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15755

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Donrow Mines Limit

# Howan Lake, Intar

## Geology.

Denrow Mines Limited holds a group of twenty-four mining elaims K 19169 - 73'incl., K 19175, K 19176, K 19182 - 90 incl., K 24660 - 64 incl. K 15739 and K 15755, situated on Nowan Lake, District of Kenora, approximately fifty miles south east of the town of Kenora.

Access can most easily be made by charter aircraft from Kenora or, in summer only, Sioux Narrows, approximately twenty five miles west on Highway 70, or by water route from Sioux Narrows a distance of approximately thirty miles. There are three tractor serviced portages on the water route.

Geologics1 mapping was carried out on the claims during the summer 1957. Traverses were run every four hundred feet on lines previously cut.

## General Geology:

Denrow mines Limited property is underlain by Precambrian rocks consisting of granite and andesite. The granite mass comprises the entire northe n portion of the property with the andesite underlying the central and southern portion.

The granite is a pink, orthoclese granite which is intrusive in origin. The contact is mewhat indefinite because of numberous offshoots into the surrounding and site.

The andesite is generally medium to fine grained, massive and relatively unaltered but has occasional pillwed sections. There are also several narrow bands of spotted, pillowed andesite.

One dike of medium to coerse grained diorite was found in the eastern wirt of the property.

Between the granite and the andesite is a "Transition Zone" in which the andes te has been highly altered by the granite. This zone is variable in width up to 1000 feet or more. A section from south to north shows a normal andesite followed by a gradational contact to amphibolite and other basic chases through more acid types with increasing granite dikes and masses until the main gravite mass is reached.

#### Structural Geology:

westerly. The regional of the of the racks indergone regional deformation but local deformation, especially in the transition zone has been operative.

ihere are two main faults, both of which have been outlined by the E.M. survey. The main or #1 fault enters the property mid way between #1 and #4 posts of claim & 24662 and strikes slighty north of west under he lake to the north west corne of the bay on claim & 15739. The bond or #2 fault strikes approximately N40 parallel to the no th undary of claim K24662 then under the lake to immediately s uth of #4 t of claim K 27363.

A shear zone containing light mineralization and striking approximately N15° 5 branches off from # 2 fault about 2600 S 3000 K. Diamond drilling has shown this shear to weaken with a shallow depth.

The work on the Denrow claim group was done between June 28th 1957 and September 20th, 1957 for a total of twenty days. This includes both field work and office work done by  $\mathbf{x} \in \mathbf{F} \circ \mathbf{D}^*$  flaherty.

September 20, 1957

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K. F. O'flaherty P. Eng. 433 - Third Street South, Ke ore Ont.





52F05NE0052 63.895 ATIKWA LAKE (GRAPNEL

Rowan Lake, Ontario, Claims.

Nic - Cop mines Limi

20285 - not covered

Geology.

Nic - Cor Mines Limited holds a group of forty five mixing claims numbered K 18381 - 86 incl., K 19165 - 68 incl., K 19174, K 19177 - 81 incl., K 20269 - 77 incl., K 20283 - 86 incl., K 27365 -K 27380 incl., situated on Rowan Lake, District of Kenora, approx imately fifty miles south east of the town of Kenora.

Access can most essily be made by charter aircraft from Kenora or, in summer only, Sioux Narrows, approximately twenty five miles west on Highway 70, or by water route from Sioux Narrows a distance of approximately thirty miles. There are three tractor serviced portages on the water route.

Geological mapping was carried out on the claims during the summer 1957. Troverses were run every four hundred feet on lines previously cut.

General weology:

The Nic - Gop claims are underlain by anied to which has been intruded by granite with the development of a broad contact zone. The granite underlies the entire north and north west portion of the claims.

Andes1te:

The andesite has been broken down into three division: spotted endesite - map symbol la andesite - map symbol lb vesicular endesite - map symbol lo

votted Andesite ;

the spotted andesite is a dark green rock varying from fine to course grain and having characteristic white felspathic nodules up to one quarter inch in size. This rock is frequently well pillowed with pillow junctions up to two inches in width. The unpillowed portions are usually massive and relatively high in elevation.

And esite;

this division is composed of the andeste which does not have a special character to it. This group includes rocks varying from pillowed to massive and fine to very coarse grained. Generally this is a fine to medium grained, dark green rock often exhibiting a well formed pillow structure.

Vesicular Andesite;

the vesicular andesite is a find grained, dark green rock with a characteristic development of gass holes up to one thirty-second of an inch in dismeter and half an inch in length which have been filled with sulphides, pyrrhotite, chalcomyrite or a combination of both. There does not appear to be any pyrite in this rock. The outline of the

vescular andesite is indefinite and the rock probably represents the upper portion of a large lava flow; most of which has been mapped as normal andesite.

#### Intrusive Rock;

there are two intrusive rock types found on the claim group; granite and diorite.

### uranite;

the granite is a light red, medium to coarse grained rock commosed mostly of quartz and feldspar with some biotits. The narrower offshoots have a characteristic sugary texture and often indefinite contacts. The granite portion of the claim group is generally lower in elevation than that underlain by the andesite.

#### Diorite;

several dikes of diorite were found during the mapping. Only when definite evidence of the rock being an intrusive, such as chilled contacts or a drastic change in grain size were found was it classified as diorite. Otherwise the rock was called a coarse grained andesite.

This restriction of the classification of diorite to those rocks which were indisputably intrusive was used because of the great variation in the grain size in the andesite. From a point about 2000 S 6000 a southwest to the island in Rowan Lake the grain size gradually increases from fine through medium and coarse to a very coarse grain which, without the evidence of the d finite flow top on the island, would normally be called a diorite. This flow top is similar to others examined in the finer grained portions of the normal andesite elsewhere on the lake.

#### Transition Zone:

The transition or contact zone which lies between the granite and the andesite is a zone, varying in width from a few hundred to over a thousand feet composed of recrystallised andesite intruded by granite dives. These rocks show a great development of hornblende and increase in grein size so that often they have the appearance of intrusives.

The amount of granite within this zone is quite variable and the main granite - transition contact has been arbitrarily set where the granite comprises more than half the rook as estimated in the field.

#### Quartz:

One quartz vein was found during the mapping. This vein, located at 900 S 7200 E strikes N 30° E, dips vertically, and is a minimum of ten feet in width. The contacts have been very strongly sheared and the anded to alter d to a sericite schist. The quartz is milk white in arpearance and contains very little mineral.

This, together with the disrite dike on claim 27371, are the only structures found which have a strike in this direction.

#### mineralisation:

The mineralisation found on the Nic - Cop ground is confined to primary structures, such as pillow intersticies or vesicles, or very local shears. Generally the mineralisation is light and consists of pyrrhotite and chalcopyrite with a very little pyrite. The pyrrhotite contains nickel. The most consistant mineralisation is found in the vesicular andesite where it is one of the characteristics of the rock type.

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#### Structural Gology:

The structure of the Nic = Cop grounds is that of a general monething. The regional strike of the rocks is N 59° W and the dip steep to the south. There is a light regional shear approximately east = west which d velops into a string local shear in isolated places. These local shears are very restricted in extent.

The general direction of intrusion is along the regional shearing. with the exceptions noted above under "quartz".

The work on the Nic - Cop claim group was done between August 13th, 1957 and September 20th, 1957, for a total of 28 days. This includes both field work and office work done by K. F. O'Flaherty.

September 20th, 1957.

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K. F. O'Flaherty P. ing. 433-3rd Street South, Kenora, Cht



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### ELECTROMAGNETIC SURVEY

OF

## NIC - OOP MINES LTD.

## ROWAN - DENMARK LAKES PROPERTY

### KENORA DISTRICT, ONTARIO

#### INTRODUCTION

Arrangements were made with Mr. L. B. Murdock of Nic - Cop Mines Ltd. to conduct an electromagnetic survey over a major portion of the company's claims in the Rowan - Denmark lakes area in the District of Kenora, Ontario.

19109

#### CLAIMS SURVEYED

The survey covered all of the following sixty-nine claims:

K - 15739 What coursed K ~ 18381 to K - 18386 / inclusive / K- 19165 to K - 19190 / 7 / K - 20269 to K - 20277 / 4 🗸 K 🛥 20283 to K 🛥 20286 🗸 K - 24660 to K - 24663 K - 27363 to K - 27380 √ . 67

In addition the survey covered portions of K-15755, K-20278 and K-20282.

### DATE OF SURVEY

The survey was carried out between December 10, 1956 and March 7, 1957.

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#### LOCATION AND ACCESS

The claims are located on and near Rowan and Denmark lakes

approximately 50 miles south-east of Kenora, Ontario.

Denmark lake is easily reached by water from the town of Sioux

·【》《《》《》:"是一个不可。" THE REAL PROPERTY AND ADDRESS OF THE PARTY Narrows, via Regina Bay, Dogpaw lake, and Caviar lake. The portage at Whitefish rapids between Regina Bay and Dogpaw lake is serviced by tractor and boat trailer. Otherwise the route is clear to the dam at the west end of Denmark lake.

Winter roads to the property are available and air transport is available from Kenora and Fort Frances, and usually from Sioux Narrows.

### REASON FOR THE SURVEY

The claims, for the most part, are underlain by greenstones and gabbroic rocks which are favorable hosts for base metal mineralization. Several copper showings and one copper-nickel showing occur in the claim area. The promising Maybrun copper and Kenbridge copper-nickel ore bodies occur within a few miles of the property. Copper and coppernickel orebodies are usually electrical conductors so the electromagnetic survey was made to locate any subsurface conductors.

### ELECTROMAGNETIC INSTRUMENT

The instrument used for the survey was manufactured by R. H. Squires, Hamilton, Ontario. The instrument is a vertical coil type gear which uses a triangular vertical transmitting coil that is fifteen feet high. The gear consists essentially of a motor generator which emergizes the vertical transmitting coil which sets up a primary electromagnetic field. The signal from the primary coil is received by a horizontal receiving coil. Any conductor in the vicinity produces a secondary electromagnetic field which distorts the primary field. The distortion in the field is measured by the receiving coil in terms of dip angles.

# METHOD OF SURVEY

A picket line grid system on the claims was completed by Nic-Cop

Mines Ltd. The lines are north-south picket lines spaced at 200<sup>1</sup> intervals and picketed at 100<sup>1</sup> intervals. The electromagnetic readings were taken at the hundred foot stations. In many places lines were reread from more favorable transmitter locations to locate donductors more accurately, and to locate suspected conductors where original set-ups indicated anomolous readings but were not in the proper position to outline the conductor axes.

#### PRESENTATION OF RESULTS

The electromagnetic readings are plotted on the accompanying maps. Transmitter locations for each traverse line are shown at the end of the traverse line. The readings are plotted as dip angles of the receiving coil, and direction of dip to the north or south is indicated by an "N" or "S". Where more than one traverse was made along a single picket line, it has often been necessary to plot the additional traverses on the map along side the actual picket line. The position of such traverses is shown by arrows pointing to the true traverse line.

A "true crossover", which indicates the presence of a conductor, occurs when the readings change from north to south when proceeding southwards along a traverse line. In a few places east-west traverses were made where conductors strike nearly north-south. A change in dip angle from west to east when proceeding east indicates a conductor. The converse of the above changes is a "false crossover" which may be caused by a variety of things, but does not indicate a conductor.

Orossovers of less than 4° may not be significant.

## TYPES OF CONDUCTORS LOCATED

Any one of the following geological phenomena, or any combination

of them, may be electromagnetic conductors:

- (a) Sulphide mineralization.
- (b) Graphite seams.
- (c) Carbonaceous sediments.
- (d) Faults and shear zones, including some contact zones.
- (e) Saline waters in fractures.

It is not possible to distinguish graphitic conductors from sulphide conductors. Faults, shear zones and saline waters cannot be distinguished from graphite and sulphide conductors with any certainty although the saline waters tend to give high dip angles at a distance from the conductor and low dip angles near the conductor. Sulphide and graphite conductors tend to build up to high angles near the conductor, then cross over sharply. In general, conductors indicated by high dip angles usually mean larger amounts of well connected conducting material, whereas the conductors indicated by low dip angles mean smaller amounts of the conducting material, but several other factors such as distance from the transmitter and depth of the conductor also effect the magnitude of the dip angles.

If conductors are located, they can be examined if exposed in outcrop. If the conductors are not exposed, a magnetic survey will distinguish between pyrrhotite and graphite, but not between graphitemagnetite mixtures and pyrrhotite, nor between non-magnetic conductors such as chalcopyrite and graphite. Conductors associated with sulphide indications in the general area are usually considered to be worth drilling if they are strong and long enough to be a possible ore body.

## GEOLOGY OF THE PROPERTY

The geology of the Kakagi Lake Area, which includes the claims, was mapped by E. M. Burwash. The results of his survey are presented in Vol. XLII, Part 4, Ont. Dept. of Mines Annual Report 1933, and on Map No. 42-b.

The largest portion of the claim group is underlain by andestic and baseltic lavas which exhibit both massive and ellipsoidal structures. Burwash shows gneissic granite intruding the older greenstons. The gneiss in turn is intruded by a variety of basic and ultrabasic intrusions. A hornblende granite body in the north western portion of the claim group is supposedly later than the other formations. The geology of the claims has not yet been mapped in detail but the resident geologist of the department of mines is remapping this portion of the Ka‡kagi lake area.

Prospecting and trenching on the claims has located several copper and one copper-nickel showing.

### RESULTS OF THE SURVEY

The electromagnetic survey located several conductors on the property. Individual conductors are described below and where possible, explanations are suggested.

#### SHEET (1)

(1) <u>Claims 20283 & 20277</u>. A strong northerly trending conductor occurs on these claims. The conductor has an arcuate shape and is probably continuous with the conductor that trends easterly across the south half of claims 20276 and 20272. The conductor lies entirely beneath Rowan lake and according to Burwash's map it should be in the late granite.

If examination of nearby shores and islands confirms the granite formation, it is unlikely that the conductor has any economic importance as it is probably a fracture zone. However the conductor may be worth checking by other geophysical equipment that is less sensitive to fracture zones or by a single drill hole located at  $450^{\circ}W = 5100^{\circ}N$ , drilling due west at  $50^{\circ}$  to a depth of  $250^{\circ}$ .

A perpendicular subsidiary structure extends across the northeast corner of claim 20277.

(2) Olaims 20276 and 20272. Described under (1) above.

(3) <u>Claim 20247</u>. A strong but irregular east-west conductor occurs near the south boundary of this claim. At the west boundary of the claim the conductor divides into a northwest and a southwest branch. An irregular eastward continuation of the conductor extends across claim 20275. The conductor apparently partly coincides with a granite-greenstone contact shown on Burwash's map. The island on claim 20275 should be examined for the cause of the conductor. A drill hole to investigate the conductor might be located on claim 20247 at  $500^{4}W - 2500^{4}N$ . From this location, it should be drilled  $350^{6}W$ , dip  $45^{6}$ , to a depth of  $450^{4}$ .

(4) <u>Claims 19190, 19187, 19188.</u> A long ( $3800^{\circ}$ ) strong conductor extends in a northeasterly direction across these claims. The conductor lies beneath Rowan lake. A hole was drilled to test the conductor and it was reported that the conductor lies along a sheared contact between peridotite to the northwest and greenstone to the southeast. Sulphide mineralization was reported to be very sparse. Such a long conductor is probably worth a further test and a hole is suggested at  $700^{\circ}W \approx 400^{\circ}N$ , to be drilled due north at  $45^{\circ}$ , to a depth of  $225^{\circ}$ . Alternatively it may be possible to test the conductor with a horizontal loop gear which is more

definitive for sulphide mineralization when the actual location of the conductor is known.

(5) <u>Claim 20269 and 20270</u>. A large semicircular conductor occurs on these claims. Drilling on an adjoining property has shown that the conductor outlines a peridotite body which occurs beneath this bay on Denmark lake. The contact of the peridotite where intersected was sheared and the rock altered to hematite. It was not mineralized. The anomaly is probably due to the sheared peridotite contact zone.

(6) <u>Claim 19177</u>. The weak east-west conductor on this claim should be investigated on the ground, as it is approximately a claim and a half long. It may be worth drilling depending upon the results of the ground observations.

## SHEET 2

(7) <u>Claim 27363 and 19176.</u> This long conductor lies completely beneath Rowan lake. Its cause is unknown and it should be drilled because it is in a greenstone area. A suggested borehole is located at  $00 - 1300^{1}$ N, drilling \$ $20^{\circ}$ E, dip 45°, depth 310'.

(8) <u>Claim 15739</u>. A short weak conductor that passes almost through transmitter position "R" apparently coincides with a reported copper showing. It should be examined on the ground and drilled if the conductor zone is not exposed.

(9) <u>Olaim 15739, 24663, 24662, 24661, 19169, 24660 and 19182.</u> A long east-west conductor extends through a channel in Rowan lake. The cause of the anomaly is unknown and while it may be due to a shear or fracture zone, it is worth further investigation by additional geophysical tests (magnetic or horizont& loop) or drilling. If it is a fracture or shear zone, it may have ore shoots along it, so that a single borehole may not

rule out ore possibilities even if mineralization is not found. A first borehole test is suggested at 1200 E - 3200 S, drilling north, dip  $45^{\circ}$ , hole depth  $300^{\circ}$ .

A strong north-south branching structure apparently occurs on claim 24660.

(10) <u>Claim 19169</u>. A short anomaly occurs on this claim. It should be investigated on the ground after breakup, before deciding on further work.

(11) <u>Olaim 19175 and 19185.</u> Widespread copper showings are reported in this area. The most continuous conductor occurs on the east side of the claims. This conductor is somewhat more than 800<sup>1</sup> long. It should be investigated by drilling near the boundary between the two claims, but the actual hole should not be located until the area can be examined in the spring. The other weak conductor areas on claim 19175 also need a ground examination to determine whether further work is warranted.
(12) <u>Olaim 18381</u>. Two short conductors occur on these claims. The northern-most conductor is on land so it can be examined on the ground.
(13) <u>Claim 18385</u>. A possible weak conductor area occurs on this claim as shown on the map. The zero reading area is broad but all readings to the north dip north and all readings to the south dip south, so some kind of conducting area is indicated. It may represent an area of disseminated mineralization.

## SHEET 3

(14) <u>Olaims 27365, 27370, 27380 and 27385.</u> A series of short but strong east-west conductors lig in an east-west striking zone across these claims. Copper mineralization has been reported from this area so these conductors should be carefully examined on the ground, and either test

pitted or drilled with short test holes if the causes of the anomalies are not apparent. Drill holes would be spotted best after the ground examination.

(15) <u>Claims 27368 and 27378</u>. A weak conductor occurring mainly beneath Denmark lake extends in an east-west direction across these claims. At its eastern end, on claim 27378, the conductor occurs on the land. It should be carefully examined here and if necessary a short test hole could be drilled to the south from approximately  $700^{1}E - 4700^{1}N$ , but actual location is best decided after a ground examination.

(16) <u>Claims 27376, 27379 and 27380.</u> A weak, possibly intermittent conducting zone extends in an east-north-east direction across these claims. Much of the conductor occurs beneath a bay in Denmark lake, but it intersects the shore at its western end near line 600% at approximately 2500' N. This area should be carefully examined on the ground before determining whether further work is warranted.

Other isolated conductor axes not specifically mentioned are worth examining on the ground to determine whether any mineralization is present.

#### SUMMARY OF WORK PERFORMED ON THE CLAIMS

Name	Address	Period	<u>days</u> 63
Eric Nilsson	Lac Du Bonnet, Man.	Dec.10,1956 - Mar.7, 1957	63
Ken Kirkwood	Keewatin, Ont.	Dec.10,1956 - Dec.19,1956	9
Albert Nilsson	Lac Du Bonnet, Man.	Jan.3, 1957 - Jan.10,1957	7
C.E. Carlson	91 Grace Street,		
	Winnipeg, Man.	Jan.10,1957 - Mar.7, 1957	34
Wm. Lougheed	Lac Du Bonnet, Man.	Feb.17,1957 - Mar.7, 1957 Total days	$\frac{16}{129}$

The survey was supervised by F. Carlson, M. G. Holden, both of

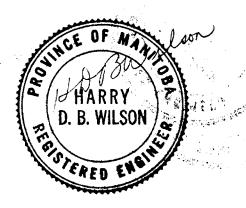
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Lad du Bonnet, Manitoba, and H. D. B. Wilson, Ph.D. of Winnipeg,

Manitoba.

Supervision, draughting and preparation of the report required a total of 37 man days.

> CENTRAL GEOPHYSICS LIMITED, Winnipeg, Manitoba. April 15, 1957.





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Denrow Mines Limited NO PERSONAL LIABILITY 502 PARIS BLDG. PHONE WHItehal 3-TER PHONE WHItehal 3-TER OCT 119.0 OCT 119.0 Mr. R.V.Scott Chief, Mining Lands Branch Parliament Buildings Toronto. 2 Ontario

Dear Sir:

Re: 69 claims in Rowan and Atikwa Lakes Areas L.B.Murdock and Denrow Mines Limited.

This is to inform you that we have now filed the work reports with the Mining Recorder at Kenora as instructed by your secretary.

We were delayed in this filing as we had to locate Mr. O'Flaherty for the information.

We find the mistake was made in the numbering on the <u>Geophysical and Geological</u> maps as claim K.27364 lies south of K.27363 and K.15739 lies south of K.27364.

We find a discrepancy in the claim map that has caused some confusion as an area is shown without claim numbers.

This area is covered on the ground by claims K. 19176 and K. 19175 this means that four claims would have to be moved north on the claim map, namely K.19176 K. 19175, K.24663, K. 24662.

We are mailing you under seperate cover the geological and geophysical maps and reports covering this work.

Trusting this will meet with your approval as we are planning further work on the claims this fall.

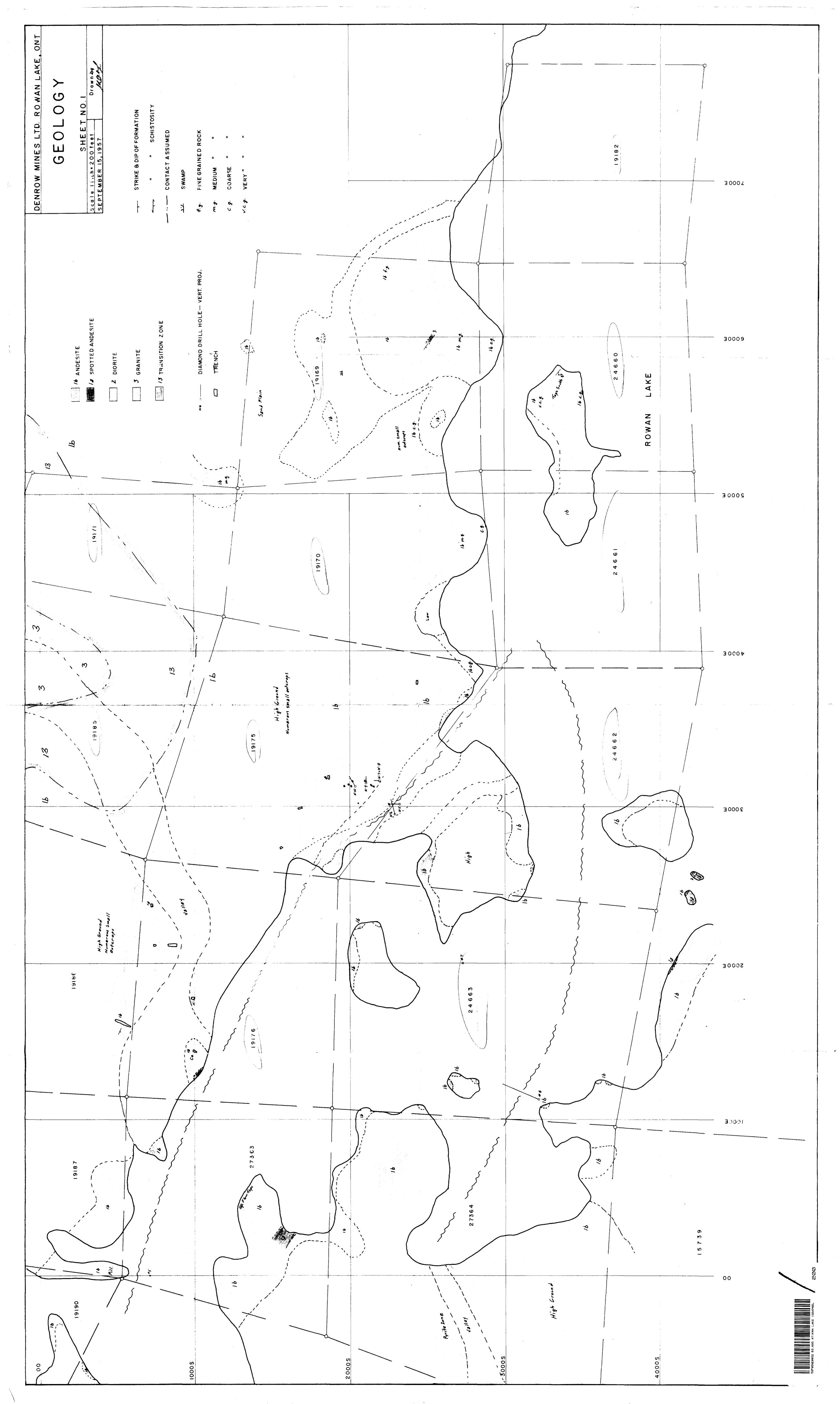
Yours very truly,

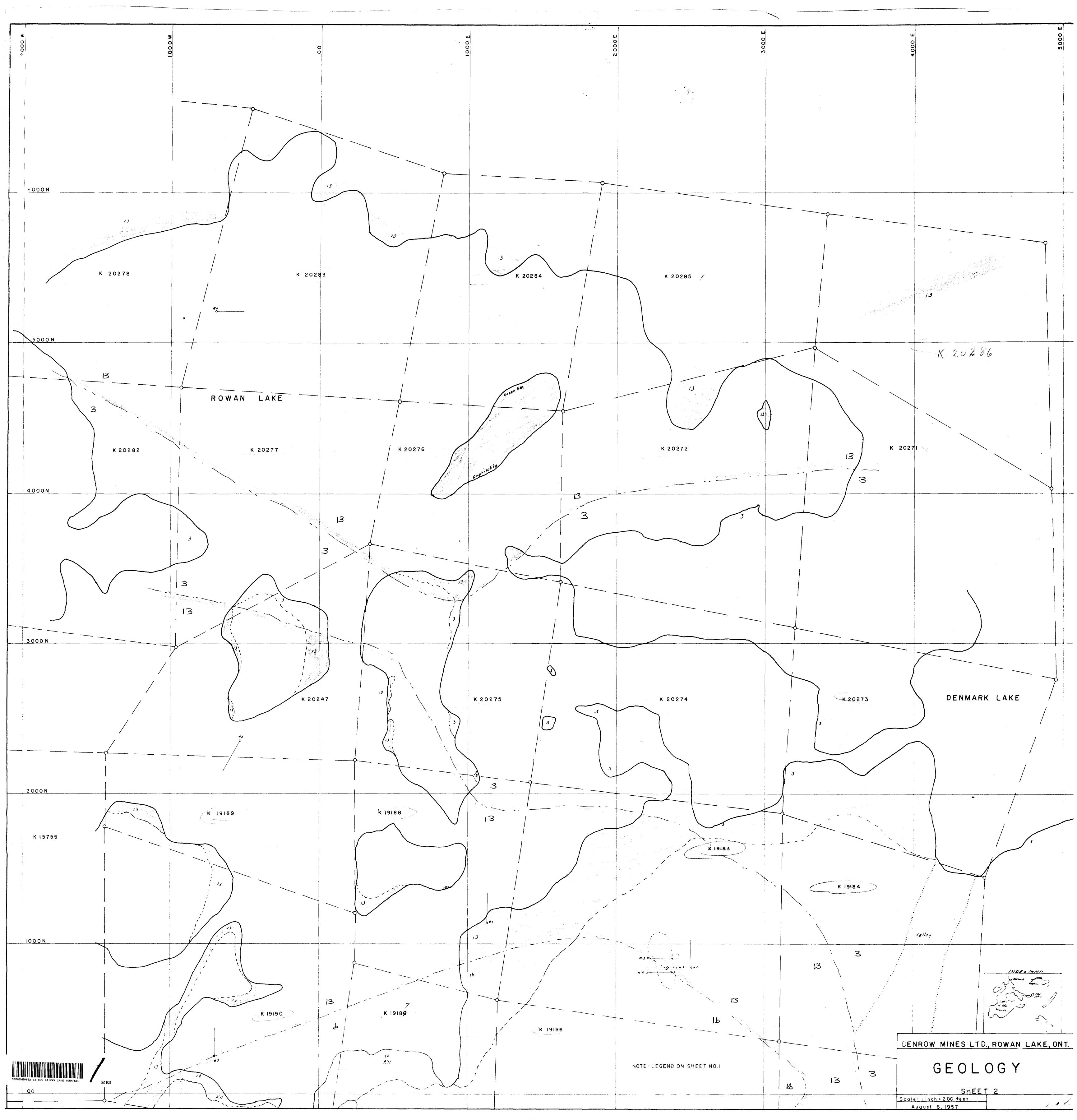
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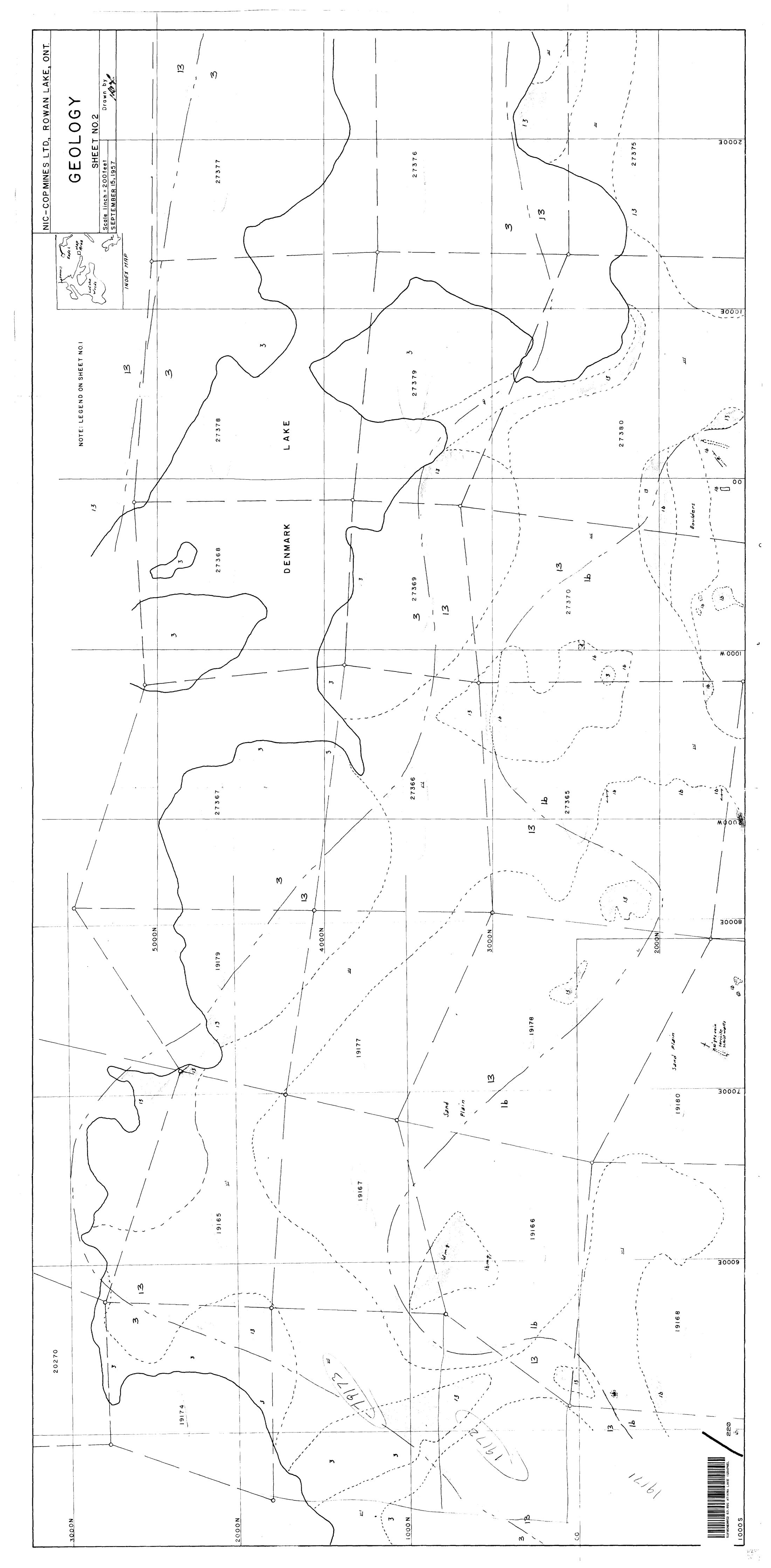
L.B.Murdock.

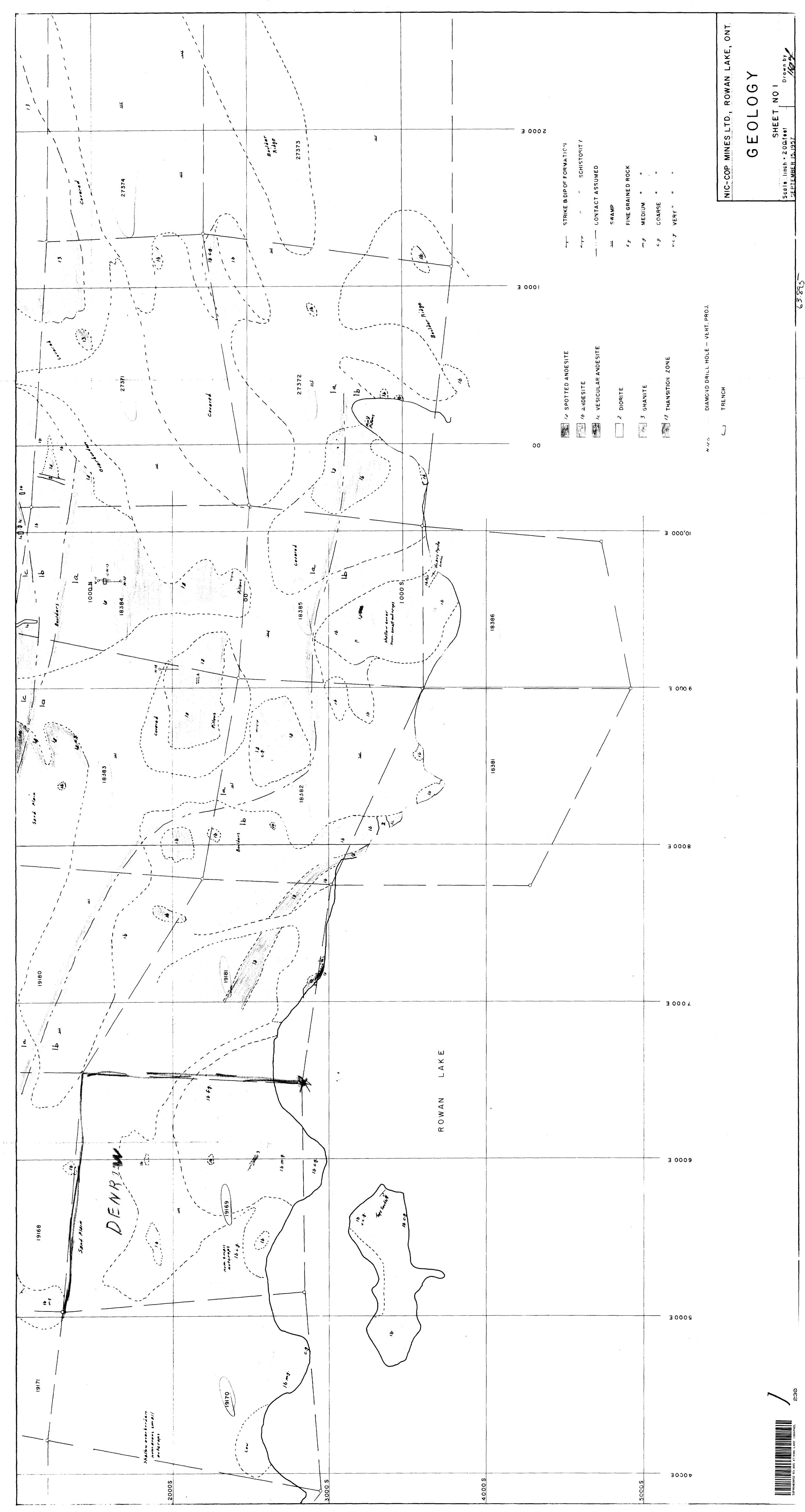
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SILVER COPPER GOLD Limited Nic-Cop. Mines 502 PARIS BUILDING PHONES: 92-7218 - 92-2719 195.8. WINNIPEG 1, MAN......Aug. RTMENT OF NIINES AUG 5 1958 Mr. R.V.Scott Chief, Mining Lands Branch Parliament Building Toronto 2 Ontario. Dear Sir: Re: 69 claims in Rowan and Atika Lakes Areas L.B.Murdock and Denrow Mines Limited. Your letter of July 10th. has just been brought to my attention as 1 have been in the north for the past three weeks. 1 might say that 1 thought this matter had been cleared up by Mr. O Flaherty at the time we received the first letter from you in January. 14 #/58 Mhen Central Geophysics Ltd. started their survey we did not own claim No.15739 we had found open ground to the north and had staked claims No.27363 and 27364. Now as 1 see it Central Geophysics men put the claim No. K.18739 in the location where K 27364 should be and Mr. 0 Flaherty made the same mistake. I have an old claim map showing Claim No. K.15739 in the proper place with Claim No. K 15738 directly porth and Claim No. K 15735 north of K. 15738 these claims the budget with the way were apparently droped and that is the claims we staked. l expect to be in Toronto before the end of the month and would like to get this matter straightened out, or would you suggest that 1 go to Kenora first. Martin and by deter by Continues Awaiting your reply 1 am, Yours very truly, RMurder

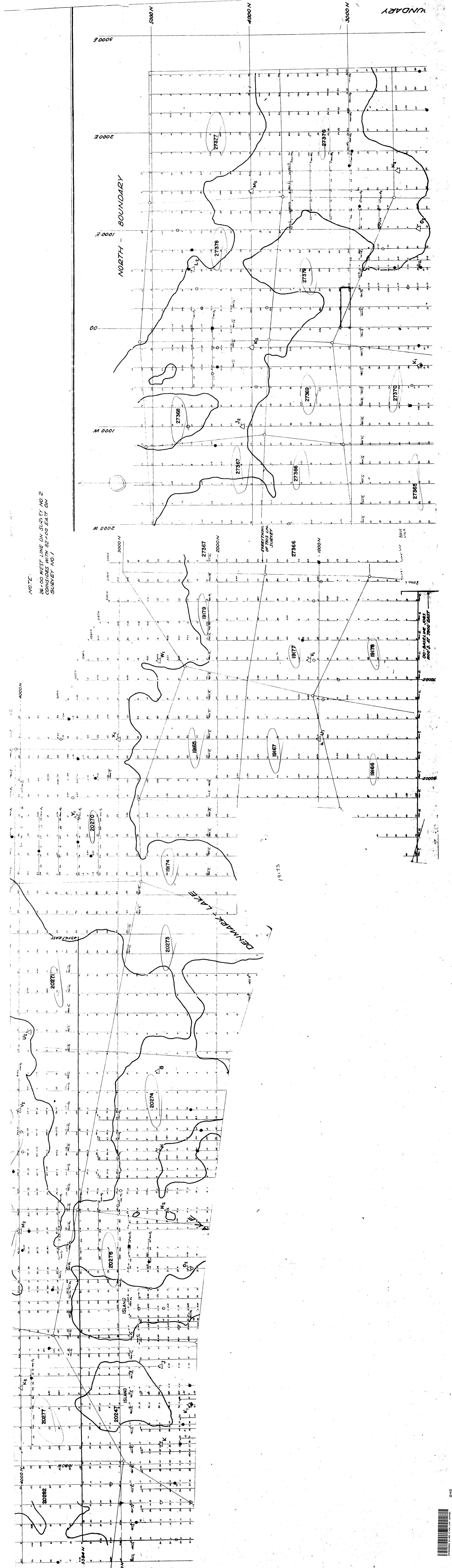


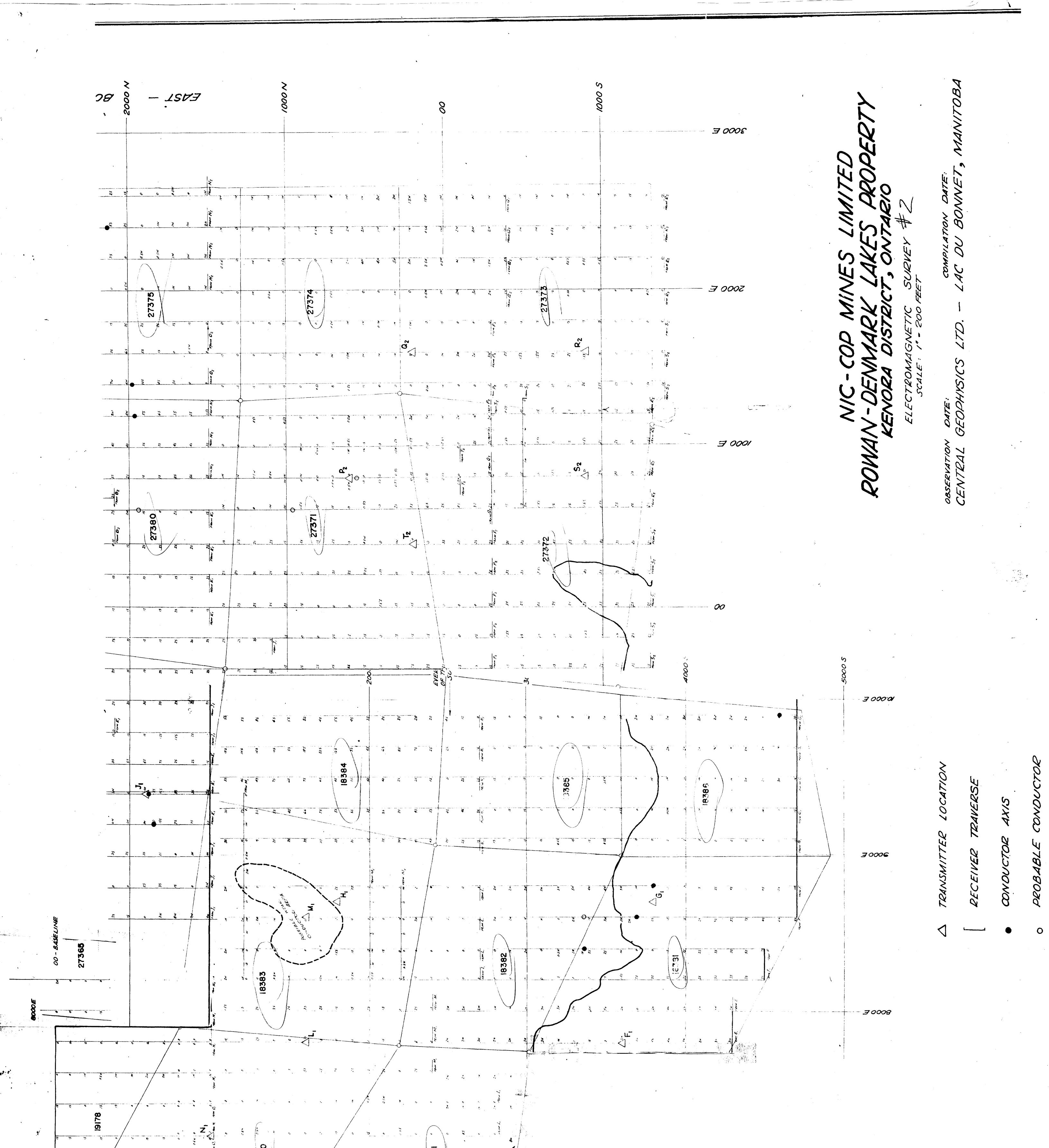


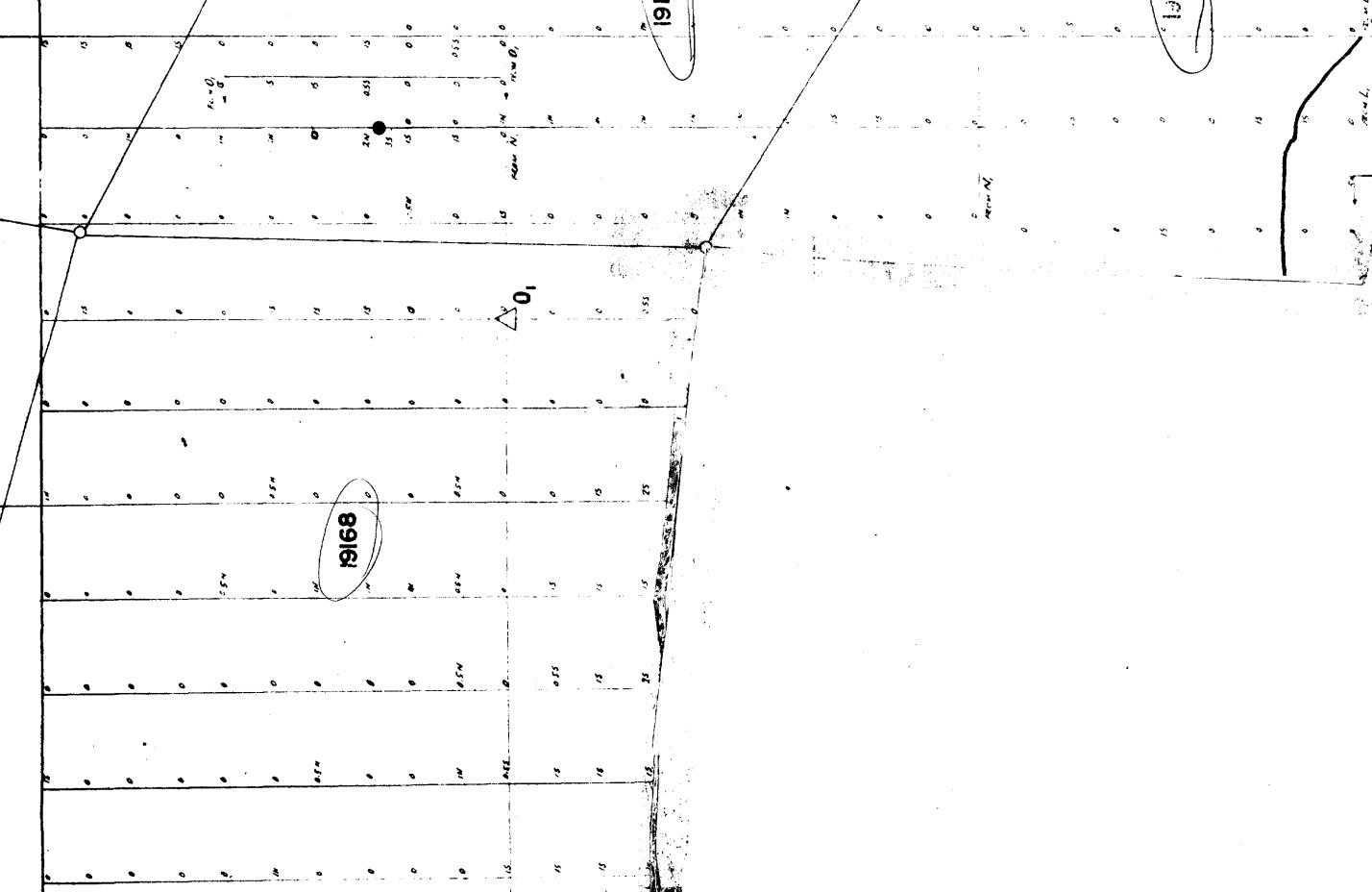




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