

# 5857

HUDSON BAY EXPLORATION AND DEVELOPMENT COMPANY LIMITED

NITINAT LAKE AREA PROPERTY

VICTORIA MINING DIVISION

BRITISH COLUMBIA

REPORT ON GEOCHEMICAL SURVEY

By G. E. Bidwell

March, 1976

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 5857 MAP \_\_\_\_\_

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REPORT ON GEOCHEMICAL SURVEY

By G. E. Bidwell

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### Introduction

This report concerns a rock geochemical survey, carried out from November 4 to 6, 1975 by Hudson Bay Exploration and Development Company Limited on their EASY claims which are situated in the Four Mile Creek - Nitinat Lake area on Vancouver Island. The purpose of the work was to test the suitability of rock geochemistry as an exploration tool on the property and also an attempt to check the amount of movement of copper soil anomalies on the steep slopes. Some general prospecting and mapping was also carried out at the same time.

### Summary and Conclusions

The rock geochemistry work proved to be very useful in the area it was carried out. It indicated that the copper soil anomalies that had been outlined previously were probably close to their source. The program also showed that rock geochemistry can be a useful exploration method, but it is subject to the availability of fresh unoxidized samples, such as the road cuts used in this work.

### Mineral Claims

The Hudson Bay Exploration and Development Company Limited property originally consisted of 97 claims and fractions (Fig. 1). The claims were recorded in Victoria during the period May 19th to June 26th, 1970. With the exception of the A, B, C, D, and E fractions and the TUM TUM claims, the balance of the group were recorded as TAM or EASY claims.

In May, 1971 202 years of assessment was applied in three groups to all the claims except fractions "A" and "B" which were allowed to lapse as they were not required. This assessment consisted of line cutting, geochemical and geological surveys. In May, 1972 161 years of assessment (diamond drilling) was applied in two groups to 64 claims. The present assessment of 4 years is being applied to EASY 20, 22, 50 and 52. The remainder of the claims will be transferred to the original stakers or allowed to expire.

#### Ownership

The registered owner of the claims is Hudson Bay Exploration and Development Company Limited, Flin Flon, Manitoba. The program in this report was conducted from the western exploration office of the owner located at #1695 - 555 Burrard Street, Vancouver, British Columbia.

#### Location and Access

The property is in the Victoria Mining Division and lies within the drainage basin of Four Mile Creek between the Cayeuse River and Jasper Creek, approximately 4.3 miles ENE of the north end of Nitinat Lake.

The Nitinat Lake area is readily accessible by the public access road which extends from the community of Lake Cowichan on the east end of Cowichan Lake. There are numerous logging roads in the area and British Columbia Forest Products has recently completed a haulage road which cuts through the EASY claims.

#### Topography and Surface Features

Surface elevations in the area range from a few hundred feet to about 3,200 feet above sea level. The terrain is generally rugged and the slopes

are quite steep. The claim area lies within a large basin, drained by Four Mile Creek in which the creek cuts, particularly near the head waters, are relatively shallow and provide the best rock exposures.

The entire property area is covered by heavy forest growth consisting mainly of fir, hemlock, cedar, and spruce which are up to 200 feet in height. Undergrowth at higher elevation is sparse. Logging operations are presently being carried out on the group by British Columbia Forest Products.

Rock exposure is scattered but quite abundant in the creek beds and overburden is considered to be generally shallow.

#### Geology

There have been no geology maps of the area published by either the provincial or federal government, although J. E. Muller of the Geological Survey of Canada has almost completed the field work of the Cape Flattery map-area (92C). This includes the area under discussion. A preliminary map is given in G. S. C. paper 76 - 1A, page 108.

The property is underlain by Bonanza Volcanics of the Vancouver Group, a predominantly pyroclastic sequence of Jurassic age. The mineralization is hosted by altered acidic volcanics which were probably lithic crystal tuffs of dacitic composition. The rock is buff to light green in outcrop and is characterized by green patchy saussuritic alteration. The sulphide minerals, pyrite and chalcopyrite, are usually restricted to bleached, rusty zones in the vicinity of closely spaced fractures and shears. The pyrite is fine grained and disseminated with minor fracture filling. Chalcopyrite is also disseminated and associated with quartz.

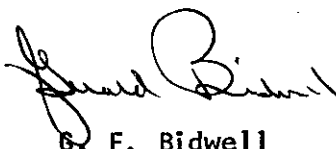
Geochemistry

Thirty-eight rock chip samples were collected along the road cuts. The samples were shipped to Chemex Labs Ltd., North Vancouver, where they were dried, pulverized to -80 mesh, and tested by atomic absorption for copper, silver, and molybdenum. A few of the higher metal value samples were later checked by regular assay.

The results are shown on the accompanying geochemistry map along with copper soil geochemistry data from a previous program. Generally, the rock geochemistry complements the earlier work. Rock chip anomalies from sections 94S to 100S (old grid) are in the vicinity of soil values over 300 p.p.m. Cu. The same is true of a small area at section 86S. One can conclude from this, that even though the slopes are steep ( $25^{\circ}$ ), dispersion of the soil anomalies does not seem to be great and one would suspect the anomalies to be close to their source.

Results

Further work should include checking the road cuts that gave the high copper values. The silver results are usually low, but where they rise above the background, they coincide with copper highs. The molybdenum results are more erratic, but roughly correspond to the copper anomalies.



G. E. Bidwell

Senior Geologist.

B.

**SUB-MINING RECORDER  
RECEIVED**

MAY 7 1976 00

M.R. # 102121 \$ 60

VANCOUVER, B. C.

DOMINION OF CANADA: }  
 PROVINCE OF BRITISH COLUMBIA. }  
 To Wit: }

**In the Matter of** HUDSON BAY EXPLORATION AND  
 STATEMENT OF EXPENDITURE DEVELOPMENT COMPANY LIMITED

I, R. A. Freberg  
 of Vancouver

in the Province of British Columbia, do solemnly declare that the following statement of expenditures on behalf of HUDSON BAY EXPLORATION AND DEVELOPMENT COMPANY LIMITED on their Nitinat Lake area claims, Vancouver Island is correct.

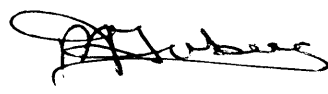
Geochemical Survey

Field work - November 4, 1975 to November 6, 1975.		
G. E. Bidwell - \$77.31/day x 3 =	\$231.93	
K. J. Taylor - \$52.42/day x 3 =	<u>\$157.26</u>	\$ 389.19
<b>Field Expenses</b>		
Transportation	\$ 23.25	
Hotel	\$ 42.00	
Meals	<u>\$ 65.45</u>	\$ 130.70
<b>Sample Analysis</b>		
Chemex Labs	\$ 94.36	
" "	<u>\$ 17.00</u>	\$ 111.36
Preparation of Maps and Report - Nov. 17 to 21, 1976		
G. E. Bidwell - \$77.31/day x 5 =		<u>\$ 386.55</u>
		\$1,017.80

(see attached expense report and invoices)

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 **VANCOUVER, B. C.**  
 day of



MAY 7 1976, A.D.  
  
**Sub-Mining Recorder**

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

CLAIM GROUPS & GRID LOCATION  
of TAM-EASY CLAIMS

VICTORIA MINING DIVISION, B.C.

SCALE 1" = 1/2 MILE

MAY, 1972.

Fig. 1



EXPIRY YEAR

1977 (11)

NITINAT RIVER

TERRACE BELL  
MINES LTD.

STAKED

STAKED

"A" & "B"  
FRACTIONS  
NOT PRESENT  
(LAPSED)

"G" FRACTION  
NOT PRESENT

"C" FRACTION  
STAKED  
TUM-TUM  
TUM-TWO

EASY 6	EASY 4	EASY 2	EASY 7	EASY 9	EASY 11	EASY 13	EASY 15	EASY 17	EASY 19	EASY 21	EASY 23	EASY 25	EASY 27
EASY 5	EASY 3	EASY 1	EASY 8	EASY 10	EASY 12	EASY 14	EASY 16	EASY 18	EASY 20	EASY 22	EASY 24	EASY 26	EASY 28
EASY 29	EASY 31	EASY 33	EASY 35	EASY 37	EASY 39	EASY 41	EASY 43	EASY 45	EASY 47	EASY 49	EASY 51	EASY 53	EASY 55
EASY 30	EASY 32	EASY 34	EASY 36	EASY 38	EASY 40	EASY 42	EASY 44	EASY 46	EASY 48	EASY 50	EASY 52	EASY 54	EASY 56

TAM 17	TAM 19	TAM 21	TAM 23	TAM 25	TAM 27	TAM 29	TAM 31	TAM 33	TAM 35	TAM 37	TAM 39	TAM 41	TAM 43	TAM 45	TAM 47	TAM 49	TAM 51	TAM 53	TAM 55
TAM 18	TAM 20	TAM 22	TAM 24	TAM 26	TAM 28	TAM 30	TAM 32	TAM 34	TAM 36	TAM 38	TAM 40	TAM 42	TAM 44	TAM 46	TAM 48	TAM 50	TAM 52	TAM 54	TAM 56
TAM 9	TAM 11	TAM 13	TAM 15	TAM 17	TAM 19	TAM 21	TAM 23	TAM 25	TAM 27	TAM 29	TAM 31	TAM 33	TAM 35	TAM 37	TAM 39	TAM 41	TAM 43	TAM 45	TAM 47
TAM 10	TAM 12	TAM 14	TAM 16	TAM 18	TAM 20	TAM 22	TAM 24	TAM 26	TAM 28	TAM 30	TAM 32	TAM 34	TAM 36	TAM 38	TAM 40	TAM 42	TAM 44	TAM 46	TAM 48
TAM 1	TAM 3	TAM 5	TAM 7	TAM 9	TAM 11	TAM 13	TAM 15	TAM 17	TAM 19	TAM 21	TAM 23	TAM 25	TAM 27	TAM 29	TAM 31	TAM 33	TAM 35	TAM 37	TAM 39
TAM 2	TAM 4	TAM 6	TAM 8	TAM 10	TAM 12	TAM 14	TAM 16	TAM 18	TAM 20	TAM 22	TAM 24	TAM 26	TAM 28	TAM 30	TAM 32	TAM 34	TAM 36	TAM 38	TAM 40

STAKED

MARSHALL CREEK  
COPPER MINES LTD.

NITINAT



HUDSON BAY EXPLORATION AND DEVELOPMENT COMPANY LIMITED

NITINAT LAKE AREA PROPERTY

VICTORIA MINING DIVISION

BRITISH COLUMBIA

ATTACHMENTS

March, 1976

QUALIFICATIONS

Of

SUPERVISORY PERSONNEL

Employed By

HUDSON BAY EXPLORATION AND DEVELOPMENT COMPANY LIMITED

NITINAT LAKE AREA PROPERTY

BRITISH COLUMBIA

1975

GERALD EUGENE BIDWELL

1963-1967 University of Saskatchewan. Graduated with B. Sc. in Geology in 1967.

Summer Employment, 1965-1966

Geological assistant on Precambrian mapping parties, Dept. of Mineral Resources, Government of Saskatchewan.

1967-1968 Hudson Bay Exploration and Development Company Limited  
Geological mapping, Snow Lake area, Manitoba

1968-1970 Hudson Bay Mining and Smelting Company Limited  
Mine geologist, Anderson Lake Mine and Dickstone Copper Mine, Snow Lake area, Manitoba

1970-1976 Hudson Bay Exploration and Development Company Limited  
Senior geologist, Western Exploration office, Vancouver, B.C.  
- employed on various exploration projects in British Columbia and Yukon Territory.

RAY ALFRED FREBERG

1946-1950 University of Toronto. Graduated with B.A. Sc. in Mining Geology in 1950

1950-1951 University of Toronto. School of Graduate Studies. Graduated with MA. Sc. in Mining Geology in 1951

Summer Employment 1947-1950

1947 INCO, Frood Mine, Sudbury, Ontario - underground helper.

1948 McIntyre Porcupine Mines Ltd. - prospecting, mapping - Ontario.

1949 Kennco Explorations, geological mapping - Quebec.

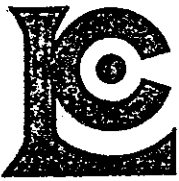
1950 Kennco Explorations, geochemical survey - Gaspé, Quebec.

1951-1956 Hudson Bay Mining and Smelting Company Ltd., Flin Flon Manitoba.  
1950 - drilling supervision in field camps.  
1951-1952 - Supervisor of all exploration diamond drilling.  
1953-1956 - Resident Geologist at Hudson Yukon Mines property, Quill Creek, Y.T. Surface & underground geologist.

1956-1958 Greyhawk Uranium Mines Ltd. Bancroft, Ontario.  
1956-1958 - Mine Engineer & Mine Geologist.  
1958 - Mine Manager, 600 tpd operation.

1959 Faraday Uranium Mines Ltd., Bancroft, Ontario.  
Mine Geologist - part time shift boss.

1960-1976 Hudson Bay Mining and Smelting Company Limited  
1960-1963 - Supervisor of exploration diamond drilling.  
1964-1966 - Senior Exploration Geologist - project research, property examinations.  
1967-1976 - Manager, Vancouver Branch Office, Hudson Bay Exploration and Development Co. Ltd.  
- Manager of exploration projects in Western Canada.



INVOICE

*Tom-Easy*

CHEMEX LABS LTD. 212 BROOKSBANK AVE., NORTH VANCOUVER, B.C. V7J 2C1 TELEPHONE (604) 985-0648

Hudson Bay Exploration & Dev. Co. Ltd.,

1695 - 555 Burrard St.,

Vancouver 1, B.C.

DATE Nov. 20/75

INVOICE NO. 15811

CERTIFICATE NO. 36461

ATTN: \_\_\_\_\_

ITEM	DESCRIPTION	SUB-TOTAL	TOTAL
2	Assayed for Cu & Ag @ \$8.50	\$17.00	
			\$17.00

TERMS — NET 30 DAYS

1½% Per Month (18%) Per Annum Charged on Overdue Accounts.

75-040

Area 9.0  
With thanks



# INVOICE

CHEMEX LABS LTD. 212 BROOKSBANK AVE., NORTH VANCOUVER, B.C. V7J 2C1 TELEPHONE (604) 985-0648

Hudson Bay Exploration & Dev. Co. Ltd.,

1695 - 555 Burrard St.,

Vancouver, B. C.

DATE Nov. 18/75

INVOICE NO. 15796

CERTIFICATE NO. 36461

ATTN: Mr. G. Bidwell

ITEM	DESCRIPTION	SUB-TOTAL	TOTAL
38	Analyzed for Cu, Mo & Ag @ \$2.50	\$95.00	
38	Prepared @ \$1.25	47.50	
		142.50	
	Less 10%	14.25	
			\$128.25
	<p><i>cost/sample = <math>\frac{128.25}{38} = 3.37</math></i></p> <p><i>28 samples in claim area = <math>28 \times 3.37 = 94.36</math></i></p> <p><i>TAM - easy.</i></p>		

**TERMS--NET 30 DAYS**

1½% Per Month (18%) Per Annum Charged on Overdue Accounts.

75-040

Area 9.0  
With thanks

EXPENSE REPORT

NAME GERALD BIDWELL PERIOD FROM OCT 1 TO Nov 6 1975

TRIP OR PROJECT TAM - EAST.

DATE	ITEMS	Account Number	RECEIPT ✓	AMOUNTS	SUB TOTALS
Oct 1	taxi - airport to home	1616-		18 00	
" 2	Parking - bring equipment + maps into office			2 50	
" 7	G.S.C. - maps + requests		✓	18 15	
" 29	gas		✓	5 00	
" 30	parking			2 50	
" "	gas		✓	5 00	
Nov 3	fare to Vancouver Is.		✓	9 00	
" "	lunch		✓	4 25	
" "	maps		✓	6 00	
" "	summary notebook		✓	9 98	
" "	hotel		✓	16 80	
" "	supper			12 00	
" 4	gas		✓	5 00	
" "	groceries		✓	7 35	
" 5	supper		✓	11 85	
" 6	hotel (2 1/2 nite)		✓	42 00	
" "	meals (14 meals)		✓	42 35	
" "	fare (Mill Bay)		✓	2 25	
" "	fare (Summit Bay)		✓	7 00	
" "	supper		✓	3 90	
Summary 1616-62		\$34.73	✓		
1616-64		196.18	✓		

TOTAL EXPENSE ITEMS : 230 88

CHECK (✓) IF  
FARE ADVANCED  
OR IF COMPANY  
GIT CARD USED  
FOR TRAVEL, RENT,  
GASOLINE -  
ATTACH RECEIPTS.

PASSENGER'S  
COUPON

CREDIT CARD  
INVOICE COPIES

ADVANCES TO OTHER EMPLOYEES,  
LIST NAMES AND ATTACH RECEIPTS :

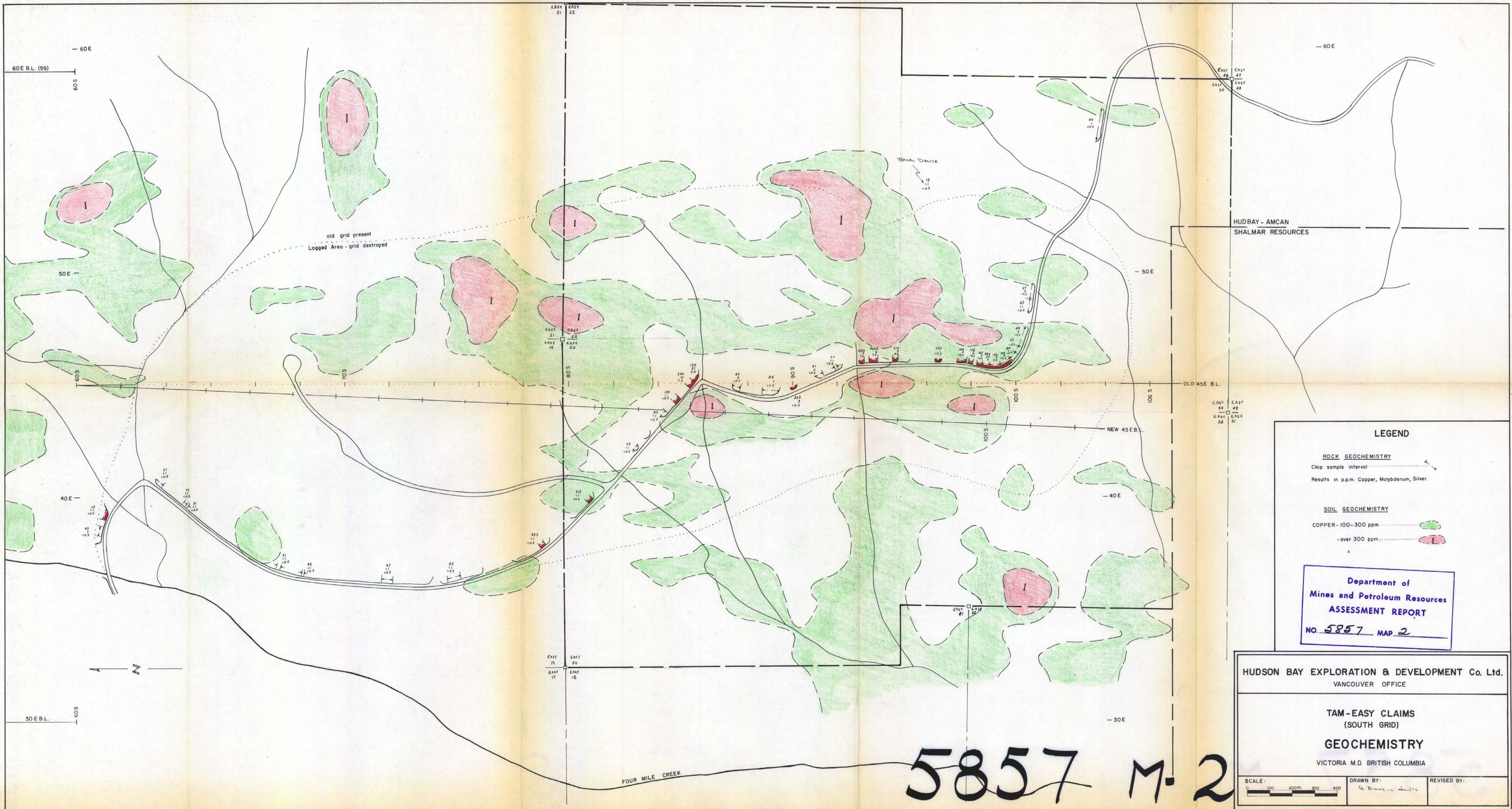
TOTAL DISBURSEMENTS : 230 88

CASH SUMMARY

BALANCE FORWARD FROM PREVIOUS REPORT		NIL
CASH RECEIVED :		
DATE	SOURCE	AMOUNT
Oct 27	R.A. Fisher - cheque #3679	200.00
Nov. 7	" " " 3687	36.88
TOTAL CASH RECEIVED :		230.88
TOTAL TO ACCOUNT FOR :		230.88
TOTAL DISBURSEMENTS :		230.88
BALANCE OWING :		NIL
TO COMPANY <input type="checkbox"/>		
TO EMPLOYEE <input checked="" type="checkbox"/>		

SIGNED Gerald Bidwell  
DATE Nov 7/75

APPROVED [Signature]  
DATE Nov. 7, 1975  
CHARGE ACCT NO SEE ABOVE



**LEGEND**

**ROCK GEOCHEMISTRY**  
 Chip sample interval:   
 Results in p.p.m. Copper, Molybdenum, Silver.

**SOIL GEOCHEMISTRY**  
 COPPER - 100-300 ppm:   
 - over 300 ppm:

Department of  
 Mines and Petroleum Resources  
**ASSESSMENT REPORT**  
 NO. 5857 MAP 2

**HUDSON BAY EXPLORATION & DEVELOPMENT Co. Ltd.**  
 VANCOUVER OFFICE

**TAM-EASY CLAIMS**  
 (SOUTH GRID)

**GEOCHEMISTRY**  
 VICTORIA M.D. BRITISH COLUMBIA

SCALE:	DRAWN BY:	REVISED BY:
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5857 M-2