REPORT ON THE ELECTROMAGNETIC SURVEY AT MICHIPICOTEN ISLAND LAKE SUPERIOR, ONTARIO

NUCOM LIMITED

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I. Introduction

A dual frequency EM survey was completed during August and September 1955 on 13 miles of line within the Amco optioned group of claims on the western end of Michipicoten Island.

The surveying was performed on three grids laid out to cover the vicinities of two conglomerate-agglomerate beds. The purpose of the survey was to trace the conglomerate-agglomerate beds either by virtue of contained native copper or by virtue of other conductive material within the beds. An earlier trial survey had indicated that conductors coincided with the conglomerate-agglomerate beds at two isolated locations.

2. Presentation of Results

The EM data are presented in profile form on a series of 1" = 200' scale maps. (DWGS E 4059 - 1, 2 and 3).

A sketch (DWG K 1098) showing the grid layout also is enclosed. The three grids employed for the survey have been labelled GRID 1, GRID 2, and GRID 3 on this sketch.

Discussion of Results

The northernmost conglomerate-agglomerate band appears to be represented by Zone A, which trends throughout Grids 1 and 2. This conductive zone passes through or closely adjacent to several pits and shafts. The writer visited the

property on September 1st and 2nd and while there, studied the surface in the vicinities of the conductors on Grid 1. No obvious cause of the conductors was found, but it is believed that they are due to ionized solutions in porous phases of the conglomerate-agglomerate. This relatively high porosity may be due to shearing or vesicularity. However, the possibility that native copper is at least part of the cause of the conductors cannot be ruled out. No evidence of graphitic or carbonaceous material was observed.

Beyond line 32+00N to the north, the pattern of conductors becomes indefinite. The topography suggests that some faulting has occurred in this area and perhaps this has led to offsetting of the northernmost conglomerate-agglomerate band. The conductors are of generally poor conductivity throughout the length of the zone.

It appears that a second horizon is serving as a conductor on Grid 1, north of line 32+00N. This zone has been labelled Zone B and is of very poor conductivity.

Zone C closely follows a steep escarpment for most of it's length. No evidence of mineralization could be seen in any of the rocks exposed along the escarpment, and hence, the most likely cause of this conductor seems to be a fault or shear zone. This zone is of moderate conductivity throughout.

It seems possible that zones B and C are related and that they might represent the southernmost conglomerate-agglomerate band. High-weathering basic rocks are exposed at the escarpment and these rocks may be the basic eruptives mapped along the south-

ern contact of the southernmost conglomerate-agglomerate band. Existing topographic maps are inadequate and hence correlation of the mapped geology with Zone C is made difficult.

No conductors were found on Grid 3, which covers the western end of the southern conglomerate-agglomerate band. This suggests that the porosity of this band is not sufficiently high here to permit sufficient ionized solution to enter and form a continuous conductor.

4. Conclusions and Recommendations

The major conglomerate-agglomerate horison has been traced across the property. Several drill holes are recommended to test this band as follows:

GRID	D.D.H	Location	Dip	Azimuth	Depth
# 1	# 1	2+75Ex36+00N	45°	300°	250'
	# 2	1+00Wx32+00N	45°	300°	300'
	# 3	5+50Wx20+00N	45°	300°	200'
	# 4	5+75Wx12+00N	45°	300°	200'
# 2	# 5	1+00Nx12+00W	45°	320°	150'
	# 6	4+00Sx20+00W	45°	320°	175'
	# 7	5+50Sx28+00W	45°	320°	200'
	# 8	10+00Sx36+00W	45°	320°	175'

In addition two holes have been spotted to determine the cause of the conductors adjacent to the escarpment; these are:

GRID	D.D.H.	Location	Dip	Azimuth	Depth
# 1	# 9	8+00Ex12+00N	45°	300°	200'
	# 10	8+50Ex 0+00	45°	300°	175'

S SM

The above proposed drilling program may need adjustment, particularly with respect to depth of hole, as may be evidenced by the results of the first few holes. An additional hole which might be drilled is:

D.D.H. # 11, located at 2+50Wx52+00N, dipping 45° at an azimuth of 300° and extending to a depth of 200 feet.

NUCOM LIMITED

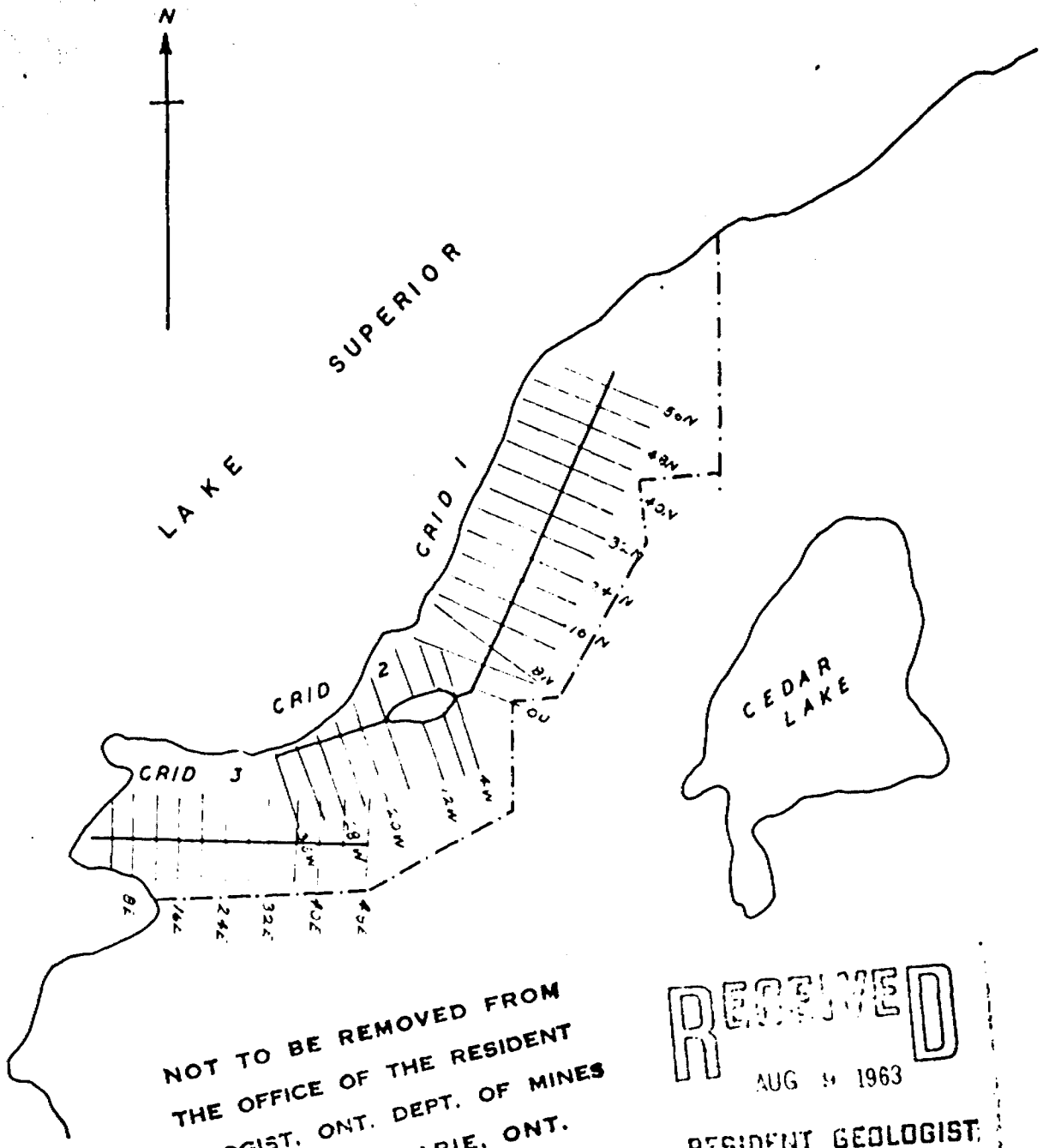
S H Ward

Dated: October 14, 1955

Copies to:

New York
Toronto (2)
File (2)

NUCOM LIMITED



NOT TO BE REMOVED FROM THE OFFICE OF THE RESIDENT GEOLOGIST, ONT. DEPT. OF MINES SAULT STE. MARIE, ONT.

S.SM. 499

THE AMERICAN METAL COMPANY LIMITED

MICHIPICOTEN ISLAND ONTARIO

SCALE: 1" TO ½ MILE

1" = ½ M

DWG K1098

STATEMENT OF TIME AND PERSONNEL ENGAGED - RE EM SURVEY

- MICHIPICOTEN ISLAND CLAIMS -

COVERING 22 MINING CLAIMS NOS. SSM 42747-56, 43177-86, 43188-89

1. FIELD TECHNICIAN

Wayne Latta, Chief,	Sept. 1-23/55	23 days
Tweed, Ontario	Aug. 10-31/55	22 "
	July 12-19/55	8 "
Total Man Days -		53 days

2. DRAUGHTING

Ronald Watson,	July 29/55	1/2 day
153 Parkmount Rd.,	Oct. 7/55	1 "
Toronto 6, Ont.	Oct. 8/55	1 hour
	Oct. 11/55	1/2 day
	Oct. 12/55	1 "
	Oct. 13/55	1 "
Total Man Days -		4 1/8 days
John Gardner,	Oct. 8-9/55	1 3/8 "
28 Elvina Gardens,		
Toronto, Ont.		
Total Man Days - Draughting -		5 1/2 days

3. CONSULTANTS

Dr. S.H. Ward,	Sept. 1-3/55	3 days
7 Staghill Drive,	Sept. 6/55	1/2 day
Toronto 16, Ont.	Oct. 29-31/55	2 1/2 days
Total Man Days -		6 days
Herbert Harvey,	July 11-12/55	2 days
28 McCowans Rd.,		
Toronto, Ont.		
Total Man Days - Consulting -		8 days

STATEMENT OF TIME AND PERSONNEL ENGAGED - RE EM SURVEY - MICHIPICOTEN ISLAND CLAIMS

4. LINE CUTTERS

E. G. Dean, Supervisor, 56 Chaplin Cr., Toronto, Ont.	August 19 - Sept. 22/55	35 days
Emile Leveille, Lac Aux Sables, Quebec	August 19 - Sept. 22/55	35 days
Harvey Hampel, Port Loring, Ont.	August 19 -Sept. 22/55	35 days
Vernon Hampel, Port Loring, Ont.	August 19 - Sept. 22/55	35 days
Willis Hutchins, Loring, Ont.	August 19 - Sept. 22/55	35 days
John Quesnell, Sault Ste.Marie, Ont.	August 19 - Sept. 22/55	35 days
Total Man Days - Line Cutters -		210 days

BREAKDOWN OF WORK CREDITS

1. FIELD TECHNICIAN	- 53 Man Days x 4	212 days
2. DRAUGHTING	- 5 1/2 Man Days x 4	22 "
3. CONSULTANTS	- 8 Man Days x 4	32 "
4. LINE CUTTERS,	- Maximum Time Allowable - 5 x 22 claims	110 "
TOTAL ALLOWABLE WORK CREDITS -		376 days

S SM - 4[illegible]

900

63.705

ONTARIO
DEPARTMENT OF MINES

PARLIAMENT BUILDINGS
TORONTO 2, ONTARIO

December 12th, 1956.

Dear Sir:

Herewith for your records is a geophysical survey filed by the American Metal Company Limited covering 22 mining claims on Michipicoten Island.

Yours very truly,

:AB

R. V. Scott,
Chief, Mining Lands Branch.

Mr. E. G. Pye,
Resident Geologist,
Court House,
PORT ARTHUR, Ont.

c.c. Dr. M. E. Hurst,
Provincial Geologist,
Department of Mines,
BUILDINGS.

FOR ADDITIONAL

INFORMATION

SEE MAPS:

4IN/13SW-0015-A1 # 1

2

3

4

FOR DUPLICATE OF MAP

4IN/13SW-0015-A1 #4

SEE MAP

4IN/12NW-0010-A1 #1

DWG E 4059-1

THE AMERICAN METAL COMPANY LIMITED

LAKE SUPERIOR

MICHIPICOTEN ISLAND ONTARIO

SCALE: ONE INCH TO TWO HUNDRED FEET

0 100 200 300 400 500 600 700 800 900 1000

DIP ANGLE: ONE INCH TO TWENTY DEGREES

KEY MAP

LEGEND

TRANSMITTER LOCATION
RECEIVER TRAVERSE AND PROFILES

NOTE: LOCATION OF CORRESPONDING TRANSMITTER IS INDICATED AT THE END OF EACH PROFILE

N

200

SYMBOLS

5000 ~ 1000 ~

CONDUCTOR AXIS ESTABLISHED
POSITION OF CONDUCTOR AXIS
UNCERTAIN
EXISTENCE OF CONDUCTOR AXIS
UNCERTAIN
SUGGESTED TEST DRILL HOLE
DIP ANGLE PROFILES

DRAWN: R.WATSON
DATE: OCT 55
APPROVED:
DATE: March 19/56

NOT TO BE REMOVED FROM
THE OFFICE OF THE RESIDENT
GEOLOGIST, ONT. DEPT. OF MINES
SAULT STE. MARIE, ONT.

RESIDENT GEOLOGIST
SAULT STE. MARIE

RECEIVED
AUG 9 1956

S Sm-499

41N/13SW-0015-A1 #1

ZONE C

ZONE A

ZONE B

GRID

BASE LINE NO 1

Lake Superior

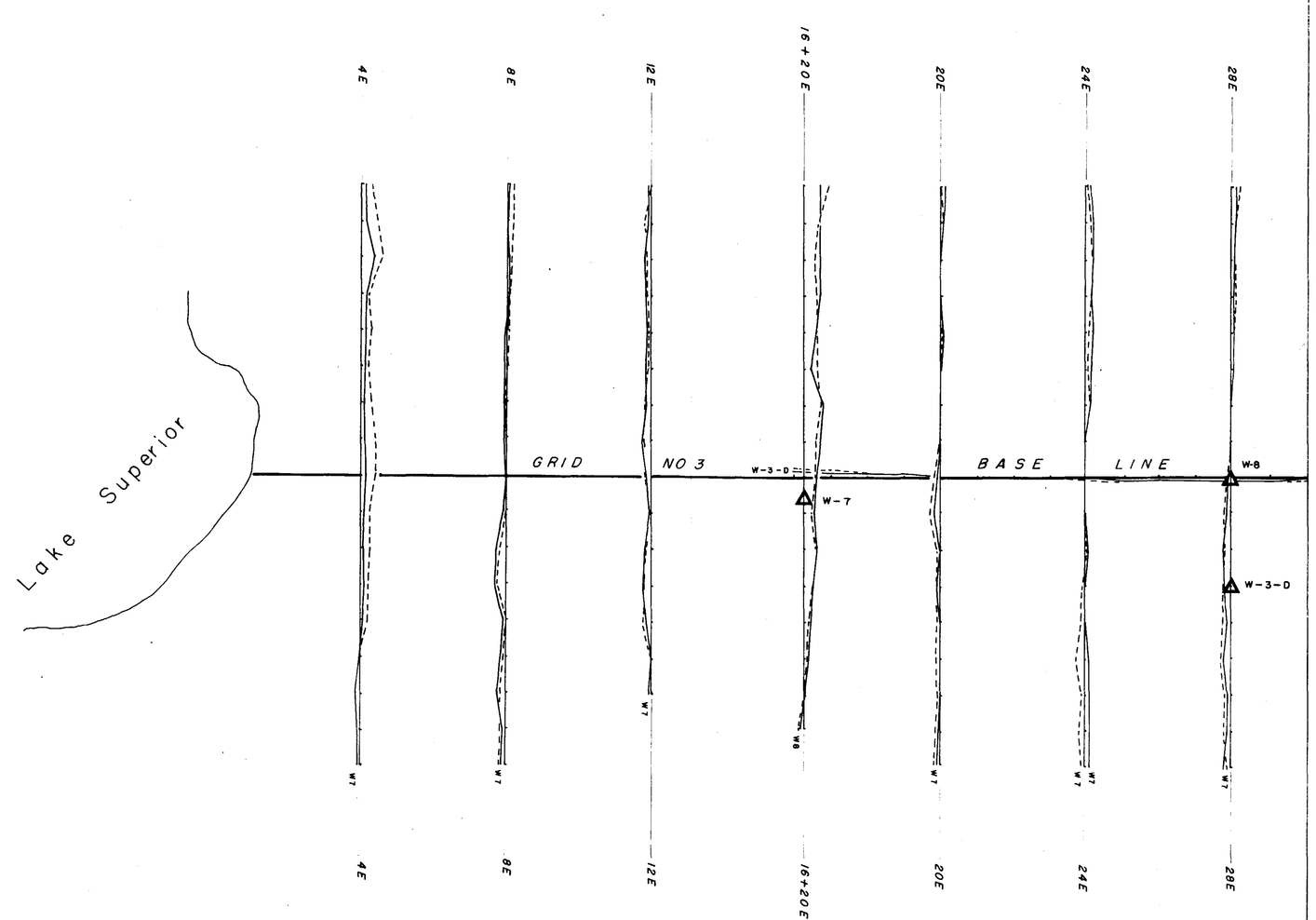
QUEBEC MINE TOWNSITE

SHAFT

NUCOM LIMITED
ELECTROMAGNETIC SURVEY

DWG E 4059-1

NUCOM LIMITED
ELECTROMAGNETIC SURVEY



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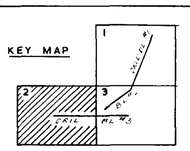

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LAKE SUPERIOR

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SCALE: ONE INCH TO TWO HUNDRED FEET

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DIP ANGLE: ONE INCH TO TWENTY DEGREES

5000 ~ 1000 ~ SYMBOLS

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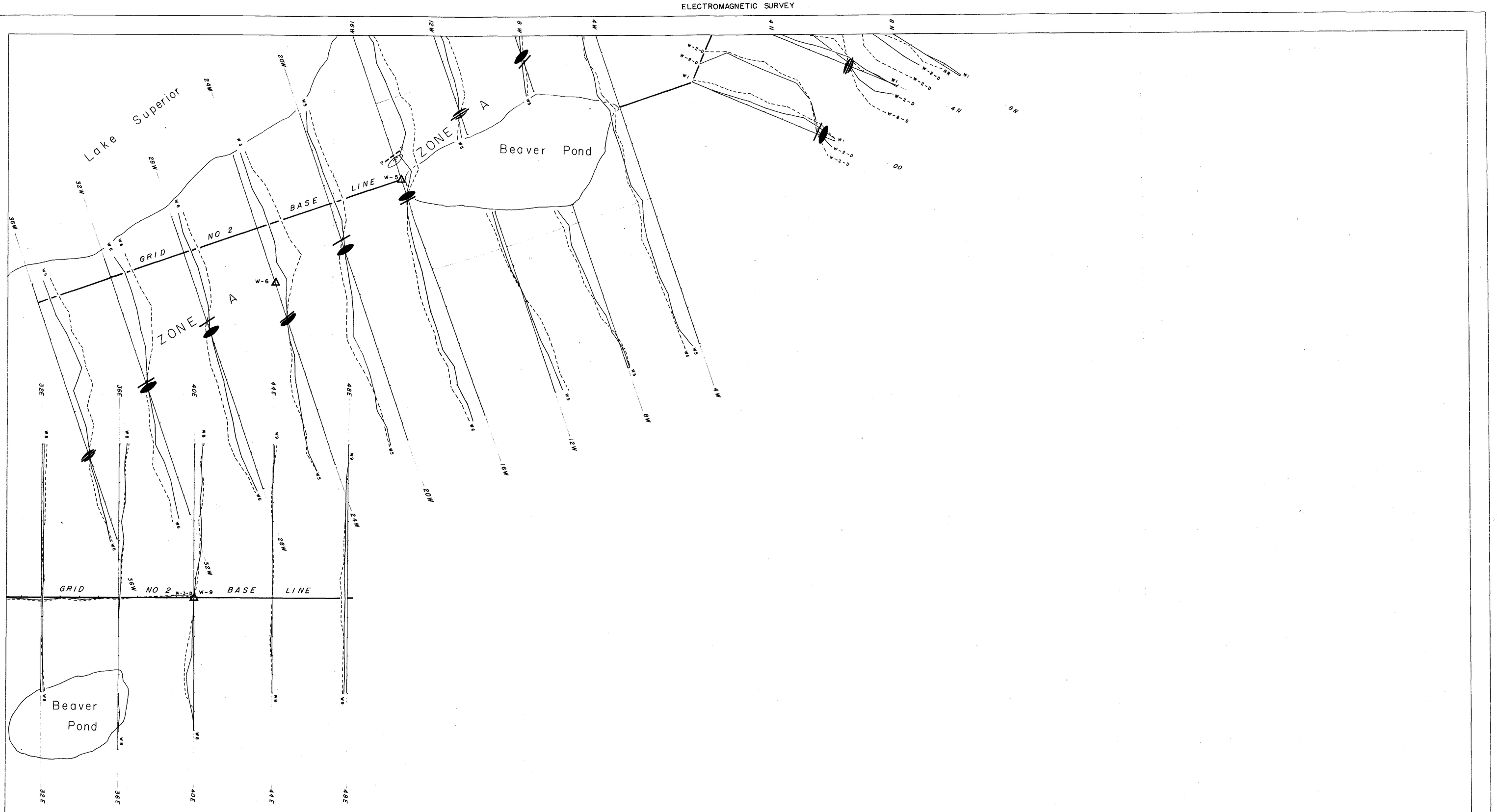
- POSITION OF CONDUCTOR AXIS UNCERTAIN
- EXISTENCE OF CONDUCTOR AXIS UNCERTAIN
- SUGGESTED TEST DRILL HOLE
- DIP ANGLE PROFILES

DRAWN: R. WATSON
DATE: oct 55
APPROVED: T.R.G.
DATE: March 9/56

DWG E 4059 - 3

NUCOM LIMITED
ELECTROMAGNETIC SURVEY



41N/13SW-0015-A1 #3

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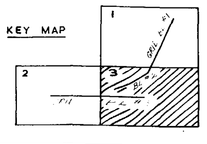

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