

PROJECT PROPOSALSAS LAKE CLAIM GROUPINTRODUCTION:

Geological and geophysical work on the property to date indicate that further work is warranted, in the form of diamond drilling, and geophysical surveys on the lakes.

PROPERTY:

The Sas Lake claim group is situated in Coleman Township (parts of lots 7, 8 and 9, concession VI), just west of the town of Cobalt, Ontario. The claim boundaries and recorded numbers are shown in Figure 1.

GEOLOGY:

Most of the property is an inlier of Archean felsic and mafic volcanic rocks, covered to the west by gently-dipping conglomerates of the Gowganda Formation (Figure 1). The volcanics are believed to be part of a south-facing, homoclinal sequence; the contact of rhyolite with overlying andesite approximately bisects the claim group. At the contact, in the southwest part of the property, detailed mapping has revealed a unit of rhyolite breccia with minor disseminated pyrite; it is about 400 feet wide.

GEOPHYSICS:

The following geophysical surveys have been conducted on parts of the property: magnetics, vertical loop E.M., horizontal shootback (C.E.M.) and induced polarization (I.P.). There are several zones of interest, each related to an E.M. conductor, and indicated on Figure 1.

- 1) CONDUCTOR A: The cross-over was located at 84W/21+20S; it was not detected on line 80W, but remains untested to the west. Associated with the conductor is a positive magnetic anomaly of about 300 gammas. It may lie on the rhyolite/andesite contact, and for this reason deserves investigation by drilling.
- 2) CONDUCTOR B: This conductor extends from 80W/18+20S to 84W/17+00S, and requires further work to define its western limit. Its position coincides with a broad negative magnetic anomaly of about 150 gammas, and with an envelopping zone of high chargeabilities and low resistivities, about 400 feet wide. The conductor and I.P. zone dip steeply north, and lie within a rhyolite breccia unit. Geophysical interpretation indicates the top of the target to be about 50 feet below the surface. Drilling is recommended.
- 3) CONDUCTOR C: A strong cross-over was obtained by the vertical loop method at 72W/10+50S. The enclosing rocks are rhyolites. Further work on the frozen lake is needed to define its extent.

GEOPHYSICS continued

- 4) CONDUCTOR D(?): The vertical loop survey suggests a conductor under Sas Lake at about 48W/3S.

RECOMMENDATIONS:

1. Geophysics: The magnetic and E.M. surveys conducted during the summer of 1971 should be completed over the frozen lakes. The horizontal shootback (C.E.M.) method should be supplemented by the vertical loop method where conductors are indicated. In addition, magnetic and vertical loop surveys are needed to more precisely define the location and extent of conductors A and B.
2. Drilling: A program of diamond drilling is recommended to test conductors A and B, with provision to investigate other targets revealed by the winter geophysical work. This would require a maximum of 3,000 feet of drilling. The locations of the first four holes are as follows:

RECOMMENDATIONS continued

CONDUCTOR	HOLE	COORDINATES		BEARING	DIP	LENGTH (ft)
		WEST	SOUTH			
B	1	80+20	16+90	195°	-60°	500
A	2	84+00	20+20	180°	-60°	200
B	3*	86+00	18+00	15°	-40°	500
A	4*	88+00	19+00	180°	-60°	300
TOTAL						1500

* Holes 3 and 4 are subject to review
in light of results from Holes 1 and 2

ESTIMATE OF EXPENSES

1.	Living expenses and travel	
	- 6 weeks	\$ 600.00
2.	Geophysics: <i>Magnetic, E.M., vertical loop.</i>	
	- 4 line-miles @ \$150/mile	\$ 600.00
3.	Drill supervision and core logging	\$1,000.00
4.	Assays	\$ 200.00
5.	Drilling: 3,000 ft. ^{@ #6,} AQ wireline	\$18,000.00
6.	Snowmobile rental 10 days @ \$20/day	\$ 200.00
7.	Core freight and storage	\$ 200.00
8.	Miscellaneous and contingencies	\$ 400.00
		<hr/>
		\$21,200.00
		<hr/>

Encl - 1 map

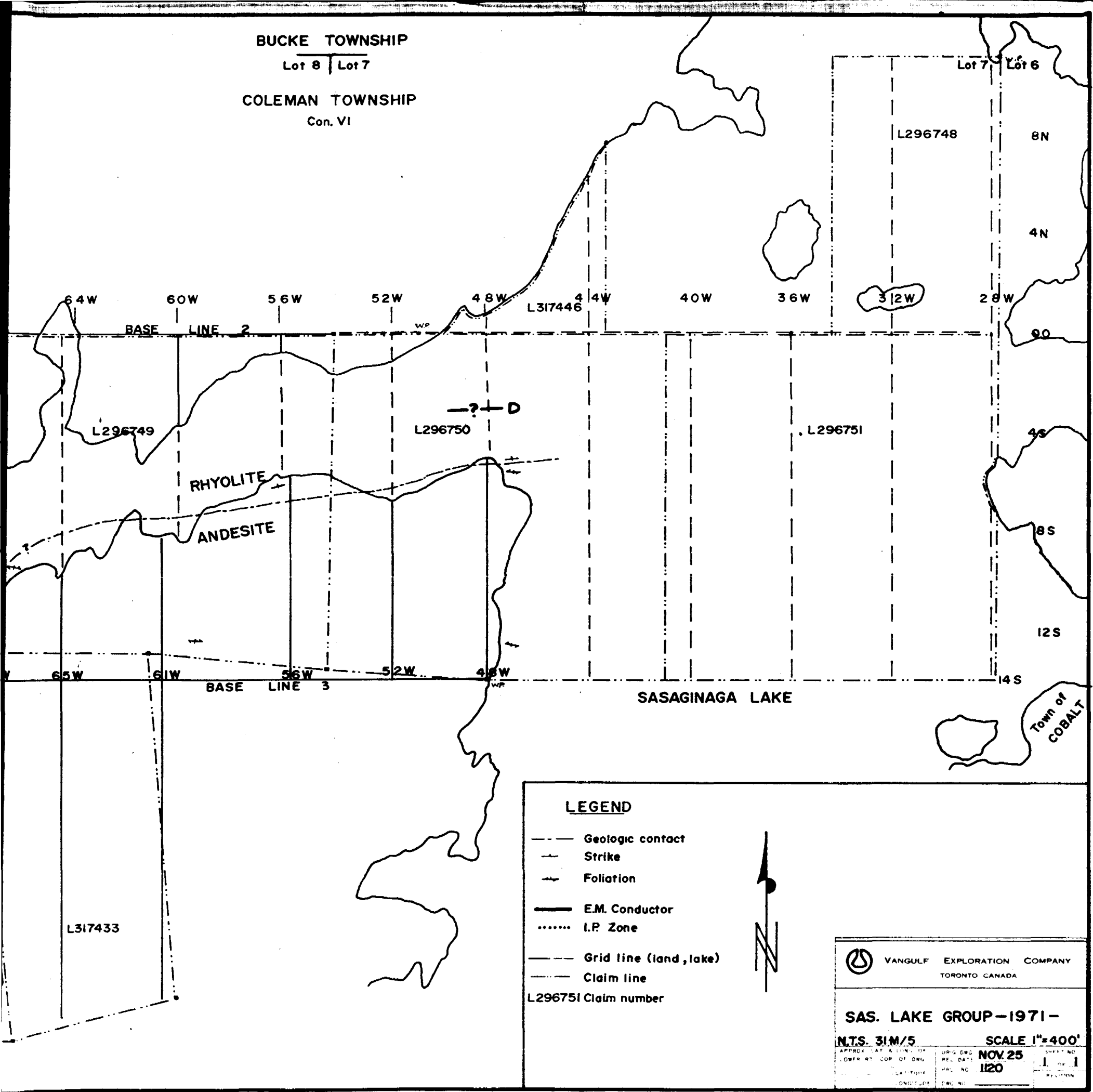
David F. Fisher
David F. Fisher, M.Sc.,
Geologist

BUCKE TOWNSHIP

Lot 8 | Lot 7

COLEMAN TOWNSHIP

Con. VI



LEGEND

- Geologic contact
 - - - Strike
 - - - Foliation
 - E.M. Conductor
 - I.P. Zone
 - Grid line (land, lake)
 - Claim line
- L296751 Claim number



VANGULF EXPLORATION COMPANY
TORONTO CANADA

SAS. LAKE GROUP - 1971 -

NTS. 31M/5

SCALE 1"=400'

APPROX. DATE OF WORK

ORIG. DATE NOV. 25

SHEET NO. 1 of 1

LOWER RT. COP. OF DRG.

REL. DATE 1120

PLANTING

LONGITUDE

DWG. NO.

REVISION



31M05NE0416 63.2946 COLEMAN

020

8"

PROGRESS REPORT
ON THE
SAS LAKE PROPERTY
OF
VANGULF EXPLORATION COMPANY

by

D.F. Fisher

February 11, 1972

Submitted under the Exploration Assistance
Programme of the Ontario Department of
Mines and Northern Affairs.

PROGRESS REPORT

SAS LAKE PROJECT

INTRODUCTION

Vangulf Exploration Company holds a block of mining claims in Coleman and Bucke Townships, near Cobalt, Ontario. An application was submitted on November 25, 1971, relating to 9 claims in Coleman Township, under the Exploration Assistance Programme of the Ontario Government. This present report describes the work done on the property.

GEOPHYSICS

Several geophysical surveys were conducted on the property; the work on land was done in 1971 and these surveys were completed on lake ice in January, 1972.

a) Magnetic Survey

The magnetic survey was conducted with a Scintrex MF-2 fluxgate magnetometer. The survey was well controlled by numerous base stations, so that a resultant accuracy of about ± 20 gammas was achieved. Readings were taken at intervals of 50 feet along picket lines. To minimize minor fluctuations, the data were treated statistically by a simple 3-point rolling average calculation, and these values were contoured on the magnetic survey map.

The isomagnetic lines reveal a greater relief over the southern part of the property, underlain by andesite, as compared to the northern part, underlain by rhyolite.

GEOPHYSICS continued

Magnetic Survey

The magnetics are locally of assistance in interpreting the position of the rhyolite/andesite contact, as in the area west of Pretty Lake, and along the narrow western arm of Sas Lake.

The magnetic anomaly at about 52W/10S was drilled in 1964 by Flobelle Mines Limited, and found to be caused by pyrrhotite in andesite and graphitic bands. This is believed to be the cause of the similar anomalies at about 61W/10S and 80W/23S.

The large positive and negative anomalies on Line 68W do not extend to the adjacent lines. Although the readings on this line were well controlled at a series of base stations immediately before and after reading this line, it is possible that these large values were caused by a brief magnetic storm. Alternatively, the anomaly may be related to the contact of a diabase dike, about 150 feet wide, which lies between Lines 65W and 68W in this area.

The discrete positive anomaly at 84W/21S was considered an attractive target for drilling because of its postulated coincidence with the andesite/rhyolite contact and a short E.M. conductor ("A"). Detailed survey work (Lines 82W and 86W) reduced the size of the anomaly and showed it to be unrelated to conductor A. A narrow, positive magnetic anomaly at the south end of Lines 61W and 65W may be related to a narrow, cherty interflow band in andesite; it outcrops on the lakeshore at about 68W/26S and strikes parallel to the magnetic trend.

GEOPHYSICS continued

Magnetic Survey

Near 68W/10S, a small magnetic high apparently coincides with conductor C. Interpretation from the profile indicates a depth of about 150 feet to the top of this magnetic body. This implies a narrow width, in accord with E.M. interpretation also.

b) Electromagnetic Surveys

Three types of E.M. surveys were conducted: Vertical loop, horizontal shootback (C.E.M.) and V.L.F.-E.M. (RADEM). The vertical loop method provided the most useful data. Detailed work, at a later date, was performed with a different instrument, at somewhat different frequencies.

Several conductors have been outlined. These have been designated by letter and are shown on the E.M. survey maps. Conductors A, A' and B were tested by diamond drilling. Conductor C has a magnetic expression along part of its length, but the V.L.E.M. profile indicates a narrow width. Magnetic interpretation confirms this width estimate. Conductors I and K are part of the target drilled by Flo-belle Mines Limited in 1964, in a north-south section at about 54W. They were found to be sulphide-bearing graphitic bands in andesite. Conductor E is exposed on two shaft dumps as graphitic slate with some pyrite nodules. Conductor D requires further detailed work, but appears to be weak. The RADEM survey on Line 28W located 2 conductors; these are believed to be parallel bands of dark slate which outcrop on the adjacent island.

DRILLING SEE DRILLING, COLEMAN #29


A total of 1,155 feet of drilling was completed in December, 1971. Conductors A and B were found to be graphitic horizons within andesite and rhyolite respectively. Conductor A' was not adequately explained in drilling, but further consideration of the survey data lead to the conclusion that the anomaly was false. The magnetic anomaly near A is related to disseminated pyrrhotite in andesite.

The drill logs for all 3 holes, SL-1, SL-2 and SL-3 are appended, along with sections through these holes.

CONCLUSIONS

Most of the geophysical anomalies have been adequately explained, by interpretation or drilling. A small amount of detailed work might be useful in tracing the extensions of conductors C and K and in defining conductor D.

No economically significant amounts of any minerals were located in the course of the work on this property.



D.F. Fisher, M.Sc.



31M05NE0416 63.2946 COLEMAN

SCHEDULE

030

SAS LAKE1) GEOPHYSICS

<u>Survey</u>	<u>line miles</u>	<u>\$/line mile</u>	<u>\$</u>	
Magnetics	6.1	60	366	
VLEM	3.2	110	352	
CEM	1.6	90	144	
RADEM	1.8	50	90	
			<u>952</u>	\$ 952.00

(includes detailed work, data plotting, operators' salaries)

2) DRILLING

1155 feet AQ				
Invoices (Bradley Bros. Ltd.)	Nov.30/71	\$2988.90		
	Dec.15/71	<u>4729.85</u>		
		7718.75		\$7,718.75

3) GENERAL EXPENSES

- mobilization & demob. Toronto-Cobalt (600 miles)				
Nov.25-Dec.6 and Jan.16-22 @ 15¢/mile		180.00		
- local travel 310 miles @ 15¢/mile		46.50		
- core freight storage @ \$10/mo.		30.00		
Dec.-Feb.				
- room & board: 1 man Nov.25-Dec.5		220.00		
@ \$20/day				
2 men Jan.16-21		125.00		
@ \$25/day				
(provided in house rented by Vangulf)		<u>601.50</u>		
				\$ 601.50

Carried forward ... \$9,272.25

SCHEDULE A continued

Balance Forward \$ 9,272.25

4) PROFESSIONAL SERVICES

by D.F. Fisher @ \$100/day

	<u>days</u>	
a) geophysics supervision Nov.27,28; Jan.22	3	
b) drilling supervision Nov.26, 28; Dec.5; & core logging	8	
c) report preparation Nov.23,24, Dec. 10, Feb.4	4	
	<hr/> 15 days	
		\$ 1,500.00
		<hr/>
TOTAL		\$10,772.25

David F. Fisher

 David F. Fisher, M.Sc., Assoc.G.A.C.

APPENDIX: Geophysical Operators

- 1) Magnetometer: R.S. Chanyi, M. Hlava
- 2) Vertical Loop E.M.: R.S. Nichols, M. Bordeau
- 3) C.E.M.: R.S. Nichols, M. Bordeau
- 4) RADEM: D.F. Fisher
- 5) Vertical Loop E.M. (detail): D.F. Fisher,
M. Bordeau, M. Hlava, D. MacLean

Vulcan Exploration Company,
 2523 Yonge Street,
 Toronto 315, Ontario.

IN ACCOUNT WITH

BRADLEY BROS. LIMITED
 CONTRACT DIAMOND DRILLING



HOLE NO.	TO COVER DIAMOND DRILLING FOR		
	FROM	TO	FOOTAGE COMPLETED
			November 15 to 20, 1971
			Mobilization and Demobilization
			\$ 300 00
			Cost to move to first hole:
			71 man hrs. at \$5.50
			12 tractor hrs. at \$8.00
			390 00
			96 00
SL-1	0'	336'	336 feet at \$4.90
			1,646 40
			Cost to move to SL-2:
			64 man hrs. at \$5.50
			8 tractor hrs. at \$8.00
			352 00
			64 00
			40 core boxes supplied at \$3.50
			140 00
			<u>\$2,983 90</u>
			<u><u> </u></u>
			RECEIVED PAYMENT
			WITH THANKS
			Feb. 8/72
			BRADLEY BROS. LIMITED
			<i>J. Kelly</i>

December 15, 1971,

Gulf Exploration Company,
 2323 Yonge Street,
 Toronto 215, Ontario.

IN ACCOUNT WITH

BRADLEY BROS. LIMITED
 CONTRACT DIAMOND DRILLING



HOLE NO.	TO COVER DIAMOND DRILLING FOR December 1 to 15, 1971				
	FROM	TO	FOOTAGE COMPLETED		
SL-2	0'	500'	500 feet at \$4.00	\$2,450	00
	500'	515'	15 " " \$5.25	78	75
SL-3	0'	304'	304 feet at \$4.90	1,489	60
			2 tests in SL-2 (200' - 400') at \$10.00	20	00
			1 test in SL-2 at 515'	10	50
			1 test in SL-3 at 155'	10	00
			Cost to move to SL-3:		
			48 man hrs. at \$5.50	264	00
			6 tractor hrs. at \$8.00	48	00
			Cost to move to road:		
			60 man hrs. at \$5.50	330	00
			3 tractor hrs. at \$8.00	24	00
				<u>\$4,764</u>	<u>85</u>
			<u>CREDIT</u>		
			10 core boxes at \$3.50		35 00 cr.
				<u>\$4,729</u>	<u>85</u>

RECEIVED PAYMENT
 WITH THANKS
 Feb. 8/72.

BRADLEY BROS. LIMITED



31M05NE0416 63.2946 COLEMAN

900

965-6139

Room 1606, Whitney Block
Parliament Buildings
Queen's Park
Toronto, Ont.

June 15, 1972

Vangulf Exploration Company
2323 Yonge Street
Toronto 315
Ontario

Attention: Mr. R. M. Ginn, Manager

Dear Sir:

The duplicate copies of progress report on "Sas Lake Project" covering geophysical survey and diamond drilling in Coleman Township, submitted under the "Exploration Assistance Programme" have been forwarded to this office for filing and are now available to the general public.

One copy is on file in Room 1606, Whitney Block, Assessment Work-Research Library, Parliament Buildings Queen's Park, Toronto and the second copy has been forwarded to the Resident Geologist, Kirkland Lake, Ontario.

Yours very truly,

G. T. Stevens
Research Officer
Mining Lands Branch

GTS/lm

c.c. Mr. H. Lovell

AREA CODE — 416
TELEPHONE 965-1314



CG 8
WHITNEY BLOCK,
QUEEN'S PARK,
TORONTO 182, ONT.

DEPARTMENT OF MINES AND NORTHERN AFFAIRS
FINANCE AND ADMINISTRATION BRANCH

March 23th, 1972

Vangulf Exploration Company
2323 Yonge Street
Toronto 315, Ontario

Attention: Mr. R.H. Gilm, Manager

Dear Sir:

Enclosed herewith is a cheque in the amount of \$3,590.75. This amount represents the Department's share of the cost, under the exploration assistance agreement, of the actual expenses incurred by you while exploring for minerals in Coleman Township between November, 1971 and March, 1972.

Yours truly,

A handwritten signature in cursive script, appearing to read "H.G. Matthews".

H.G. Matthews
Chief Accountant

/kc
Enclosure

cc: Mr. G.R. Guillet ✓
Mr. J.R. McGinn

LEGEND

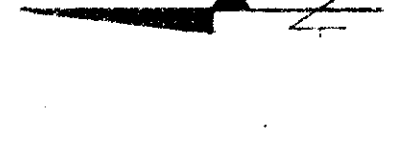
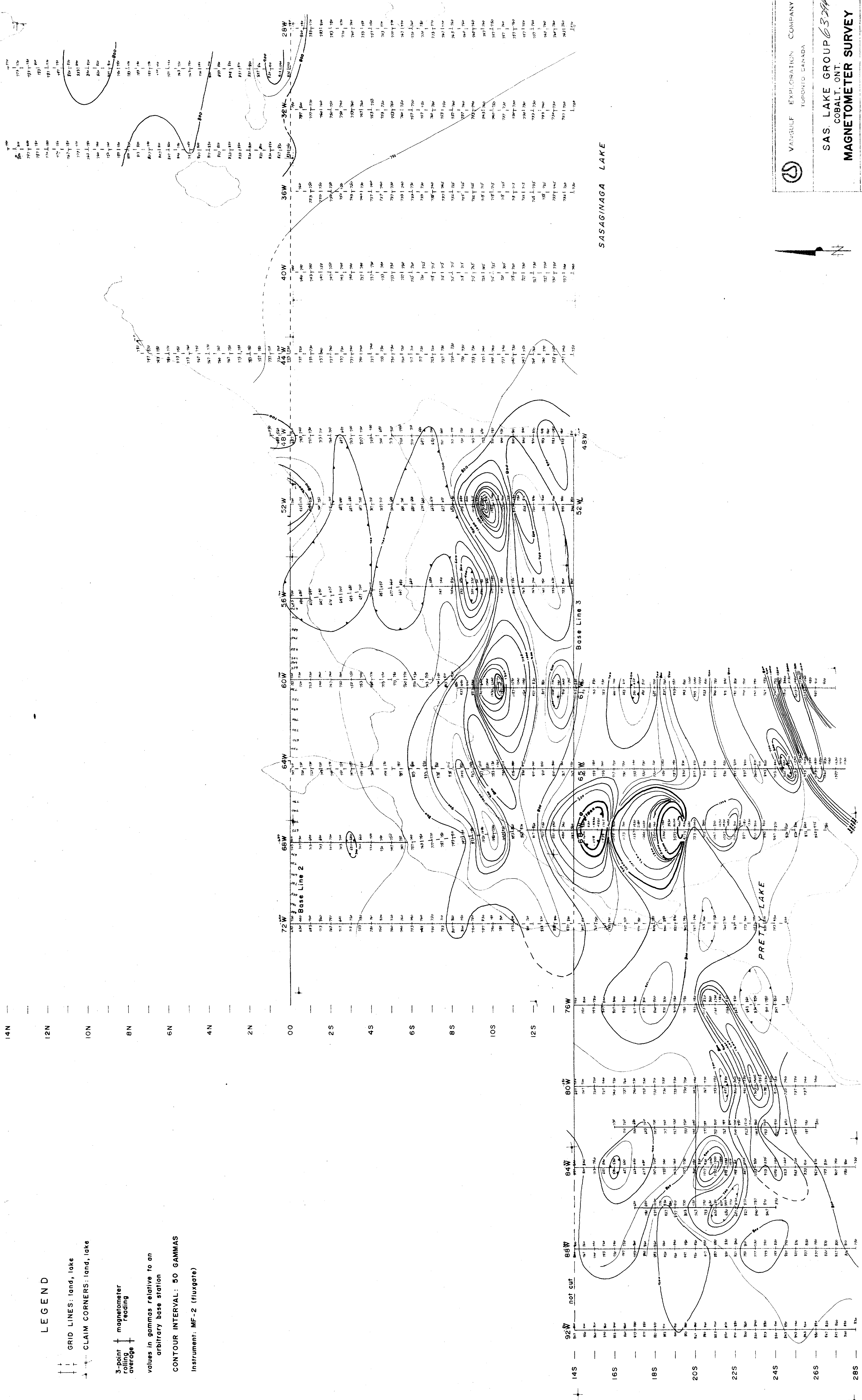
+ + + GRID LINES: land, lake
 - - - CLAIM CORNERS: land, lake

+ magnetometer reading
 + 3-point rolling average

values in gammas relative to an arbitrary base station

CONTOUR INTERVAL: 50 GAMMAS

Instrument: MF-2 (fluxgate)



1 inch = 200 feet
N.T.S. 31M/5

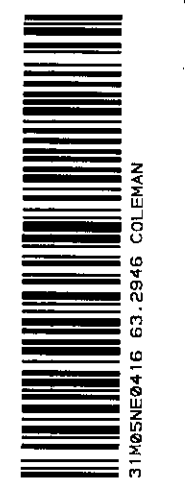
VANQUEL EXPLORATION COMPANY
 TORONTO CANADA

SAS LAKE GROUP
 COBALT, ONT.

MAGNETOMETER SURVEY

APPROX. LAT. & LONG. OF SURVEY: FEB 3, 1972
 SHEET NO. 1 OF 3
 UTM ZONE: 18Q
 LATITUDE: 46° 12' N
 LONGITUDE: 79° 50' W

AS 3/6/77



LEGEND

GRID LINES: land, lake

CLAIM CORNERS: land, lake

17.8 KHz (Curier, Maine) - RADEM

1830 Hz - C.E.M. (Horizontal shootback, $d=400$)

Picket line

100 Station

20° (N)

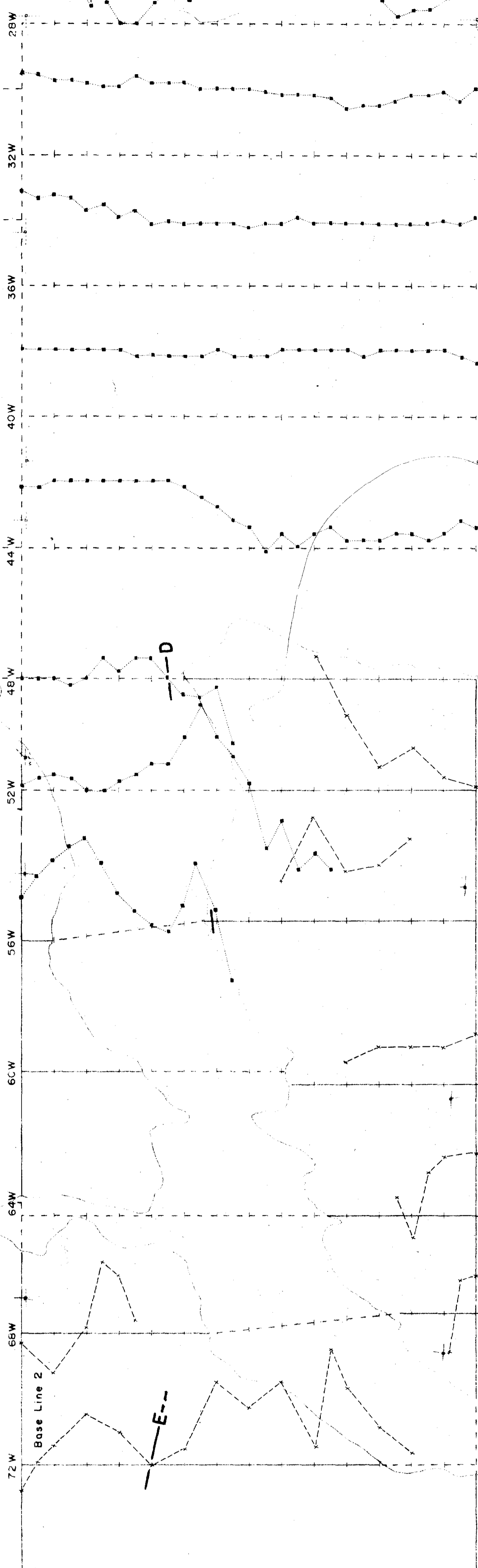
Angle sub scale

REVERSE

X-OVER

14N
12N
10N
8N
6N
4N
2N
00

2S
4S
6S
8S
10S
12S



SASAGINAGA LAKE

Pretty Lake



1 inch = 200 feet
N.T.S. 31M/5
6/2/54

VANGUARD EXPLORATION COMPANY
SAS. LAKE GROUP 63294
COBALT, ONT.
ELECTROMAGNETIC SURVEYS

DATE	NO. OF STATIONS	NO. OF READINGS	NO. OF CORRECTIONS
FEB 3, 1972	3	120	

