

## 6

GEOPHYSICAL REPORT

Induced Polarization Survey on the BIT, BREN, GMM, VAL, TAK, RYE, RUM and BUN Claims

McLeese Lake: $52^{\circ} 30^{\prime}, 122^{\circ} 14^{\prime}$

McLEESE LAKE COPPER MINES LTD. (N.P.L.)

Claims: BIT 1-6Fr, 1-41, 45-58, 65, 67-70, 74; BREN 1-50 GMM. 1-12A, 13-26, 31-74, 75-76A, 81-91, 93, 95, 97, 99, 101-122; VAL 1-2; TAK 1-30; RYE 1-8 M.C., 9-10; RUM 1-79Fr; BUN 1-.38A, 41-44A.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2936 MAP
R. W. Cannon, B.A.Sc., P.Eng.

March-July 1970

# CANEX AERIAL EXPIORATION ITD. 

DIVISION OF CANADIAN EXPLORATION LIMITED

# - <br> BREAKDOWN OF I.P. EXPENDITURES <br> DAYS WORKED (MARCH THRU JULY 1970 INCL.) 

MARCH

| J. Alsen | 7 days |
| :--- | ---: |
| F. Hewett | 8 days |
| D. Huston | 13 days * |
| R. McCauley | 3 days |
| D. Robertson | 13 days * |
| A. Welch | $\frac{3 \text { days }}{}$ |
|  | 47 man days |

APRIL

| L. Bradish | 1 day |  |
| :--- | :--- | :--- |
| R. Cannon | 4 days * |  |
| R. Dame1 | 12 days |  |
| F. Hewett | 10 days |  |
| D. Huston | 13 days * |  |
| R. Lefferson | 7 days |  |
| R. McCauley | 10 days |  |
| D. Robertson | 17 days * |  |
| S. Withrow | 3 |  |
|  | 77 days days | 77 |

MAY
L. Bradish
A. Clendenan
F. Hewett
D. Huston
P. Kowalczyk
R. McCauley
R. Needoba
D. Robertson
J. Thornton
R. Walton

19 days *
11 days
1 day
2 days
19 days
6 days
7 days
19 days *
3 days
3 days
$\overline{90}$ man days
90

JUNE
B. Bowen
L. Bradish
A. Clendenan
T. Fletcher
R. Needoba
D. Robertson
C. Wilmot

1 day
15 days
19 days *
1 day
9 days
19 days
3 days
67 man days
C/F
67

$$
B / F \quad 281
$$

JULY

| B. Bowen | 1 day |
| :--- | :--- |
| L. Bradish | 9 days * |
| A. Clendenan | 9 days |
| R. Needoba | 9 days |
| D. Robertson | 9 days * |
| R. Weber | $\underline{5}$ days |
| $\mathbf{4 2}$ man days | $\underline{42}$ |

TOTAL MAN DAYS $=\quad 323$

* Operators wages included with Equipment Costs.


## LABOUR COSTS

J. Alsen $7 / 21 \times \$ 540 /$ month $=180.00$
L. Bradish $16 / 21 \times \$ 540 /$ month $=411.43$
A. Clendenan $20 / 21 \times \$ 386 /$ month $=367.63$
R. Dame $12 \times \$ 25 /$ day $=300.00$
B. Bowen $2 / 21 \times \$ 675 /$ month $=64.26$
T. Fletcher $1 / 21 \times \$ 425 /$ month $=20.24$
F. Hewett $19 / 21 \times \$ 665 /$ month $=601.69$
D. Huston $2 / 21 \times \$ 770 /$ month $=73.30$
P. Kowalczyk 19/21 x $\$ 770 /$ month $=565.48$
R. Lefferson $7 \times \$ 25$ /month $=175.00$
R. McCauley $19 \times \$ 25 /$ day $=475.00$
R. Needoba $25 / 21 \times \$ 386 /$ month $=459.53$
J. Thornton $3 / 21 \times \$ 770 /$ month $=110.00$
R. Walton $3 / 21 \times \$ 463 /$ month $=66.14$
A. Welch $3 / 21 \times \$ 635 /$ month $=\quad 90.71$
S. Withrow $3 \times \$ 25 /$ day $=75.00$
C. Wilmot $3 / 21 \times \$ 525 /$ month $=75.00$
R. Weber $5 / 21 \times \$ 400 /$ month $=95.24$

TOTAL LABOUR COST 4,205.65
I.P. Equipment plus two operators

77 operating days @ $\$ 265 /$ day $=20,405.00$
13 weather days @ $\$ 100 /$ day $=1,300.00$
Board Costs 323 man days @ $\$ 8.00 /$ day $/$ man $=2,584.00$
Compensation, Administration and Supervision $=1,615.00$ 323 @ \$5.00/day/man

TOTAL COSTS


## TOTAL COST OF LINE-CUTTING

77.91 miles of Line 7.5 miles of Baseline $\overline{84.47}$ miles $@ \$ 150.00 / \mathrm{mile}=\$ 12,811.50$

TOTAL COST OF I.P. PLUS LINE-CUTTING $=\$ 42,921.15$

## RWC/mm


R. W. Cannon, P.Eng.

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LIST OF ILLUSTRATIONS
I. P. Sections End of Text
4. Location Map ..... In pocket
In pocket
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## THE METHOD OF FIELD OPERATION

In the field procedure, measurements on the surface were made in a way that allows the effects of lateral changes in the properties of the ground to be separated from the effects of vertical changes in the properties of the ground. Current was applied to the ground at two points ( $X$ ) feet apart. The potentials were measured at two other points ( $X$ ) feet apart, in line with the current electrodes. The distance between the nearest current and potential electrodes was an integer number ( $N$ ) times the basic distance (X).

The measurements were made along surveyed lines, with a constant distance (NX) between the nearest current and potential electrodes. Measurements were taken with values of $N=1,2$ and 3 for $X=300^{\prime}$.

In plotting the results, the values of the apparent resistivity, percent frequency effect and the apparent metal factor measured for each set of electrode positions were plotted at the intersection of grid lines, one from the center point of the current electrodes and the other from the center point of the potential electrodes. The resistivity values were plotted above the line and the percent frequency effect and metal factors below. The lateral displacement of a given value is determined by the location along the survey line of the center point between the current and potential electrodes. The distance of the value from the line is determined by the distance (NX) between the current and potential electrodes when the measurement was made. The separation between sender and receiver electrodes is only one factor which determines the depth to which the ground is being
sampled in any particular measurement. The plotted results were contoured using a logarithmic contour interval $1,1.5,2,3,5,7.5$, and 10.

# REPORT ON THE INDUCED POLARIZATION SURVEY <br> McLEESE LAKE AREA, B.C. McLEESE LAKE COPPER MINES LTD. (N.P.L.) 

## INTRODUCTION

An Induced Polarization Survey was carried out on 577 claims and fractions held by McLeese Lake Copper Mines Ltd. and Canex Aerial Exploration Ltd. during the months of March through July 1970.

This survey was conducted along 77.91 miles of cut line. The lines were cut at 800 and 1,600 foot intervals with stations marked every 100 feet.

The induced Polarization Survey by Canex Aerial personnel was carried out using McPhar frequency effect equipment (Model P 654) employing frequencies of 0.31 and 5.0 cycles per second. LOCATION AND ACCESS

The property is located approximately 10 miles north-east of McLeese Lake and can be reached by bush road from Ross Sawmill. Access to the property is solely by 4 -wheel drive vehicle.

## PROPERTY

The property consists of 577 claims and fractions as follows:
CLAIM NAME: EXPIRY DATE:

| BIT $1-2$ FRS. | $52911 / 12$ | July 15, 1970 |
| :--- | :--- | :--- |
| BIT 1-41 | $48040 / 80$ | Oct. 21, 1970 |

## CLAIM NAME:

BIT 45 - 58 48084/97
BIT 6548104
BIT 67-70 48106/9
BIT $74 \quad 48113$
BREN 1 - 6 FRS. 48355/60
BREN 1 - 22 44901/22
BREN 23-50 45199/226
GMM 13-20
GMM 21-26 49640/45
GMM 31 - 48 48947/64
GMM 49 - 54
GMM 55-60
GMM 61 - 74
GMM 81 - 90
GMM 91
GMM 93
GMM 95
GMM 97
GMM 99
GMM 101-122
HL 1-108
JH $1-18$
ROJ 1-48
RECORD NOS:

EXPIRY DATE:

Oct. 21, 1970
Oct. 21, 1970
Oct. 21, 1970
Oct. 21, 1970
Dec. 24, 1970
March 4, 1971
March 21, 1971
March 7, 1971
March 18, 1971
March 7, 1971
March 7, 1971
March, 18, 1971
March 7, 1971
March 18, 1971
May 6, 1971
May 6, $197{ }^{\circ}$
May 6, 1971
May 6, 1971
May 6, 1971
May 6, 1971
May 14, 1972
May 14, 1971
March 18, 1971

## CLAIM NAME:

| BIT 3 - 6 FRS. | $56297 / 300$ | Jan. 23, 1971 |
| :--- | :--- | :--- |
| VAL 1 - 2 | $56301 / 2$ | Jan. 23, 1971 |
| TAK 1-30 | $56303 / 32$ | Jan. 23, 1971 |

VAL 1-2 56301/2
TAK 1 - 30

RECORD NOS:
EXPIRY DATE:

## CLAIM NAME:

RYE \#1 M.C. $\quad 117924$ M
RYE \#2 M.C. 117923 M
RYE \#3 - 8 M.C. $\quad 84007 / 12$ M
RYE \#9 - 10 124497/8 M May , 1971

RECORD NO:
EXPIRY DATE:

RUM \#10 FR. $\therefore . \quad 117901$ M
RUM \#11 FR. 117904 M
RUM \#12 FR. $\quad 117902$ M
RUM \#13 - 41 ER. $83013 / 41$ M
RUM \#42-61 FR. 124401/20 M
RUM \#62 FR. 124428 M
RUM \#63 - 69 FR. 124421/27 M
RUM \#70 - 79 FR. 124429/38 M
BUN \#1 - 24 A 117954/77 M
BUN \#25-37 A 83042/46 M
BUN \#38 A 879843
BUN \#41-42 A 879846/7
BUN \#43-44 A 879844/45
GMM \#1-5 A 117905/9 M
GMM \#6-12 A 117947/53 M
GMM \#75-76 A 124499/500 M

## PREVIOUS WORK

The previous work consisted of a limited Induced Polarization Survey and some diamond drilling near the Coast Silver ground.

## PRESENTATION OF RESULTS

The Induced Polarization and Resistivity results are shown on the enclosed dataplots in the manner described in the notes preceding this report. All lines were run using an electrode spread of 300 feet and dipole separations of $N=1,2$ and 3. Plan maps of Percent Frequency Effect and Resistivity are included in the pocket at the back of the report.

## DISCUSSION OF RESULTS

Anomalous areas were detected as follows:
Line 80E - 177 N to the end of the line at 189 N
Line 64E - 159N to 171N
Line 48E - 136N to 181N
Line 32 E - 135 N to $144 \mathrm{~N}, 162 \mathrm{~N}$ to 180 N
Line 16 E - 135 N to $141 \mathrm{~N}, 153 \mathrm{~N}$ to 180 N
Line 0 - 144 to 170 N , weak anomaly 95 to 6 N
Line 8 W - 105 to 9 N
Line 16W - 127N to 133N
Line 32W - 120N to 126 N
Line 112W - 87N (3rd separation)
Extensions of Lines near Coast Silver
Line 32 W - 24 N to 45 N
Line 40W - 30 N to 48 N
Line 48 W - 30 N to 48 N
Line 56 W - 36 N tp 45 N
Line 64W - 36N to 45N
Line 72 W - 36 N to 45 N
Line 80 W - 36 N to 54 N
The anomalous areas on the northern end of the grid are fairly linear and are most likely due to sediments mapped by T. Takeda.

The anomalous area located on Line 0 at 9 S to 6 N and Line 8 W at 10 S to 9 N was due to minor pyrite which was detected by subsequent diamond drilling.

The anomalous area on the Coast Silver extensions coincides with the Morroco drilling which encountered pyrite and chalcopyrite.

## CONCLUSIONS AND RECOMMENDATIONS

It was concluded that the only significant anomaly was the area previously drilled by Morroco Mines Ltd. It is recommended that no further exploration work be conducted on the McLeese Lake Copper ground.

RWC/mm

R. W. Cannon
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Department of Mines and Petroleum Resources Asesesmant raport NO 2736
.... MAP $\qquad$
$\qquad$ Mcleese Lake Copper
UNE: 64E (0-12)B) DPME DPOIC CORGGURATON
 $x=300^{\prime}$
 DRAWN BY: C.C.B. DAIE: 14.7.70


M.F.

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McLeese Lake Copper lat 32+00 E
$\qquad$ Apri, 1970
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McLeese Lake Copper UNE: $24+00 \mathrm{E}$


CANEX AERIAL EXACRATIOM LTD. :-1.... By: R.CANron L.aic. April, 1970
$\qquad$ $84 \times$ $\square$



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Department of Mines and Petroleum Resources

$\square$ NO NO. 2136

MAP.....
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 (MA.)



McLeese Lake Copper

ANEX AEMM $x=100$

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N: 1
arcon





McLeese Lake Copper LINE: 128 W or $\mathrm{V}-121 \mathrm{~B}$ prontrallences: $031+50-83$ CANES ARAL EXpLORATION LTD. DRAWN BY: L.C.B. DATE 31.5.70


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McLeese Lake Copper LWE: 4OW coast siver mar mbermentration mednames ose fay

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x=300
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 DPAWN BY: P. KOWALCZYK
W. TE: 24.5.70

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\begin{gathered}
\text { McLeese Lake Copper } \\
\text { :N } 48 \mathrm{w} \text { Cousisur } \\
\forall 300
\end{gathered}
$$

Soment an
24/5/70

$66 \mathrm{~N} \quad$ 69N 72 N
(M.F. $)_{a}$

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- sbw Cosst Suver


## - $300^{\prime}$

D. . Rosereriso
 $P_{2 / 2 x}$





