83-#886 - 11797

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A REPORT

ON

AN INDUCED POLARIZATION SURVEY

Sweeney Lake Area, British Columbia
(53° 45'N, 127° 08'W)
N.T.S. 93E 11/14

Claims surveyed: DEL, TIP

Survey Dates: Sept. 30th - Oct. 9th
1983

FOR

GEOKOR ENERGY HOLDINGS LTD.

Vancouver, B.C.

BY

PETER E. WALCOTT AND ASSOCIATES LIMITED
Vancouver, British Columbia

JANUARY 1984

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ACCOMPANYING MAPS - Scale 1:10,000

INTRODUCTION.

Between September 30th and October 9th, 1983, Peter E. Walcott & Associates Limited undertook a limited induced polarization (I.P.) survey over part of a property in the Sweeney Lake area, British Columbia, for Geokor Energy Holdings Ltd.

The survey was carried out over eight east-west "compass and flag" lines established by the I.P. crew off a north-south base-line.

Measurements (first and second separation) of apparent chargeability - the I.P. response parameter - and resistivity were made along these lines using the pole-dipole method of surveying with a 100 metre dipole.

The data are presented in contour form on plan maps of the grid - Map W-333-1 to 4 that accompany this report.

PROPERTY, LOCATION & ACCESS.

The property is located in the Omineca Mining Division of British Columbia and consists of the following claims:

Claim Name		Record No.
DEL	20 units	2163
MOR	" "	3741
PEP	" "	2162
TIP	" "	3740

The claims are situated about 80 kilometres southwest of the town of Houston in central British Columbia.

Access was obtained from Houston by the Nadina Lake - Sweeney Lake gravel road, and thence by 4 wheel drive vehicle north along an access road leading to Sibola Mountain.

PURPOSE.

The purpose of the survey was to examine the I.P. signature over the property in view of the favourable geochemical results and the I.P. and drilling results on the S.M.D.C. property adjoining to the west.

PREVIOUS WORK.

Previous work on the property consisted of prospecting, geological mapping, and geochemical surveying - the results of which are documented in reports by R.W. Phendler, P.Eng. and held by Geokor Energy Holdings Ltd.

GEOLOGY.

The reader is referred to the previously mentioned reports.

SURVEY SPECIFICATIONS.

The induced polarization (I.P.) survey was carried out using a pulse type system, the principal components of which are manufactured by Huntec Limited and Phoenix Geophysics Limited of Metropolitan Toronto, Ontario.

The system consists basically of three units: a receiver (Huntec), a transmitter and a motor generator (Phoenix). The transmitter which provides a maximum of 3.0 kw d.c. to the ground, obtains its power from a 3.0 400 c.p.s. three phase alternator driven by a gasoline engine. The cycling rate of the transmitter is 2 seconds "current-on" and 2 seconds "current-off" with the pulses reversing continuously in polarity. The data recorded in the field consists of careful measurements of the current (I) in amperes flowing through electrodes C_1 and C2, the primary voltage (V) appearing between the two potential electrodes, P_1 and P_2, during the "current-on" part of the cycle, and the apparent chargeability (M_a) presented as a direct readout using a 200 millisecond delay and a 1000 millisecond sample window.

The apparent resistivity (P_a) in ohm metres is proportional to the ratio of the primary voltage and the measured current, the proportionality factor depending on the geometry of the array used. The chargeability and resistivity are called apparent as they are values which that portion of the earth sampled would have if it were homogeneous. As the earth sampled is usually inhomogeneous the calculated apparent chargeability and resistivity are functions of the actual chargeability and resistivity of the rocks.

The survey was carried out using the "pole-dipole" method of surveying. In this method the current electrode C_1, and the two potential electrodes, P_1 and P_2, are moved in unison along the survey lines. The spacing "na" (n an integer) between C_1 and P_1 is kept constant for each traverse at a distance roughly equal to the depth to be explored by that traverse, while that of P_1 to P_2 (the dipole) is kept constant at "a". The second current electrode C_2 is kept constant at "infinity".

Thus usually on a "pole-dipole" array traverse with an electrode spacing of 50 metres a body lying at a depth of 25 metres will produce a strong response, whereas the same body lying at a depth of 50 metres will only just be detected. By running subsequent traverses at different electrode separations, more precise estimates can be made of depth, width, thickness and percentage of sulphides of causative bodies located by the I.P. method.

SURVEY SPECIFICATIONS cont'd.

Here the survey was carried out using a 100 metre dipole and obtaining first and second separation measurements.

In all some 22.4 kilometres of surveying were carried out.

DISCUSSION OF RESULTS.

The results of the I.P. survey showed that part of the property surveyed to exhibit a reasonably high chargeability background above which several anomalous zones effectively outlined by the 35 millisecond contour on Maps W-333-3 and 4 are discernible.

The resistivity survey showed the presence of a large resistivity low - outlined by the 500 ohm metre contour on Maps W-333-1 and 2 - on the western part of the survey area.

The greater part of the chargeability high is located around the edge and on the open western extremity of this low reasonably coincident with anomalous copper soil values.

Copper mineralization is known to have been encountered in drill holes put down by S.M.D.C. on the basis of combined geological, geophycisal and geochemical information on the western edge of the claims near Whiting Creek.

The main I.P. and for that matter the resistivity low is undefined on the TIP claims to the north. However before proceeding with further work to more properly define the same it would be better to obtain the results of the S.M.D.C. and previous work on the adjoining properties to better understand the complexity of the mineralization.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.

Between September 30th and October 9th, 1983, Peter E. Walcott & Associates Limited carried out a limited I.P. survey over part of a property for Geokor Energy Holdings Ltd.

The property is located south of Sibola Mountain in an area where a number of low grade copper deposits have been discovered - the Huckleberry 2 kms south on the adjoining claims, the Berg 19 kms to the northwest, and Ox Lake 8 kms to the east.

The results of the survey indicated a large resistivity low in the western portion of the grid. A large chargeability high rings the northern and southern parts and is coincident with the western open part of this low. A reasonably good copper geochemical correlation also exists.

As these results are very compatible with those obtained by S.M.D.C. on the adjoining Whit claims to the west where known copper mineralization is known to have been encountered in drill holes near the property boundary, and as the results of this latter work was supposedly filed for assessment in 1981 - open file by now - an effort should be made to obtain that data before further study of this data is carried out and/or further work such as extending the I.P. zone to the north is carried out.

Respectfully submitted,

PETER E. WALCOTT & ASSOCIATES LIMITED

Peter E. Walcott, P.Eng.
Geophysicist

Vancouver, B.C.

January 1984

APPENDIX

COST OF SURVEY.

Peter E. Walcott & Associates Limited undertook the survey on a kilometre basis. Reporting charges were extra so that the total cost of services provided was $12,804.00.

PETER E. WALCOTT & ASSOC. LTD.

605 RUTLAND COURT, COQUITLAM, B.C. V3J 3T8 • TEL. 939-0383

INVOICE

NO. 1629

Date: Oct. 23rd, 1983

Terms: NET 30 DAYS

To: GEOKOR ENERGY HOLDINGS LTD.
305 - 1212 W. Broadway
Vancouver, B.C.
V6H 1G6

Re: I.P. Survey, Sebola Mtn., B.C.

1.	22.4 km of survey at $540.00 per km	$12,096.00

PAID
Paid Geokor
Cheque No. 209 + 217
Date 9/28/83 $5000 12/2/83 $7209

INVOICE NO. 1629

Please note interest will be charged at the rate of 1 1/2% on all overdue accounts.

7096
105

GEOPHYSICAL SERVICES

PETER E. WALCOTT & ASSOC. LTD.

605 RUTLAND COURT, COQUITLAM, B.C. V3J 3T8 • TEL. 939-0383

INVOICE

Re: 1629

Date: October 23rd, 1983

Terms: NET 10 DAYS

To: GEOKOR ENERGY HOLDINGS LTD.
305 - 1212 W. Broadway
Vancouver, B.C.
V6H 1G6

Re: Breakdown of I.P. costs.

1.	Mobilization - packaging		$300.00
2.	Provision of two operators, I.P. equipment + 3 helpers - 6 survey days at $895.00 per day		$5,370.00
3.	Provision of same - 4 standby days at $695.00 per day		2,780.00
4.	Provision of truck + trailer		
	10 days at $55.00 per day	$550.00	
	1661 miles at 20¢ per mile	332.20	
	gasoline $43.30 84.54 50.00		
	50.00 72.52 39.44 gas generator		
	68.00 50.04 14.28 tyre repair		
	54.00 35.00	561.12	1,443.32
5.	Room and Board in transit		
	39.22 4.14 5.50 24.40		
	39.22 9.09 23.70 22.95		
	34.98 3.50 26.20		
	97.46 10.20 32.95		
	2.25 23.95		
	210.88	199.83	430.71
6.	Camp gear and board		
	Oct. 1 - 8th = 7 at $215.00 per day		$1,505.00
7.	Generator for charging purposes		
	Oct. 1 - 8th = 8 at $30.00 per day		240.00
8.	Flagging for survey lines		44.30
			$12,093.33

Please note interest will be charged at the rate of 1 1/2% per month on all overdue accounts.

INVOICE NO. 1630

GEOPHYSICAL SERVICES

PETER E. WALCOTT & ASSOC. LTD.

605 RUTLAND COURT, COQUITLAM, B.C. V3J 3T8 • TEL. 939-0383

INVOICE

NO. 1639

Date: January 18th, 1984

Terms: NET 30 DAYS

To: GEOKOR ENERGY HOLDINGS
305-1212 W. Broadway
Vancouver, B.C.
V6H 1G6

Re: Sibola I.P. Survey

1.	Report writing and correcting maps - 8 hours at $65.00 per hr.	$520.00
2.	Report preparation	148.00
		$668.00

Project W-333

INVOICE NO. 1639

Please note interest will be charged at the rate of 1 1/2% per month on all overdue accounts.

GEOPHYSICAL SERVICES

PERSONNEL EMPLOYED ON SURVEY.

Name	Occupation	Address	Dates
Peter E. Walcott	Geophysicist	Peter E. Walcott & Assoc. 605 Rutland Court, Coquitlam, B.C. V3J 3T8	Jan. 15 & 16, 84
G. MacMillan	Geophysical Operator	" "	Sep. 30th - Oct. 9th, 1983
V. Pashniak	"	" "	"
G. Mandryk	"	" "	"
P. Charlie	"	" "	"
D. Sloan	Geophysical Helper	" "	"
J. Walcott	Typing	" "	Jan. 17th, 1984
Staff, Geokor Energy Holdings	Draughting	305 - 1212 W. Broadway Vancouver, B.C. V6H 1G6	Dec. 22nd - 24th, 1983

CERTIFICATION.

I, Peter E. Walcott, of the Municipality of Coquitlam, British Columbia, hereby certify that:

1. I am a Graduate of the University of Toronto in 1962 with a B.A.Sc. in Engineering Physics, Geophysics Option.

2. I have been practising my profession for the last twenty two years.

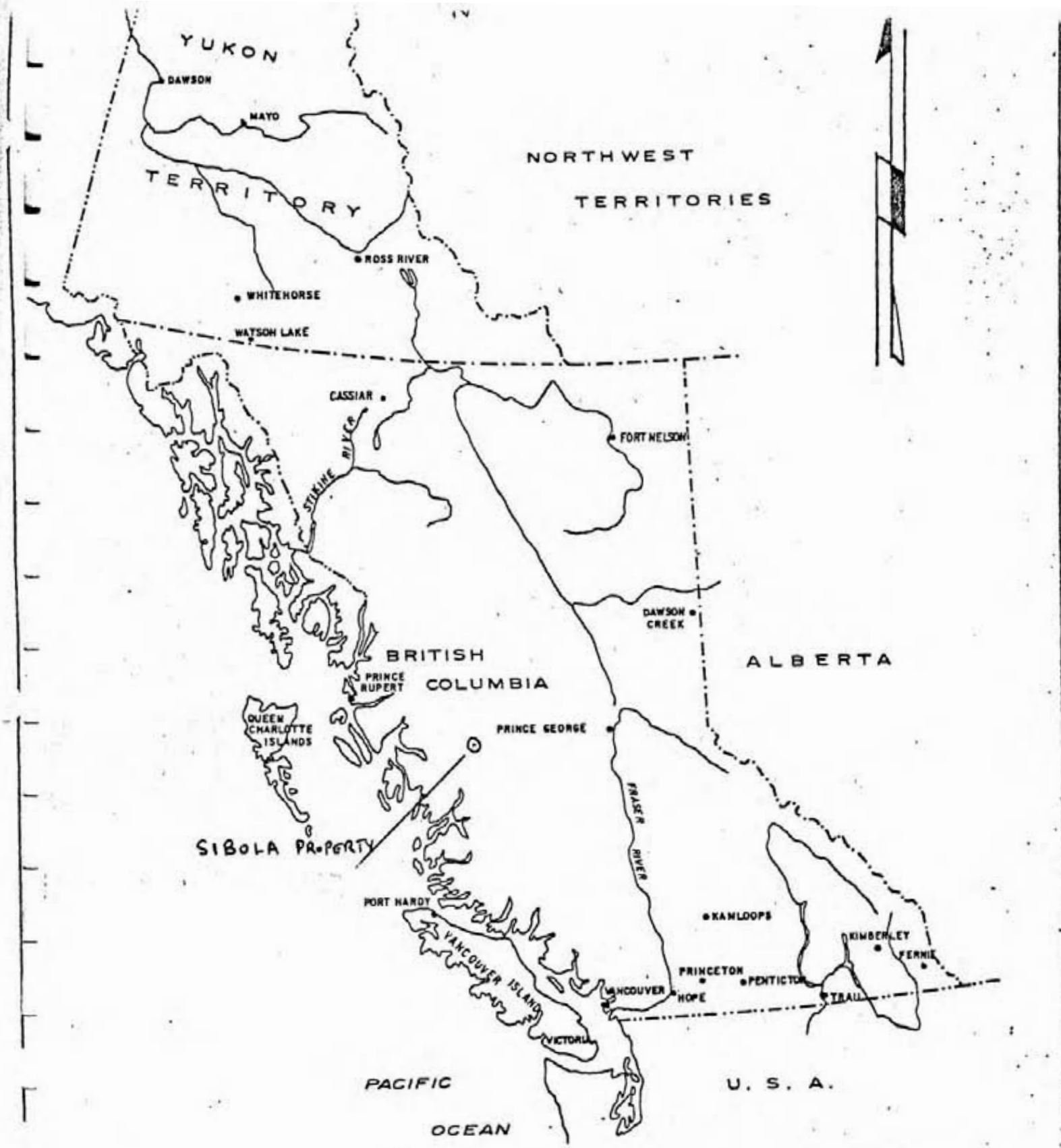
3. I am a member of the Association of Professional Engineers of British Columbia and Ontario.

4. I hold no interest, direct or indirect, in the securities or properties of Geokor Energy Holdings Ltd. nor do I expect to receive any.

Peter E. Walcott, P.Eng.

Vancouver, B.C.

January 1984



LOCATION MAP

VANCOUVER BRITISH COLUMBIA

GEOKOR ENERGY HOLDINGS LTD.

DEL CLAIM

SCALE 1:12,672,000

0 200 Km

1" = 200 MILES

NTS. | DATE JAN 84 | FIG. No. 1

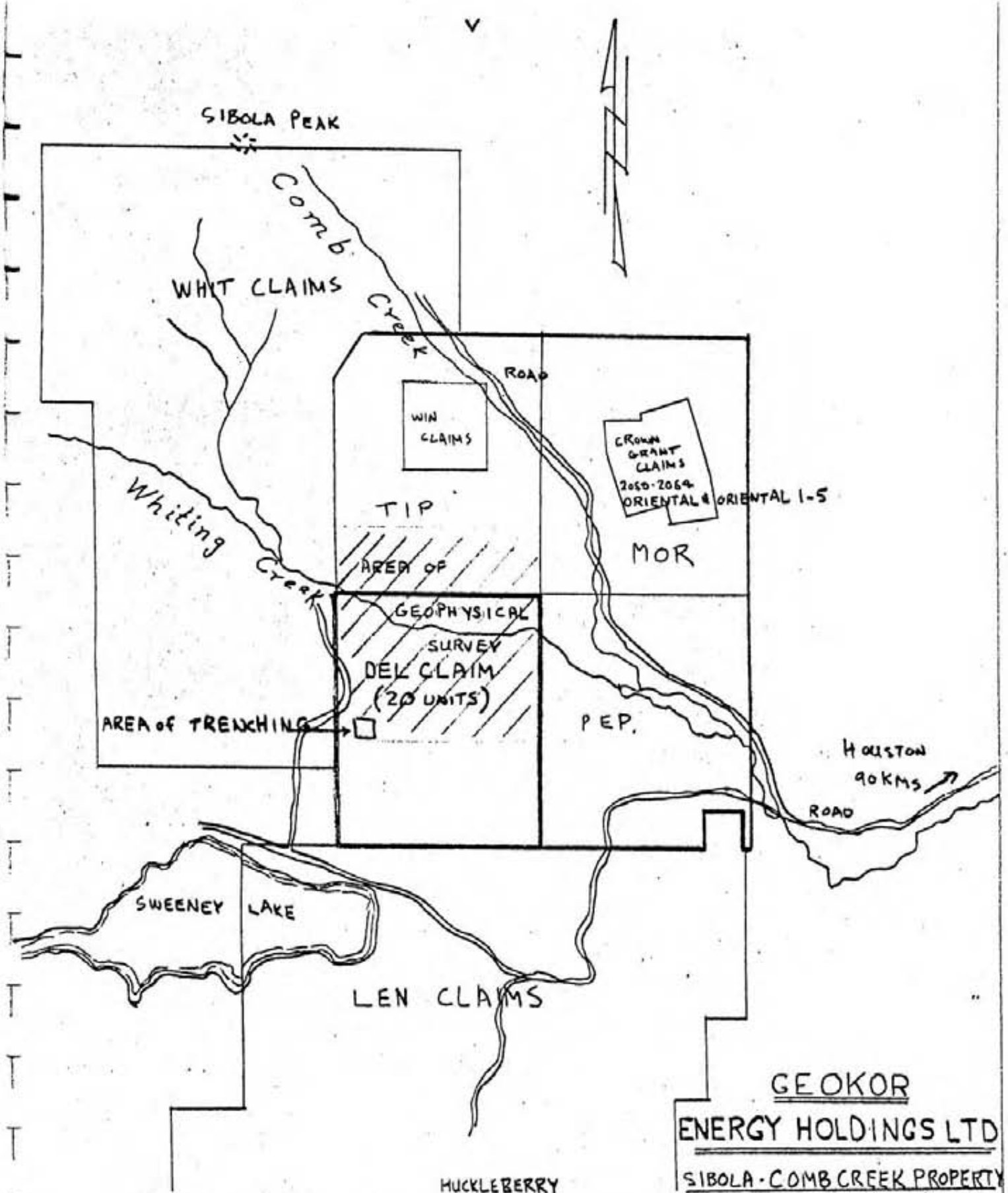
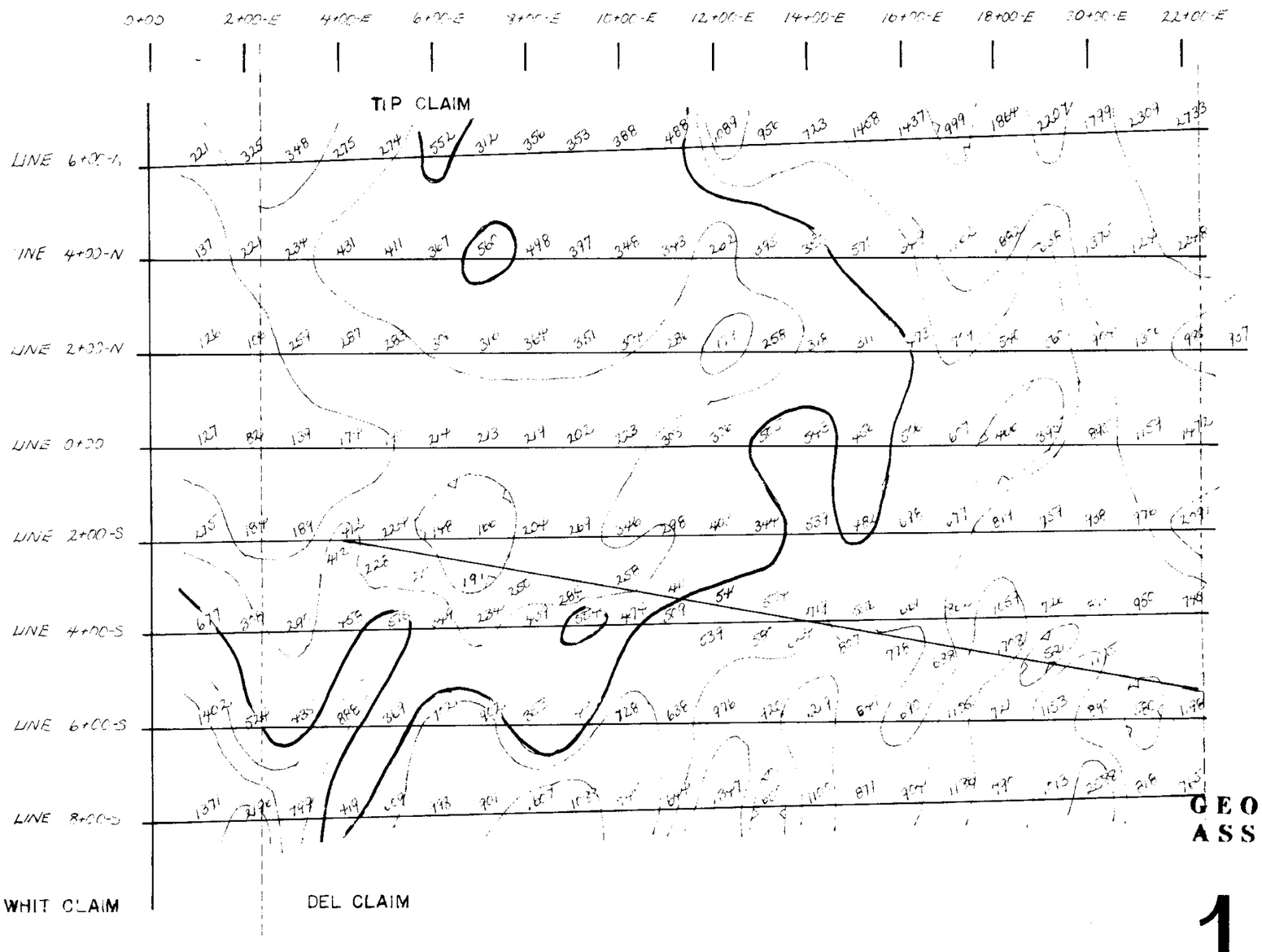

SIBOLA PEAK
Comb Creek
WHIT CLAIMS
ROAD
WIN CLAIMS
CROWN GRANT CLAIMS 2050-2069 ORIENTAL & ORIENTAL 1-5
TIP
MOR
Whiting Creek
AREA OF GEOPHYSICAL SURVEY
DEL CLAIM (20 UNITS)
AREA of TRENCHING
PEP.
HOUSTON 90 KMS
ROAD
SWEENEY LAKE
LEN CLAIMS
HUCKLEBERRY MT DEPOSIT.
GEOKOR
ENERGY HOLDINGS LTD
SIBOLA-COMB CREEK PROPERTY
OMINECA MINING DIVISION, B.C.
SCALE 1:50000
0
1 KM
2 KM

FIG 2"

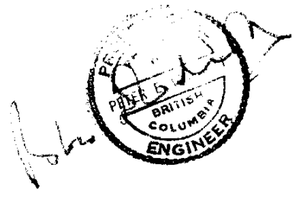


POLE-DIPOLE ARRAY a = 100 m, n = 1

← C_1

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,797



GEOKOR ENERGY HOLDING LTD.

SIBOLA MOUNTAIN

INDUCED POLARIZATION SURVEY

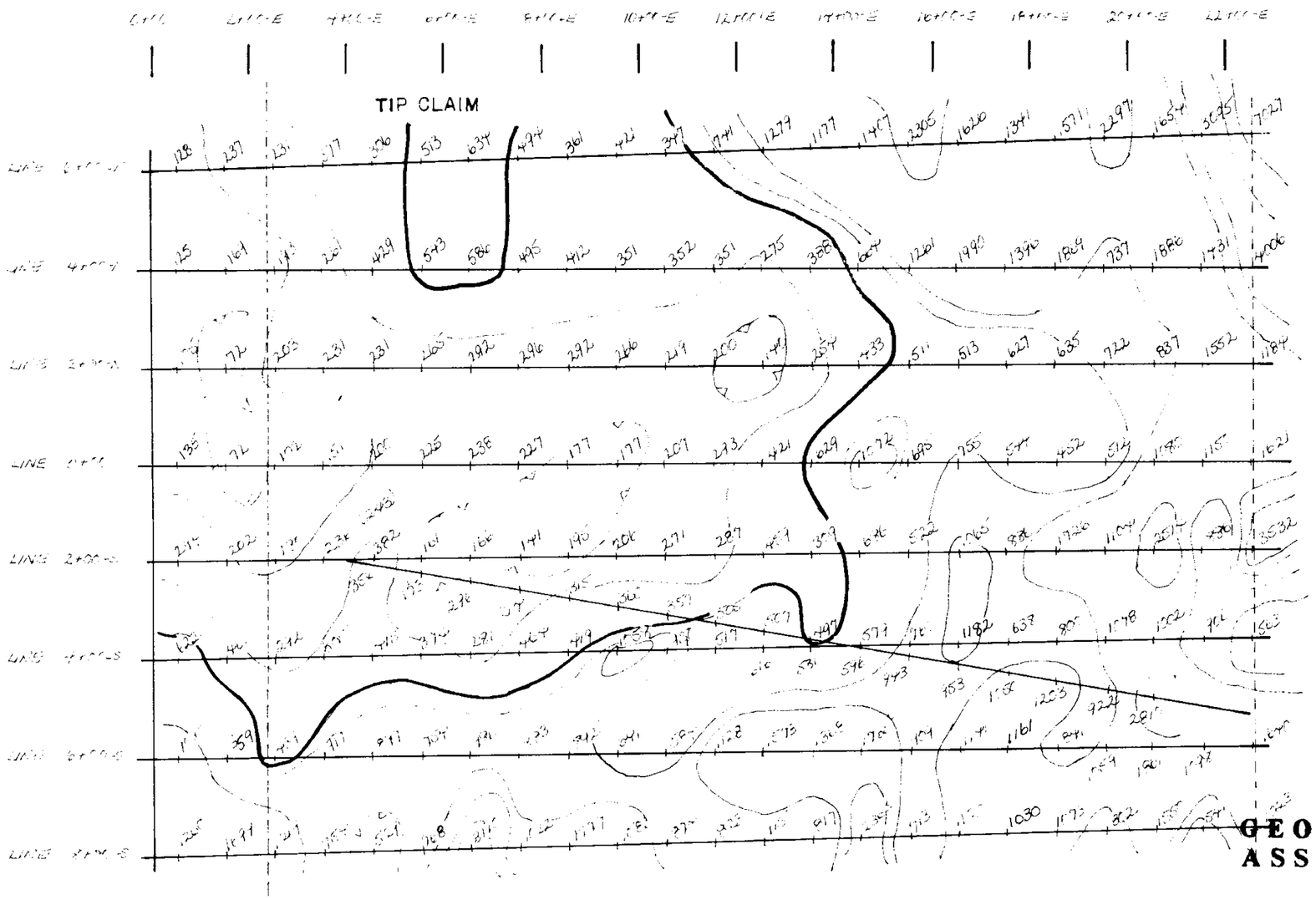
RESISTIVITY CONTOURS

SCALE - 1 - 10,000

MAP NO. W-333-1

TO ACCOMPANY A REPORT BY

PETER E. WALCOTT, P.ENG. DATED JAN/84



POLE-DIPOLE ARRAY a = 100 m, n = 2

← C

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,797

GEOKOR ENERGY HOLDING LTD.

SIBOLA MOUNTAIN

INDUCED POLARIZATION SURVEY

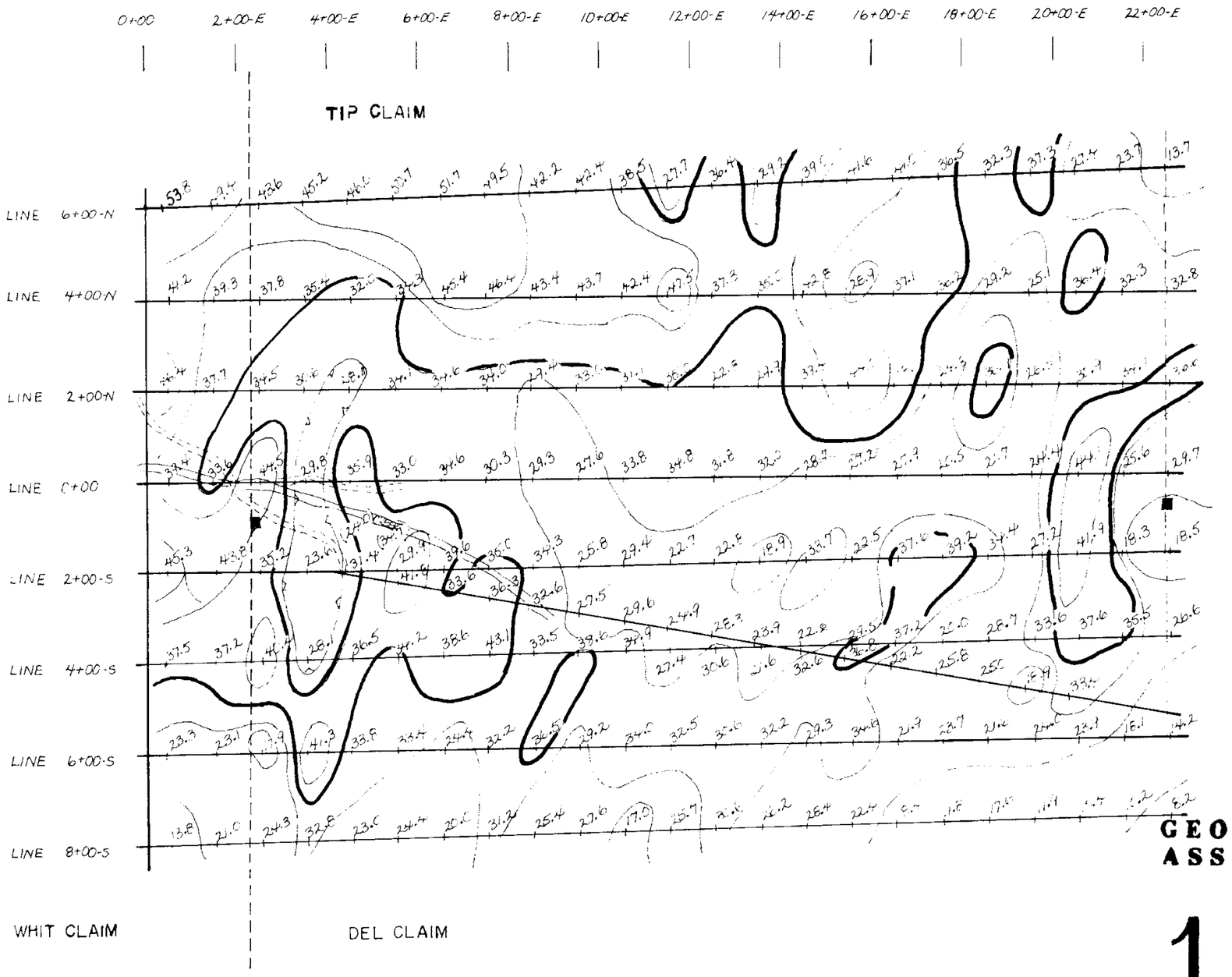
RESISTIVITY CONTOURS

SCALE - 1 - 10,000

MAP NO·W-333-2

TO ACCOMPANY A REPORT BY

PETER E. WALCOTT, P. ENG. DATED JAN./84



POLE DIPOLE ARRAY a = 100 m, n = 1

← C_1

N

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,797

GEOKOR ENERGY HOLDINGS LTD.

SIBOLA MOUNTAIN

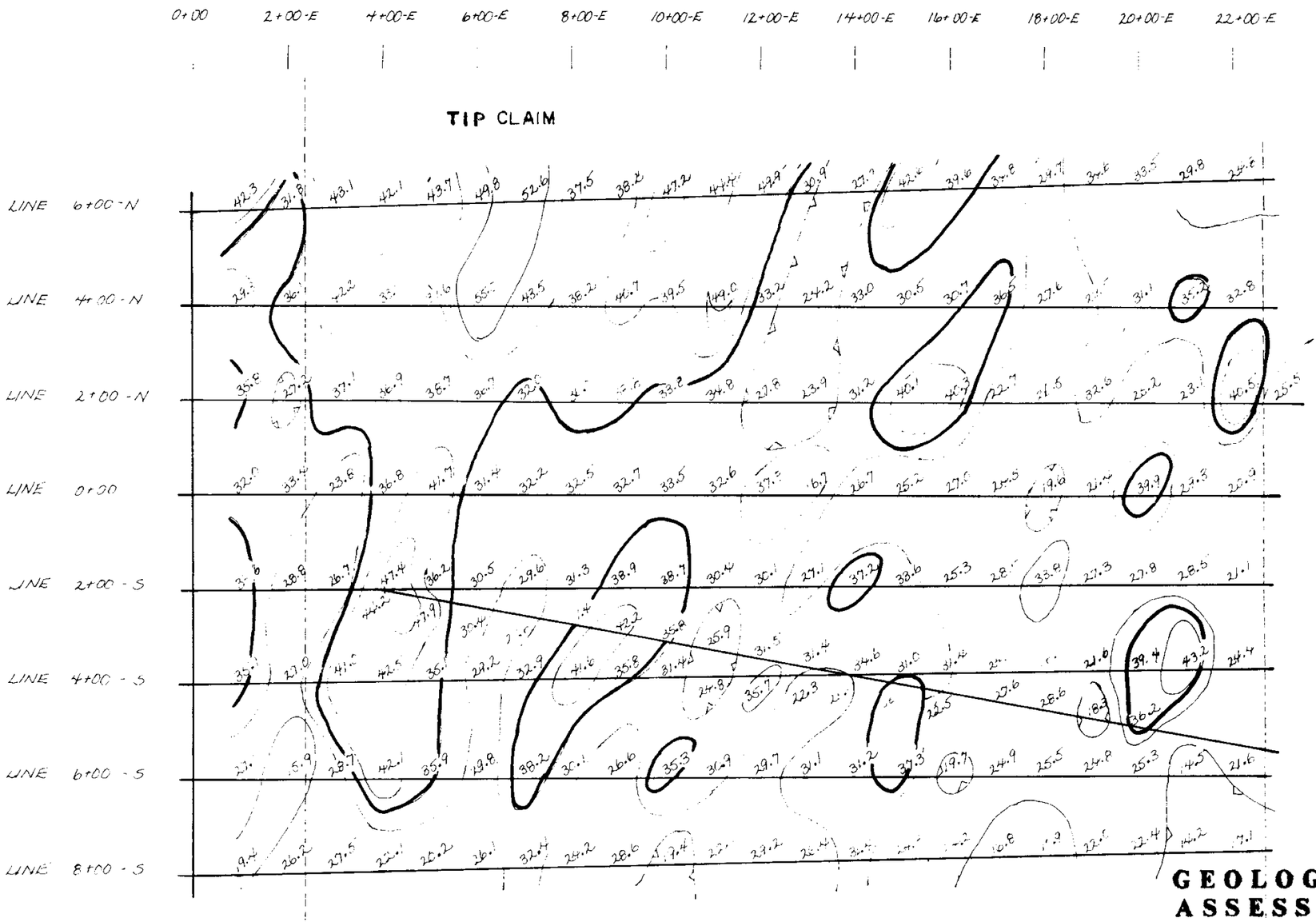
INDUCED POLARIZATION SURVEY

CHARGEABILITY CONTOURS

SCALE - 1 - 10,000

MAP NO. W-333-3

TO ACCOMPANY A REPORT BY
PETER E. WALCOTT, P.ENG. DATED JAN/84



GEOLOGICAL BRANCH ASSESSMENT REPORT

11,797

GEOKOR ENERGY HOLDING LTD.

SIBOLA MOUNTAIN

INDUCED POLARIZATION SURVEY

CHARGEABILITY CONTOURS

SCALE - 1 - 10,000

MAP NO·W-333-4

TO ACCOMPANY A REPORT BY

PETER E. WALCOTT, P.ENG. DATED JAN/84

PROFESSIONAL ENGINEER PROV. OF BRITISH COLUMBIA PETER E. WALCOTT