

5683

REPORT ON GEOPHYSICAL SURVEYS

&

SUPPORTING WORK

by

W. A. Gasteiger - Geophysicist

&

G. R. Peatfield - P.Eng.

on the

S.I.B., T.O.K. AND KAY CLAIMS (SIB SUPPLEMENT GROUP)

Situated near Tom MacKay Lake

in the Skeena Mining Division

56°38'N 130°28'W

N.T.S 104B/9W

owned by

Texasgulf Canada Ltd.

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5683 MAP

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
LOCATION, ACCESS & TERRAIN	1
LINECUTTING PROGRAMME	1
GEOPHYSICAL SURVEYS	2

Appendix A: Geophysical Report by  
W. A. Gasteiger.

Appendix B: Statements of Qualification

Appendix C: Statement of Expenditures

LIST OF FIGURES

#1 Location Map	- 1:50,000	follows p. 1
#2 Claim Grouping Sketch	- 1:40,000	follows p. 1
#3 Grid Map	- 1: 5,000	in pocket
#4 Shootback EM Map	- 1: 5,000	in pocket
#5 Magnetometer Survey Map	- 1: 5,000	in pocket

## INTRODUCTION

The SIB Supplement Group is part of the so-called Eskay Property, presently held by Texasgulf Canada Ltd. under terms of an agreement with Stikine Silver Ltd. (N.P.L.) and Consolidated Silver Butte Mines Ltd. (N.P.L.).

The property has a long history of exploration, principally for precious metals, by various interests since its discovery in 1932 by a party headed by T. S. MacKay (see BCMM Annual Reports: 1933, p. 61; 1934, pp. B30-B33; 1953, pp. 87-89; 1970, pp. 64-65). This work has included an aggregate of 950 feet of underground work in two adits, several thousand feet of diamond drilling, and much surface trenching. In 1971, a shipment of 1.68 tons yielded 0.3 oz Au., 239 oz Ag., 64 lbs. Pb., 94 lbs. Zn.

The present programme consisted of geological evaluation, cutting of some 33.9 km. of geophysical line, and geophysical surveys (E.M. and Mag.) on a portion of the grid.

## LOCATION, ACCESS & TERRAIN

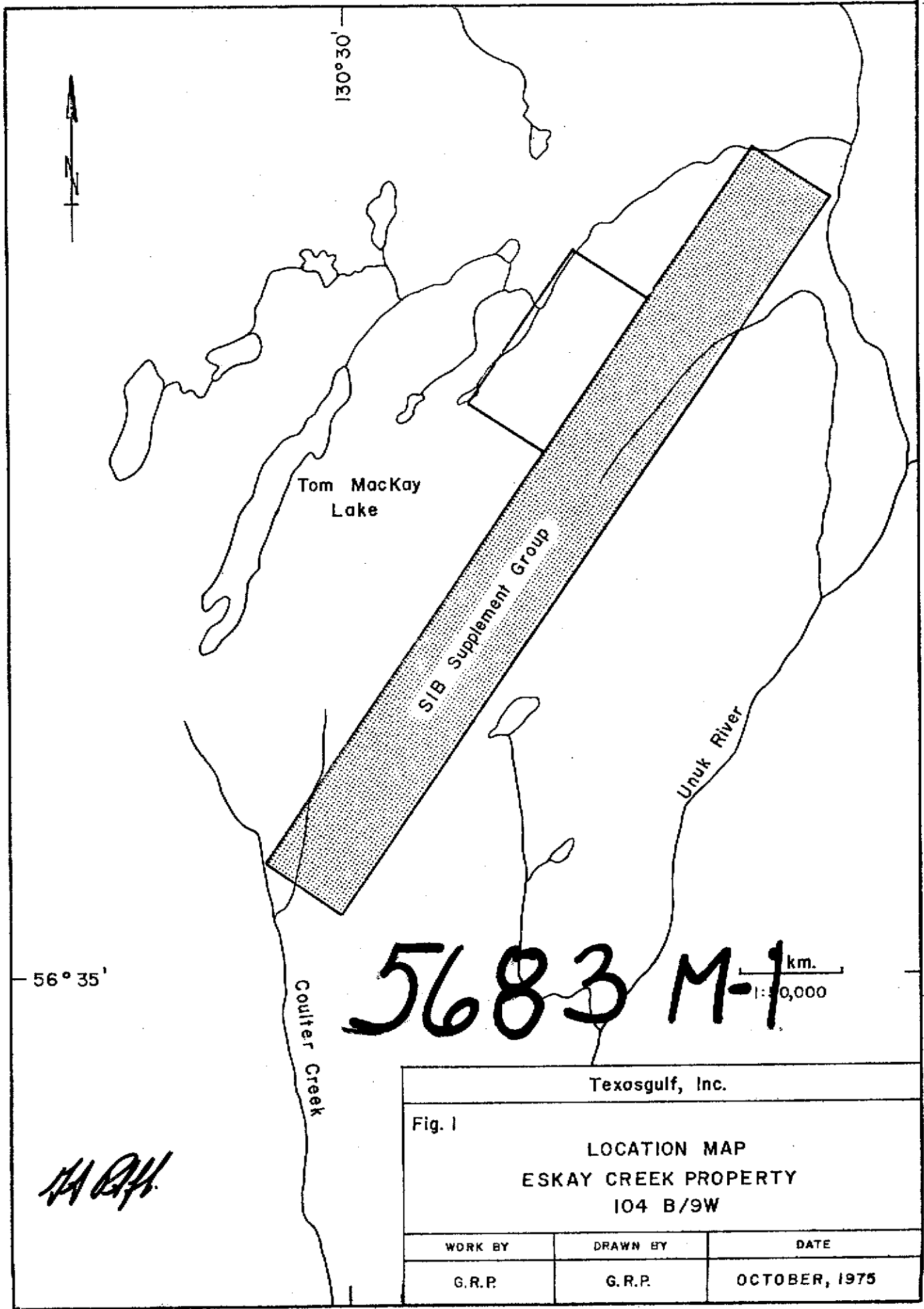
The property is located about 4 km. east of Tom MacKay Lake, between the Unuk and Iskut Rivers, and some 80 km. NNW of Stewart\*. Access is by helicopter from Stewart or points on the Stewart-Cassiar Highway, notably Bob Quinn Lake, some 40 km. to the NE.

Terrain in the work area is rough, with local high relief, of the order of 100 m. A combination of abrupt topographic changes and dense sub-alpine timber makes work difficult, especially as regards cutting lines in pre-determined positions. For this reason, costs per line-kilometer are relatively high.

## LINECUTTING PROGRAMME

In order to provide control for subsequent geophysical surveys, a grid was established on the claim group. As shown on Fig. 3, the grid consisted of a picketed baseline, and compass lines spaced at 120 m. along the baseline. Of the total grid cut, 50% can fairly be considered to be on the claim group and to have been used in

\* (See Fig. 1)

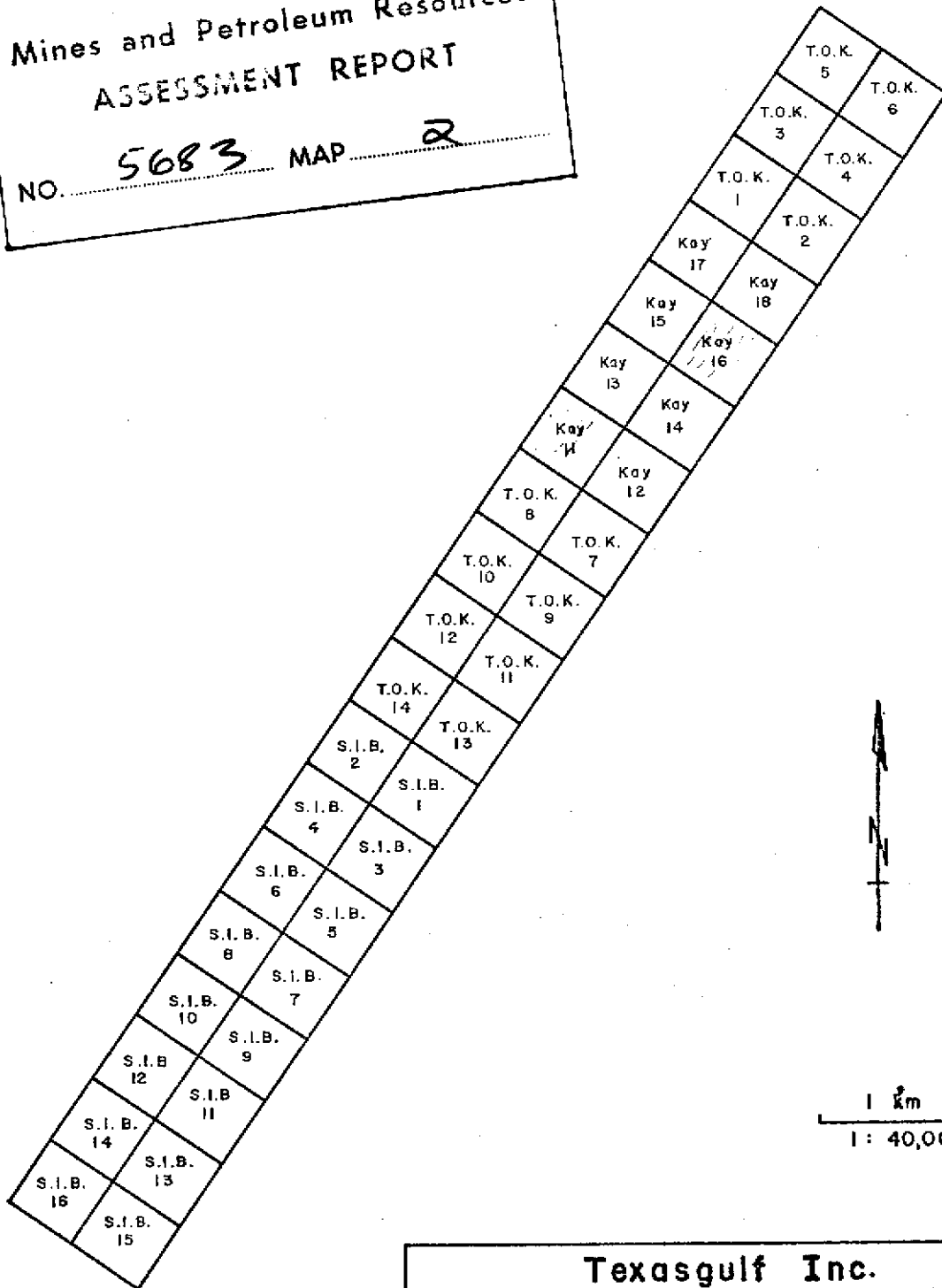


*HA P.H.*

Texosgulf, Inc.		
Fig. 1 LOCATION MAP ESKAY CREEK PROPERTY 104 B/9W		
WORK BY	DRAWN BY	DATE
G.R.P.	G.R.P.	OCTOBER, 1975

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 5683 MAP 2



*Handwritten signature*

<b>Texasgulf Inc.</b>		
Fig.2 CLAIM GROUPING SKETCH ESKAY CREEK PROPERTY 104B/9W		
WORK BY	DRAWN BY	DATE
G.R.P.	G.R.P. & E.R.	OCTOBER, 1975

the surveys.

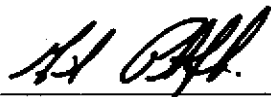
The line-cutting was undertaken under contract by Manex Mining Ltd., who supplied a four-man crew headed by M. J. Beley, president of Manex, and a cook. In view of the above mentioned distribution of lines, only 50% of the costs invoiced by Manex Mining are claimed for assessment credit.

GEOPHYSICAL SURVEYS

The geophysical surveys were performed under the direction of W. A. Gasteiger, Texasgulf Geophysicist, whose report is included as an Appendix.

The following points should be clarified:

1. The magnetometer work was done by R. Barclay of Manex Mining, and his time was billed by Manex. Since just over half the magnetometer work was on the group, the 50% cost factor was maintained with respect to Manex invoices.
2. The E. M. work, undertaken by Texasgulf personnel, is calculated to be 83.5% on the group, and costs have been adjusted accordingly.

  
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G. R. Peatfield, P.Eng.

APPENDIX A

Geophysical Report by W. A. Gasteiger

TEXASGULF CANADA LIMITED  
REPORT ON GEOPHYSICAL WORK  
ESKAY CREEK OPTION

W. GASTEIGER



INDEX

1. INTRODUCTION	Page 1
2. PREVIOUS WORK	Page 1
3. SURVEY DETAILS	Page 2
4. SURVEY RESULTS	Page 2
5. CONCLUSIONS AND RECOMMENDATIONS	Page 4

TEXASGULF CANADA LIMITED  
REPORT ON GEOPHYSICAL WORK  
ESKAY CREEK OPTION

1. INTRODUCTION:

Geophysical surveys consisting of shoot-back electro-magnetic and proton precession magnetometer traverses were performed over a number of optioned claims known as the Eskay Creek property.

This work was carried out between August 6th, and 15th., 1975.

2. PREVIOUS WORK:

A great amount of trenching, drilling, and prospecting had previously been undertaken in the surveyed area. Also, a 700 foot adit had been installed at one point. However, most of the work seems to have been directed towards silver exploration. The present survey attempted to detect massive sulphides.

The only previous geophysics consisted of some high frequency EM-16 and fluxgate magnetometer profiles over randomly spaced lines. The EM-16 survey seemed to indicate some conductive zones.

3. SURVEY DETAIL:

Traverse lines were cut in a northwesterly direction at intervals of 120 metres. Both electromagnetic and magnetic readings were taken at 20 metre intervals.

The E.M. survey was run in the horizontal shoot-back mode in which the transmitter is held horizontally and null readings are taken at the receiver at same angle off vertical. The usual coil separation was 80 metres. Since the region did not seem to have any geological "noise" such as conductive overburden, the unit's highest frequency, 5010 hertz, was used in order to pick up any weak bedrock conductors.

Because of the very rugged terrain, survey progress, especially with the shoot-back unit, was very slow. This resulted in only the areas of more favorable geology being surveyed.

4. SURVEY RESULTS:

Shoot-Back E.M. Survey:

The electromagnetic survey showed no major zones of good conductivity. Two areas had slightly anomalous readings and these were detailed.

Line 9880N, station 9600E, had a positive spike that sometimes indicates a near surface conductor. Repeated profiles with 40 metre and 120 metre coil spacings failed

to indicate a conductive response.

Lines 10600N and 10720N in the region of 9700E had negative readings that were below background. Further detailed work of both shoot-back and vertical loop E.M. was performed. This work is indicated in the detailed E.M. profiles.

Detailed E.M.  
LINE 10600N

The forty metre shoot-back survey gave no response indicating the source of conductivity is not near surface. The 120 metre shoot-back work indicates a conductive source at an effective depth of 30 metres centred at 9720E. The poor response at medium frequency shows the zone has poor conductivity. The vertical loop traverse also shows a conductor at the same location.

LINE 10720N

Neither the 120 metre nor the 160 metre shoot-back traverses indicate very much. The vertical loop survey shows a definite crossover at 9760E. This crossover could indicate an extension of the zone from Line 10600N.

Magnetic Survey:

The magnetic survey shows that for the most part the area is underlain by rocks of very low magnetic susceptibility. Except for the south end of the grid, there is barely a fifty gamma difference from one side of the property to the other.

The south-east corner of the grid contains an anomalous area whose peak response is approximately 500 gammas. It has a very different magnetic expression from the volcanic-sedimentary sequence in the remainder of the area and is probably due to an intrusive of higher magnetic susceptibility.

5. CONCLUSIONS AND RECOMMENDATIONS:

The only definite conductive response occurs at 9720E on Line 10600N. Happily this coincides directly with a very small lens of quite spectacular massive sulphide mineralization. As indicated by the detailed E.M., the conductive zone is at depth. This means that either the massive sulphide improves at depth or that the ubiquitous disseminated pyrite begins to play a larger part in the conductivity as coil separation increases. I believe the former is more plausible and suggest that a hole be drilled to intersect thirty or forty metres below the surface showing.

If detailed geology cannot determine whether the vertical loop crossover at 9760E on Line 10720N represents an extension to this zone (the crossover may be due to topographic or mis-orientation effects), further detailed geophysics should be done. A quick one day method would consist of using a radem or EM-16 to trace out the conductor axis. The operator should be experienced so as to take into account the terrain effects in the area.

  
W. Gasteiger

Texasgulf Inc.

P.O. Box 1140, 571 Moneta Avenue, Timmins, Ontario P4N 7H9 (705) 267-1188

Exploration Department

September 12, 1975

British Columbia Department  
Of Mines And Petroleum Resources,  
VICTORIA, British Columbia

Dear Gentlemen:

The following is a summary of my qualifications as  
a geophysicist.

B. Sc. Queen's University  
Geological Science (Geophysics Option)

Field Experience:

1970	Texasgulf Exploration	Seismic, magnetics, resistivity surveys
1971	Texasgulf Exploration	Magnetic, gravity, electromagnetic surveys
1972 to Present	Texasgulf Exploration	Magnetic, gravity, electromagnetic, induced polarization and seismic surveys and computer applications to geophysics.

Professional Affiliations:

Engineering Institute of Canada.  
Association of Professional Engineers of the Province of Ontario

Yours very truly,

  
W.A. Gasteiger

WAG/gc



APPENDIX B

Statements of Qualifications

Statement of Qualifications - R. Lowe

Richard Lowe is presently enrolled in third year applied geophysics at Queen's University, Kingston. He was employed by Texasgulf as a geophysical assistant for the 1975 field season, and was regarded by his supervisors as a keen, competent and conscientious employee.

Statement of Qualifications - R. Barclay

Richard Barclay is employed by Manex Mining Ltd., where his work includes surveys of a geophysical and geochemical nature. Mr. Barclay is considered an experienced and competent magnetometer operator, and worked on this project under the supervision of W. A. Gasteiger, Geophysicist.



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G. R. Peatfield, P.Eng.



APPENDIX C

Statement of Expenditures

APPENDIX C

Statement of Expenditures

Line-cutting Costs Billed by Manex Mining Ltd.

50% of attached invoices	\$ 4,248.48	
Less equipment items n/a	<u>70.83</u>	
	4,177.65	\$ 4,177.65

Salaries & Fringe Benefits - Texasgulf Inc.

G.R.Peatfield, P.Eng. - Supervision & Report 10 days @ \$100	\$ 1,000.00	
W.A.Gasteiger - Geophysicist 83.5% x 10 days @ \$65	542.75	
R.Lowe - Geophysical Assistant 83.5% x 10 days @ \$30	250.50	
D.A.Donnelly - Field Assistant (camp) 5 days @ \$35	<u>175.00</u>	
	\$ 1,968.25	\$ 1,968.25

Report Preparation

Draughting, secretarial, reproduction, etc.		\$ 500.00
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Room & Board

Geophysicists, 83.5% x 20 days @ \$15	\$ 250.50	
G.R.Peatfield, 4 days @ \$15	60.00	
D.A.Donnelly, 5 days @ \$15	75.00	
Line-cutters, 50% x 100 days @ \$15	<u>750.00</u>	
	\$ 1,135.50	\$ 1,135.50

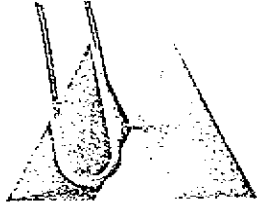
Helicopter Support (Mob, Demob, Supply)

Okanagan Helicopters, 206B	\$ 3,092.96	
Texasgulf G3B2, 30 hrs. @ \$200	<u>6,000.00</u>	
	9,092.96	\$ 9,092.96

Travel, Shipping, etc.

Travel	\$ 780.00	
Shipping	500.00	
Auto	100.00	
Equipment Rental	200.00	
Communications	<u>150.00</u>	
	1,730.00	\$ 1,730.00
TOTAL		\$ <u>18,608.36</u>

  
G. R. Peatfield, P. Eng.

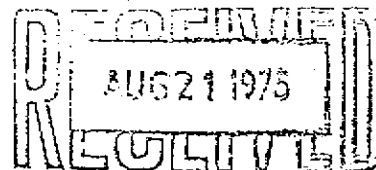


MANEX MINING LTD.

227 - 470 GRANVILLE STREET, VANCOUVER 2, B.C. ☉ 681-4411

August 20th, 1975

Texasgulf Inc.,  
1281 West Georgia Street,  
VANCOUVER, B.C.



Re: Eskay Project.

WAGES

B. Schultz	15 3/8 days at \$45.00 per day	\$ 691.86
J. van der Ark	9 1/2 days at \$50.00 per day	475.00
K. Verster	15 days at \$26.93 per day	403.95
R. Barclay	19 days at \$50.00 per day	950.00

\$2,520.81

Payroll overhead 11.55% 291.15

Signature: <i>[Signature]</i>	\$2,811.96
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DISBURSEMENTS

R. Barclay	\$ 72.00
M.J. Beley	103.30
Standard Oil	78.53
B.C. Telephone	127.84
Hermes Travel	59.40

Date: August 25, 1975
Charge: 78-023-812-23

441.07

\$3,253.03

Overhead 15% 487.95

\$3,740.98

GEOLOGIST

M.J. Beley	1 day at \$95.00 per day	95.00
M.J. Beley	7 days at \$125.00 per day	875.00

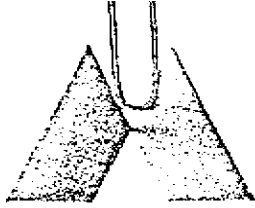
EQUIPMENT

Powersaws (2)	8 days at \$125.00 per month	66.72
Misc.	8 days at \$200.00 per month	53.36
Camp	5 days at \$225.00 per month	37.50
Radio Telephone	5 days at \$200.00 per month	33.33

\$4,901.89

This is our Account,  
MANEX MINING LTD.,

Per:



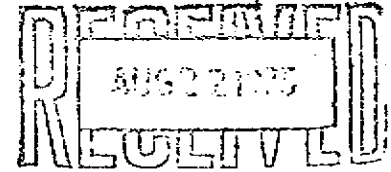
#230

MANEX MINING LTD.

227 - 470 GRANVILLE STREET, VANCOUVER 2, B.C. • 681-4411

August 21st, 1975

Texasgulf Inc.,  
1281 West Georgia Street,  
VANCOUVER, B.C.



Re: Eskay Project.

WAGES

R. Barclay	17 3/4 days at \$50.00 per day	\$ 887.50
K. Verster	15 days at \$26.93 per day	403.95
B. Schultz	8 1/2 days at \$45.00 per day	382.50
J. van der Ark	8 1/2 days at \$50.00 per day	425.00
		<hr/>
	Payroll overhead 11.55%	\$2,098.95
		242.43
		<hr/>
	Overhead 15%	\$2,341.38
		351.21
		<hr/>
		\$2,692.59

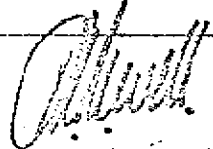
GEOLOGIST

M.J. Beley	6 1/2 days at \$125.00 per day	812.50
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EQUIPMENT

Powersaws (2)	6 days at \$125.00 per month	49.98
Misc.	6 days at \$200.00 per month	40.00
		<hr/>

\$3,595.07

Signature: 
Date: August 25, 1975
Charge: 78-023-312-23

This is our Account,

MANEX MINING LTD.,

Per: 



5683 M-3

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5683 MAP 3

to accompany  
Report on Geophysical Surveys  
& Supporting Work  
SIB SUPPLEMENT GROUP  
Tom MacKay Lake - Skeena M.D.  
by  
W.A. Gasteiger & C.R. Peatfield

Scale 1:5,000  
100 50 0 100 200 400 M

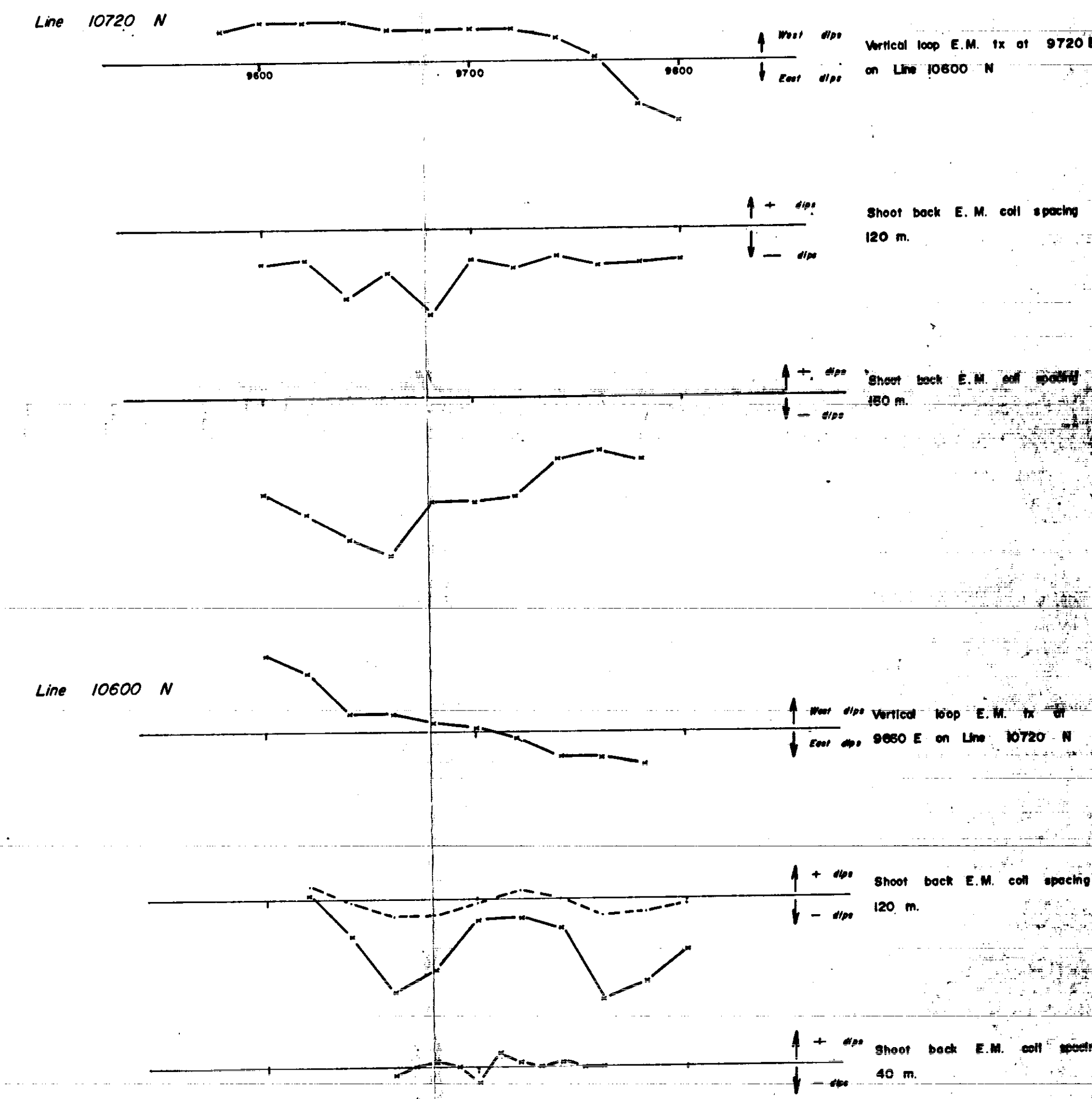
Texasgulf Inc.

ESKAY CREEK OPTION ①  
104 B/SW

Fig. 3 GRID MAP & WORK AREA LOCATIONS

G.R.P.	E. ROGAN	OCT. 21/1975
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Scale: 1 m = 2000 m  
**DETAILED E. M.**

**5683 M4**

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. **5683** MAP **4**

to accompany  
 Report on Geophysical Surveys  
 & Supporting Work  
 SIB SUPPLEMENT GROUP  
 Tom Mackay Lake - Skeena M.D.  
 by  
 W.A. Gasteliger & C.R. Peatfield

**LEGEND**

DIP ANGLE (Degrees)

INSTRUMENT : CRONE C.E.M.  
 FREQUENCY : 500 Hz  
 PROFILE SCALE : DIP ANGLE 1" = 20'

← dips      + dips →

**TEXASGULF CANADA LTD.**

② **ESKAY CREEK**

**SHOOT BACK - E. M.**

Standard : 80 m.  
 Scale : 1 m = 5000 m

0 100 m 200 m 300 m 400 m 500 m

Date of Survey August, 1975      Drawn By D.E. Lott  
 Survey By Gasteliger, Lowe      N.T.S.





Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 5683 MAP 5

to accompany  
 Report on Geophysical Surveys  
 & Supporting Work  
 SIB SUPPLEMENT GROUP  
 Tom MacKay Lake - Skeena M.D.  
 by  
 W.A. Gasteiger & G.R. Peatfield

LEGEND  
 INSTRUMENT - GEOMETRICS 606  
 TYPE - PROTON PRECESSION - TOTAL FIELD READINGS IN  
 GAMMAS

TEXASGULF CANADA LTD.  
 ③  
 ESKAY CREEK  
 MAGNETOMETER  
 SURVEY  
 Scale 1 m = 5000 m  
 0 100 m 200 m 300 m 400 m  
 Date of Survey - August, 1975 Drawn By - D.E. Lott  
 Survey By - Barclay, Gasteiger M.T.S.