



42G055W0007 63.770 TALBOTT

010

46 Owen Boulevard  
Willowdale, Ontario

November 12, 1956

Dr. N. S. Beaton  
Consulting Engineer  
Northern Canada Mines Limited  
Room 1821  
44 King Street West  
Toronto 1, Ontario

Dear Dr. Beaton:

Submitted herewith is a report on the exploration completed on:

BLOCK 5

EBBS and SCHOLDFIELD TOWNSHIPS

Sault Ste. Marie Mining Division  
(Hearst - Oba Area)

Ground geophysical surveys mapped the cause of the airborne geophysical anomalies. Diamond drilling showed that a zone of disseminated pyrite and pyrrhotite was the causitive body of these anomalies. Assay results returned up to .23% copper, .01% gold and a trace of nickel.

INTRODUCTION

The claims comprising Block 5 are part of the area mapped by an airborne geophysical survey and were staked to cover the anomalies outlined on that survey. Six claims were staked and their location and dates of staking are listed below:

Staked

Sept. 6, 1956	SSM 46508	NW $\frac{1}{4}$	Lot 26	Con. 12	Scholfield Twp.
Sept. 6, 1956	SSM 46509	NE $\frac{1}{4}$	Lot 26	Con. 12	Scholfield Twp.
Sept. 6, 1956	SSM 46510	NW $\frac{1}{4}$	Lot 25	Con. 12	Scholfield Twp.
Sept. 6, 1956	SSM 46511	SW $\frac{1}{4}$	Lot 25	Con. 1	Ebbs Twp.
Sept. 6, 1956	SSM 46512	SE $\frac{1}{4}$	Lot 25	Con. 1	Ebbs Twp.
Sept. 6, 1956	SSM 46513	SW $\frac{1}{4}$	Lot 24	Conl 1	Ebbs Twp.

Access to these claims is via a 9 mile winter road from Hansen, Ontario on the Algoma Central Railroad.

*W. G. Wahl*

The ownership of these claims is vested in Northern Canada Mines Limited at Room 1821, 44 King Street West, Toronto 1, Ontario

#### GEOPHYSICS

Mr. A. J. Walker of Port Credit was in charge of the ground electromagnetic survey which found and outlined the cause of an electromagnetic anomaly mapped during the airborne geophysical survey. A Sharpe SE 100 electromagnetic survey unit was used and 145 stations were occupied. Dr. W. G. Wahl of Toronto carried out the magnetometer survey using a Sharpe magnetometer with a scale constant of 19.1 gammas. Ninety nine magnetometer stations were occupied. These surveys were carried out during the period of January to April 1956. Attached is a breakdown of the man days spent on the geophysical surveys.

As the diamond drill holes were drilled at an azimuth of 40 degrees to the geophysical traverse lines, the profiles shown on the attached drill sections are the results of a lateral projection of the geophysical data and should be considered as hypothetical. *W. G. Wahl*

#### DIAMOND DRILLING

Mr. K. A. Parkinson of London, Ontario supervised the drilling and logged and sampled the core. No rock exposures were found on these claims.

Diamond drilling showed that pyrite and pyrrhotite as disseminated grains and small irregular veins were found across a zone approximately 360 feet wide. Locally within this zone the sulphides comprised up to 3% by volume. This is based on a visual estimate. A maximum of .23% copper was returned in one assay of 3 foot of core from drill hole 5-2.

The host rock for the sulphides is a fine grained equigranular paragneiss or paraschist composed principally of quartz and biotite with a low tenor of hornblende and chlorite. Barren quartz veins up to one foot of core length are found. In certain zones (up to 15 feet in core length) hornblende is so well developed as to give a porphyroblastic texture to the rock.

All of the core is stored in a core shack constructed at the base camp located on claims SSM 52682 and 52683.

#### RECOMMENDATION

A total of 169 days assessment work has been completed on each claim and should be filed with the recorder

*W. G. Wahl*

of the Sault Ste. Marie Mining Division. No additional work should be done these claims at the present time.

All of which is respectfully submitted,

W. G. WAHL LIMITED

A handwritten signature in cursive script, appearing to read "W. G. Wahl".

W. G. Wahl, P. Eng.

63.770

46 Owen Boulevard  
Willowdale, Ontario

March 14, 1957



42G05SW0007 63.770 TALBOTT

020

Dr. N. S. Beaton  
Consulting Engineer  
Northern Canada Mines Limited  
Room 1821  
44 King Street West  
Toronto 1, Ontario

Dear Dr. Beaton:

Submitted herewith is a report on the exploration completed on:

BLOCK 1

SCHOLFIELD and TALBOIT TOWNSHIPS

Sault Ste. Marie Mining Division  
(Hearst - Oba Area)

The airborne survey mapped two conductors lying on the flank of a broad, but weak, circular magnetic anomaly. Geophysical ground surveys mapped two strong conductors which for the most part had a high magnetic susceptibility. Seven diamond drill holes were drilled and the results show that the geophysical anomalies were all caused by sulphide mineralisation. The best assays obtained on 25 samples were .005 gold, .10 copper and .05 nickel.

#### INTRODUCTION

Block 1 consists of 24 claims which were staked to cover the airborne geophysical anomalies in the northeast corner of Talbott and the northwest corner of Scholfield Townships. The following table lists the claims

and their locations:

SCHOLFIELD TOWNSHIP

*Credits*

	<u>Claim</u>	<u>Location</u>	<u>Staked</u>	<u>Assessment Work Filed</u>
16.7	SSM 46447 -	SW 1/4 Lot 33, Con. 10	Aug. 29, 1955	109
23.7	SSM 46448	SE 1/4 Lot 34, Con. 10	Aug. 29, 1955	109
"	SSM 46449	SW 1/4 Lot 34, Con. 10	Aug. 29, 1955	109
16.7	SSM 46450 -	NW 1/4 Lot 33, Con. 10	Aug. 29, 1955	113
23.7	SSM 46451	NE 1/4 Lot 34, Con. 10	Aug. 29, 1955	113
"	SSM 46452	NW 1/4 Lot 34, Con. 10	Aug. 29, 1955	113
"	SSM 46454	SE 1/4 Lot 34, Con. 11	Aug. 30, 1955	113
"	SSM 46455	SW 1/4 Lot 34, Con. 11	Aug. 30, 1955	113

TALBOTT TOWNSHIP

	<u>Claim</u>	<u>Location</u>	<u>Staked</u>	<u>Assessment Work Filed</u>
23.7	SSM 46453	NE 1/4 Lot 1, Con. 10	Aug. 29, 1955	109
"	SSM 46456	SE 1/4 Lot 1, Con. 11	Aug. 30, 1955	113
"	SSM 46457	SW 1/4 Lot 1, Con. 11	Aug. 30, 1955	109
"	SSM 46458	SE 1/4 Lot 2, Con. 11	Aug. 30, 1955	109
14.7	SSM 46459	NE 1/4 Lot 1, Con. 11	Aug. 30, 1955	113
"	SSM 46460	NW 1/4 Lot 1, Con. 11	Aug. 30, 1955	113
"	SSM 46461	NE 1/4 Lot 2, Con. 11	Aug. 30, 1955	109
"	SSM 46462	SE 1/4 Lot 1, Con. 12	Aug. 30, 1955	113
"	SSM 46463	SW 1/4 Lot 1, Con. 12	Aug. 30, 1955	109
"	SSM 46464	SE 1/4 Lot 2, Con. 12	Aug. 30, 1955	109
7.7	SSM 46465 -	NE 1/4 Lot 1, Con. 12	Aug. 30, 1955	113
"	SSM 46466 -	NW 1/4 Lot 1, Con. 12	Aug. 30, 1955	113
"	SSM 46467 -	NE 1/4 Lot 2, Con. 12	Aug. 30, 1955	113
"	SSM 49102 -	NW 1/4 Lot 2, Con. 12	Jan. 2, 1956	113
"	SSM 49103 -	SW 1/4 Lot 2, Con. 12	Jan. 3, 1956	113
"	SSM 49104 -	NW 1/4 Lot 2, Con. 11	Jan. 3, 1956	113

These claims are recorded in the name of Northern Canada Mines Limited.

Access to this area is via a winter road from Hansen, Ontario on the Algoma Central Railroad.

GEOPHYSICS

An airborne magnetometer, electro-magnetic and sintillometer survey was flown in July, 1955. Over this block of claims 2 EM conductors were mapped on the flank of a broad, but weak, circular magnetic anomaly. A small amount of radioactivity was found in the vicinity of the two anomalies.

The 2 EM anomalies trend north and appear as a flexure on the regional trend of the other conductors in this area. The ratio between the high and low frequencies on the southern conductor is 1.0 and was mapped on a single flight line. The ratios of the frequencies on the north anomaly are from 0.46 to 0.66 and were mapped on three flight lines. The airborne magnetic data show the same flexure in the regional trend. The magnetometer map shows the conductors to be on the flank of a large broad anomaly. It also mapped small magnetic anomalies directly over the EM conductor. The airborne sintillometer data appears to be of little value but the above background readings were coincident with the EM and magnetometer anomalies.

A ground EM survey employing a Sharpe electro-magnetic survey unit located the conductors on the ground. The area surrounding the EM conductors was mapped by a Watt's vertical force magnetometer with a scale constant of 29.1 gammas per division. A resistivity survey was completed over part of the south sheet only and was discontinued as the survey did not add appreciable data to the interpretation of the underlying geology.

A 17 mile grid system employing 3 base lines and associated picket lines was established to cover these claims. During the winter of 1955-1956 there were 696 EM stations, 653 magnetometer stations and 425 resistivity

stations occupied.

For ease of presentation the area covered by the ground geophysical surveys was divided into the north and south sheets.

The ground EM survey mapped one strong conductor 6400 feet in length on the south sheet. This conductor is sinuous, striking N 10° E at the south end, N 25° W in the central part and east-west at the north end. The "cross-overs" are quite strong being up to 51° between 100 foot stations but would average near 20° between 100 foot stations. Three small, weak conductors were mapped elsewhere on the south sheet and appear to be of little interest.

On the north EM sheet 3 strong conductors with an aggregate length of 5000 feet were mapped. These conductors may represent a single conductor offset by faulting. The "cross-overs" are quite strong, averaging about 25° between 100 stations over the southern conductor and 5° between 100 stations over the northern conductor.

The ground magnetometer survey confirms the location of the EM conductors and shows that these conductors, over most of their length, have a relatively high magnetic susceptibility indicating that sulphide rich zones with a high tenor of pyrrhotite may be the causitive bodies of the various geophysical anomalies. The intensity of the magnetic anomalies differs along the strike of the anomalies indicating changes in the concentration of high susceptibility material. Diamond drilling confirmed this supposition. The magnetic anomalies on the south sheet have a length equal to the EM conductors and indicate that the width of the causitive body seldom exceeds 150 feet with an average of approximately 100 feet.

On the north sheet there is agreement only in part between the EM and the magnetometer data. The trends of the two geophysical data are more or less parallel but only in six instances are the two data coincident. This is probably due to the differing tenor of pyrrhotite within the causative body.

The resistivity survey was completed over the south sheet only and confirmed the location on the ground of several of the EM conductors. This survey mapped an area of very low resistance in the central part of the south sheet directly beneath the conductor mapped by the airborne EM. It is felt that in this instance that the resistivity anomaly is caused by a flat lying, near surface body such as a clay horizon in the overburden and that the airborne EM anomaly as contoured is also caused by this flat lying body. In the lower part of the south map sheet the resistivity low, the EM conductor and the magnetometer anomaly are coincident. Although the resistivity survey mapped the EM conductors, this method was discontinued as it added no new diagnostic information concerning the conductor and it did not map the location of the airborne conductor as well as the ground electro-magnetic surveys.

#### GEOLOGY

All of the claim lines and picket lines were traversed during the geological survey. Most of the area is low lying and is covered by a black spruce swamp. Quartz, biotite paragneiss was the only rock mapped except for one exposure of diorite in claim SSM 46460. Because of the paucity of exposures little information was gathered as to the bedrock structure or of the type of rocks underlying these claims.



DIAMOND DRILLING

Seven diamond drill holes were drilled to check the geophysical anomalies. This drilling showed that the causitive bodies were sulphide rich zones consisting of pyrite and pyrrhotite. Drill hole #1 had an intersection of 122.4 feet of 1% sulphides including an 18 foot section of 5% pyrite. Hole #2 had a 50 foot section of 40% sulphides with sulphides up to 10% being found in a total of 237 feet of core. Hole #3 had a 184 foot section of pyrite and pyrrhotite whose tenor varied from 1% to 15% of the core. Sulphides up to 6% were found for 275 feet in hole #4. Hole #5 had a 70 foot section of sulphides and was stopped as it was apparent that the hole was being drilled down dip. Hole #6 had a 3 foot section of 20% pyrrhotite. Hole #7 had a 19 foot section of 10% sulphides, followed by a 29 foot section of 20% sulphides and after a gap of 12 feet there was a 90 foot section of 30% sulphides.

The core is stored in a core shack at the base camp in the southwest corner of claim 52683 in Lot 26, Con. 8, Scholfield Township.

The best individual assays returned on 25 samples were .005 gold, .10 copper and .05 nickel.

The diamond drilling and all geophysical surveys have been filed as assessment work.

All of which is respectfully submitted.

F. G. WAHL LIMITED



W. G. Wahl, P. Eng.



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46 Owen Boulevard  
Willowdale, Ontario

March 15, 1957

Dr. H. S. Beaton  
Consulting Engineer  
Northern Canada Mines Limited  
Room 1821  
44 King Street West  
Toronto 1, Ontario

Dear Dr. Beaton:

Submitted herewith is a report on the exploration completed on:

BLOCK 6

EBBS TOWNSHIP

Sault Ste. Marie Mining Division  
(Hearst - Oba Area)

A strong airborne EM conductor and magnetometer anomaly was covered by the 9 claims of Block 6. Ground geophysical surveys mapped a single strong EM conductor which has a high magnetic susceptibility. Diamond drilling showed that the causative body was a sulphide rich zone up to 77 feet wide with a high tenor of pyrrhotite. Assaying of 3 samples returned nil gold, up to a trace of copper and up to .03 nickel.

#### INTRODUCTION

The airborne geophysical survey mapped a strong, narrow electromagnetic conductor superimposed on a magnetic anomaly.

Nine claims were staked to cover these anomalies and are recorded in the name of Northern Canada Mines Limited. These claims are located in Ebbs Township, Sault Ste. Marie Mining Division. The following table lists

the claims together with other pertinent data:

	Claim	Location	Recorded	Assessment Work Filed
12	SSM 46499	NE 1/4 Lot 25, Con. 2	Sept. 27, 1955	72.1 days
12	SSM 46500	NW 1/4 Lot 24, Con. 2	Sept. 27, 1955	72.1 days
8	SSM 46501	SE 1/4 Lot 25, Con. 3	Sept. 27, 1955	72.1 days
8	SSM 46502	SW 1/4 Lot 24, Con. 3	Sept. 27, 1955	72.1 days
8	SSM 46503	SE 1/4 Lot 24, Con. 3	Sept. 27, 1955	72.1 days
8	SSM 46504	SW 1/4 Lot 23, Con. 3	Sept. 27, 1955	72.1 days
8	SSM 46505	SE 1/4 Lot 23, Con. 3	Sept. 27, 1955	72.1 days
12	SSM 46506	NE 1/4 Lot 24, Con. 2	Sept. 27, 1955	72.1 days
12	SSM 46507	NW 1/4 Lot 23, Con. 2	Sept. 27, 1955	72.1 days

Access to these claims is via a winter road from Hansen on the Algoma Central Railroad.

GEOPHYSICS

The airborne geophysical survey was performed during July, 1955 and over the claims in Block 6 mapped a narrow EM anomaly 2 miles long. Along this anomaly and on two adjacent flight lines the ratio between the high and low frequencies were 1.50 and 1.33, indicating a relatively good conductor. This magnetic anomaly trends east-west and is terminated at its east end by a strong anomaly trending N 30° W. The airborne data show that all of the basement rocks to the northeast of Block 6 trend N 30° W and those to the southwest of this block trend northeast to east. Block 6 lies on the line which marks the abrupt change in the strike of the basement rock.

During the period between January and April, 1956 a grid system consisting of 6.6 miles of base and picket lines was established. An electro-magnetic survey employing a Sharpe electro-magnetic survey unit and a magnetometer survey using a Sharpe magnetometer with 19.1 gammas per scale division were made.

During the EM survey 190 stations were occupied and the data, when compiled, indicated a single strong, narrow conductor at least 3200 feet long. The "cross-overs" would average about 30° between 100 foot stations and 40° between 300 foot stations. The ground EM conductor parallels the trend of the airborne anomaly, but is displaced some 700 feet south of the airborne anomaly.

The ground magnetometer occupied 105 stations and mapped a narrow anomaly more than 3200 feet long superimposed on the EM conductor. The magnetometer data indicated that the causative body was near surface, not more than 75 feet wide, and that the tenor of high susceptibility material would differ along the strike of the anomaly. These two surveys indicated that the causative body would probably be a sulphide zone with a high tenor of pyrrhotite. Diamond drilling confirmed this interpretation.

#### GEOLOGY

All of the claim and picket lines were traversed during August, 22 and 23, but no exposures were seen. This area is, for the most part, a low lying, black spruce swamp. A small sand ridge trends east-west through the southern claims.

#### DIAMOND DRILLING

Two holes were spotted to test the geophysical anomalies. Both holes were drilled at 45° at an azimuth of 180° and reached a depth of 257 feet. Stringers, veins and small masses of sulphides constituting up to 40% of the core were found to be the cause of the geophysical anomalies. In hole #6 - 1 the sulphides had a drill intersection of 77.5 feet and in hole #6 - 2 an intersection of 28.5 feet. Pyrite and pyrrhotite were the only two sulphides identified. The results of chemical assaying showed, nil gold,

trace of copper and .03 nickel.

The core is stored in a core shack in the southwest corner of claim  
SSM 52683 in Lot 26, Con. 8, Scholfield Township.

The diamond drilling and the geophysical and geological surveys have  
been filed as assessment work.

All of which is respectfully submitted.

W. G. WAHL LIMITED



W. G. Wahl, P. Eng.



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46 Owen Boulevard  
Willowdale, Ontario

March 19, 1957

Dr. W. S. Beaton  
Consulting Engineer  
Northern Canada Mines Limited  
Room 1821  
44 King Street West  
Toronto 1, Ontario

Dear Dr. Beaton:

Submitted herewith are the results of the exploration completed on:

BLOCK 4

EBBS TOWNSHIP

Sault Ste. Marie Mining Division  
(Hearst - Oba Area)

The airborne survey mapped a strong magnetic anomaly and a relatively good EM conductor over the claims in Block 4. Ground surveys showed that the airborne anomalies are the resolution of at least 3 causative bodies. Diamond drilling results indicated that the causes of the geophysical anomalies are sulphide rich zones. Chemical and spectrographic assays returned no results of any value.

#### INTRODUCTION

Seventeen claims were staked to cover a promising airborne, electro-magnetic and magnetometer anomaly over south-central Ebbs Township. The ownership of these claims is vested in Northern Canada Mines Limited. The table on the following page lists the location and other pertinent data concerning this block of claims:

W.S.B.

CLAIM	LOCATION EBBS TWP.	RECORDED	ASSESSMENT WORK FILED
SSM 46482	NW 1/4 Lot 22, Con. 1	Sept. 27, 1955	145.3 days
SSM 46483	NE 1/4 Lot 22, Con. 1	Sept. 27, 1955	145.3 days
SSM 46484	NW 1/4 Lot 21, Con. 1	Sept. 27, 1955	145.3 days
SSM 46485	SW 1/4 Lot 22, Con. 2	Sept. 27, 1955	145.3 days
SSM 46486	SE 1/4 Lot 22, Con. 2	Sept. 27, 1955	145.3 days
SSM 46487	SW 1/4 Lot 21, Con. 2	Sept. 27, 1955	145.3 days
SSM 46488	SE 1/4 Lot 21, Con. 2	Sept. 27, 1955	145.3 days
SSM 46489	SW 1/4 Lot 20, Con. 2	Sept. 27, 1955	145.3 days
SSM 46490	SE 1/4 Lot 20, Con. 2	Sept. 27, 1955	145.3 days
SSM 46491	NW 1/4 Lot 21, Con. 2	Sept. 27, 1955	145.3 days
SSM 46492	NE 1/4 Lot 21, Con. 2	Sept. 27, 1955	145.3 days
SSM 46493	NW 1/4 Lot 20, Con. 2	Sept. 27, 1955	145.3 days
SSM 46494	NE 1/4 Lot 20, Con. 2	Sept. 27, 1955	145.3 days
SSM 46495	NW 1/4 Lot 19, Con. 2	Sept. 27, 1955	145.3 days
SSM 46496	NE 1/4 Lot 19, Con. 2	Sept. 27, 1955	145.3 days
SSM 46497	SW 1/4 Lot 19, Con. 2	Sept. 27, 1955	145.3 days
SSM 46498	NE 1/4 Lot 21, Con. 1	Sept. 27, 1955	145.3 days

Access to Block 4 is via a winter road from Hansen, Ontario on the Algoma Central Railroad.

GEOPHYSICS

The airborne magnetometer mapped a relatively strong anomaly transverse to the regional trend in the southern part of Ebbs Township. This anomaly is about 1 and 1/2 miles long and its peak value is 275 gammas above the regional level. This value, although small, is quite intense for this area. A relatively strong electro-magnetic anomaly was mapped over the same area. The conductor has a ratio of up to 3.0 between the high and low frequencies. The airborne EM data indicated that the conductor on Block 5 is possibly an extension of the conductor found on Block 4.

A grid system consisting of 12.3 miles of base and picket lines was established to control the electro-magnetic, magnetometer and geological surveys.

*Wells*

A Sharpe vertical-loop electro-magnetic survey unit, a Sharpe vertical-balance magnetometer with a scale constant of 19.1 gammas per scale division and a Watt vertical-balance magnetometer with a scale constant of 29.0 gammas per scale division were used on the geophysical surveys. There were 330 electro-magnetic stations and 341 magnetometer stations occupied during these surveys.

The ground EM survey mapped 3 strong conductors with a maximum "cross-over" of 60° between 100 foot stations and 56° between 300 foot stations. These conductors trend N 45° E and are more or less parallel. The southern conductor is more than 6800 feet long, the middle conductor is approximately 3600 feet long and the northern conductor is more than 2800 feet long.

The magnetometer survey showed that the conductors have a high magnetic susceptibility over most of their length. The peak of the magnetic values differs along the trend of the anomaly indicating a change in the tenor of high susceptibility material within the causative bodies. The length of the magnetic trends is comparable to the length of the EM conductors. The magnetometer data indicated that the causative body is near surface and up to 100 feet wide.

#### GEOLOGY

Quartz, biotite paragneiss is the only rock type exposed and these exposures are limited to a north-east trending ridge approximately 300 feet southeast of the base line. The remainder of the area is covered by a black spruce swamp.

*Weld*



DRILLING

The 5 diamond drill holes showed that sulphide zones are the cause of the geophysical anomalies. Drill hole #1 has a drill intersection of 117 feet of material averaging 40% pyrrhotite and 10% pyrite. Sulphides are found for a total length of 309 feet. In drill hole #2 sulphides are found continuously for 473 feet of core. Sulphides comprise more than 20% of the core from 405 to 465 feet. In drill hole #3 sulphides are found in 392 feet of core of which 105 feet has approximately 1% pyrite and 2% pyrrhotite. Drill hole #4 has sulphides throughout 390 feet of core with a 32 foot section of massive sulphides made up of 30% pyrite and 60% pyrrhotite. Drill hole #5 was spotted to intersect a weak conductor over which there was no related magnetic anomaly. Flecks of pyrrhotite and a few veins of pyrite are intersected in the drill hole.

The host rock for the mineralization in Block 4 is a medium grained, quartz paragneiss with a low tenor of biotite and sericite. Some hornblende and garnet rich paragneisses and almost pure quartzite are found in association with the quartz paragneiss. The foliation in these rocks dips steeply northwest and strikes northeast.

Assaying of 22 samples returned results of up to nil gold, .17 copper and .08 nickel. A spectrographic assay of a composite sample across the massive sulphide zone in drill hole #4 showed that the material carried no metal of value.

The core is stored in a core shack in the southwest corner of claim 55M 52683 in Lot 26, Con. 8, Scholfield Township.

The diamond drilling and the geophysical and geological surveys

Wells

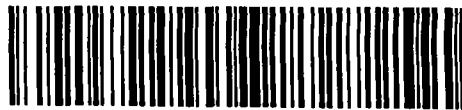
have been filed as assessment work.

All of which is respectfully submitted.

W. G. WAHL LIMITED

*W. G. Wahl*

W. G. Wahl, P. Eng.



42G05SW0007 63.770 TALBOTT

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46 Owen Boulevard  
Willowdale, Ontario

March 21, 1957

Dr. N. S. Beaton  
Consulting Engineer  
Northern Canada Mines Limited  
Room 1821  
44 King Street West  
Toronto 1, Ontario

Dear Dr. Beaton:

Submitted herewith is a report on the exploration completed on:

BLOCK 2

TALBOTT TOWNSHIP

Sault Ste. Marie Mining Division  
(Hearst - Oba Area)

Eight claims were staked to cover 2 airborne EM anomalies. Ground geophysical surveys mapped 2 strong conductors which had a relatively high magnetic susceptibility. Diamond drilling showed that the causative bodies of the geophysical anomalies are sulphide zones. Assaying returned no metal values of interest except for a 4 inch sample which returned 1.25% zinc.

#### INTRODUCTION

The relatively good airborne EM anomalies in the east-central part of Talbott Township were covered by 8 claims. These claims are recorded in the name of Northern Canada Mines Limited and are listed with other relevant data on the following page:

CLAIM	LOCATION TALBOTT TWP.	RECORDED	ASSESSMENT WORK FILED
SSM 46468	SW 1/4 Lot 5, Con. 7	Sept. 27, 1955	115 days
SSM 46469	SE 1/4 Lot 5, Con. 7	Sept. 27, 1955	115 days
SSM 46470	SW 1/4 Lot 4, Con. 7	Sept. 27, 1955	115 days
SSM 46471	SE 1/4 Lot 4, Con. 7	Sept. 27, 1955	115 days
SSM 46472	NW 1/4 Lot 5, Con. 6	Sept. 27, 1955	115 days
SSM 46473	NE 1/4 Lot 5, Con. 6	Sept. 27, 1955	115 days
SSM 46474	NW 1/4 Lot 4, Con. 6	Sept. 27, 1955	115 days
SSM 46475	NE 1/4 Lot 4, Con. 6	Sept. 27, 1955	115 days

Access to this area is via a winter road from the Algoma Central Railroad at Hansen, Ontario.

### GEOPHYSICS

The airborne survey mapped 2 conductors over this block of claims, one of which is 1 mile long and has a ratio of 1.0 and 1.5 between the high and low frequencies. The other is 1/4 of a mile long with a ratio of .80 and is about 1/2 a mile north of the first conductor. The larger conductor lies on the north flank of an airborne magnetic anomaly trending N 70° E. These anomalies are terminated just east of the claim by a N 30° W magnetic trend. The conductor mapped over the claims in Block 3 is also related to the magnetic anomaly which trends N 30° W.

Six and three tenths miles of base and picket lines were established to control the geophysical and geological surveys. The instruments used on these surveys were the Sharpe vertical-loop electro-magnetic survey unit and a Sharpe vertical-balance magnetometer with a scale constant of 19.1 and 23.0 gammas per scale division. There were 192 magnetometer and 225 electro-magnetic stations occupied during the geophysical surveys.

The electro-magnetic survey was started by K. A. Parkinson and

*W. J. W.*

finished by A. B. Fleming. Mr. Fleming's map is attached which shows 2 strong, parallel conductors more than 2800 feet long trending N 70° E. These conductors have a maximum "cross-over" of 66° between 100 foot stations and 54° between 300 foot stations. The drill holes shown on the EM were suggested by Fleming to test the conductors. The exact location of the drill holes completed on this block of claims are shown on the geological map.

The magnetometer mapped 2 anomalies trending N 70° E and one anomaly trending N 45° W. The northern magnetic anomaly is superimposed on the EM conductor whereas the southern EM conductor lies on the north flank of a positive magnetic trend. No EM conductor was found to be associated with the northwest trending magnetic anomaly and it is believed that this anomaly is caused by a dyke.

#### GEOLOGY

All of the claim and picket lines were traversed during the geological survey. The eastern claims are on high ground which has been recently cut over and burned. The western claims are covered by a cedar swamp. The rocks exposed strike N 70° E and dip steeply to the south and consist of medium-grained quartz paragneiss with hornblende, biotite and sericite as accessory minerals. Two exposures of unaltered igneous rocks, a diorite and diabase, were mapped.

#### DIAMOND DRILLING

Three diamond drill holes were drilled to test the geophysical anomalies. Drill hole #1 intersects 11 feet containing an estimated 10% sulphides, but was stopped as the hole was being drilled down dip. Drill hole

*Weller*

#3, on the same section as hole #1, has sulphide mineralization throughout its entire length of 342 feet. In hole #3 sulphides constitute 60% of the core from 67 to 83 feet (16 feet) and 30% of the core from 223 - 265 feet (42 feet). Sphalerite as 3/4 inch masses and making up 10% of the core is found from 288 to 288.4 feet. No other metallic sulphides except pyrite and pyrrhotite were identified. Drill hole #2 encounters sulphide mineralization from 129.0 to 245.1 feet (116.1 feet) with 2 zones of massive sulphides from 129.0 to 131.5 feet (2.5 feet of 90% sulphides) and from 150 to 153 feet (3 feet of 90% sulphides). From 153.0 to 161.5 feet (8.5 feet) sulphides with an estimated tenor of 40% are found. The host rock is a quartz paragneiss with differing amounts of biotite, sericite, hornblende and actinolite. A diabase dyke with a drill hole intersection of 12 feet and a diorite dyke with an intersection of 10 feet are found in the core from hole #2.

Chemical assaying of 10 samples returned up to nil gold, .17% copper, .08% nickel and 1.25% zinc. Two spectographic assays showed no metal values of interest.

The core is stored in a core shack in the southwest corner of claim SSM 52683 in Lot 26, Con. 8, Scholfield Township.

All geophysical and geological surveys and the diamond drilling has been filed as assessment work.

All of which is respectfully submitted.

W. G. WAHL LIMITED



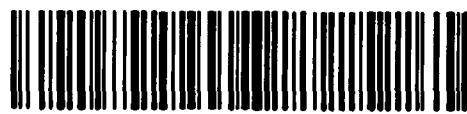
W. G. Wahl, P. Eng.

TEMPLETON  
TWP.

TALBOT TWP.

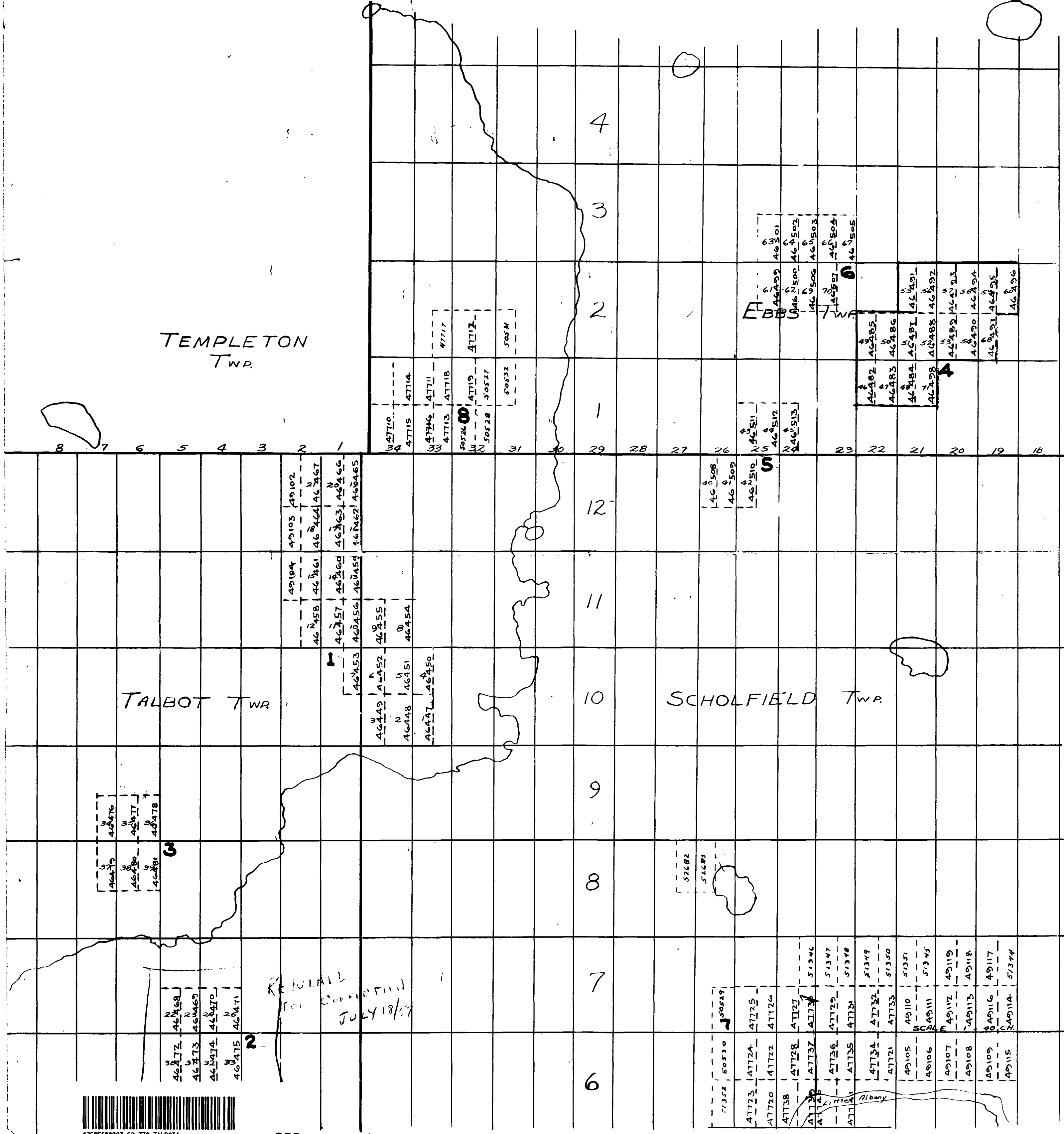
SCHOLFIELD TWP.

REMAINDER  
FOR COMPTON  
JULY 18/57



426055W0007 63.778 TALBOTT

200



TEMPLETON  
TWP.

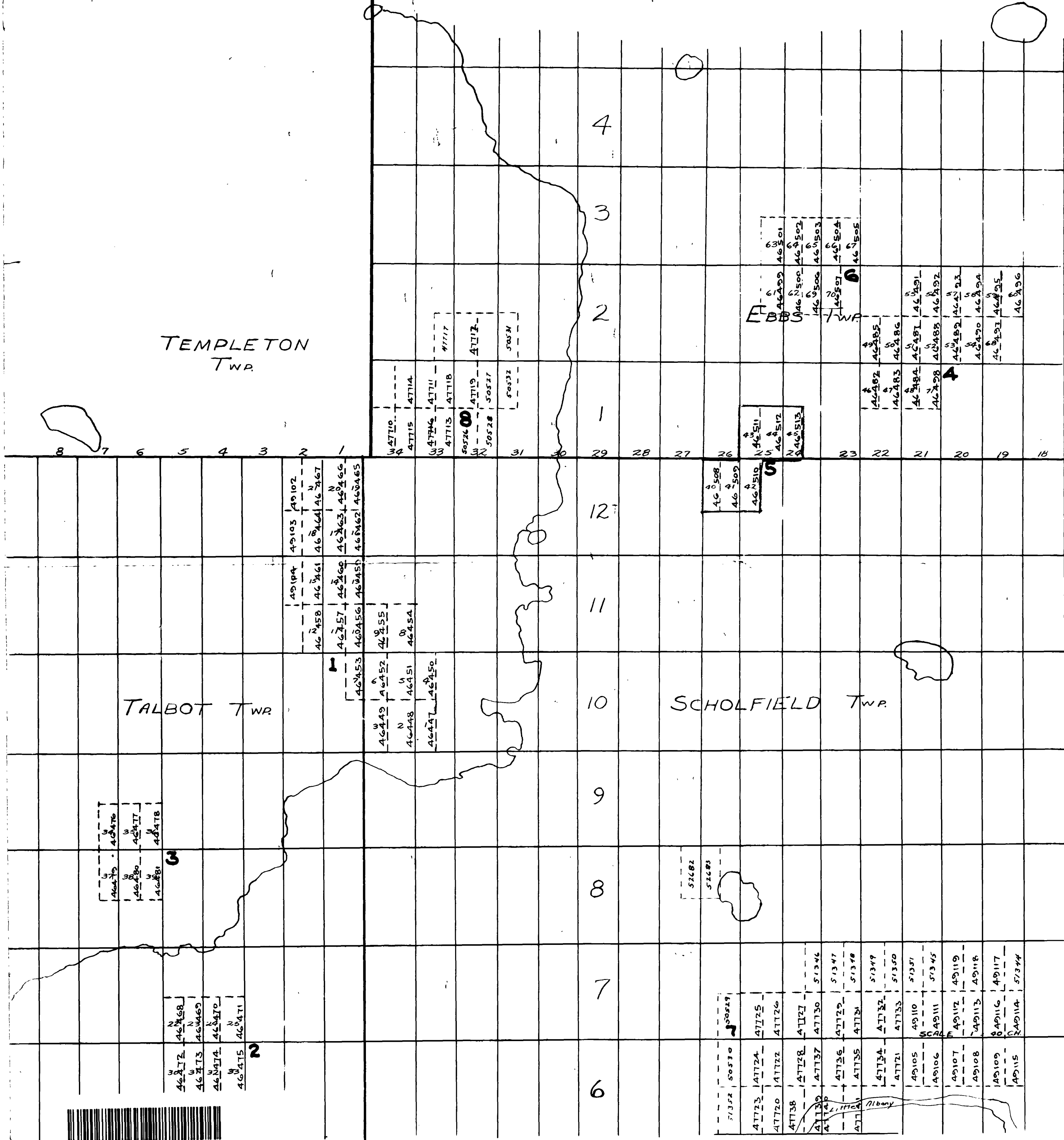
TALBOT TWP.

SCHOLFIELD TWP.



42G055W0007 53.770 TALBOTT

210



46472  
46473  
46474  
46475

46472  
46473  
46474  
46475

49103 49102  
46458 46461  
46457 46460  
46453 46456 46459 46462 46465

46449 46452  
46448 46451  
46447 46450

47710  
47715 47714  
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47713 47718 47717  
50526 47719 47712  
50528 50527  
50532 50531

46508  
46509  
46510

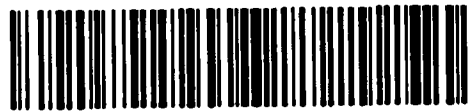
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52683

51352 50530  
47723 47724 47725  
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47731 47731 51348  
47734 47732 51349  
47733 47733 51350  
49105 49110 51351  
49106 49111 51345  
49107 49112 49119  
49108 49113 49118  
49109 49116 49117  
49115 49114 51344

46499 46501  
46500 46502  
46506 46503  
46507 46504  
46508 46505

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46496





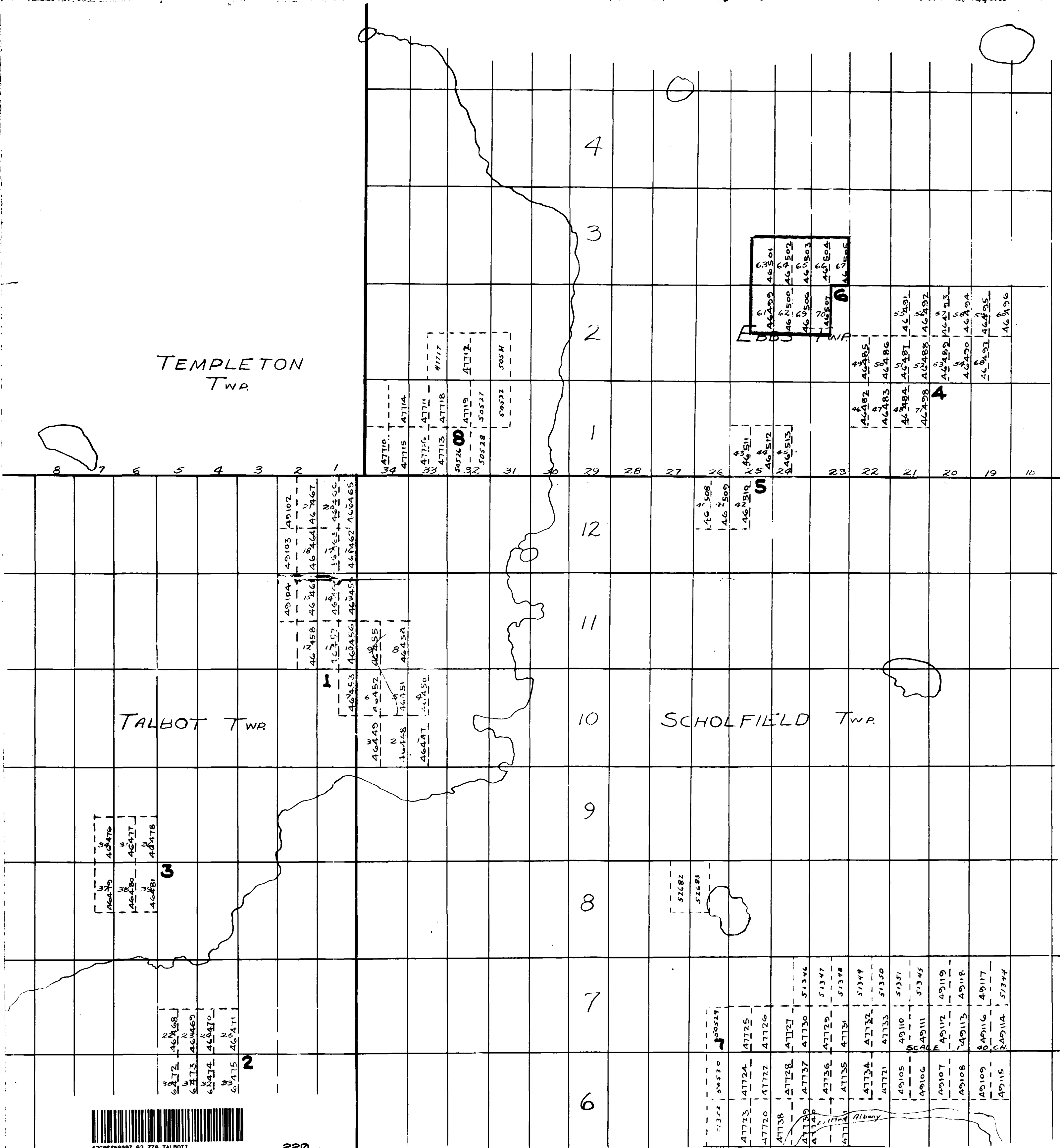
42055W0007 83.778 TALBOTT

220

TEMPLETON  
TWP.

TALBOT TWP.

SCHOLFIELD TWP.



4

3

2

1

12

11

10

9

8

7

6

6  
46492 46501  
6  
46500 46502  
6  
46506 46503  
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46507 46504  
6  
46505

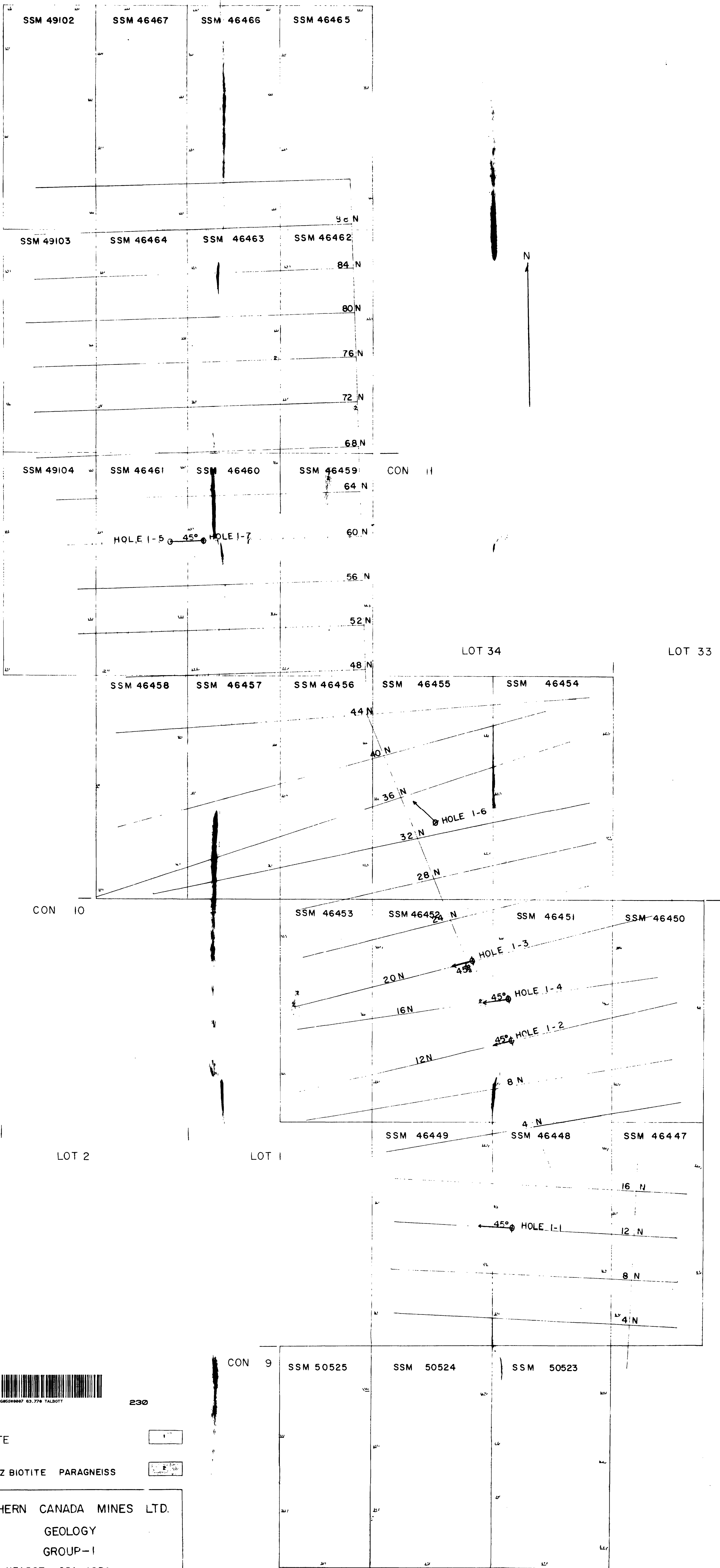
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46513

52682  
52683

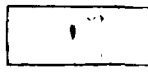
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Albany

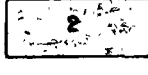


230

DIORITE



QUARTZ BIOTITE PARAGNEISS



NORTHERN CANADA MINES LTD.  
GEOLOGY  
GROUP-1  
HEARST - OBA AREA

SAULT STE. MARIE MINING DIVISION

SCALE 1" = 400' FEBRUARY 1957

TALBOTT TWP.

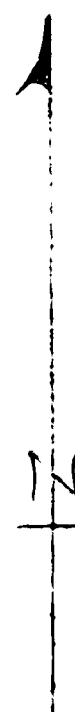
SCHOLFIELD TWP.

TEMPLETON TOWNSHIP

TALBOT TOWNSHIP

EBBS TOWNSHIP

SCHOLFIELD TOWNSHIP



SSM 4112

SSM 4307

SSM 4914

SSM 4310

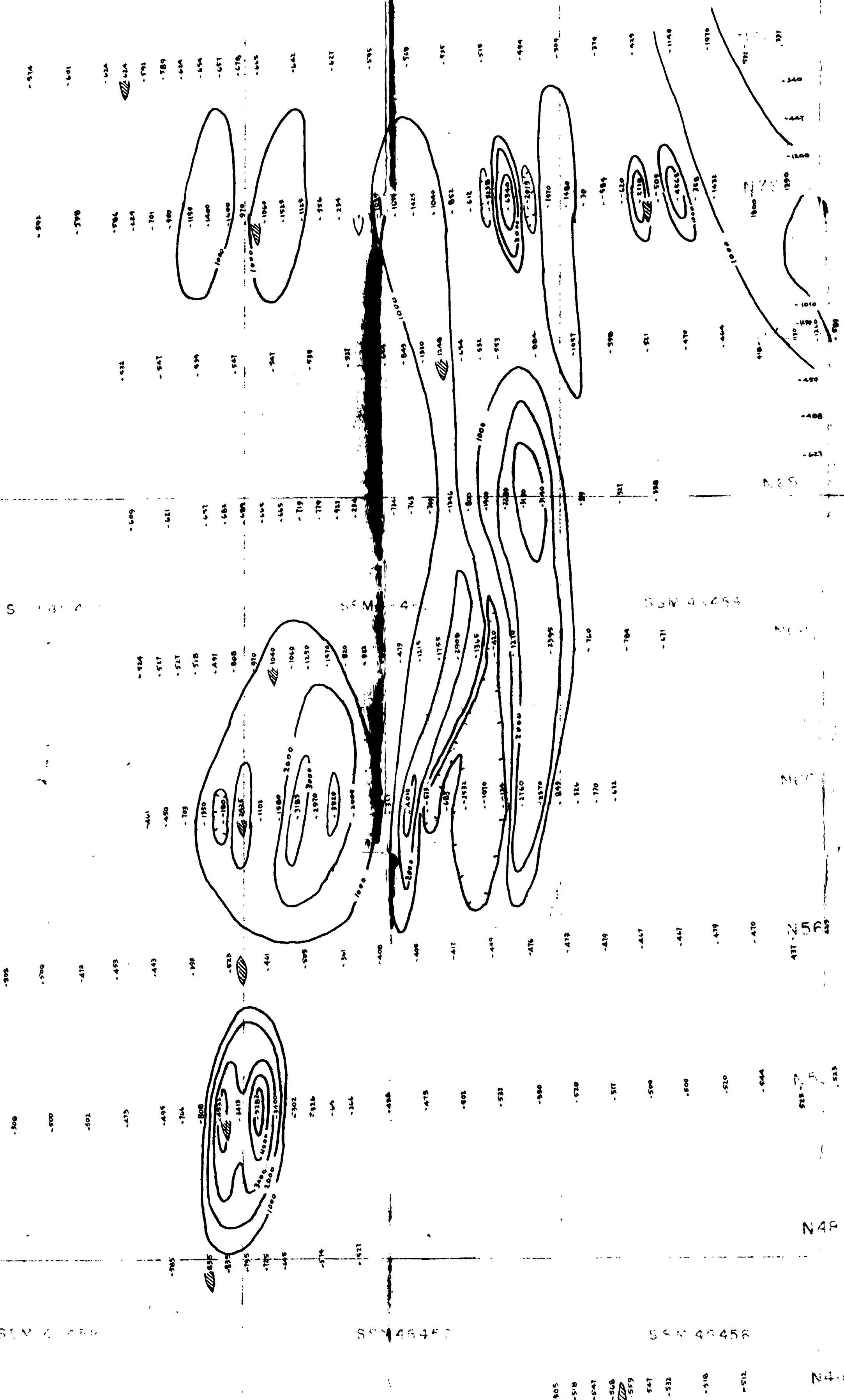
SSM 4310

SSM 4455

SSM 4455

SSM 4455

SSM 4455



E-M CONDUCTOR

NORTHERN ONTARIO MINES LTD.

MAGNETOMETER SURVEY

GRANT AND NEWMAN HALL

HEBERTVILLE AREA

SAINTE-THÉRÈSE

MINE DIVISION

Scale 1" = 200' April 1958

*A. J. Walker*



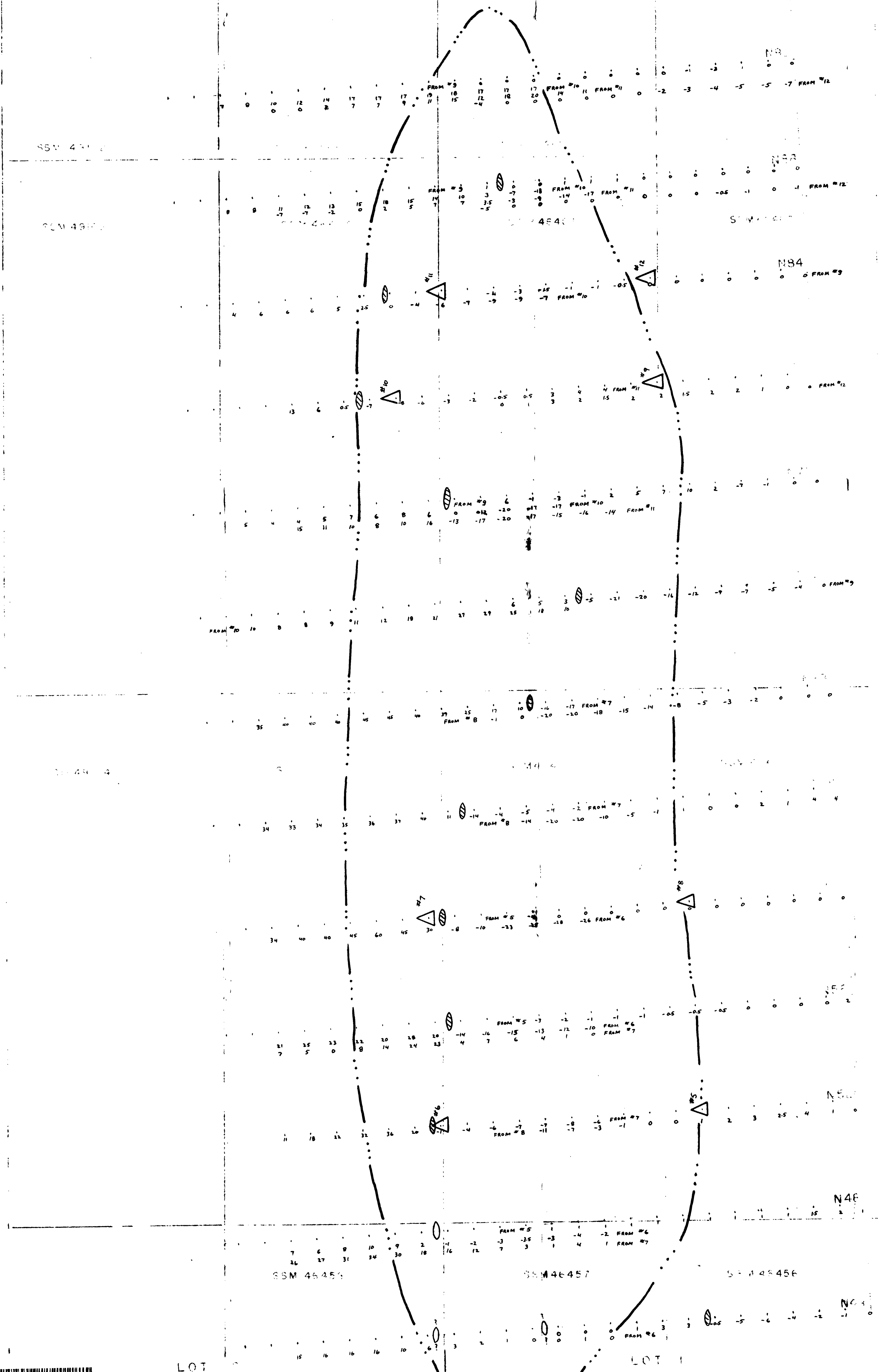
426658887 63.778 TALBOT

TEMPLETON TOWNSHIP

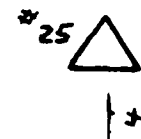
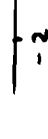
TALBOT TOWNSHIP



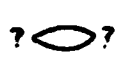
EBBS TOWNSHIP

SCHOLFIELD TOWNSHIP



 AIRBORNE E-M  
0.6 CONTOUR

 TRANSMITTER LOCATION  
 RECEIVER DIP ANGLES  
Positive Number - North & West  
Negative Number - South & East

 CONDUCTOR  
 WEAK CONDUCTOR  
 POSSIBLE CONDUCTOR

63 770

NORTHERN MINNESOTA MINING CO.

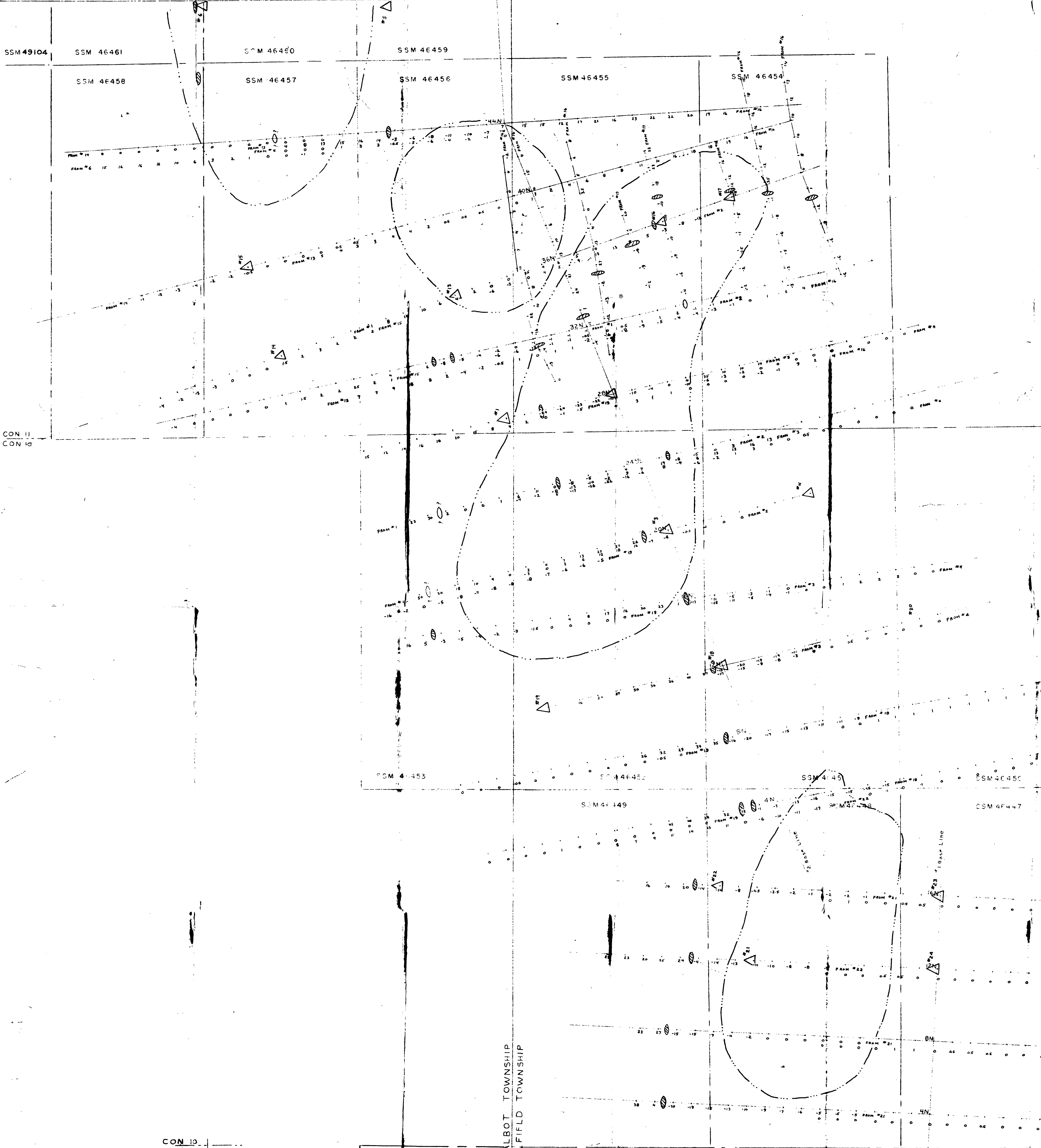
ELECTRO-MAGNETIC SURVEY

REAR PORT-OGA AREA

SAULT STE. MARIE  
MINING DIVISION

Scale 1"=100' April 1956  
*James Walker*





CON 11  
CON 10

CON 11  
CON 10

CON 10  
CON 9

LOT 2

LOT 1

LOT 34

LOT 33



260

- AIRBORNE E-M 0.6 CONTOUR
- TRANSMITTER LOCATION
- RECEIVER DIP ANGLES  
Positive Number - North & West Dip  
Negative Number - South & East Dip
- CONDUCTOR
- WEAK CONDUCTOR
- POSSIBLE CONDUCTOR

63.770  
NORTHERN CANADA MINES LTD  
ELECTRO-MAGNETIC SURVEY  
SOUTH HALF  
GROUP I  
HEARST-GBA AREA  
SAULT STE. MARIE  
MINING DIVISION  
Scale 1"=200' April 1956  
*John Walker*



SSM 46461 SSM 46460 SSM 46459 SSM 46458 SSM 46457 SSM 46456 SSM 46455 SSM 46454

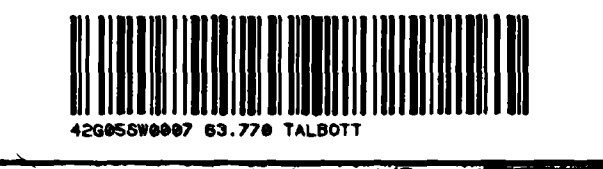
CON 11  
CON 10

CON 11  
CON 10

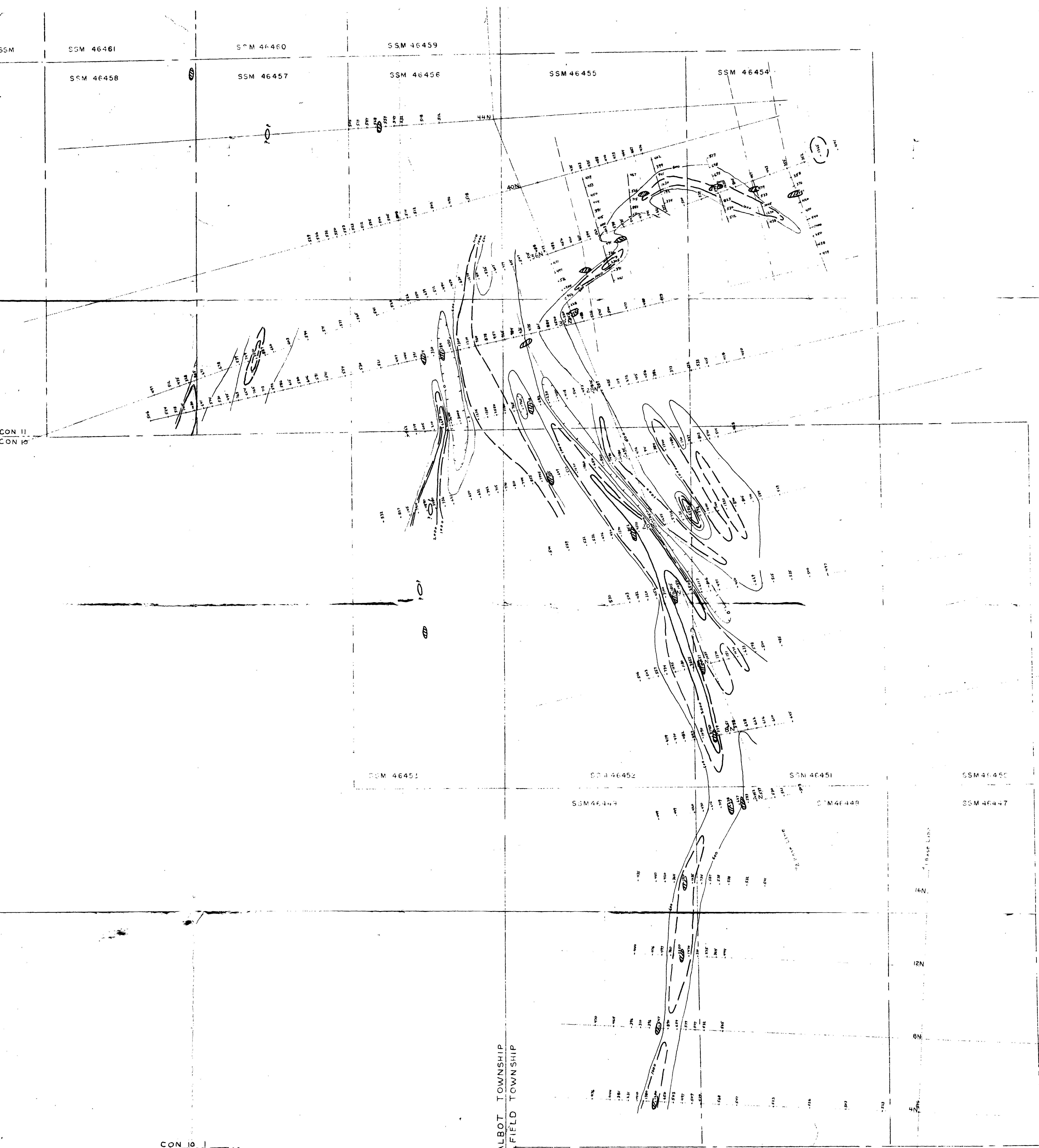
SSM 46453 SSM 46452 SSM 46451 SSM 46450 SSM 46449 SSM 46448 SSM 46447

CON 10  
CON 9

Lot 2 Lot 1 Lot 34 Lot 33



270



E-M CONDUCTOR

NORTHERN CANADA MINES LTD.  
MAGNETOMETER SURVEY  
SOUTH HALF  
GROUP I  
HEARST-GBA AREA  
SAULT STE MARIE  
MINING DIVISION  
Scale 1"=200' April 1956  
*A. J. Walker*

SSM

SSM 46461

SSM 46460

SSM 46459

SSM 46458

SSM 46457

SSM 46456

SSM 46455

SSM 46454

CON II  
CON 10

CON II  
CON 10

SSM 46453

SSM 46452

SSM 46451

SSM 46450

SSM 46449

SSM 46448

SSM 46447

TALBOT TOWNSHIP  
SCHOLFIELD TOWNSHIP

Lot 2


Lot 1


Lot 34

Lot 33



280

 AIRBORNE E-M  
0.6 CONTOUR

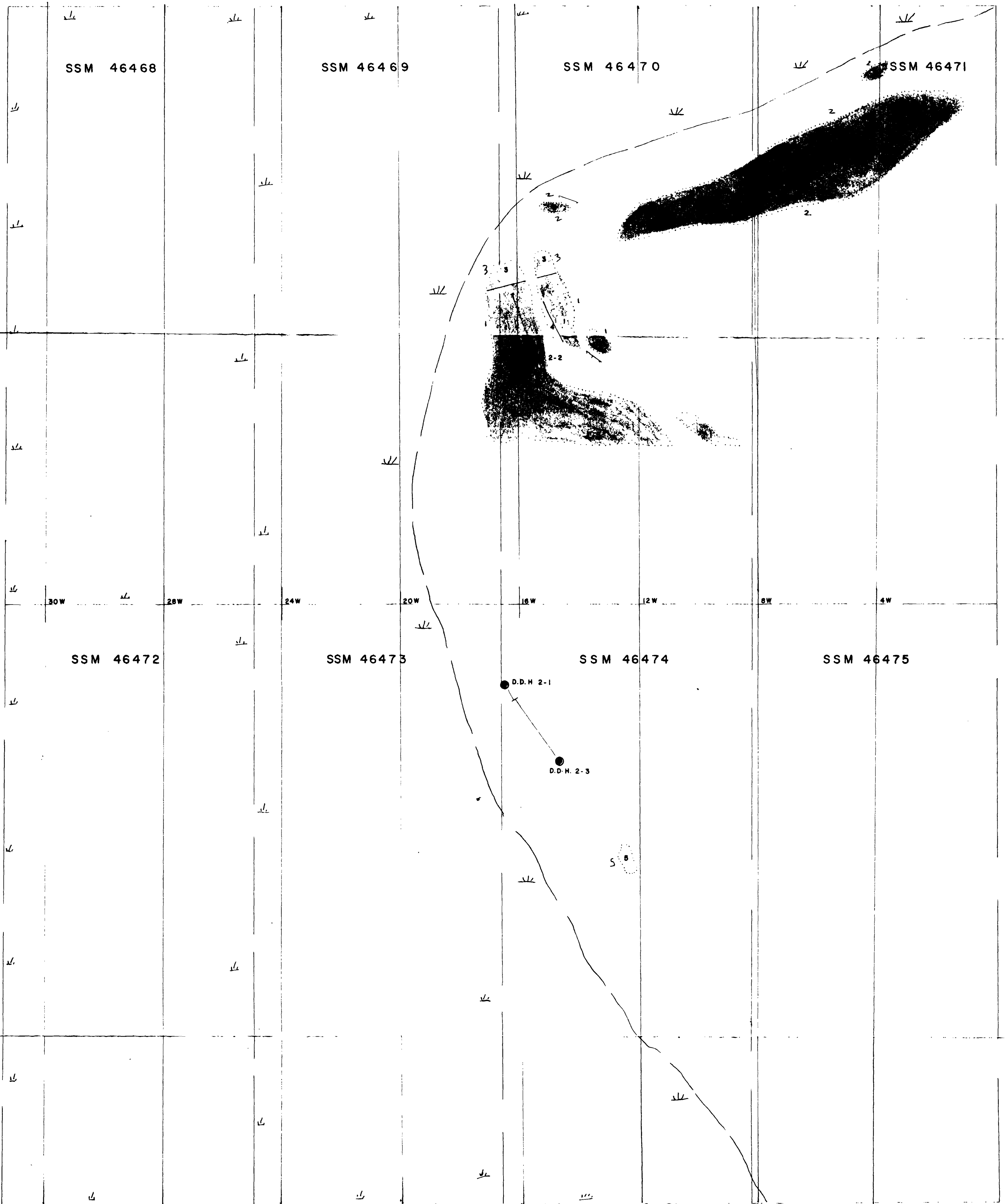
 E-M CONDUCTOR (ground)

Resistivity values in  
 $10^5$  Ohm Cm. Units

NORTHERN CANADA MINES LTD.

RESISTIVITY SURVEY  
SOUTH HALF  
GROUP I  
HEARST-CBA AREA

SAULT STE. MARIE  
MINING DIVISION  
Scale 1"=200' April 1956  
*a James Walker*



LEGEND

- 1 Paragneiss, quartz, biotite
- 2 Paragneiss, quartz, sericite
- 3 Paragneiss, quartz, hornblende
- 4 Diabase dike.
- 5 Diorite dike.

NORTHERN CANADA MINES  
BLOCK 2

TALBOTT TOWNSHIP DISTRICT ALGOMA  
GEOLOGICAL MAP

SCALE 1"=200' OCTOBER 1956

KEY

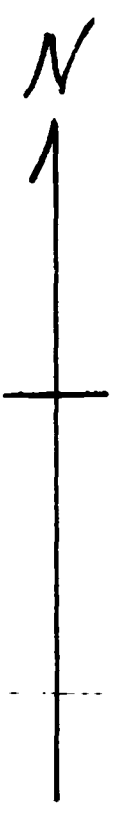
- Swamp
- Outcrop
- Schistosity
- Diamond drill hole



4206539007 63.776 TALBOTT

*W. J. Wall*



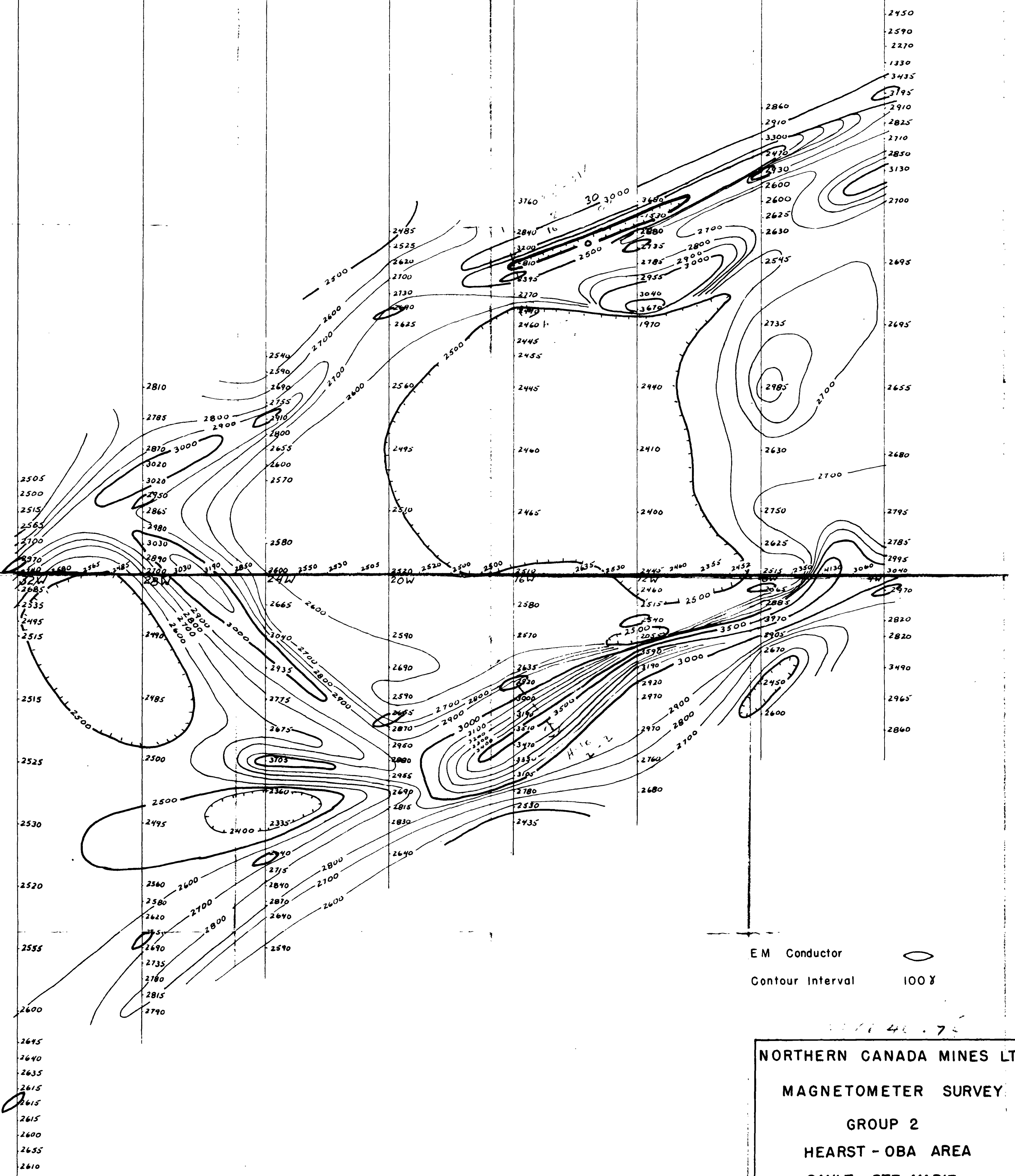



SSM 46470

SSM 46471

SSM 46472

SSM 46473



EM Conductor 

Contour Interval 100 Y

NORTHERN CANADA MINES LTD  
 MAGNETOMETER SURVEY  
 GROUP 2  
 HEARST - OBA AREA  
 SAULT STE. MARIE  
 MINING DIVISION

Scale 1" = 200' February 1957

*W. J. Wall* *W. J. Wall*



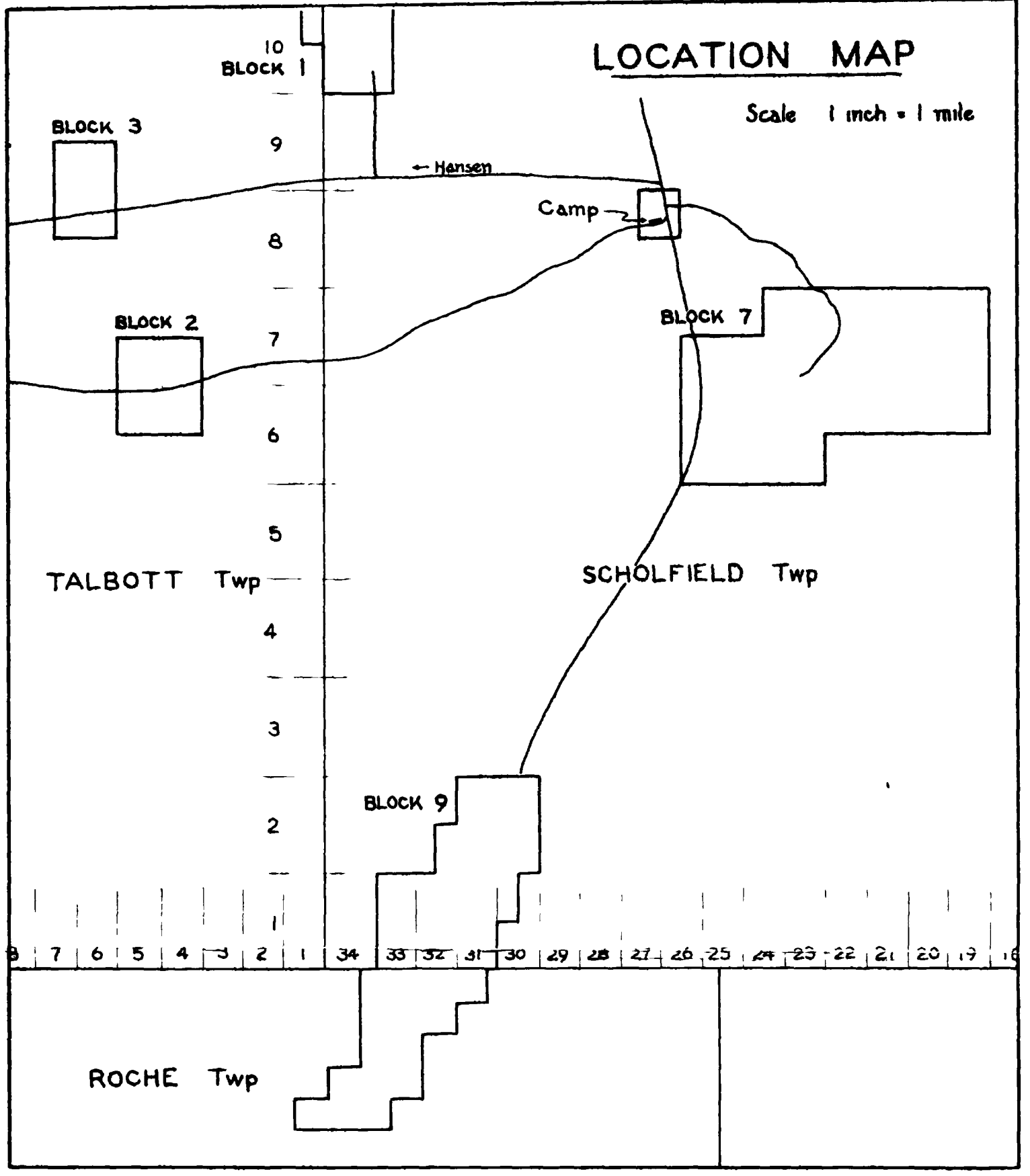
4209550007 83.776 TALBOTT

# NORTHERN CANADA MINES LIMITED, ET AL

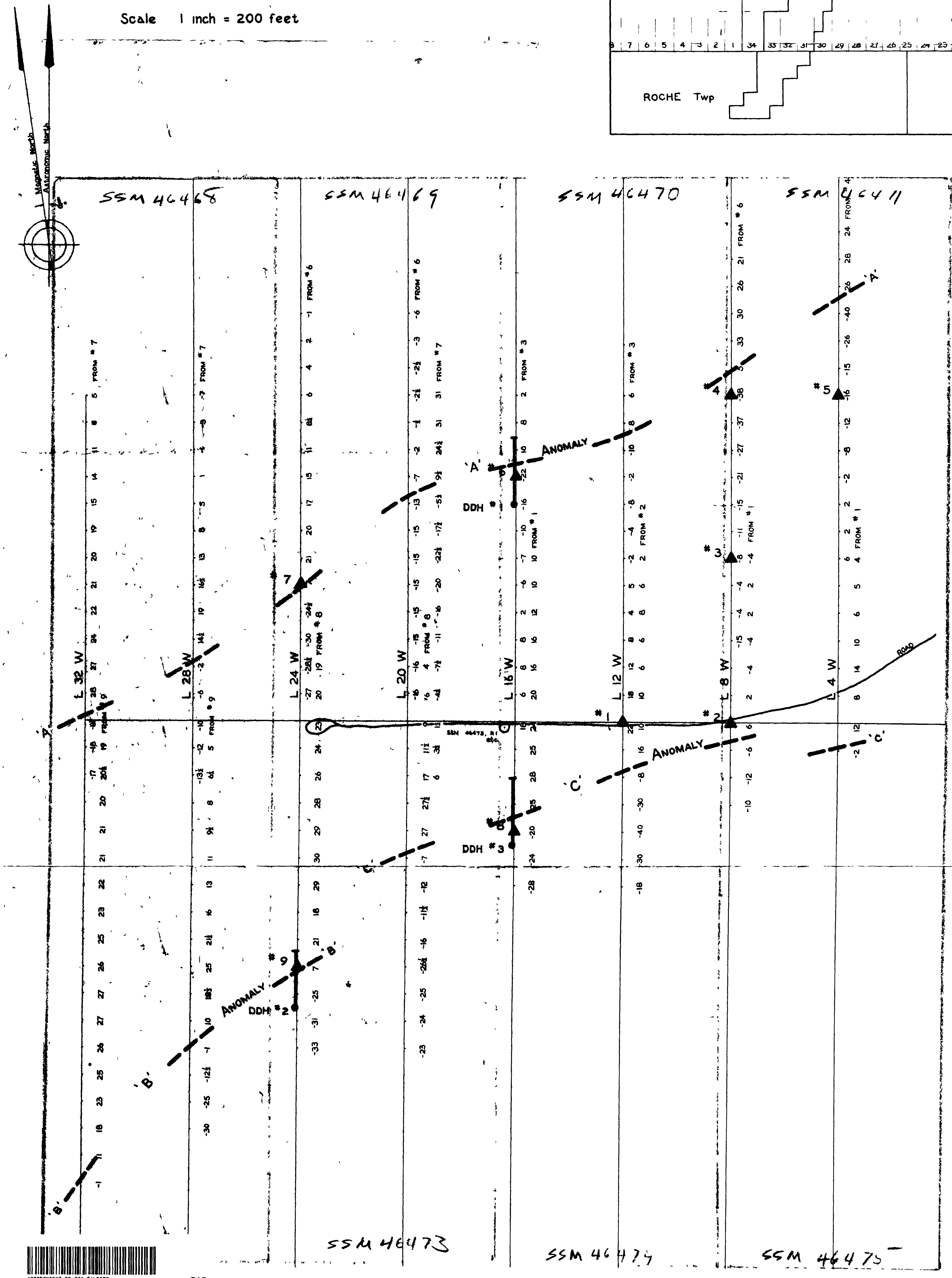
HEARST - OBA AREA, ONTARIO - BLOCK 2

## ELECTROMAGNETIC SURVEY

▲ #'s 6 to 9 by Exploration Surveys Limited, Toronto



Scale 1 inch = 200 feet



42065V0007 63 770 TALBOTT

310

*W. J. Wall*

LOT 22

LOT 21

LOT 20

LOT 19

SSM 46491

SSM 46492

SSM 46493

SSM 46494

SSM 46495

SSM 46496

SSM 46485

SSM 46486

SSM 46487

SSM 46488

SSM 46489

SSM 46490

SSM 46497

SSM 46482

SSM 46483

SSM 46484

SSM 46498

HOLE 4-1  
45°

HOLE 4-2  
45°

HOLE 4-3  
45°

HOLE 4-4  
45°

HOLE 4-5  
45°

CON 2  
CON 1

EBBS TWP.

QUARTZ BIOTITE PARAGNEISS

NORTHERN CANADA MINES LTD.

GEOLOGY

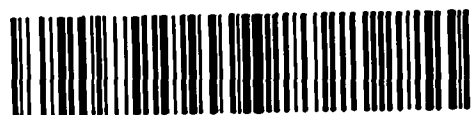
GROUP 4

HEARST-OBA AREA

SAULT STE. MARIE MINING DIVISON

SCALE 1"=400' FEBRUARY 1957

*wjwall*



LOT 22

LOT 21

LOT 20

LOT 19

CON. 3  
CON. 2

SSM 46491

SSM 46492

SSM 46493

SSM 46494

SSM 46495

SSM 46496



SSM 46485

SSM 46486

SSM 46487

SSM 46488

SSM 46489

SSM 46490

SSM 46497

CON. 2  
CON. 1

EBBS TWP

( ) AIRBORNE E-M  
0.6 CONTOUR  
□ CLAIM POSTS

E-M CONDUCTOR  
READINGS IN GAMMAS  
MAGNETIC CONTOUR

SSM 46482

SSM 46483

SSM 46484

SSM 46498

NORTHERN CANADA MINES LTD.

MAGNETOMETER SURVEY

GROUP 4

HEARST OBA AREA

SAULT STE. MARIE  
MINING DIVISION

Scale 1" = 200' August 1956

24/8/56

*A. J. Walker*





LOT 22

LOT 21

LOT 20

LOT 19

CON. 3

CON. 2

SSM 46491

SSM 46492

SSM 46493

SSM 46494

SSM 46495

SSM 46496



SSM 46485

SSM 46486

SSM 46487

SSM 46488

SSM 46489

SSM 46490

SSM 46497

CON. 2

CON. 1

EBBS TWP

AIRBORNE E-M  
0.6 CONTOUR

CLAIM POSTS

TRANSMITTER LOCATION  
RECEIVER DIP ANGLES  
Positive Number - North & West Dip  
Negative Number - South & East Dip

CONDUCTOR

WEAK CONDUCTOR

? CONDUCTOR

NORTHERN CANADA MINES LTD.

ELECTRO-MAGNETIC SURVEY

GROUP 4

HEARST OBA AREA

SAULT STE. MARIE  
MINING DIVISION

Scale 1" = 200' August 1956

2/8/56 A. J. Walker



LOT 26

LOT 25

LOT 24

SSM 46511

SSM 46512

SSM 46513

CON. 1

30 W

26 W

22 W

18 W

14 W

10 W

6 W

2 W

EBBS TWP.

CON 12

SCHOLFIELD TWP.

SSM 46508

SSM 46509

SSM 46510

AIRBORNE E-M  
0.6 CONTOUR

E-M CONDUCTOR  
READINGS IN GAMMAS  
MAGNETIC CONTOUR

63:170

NORTHERN CANADA MINES LTD.

MAGNETOMETER SURVEY

GROUP 5

HEARST OBA AREA

SAULT STE MARIE  
MINING DIVISION

Scale 1" = 200' August 1956

27/8/56 A. James Walker  
W. J. Walker



420855W0007 63.770 TALBOTT

350

LOT 26

LOT 25

LOT 24

SSM 46511

SSM 46512

SSM 46513

CON 1

30 W

26 W

22 W

18 W

14 W

10 W

6 W

2 W

EBBS TWP.

CON 12

SCHOLFIELD TWP.

SSM 46508

SSM 46509

SSM 46510

AIRBORNE E-M  
0.6 CONTOUR

\*5  
▲ TRANSMITTER LOCATION  
↑ RECEIVER DIP ANGLES  
Positive Number - North Dip  
Negative Number - South Dip

CONDUCTOR

NORTHERN CANADA MINES LTD.

ELECTRO-MAGNETIC SURVEY

GROUP 5

HEARST OBA AREA

SAULT STE MARIE  
MINING DIVISION

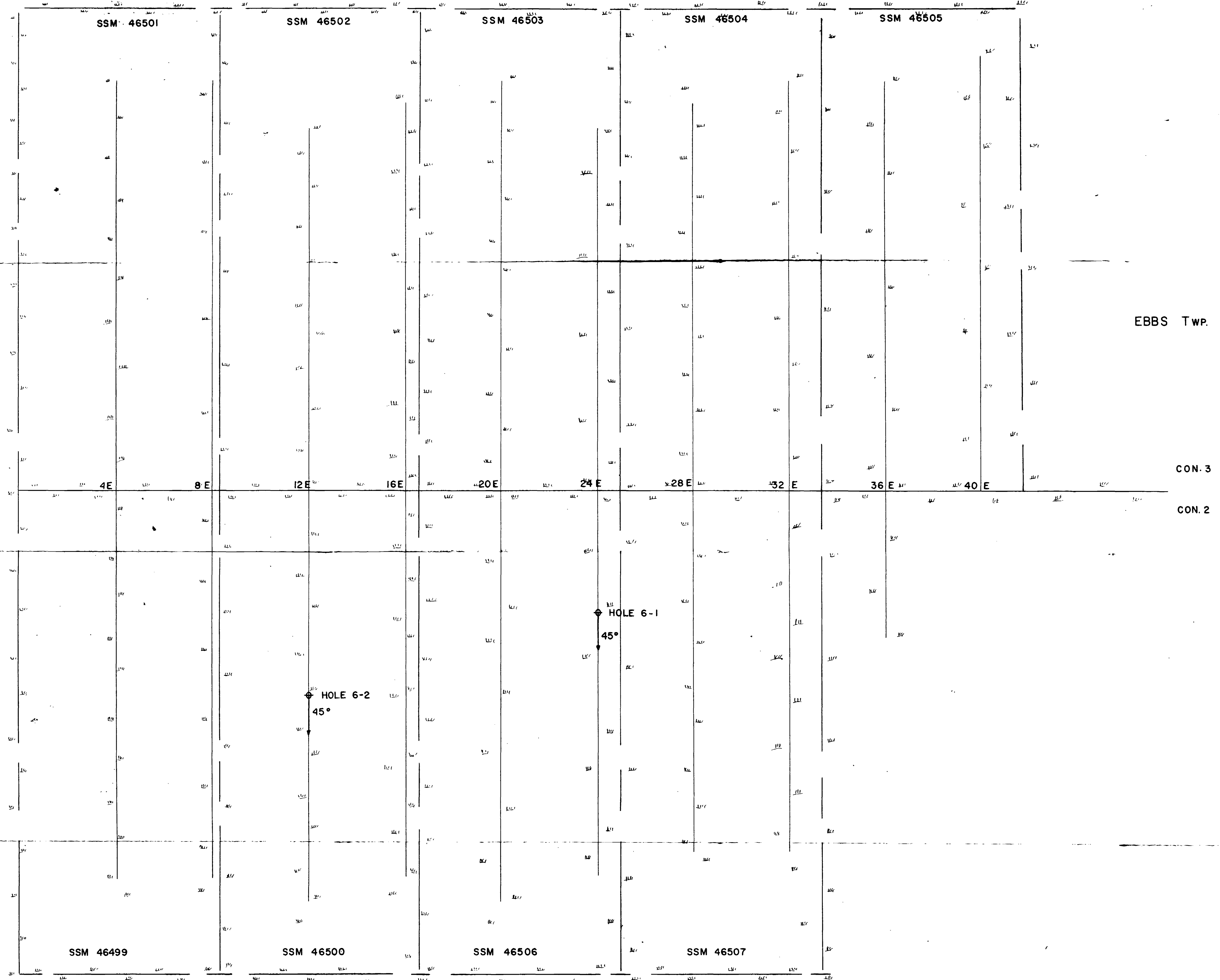
Scale 1" = 200' August 1956

27/8/56 *A. James Walker*



4208509097 83.778 TALBOTT

360

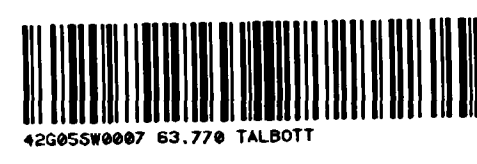


LOT 25

LOT 24

LOT 23

NORTHERN CANADA MINES LTD.  
 GEOLOGY  
 GROUP - 6  
 HEARST - OBA AREA  
 SAULT STE. MARIE MINING DIVISION  
 SCALE 1" = 200' FEBRUARY 1957  
*A. Knapp*





SSM 46501

SSM 46502

SSM 46503

SSM 46504

SSM 46505



EBBS TWP

CON. 3  
CON. 2

4E

8E

12E

16E

20E

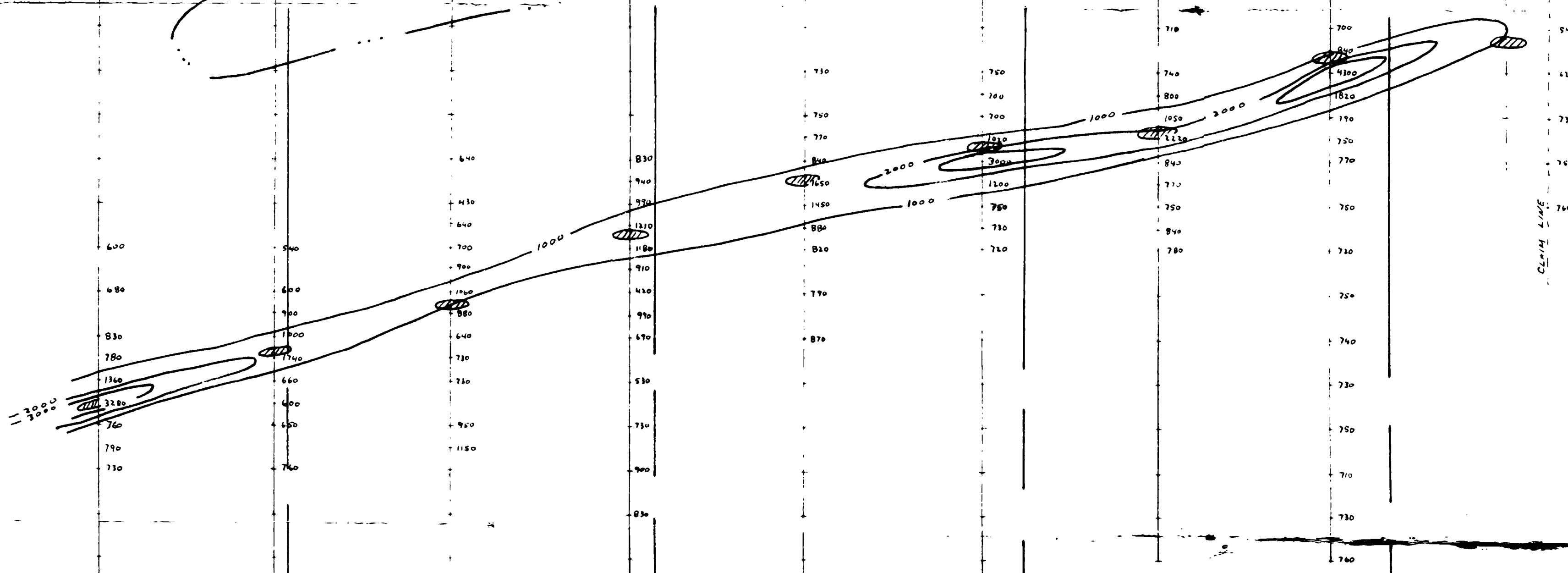
24E



28E




32E

36E

40E



 AIRBORNE E-M  
0.6 CONTOUR  
 CLAIM POSTS

 E-M CONDUCTOR  
 READINGS IN GAMMAS  
 MAGNETIC CONTOUR

SSM 46499

SSM 46500

SSM 46506

SSM 46507

LOT 25

LOT 24

LOT 23



380

NORTHERN CANADA MINES LTD

MAGNETOMETER SURVEY

GROUP 6

HEARST OBA AREA

SAULT STE MARIE  
MINING DIVISON

Scale 1" = 200' APRIL 1956

23/8/56 *A. James Walker*

SSM 46501

SSM 46502

SSM 46503

SSM 46504

SSM 46505

FROM #1  
-1.8 -1.6 -1.4 -1.2 -1.0 -0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8

FROM #2  
-1.1 -1.0 -0.9 -0.8 -0.7 -0.6 -0.5 -0.4 -0.3 -0.2 -0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1

FROM #3  
-1.5 -1.4 -1.3 -1.2 -1.1 -1.0 -0.9 -0.8 -0.7 -0.6 -0.5 -0.4 -0.3 -0.2 -0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5

FROM #1  
-1.1 -1.0 -0.9 -0.8 -0.7 -0.6 -0.5 -0.4 -0.3 -0.2 -0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1

FROM #2  
-1.1 -1.0 -0.9 -0.8 -0.7 -0.6 -0.5 -0.4 -0.3 -0.2 -0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1

FROM #3  
-1.1 -1.0 -0.9 -0.8 -0.7 -0.6 -0.5 -0.4 -0.3 -0.2 -0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1

FROM #4  
-1.1 -1.0 -0.9 -0.8 -0.7 -0.6 -0.5 -0.4 -0.3 -0.2 -0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1

FROM #5  
-1.1 -1.0 -0.9 -0.8 -0.7 -0.6 -0.5 -0.4 -0.3 -0.2 -0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1

FROM #6  
-1.1 -1.0 -0.9 -0.8 -0.7 -0.6 -0.5 -0.4 -0.3 -0.2 -0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1

SSM 46499

SSM 46500

SSM 46506

SSM 46507

LOT 25



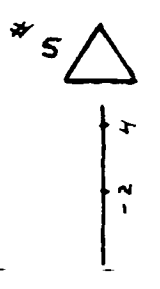

LOT 24

LOT 23

EBBS TWP

CON. 3  
CON. 2



-  AIRBORNE E-M 0.6 CONTOUR
-  CLAIM POSTS
-  TRANSMITTER LOCATION  
RECEIVER DIP ANGLES  
Positive Numbers North Dip  
Negative Numbers South Dip
-  CONDUCTOR



390

NORTHERN CANADA MINES LTD  
 ELECTRO-MAGNETIC SURVEY  
 GROUP 6  
 HEARST OBA AREA  
 SAULT STE MARIE  
 MINING DIVISION  
 Scale 1" = 200' APRIL 1956  
 12/8/56 *A James Walker*