

921/7W

I. GEOPHYSICAL REPORT

ON MINERAL CLAIMS:

position on map
approximate
53°16'-17"
110°45'-57"
90°40'-21"
121°25'-25"

~~921/7W~~
GAL 1 to 12 INCLUSIVE
NICOLA LAKE

G.M. 1 to 8 INCLUSIVE
MAMIT LK. AREA

G.M. 9 to 16 INCLUSIVE
MAMIT LK AREA

50° 120° S.W.

- III. Wm. LEE YOUNG P.A.D. GEOLOGIST
- JOHN E. BETZ M.A. GEOPHYSICIST
- SURVEY CARRIED OUT BETWEEN
- IV. APR 1/57 to JUNE 18/57

187

ELECTROMAGNETIC SURVEY

for

B. C. BASE METALS DEVELOPMENT LIMITED

NICOLA MINING DIVISION

BRITISH COLUMBIA

by

Shield Mining Surveys Limited

June 18,

1957.

Ottawa,

Ontario.

.....

**Re: Electromagnetic Survey
Mineral Claims AL 1 to 12
GM 1 to 16, Nicola Mining
Division**

The instrument with which this survey was performed is described as a conventional single phase, vertical loop, dip angle electromagnetic unit. This unit was operated at a frequency of 1500 cycles/second. It was designed and manufactured by personnel of this company and is listed in our inventory as Model SHB.

Further details on this type of instrument may be obtained by reference to Exploration Geophysics by J. J. Jakosky.

All phases of this survey were carried out during the period May 1 to June 18, 1957, by the following personnel:

Linecutting - R. McBean, B. Welsh, J. Bohren.

Geophysical survey - L. Halliday, H. Wakabayashi.

Draughting - V. Montgomery.

Interpretation - W. L. Young, J. E. Betz.

SHIELD MINING SURVEYS LTD.

William L. Young

**William L. Young, Ph. D.
Manager, Geologist.**

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#1-3 Plans showing Electromagnetic readings and results

..... in pocket at back of report.

ELECTROMAGNETIC SURVEY**for****B. C. BASE METALS DEVELOPMENT LIMITED****NICOLA MINING DIVISION****BRITISH COLUMBIA****Introduction-**

Electromagnetic surveys were carried out on behalf of B. C. Base Metals Development Limited on three groups of Mineral Claims in the Nicola Mining Division, more specifically described as follows:

<u>Claim Group</u>	<u>Claim Numbers</u>
AL	1 to 12 inclusive
GM	1 to 8 inclusive
GM	9 to 16 inclusive

Location and Access-

The AL Mineral Claim group consists of 12 contiguous Mineral Claims located along the north shore of Nicola Lake, approximately 3 miles from the village of Nicola. They are easily accessible by secondary road from Nicola.

The GM Mineral Claim group consists of two separate blocks of 8 contiguous claims each. Claims 1 to 8 inclusive are located near the Lazy L Ranch, which is situated approximately 18 miles from the

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town of Merritt. It is reached by following the Mamett Lake road for 15 miles from Merritt, and then a branch road to the east which leads to the Lazy L Ranch.

GM 9 to 16 inclusive are located approximately 21 miles from Merritt along the Mamett Lake road. This road runs along the western half of the claims. The pipe line runs through the center of these claims.

Method of Survey-

In the present survey a vertical-loop, single phase electromagnetic unit was used. For this system of grid lines a conductor exists when the readings change from west to east angles while proceeding from the west. This change in the direction of the readings is known as a 'right-way cross-over', and this lies above the axis of the conductor. In the case of parallel conductors, the effect of one may overshadow the effect of another, resulting in a cross-over over one and only a 'dip' or 'rise' in the magnitude of the readings in the vicinity of the other.

Points above the various conductors detected are indicated on the map by a solid heavy bar. In cases where there is doubt as to the existence of a conductor, a series of heavy dots is shown. Where these points appear to lie on a common conductor, they are joined by a dashed line which constitutes the conductor axis.

Discussion of Results-

AL Mineral Claim Group-

Two weak cross-overs were detected along lines 27+00N and 30+00 N. Lacking a third cross-over point, it cannot be said with any degree of certainty whether or not these two cross-overs lie on the same conductor axis. In any case, it has been found that in this area this magnitude and pattern of readings is most often representative of wet shear zones which may or may not contain minor sulphide mineralization.

GM (1 to 8) Mineral Claim Group-

Several short contiguous conductors and potential conductors were located in the western section of the area surveyed. All of these conductors are fairly weak and could be caused by wet shear zones, conducting overburden, or disseminated sulphide mineralization.

The most interesting conductors are designated A, B, and C. Potential conductors exist at D, E, F, G, H, and I.

GM (9 to 16) Mineral Claim Group-

Much difficulty was experienced in obtaining reliable readings in the ^{WESTERN Pt} eastern sector of this property due to the fact that the pipe line (which follows the base line) and the telephone line along the Mamett Lake road are suspected of forming a type of closed loop through the ground, which would give deceptive and erratic readings. Therefore, all implied conductors between the road and the pipe line must be viewed with some scepticism until further investigation either proves or disproves the suspected coupling effect. These conductors are shown as

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potentials and are designated L, M, N, O, P, Q, R, and S.

The remaining conductors are conductors of weak to moderate intensity and may represent the effect of wet or mineralized shear zones. Conductors B and T are the most interesting from a point of view of intensity, and J because of length.

Recommendations-

It is recommended that further surface work should be done to ascertain the nature of the conductors. To keep costs to a minimum the work should be done in the systematic steps:

1. Geochemical soil samples should be taken across each of the conductors and potential conductors.
2. After evaluating the geochemical results, bulldozing should then be trenched and bulk sampled.
3. Finally diamond drilling, if warranted, should be planned on the information obtained in steps 1 and 2.

Respectfully submitted,

SHIELD MINING SURVEYS LIMITED

John E. Betz
John E. Betz, M. A.
Geophysicist.

William L. Young
William L. Young, Ph. D.
Manager, Geologist.

CERTIFICATE

I, William Lee Young, of Ottawa in the province of Ontario, certify :

1. THAT I am a geologist and maintain an office at Ottawa, Ontario.
2. THAT I am a graduate of McGill University, Ph. D. 1953, and that I have been practising my profession as a geologist for more than four years.
3. THAT I have no direct or indirect interest whatsoever in the Mineral Claims covered thereby and referred to here in the accompanying report on the Electromagnetic Survey for B. C. Base Metals Development Limited, dated this 18th day of June, 1957, or expect any interest in the securities of this company.
4. THAT the accompanying report is based on a survey conducted by personnel of Shield Mining Surveys Limited, interpretation of the results by Mr. John E. Betz, M. A., consulting geophysicist, and on personal observations made in the general area.

DATED this eighteenth day of June, A. D. 1957.

William Lee Young

William Lee Young, Ph. D.,
Geologist.

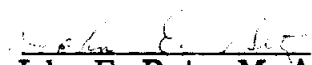
Manager, Shield Mining Surveys Limited

C E R T I F I C A T E

I, John E. Betz, of Chibougamau in the Province of Quebec, certify:

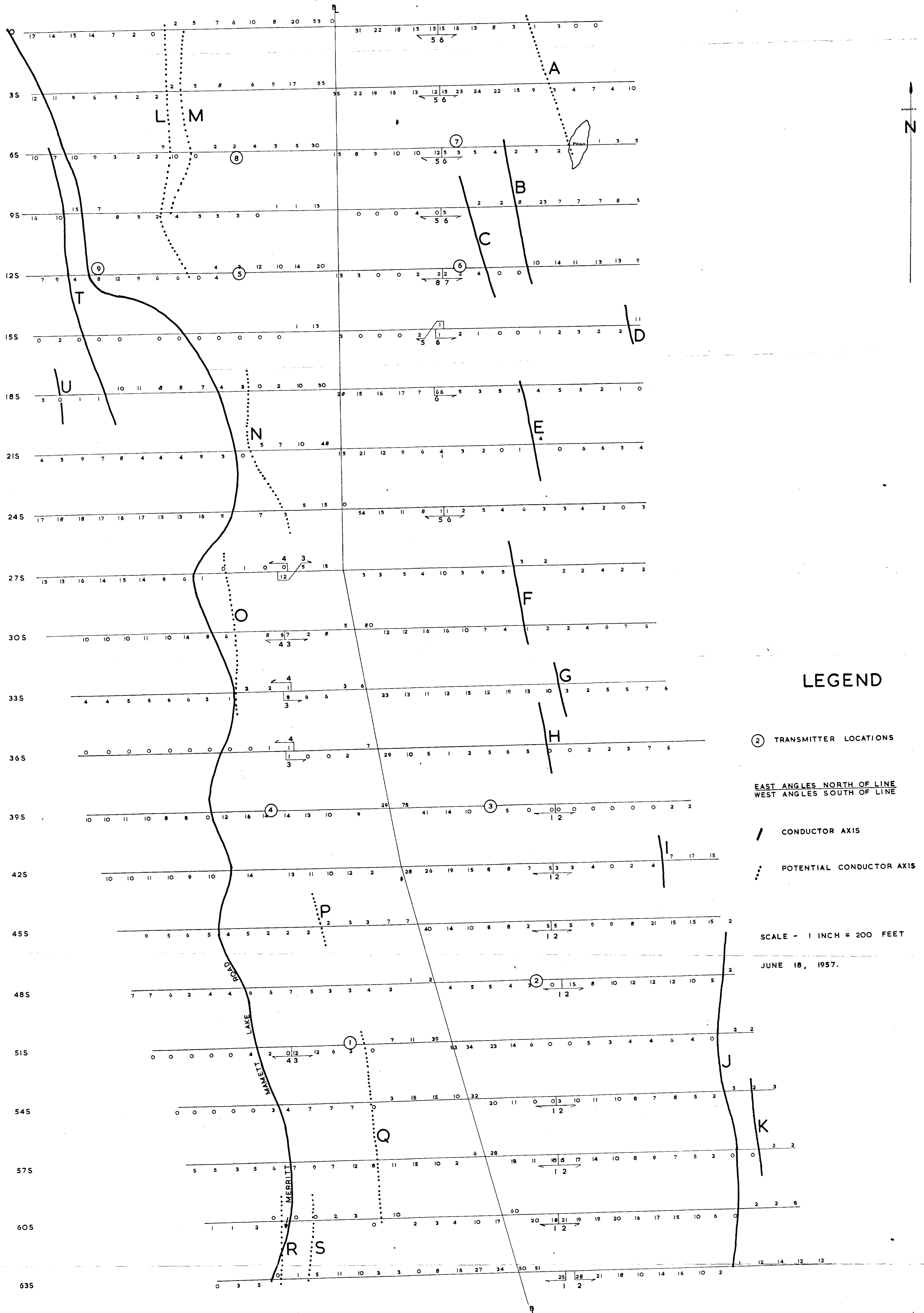
1. THAT I am a geophysicist and maintain an office at Chibougamau, Quebec.
2. THAT I am a graduate of the University of Toronto, B. A. (Physics and Geology), 1952, M. A. (Physics), 1954, and that I have been practising my profession as a geophysicist for more than four years.
3. THAT I have no direct or indirect interest whatsoever in the Mineral Claims covered thereby and referred to herein the accompanying report on the Electromagnetic Survey for Western Copperada Mining Corporation, Copperado Property, Merritt, B. C., dated this 28th day of February, 1957, or expect any interest in the securities of the company that owns or may own this Mineral Claim Group.
4. THAT the accompanying report is based on field work done by personnel of Shield Mining Surveys Limited, whom I know to be competent, and my own interpretation of the results.

DATED this twenty-eighth day of February,
A . D. 1957.


John E. Betz, M. A.
Geophysicist.

B. C. BASE METALS DEVELOPMENT LTD.

MINERAL CLAIM GROUP GM NINE TO SIXTEEN INCL.



LEGEND

① TRANSMITTER LOCATIONS

EAST ANGLES NORTH OF LINE
WEST ANGLES SOUTH OF LINE

— CONDUCTOR AXIS

⋯ POTENTIAL CONDUCTOR AXIS

SCALE - 1 INCH = 200 FEET

JUNE 18, 1957.

ELECTROMAGNETIC SURVEY

BY

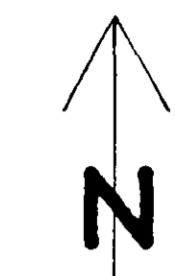
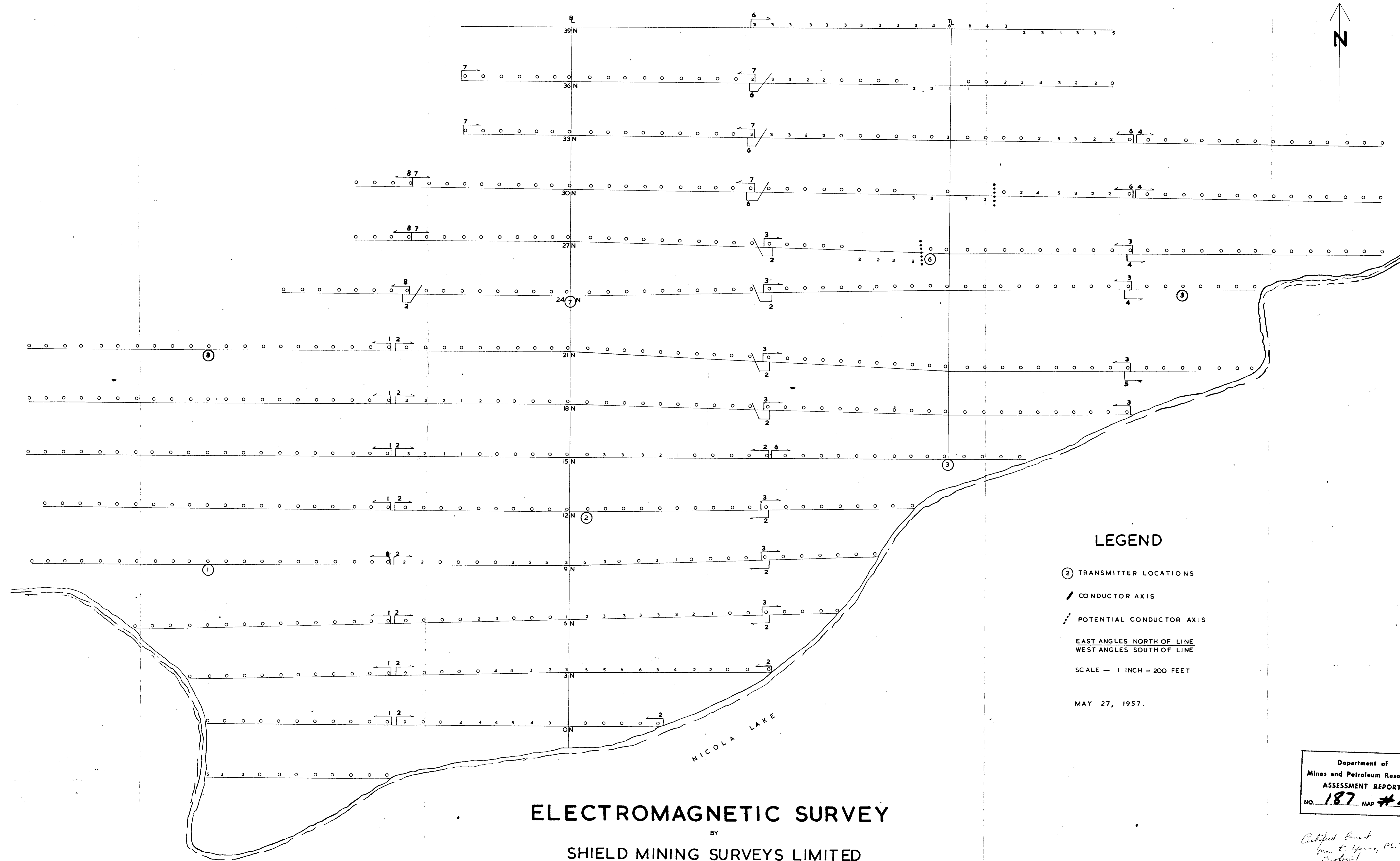
SHIELD MINING SURVEYS LIMITED

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 187 MAP #1

Original Contact:
W. R. Young P.E.
Geophysicist
John E. 125, M.A.

B.C. BASE METALS DEVELOPMENT LIMITED

'AL' CLAIM GROUP, MERRITT, B.C.



LEGEND

- ② TRANSMITTER LOCATIONS
- CONDUCTOR AXIS
- - - POTENTIAL CONDUCTOR AXIS
- EAST ANGLES NORTH OF LINE
WEST ANGLES SOUTH OF LINE
- SCALE — 1 INCH = 200 FEET
- MAY 27, 1957.

ELECTROMAGNETIC SURVEY

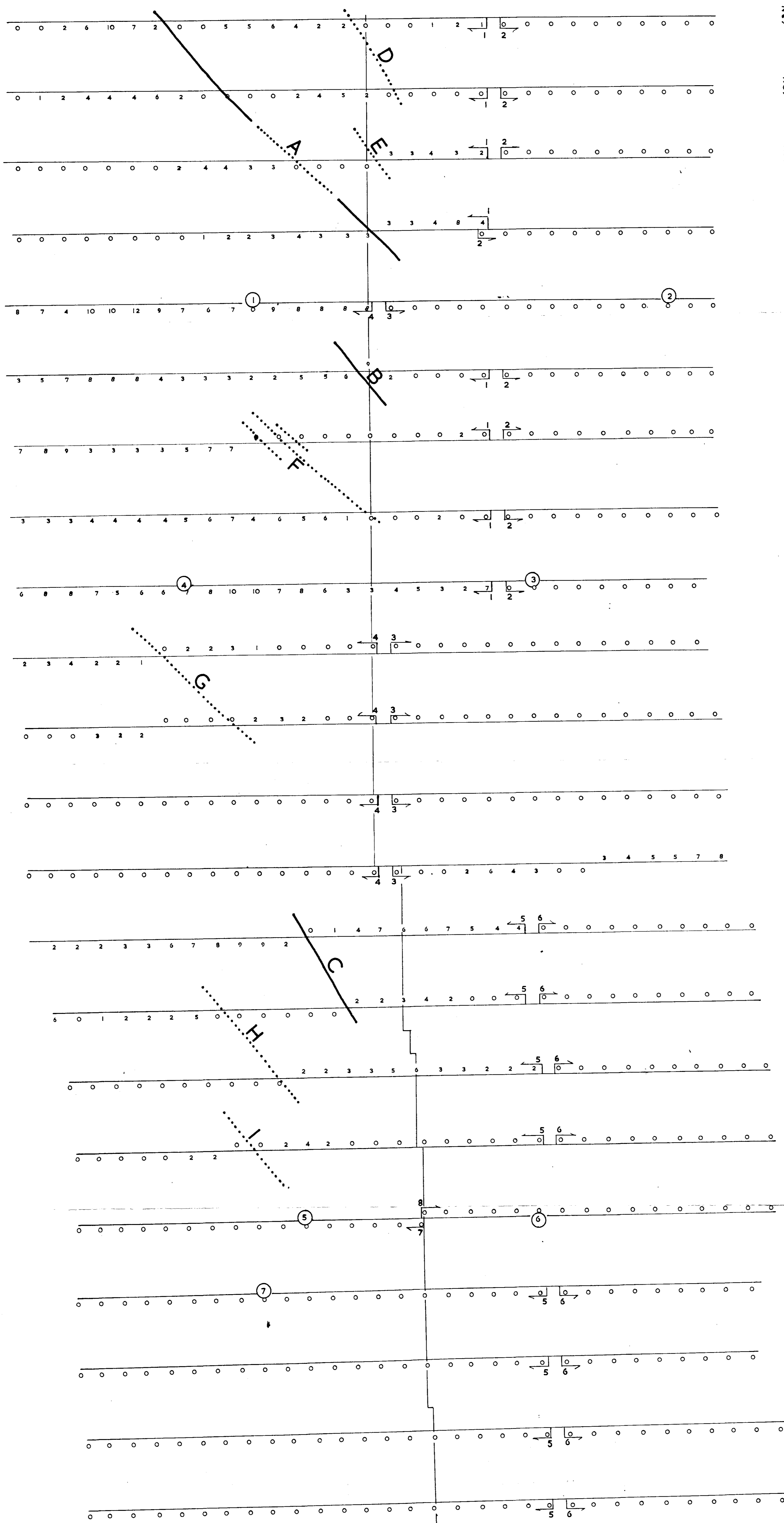
BY
SHIELD MINING SURVEYS LIMITED

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 187 MAP #2

*Richard Bennett
Vern E. Young, P.E.
Geophysicist
Sept. 8, 1957, M.A.*

B. C. BASE METALS DEVELOPMENT LTD.

MINERAL CLAIM GROUP GM 1 TO 8 INCLUSIVE



LEGEND

② TRANSMITTER LOCATIONS

WEST ANGLES NORTH OF LINE
EAST ANGLES SOUTH OF LINE

— CONDUCTOR AXIS

... POTENTIAL CONDUCTOR AXIS

SCALE - 1 INCH = 200 FEET

JUNE 6, 1957.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 187 MAP #3

Certified Correct:
W. R. Van 9 P.H.D.
Geologist
June 8, 1957, M.A.

ELECTROMAGNETIC SURVEY

BY
SHIELD MINING SURVEYS LIMITED