulphide body which is up to 20 feet wide can be traced over 1200 feet. The sulphides, consisting chiefly of pyrite, have low values in copper and zinc. The adjacent rock is a white quartz-sericite schist, frequently containing disseminated pyrite. Two new disseminated sulphide locations were found during the mapping programme. The north-eastern showing, which may represent a continuation of the massive sulphide horizon has about 15% pyrite disseminated in white quartz-sericite schist over a width of 2 feet.

Meta-argillite(phyllite) and Meta-siltstone - These rocks are found in the western area of the claim group. They vary from a grey-white meta-siltstone to a black meta-argillite and are frequently inter-banded. The contact with the diorite body is marked by a zone of quartzite. These metasedimentary rocks have the same attitude as the main body of schists.

Within the chlorite-quartz-sericite schists there are some narrow zones of argillic schists. These zones are usually marked by rusting due to the oxidation of disseminated pyrite and are frequently adjacent to pyritic quartz-sericite rocks.

Chlorite-diorite - This igneous rock unit is exposed near the western boundary of the claims. The outcrops are fairly massive in contrast to the adjacent foliated metavolcanic and metasedimentary rocks.

The chlorite diorite is characterized by larger clots of chlorite in a medium to finely crystalline feldspathic matrix. The rock is probably an altered hornblende diorite.

Hornblende lamprophyre Dykes - The youngest rocks in the area are fresh hornblende lamprophyre dykes. They are generally exposed along creek channels and are about 10 feet wide.

### Structural Geology

A strong foliation which characterizes all rocks except the igneous bodies, strikes approximately  $118^{\circ}W$  and dips  $85^{\circ}$  to the east. The attitude of the massive sulphide body is roughly the same. A strong linear weakness running about  $165^{\circ}$ , and marked by several parallel linear topographic depressions, is prominent within the area. Locally these depressions are interpreted as fault zones. A second linear fault zone strikes north-south and is marked by topographic linear depressions along the massive sulphide horizon.

### PROPERTY GEOCHEMISTRY

#### Sampling and Analytical Methods

One hundred and nineteen soil samples were collected within the Packsack-Gunnysack claim group. The samples were collected every 100 feet along east-west flagged lines. Because of the dense network of vegetation, the majority of soil samples were taken from the "A" horizon. These samples were analysed for copper, lead and zinc by the Bondar-Clegg and Co. Ltd. laboratory in North Vancouver. The analytical technique is briefly described as follows:-



The samples were first dried and seived to obtain the -80 mesh fraction. Contained metal is extracted from a weighed sample of this fraction, using Le Fort aqua regia. The resulting solution is bulked to 20% acid concentration and analysed by atomic absorption spectrophotometry, in constant comparison with both synthetic and matrix standards. Results are expressed in parts per million contained metal.

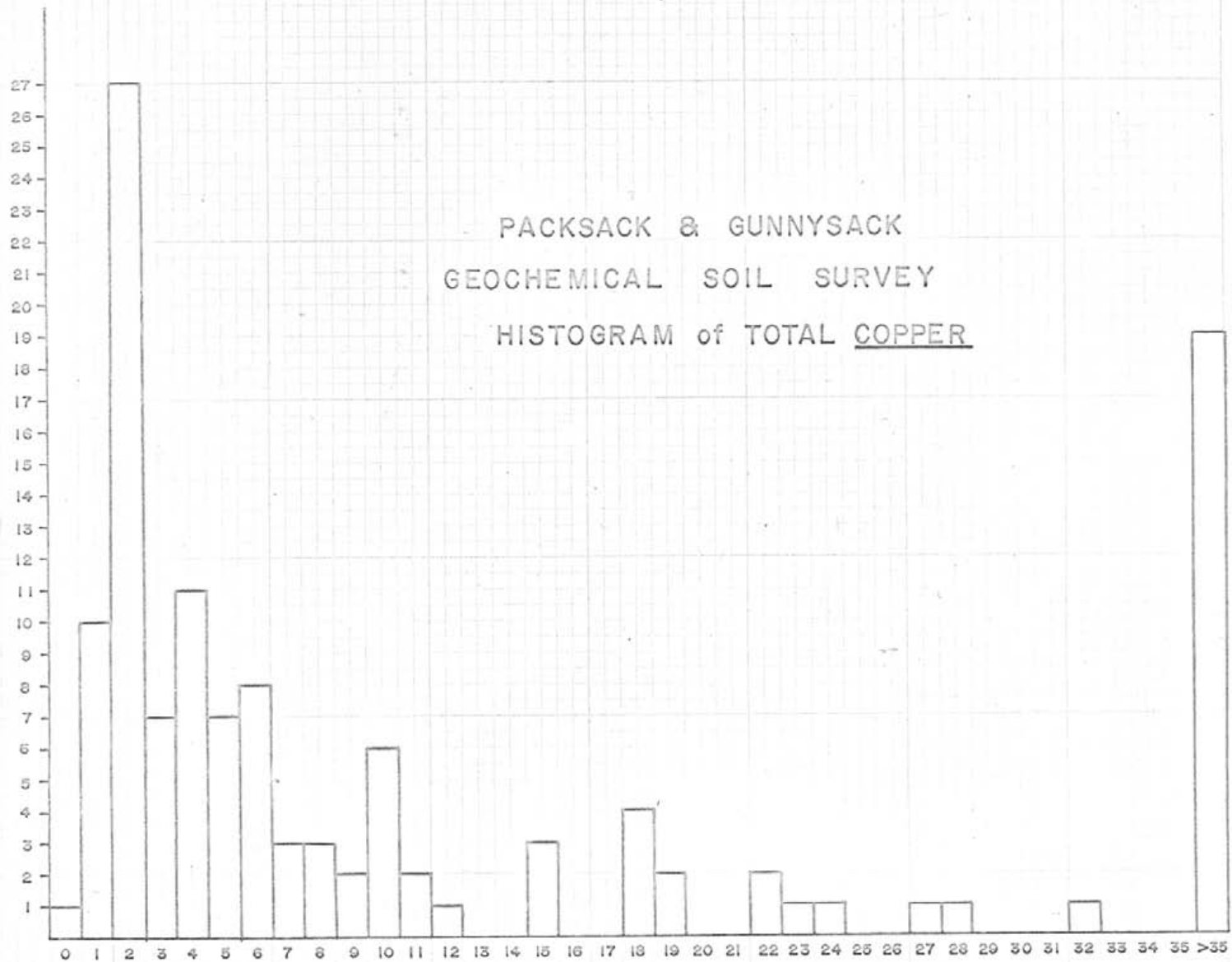
### Discussion of Results

Histograms were constructed to show the distribution of copper, lead and zinc. Since the number of samples, are inadequate to obtain a good statistical model, the anomalous values have been arbitrarily set at:

Copper	greater than 35 ppm
Zinc	greater than 45 ppm
Lead	greater than 50 ppm.

One rock chip taken from the disseminated pyrite showing discovered northeast of the massive sulphide body showed 59 ppm Cu, 67 ppm Pb, 200 ppm Zn, 1.5 ppm Ag, less than 5 ppb Au. Samples taken over or adjacent to the known massive sulphides body do not show anomalous values. However the general mineralized zones are reflected in isolated anomalous values. This is probably due to the fact that many of the samples are taken from the "A" horizon in extremely variable topography. Highly anomalous sample 5070 probably reflects the most northerly extension of the massive sulphide body; anomalous samples 3724 and 5055 possibly reflect minor disseminated sulphide related to the main body. The anomalous values of samples 3731 and 3732 suggest an extension of the disseminated pyrite showing discovered southwest

PACKSACK & GUNNYSACK  
 GEOCHEMICAL SOIL SURVEY  
 HISTOGRAM of TOTAL COPPER



Cu ppm (total)

Figure 1

Department of  
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 NO. 4509 MAP #4

PACKSACK & GUNNYSACK  
GEOCHEMICAL SOIL SURVEY  
HISTOGRAM of TOTAL ZINC

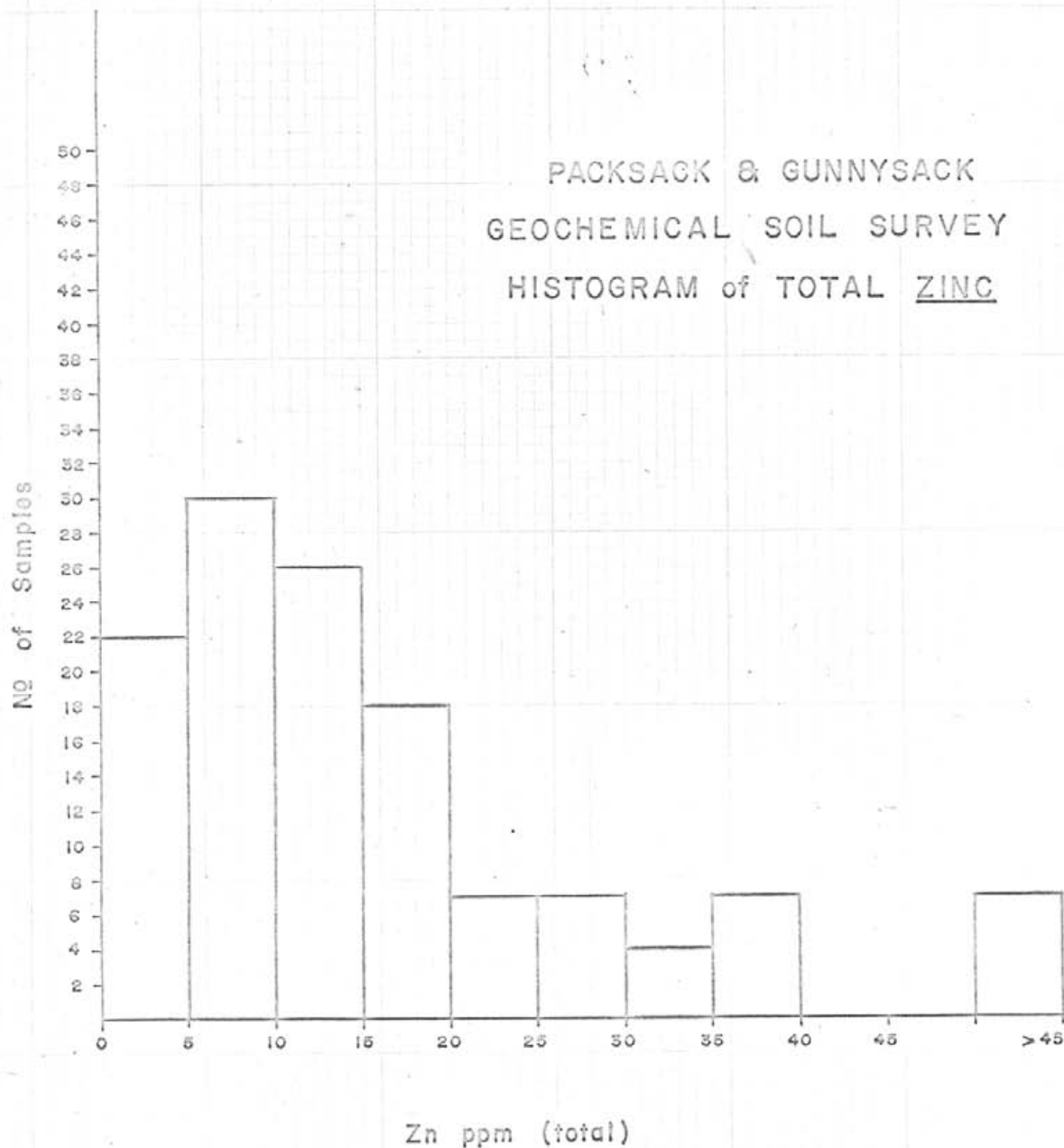


Figure 5

Department of  
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ASSESSMENT REPORT

NO. 4509 MAP #5

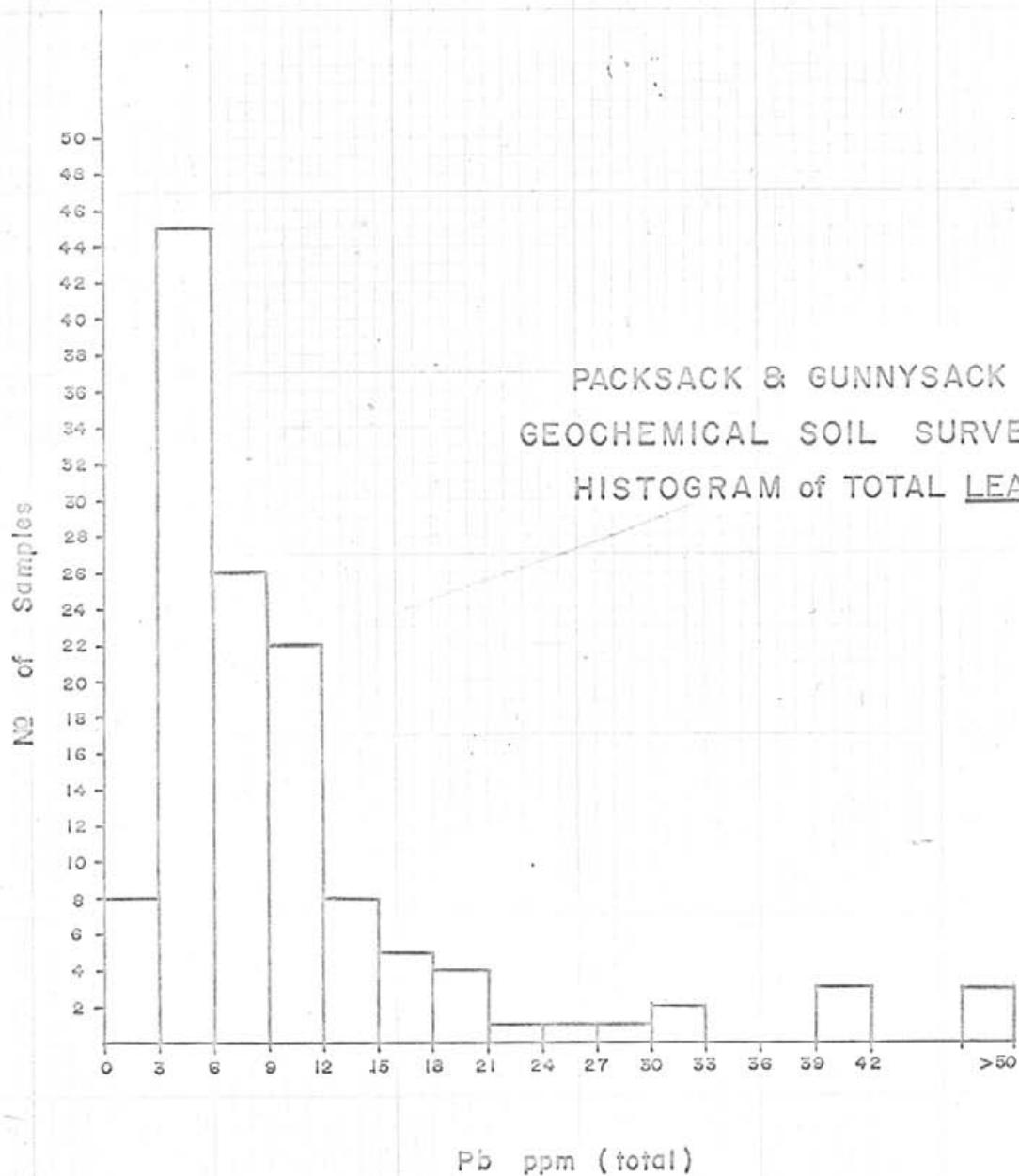


Figure 1

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4509 MAP #6

of the massive sulphides. The other weakly anomalous values may represent local disseminations of pyrite.

CONCLUSION

Although several new areas of quartz-sericite schist were mapped, no new massive sulphide bodies were found. The two discoveries of disseminated sulphides probably represent a continuation of the massive sulphide horizon (northeast showing) or a peripheral zone (southwest showing). Results from these surveys do not encourage hopes for extending the known massive sulphide body or discovering other significant massive sulphide zones on the Packsack-Gunnysack Claim Group.

*P. R. DeLancey*  
P. R. DeLancey, M. Sc.

*J. M. Newell*  
J. M. Newell, P. Eng.

STATEMENT OF QUALIFICATIONS

Mr. P.R.DeLancey obtained his B.Sc. degree, in Honours Geology, from the University of Manitoba in 1965. He received his M.Sc. degree in 1970, from the same university. In the interim he was employed by Chile Exploration Company (Anaconda) on the geological staff at Chuquicamata, Chile.

He was employed by Texas Gulf Sulphur Company's Exploration Division from 1969 to 1971, when he returned to the University of British Columbia for further post-graduate studies. He has been working with Texasgulf on a temporary basis since 1971.

Messrs. M. Mollison and R. Wilson are both University students. They are competent and conscientious field assistants.

A handwritten signature in black ink, appearing to read "M. Mollison", is located in the lower right quadrant of the page. The signature is written in a cursive style with a period at the end.

DOMINION OF CANADA:  
PROVINCE OF BRITISH COLUMBIA.

To Wit:

**In the Matter of** Assessment work carried out on the Packsack 1-8 and Gunnysack 1-8 Mineral Claims, situated on the Ecstall River, in the Skeena Mining Division

I, John M. Newell, agent for Texasgulf, Inc.

of 701-1281 West Georgia Street, Vancouver 5

in the Province of British Columbia, do solemnly declare that during the period July 9th-17th, 1973, I caused assessment work to be done on the Packsack 1-8 and Gunnysack 1-8 Mineral Claims, to the value of \$3,748.70. The expenses were incurred as follows:

Geological Mapping

P.R.DeLancey 9 days @ \$65.00 585.00

Geochemical Sampling

M.Mollison 7 days @ \$22.50 157.50  
R.G.Wilson 7 days @ \$25.00 175.00

Supplies

23 man days @ \$10.00 230.00

Geochemical Analyses

129 samples for Cu,Pb, Zn @ \$2.20 283.80

Transportation

7.7 hours Bell 206 helicopter @ \$262.00 2,017.40

P.Eng. Supervision, Report, Drafting etc.

300.00

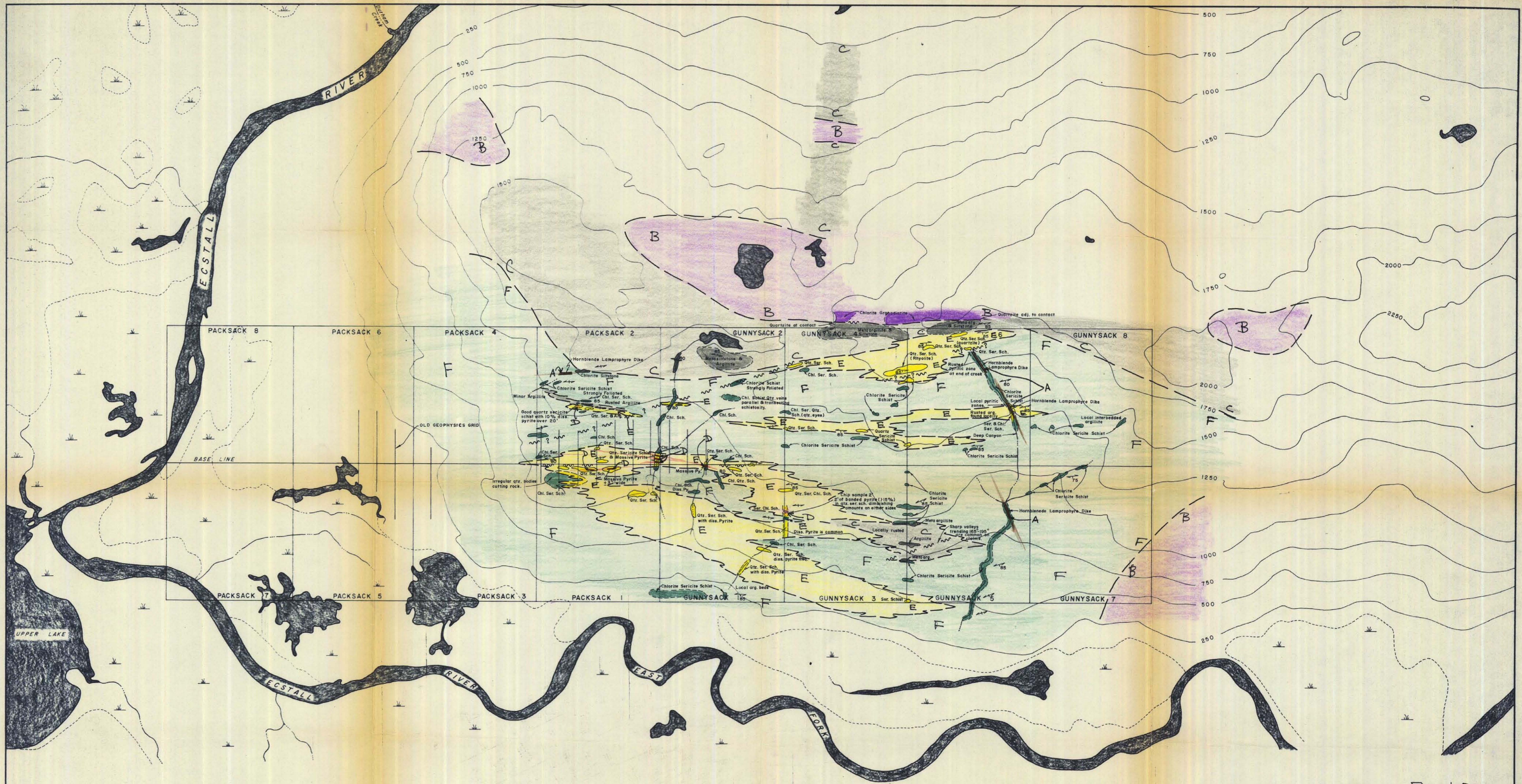
\$ 3,748.70

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 *10*  
day of *August*, 1973, A.D.

*A. Gravotto*  
A Commissioner for taking Affidavits for British Columbia or  
A Notary Public in and for the Province of British Columbia.

Sub-mining Recorder



**LEGEND**

**INTRUSIVE ROCKS**

- HORNBLLENDE LAMPROPHYRE DIKES
- CHLORITE - HORNBLLENDE DIORITE

**METASEDIMENTARY ROCKS**

- META-SILTSTONE & META-ARGILLITE (Phyllite)

**METAVOLCANIC ROCKS**

- SULPHIDES (Mainly Pyrite)
- QUARTZ-SERICITE SCHIST
- CHLORITE-SERICITE SCHIST

- Attitude or Foliation
- Fault
- Outcrop
- Outcrop area
- Contact
- Creek
- Swamp area

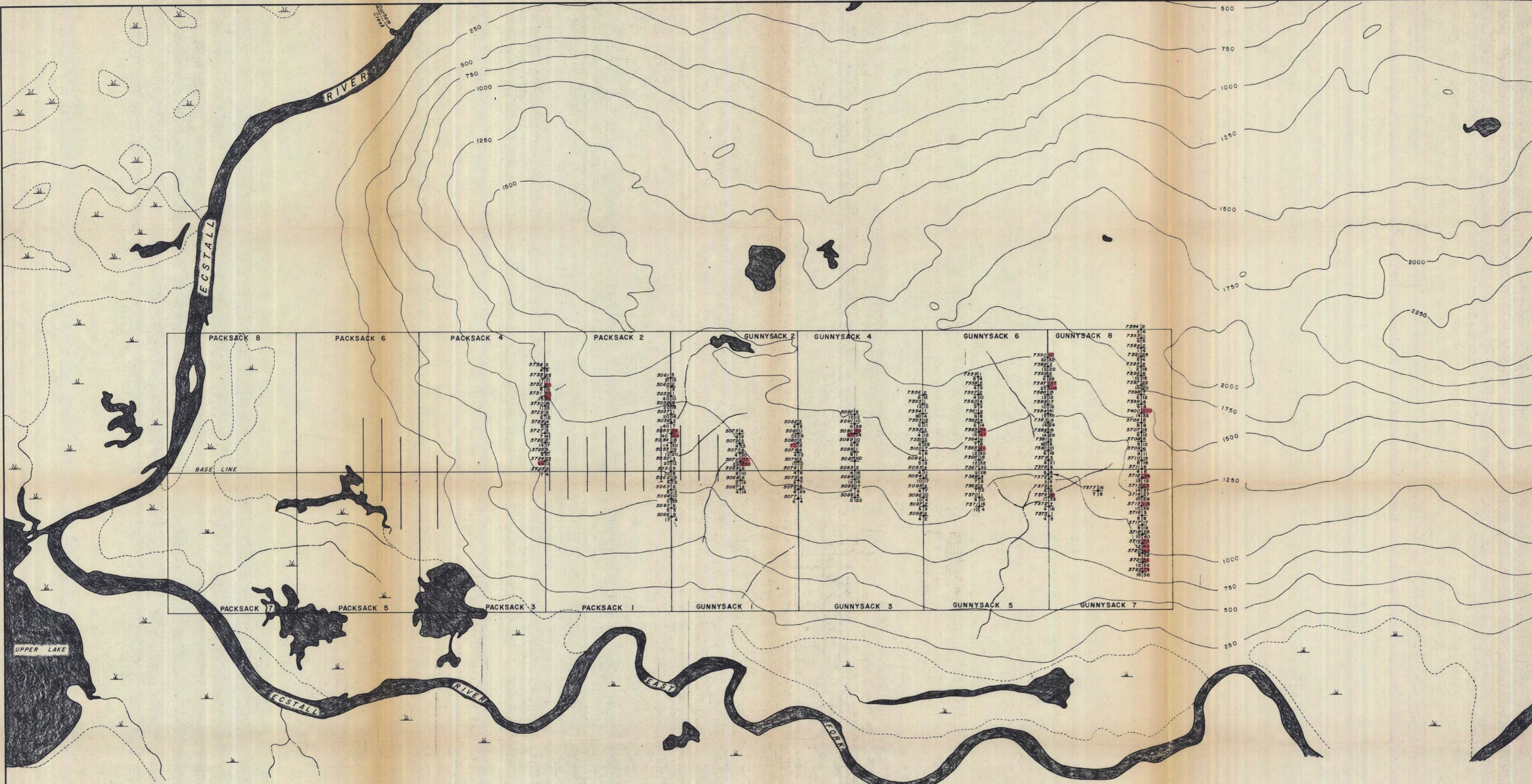
Geological and Geochemical Report on surveys completed July 1973 on the Packsack, Gunnysack Claims situated on the Ecstall River in the Skeena Mining Division 53°40'9"N 129°26'25"W

SCALE: ONE INCH = 500 FEET

Department of Mineral and Petroleum Resources		TEXASGULF, INC.	
ASSESSMENT REPORT #2		GEOLOGY	
NO. 4509	MAP	PACKSACK & GUNNYSACK CLAIM GROUP	
SKEENA, M.D. — N.T.S. 103H/14W			
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P. DELANCEY	L. BELL	JULY, 1973	

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Geological and Geochemical Report on surveys completed July 1973 on the Packsack, Gunnysack Claims situated on the Ecstall River in the Skeena Mining Division 53°40'9"N 129°26'25"W

Department of  
Mines and Petroleum Resources

ASSESSMENT REPORT  
NO. 4509 M.A.P. #3

SCALE: ONE INCH = 500 FEET

TEXASGULF, INC.

**GEOCHEMICAL SOIL SURVEY**  
PACKSACK & GUNNYSACK CLAIM GROUP

SKEENA, M.D. — N.T.S. 103H / 14W

WORK BY	DRAWN BY	DATE
P. DELANCEY	L. BELL	JULY, 1973

NOTE:  
Soil Sample Location  
Sample N2 | Cu ppm  
Pb ppm | Zn ppm