

42A125E0412 2.2898 GODFREY

010

GEOLOGY REPORT GODFREY 51 PROPERTY N.T.S. 42-A-12/5

# RECEIVED

FFR 1 5 1970

MINING LANDS SECTION

October 19, 1977

E

Qualification (Qualification 2.1814)

GEOLOGY REPORT GODEREY 51 TROPERTY N.T.S.  $42-\Lambda$ -12/5

INTRODUCTION:

The Godfrey 51 Property, consisting of nineteen contiguous claims, numbered P-410424, 410425, 410464, 451641, 498597, 498598 and 498964 to 498976 inclusive, was mapped at a scale of 1:2000 (1cm to 20m) from July to August, 1977. Claims P-410424, 410425 and 410464 were previously mapped at 1" to 100' in September and October 1974 by John J. Watkins.

LOCATION AND ACCESS:

Godfrey 51 is located in northwest Godfrey Township, approximately 25km west of Timmins City Centre. Access to the claim group is best obtained by helicopter from Timmins. The east claims can be reached from the Genex Mine road off Highway 576. Drill roads unsuitable for conventional vehicular traffic also traverse the property; west from the Genex Mine road and north from the old Lally road, 400m south of the property boundary. A camp was set up on the swampy west shore of Steep Lake.

TOPOGRAPHY AND NATURAL RESOURCES:

The property is characterized by large ridges and areas of solid outcrop with low swampy or drift covered areas in between. Moss and lichen cover much of the exposure and stripping was necessary to facillitate mapping.

The higher outcrop areas have sparce growth of Jack Pine, while Spruce and Balsam predominate elsewhere. Birch, Poplar, Moose Maple and Tag Alder are found on the drift covered areas notably to the north. The swamps are generally Spruce with minor patcheb of Cedar, Alder and Tamarack.

Steep Take is dramed by Steep Creek, which flows into Godfrey Creek. Two small creaks drain into Steep Take and one flows into Steep Creek.

#### PREVIOUS WORK:

- And A

「中国の「朝鮮代」に記録しています。

「三日」の「おものの

In 1975 Noranda Exploration carried out mag and H.E.M. surveys on what are the new Godfrey 51 claims. Mespi Mines performed Kadem and E.M. surveys on the same group in 1970. This was followed by the drilling of three holes.

In 1964, Consolidated Brewis drilled twenty holes after conducting mag and E.M. surveys, and some trenching. Their claim group corresponded to the old Godfrey 51 claims plus P-451641, 498597, 498598, 498964, 498965 and 498976.

In the same year Cu-Kam carried out mag and E.M. surveys on what are now claims P-498966, 498974, 498975 and 498976.

The earliest recorded work was done in 1951 by Phillips-O'Neill. Trenching and five drill holes were put down on a group which now corresponds to claims P-498597, 49%98, 498964, 498965, 498966, 451641 and the old Godfrey 51 group.

Government works includes geological mapping by N. Hogg in 1949, 1951 and 1952 for the O.D.M. Further work was done in 1969 and 1970 by R.S. Middleton again for the O.D.M. Geological mapping and a detailed magnetometer survey were carried out.

A high resolution magnetic test grid was cut for the G.S.C. and data gathered from this survey was reported in 1973. This grid was cut at N  $55^{\circ}$  E with lines averaging 158m apart. Seven of the 3m wide lines cross the property to the south of Steep Lake and continue past the property boundaries.

## GEOLOGY: (See Maps In Fockets)

The Godfrey 51 group is underlain by a sequence of mafic to felsic volcanics, striking north-south to south-east and topping east. This sequence is invaded by a myriad of intrusions, including quartz-albite porphyry, granite, grapophyre, gabbro, quartz-diorite, trap dykes and diabase.

LITHOLOGIES:

Mafic Volcanics -

The mafic volcanics are best exposed north and east of Steep Lake. Here, both massive and pillowed flows of basalt crop out. Pillow and flow top breccias are seen, striking approximately north-south and topping east. The pillows, up to lm in long dimension have well formed selvages up to 5cm thick and are quite vesicular. The vesicles show a size gradation from 5cm at the core to 2-5 mm at the pillow rim. The massive flows are also vesicular in places and show a similar size gradation. The pillowed units grade both laterally and vertically into massive flow and incipient pillows are observed in one outcrop.

In hand specimen, these volcanics are fine to medium grained, dark green in colour and are carbonated, notably in the flow top breccias. Small well formed octahedra of magnetite are often observed in this unit.

South of Steep Lake, the pillowed volcanics have very thin irregular selvages which are almost indistinguishable on the weathered surface. These mafic volcanics have a felsic component which forms siliceous bands and "clasts" in a dark chloritic matrix. Similar rocks are seen on the original grid mapped by John Watkins. The formation of this type of unit may be the result of immiscibility processes and is related more to the "curdy" rhyolite than the mafic volcanics. Associated with these felsic bands are disseminated to discontinuous "bands" of pyrite, but these don't appear to be tuffaceous.

? altored

Mafic volcanics are again found south-west of Steep Lake on the original three claims, and also appear to the east by the Genex Mine road. Watkins describes these as "massive, pillowed, pillow breccia and amygdaloidal lavas; fine grained, uniform, chloritic and locally carbonated". To the east of the lavas are massive with minor pillowed sections, schistose, chloritic and carbonated.

A "massive indefinite" unit is possibly exposed near 3+00W on Line 6+00N, associated with "immiscible" material. It shows no flow features and may be intrusive in nature, but is still related to the volcanic succession.

Basaltic material also occurs as rafts caught up within the granophyre.

Felsic Volcanics -

Massive, very siliceous quartz-eye rhyolites striking approximately south-east crop out in the southern part of the property. They weather creamy-white and occassionally show contorted flow laminations. On a fresh surface, they vary in colour with yellow, orange, cream, pink, light green, bluish and grey being noted. The quartz-eyes range from pin-head size to 4mm. Within the rhyolites are canterly trending, narrow lm wide chloritic zones which may represent flow contacts. These "interflow" units also contain quartz-eyes and are rusty and carbonated in places. Probably overlying the massive rhyolites are sericitic schistose rhyolite agglomerates and lapilli tuffs. The clasts, ranging in size from a few millimetres to over 30cm are round to sub-angular in shape. Spherulitic banded fragments are observed in some exposures. Rusty areas containing pyrite have also been noted.

Probably the stratigraphic equivalent of the rhyolite fragmental is an "immiscible rhyolite-andesite". This unit is also closely associated and possibly genetically related to the mineralized zone. The unit is exposed on the original three claims mapped by Watkins and also just south of these claims at 6+30N, 3+20W. A similar unit has also been noted at the east end of Line 7+80N.

Gobs and "stringers" of rhyolite in chloritic material and visa versa are characteristic of the unit. The rhyolite often shows banding, "curdy" and occassionally spherulitic textures. Minor gossans are found scattered throughout the horizon. As the amount of felsic material decreases the unit appears more fragmental in nature. Watkins describes these as "chloritic rhyolite tuffs". The felsic material is completely absent in one exposure and it could be classified as a chloritic mafic volcanic, similar to the volcanics just south of Steep Lake.

Ķ

To the east on claim P-498976, a unit texturally similar to "curdy" rhyolite crops out. Here, possibly immiscible textures have been noted, along with highly contorted bands of coalesced spherules. A minor gossan with pyrite was observed near the top of the unit, close to the contact with mafic volcanics. This unit, however, is believed to overlie the Godfrey 51 mineralized zone.

Still further to the east, at the north-east corner of the property, the base of a very thick massive rhyolite unit is exposed. At the base, tongues of underlying mafic material is intermixed with the fine grained grey rhyolite. The unit also has patches abundant in quartz-eyes.

- 5 -

### Felsic Intrusives -

Intruding the volcanic succession are small plugs of medium to coarse grained white to pink granite, averaging 250m X 150m. The white granite (quartz-albite porphyry) crops out in the south-central, extreme east, and north-central parts of the claim group. Blocks of this material are scattered throughout the granophyre. The pink granite (Type I) is found in the north part of the grid, as well as being gradational with the quartzalbite porphyry in the south-central plug. Both are texturally and mineralogically similar containing cubedral and subhedral grains of quartz and feldspar with sparce mafics and sulphides. Albite dominates in the quartzalbite porphyry while K-feldspar is the main constituent of the pink granite.

Watkins noted a quartz-feldspar porphyry along the gabbro-rhyolite contact, which is probably related to one of the above types. He also describes a "mass of partly digested felsic material within the gabbro complex, comprising a quartz-rich chloritic rock, silicitied quartz porphyry and quartz-feldspar porphyry". This material may be rafts of the felsic intrusive.

Granophyre -

The most abundant and most variable rock type exposed on the property is the granophyre. It occurs as a stock intruding volcanics south, south-west, and east of Steep Lake as well as cropping out on the north-east claims. In outcrop it is very massive and has a knobby-like texture.

Of the seven different phases noted, the most abundant is a dark grey-green, fine to medium grained granophyre. This fairly siliceous variety occassionally contained pink-purple patches of feldspathic material, quartz eyes and cuhedral grains of brown carbonate (ankerite?), especially near contacts. A lighter coloured type, with and without quartz eyes is also present.

Five hundred metres south-west of Steep Lake a very massive, generally coarse grained leucoxene-rich phase is exposed. Here the intrusion contains skeletal crystals of soft yellowy-brown leucoxene (after ilmenite?)

6.

up to lcm in length. Cubes of pyrite 5-10mm in size were also noted. Banding on a scale of 20-30cm per band was observed between coarse and finer grained leucoxene-rich granophyre at 6+80N, 1+50W.

- 7 -

South of Steep Lake, an elongate zone of pink granite (Type II) lies totally within typical granophyre material. This may represent a central core of the complex as only gradational contacts have been observed. It is texturally and mineralogically similar to the Type I granite.

Mafic Intrusives -

Two large bodies of gabbro occupy the west and central parts of the property. Watkins describes the western body as "medium to coarse grained, containing variable amounts of magnetite, plagioclase and mafic minerals, as well as quartz eyes near its contacts". The elongate central body, 1000m X 250m is similar except for its diabase texture in places. These intrusions are probably related to the Kamiskotia gabbro complex.

Associated with the gabbro in the north-west part of the grid is a quartz-diorite. Its contact with gabbro is somewhat gradational and may be genetically related to the gabbro. In other places it resembles the dark quartz eye phase of the granophyre. The unit generally weathers a shade of pink and is quite massive. Texturally it shows wide variation, ranging from a unit with "splotchy" patches of feldspathic material up to 2 cm in diameter to a fairly uniform equigranular rock-containing feldspar, hornblende, and some quartz. Magnetite is a common constituent, once comprising up to low of the rock.

Trap Dykes -

These dykes ranging from 1m to 10m wide are found in several places on the property. They are dark green, fine to medium grained, chloritic, carbonated and show no prefered orientation.

Diabase -

Several north north-west trending diabase dykes ranging

in width from 20m to 60m, cross the property cutting all rock types. These dykes are fine grained at the contacts, but do become quite coarse grained with a distinct diabasic texture near their cores. One dyke deviates from the rest by striking normal to the general trend (i.e. east-west). This dyke is different as it shows up as a magnetic low while the other dykes show a high magnetic response, which allows correlation in areas of no outcrop.

MINERALIZATION: (See Figure 1)

#### Main Showing -

The main showing is exposed on the original three claims and is described by Watkins as follows: " a mineralized zone containing chalcopyrite, sphalerite, pyrite and minor pyrrhotite occurs along a north-south striking rhyolite-andesite contact. The chalcopyrite occurs as blotches and narrow stringers in the rhyolite and andesite. Sphalerite occurs as irregular blotches in the andesite. From the Consolidated Brewis drilling, the mineralization appears to occur as lenses up to 20 feet (6.1m) wide along the rhyoliteandesite contact and dipping about  $-80^{\circ}$  east. A 60,000 gamma magnetic expression roughly corresponds to the zone of mineralization". Several trenches and drill holes have investigated this horizon.

Besides the main showing, nothing spectacular was found during the survey, but a few gossans were noted. A rusty zone containing pyrite was found at 6+20N, 3+20W associated with "immiscible" material; which is identical to the host rock of the main showing.

Another two gossans with minor pyrite were located at Line 3+00N, 1+20W and 3+40N, 1+80W. These are within a rhyolite fragmental horizon which possibly is the stratigraphic equivalent to the "immiscible rhyolite-andesite ".

A re-examination of the south-east claim of the original grid (P-4)0464) turned up several gossans associated with "curdy" rhyolite. These contained disseminated to fairly massive pyrite with the odd speck of pyrrhotite. Two trenches were located.

- 8 -

Two minor gossans containing pyrite were observed to the east at 14+50N, 14+00E within rhyolitic material similar to "curdy" rhyolite, near the contact with the overlying mafic volcanics.

Several pits were found in the Type I granite near 3+30N, 1+80E where quartz veins carrying pyrite and traces of chalcopyrite were observed.

#### STRUCTURAL GEOLOGY:

日本教教会のおいた

二十二日 二日 二十二日

The entire volcanic succession appears to be a monoclinal sequence striking south to south-east and dipping and topping east. Much of the sequence has been lost due to the number of intrusions. The intrusions have no doubt deformed the sequence, but no evidence of major folding is indicated.

A relatively well developed schistosity is present in the volcanics, notably the felsic agglomerates and tuffs and "curdy" rhyolites. The strike of the schistosity varies from approximately  $90^{\circ}$  to  $135^{\circ}$  while dips change  $10^{\circ}$  each side from vertical.

Only very minor faults (actually slips) were noted, with movement less than 10m. The major fault indicated by Hogg's work; striking south-easterly across the property does not appear to exist.

Dul Hullon

REFERENCES:

- Hogg, N. (1954); Geology of Godfrey Township; Ontario Department of Mines Vol. 63, pt 7; Accompanied by map 1954-4 (1" to 1000")
- Kormick, L.J.; McGrath, P.H., Holroyd, M.T.; Hood, P.J.; (1975); Evaluation of High Resolution Aeromagnetic Survey Data Over a Test Range in the Timmins Area, Ontario; Geol. Survey of Canada, Paper 75-18.

Middleton, R.S. (1975); Magnetic, Fetrochemical and Geological Survey of Turnbull and Godfrey Townships, District of Cechrane; Ontario Division of Mines OFR 5118

Watkins, J.J. (1974); Report on the Geology of the Godfrey 51 Claim Group, Godfrey Township; Texasgulf Inc. Files





2A12SE0412 2.2898 GODFRE

900

Ministry of
Natural
Resources

60 Wilson Avenue, Timmins, Ontario, February 14, 1979.

Lands Administration Branch Mining Lands Section Ministry of Natural Resources Room 1617, Whitney Block Queen's Park, Toronto M7A 1W3 Notification of recording

of assessment work credits

RECEIVED

FEB 1 6 1970

MINING LANDS SECTION

Date of recording of work: _	February	, 13,	1979.	
Recorded holder:	Texasgulf (	Canada	Limited,	·

Address: P.O. Box 175, Suite 5000, Commerce Court, Toronto,

Address: P.O. BOX 175, Suite 5000, Commerce Court, Toronto, Ontario. M5L 1E7 Township or Area: Godfrey Township

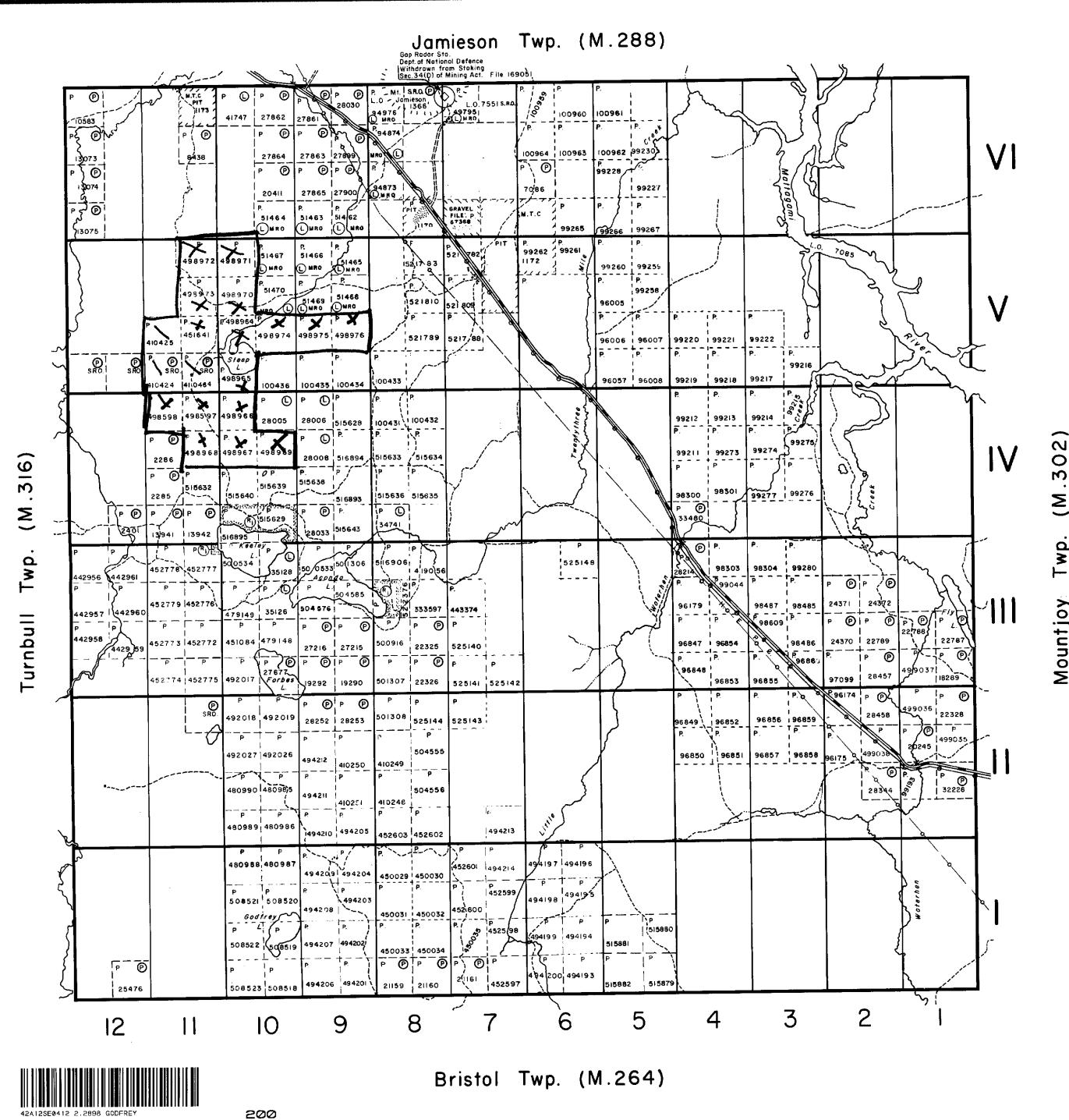
Type of survey and number of Assessment days credit per claim		Mining claims
Geophysical		P-451641,
Electromagnetic	days	P-498597-498598,
Magnetometer	days	P-498964-498976 incl.
Radiometric	days	
Induced polarization	days	
Section 86 (18)	days	
Geological20	days	
Geochemical	days	
Man days 🗌 🛛 Airb	oorne 🗆	
Special provision 🗌 Gr	round 🖾	

Notice to recorded holder:

- Survey reports and maps in duplicate be submitted to the Lands Administration Branch, Toronto within 60 days from the date of recording of this work.
- Reports and maps are being forwarded to the Lands Administration Branch with this letter.

alyce & Kess

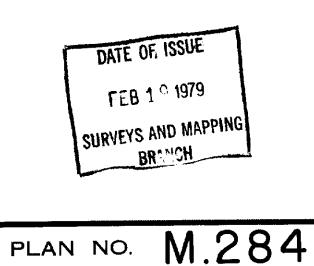
c.c. / Texasgulf Canada - Toronto. Texasgulf Exploration - Timmins



Ο m Σ -М  $\vdash$ ountjoy

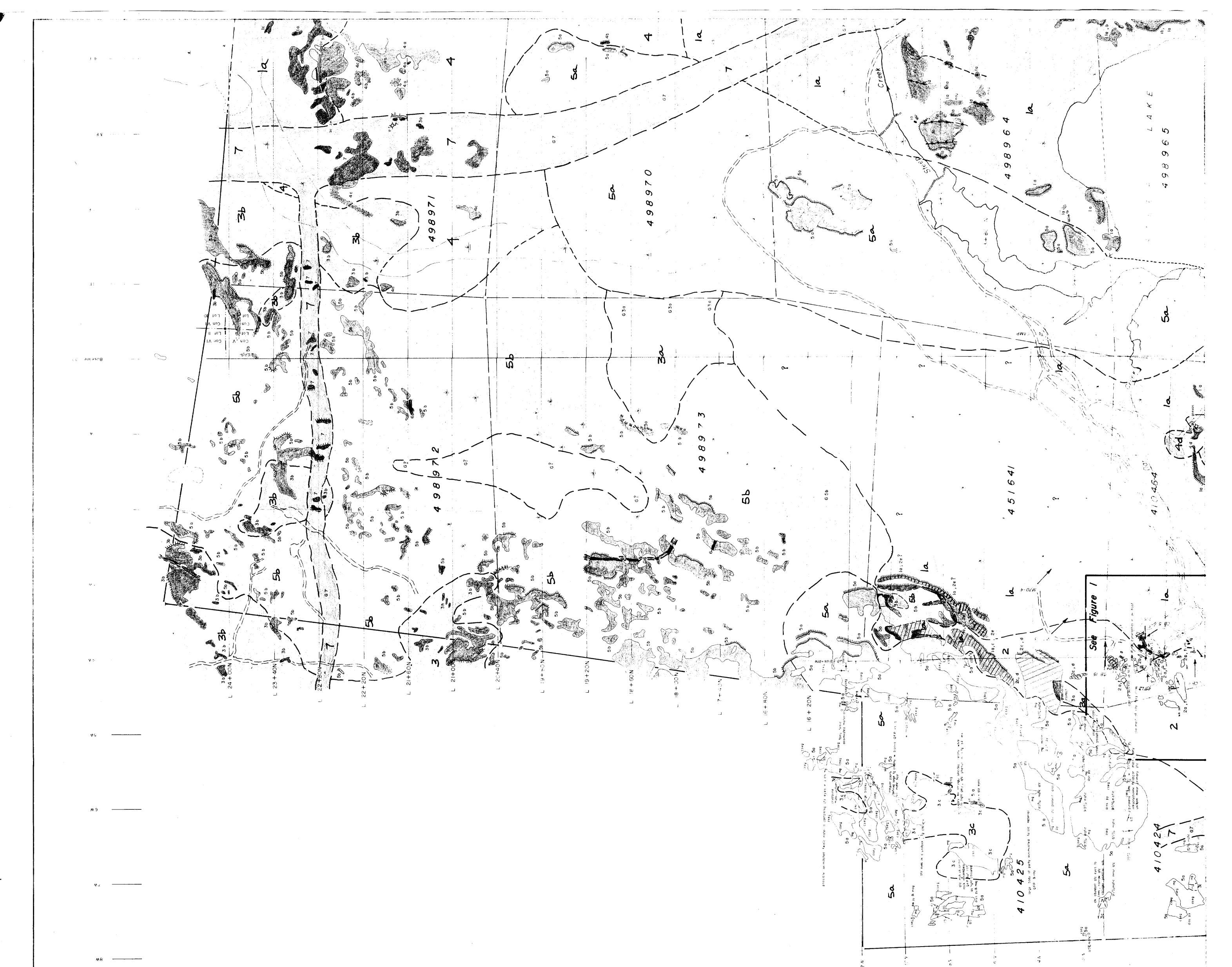
Σ

THE TOWNSHIP OF 2.2898 GODFREY DISTRICT OF COCHRANE PORCUPINE MINING DIVISION SCALE: 1-INCH = 40 CHAINS LEGEND • or P PATENTED LAND C.S. CROWN LAND SALE 🗖 or 🛈 LEASES Loc. LOCATED LAND L.O. LICENSE OF OCCUPATION M.R.O. MINING RIGHTS ONLY S.R.O. SURFACE RIGHTS ONLY ROADS IMPROVED ROADS KING'S HIGHWAYS RAIL WAYS POWER LINES \*\*\*\* MARSH OR MUSKEG MINES С. CANCELLED • PATENTED S.R.O. NOTES 400' surface rights reservation along the shores of all lakes and rivers. Flooding rights on either side of the Mattagami to H.E.P.C. This township lies within the Municipality of CITY of TIMMINS. Reservations: (R) - Reserved for recreational purposes under Sec. 3 P.L.A. File 188543.



ONTARIO MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH



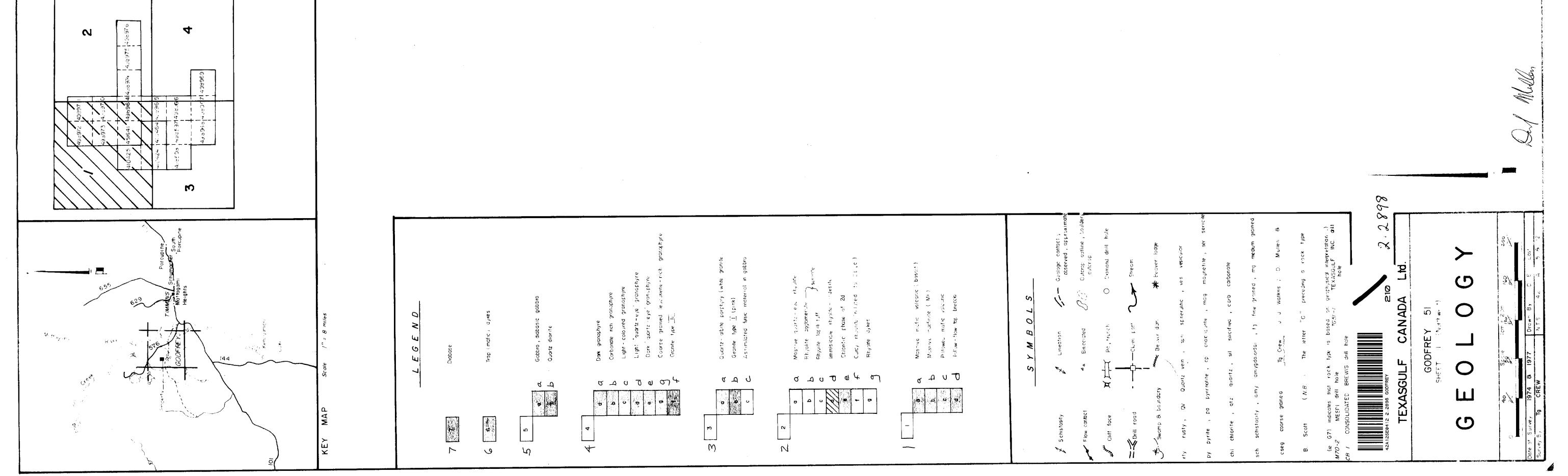
F

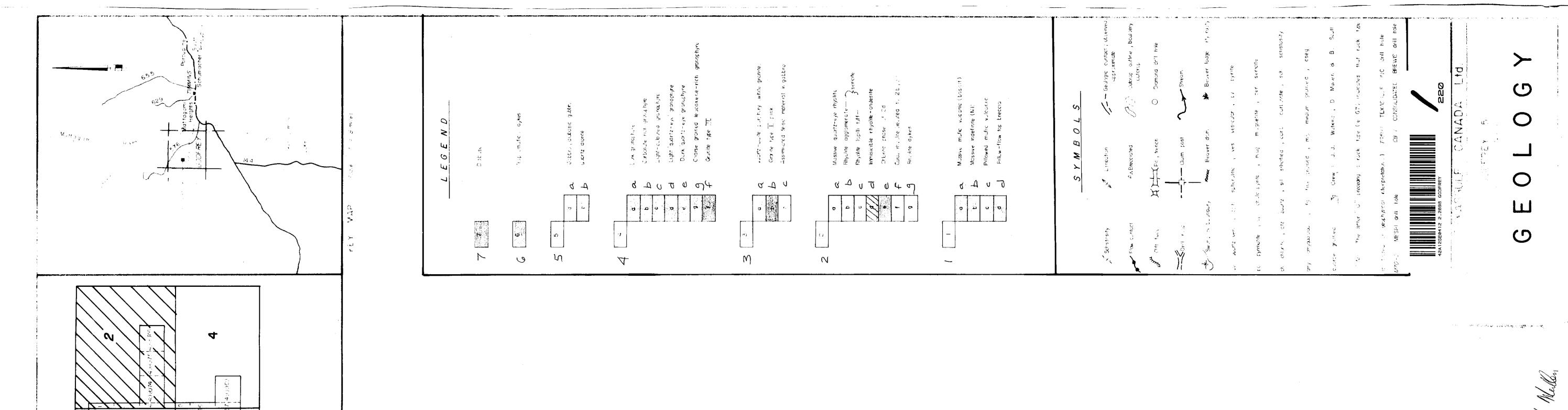
دي. حي -

t

•

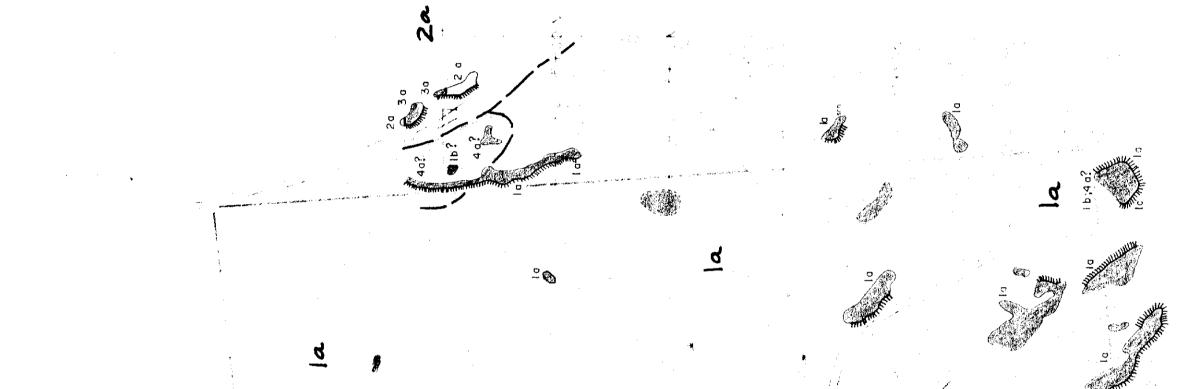
•



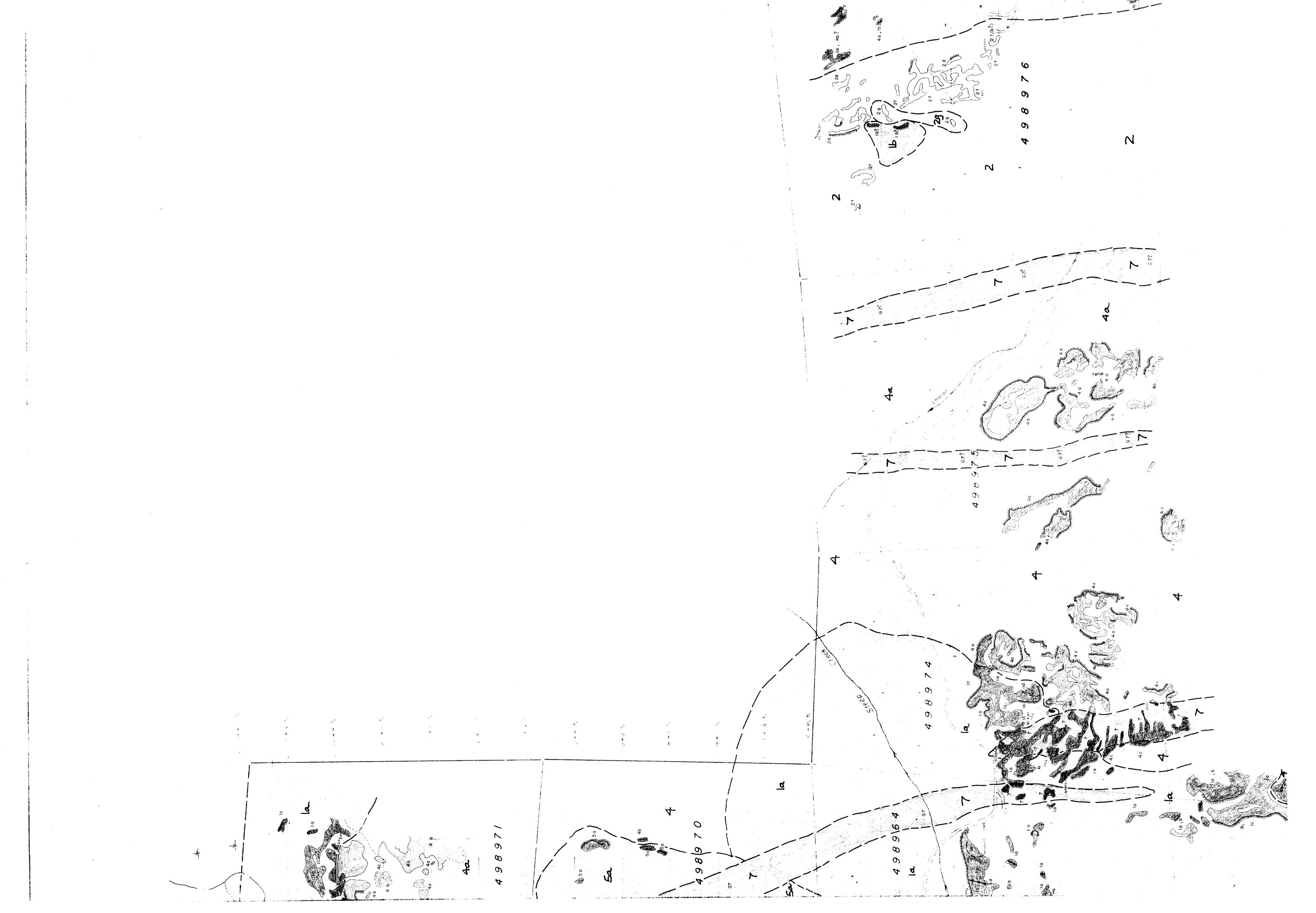


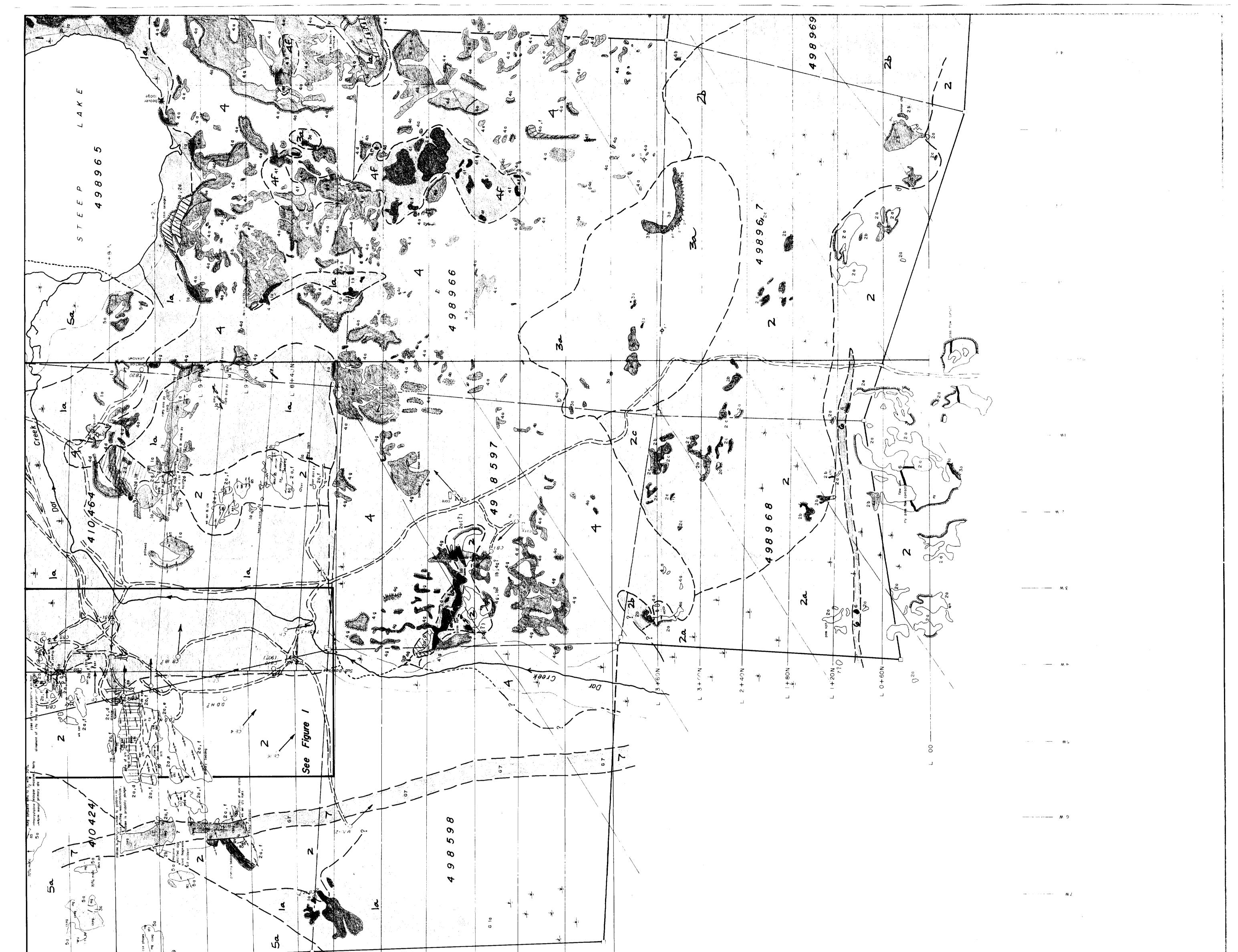
- I ~

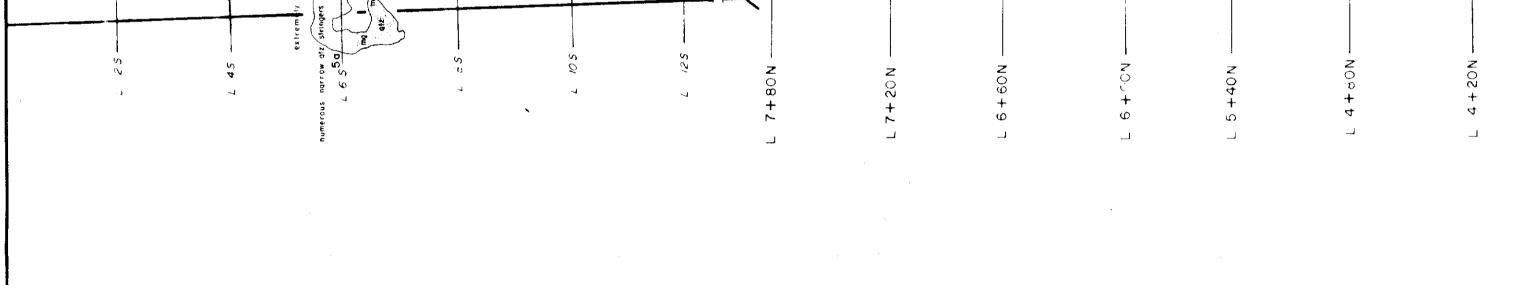
M

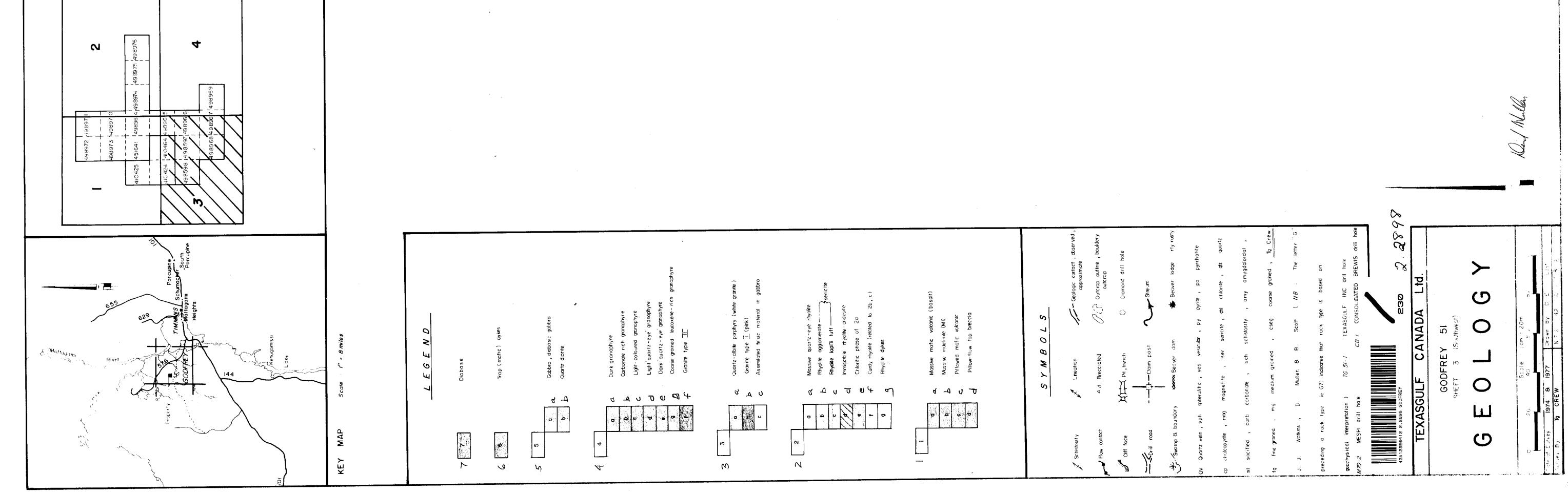


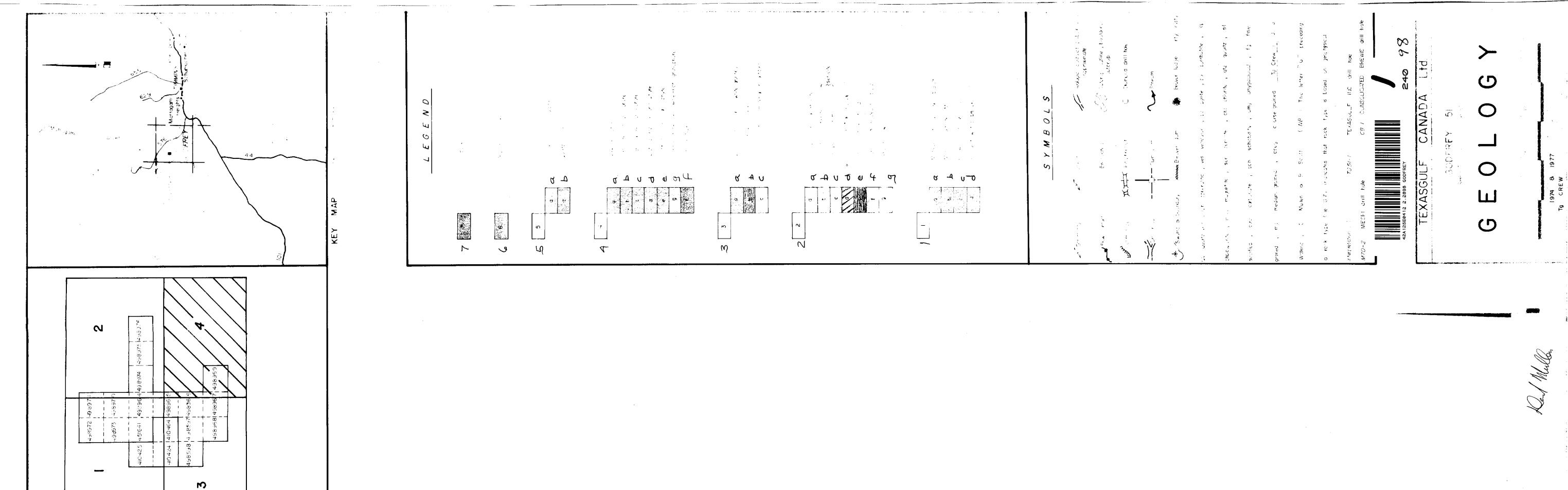
1974 B Tg CREW











ι,

.

