

REPORT

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132° 40'

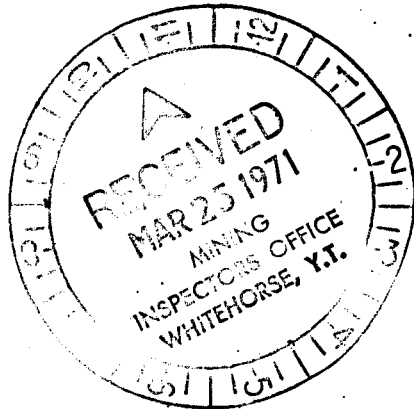
on

TOP AND SANK GROUP OF CLAIMS

Howard Lake, Yukon Territory

019768

CITEX MINES LTD. (N.P.L.)



This report has been examined by the Geological Evaluation Unit and is recommended to be considered as a preliminary report.

7,093.59

D. Craig

Commissioner of Yukon Territory

[Signature]

Commissioner of Yukon Territory

C O N T E N T S

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Location Map	
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In the pocket:

Geochemical Survey map for zinc.
Geochemical Survey map for copper.
Geological map of the property.
Airborne Electromagnetic Survey map.
Magnetometer survey map.

March 12, 1971

TO: CITEX MINES LTD. (N.P.L.)

INTRODUCTION

In the Summer and Fall of 1966, Archer and Cathro, Consulting Geological Engineers, and Mr. Arthur O. Hall, P. Eng., did a fair amount of work on this property. In this report is mainly based on the information submitted by Mr. Arthur O. Hall, P. Eng., information from maps and sections prepared by Archer and Cathro on this property, and from the published G.S.C. memoirs and general geological knowledge of this area.

In the Spring of 1970 the author visited the property and in the month of January 1971 a magnetometer survey was carried out by Primac Exploration Services Ltd.

PROPERTY

The property consists of fifty-six contiguously located mineral claims and they are as follows:

<u>Claims</u>	<u>Record Numbers</u>
Sank 13 - 44	Y50249 - Y50280
Top 1 - 16	Y30399 - Y30414
Top 17 - 24	Y30354 - Y30361

These above claims are recorded with the Mining Recorder's Office in Whitehorse, Yukon Territory.

LOCATION AND ACCESS

The property is located around Howard Lake, situated about 15 miles north of the settlement of Ross River, Yukon. These

claims are located approximately 15 miles southeast of the Swim Lake property owned by Kerr Addison Mines Ltd. The Ross River settlement is situated about 120 air miles from Whitehorse, Yukon. This settlement can also be reached by road which would be approximately 260 miles via Carmacks, Yukon. There is a fair gravel road and it is open during all seasons. From Ross River the property can be reached by float or ski plane which could land on Howard Lake, which is situated in the middle of the property. There is a fair trail from the north shore of the Pelly River which leads into the property and this trail could be utilized during the Summer months. It is believed that there will be a ferry service between the south and north banks of the Pelly River during the Summer months.

TOPOGRAPHY AND VEGETATION

Topography on this property is fairly smooth with some occasional steep phases. The property lies on the elevation of 2500 to 3000 feet above sea level. The forest growth is very moderate with frequent open areas. The timber on this property consists mainly of white and black spruce with some jackpine and balsam fir.

GEOLOGY

The entire area in the vicinity of this property is underlain by a thick sequence of paleozoic strata that is intruded by mesozoic granitic rocks forming the Anvil Batholith. The paleozoic sequence consists mainly of Cambrian phyllitic rocks, Mississippian clastic rocks and Pennsylvanian volcanic strata. The oldest rocks, the Yukon group, are recrystallized sediments consisting of quartzitic mica schist, limestone, minor phyllites and graphite schists are common over most of the area. Andesites, diabase, basalt, diorite and gabbro of the mesozoic age are the basic intrusives, and most of these rocks are highly altered and

and have a complex structure. Bodies of serpentine are associated with these rock types. Granodiorite is another major intrusive in this general area. This rock type is believed to be of mesozoic age. Syenites, monzonites and allied rock types grade into the typical granodiorite, are reported in many places in this area.

Structurally the Anvil Batholith appears to trend north-westerly and contains remnants of the older schistose volcanic and sedimentary rocks. The granitic rocks in this area are uniformly coarse to medium grained and composed of quartz, white feldspar, hornblende and small amounts of biotite. Much of the feldspar appears to be plagioclase so the rock is considered to be probably a granodiorite. The syenitic and monzonitic rocks are dark grey in colour, medium to coarse grained and consist of feldspar, a varying amount of quartz and minor amounts of hornblende. The feldspar is whitish-gray and alkaline in appearance.

This claim group appears to overlie rocks of Paleozoic and Mesozoic Age. Recent alluvium, volcanic ash and glacial drift are found extensively over this property. The principal rock type in which the mineralization occurs is composed of a series of quartz sericite and chlorite schist interlayered with banded skarn, volcanics and sediments. This group of rocks are considered to be of Paleozoic Age more specifically belonging to the Yukon Group. All the members of the Yukon Group have been recrystallized and in most places their original fabric has been destroyed. The lead, zinc and silver mineralization along with some copper values would seem to associate with the phyllites and the allied schists of Paleozoic Age. It has been attributed that this mineralized zone is a rather flat lying "pancake" shaped structure.

It was assumed on the basis of Canadian Geological Survey (Map 131941) that the north half of this property was completely underlain with rocks of the Anvil Batholith. Reconnaissance

mapping under the direction of Consulting Geological Engineers Archer and Cathro reveals that the contact between the Anvil granites and the favourable schists and quartzites recedes well to the north at this point and consequently makes available a large area of highly potential formation for exploration.

An extensive northwest trending fault has been reported along the general course of the Pelly River valley and cross or north-easterly striking block faults are suggested. Due to the extensive overburden, geological knowledge of this area is very limited, with the exception of the deposits actually drilled and mapped in detail.

WORK DONE

Archer and Cathro, the consulting geological engineers, have done some reconnaissance exploratory work on this property in the Summer and Fall of 1966. The work consists of a geochemical survey for zinc and copper, geological reconnaissance mapping and an airborne electromagnetic survey. Mr. Arthur O. Hall, P. Eng., made a report on the work carried out. Even though encouraging results were obtained, these surveys were of a highly reconnaissance type and somewhat incomplete. It appears that the geochemical survey was conducted sporadically following the claim location line. The geological mapping was done in a large scale of 1" = 1700' and it is not possible to obtain any critical information from this mapping. The airborne electromagnetic survey has yielded some fairly large areas of distortion. The remarkable coincidence of location for zinc and copper anomalies with that of airborne electromagnetic distortion is of particular significance.

In the month of January, 1971, a magnetometer survey was carried out on the property by Primac Exploration Services Ltd. The data was submitted to Mr. Richard O. Crosby, B.Sc., P.Eng., Geophysicist, and his comments are as follows:

"at your request, I have reviewed the results of a magnetometer survey executed on the TOP and SANK group of claims Howard Lake area, Yukon Territory by Primac Exploration Services Ltd. The survey was conducted along claim lines oriented east-west and stations were occupied at 100' intervals. Magnetic observations were made with a Scintrex MF-1 vertical force, fluxgate magnetometer. The magnetic map was corrected for diurnal variations. The observed magnetic relief is a total of about 2600 gammas and occurs as an east-west trending zone recorded between Base Line C and Base Line D in the northern part of the grid. Since the geology is shown on a geologic map supplied by Primac indicates a general east-west trend, magnetic traverses oriented north-south would have been preferred, however the present results confirm this regional geological trend. This intense magnetic feature is interpreted as the magnetic expression of the gravite-quartzite contact shown on the geologic map. The magnetic data suggests that this contact trends slightly more easterly than as mapped.

The vertical magnetic field recorded south of Howard Lake oscillates between 100 and 1300 gammas, probably reflecting the near-surface distribution of magnetic material.

A 300 gamma depression recorded along the eastern half of the claim line approximately 1500 south of Howard Lake may indicate relatively acidic rocks or an increase in the depth of overburden. Since the present survey has been carried out along east-west claim lines, it is recommended that additional north-south lines be completed in order to better correlate the geologic and magnetic data.

It is also recommended that a turam electromagnetic survey be conducted over the area as a follow-up method to check conductors revealed by a previous airborne electromagnetic survey."

CONCLUSIONS AND RECOMMENDATIONS

Due to the encouraging results obtained by the previous work, the property warrants further systematic exploration program.

On the basis of available data there appears to be a productive belt of schist sediments trending north-westerly between the Pelly River to the south and the outcrop margin of the Anvil Batholith to the north. Within this belt have been found the Faro, Vangorda and the Swim Lake deposits. Similar geological conditions appear to persist both to the northwest and southeast and to underlie the properties under consideration. The Swim Lake property, owned by Kerr Addison Mines Ltd. is situated less than 15 miles northwest of this property. It can be expected that these two properties are situated along the same belt of the mineralized zone. It is understood that Kerr Addison Mines Ltd. is actively carrying on their exploration work on their property. It has been reported that so far they have outlined approximately 5 million tons having an average grade of 1.5 ounces silver per ton, and 9.5% combined lead and zinc, together with minor copper and gold values. The location of the Citex Mines Ltd. (N.P.L.) property with respect to the geology and ore findings to date in this belt appears favourable. In view of the fact that at least three multimillion ton deposits have been found in this belt to date and the large number of anomalies located and remain to be explored, this property warrants further exploration work to determine its economical potential.

The grid lines have to be cut on most of this property to have a good control over the surveys to be conducted. Cross lines at 400 foot intervals and stations at every 100 feet are desirable for an intensive exploration program. Geochemical survey should be carried out on this grid line.

The geochemical survey is most important in this area since the favourable belt is masked glacial debris and overburden. It is believed that the mineralization is sometimes associated with secondary magnetite and a magnetometer survey may indicate some anomalous areas. Due to the flat lying nature of the

mineralized zone, gravimetric survey has been proved highly successful on the adjoining properties. A gravimetric survey could be very valuable on this property to delineate the mineralized zones of importance. Such an intensive exploration program would amount to an expenditure of approximately \$70,000. Depending on the results of this exploration program, the property may be subjected to diamond drilling, the cost of which has to be determined at that stage.

Respectfully submitted,

S. Venkataramani

S. Venkataramani, M.Sc., P.Eng.



REFERENCES

Report on Howard Lake Property by Arthur O. Hall, P. Eng.

Report on Howard Lake Property by Archer and Cathro.

The mineral Industry of Yukon Territory
and Southwestern District of Mackenzie, 1967
G,S,C Paper 68-68.

By D. C. Findlay

A Reconnaissance of Pelly River Between
MacMillan River and Hoole Canyon, Yukon
Memoir 200.

By J. R. Johnston

C E R T I F I C A T E

I, S. Venkataramani, of Vancouver, British Columbia, do hereby certify that:

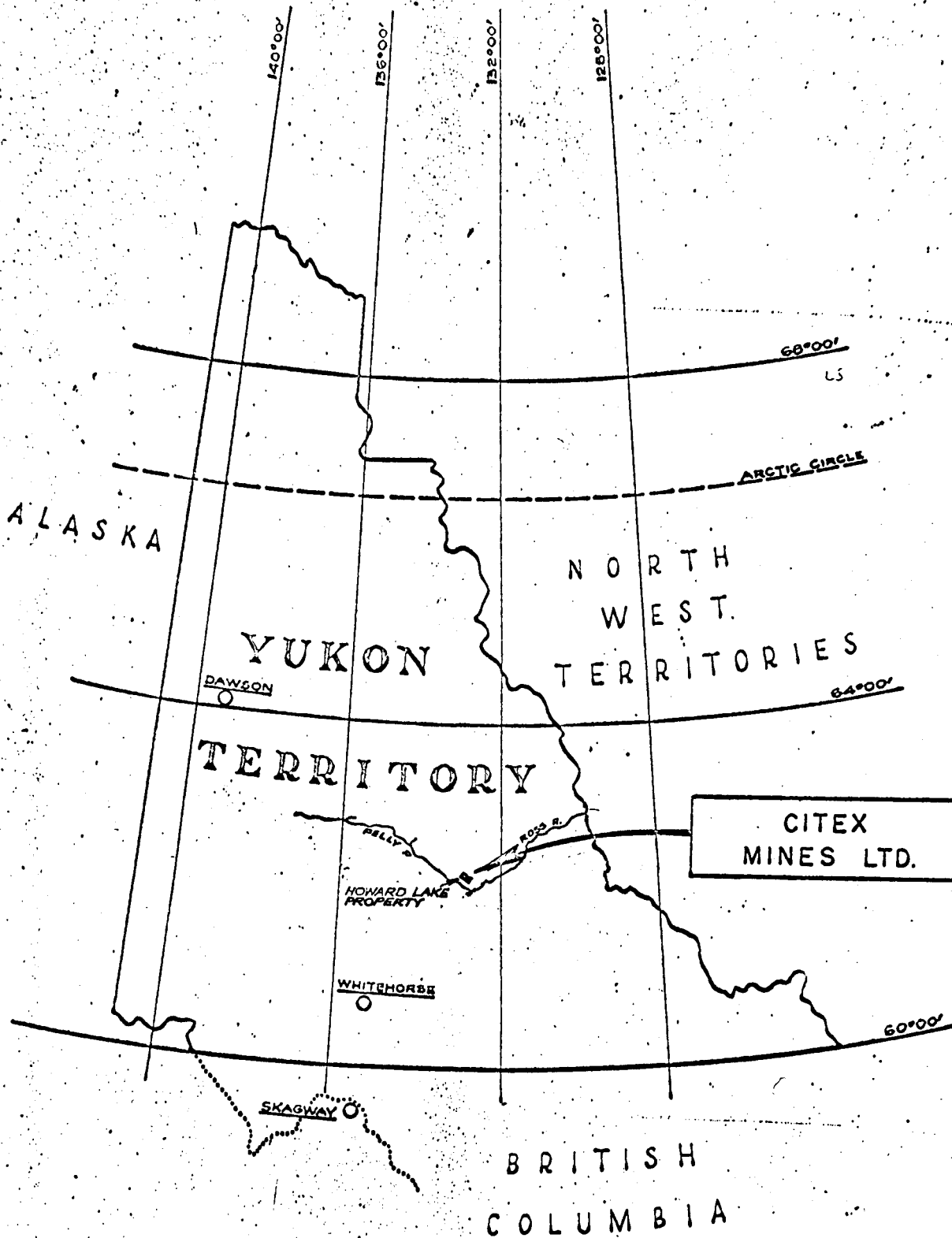
1. I am a consulting geologist with my office located at #630 - 890 West Pender Street, Vancouver 1, B. C.
2. I am a graduate geologist with a Master of Science Degree from the University of Madras, India.
3. I am a member of the Association of Professional Engineers of the Province of British Columbia.
4. I am a certified professional geologist belonging to the American Institute of Professional Geologists, Golden, Colorado, U. S. A.
5. I am a member of the Canadian Institute of Mining and Metallurgy.
6. I have been practicing my profession for over 10 years.
7. I have no direct or indirect interest, nor do I expect to receive any interest directly or indirectly in this property or the securities of Citex Mines Ltd. (N.P.L.)
8. This report is based on my personal visit to the area and from previous reports on the property and the published geological literature.

Vancouver, British Columbia

S. Venkataramani, M.Sc. P. Eng.

S. Venkataramani

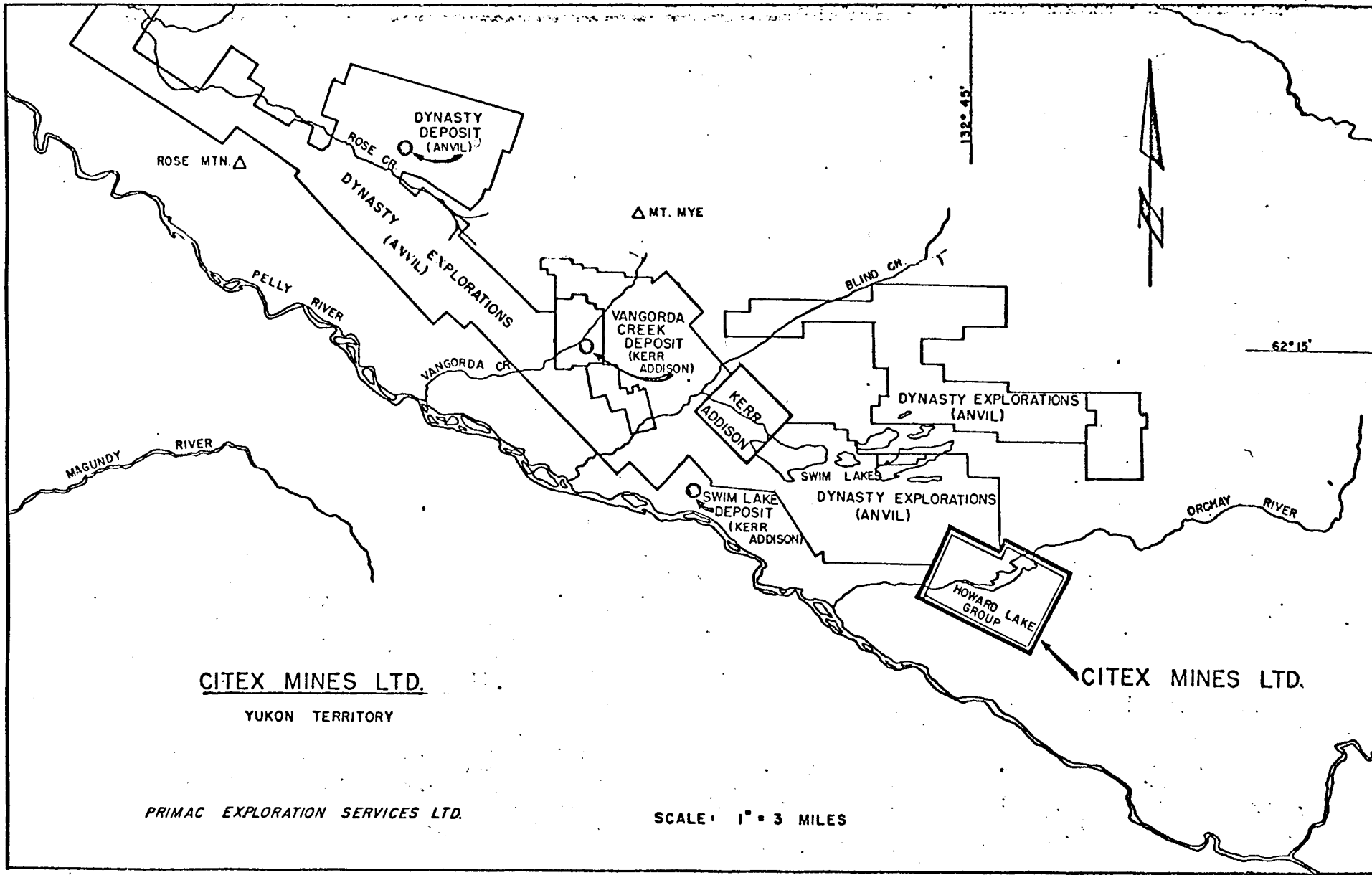




CITEX
MINES LTD.

100 80 60 40 20 0 100 200 300 400
SCALE: 1" = 120 miles

20071. DRAWINGS AND TITLING SERVICE/127



ROSE MTN. Δ

DYNASTY DEPOSIT
(ANVIL)

DYNASTY (ANVIL) EXPLORATIONS

Δ MT. MYE

VANGORDA CREEK DEPOSIT
(KERR ADDISON)

BLIND CR.

KERR
ADDISON

DYNASTY EXPLORATIONS
(ANVIL)

62° 15'

MAGUNDY RIVER

PELLY RIVER

VANGORDA CR.

SWIM LAKES

SWIM LAKE DEPOSIT
(KERR ADDISON)

DYNASTY EXPLORATIONS
(ANVIL)

ORCHAY RIVER

HOWARD LAKE
GROUP

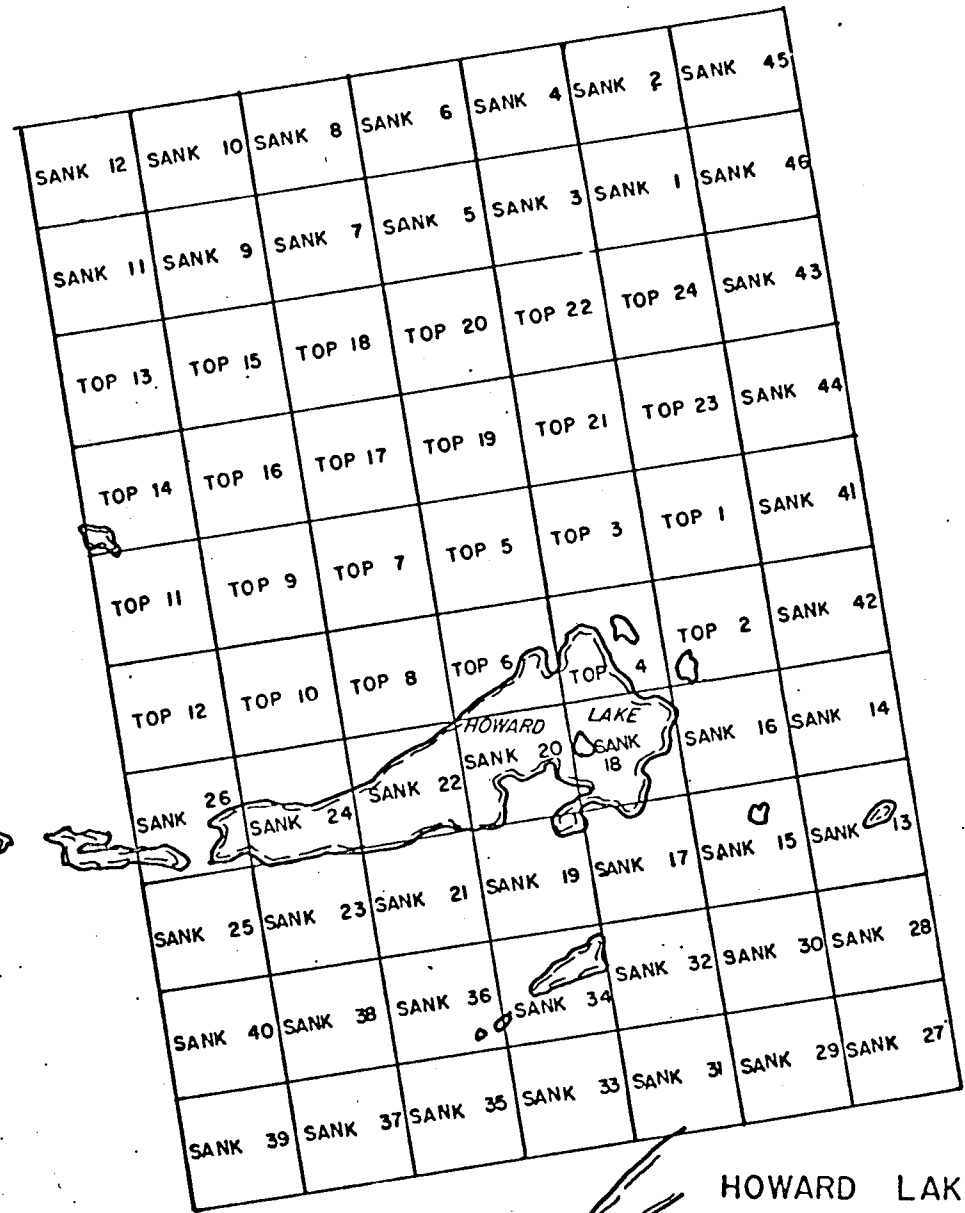
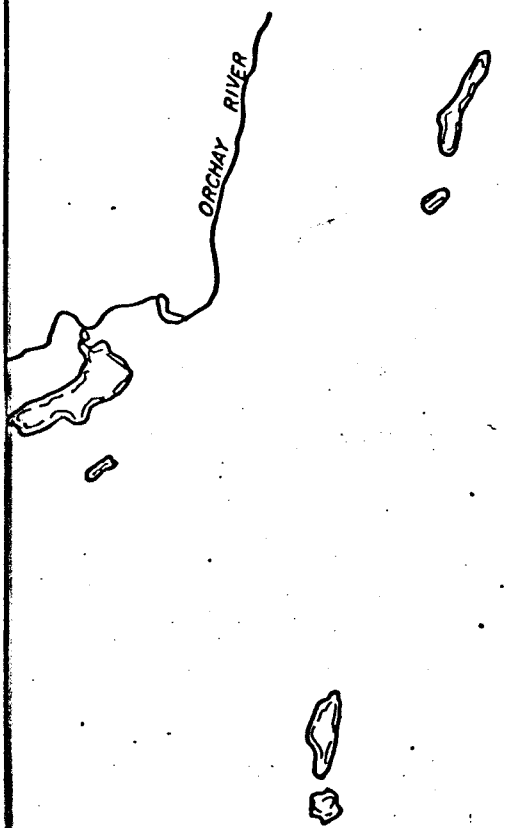
CITEX MINES LTD.

YUKON TERRITORY

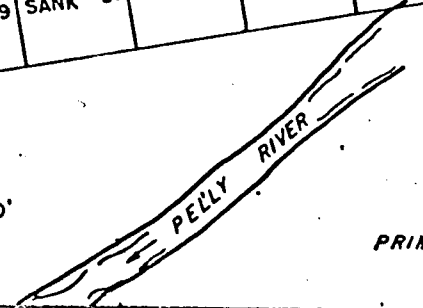
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PRIMAC EXPLORATION SERVICES LTD.

SCALE: 1" = 3 MILES



SCALE 1" = 2700'



HOWARD LAKE CLAIMS

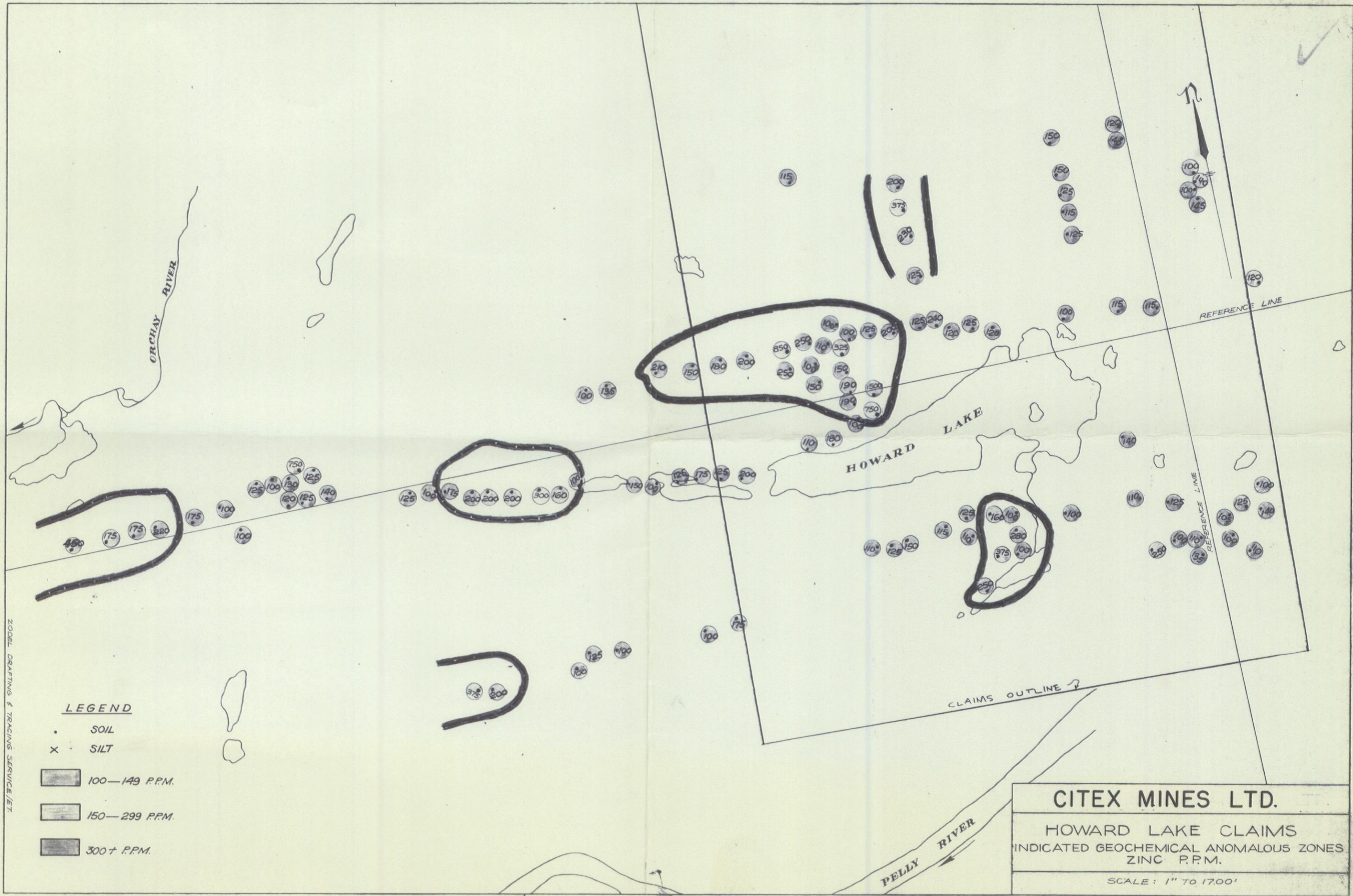
CITEX MINES LTD.

ANVIL - VANGORDA DISTRICT, YUKON

FEB. 16, 1970

PRIMAC EXPLORATION SERVICES LTD.

ZODEL DRAFTING & TRACING SERVICE/ET.



LEGEND

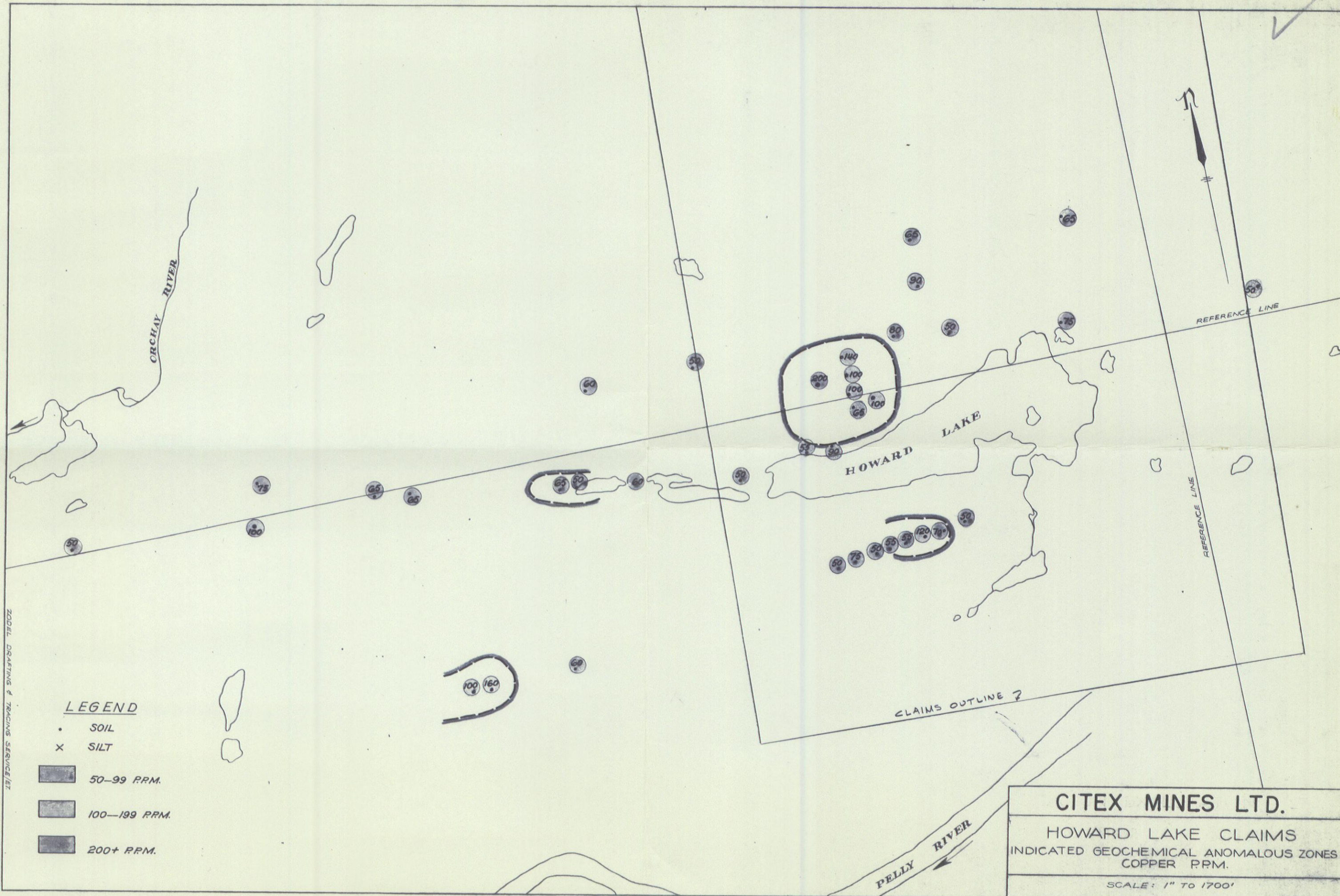
- SOIL
- x SILT
- 100—149 P.P.M.
- 150—299 P.P.M.
- 300+ P.P.M.

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HOWARD LAKE CLAIMS
INDICATED GEOCHEMICAL ANOMALOUS ZONES
ZINC P.P.M.

SCALE: 1" TO 1700'

ZODEL DRAFTING & TRACING SERVICE/ET



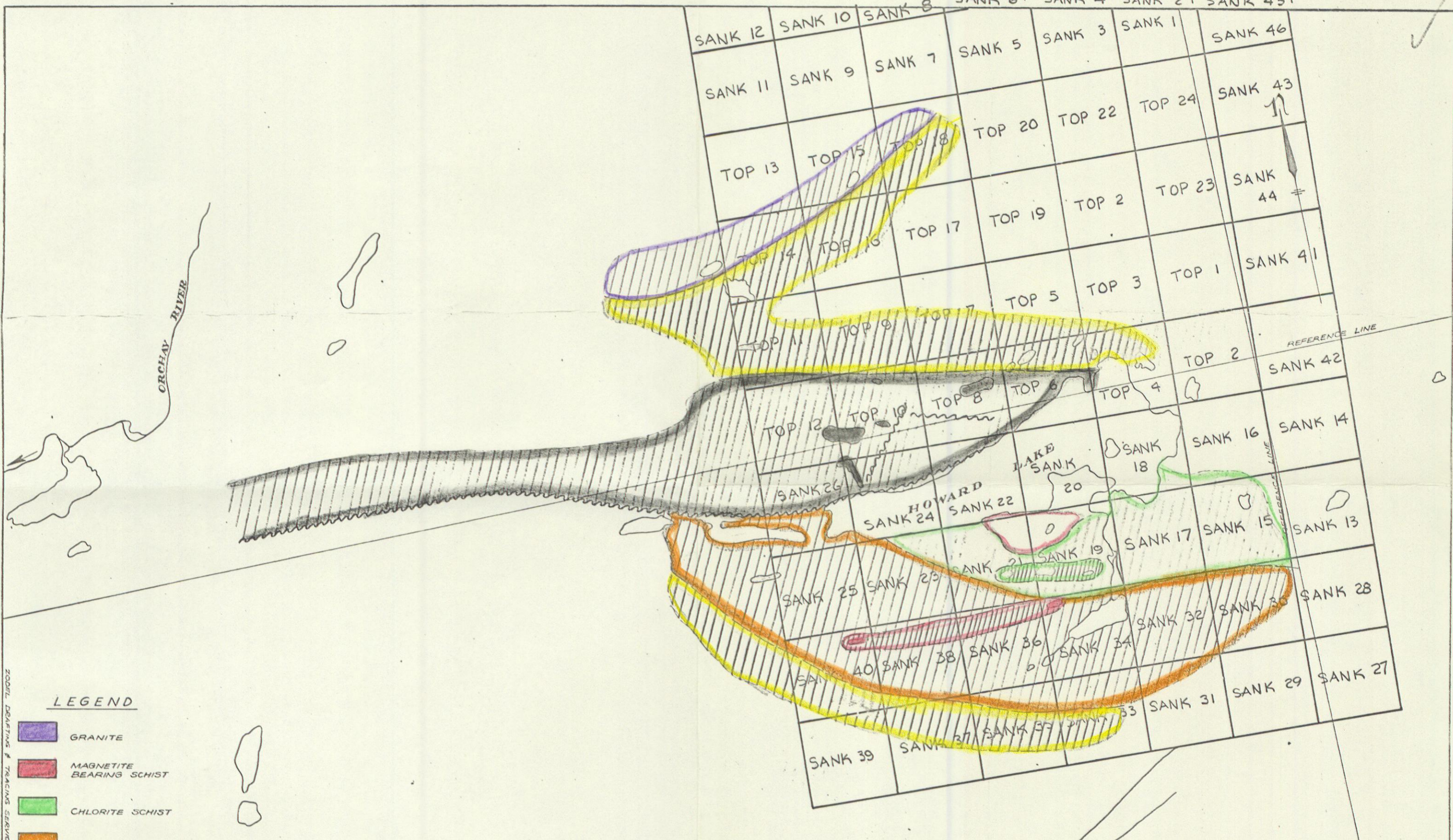
LEGEND

- SOIL
- x SILT
- 50-99 P.P.M.
- 100-199 P.P.M.
- 200+ P.P.M.

CITEX MINES LTD.

HOWARD LAKE CLAIMS
INDICATED GEOCHEMICAL ANOMALOUS ZONES
COPPER P.P.M.

SCALE: 1" TO 1700'

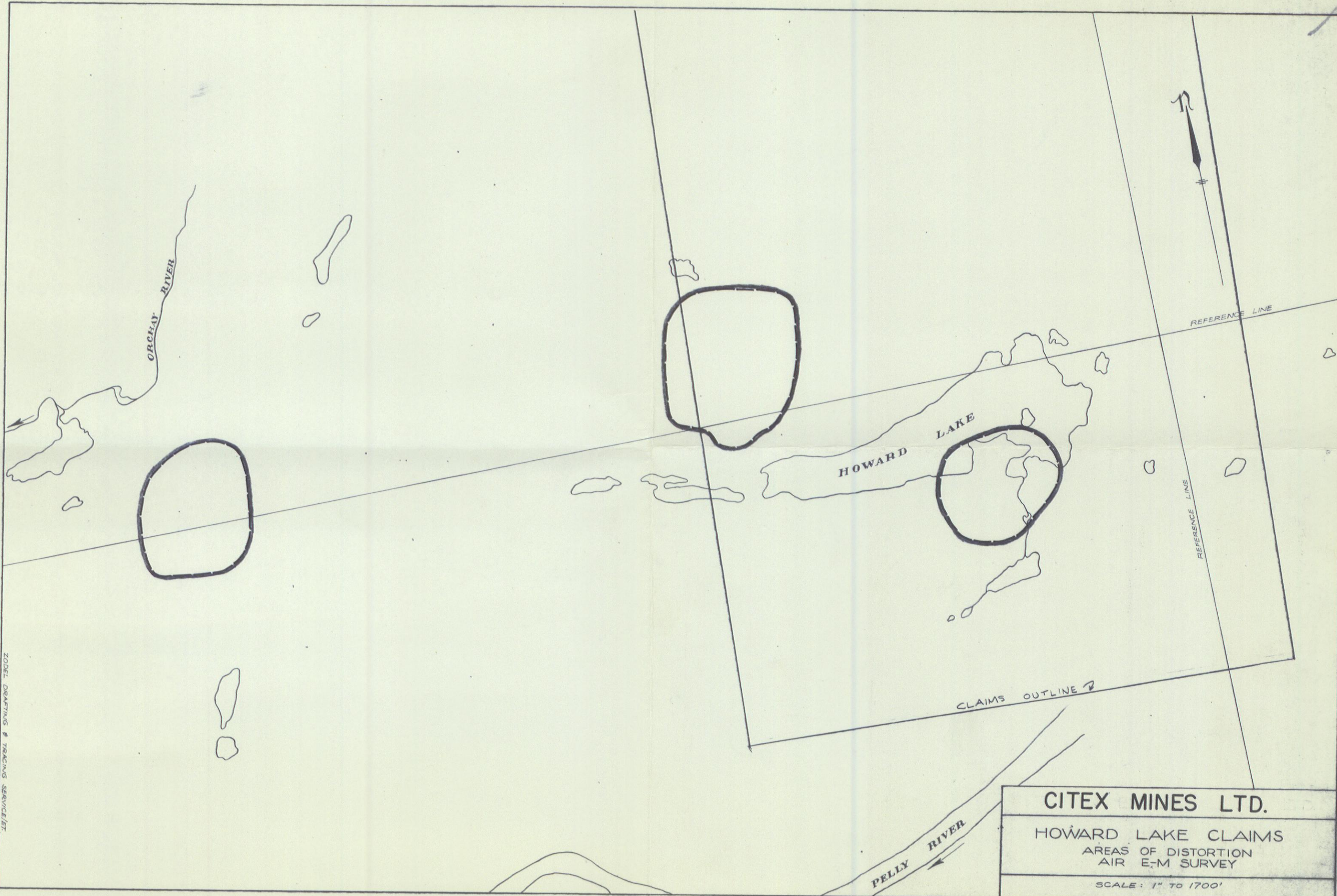


LEGEND

- GRANITE
- MAGNETITE BEARING SCHIST
- CHLORITE SCHIST
- PHYLLITE
- QUARTZITE (BANDED)
- GREENSTONE

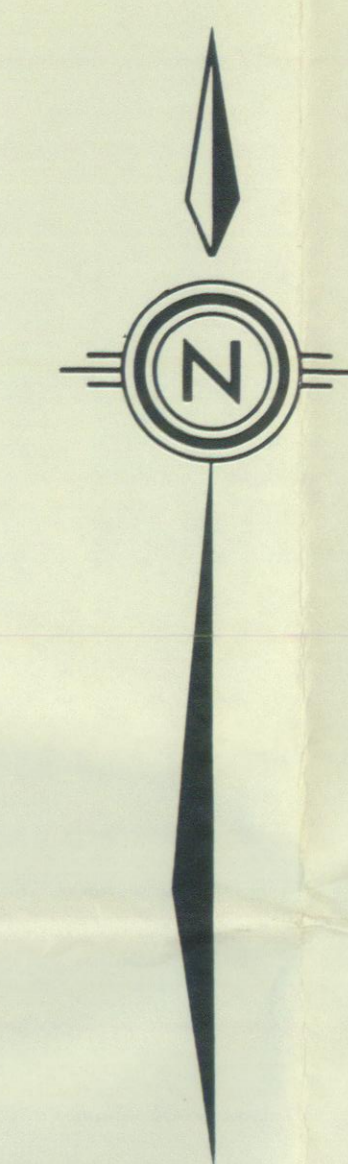
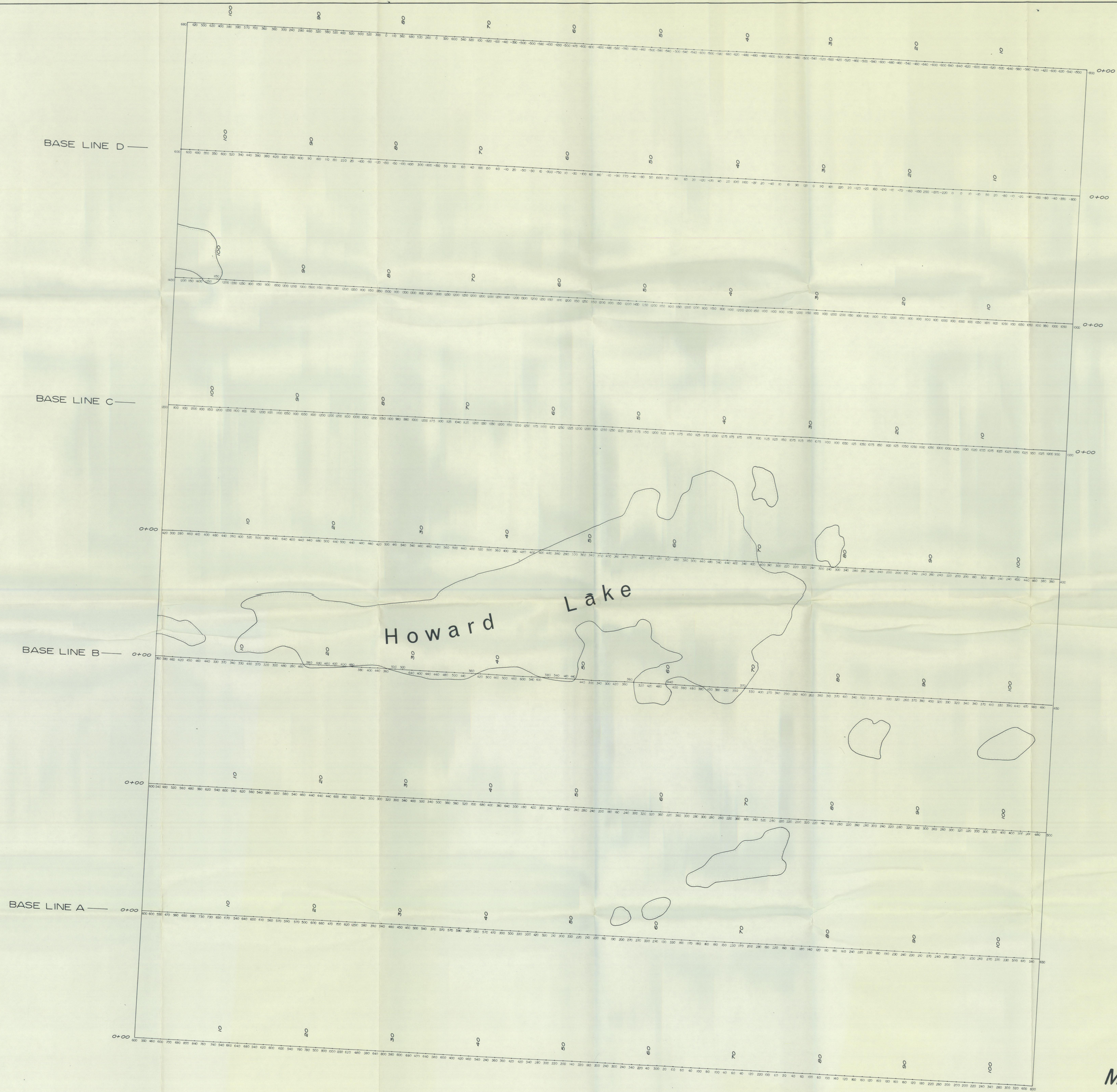
CITEX MINES LTD.
HOWARD LAKE CLAIMS GEOLOGY
SCALE: 1" TO 1700'

ZODEL DRAWING & TRACING SERVICE/ET



ZODEL DRAFTING & TRACING SERVICE/ET

CITEX MINES LTD.
HOWARD LAKE CLAIMS AREAS OF DISTORTION AIR E-M SURVEY
SCALE: 1" TO 1700'



LEGEND
 100 — MAGNETOMETER READING (GAMMAS)

CITEX MINES LTD.
MAGNETOMETER SURVEY
 HOWARD LAKE PROPERTY
 WHITEHORSE MINING DIVISION
 YUKON TERRITORY

SCALE
 FEET 400 200 0 400 800 1200 1600 2000 2400 FEET
 PRIMAC EXPLORATION SERVICES LTD.