

2.722



42E136E0048 2.722 KABY LAKE

010

DEC 20 1971

PROJECTS
SECTION

REPORT FOR
CHEMALLOY MINERALS LIMITED
ON A DRILLING AND ORIGINAL
EXPLORATION PROGRAM CARRIED
OUT ON THEIR PROPERTY IN
ELMHIRST AND PIFHER TOWNSHIPS
IN WESTERN ONTARIO

BY

A. C. A. HOWE INTERNATIONAL LIMITED

J. N. WHEADON

REPORT NO. 305
TORONTO, ONTARIO

SEPTEMBER 9, 1971

SUMMARY

Chemalloy Minerals Limited has acquired 43 claims in Elmhirst and Pifher Townships, Thunder Bay Mining Division, Ontario.

They are located in the Jellicoe area, approximately 20 miles on highway 801 from highway 11.

The property was acquired because of preliminary prospecting in the area turning up a showing of molybdenite associated with quartz stringers in a sheared zone, in granodiorite.

Bulldozing and backhoe operations, followed by washing the outcrop with a high pressure hose, exposed the main shear zone for purposes of mapping, trenching and sampling.

Due to the fact that a diamond drill was already in the area, and drilling could be carried out at relatively low cost, four preliminary holes, with a total length of 499 feet were drilled to intersect the shear zone at various points.

Although the assay results of the sludge and core samples showed no zones of economic grade MoS_2 at this point, they do indicate the presence of MoS_2 in the shear zone at depths below the surface of up to 70 feet.

The final hole drilled, M71-4, showed the most promising results with a greater area of granodiorite intruded by quartz stringers and with substantially higher MoS_2 values.

PROPERTY

The Chemalloy Minerals Limited property in Elmhirst and Pifher Townships in the Thunder Bay Mining Division in Ontario consists of the following claims in two groups:

The first group consisting of claims nos. TB 296943 - TB 296972 incl. lies completely in the Elmhirst Township, bounded on the west by the copper-nickel property of Chesterville Mines Limited, on the north by the boundary line of the Elmhirst Township and on the south and east by other staked claims in the township.

The second group, consisting of claims nos. TB 296973 - TB 296984 incl. and 296986, lies mostly in the Elmhirst Township but has four claims, nos. TB. 296981, 296983, 296983 and 296984 in the north-east corner of the Pifher Township. This group is bounded on the east by the Chesterville Mines property, on the north by the township lines, and on the south and west by other staked claims in the townships.

These claims were recorded on November 12th, 1970 and the work that has been done to date should be recorded in the most beneficial manner as soon as possible.

LOCATION AND ACCESS

Approximate co-ordinates of the property are:

49° 39' N latitude

87° 43' W longitude

Nearest River: Namewaminikan (8 miles south of property)

Nearest Lake: Pinell Lake (1 mile northeast of property)

Nearest Town: Jellicoe (22.5 miles southeast of property)

Nearest Highway: Route 11 (18.5 miles south of the property)

Access to the property is by route 801 at Nezah (6.3 miles west of Jellicoe). Approximately 12.2 miles north on route 801 access to the property is made by a lumber road for about 6 miles. During the summer months a car can be taken to within 200 yards of the showing, which is located on claim TB 296949. All roads are in reasonable condition. Time to reach the property from Jellicoe is about 50 minutes.

The climate of this area is temperate, with rainfall occurring on the average every four to five days.

The nearest electrical power is the Ontario Hydro with lines along highway 11.

TOPOGRAPHY

In general the country has the typical peneplain features of the Canadian Shield. The showing is located on the shore of a small un-named lake which connects with Pinell Lake. To the northwest of the showing the land rises to a height of perhaps 200 - 250 feet above the low swampy area.

HISTORY OF THE PROPERTY

The showing was discovered by Mr. A. Mitto in the course of general geologic prospecting in the area in June, 1971. Minor blasting and grab sampling was carried out originally to determine the presence of molybdenite.

The present program of bulldozing, backhoe clearing, washing of the outcrop, trenching, sampling, and diamond drilling was carried out during the months of July - August, 1971.

GENERAL GEOLOGY

Regional geological information is available on maps 47L (South Onaman Area), and 45A (Sturgeon River Area).

The area to the north has been mapped as Keewatin basic volcanics intruded by a diorite or quartz diorite mass. Nearer to the property, intermediate to acid volcanics have been mapped. These volcanics have been intruded by diorite and granodiorite. The predominant rock type to the west of the showing is greenstone, mainly andesite, but varying to rhyolite in places. In the immediate area of the showing and to the east the predominant rock type is granodiorite. In general the outcroppings are of a nature that provide little structural information.

GEOLOGY OF THE PROPERTY

The showing was discovered as a quartz outcropping in an area of granodiorite, with little other outcrop exposed.

Upon uncovering the outcrop by mechanical means a zone of shearing and alteration, intruded by quartz stringers could be observed. These stringers carry with them a dark blue colouration that is partially due to the presence of MoS_2 . In the few inches of granodiorite immediately adjacent to the quartz intrusions there is sometimes finely disseminated MoS_2 that has been carried in by the quartz. In scattered places finely disseminated metallic MoS_2 is visible in the granodiorite.

In the area of trench "A" the shearing has been exposed a distance of 50 feet to the south of the original showing, over a width of approximately 20 feet. In a northwest direction the shearing is observed to run a distance of at least 100 feet on surface.

Quartz stringers intrude into the zone of shearing wherever it occurs, and wherever they do they carry the dark blue colouration that in this area has been characteristic of the presence of MoS_2 .

Surface expression of the shearing zone seems to indicate that it follows a northwest-southeast trend. The drilling was aimed to intersect this trend.

TRENCHING RESULTS

Two trenches were opened and chip samples taken. These were subsequently sent to X-Ray Assay Laboratories Limited for analysis.

Trench A was opened through a northeasterly trending horizontal distance of thirty-three (33) feet. This trench is five feet wide, intersecting the baseline at 0 + 23' W and 0 + 27' W. Eight samples were taken along the trench and resulting MoS₂ values ranged from nil to 0.09% MoS₂.

Trench B was exposed through a northwesterly trending horizontal distance of twenty-two (22) feet. This trench is six feet wide where it intersects the baseline at 0 + 7' W and 0 + 13' W. Four samples were taken along the trench, with resulting assay values of MoS₂ ranging from nil to 0.02% MoS₂.

A total of twelve (12) chip samples were taken along the two trenches and assayed for MoS₂ content.

DRILLING RESULTS

Four holes with a total length of 499 feet were drilled in the immediate area of the showing with the intentions of intersecting the shear zone at a depth of 50 to 60 feet below surface.

The drilling program was started on August 5, 1971 with hole M71-1 being drilled at 0 + 08E; 0 + 42W at a dip of 44° in the direction of true north. At a distance of 13 feet down the hole, and 9 feet vertically below surface, unsheared, unaltered, granodiorite was encountered. At a distance of 63 feet down the hole and 43 feet vertically below surface, the zone of shearing was intersected for a distance of 32 feet to a point 95 feet down the hole, 62 feet vertically below surface and indicated a width of approximately 25 feet at this point.

Assay values of MoS₂ from trace to 0.07% were picked up in the zone of shearing.

At the point 95 feet down the hole, 62 feet vertically below surface, the zone of shearing stopped, and unaltered, unsheared, coarse grained granodiorite was encountered. This continued to the end of the hole at 115 feet down the hole.

Hole M71-2 was drilled at position 0 + 12W; 0 + 72N at a dip of 46° in the direction of true south.

At a distance of 17.0 feet down the hole 12.5 feet below surface, unsheared, unaltered, coarse grained granodiorite was encountered. At a distance of 53.4 feet down the hole, 41.5 feet below surface, the zone of shearing was intersected for a distance of 32.8 feet to a point 86.2 feet down the hole, 69.0 feet vertically below surface, and indicated a width of approximately 25 feet at this point.

Assay values of MoS_2 from trace to 0.08% were picked up in the zone of shearing.

From 86.2 feet down the hole to the end of the hole at 149 feet, unsheared, unaltered, coarse grained granodiorite was encountered.

Hole 71-3 was drilled at position 0 + 58E; 0 + 72N at a dip of 43.0° in the direction of true south.

At a distance of 11.0 feet down the hole, 8.0 feet vertically below surface, unsheared, unaltered, coarse grained granodiorite was encountered. This continued, with no zone of shearing or alteration being encountered, to the end of the hole at 105 feet.

Hole 71-4 was drilled at position 0 + 62W; 0 + 72N, at a dip of 47.5° in the direction of true south.

At a distance of 9.0 feet down the hole, 3.0 feet below surface, unsheared, unaltered, coarse grained granodiorite was encountered. At a distance of 22.0 feet down the hole, 17.0 feet below surface, a zone of alteration due to the presence of a pyroxinite dyke was encountered.

This zone continued to 28.0 feet down the hole, 22.0 feet below surface where the zone of shearing was intersected for a distance of 24 feet, to a point 52.0 feet down the hole, 44.0 feet vertically below surface, and indicating the shear zone to be approximately 20 feet wide at this point.

Assay values of up to 0.20% MoS_2 were picked up in the zone of shearing and over a distance of 20 feet an average grade of 0.10% MoS_2 was obtained.

This was the best range of values obtained in any of the holes drilled to date.

The area from 52.0 feet down the hole to a point 80.0 down the hole, consisting of unsheared, unaltered coarse grained granodiorite, was also intruded by occasional quartz stringers carrying MoS₂.

From a point 35 feet down the hole to the point at 80.0 feet down the hole an average grade of 0.06% MoS₂ was obtained over a true width of 32.0 feet.

From 80.0 feet down the hole to the end of the hole at 130.0 feet, unsheared, unaltered, unintruded, coarse grained granodiorite was encountered.

This completed the drilling program on August 11, 1971.

CONCLUSIONS

From the drilling done to date, it appears that the zone of shearing pinches out to the east beyond hole 71-1 (as indicated by no zone of shearing being encountered in hole 71-3).

However, to the west, the zone of shearing appears to be continuing, enlarging, and increasing in grade of MoS₂.

Taking into account the general mineralization of the area, and the relative scarcity of outcrop, the following program is recommended.

RECOMMENDATIONS

A program of diamond drilling to examine the shearing zone of the granodiorite to the west of hole 71-4 and also to a greater depth.

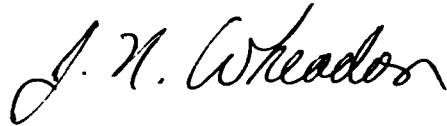
A program of line cutting, electromagnetic and magnetometer surveys, and soil sampling of the remainder of the property in order to determine the presence of base metals (copper, lead, zinc) and molybdenum.

Cost estimates of the above recommended program are as follows:

Diamond drilling 2,000 ft. @ \$12.00/ft.	\$24,000.00
Line cutting at 400 ft. intervals over 43 claims = 43 line miles @ \$85.00/mile	3,655.00
Electromagnetic Survey 43 line miles @ \$85.00/mile	3,655.00
Magnetometer Survey, 43 line miles @ \$75.00/mile	3,225.00
Soil sampling, at 200 ft. spacing over 43 line miles; 27 samples/mile = 1,161 samples @ \$4.00 per sample for collection and assaying of heavy metal and molybdenite content	4,644.00
Supervision and other engineering costs, including drafting, secretarial and final report, for an estimated period of two months	5,000.00
Travel, local transportation and board	1,500.00
Head office and administrative expenses	<u>1,500.00</u>
TOTAL	<u><u>\$47,179.00</u></u>

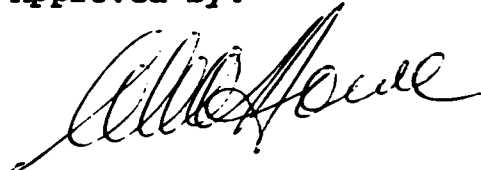
Respectfully submitted,

A. C. A. HOWE INTERNATIONAL LIMITED,



J. N. Wheadon

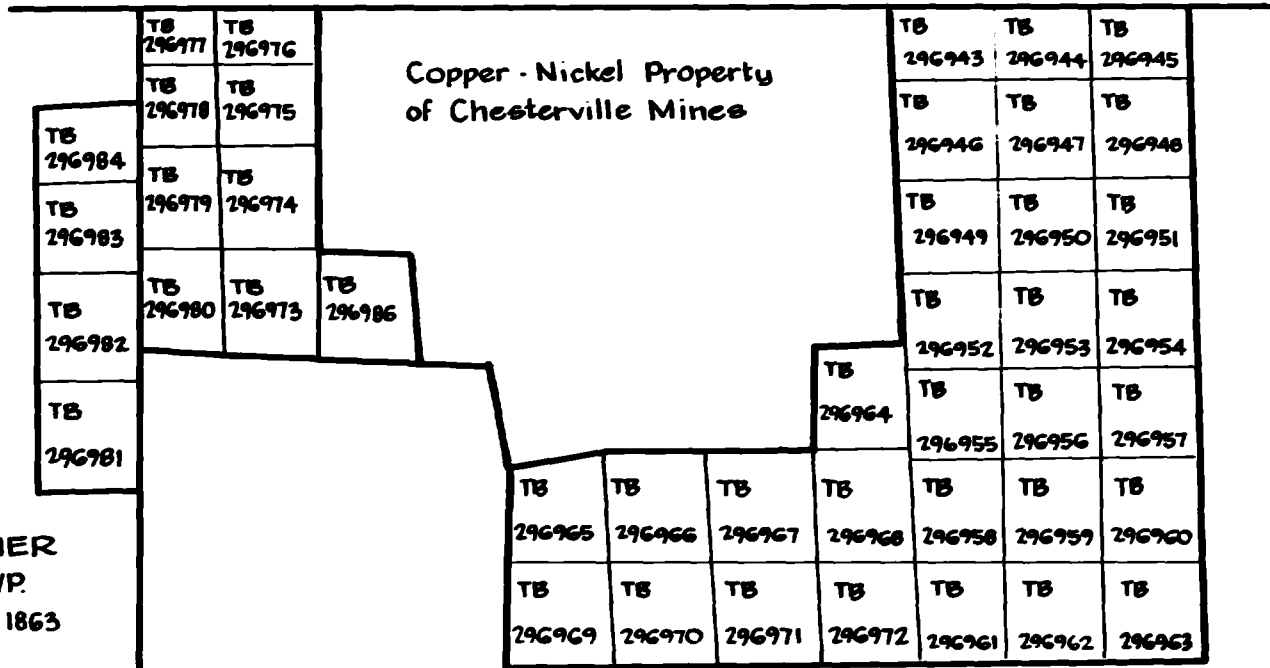
Approved by:



A. C. A. Howe, P.Eng.

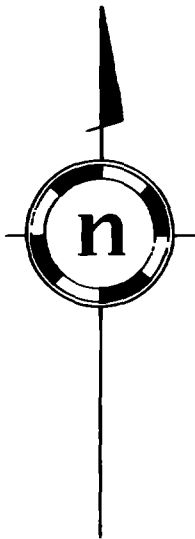
DATED AT TORONTO, ONTARIO THIS 9th DAY OF SEPTEMBER, 1971.

MAP AREA 1839



PIFHER
TWP.
Map 1863

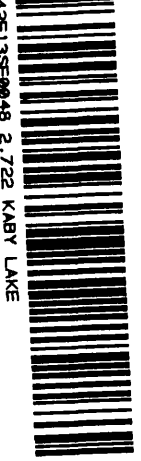
ELMHIRST TWP.



Location Map showing

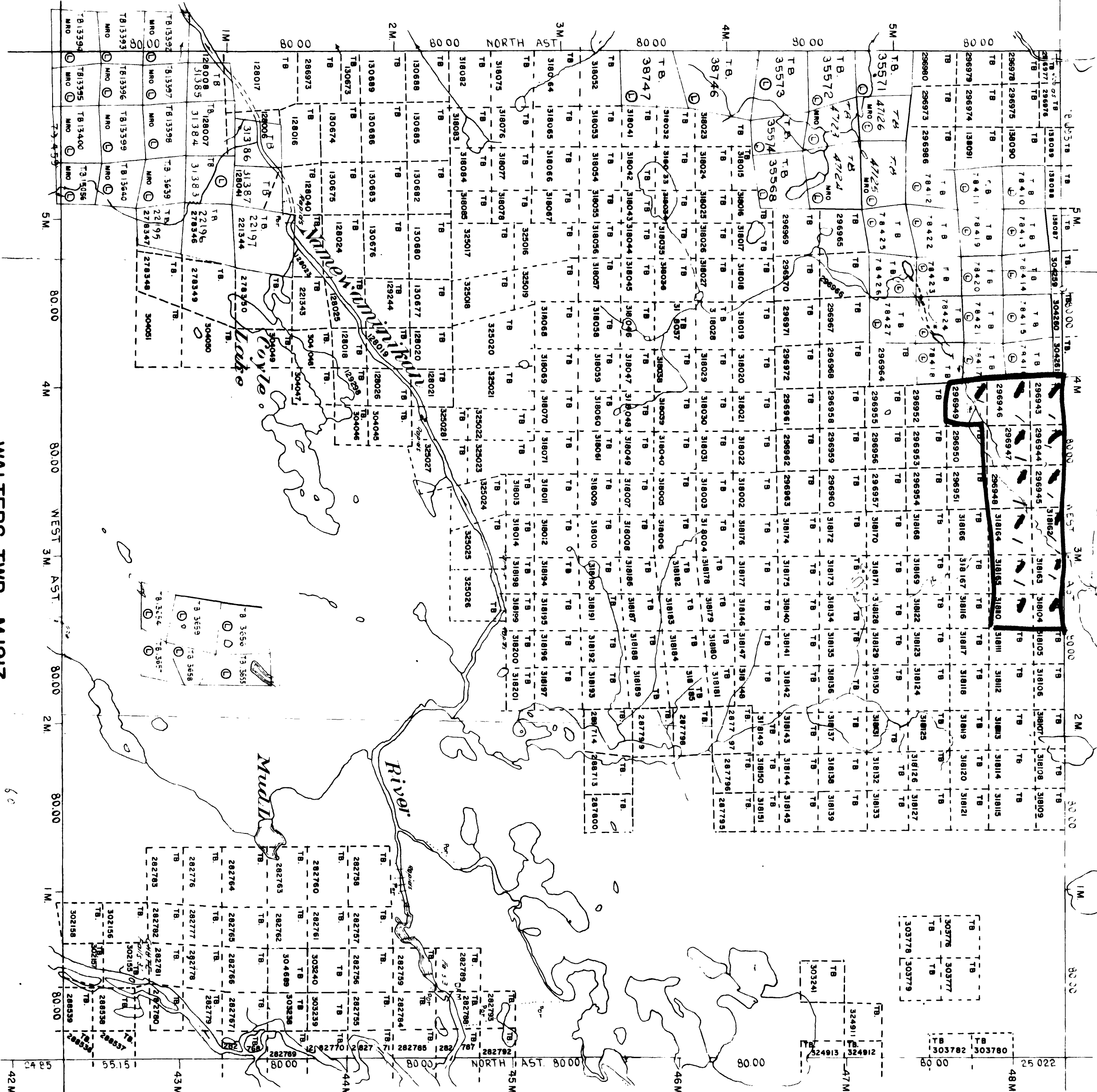
CLAIMS OF CHEMALLOY MINERALS LTD.

Scale: 1 inch to 1/2 mile



200

PIFHER TWP - M.1863



RICKABY TWP - M.1873

NOTES
400' surface rights reservation along the shores of all lakes and rivers.

DATE OF ISSUE
DEC 29 1971
ONT. DEPT. OF MINES
AND NORTHERN AFFAIRS

- LEGEND
- ⊙ or ● PATENTED LAND
 - PATENTED FOR SURFACE RIGHTS ONLY
 - LEASE
 - LICENSE OF OCCUPATION
 - CROWN LAND SALES
 - LOCATED LAND
 - CANCELLED
 - MINING RIGHTS ONLY
 - SURFACE RIGHTS ONLY
 - HIGHWAY & ROUTE NO.
 - ROADS
 - TRAILS
 - RAILWAYS
 - POWER LINES
 - MARSH OR MUSKEG
 - MINES
- * used only with summer resort locations or when space is limited

TOWNSHIP OF

ELMHIRST

claim map
DISTRICT OF

THUNDER BAY
THUNDER BAY
MINING DIVISION

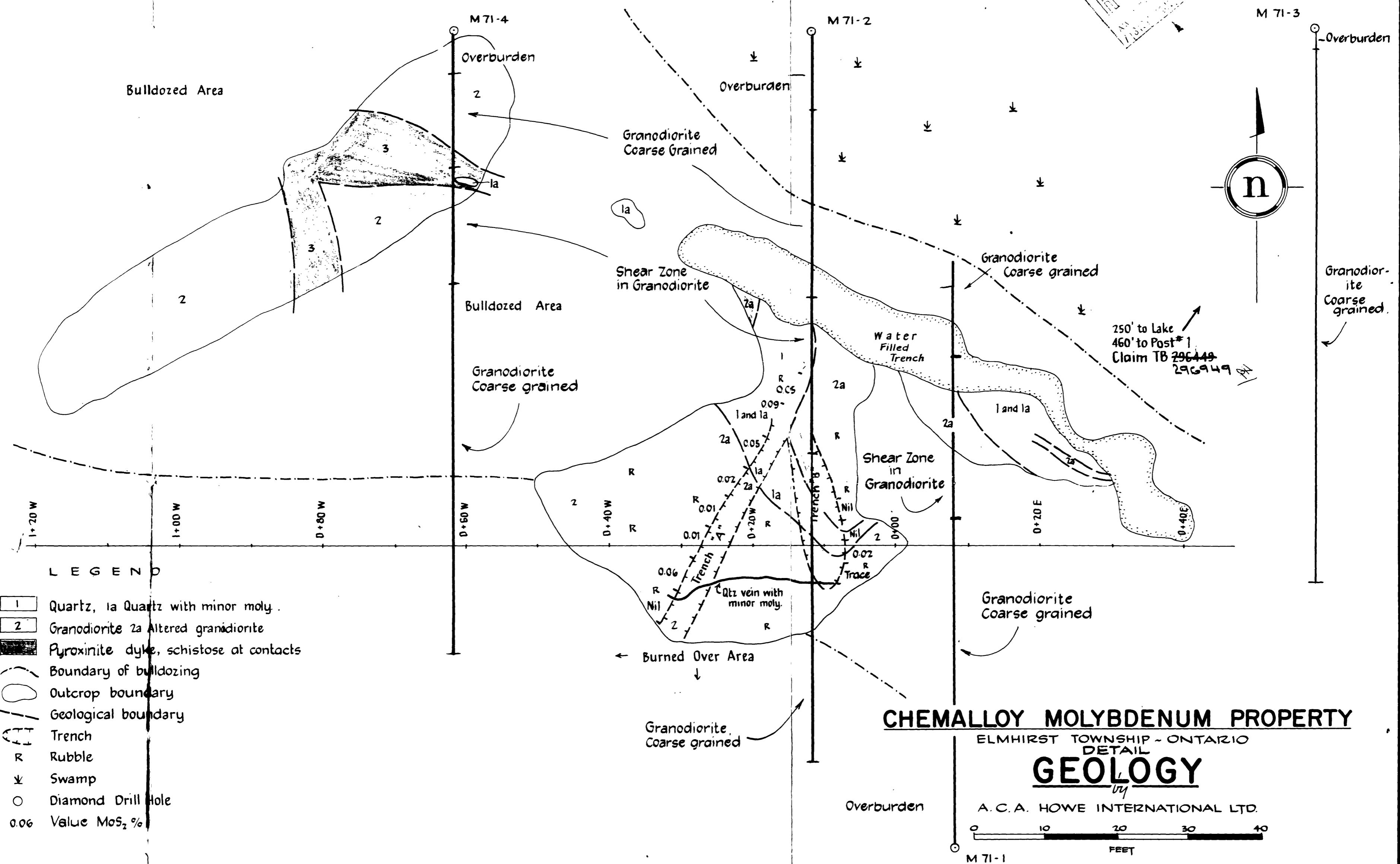
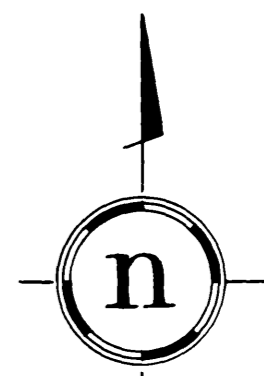
SCALE : 1 INCH = 40 CHAINS (1/2 MILE)

DR. N.G. PLAN NO. **M.1705**
DATE FEB 71

ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS

2.122

THIS PROPERTY IS REGISTERED UNDER THE MINING ACT OF 1972



LEGEND

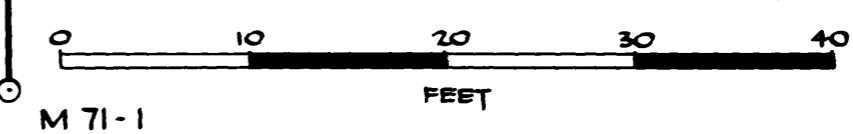
- 1 Quartz, 1a Quartz with minor moly.
- 2 Granodiorite 2a Altered granodiorite
- 3 Pyroxinite dyke, schistose at contacts
- Boundary of bulldozing
- Outcrop boundary
- Geological boundary
- Trench
- R Rubble
- Swamp
- Diamond Drill Hole
- 0.06 Value MoS₂ %

CHEMALLOY MOLYBDENUM PROPERTY

ELMHIRST TOWNSHIP - ONTARIO

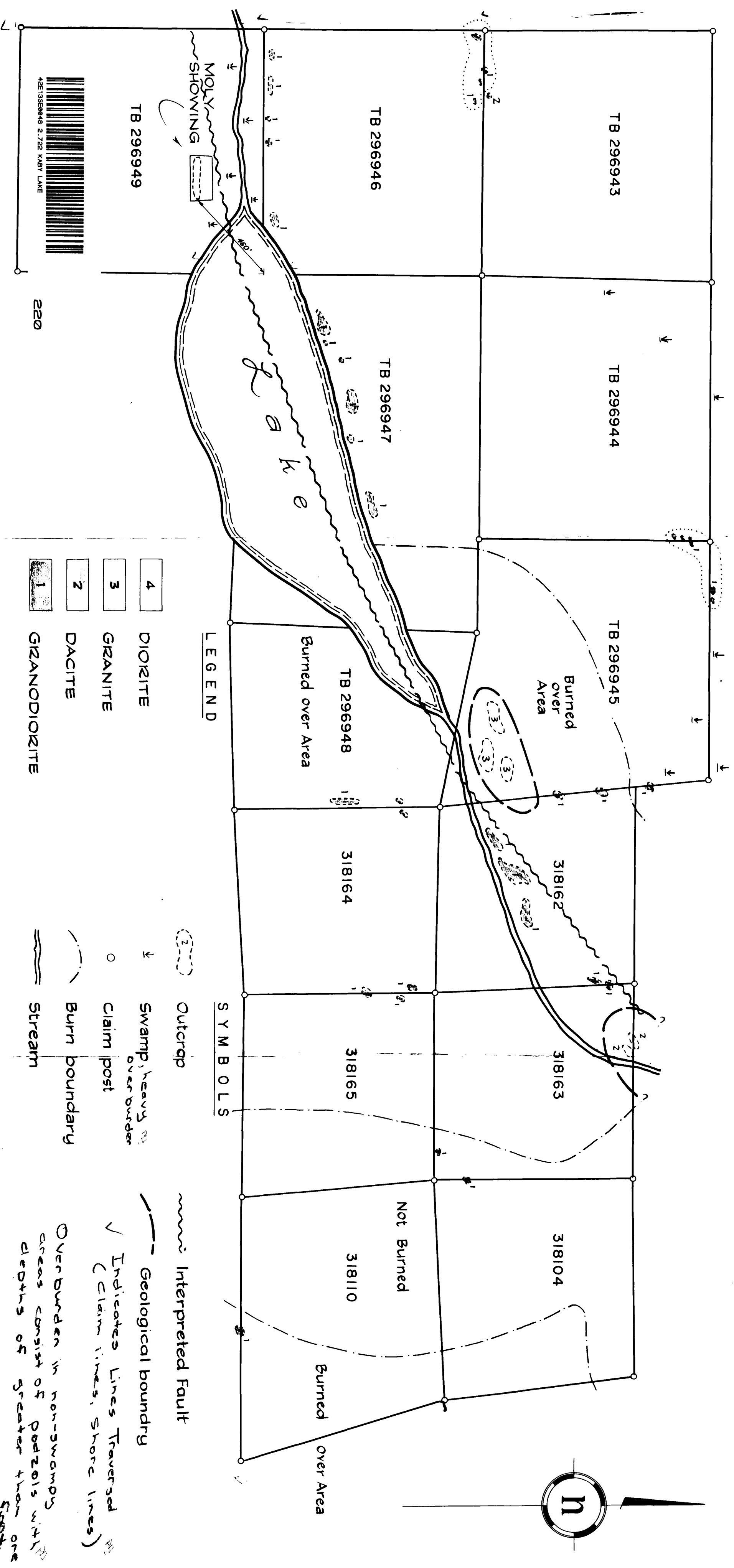
DETAIL
GEOLOGY

A. C. A. HOWE INTERNATIONAL LTD.



J. N. WHEADON, AUG. '71





- LEGEND**
- 4 DIORITE
 - 3 GRANITE
 - 2 DACITE
 - 1 GRANODIORITE

- SYMBOLS**
- ⬇ Outcrop
 - ⬇ Swamp, heavy overburden
 - Claim post
 - Burn boundary
 - ≡ Stream

⋯ Interpreted Fault

— Geological boundary

✓ Indicates Lines Traversed (Claim lines, Shore lines)

○ Overburden in non-swampy areas consist of podzols with depths of greater than one foot.



CHEMALLOY MINERALS LIMITED
 ELMHIRST TWP, THUNDER BAY, M.D. ONT.
MOLYBDENUM PROPERTY
RECONNAISSANCE GEOLOGY
 by
A.C.A. HOWE INTERNATIONAL LTD.

