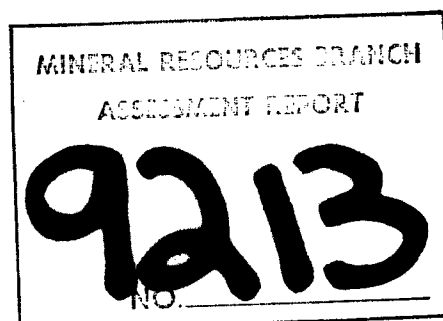


DIAMOND DRILLING AND GEOPHYSICAL SURVEY
REPORT ON THE ELK PROPERTY
NANAIMO MINING DIVISION

102 I/16E

Longitude: $128^{\circ}10'$
Latitude: $50^{\circ}45'$



By
Bruce I. McClymont
Teck Explorations Limited
For
H. Veerman

Vancouver, B. C.

November 1980

TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
Description of Work	1
Introduction	1
Electromagnetic (Radem) Survey	1
Magnetometer Survey	2
Diamond Drilling	3
Cost Statement	4
Certificate of Author	
Analyses	Appendix I
Drill Logs	Appendix II
Figure 1	Location Map
Figure 2	Index Map 1:250,000
Figure 3	Magnetometer Survey
Figure 4	E.M. Survey
	Following page 1
	Pocket 1
	Pocket 2
	Pocket 3

INTRODUCTION

The 20 unit Elk I claim group is located 15 miles north of Holberg on northern Vancouver Island. The claims are owned by H. Veerman of Vancouver.

Access to the property is by helicopter out of Port Hardy. A group of five Teck personnel were involved with work on the property at various stages of the program (April 8th-April 27th, 1980).

DESCRIPTION OF WORK

Introduction

Geophysical surveys consisting of magnetometer and Radem were run over an area of previous interest. Distance between stations was tightened up to give a more definitive look at magnetic highs. Lines were run at 100 meter spacings with stations every 25 meters along the lines. A total of 418 stations were put in.

Electromagnetic (Radem) Survey

1. Discussion of the Method

The Radem unit, manufactured by Crone Geophysics, utilizes very low frequency (12-24 kilocycles) radio waves broadcast by the U.S. Navy. In this instance the station at Seattle, Washington, was employed, with a frequency of 18.6 kilocycles. This frequency is very much higher than the normal frequency range employed in electromagnetic prospecting. As a result, the effect of relatively poor conductors such as water filled shears and deep swamps may be comparable to that over more conductive sulfide zones. Since the signal originates from an essentially infinite source, faults of great horizontal and vertical extent give a particularly strong anomalous response.

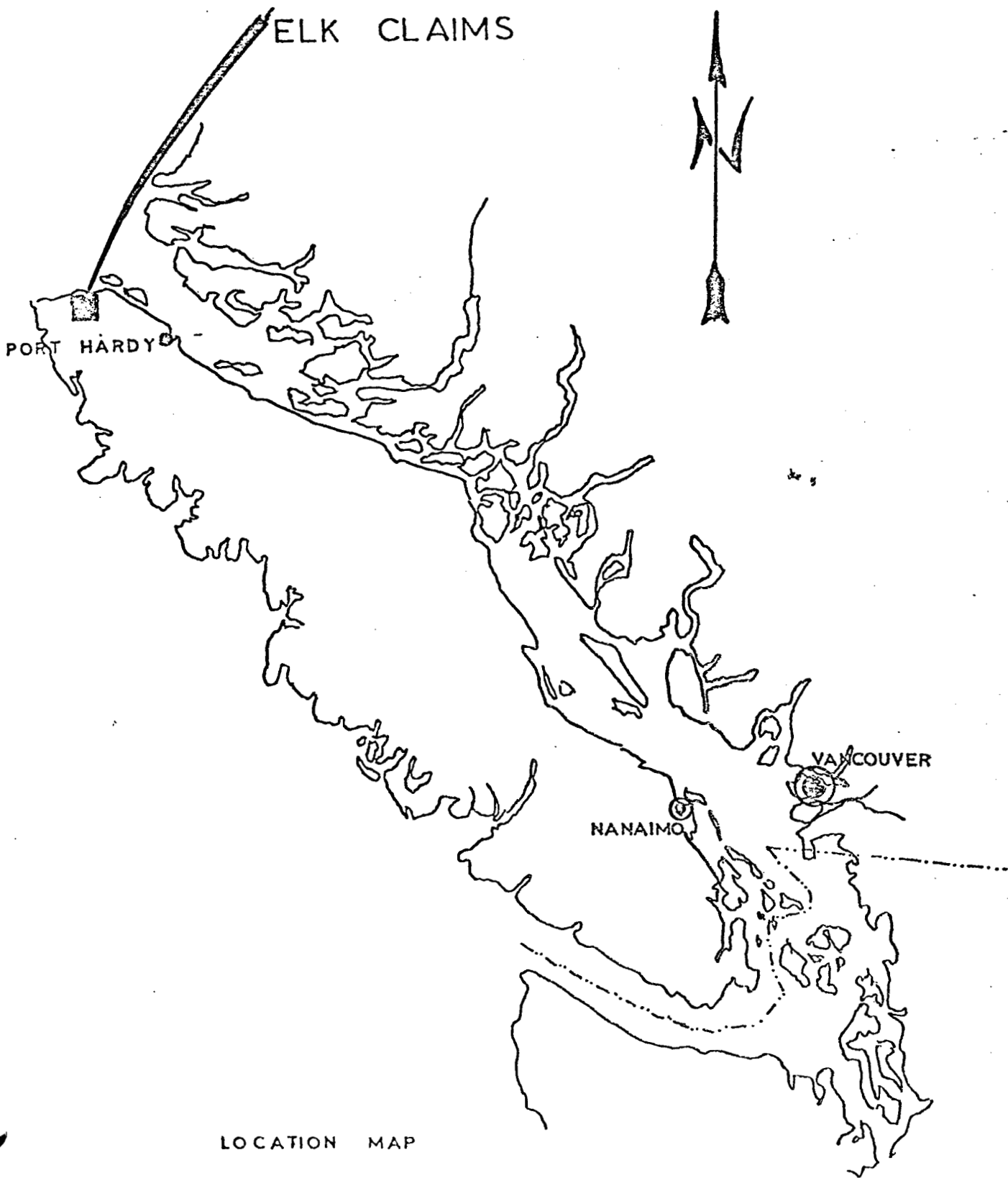


FIG. 1

The Radem method can be effective in locating faults and shears which may provide structural control for disseminated copper deposits, or for the detection of higher grade copper mineralization related to shears.

The data are recorded as inclinations of the electromagnetic field. A conductor is indicated by a "cross over" in the angle of inclination. This can be observed in profile form, but presentation of the data in this way is awkward. A filter operator was designed by Dr. D. C. Fraser, President, Dighem Limited, to phase shift the dip angle by 90 degrees. Crossovers are transformed into peaks to yield contourable quantities. Only the filtered data are shown on the accompanying map. Negative values are not meaningful, and have not been plotted. Values of 10 degrees or higher are significantly anomalous.

2. Discussion of Results

Seventeen kilometres of Radem survey were done over the property to cover an area of known alteration and erratic mineralization. Three geophysical anomalies were outlined for later drill testing.

Magnetometer Survey

1. General

The magnetic survey was carried out by a Teck Explorations Limited field party consisting of B. McClymont, P. Folk, G. Lovang, K. Lehmann and D. Nikirk. Instruments used were a Scintrex MF-2 and a Jalander Model 505. A second MF-2 was used as a base instrument.

The purpose of the magnetic survey was threefold:- definition of rock types, delineation of structures, and indication of zones of hydrothermal alteration.

The various phases of the Bonanza volcanics have varying amounts of magnetite and it was hoped to define the contacts between phases more closely by their magnetic property. Hydrothermal alteration tends to destroy magnetite. Hence the alteration accompanying ore deposition may be expressed as a magnetic low. Faulting and zones of brecciation may be expressed by lower magnetic values if accompanied by alteration, or may be indicated by their effect on the magnetic pattern.

Diamond Drilling

Three diamond drill holes were then drilled using a portable Winkie drill (see surface plan). A total of 83.82 meters of IAX core was produced. The core was split and sent for assay in 3.05 meter sections. The core is stored at the base camp within the claim boundaries.

The drilling encountered altered (propylitic) Bonanza volcanics with a fair content of sulphides (pyrrhotite, pyrite) and magnetite. Visible economic sulphides were minor. Drill logs and assays are appended with this report. The entire program was supervised by the author.

COST STATEMENT

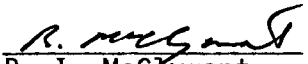
Salaries:

P. Folk, instrument man - April 8-13 6 days @ \$200/day	\$ 1,200.00	
G. Lovang, instrument man - April 8-13 6 days @ \$150/day	900.00	
B. McClymont, geologist - April 13-27 15 days @ \$200/day	3,000.00	
K. Lehmann, driller - April 13-27 15 days @ \$55/day	825.00	
D. Nikirk, driller - April 13-27 15 days @ \$50/day	<u>750.00</u>	\$ 6,675.00
Diamond Drilling		5,310.00
Drafting and Report Preparation		482.15
Assays - 22 samples @ \$8.71/sample		191.62
Air Travel (Vancouver Island Helicopters)		6,497.52
Living expenses (food)		1,073.86
Travel (P.W.A., Redhawk Truck Rental)		3,672.03
Field Supplies (tent camp)		2,527.58
Telephone (rental, etc. of B.C. Telephone radio phone)		<u>463.76</u>
		<u>\$ 26,893.52</u>

CERTIFICATE

I. Bruce I. McClymont, do hereby certify that:

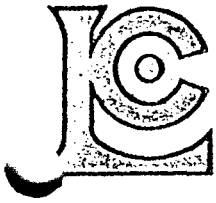
1. I am a geologist employed by Teck Explorations Limited and reside at 3383 West 27th Street in Vancouver, British Columbia.
2. I am a graduate of the University of Alberta with a B.Sc. in Geology.
3. I am a professional geologist registered in the Province of Alberta.
4. I have practised my profession continuously for the past six years and since 1976 in British Columbia.
5. I was engaged in the performing of the geophysical and diamond drilling program on the Elk claims on behalf of Teck Corporation.


B. I. McClymont
P. Geologist

November 10, 1980

APPENDIX I

ANALYSES



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Teck Mining Group Ltd.
14th Flr. 1199 W. Hastings St.
Vancouver, B.C.
V6E 2K5

ATTN: Bruce McClymont

ROCKS

CERTIFICATE NO. 52711

INVOICE NO. 35698

RECEIVED April 30/80

ANALYSED May 12/80

SAMPLE NO. :	PPM	PPM	PPM	PPB
	Cu	Zn	Ag	Au
KH80-1 0'-10'	.0076%	38	0.1	<10
	10'-20'	62	0.1	<10
	20'-30'	56	0.1	<10
	30'-40'	58	0.1	<10
	40'-50'	20	0.1	<10
KH80-1 50'-60'	38	34	0.1	<10
	60'-70'	62	0.1	20
	70'-80'	76	0.1	<10
	80'-90'	60	0.1	10
	90'-100'	54	0.1	<10
KH80-1 100'-110'	88	38	0.1	<10
	110'-115.5'	72	0.1	<10
KH80-2 0'-10'	32	26	0.1	<10
	10'-20'	64	0.1	<10
	20'-30'	28	0.1	<10
KH80-2 30'-40'	22	38	0.1	<10
	40'-50'	34	0.1	<10
KH80-3 11'-20'	50	44	0.1	<10
	20'-30'	52	0.1	10
	30'-40'	72	0.1	<10
KH80-3 40'-50'	34	46	0.1	<10
	50'-62.5'	46	0.1	<10



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY:

Hart Biddle

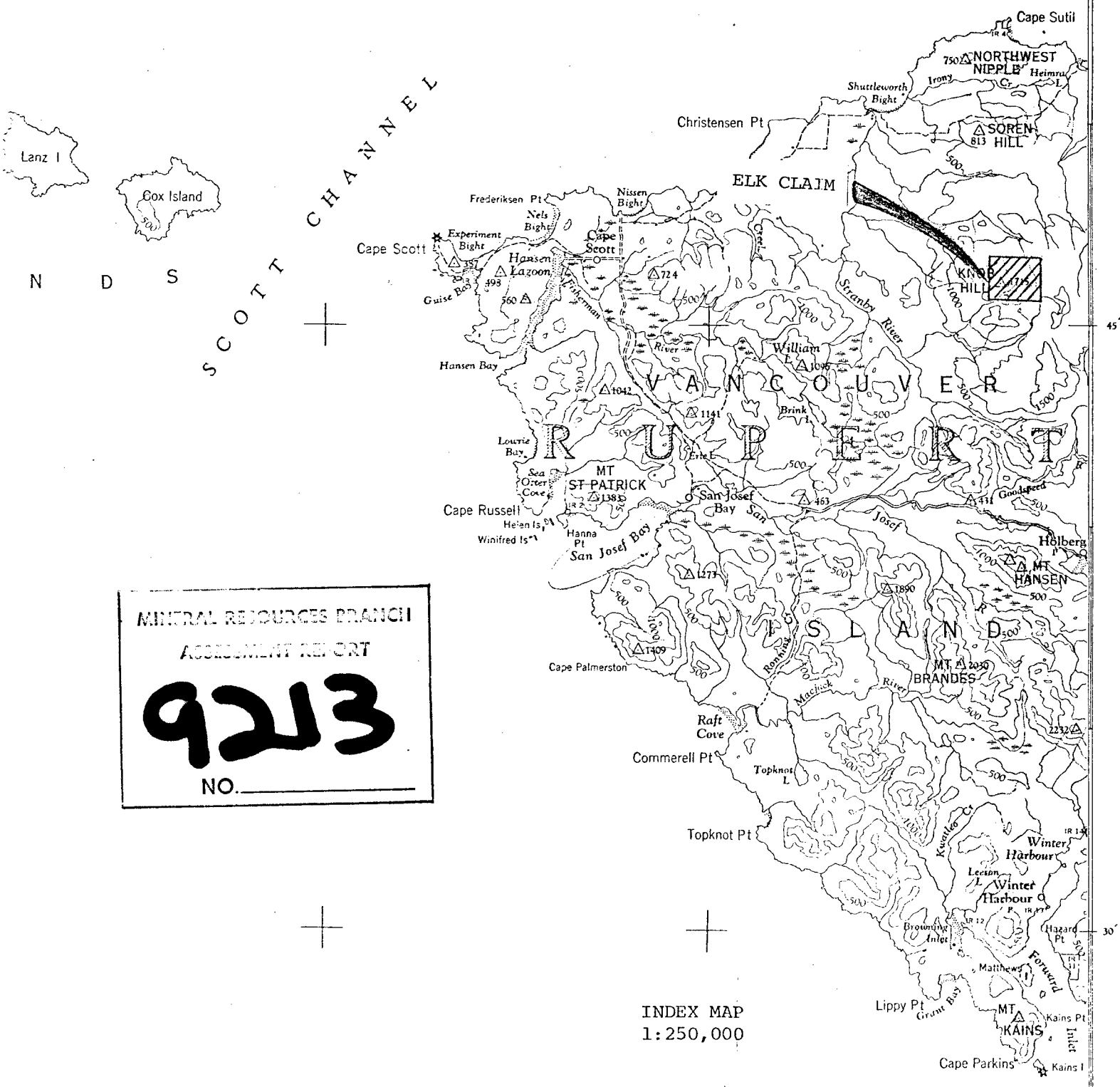
APPENDIX II

DRILL LOGS

FIGURE 2

QUEEN CHARLOTTE

SOUND



MINERAL RESOURCES BRANCH
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 NO. _____

INDEX MAP
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TECK EXPLORATIONS LIMITED

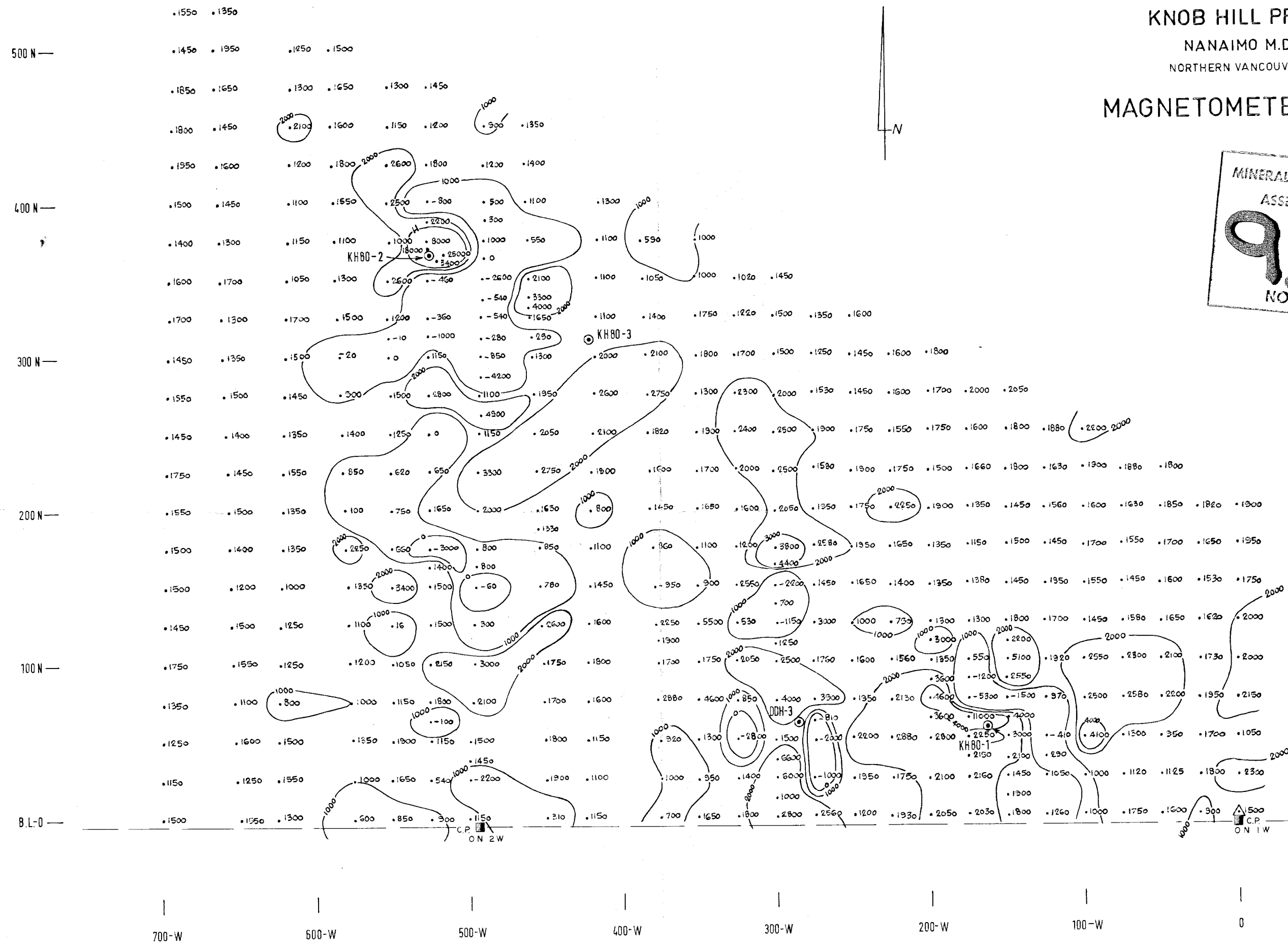
VANCOUVER, B.C.

NOB HILL PROPERTY

NANAIMO M.D., B.C.

NORTHERN VANCOUVER ISLAND

MAGNETOMETER SURVEY



LCP ELK →

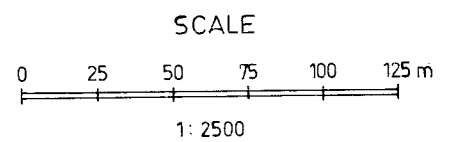


FIG. 3

TECK EXPLORATIONS LIMITED

VANCOUVER, B.C.

KNOB HILL PROPERTY

NANAIMO M.D, B.C.

NORTHERN VANCOUVER ISLAND

E.M. SURVEY

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
9213
NO.

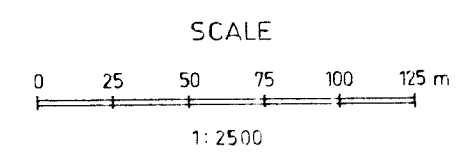
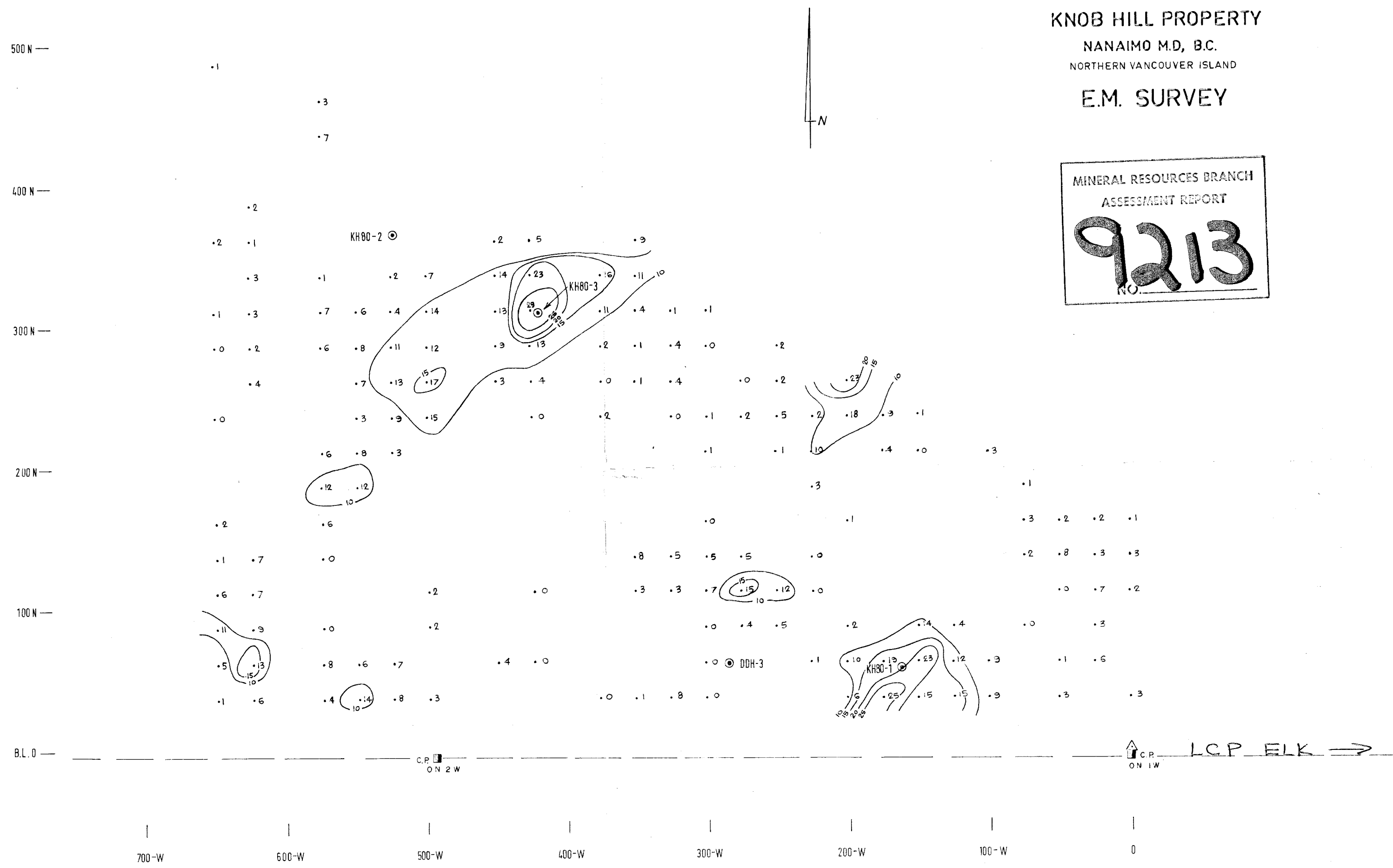


FIG. 4