



41P06SE0027 63A.329 HODGETTS

010

GEOLOGICAL SURVEY
MINADA EXPLORATIONS LIMITED
HODGETTS TWP. PROPERTY

(A) LOCATION AND MEANS OF ACCESS TO THE PROPERTY:

The Minada Explorations claim group, consisting of 32 claims, is located in Hodgetts Township, Sudbury Mining Division.

The claim block is located in the SE corner of Hodgetts Township and extends for 10 claim lengths west from a line approximately 1/2 mile west of the Hodgetts - Unwin Township line and is 3 claims wide from north to south.

The property may be reached from the Howard Smith Paper Mills bush road which passes just north of Conglomerate Chutes. From here one travels approximately 1/2 mile down the Wampitei River to a trail which leads SE to the property (Minada Trail). The Minada Explorations camp is located about 1/2 mile along this trail.

The Howard Smith road extends 12 miles to the west to La Palmes Spur on the C.N.R. and also approximately 30 miles to the north to Howard Smith Paper Mills which is 5 miles from Shining Tree, Ontario. (See Key Map on Geological Sketch Map).

(B) OWNERS:

Minada Explorations Limited,
Suite A, 80 Richmond Street West,
Toronto, Ontario.

George Chilian, President.

32 claim block

Survey chained out between September 26th and October 21st, 1956.

(C) TABLE OF FORMATIONS:

Youngest

Overburden including glacial drift (sand and gravel) and angular float.

Olivene diabase - medium grained
dark green.

Conglomerates, fine to medium grained
dark green matrix - well rounded granitic
pebbles including lenses of quartzite and
arkose and separate fine grained
conglomerate rock unit

Disconformity

Arkose - medium to fine grained, containing
red feldspars and quartz fragments.

Fine grained
dark green
slate

Injection breccia -
network of smoky quartz
stringers enclosing
slate fragments.

Smoky quartz stringers,
rust stained on surface
and cut and cap the
slates.

Chesty slates.

Slates with interbedded
quartzite and quartzite
pebbles.

Spotted slates, contain-
ing plates of biotite,
porphyroblasts of quartz
and red garnets.

Well bedded fine
grained slates with
alternate light and
dark green bands.

Oldest

No definite relation in ages of slate units except

that quartz in later (younger) than slates it intrudes.

(D) DESCRIPTIONS OF FORMATIONS:

Beginning with the youngest formation:

1. Fine grained dark green slate. This rock on outcrop is contorted and washed and is cut by smoky quartz stringers along strike and at varying angles to the strike of the slates. The slate is dark green on fresh surface but weathers to a dull whitish green on top.

The depth of weathering is about 1/4". The weathered surface has a scaly appearance and the quartz stringers are stained red on surface.

The slate formation strikes roughly 60° azimuth throughout the property. Bedding, where distinct, shows a flat (0 to 10°) dip to the south. Slaty cleavage where developed also dips flatly to the south.

Fracturing has caused varied joint patterns within the slates throughout the property and in places where joints are closely spaced other geological features suggest fault movement. There has been minor slip cleavage along one joint direction (SE-NW).

For the purposes of the survey this slate formation has been divided into several units:

1A Fine grained green slate which is cut and capped by smoky quartz stringers.

1B. Banded chesty slates that tend to be more compact and are harder than slates of 1A.

1C. Slates with interbedded reddish quartzite and quartzite pebbles.

1D. Dark green spotted slates with parallel banding and containing plates of biotite, porphyroblasts of quartz and red garnets.

These spotted slate zones are narrow (6" - 1') and are at or near the contact with olivene diabase. They are presumably the slightly metamorphosed equivalent of the slates in which they are found.

1E. Well bedded fine grained slates with alternate light and dark bands, especially noticeable on the weathered surface. These slates are found mainly underlying the conglomerate in the southern portion of the property and the apparent dip is very flat to the south, with an east-west strike.

1F. This rock unit has been differentiated and mapped as a separate unit. It is really an extreme case of unit 1A. The force of the intruding quartz material has caused the brecciation of the intruded slates and large and small angular slate fragments are surrounded by smoky quartz. This rock unit has been termed an injection (flow) breccia and is important because of the massive and disseminated

chalcoprite which is found principally within the smoky quartz and to a lesser extent within the slates. This breccia zone is considered the main ore rock type.

2. Arkose:

This rock formation is a medium to fine grained arkose containing red feldspar and smoky quartz fragments with a small amount of biotite.

3. Conglomerate:

There are two distinct types of conglomerate on the property:

(a) A fine to medium grained dark green matrix, containing well rounded pebbles, predominantly granitic. This rock includes lenses of red medium grained quartzite and arkose.

(b) A distinctly fine grained dark green conglomerate which contains small quartz, chert and jasper fragments with isolated granite pebbles throughout the rock. This conglomerate is cut by narrow quartz stringers 1/2 to 1/4" wide striking 220°.

4. Olivene Diabase:

This rock is a medium grained dark green rock containing ferromag minerals including olivene, with lighter feldspar. This rock consistently exhibits the typical diabasic texture on weathered surface.

5. Overburden:

The overburden consists of glacial sand and gravel overlain by brownish grey clayey podsol and burn slash with angular float in places.

(E) STRUCTURAL GEOLOGY:

Three probable faults traverse the property.

One fault strikes roughly NS and passes along the Wampitei River. The geological evidence supporting this fault is the displacement of the two diabase dykes and the closely spaced jointing within the slates close to the fault zone. In addition, a pronounced topographic depression supports the existence of this fault.

The second fault strikes EW and follows both Minada Creek and the Wampitei River. The geological evidence supporting this fault is the pronounced ridge formed by the conglomerate and underlying slates to south. Also the dissimilarity of the rock formations north and south of this ridge.

The third main structural feature is the probable fault following the pronounced draw or topographical depression from Fult Lake to the south east. The geological evidence supporting this is the displacement of the diabase dyke and the closely spaced jointing in the slates just west of this draw.

Unconformable Relation:

There is an unconformable relation between the underlying well bedded slates and the overlying conglomerates on the south bank of the Wampitei River.

The conglomerate, which consists of a medium grained dark green matrix with rounded and sub-rounded granitic pebbles overlies well bedded compact slates which dip flatly to the south.

At the contact, sub angular pebbles of slate are contained in the conglomerate in the lower 6". Larger lenses of pink quartzite (medium to coarse grained) are interbedded with the conglomerate. These lenses are 2-6' deep and 10-25' long.

Thus there is a sharp contrast in lithology between the rocks above and below the contact, the contact is wavy and there is a thin area of conglomerate at the contact making the unconformable relation a DISCONFORMITY.

1. Diabase dykes form a structural anticline with steep limbs.
2. East block has apparently moved up relative to west block. (Bluff on east block in field).
3. Shears, parallel to the strike of the fault dip 85° to west; i.e. fault is probably same steep dip to west. Thus a Normal Fault.

Structure

The above is a diagrammatic representation of the probable fault movement on the Minada claim block (central portion).

(F) MINERALIZED ZONES:

The main mineralized zone lies within claim # S95321 and consists primarily of chalcopyrite within smoky quartz in injection breccia. This zone from surface work has been proved to be 29' wide at its greatest width with mineralization extending 800' along strike. Chalcopyrite is also found disseminated within the slates proper and within the diabase at the contact.

Trench #4 exhibits calcite mineralization at diabase contact with associated native copper and hematite.

The second mineralized zone consists of chalcopyrite and hematite within the breccia zone south of the diabase east of the main showing and across the Wampitei River. This zone is 60' wide and can be traced for not more than 100', due to overburden.

The third zone of mineralization occurs west of the main showing in a breccia zone north of the diabase and consists of disseminated chalcopyrite and hematite.

Minor showings are chalcopyrite and hematite in a shear zone just south of Minada Creek and chalcopyrite in breccia on the west side of Arkose Lake.

SUMMARY:

Chalcopyrite mineralization has been traced along strike of the formations for over two miles although the main zone of chalcopyrite, native copper and hematite is 800' long.

The average grade across 29' of width is estimated at 3 to 4% copper; with grab samples estimated at 20% Cu

The Geological survey with associated line cutting was begun September 26th and completed on October 22nd.

RECOMMENDATIONS:

It is recommended, on the strength of the recent trenching and sampling, prospecting and geologic mapping, that a ground Electro-magnetic survey be carried out over the entire length of the copper showing.

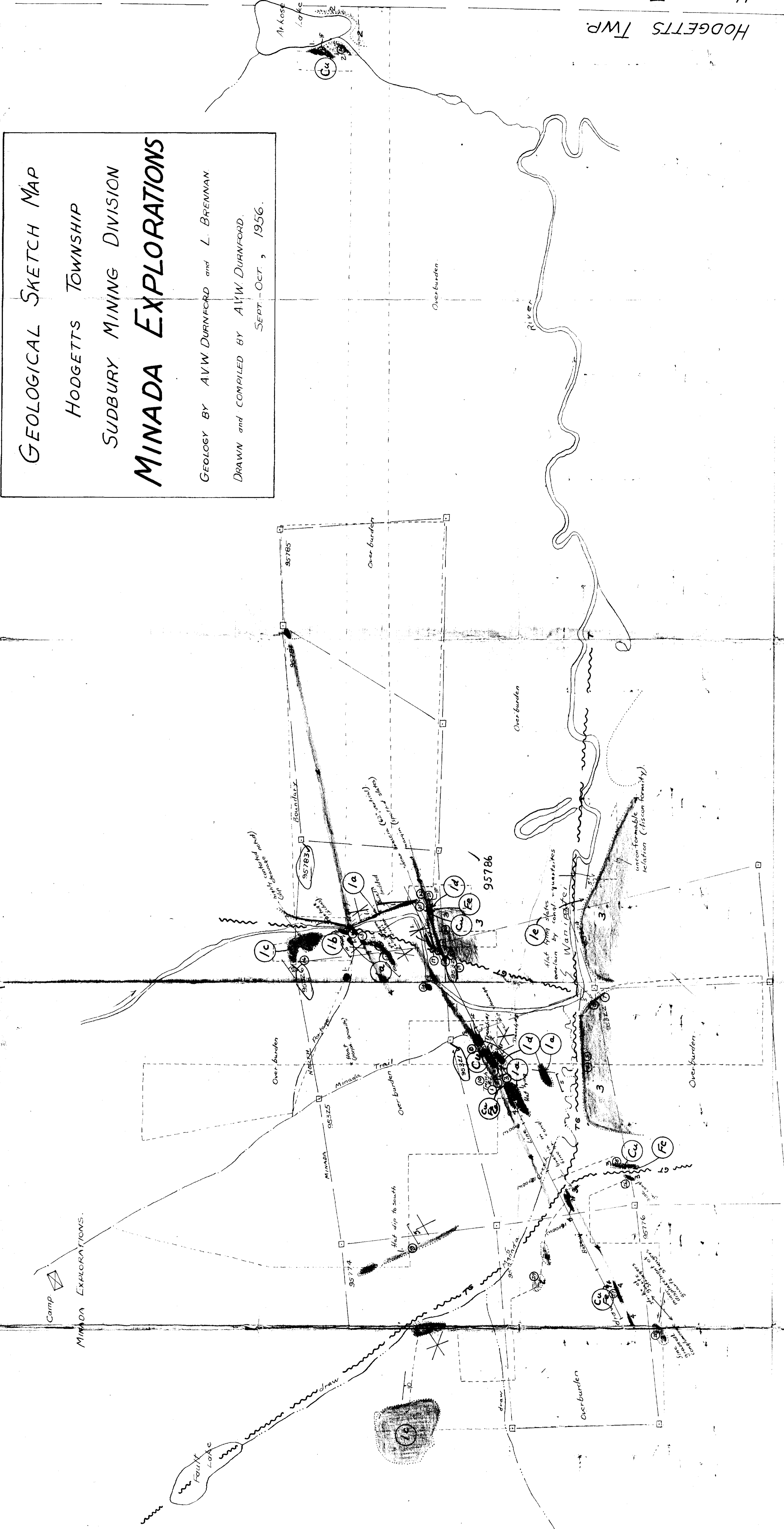
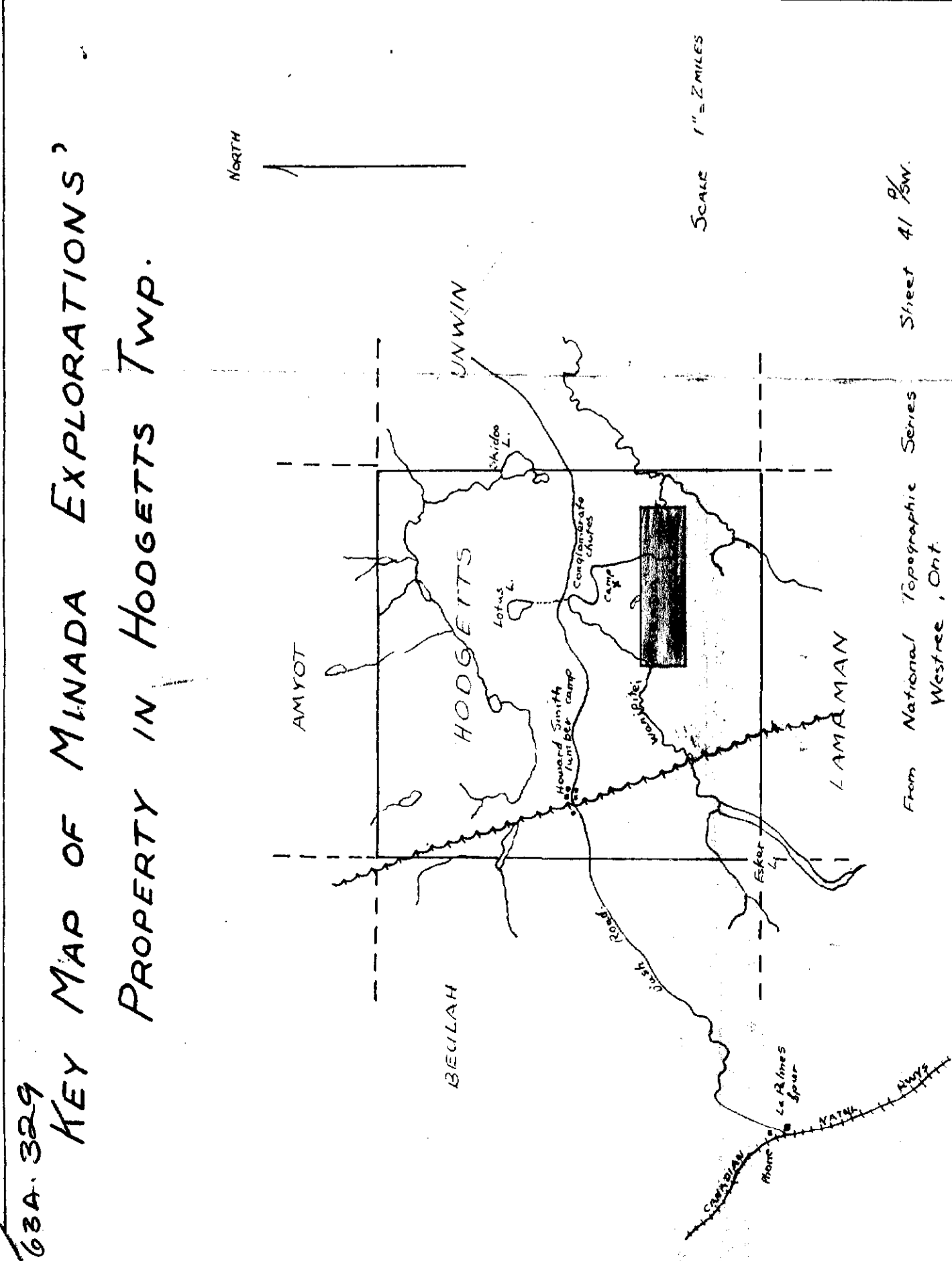
The results of this survey, coupled with a possible ground magnetometer survey and/or aeromagnetic maps soon to be released by the Geological Survey of Canada, will reveal the position and extent of the known sulphide (chalcopyrite) and magnetite mineralization.

A comprehensive diamond drilling program should then be correlated with known surface geology and data compiled

from the geophysical surveys.

Respectfully submitted

Andrew V. Wm. Dunford (B.Sc.)



LEGEND

Youngest

5 Overburden including glacial drift (sand, gravel, and angular float).

6 Dyke, diabase - medium grained, dark green with typical diabase texture noted on weathered surface.

7 Conglomerate, fine to medium grained, dark green matrix with rounded pebbles, predominantly granitic. Includes lenses of red medium grained quartzite and arkose.

Disconformity

8 Arkose - medium to fine grained, containing red siltstone and quartz fragments.

9 Fine grained dark green slate

10 Injection (low) breccia - network of stony quartz stringers enclosing slate fragments.

11 Stony quartz stringers, rust stained on surface cut and rap the slates.

12 Early slates

13 Slates with interbedded quartzite and quartzite pebbles.

14 Spotted slates containing plates of white and purple quartzite and red garnets.

15 Well bedded, fine grained slates with alternate light and dark green bands.

ECONOMIC MINERALIZATION

CHALCOPYRITE ① Mainly in quartz stringers in compact slates.
② Within slates proper.
③ Within diabase at contact.

NATIVE COPPER Mainly in compact slates + associated with calcite at diabase contact.

PYRITE Associated with chalcopyrite.

HEMATITE In breccia zones associated with calcite.

CALCITE Associated with hematite and native copper.

SCALE 1" = 5 CHAINS = 330 FEET

Trail or Portage.
Claim line and claim post.
W.P. Witness post - line crossing R(5) Rapids (drop in feet)
Traverse line.
Fault line.
Leaching and dip.
Leaching (flat lying).
Slaty cleavage and dip.
Leaching (direction).

INTERPRETIVE SYMBOLS

G Based on Geological observations.
T Based on Topographical Features (Ground and Air photos).
GT Mainly Geological, supported by Topographical Features.
Fault (Probable).

Magnetic declination of compass needle is 8° W.

by A.V.W. Durnford

