TRENCHING REPORT

ON

T-H PROPERTY

MONCRIEFF TOWNSHIP

SUDBURY MINING DIVISION

ONTARIO

for

J.G.HUYCKE

(OPAP GRANT NO. OP93-145)

Yves P. Clement

January, 1994

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1. *INTRODUCTION*

The T-H property consists of twenty-two (22) contiguous, unleased, mining claims within Moncrieff Township. The claims are located in the Sudbury Mining Division and cover an area of approximately 345 hectares.

The property is centered at 46 48'N latitude, 81 36'W longitude and is located approximately 70 kilometers northwest of Sudbury, along highway 144 (figure 1). The highway bisects the central portion of the claim block as illustrated in figure 2.

The T-H property is located along the northeastern fringe of the Benny Greenstone Belt, an east-west trending belt of Early Precambrian metavolcanic/metasedimentary rocks. A number of stratabound, base metal deposits occur within the belt. The most important of these is the Geneva Lake Mine which is located southeast of the T-H property in Hess Township. This mine produced 4,717,000 kilograms of zinc, 1,632,900 kilograms of lead and $28,416 of silver between 1941 and 1944.

A recent compilation, by the property owners, of the exploration data generated over the years appears to show that the felsic-mafic metavolcanic rock sequence which extends across the northern portion of the T-H property is stratigraphically equivalent to the sequence hosting the Geneva Lake and Stralak base metal deposits. Contained within the T-H property, and along this potential mineral bearing zone, are coincidental magnetic, electromagnetic and induced polarization anomalies with corresponding anomalous soil and lithogeochemical values.

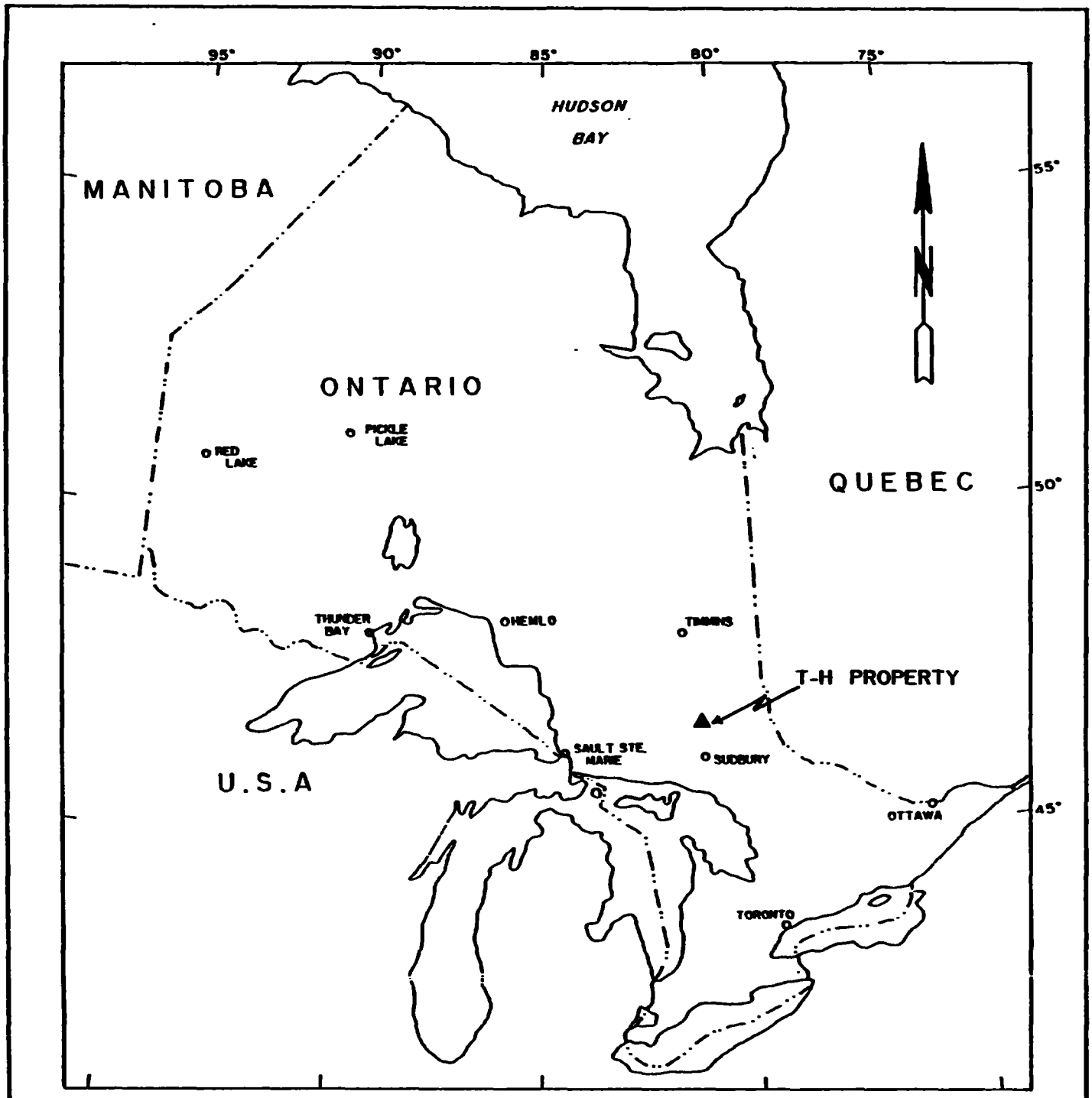

FIGURE 1

GENERAL LOCATION MAP

T-H PROPERTY

MONCRIEFF TOWNSHIP

DECEMBER, 1993

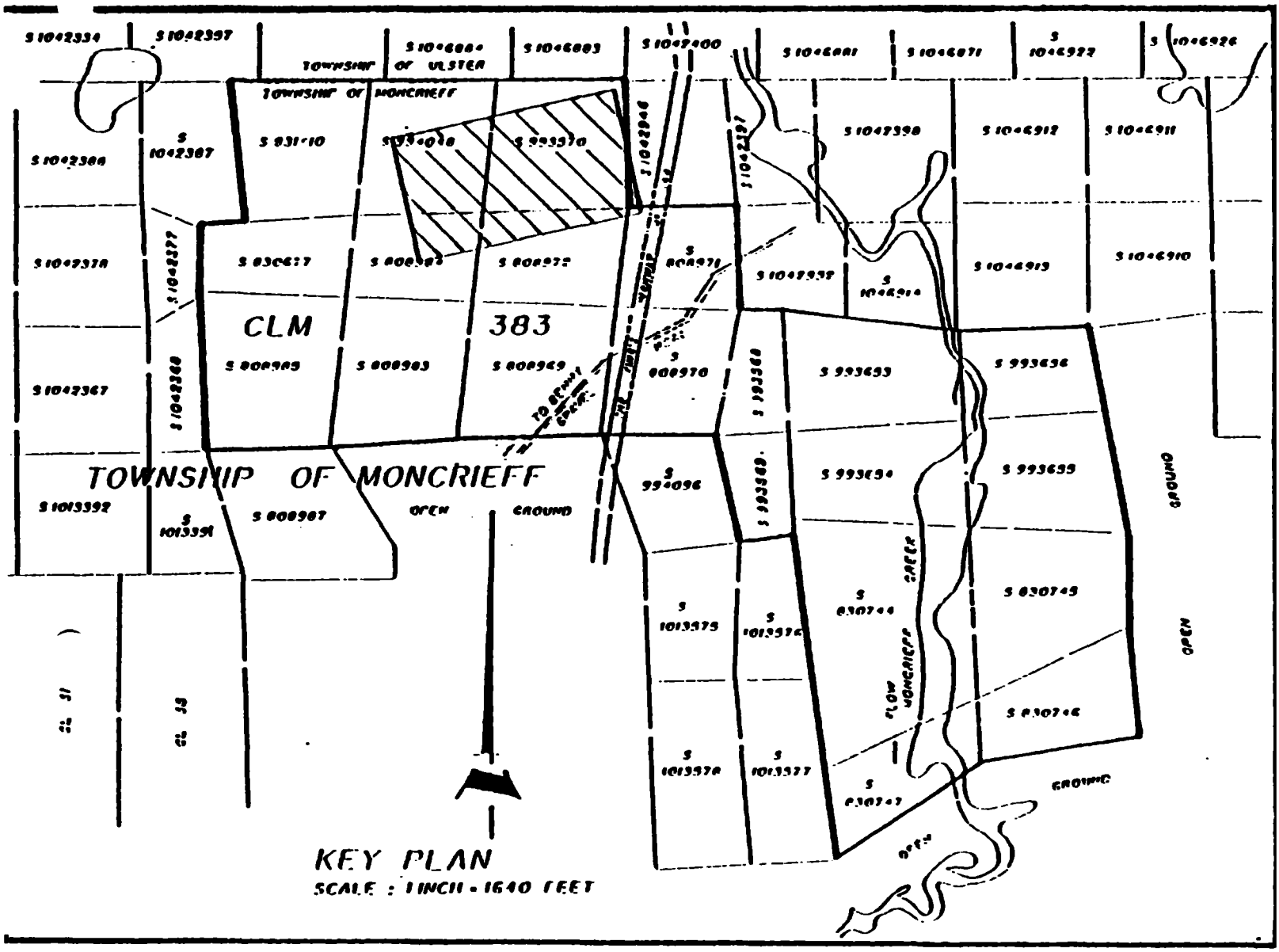

FIGURE 2

CLAIM LOCATION

T-H PROPERTY

MONCRIEFF TWP

(G-4086)

: T-H PROPERTY BOUNDARY

: AREA COVERED BY 1993 TRENCHING

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During the 1993 field season a programme of trench mapping and lithogeochemical sampling was conducted along this favourable horizon. The objective of the trenching programme was two fold. In addition to directly evaluating the exposed subcrop, trenching data was used to strategically position a diamond drill hole along the zone. The drilling programme was undertaken by the property co-owner, Harold Tracanelli (OP93-146), during September, 1993. Trenching and diamond drilling were possible through the assistance provided by the Ontario Prospectors Assistance Program (OPAP). Results of the trenching programme form the basis for this report.

2. *PROPERTY DESCRIPTION*

2.1 Claim Descriptions:

The T-H property encompasses twenty-two (22) contiguous, unleased, mining claims totalling approximately 345 hectares (table 1). The block is located in the north-central portion of Moncrieff Township within the Sudbury Mining Division (Map # G-4086). The property claims, with the exception of claim no.S-808987, have been surveyed but have not been brought to lease. The claims are held jointly by Mr. Harold Tracanelli of Chelmsford (50%) and Mr. John G. Huycke of Dowling (50%). Physiographic features and infrastructures with respect to the claim block are depicted in figure 2.

TABLE 1:

CLAIM NUMBERS	NUMBER OF CLAIMS
S.808969 - S.808972 (incl)	4
S.808983 - S.808985 (incl)	3
* S.808987	1
S.830744 - S.830747 (incl)	4
S.830677	1
S.831410	1
S.993568 - S.993570 (incl)	3
S.993653 - S.993656 (incl)	4
S.994048	1
Total Claims:	22

* - not surveyed

2.2 Location and Access:

The T-H property is centered at 46 48'N latitude, 81 31'W longitude, approximately 70 kilometers northwest of Sudbury, Ontario (figure 1).

The property is readily accessible via paved Highway 144 which passes through the central portion of the claim group. The Benny road, an all season gravel road, provides access to the property's southwestern extremity while the eastern portion is accessed via Bannerman Creek.

2.3 Topography and Vegetation:

Property topography is characterized by hilly terrain with a maximum relief of approximately 45 meters. For the most part fault controlled ravines separate hilly areas. Outcrop exposure varies from <5% to 20% with the remainder of the property being overlain by glacial drift and swamps.

The hills are mantled with thin to moderate thicknesses of boulder till which is in turn covered largely by spruce, poplar and birch. Sandy areas of low relief are characterized by jackpine with spruce, tamarack and alders present along ravine and water course borders.

2.4 Services:

The closest services to the property occur at Cartier which is located 12 kilometers southeast of the property.

A low voltage power line, along Highway 144, extends to within 7 kilometers of the property's south boundary. Bannerman Creek, which disects the property's eastern side, constitutes an adequate water supply for mining operations. Benny, a railway siding along the transcontinental line of Canadian Pacific Railways (CPR), is located 800 meters southwest of the property's southwestern extremity.

3. *PREVIOUS WORK*

Exploration for base metals, gold, silver, iron and uranium has been carried out throughout the property area over the years. Within the Benny Greestone Belt, the bulk of the exploration work has been conducted between Stralak and Geneva Lake. There are a number of stratabound, base metal deposits within the Benny metavolcanic-metasedimentary belt. The most important of these deposits, the Geneva Lake Mine in Hess Township, was discovered by John Collins in 1924 and produced some 4,717,000 kilograms of zinc, 1,632,900 kilograms of lead and $28,416 of silver between 1941 and 1944. The Stralak Deposit was discovered in the mid 1890's and although it is of considerable tonnage and grade has never been brought into production.

On the T-H property, most of the work has been carried out on a pyrite-pyrrhotite bearing horizon that trends across the central portion of the claim block. A drilling programme conducted by

Northcal Oil Ltd. (1959) on this zone yielded relatively poor results. The potential base metal bearing felsic sequence located within the northern portion of the property has been subjected to very little exploration activity over the years. Work carried out in the northern portion of the property, as part of property-wide programmes, include geological mapping, lithogeochemical sampling, ground geophysics and soil geochemistry. Figure 5 depicts significant findings encountered, within the area of question, by Chevron (1976), Noranda Explorations (1985) and Falconbridge Ltd. (1987-1990).

4 GEOLOGY

4.1 Regional Geology:

The property area lies along the southern flank of the Superior Province of the Canadian Shield, a short distance north of the Sudbury Intrusive Complex (figure 3). The geological terrain has been subject to Early, Middle and Late Precambrian depositional, deformational, metamorphic and intrusive events.

The following lithologies are present within the property area; Early Precambrian metavolcanic and metasedimentary rocks; several ages of Early Precambrian mafic and felsic intrusive rocks; Middle Precambrian metasedimentary rocks of the Huronian Supergroup; Middle Precambrian Nipissing Diabase dykes and sills; lamprophyre and breccia bodies of varying compositions and ages and Late Precambrian olivine diabase dykes.

The Benny Greenstone Belt consists of an east-west trending zone of Early Precambrian metavolcanic and metasedimentary rocks. The belt

is approximately 40 kilometers long and averages approximately 2.4 kilometers in width. The belt is enclosed within Early Precambrian granitic and migmatitic rocks which dips steeply southward and may represent the remnant of a previously more extensive supracrustal sequence. A number of cyclic repetitions from mafic to intermediate to felsic are observed in the metavolcanic rock sequence. Major lithologies include mafic flows (basaltic and andesitic), (andesitic-rhyolitic) pyroclastics including tuffs, lapilli tuffs and tuff-breccias and minor felsic flows (rhyolitic and dacitic). Metasedimentary rocks include wackes, siltstones, sandstones, cherts, graphitic and sulphide bearing metasedimentary rocks and oxide facies iron formations. The rocks of the Benny Belt have been subjected to upper greenschist to lower amphibolite facies, regional metamorphism and are generally strongly deformed in character. There are a number of stratabound base metal deposits within the Benny Greenstone Belt.

4.2 Property Geology:

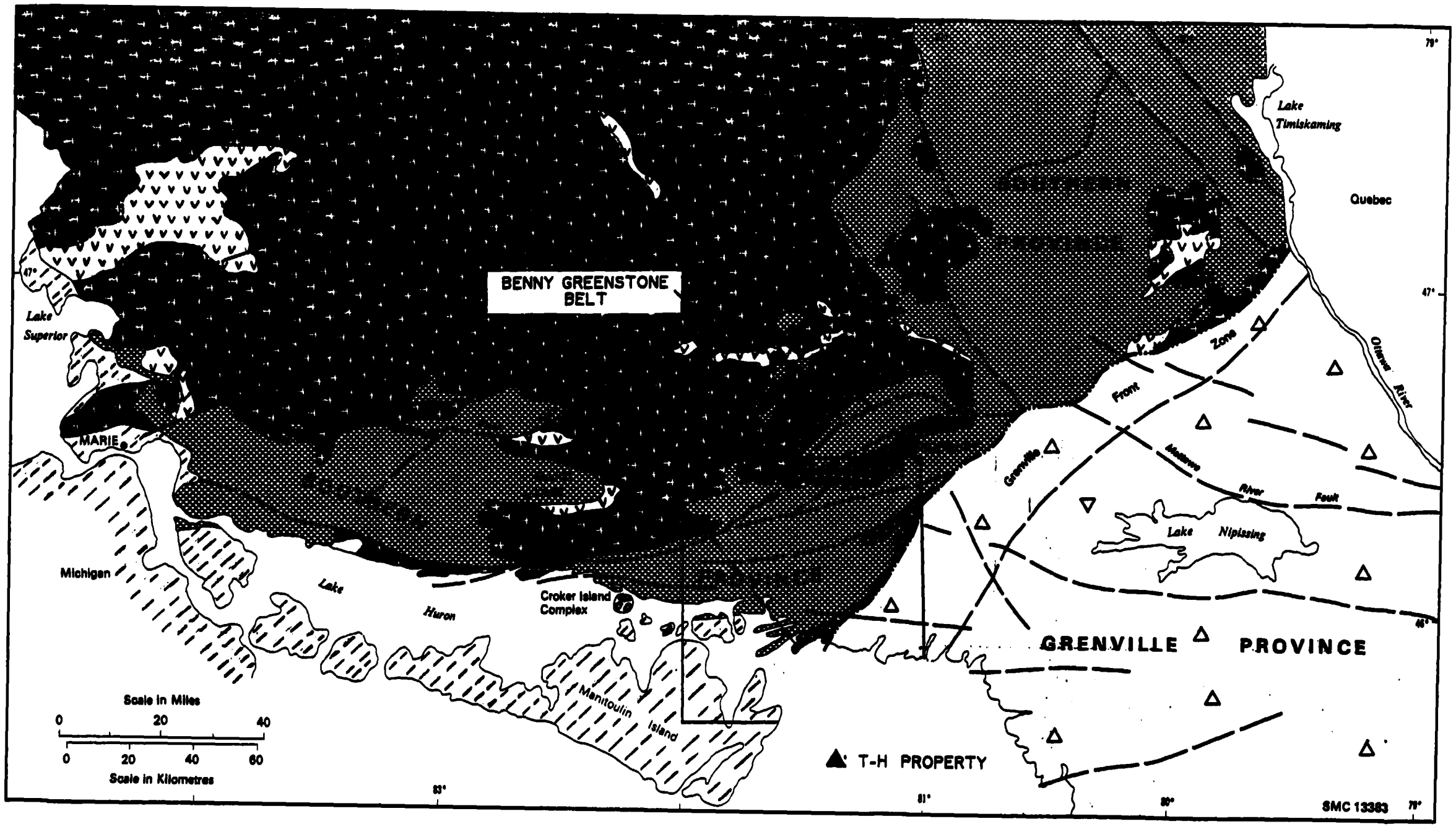
The T-H property lies along the eastern extremity of the Benny Greenstone Belt, an east-west trending belt of Early Precambrian metavolcanic and metasedimentary rocks (figure 4). The Benny Belt is approximately 40 kilometers long and averages approximately 2.4 kilometers in width. Major lithologies include mafic flows (basaltic and andesitic), (andesitic-rhyolitic) pyroclastics including tuffs, lapilli tuffs and tuff-breccias and minor felsic (rhyolitic and dacitic) flows.

The southeastern half of the T-H property is dominated by andesitic tuff-breccia while the northwestern half consists of a

FIGURE 3

T-H PROPERTY

REGIONAL GEOLOGY



LEGEND

Late Precambrian and Paleozoic rocks.

GRENVILLE PROVINCE

Middle and Late Precambrian metasediments and felsic plutons.

SOUTHERN PROVINCE

Middle Precambrian intrusions.

Middle Precambrian, Huronian, and Whitewater rocks and Nipissing Diabase intrusions.

SUPERIOR PROVINCE

Early Precambrian felsic plutons and migmatites.

Early Precambrian metavolcanics.

SYMBOLS

Grenville Front Boundary Fault.

Fault.

Approximate northern limit of Middle Precambrian orogenic effects.

Modified Figure 2, Chart C, OGS REPORT No. 166.

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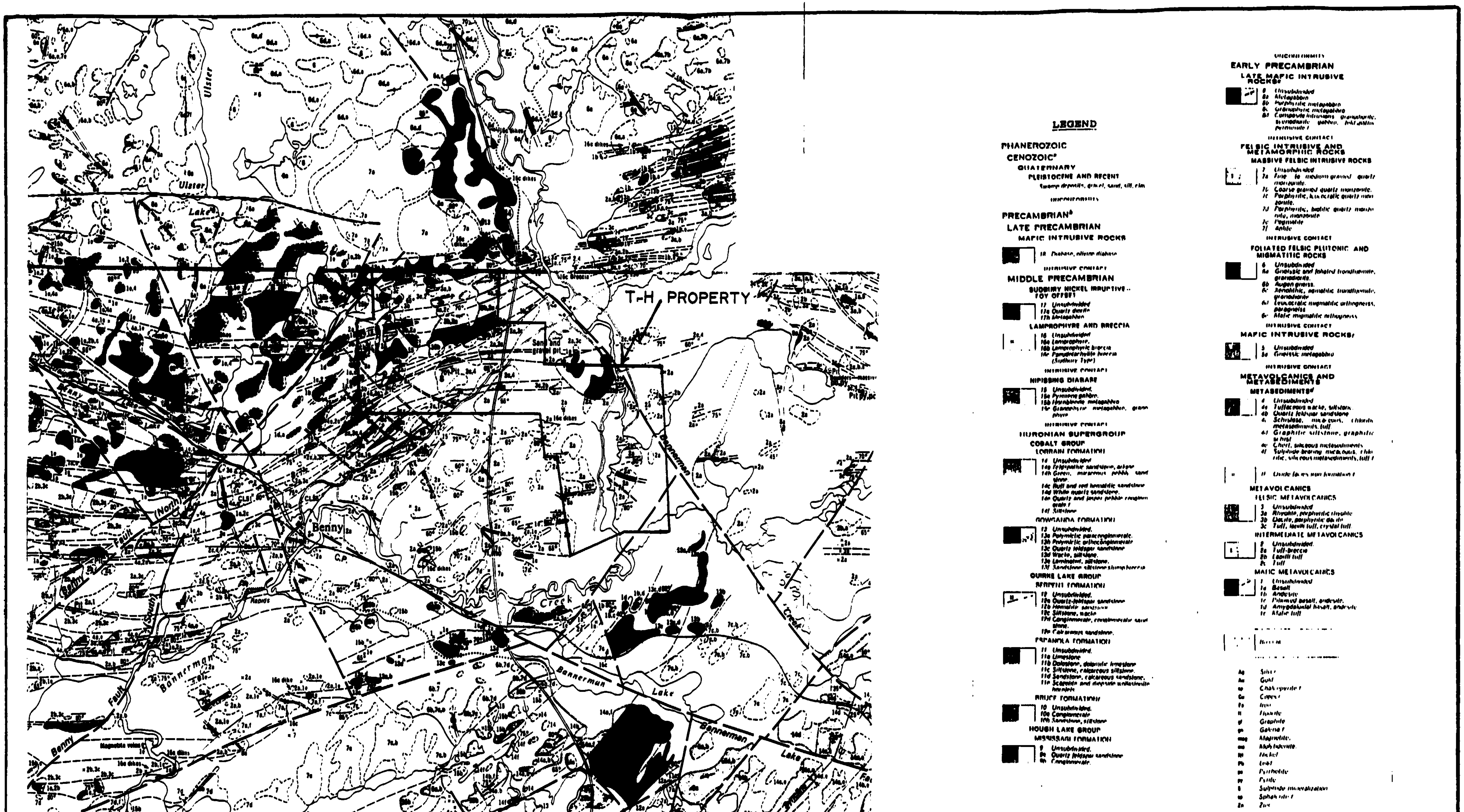

FIGURE 4

PROPERTY AREA GEOLOGY
T-H PROPERTY

(from OGS MAP 2435)

SCALE; 1:31,680

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repetative mafic, intermediate and felsic metavolcanic rock sequence. The metavolcanic sequence is east-northeasterly trending and steeply dipping to the south. The prospective felsic-mafic metavolcanic horizon which forms the objective of the 1993 trenching programme lies along the northern margin of this sequence. According to OGS Map No.2435, major lithologies within the metavolcanic rock sequence include intermediate tuffs and tuff-breccias, mafic flows and tuffs of basaltic-andesitic composition and porphyritic felsic rocks of rhyolitic-dacitic composition. Intercalated metasedimentary rocks consisting mainly of tuffaceous wackes and siltstones are also present within the sequence. A thick sequence of pyrite-pyrrhotite-graphite bearing, volcanoclastic, micaceous metasediments extends across the central portion of the northeastern half of the property. This horizon, which host large amounts of iron sulphide but relatively low base metal tenor, has been the object of most exploration programmes on the T-H property over the years.

Middle Precambrian metasedimentary outliers, of the Huronian Supergroup, consisting of Gowganda Formation sandstones, wackes and conglomerates are present along the northern flank of the property. An extensive Nipissing diabase intrusion is present within the northwestern portion of the claim block. Late mafic intrusives (metagabbro dykes) are relatively abundant throughout the property. The Bannerman Creek and Benny Creek faults trend across the southeastern and northwestern portions of the property respectively.

5. *TRENCHING PROGRAMME*

A detailed compilation of past exploration data (geological, geophysical and geochemical) indicates that the felsic-mafic metavolcanic rock sequence that trends through the northern portion of the T-H property is stratagraphically equivalent to the sequence hosting the Geneva Lake and Stralak base metal deposits. The horizon is further enhanced on the T-H property by coincident geophysical anomalies (magnetic, electromagnetic and induced polarization) with geochemical anomalies from soils and lithogeochemical sampling. Past geological mapping and lithogeochemical sampling programmes have been restricted due to extensive glacial drift cover in the perspective area. The implementation of a trenching programme was deem to be the most cost effective way to further evaluate this potential base metal bearing horizon.

During the 1993 field season a programme of mechanical trenching, trench preparation (subcrop washing), geological mapping and lithogeochemical sampling was conducted along this horizon within the northern portion of the T-H property (claims S.993570,S.994048). The work was conducted under supervision of Yves Clement, a Sudbury-based geological contractor, during June and July, 1993.

The initial phase involved 78 hours of mechanical trenching. The trenching was completed by Mainville Lumber of Chelmsford utilizing a John Deer 440 skidder with a mounted backhoe. A total of approximately 730 linear meters of trenching/stripping was completed along the potential base metal bearing felsic horizon. Five (5) sections (grid lines) spanning over a 600 meter strike length were

trenched across the prospective horizon. Sections were positioned to expose lithological contacts, lineaments/structural features and areas encompassing geophysical or geochemical anomalies (figure 5). Due to time and funding constraints, the southeast trench of section 3+00W and line 5+00W trenching remain unwashed and unmapped. The property owners plan to complete the trench mapping during the coming field season.

The exposed subcrops were subjected to power washing in preparation for geological mapping and lithogeochemical sampling. Upon establishment of spray painted base lines the trenches were mapped at a scale of 1:100. Representative lithogeochemical sampling was conducted in combination with the mapping. The results of the mapping/sampling portions of the programme will be discussed in the remainder of this report.

5.2a Trenching Area Geology (Lithologies and Field Relationships):

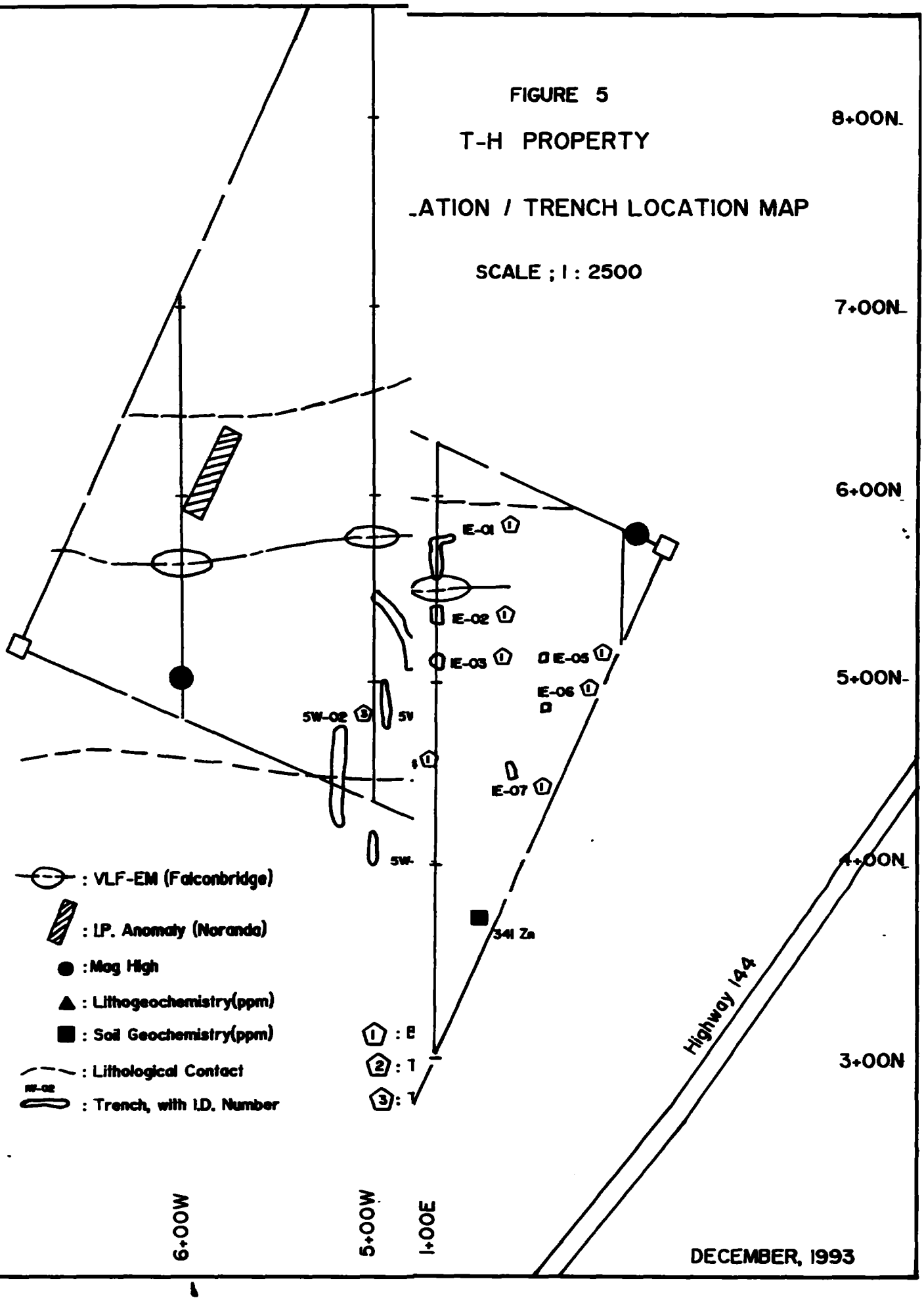
The area encompassing the trenched sections is dominated lithologically by feldspar phyric felsic (rhyo-dacitic) volcanic rocks. The unit typically consists of light grey to light pinkish-white, buff to light salmon pink weathered, very fine grained felsic material containing trace-3%, locally 5-15%, feldspar crystals and rare-trace, locally 2%, quartz crystals. Feldspar crystals are subhedral-euhedral (+/- equant) and range in size from <0.5 millimeters to 3.0 millimeters. On average the crystals range from 0.75 millimeters to 1.0 millimeters. Quartz crystals exhibit roughly equant outlines and range in size from 0.5 millimeters to 2.0 millimeters in diameter. Aphanitic groundmass appears to consist of a

FIGURE 5

T-H PROPERTY

_ATION / TRENCH LOCATION MAP

SCALE ; 1 : 2500



quartz/feldspar mixture and generally contains a maximum of +/- 5% fine grained mafics (chlorite + biotite). The rock is relatively homogeneous in appearance with local increases and decreases in feldspar crystal percentage being the only differentiating characteristic. The unit is massive in character with no apparent signs of stratification being observed during the mapping programme. Flattened, rounded to subangular, breccia-size (5-20 centimeters), monolithic felsic fragments comprise 1-5%, locally to 15%, of the rock mass. Fragments are strongly vesiculated/pumiceous in texture and unsorted in character. Rare, lensoid shaped, quartz amygdules up to 3.0 millimetes in length were observed in a few localities.

Due to the following criterias the felsic rocks dominating the trenching area are tentatively interpreted to constitute a pyroclastic flow(s): minimal internal stratification; presence of relatively rounded, strongly vesiculated/pumiceous fragments and the unsorted nature of these fragments. This interpretation is tentative however and based on limited lateral exposure provide by relatively narrow, 1-3 meter wide, trenches.

The area in question is characterized by a moderate-strong, northeasterly striking (050-070 degree), moderately steeply (60-80 degree) southeasterly dipping, penetrative foliation. The foliation is defined by parallel orientation of chlorite, biotite and sericite along foliation planes as well as the flattened nature of fragments. Relatively extensive expanses of the trenched sections exhibit moderate-strong deformation (shearing). Sheared feldspar phyric felsic material typically exhibits weak-moderate, locally strong, foliation controlled silica, sericite, chlorite +/- biotite. The

felsic horizon is sulphide poor with sulphide mineralization typically consisting of nil-rare, locally trace, finely disseminated and foliation controlled pyrite.

Mafic intrusive (gabbroic) bodies are prevalent within the trenched area. These rocks fall within two(2) main categories: Early (pre-tectonic) Mafic Intrusive rocks and Late (post-tectonic) Mafic Intrusive rocks. Early mafic (metagabbro) sills/dykes are by far the most common of the two intrusive types. The metagabbro bodies are characterized by moderate-strong deformation and metamorphism, indicative of their pre-tectonic nature in respect to Early Precambrian deformation activities. The early metagabbros are fine-medium grained, subequigranular to locally feldspar subporphyritic, moderately to strongly foliated rocks which are a relatively homogenous mixture of amphibole (uralite?) and plagioclase? feldspar. These metagabbros are typically moderately chloritized and exhibit weak-strong fracture controlled quartz and epidote which occur as fine fracture fills and pods. The unit also shows a very deep weathering. The early metagabbros occur in northeasterly trending, steep southeasterly dipping sills with their orientation being conformable with the northeasterly trend of the metavolcanic rock sequence. The sills range in width from 1.0 centimeter to 5.0 meters but average 10-30 centimeters in width.

Late (post-tectonic) mafic, metagabbro bodies are essentially undeformed and transect earlier formed tectonic features exhibited in older lithologies. Late metagabbros tend to occur as erratically oriented dykes ranging in width from 10.0 centimeters to 15.0 meters. These dykes average between 30 centimeters and 2.0 meters in width. A

fine grained, Nipissing Diabase dyke, in excess of 30 meters in width, occurs at the southern extremity of the L1+00W trench section. Rare-trace, locally 2%, pyrite is present within, along and/or proximate to all mafic intrusive bodies.

The felsic-mafic metavolcanic rock contact, located along the northern flank of the trenched area, was not trenched during the 1993 programme due to it's location along a steep sided/swampy ravine (fault?). Similarly, the southern felsic-mafic contact was not exposed due to heavy glacial drift cover.

5.2b Structure:

The dominant tectonic feature of the trenched area is a moderate to strong penetrative foliation/cleavage. The northeasterly striking (050-060 degree) moderate-steeply dipping (60-80 degrees) foliation is defined by hairline wafers of secondary minerals such as sericite, chlorite and biotite. Although not observed at many localities within the trenches, flattened and parallel breccia size lithic fragments also define the foliation. The foliation appears to be subconcordant to the metavolcanic rock sequence's primary stratification. Extensive zones of stronger deformation/shearing occur within the trenched sections. Shearing in combination with alteration is responsible for the formation of pseudo-fragments within the felsic metavolcanic rocks. These fragments result from the truncation of the rock by intersecting cleavage planes, thus forming lenses of isolated material. Foliation controlled quartz, sericite, chlorite bands and stringer accentuate the process by further isolating the truncated fragments from the main rock mass.

Minor faults and joints are numerous throughout the area. Most faults and joints have steep to vertical dips and relatively erratic orientations, although the principal directions are north-east and north north-westerly. Minor dextral and sinistral displacements of 2-20 centimeters were observed along quartz stringers and narrow mafic sills/ dykes. A strong east north-easterly (070 degrees) trending, topographic lineament interpreted as a fault/shear occurs along the northern flank of the trenched area. A narrow breccia zone was observed along the edge of the ravine at the northern extremity of trench #0-01.

5.2c Alterations:

The type and degree of alteration within the trenched area appears to be dependant on lithology, structural features and proximity to intrusive bodies. Typically the felsic volcanic rocks exhibit very weak to weak foliation and fracture controlled sericite and chlorite. Weak-moderate, locally strong, foliation controlled sericite and chlorite characterize zones of deformation and shearing. In addition to sericite and chlorite, sheared felsic rocks commonly exhibit weak, locally moderate foliation controlled silica and very weak to weak biotite enrichment. Silicification generally consists of very thin (<0.5-2.0 millimeter) foliation concordant bands and lenses. Weak-moderate patchy, light pink to cream bleaching occurs locally within the felsic volcanic rocks. This bleaching may be indicative of feldspathization.

The early mafic intrusives typically exhibit moderate, pervasive chloritization of mafic minerals and weak to moderate saussuritization

of the feldspars. Weak, locally moderate-strong, fine fracture controlled quartz, epidote and chlorite commonly occur within, along and/or proximate to mafic intrusive bodies. Early mafic intrusives also exhibit moderately to strongly developed alteration ribbing. This feature is the result of differential weathering of quartz-epidote-chlorite fracture fillings.

5.2d Mineralization and Lithogeochemistry:

Sulphide mineralization is relatively restricted in terms of occurrence and abundance within the trenched area. Sulphide mineralization consists, for the most part, of rare-trace, locally 2%, finely disseminated and fracture controlled pyrite. These sulphides occur within and/or proximate to mafic intrusive bodies. Felsic metavolcanic rocks are essentially sulphide barren with only rare, finely, disseminated pyrite observed in a few localities.

A total of 22 lithogeochemical samples were collected during the 1993 trenching programme. Samples were collected in the field on basis of sulphide mineralization, veining, shearing and/or alteration. Representative composite chip samples were collected wherever possible. Of the 22 rock samples, 17 consisted of felsic metavolcanic rock, four (4) of mafic intrusive rock and one (1) of quartz veining. Samples were analyzed by XRAY Laboratories Limited of Don Mills, Ontario. Analytical procedure utilized a multi-acid digestion followed by a 32 element induced current plasma (ICP) analysis. Gold analyses were obtained using conventional fire assay with an atomic absorption (A.A.) finish. Sample descriptions are provided in Appendix 1 and analytical result are presented in Appendix 2.

Reflecting the sulphide poor nature of the felsic rocks within the trenched area, the feldspar phyric felsic volcanic samples failed to return any anomalous base metal values. Mafic intrusive samples yielded a few weakly anomalous (80-220 ppm) base metal values for zinc, copper and nickel. Kard (1981) obtained similar base metal values from the Benny Area mafic intrusives. As anticipated all samples returned gold values below the detection limit of 1 ppb.

5.3 Section 1+00E Trenching:

Trenching on section (line) 1+00E targeted the mafic-felsic rock contact, a VLF-EM conductor and an anomalous soil geochemistry value of 341 ppm zinc. Unfortunately the contact lies within an alder swamp while the area over the geophysical and geochemical anomalies coincides with a plain of extensive glacial drift (sand). A total of seven(7) test trenches/pits were excavated along the section but all trenches failed to reach bedrock (figure 6).

5.4 Section 0+00 Trenching:

Section 0+00 targeted coincidental VLF-EM and induced polarization anomalies lying along the northern fringe of the prospective felsic metavolcanic horizon. The area also yielded an anomalous lithogeochemical zinc value of 3180 ppm during a previous programme. Section 0+00 consists of two(2) trenches spanning approximately 175 meters, from 4+80N to 5+95N.

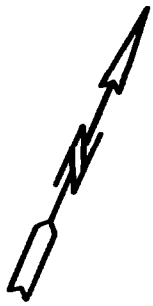
Trenched section 0+00 is dominated lithologically by feldspar phyric felsic volcanic rocks. The unit typically consists of an aphanitic, felsic groundmass with trace-3%, locally 15%, relatively

FIGURE 6

T-H PROPERTY

SECTION 1+00 E TRENCHING

SCALE : 1 : 500



6+00 N

5+75 N

IE-01

IE-02
(4.5 m deep, filled-in)

5+50 N

IE-05
(3.5 m deep, filled-in)

IE-03
(3.5 m deep, filled-in)

IE-06
(3.5 m deep, filled-in)

5+25 N

IE-04

IE-07
(2.5 m deep, filled-in)

5+00 N

L 1+00 E

IE-04 : Trench with I.D. Number

NOTE: Bedrock not reached in any of the trenches / pits.

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FIGURE 7

T-H PROPERTY

SECTION 0+00 TRENCHING

TRENCH No. 0-01

SCALE ; 1 : 100

GEOLOGICAL LEGEND

FSFV : FELDSPAR PHYRIC FELSIC VOLCANIC

EMI : EARLY(PRE-TECTONIC) MAFIC INTRUSIVE (METAGABBRO)

LMI : LATE(POST-TECTONIC) MAFIC INTRUSIVE (GABBRO)

SYMBOLS

- foliation, strike and dip
- contact, strike and dip
- shear / fault, strike and dip
- jointing, strike and dip
- breccia-size lithic fragments
- overburden
- rock sample, with I.D. number

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FIGURE 7a

T-H PROPERTY

SECTION 0+00 TRENCHING

TRENCH No. 0-02

SCALE : 1 : 100

GEOLOGICAL LEGEND

FSFV : FELDSPAR PHYRIC FELSIC VOLCANIC

EM : EARLY(PRE-TECTONIC) MAFIC INTRUSIVE (METAGABBRO)

LM : LATE(POST-TECTONIC) MAFIC INTRUSIVE (GABBRO)

SYMBOLS

- 78° : foliation, strike and dip
- 60 / 70° : contact, strike and dip
- 60° : shear / fault, strike and dip
- : jointing, strike and dip
- ∞ : breccia-size lithic fragments
- : overburden
- ▲ : rock sample, with I.D. number

DECEMBER, 1993

0+00 W | 0+05 W | 0+10 W | 0+15 W | 0+20 W

4+80 N

4+85 N

4+90 N

4+95 N

5+00 N

5+05 N

5+10 N

5+15 N

5+20 N

0+07 W

0+09 W

Deep Boulder Till

MOSS COVERED OUTCROP

FSFV

75°

Moderately-strongly foliated FSFV exhibiting weak foliation and fracture controlled silica ; sericite and weak-nil chlorite / biotite

Qtz(epidote, chlorite) stringers dipping shallowly to SE

Fine(1-3mm) qtz/epidote/chlorite fracture fills

Moderately-strongly foliated Moderately,pervasively, chloritized Trace foliation controlled pyrite

EM

#2804

Hardpan

Moderately-strongly deformed(sheared) FSFV exhibiting weak-moderate foliation conforming silica as thin foliation concordant qtz bands(1-5mm); weak foliation and fracture controlled chlorite; weak,locally moderate, foliation sericite

85°

Narrow(1-2cm) shallowly dipping(15-30° SE) Qtz(epidote, chlorite) stringers : hangingwall eroded / faulted ? ; SE-NW striations on exposed hangingwall planes of stringers

Boulder

3-5 cm drusy Qtz(epidote, chlorite) stringer; euhedral qtz / epidote crystals withh vugs

Weakly-moderately, semi-pervasively, silicified FSFV exhibiting moderate, patchy, light pinkish bleaching(feldspathisation ?); rock mottled in nature and primary texture locally obliterated: Very rare, fine grained, disseminated pyrite.

2815

Mud / Till

2812

Bedrock ? / large boulder ?

Chloritic gabbroic(EM) material with an irregular drusy qtz(chlorite) vein(3-10cm) Trace,locally 2-3%, pyrite within and/or proximate to vein

2813

Moderately-strongly, pervasively silicified FSFV : rock very blocky :n nature: moderate fracture controlled chlorite / calcite; rare very fine grained disseminated pyrite

Fracture plane - shallow dipping(30° NE) chlorite slip with polished surface

Several large, angular boulders / frost heaved blocks of siliceous / moderately chloritic FSFV

equant, greyish-white feldspar grains/crystals. Rare to locally 1% equant quartz grains are also present. The felsic horizon is characterized by a moderate-strong, northeasterly striking, southeasterly dipping, penetrative foliation. The southern third of trench #0-01 exhibits a moderate-strongly developed shearing. Local horizons contain rare-10%, flattened, breccia sized (5-15 centimeter), vesiculated/pumaceous fragments. The fragments tend to be monolithic and felsic in character and occur in otherwise homogenous, feldspar phyric material. Early (pre-tectonic) mafic intrusives, containing moderately -strongly deformed and altered metagabbros are prevalent within the trenched section. Metagabbros tend to occur as narrow sills ranging in width from <1.0 centimeters to 1.0 meters with average widths of between 20-30 centimeters. Moderately to strongly foliated, biotite phenocryst bearing, lamprophyre dykes also occur within the section.

Alteration within the feldspar phyric felsic volcanic rock consists, for the most part, of weak foliation controlled sericite, chlorite and silica. Zones of stronger deformation, specifically along the southern third of trench #0-01, typically exhibits weak-moderate, locally strong, shear controlled sericite, silica and chlorite. Local zones of weak-moderate, semi-pervasive, bleaching (silicification?) are also characteristic of areas with stronger deformation. The northern extremity (10 meters) of trench #0-02 exhibits weak-moderate, locally strong, semi-pervasive silicification with the primary feldspar phyric texture being obliterated.

The feldspar phyric felsic unit is relatively sulphide barren with rare, locally trace, finely disseminated pyrite encountered.

Rare-trace, locally 2%, finely disseminated pyrite is typically present within, along and/or proximate to mafic intrusive bodies. The induced polarization anomaly, lying within the southern portion of trench #0-01, appears to reflect such metagabbro related mineralization. Trace to 1% pyrite bearing metagabbro sills and to a lesser degree lamprophyre dykes comprise approximately 20% of this moderately-strongly sheared zone. The VLF-EM anomaly lying approximately at 5+50N appears to reflect the moderately sheared, fractured and blocky nature of the rocks.

5.5 Section 1+00W Trenching:

Section 1+00W, approximately 175 meters in length, exposed practically the entire width of the prospective felsic horizon. As in the case of section 0+00, the northern felsic-mafic metavolcanic rock contact lies within a steep sided, swampy ravine (fault?) while the southern contact falls within an alder swamp. Unfortunately, due to time/funding constraints the northern half of section 1+00W (trench #1W-01) was not mapped.

The southern half of section 1+00W (trench #1W-02), like the entire trench area is dominated lithologically by feldspar phyric felsic volcanic rocks. The trench is characterized by moderate-strong deformation (shearing) along more or less it's entire 115 meter length. Deformation consists of a strong, northeasterly striking (050-060 degree), southeasterly dipping (70-75 degree), penetrative fabric (shearing/cleavage). Shearing commonly results in the formation of pseudo-fragments within the feldspar phyric felsic rocks. Deformation zones typically exhibit weak-moderate, locally strong,

Problem Page
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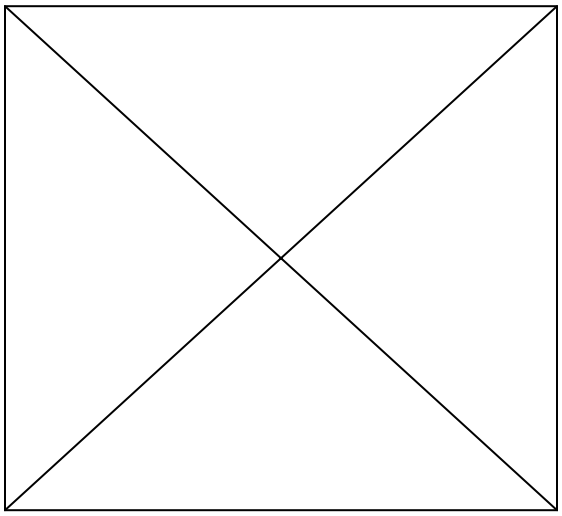

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FIGURE 8
T-H PROPERTY
SECTION 1+00 W TRENCHING
TRENCH No. IW-02
SCALE ; 1 : 100

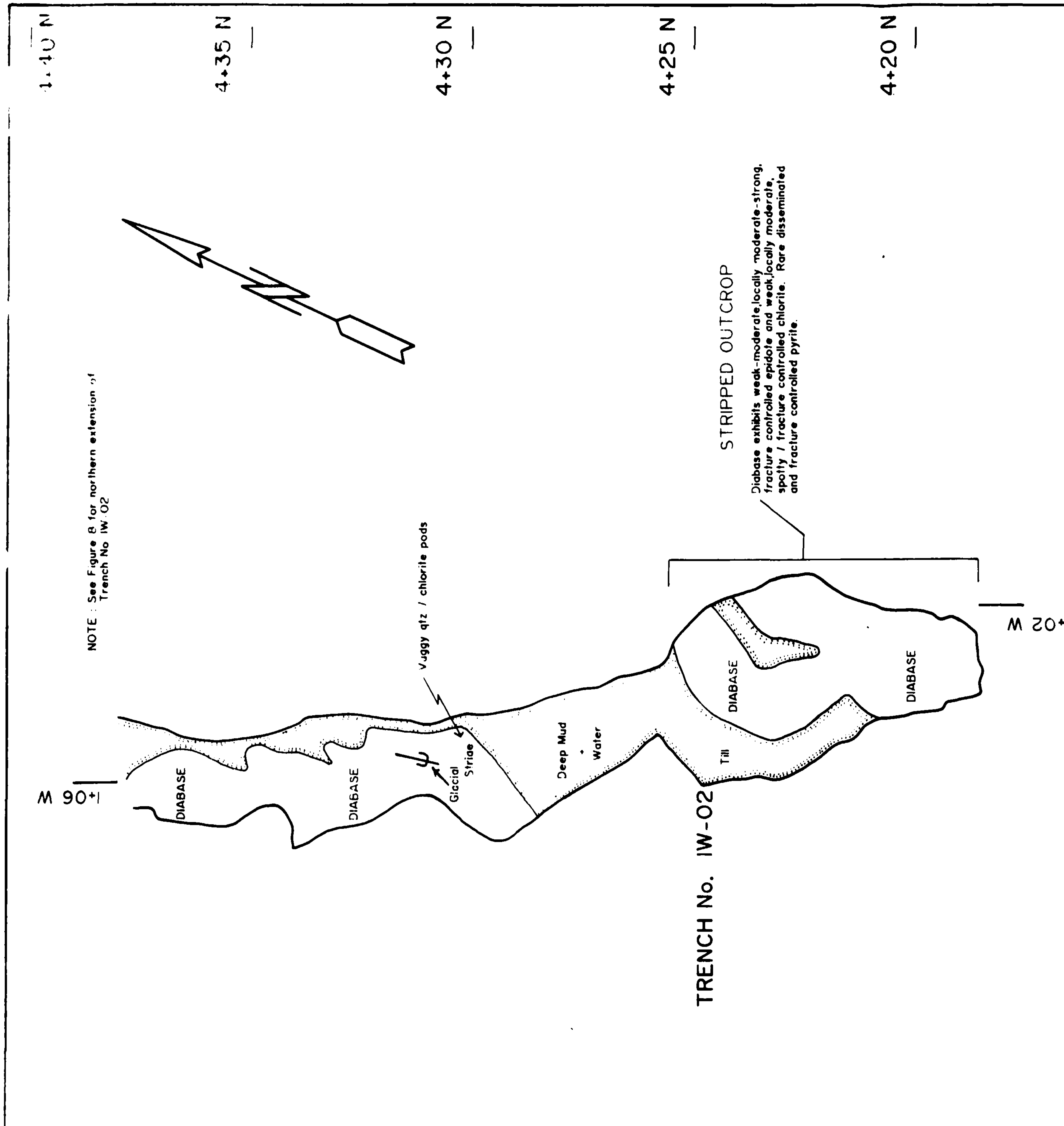
FIGURE 8a

T-H PROPERTY

SECTION 1+00 W TRENCHING

TRENCH No. IW-02 (con't)

SCALE ; 1 : 100



GEOLOGICAL LEGEND

FSFV : FELDSPAR PHYRIC FELSIC VOLCANIC

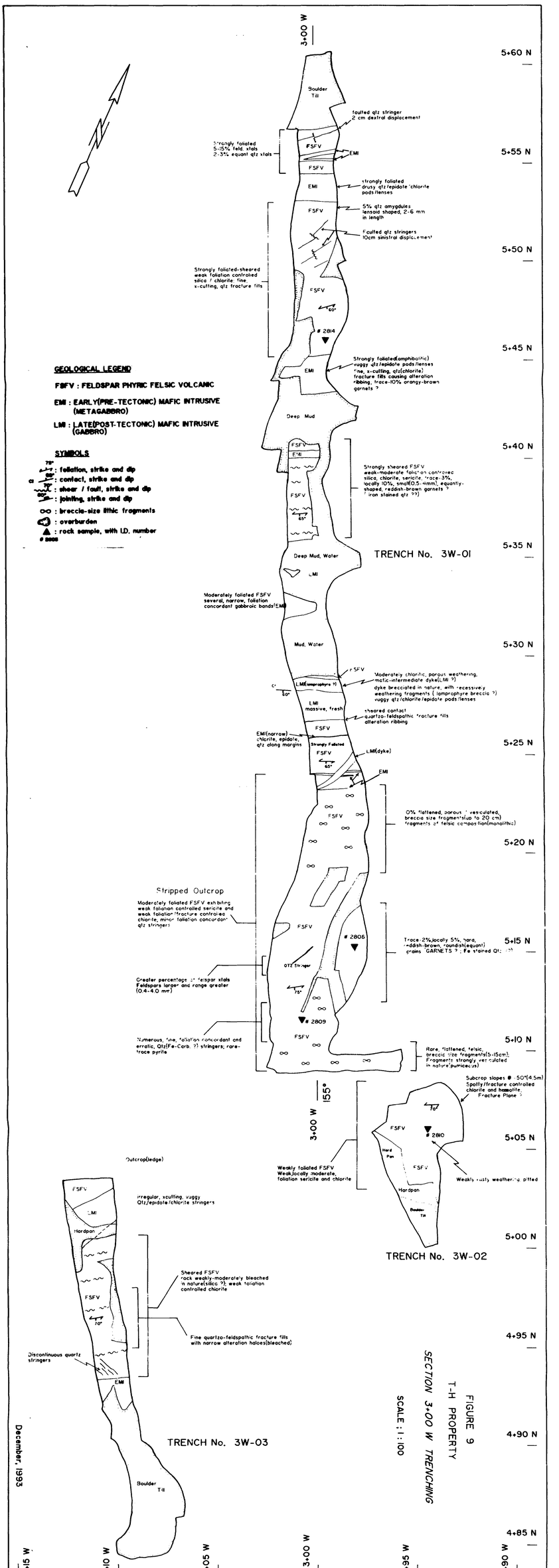
EMI : EARLY(PRE-TECTONIC) MAFIC INTRUSIVE (METAGABBRO)

LMI : LATE(POST-TECTONIC) MAFIC INTRUSIVE (GABBRO)

SYMBOLS

- 70° : foliation, strike and dip
- 80° : contact, strike and dip
- 70° : shear / fault, strike and dip
- 80° : jointing, strike and dip
- ∞ : breccia-size lithic fragments
- : overburden
- ▲ : rock sample, with I.D. number # 3808

DECEMBER, 1993


3+00 W
5+60 N
5+55 N
5+50 N
5+45 N
5+40 N
5+35 N
5+30 N
5+25 N
5+20 N
5+15 N
5+10 N
5+05 N
5+00 N
4+95 N
4+90 N
4+85 N
3+15 W
3+10 W
3+05 W
L 3+00 W
2+95 W
2+90 W
Boulder Till
faulted qtz stringer 2 cm dextral displacement
Strongly foliated 5-15% feld. xtals 2-3% equant qtz xtals
FSFV
EMI
strongly foliated drusy qtz/epidote/chlorite pods/lenses
5% qtz amygdules lensoid shaped, 2-6 mm in length
Faulted qtz stringers 10cm sinistral displacement
Strongly foliated-sheared weak foliation controlled silica / chlorite fine, x-cutting, qtz fracture fills
2814
Strongly foliated(amphibolitic) vuggy qtz/epidote pods/lenses fine, x-cutting, qtz(chlorite) fracture fills causing alteration ribbing, trace-10% orangy-brown garnets ?
Deep Mud
Strongly sheared FSFV weak-moderate foliation controlled silica, chlorite, sericite, trace-3%, locally 10%, sml(0.5-1mm), equantly-shaped, reddish-brown garnets ? / iron stained qtz ??
TRENCH No. 3W-01
Deep Mud, Water
LMI
Moderately foliated FSFV several, narrow, foliation concordant gabbroic bands(EMI)
Mud, Water
Moderately chloritic, porous weathering, matic-intermediate dyke(LMI ?)
dyke brecciated in nature, with recessively weathering fragments (lamprophyre breccia ?)
vuggy qtz/chlorite/epidote pods/lenses
LMI(lamprophyre ?)
LMI massive, fresh
sheared contact quartzo-feldspathic fracture fills alteration ribbing
EMI(narrow) chlorite, epidote, qtz along margins
Strongly Foliated
LMI(dyke)
0% flattened, porous / vesiculated, breccia size fragments(up to 20 cm) fragments of felsic composition(monolithic)
Stripped Outcrop
Moderately foliated FSFV exhibiting weak foliation controlled sericite and weak foliation fracture controlled chlorite, minor foliation concordant qtz stringers
2806
Trace-2%(locally 5%) hard, reddish-brown, roundish(equant) grains GARNETS ? ; Fe stained Qtz ??
Qtz Stringer
Greater percentage of feldspar xtals Feldspars larger and range greater (0.4-4.0 mm)
2809
Numerous, fine, foliation concordant and erratic, Qtz(Fe-Carb. ?) stringers; rare-trace pyrite
Rare, flattened, felsic, breccia size fragments(5-15cm); Fragments strongly wrt oriented in nature(pumiceous)
155°
Subcrop slopes @ : 50°(4.5m)
Spotty/fracture controlled chlorite and hematite, Fracture Plane ?
2810
Hard Pan
Hardpan
Weakly rusty weathering pitted
TRENCH No. 3W-02
Outcrop(ledge)
Weakly foliated FSFV Weak,locally moderate, foliation sericite and chlorite
Irregular, scutting, vuggy Qtz/epidote/chlorite stringers
Sheared FSFV rock weakly-moderately bleached in nature(silica ?), weak foliation controlled chlorite
Fine quartzo-feldspathic fracture fills with narrow alteration haloes(bleached)
Discontinuous quartz stringers
TRENCH No. 3W-03
GEOLOGICAL LEGEND
FSFV : FELDSPAR PHYRIC FELSIC VOLCANIC
EMI : EARLY(PRE-TECTONIC) MAFIC INTRUSIVE (METAGABBRO)
LMI : LATE(POST-TECTONIC) MAFIC INTRUSIVE (GABBRO)
SYMBOLS
: foliation, strike and dip
: contact, strike and dip
: shear / fault, strike and dip
: jointing, strike and dip
: breccia-size lithic fragments
: overburden
: rock sample, with I.D. number
SECTION 3+00 W TRENCHING
SCALE : 1 : 100
FIGURE 9
T-H PROPERTY
December, 1993

foliation controlled silica and sericite with weak, locally moderate, chlorite and biotite. Weak-moderate, semi-pervasive silicification is locally present within the trench. Patchy, pinkish to cream, bleaching (feldspathization?) is commonly associated, at least spatially, with zones of silicification. Trace orangy-brown garnets were locally observed within sheared felsic rocks. The feldspar phyric felsic volcanic rocks are relatively sulphide barren, with nil-rare, locally trace, fine foliation controlled pyrite observed during mapping.

Early mafic intrusives consisting of moderately-strongly deformed/ altered metagabbros are prevalent within trench #1W-02. These rocks typically occur as narrow (10 centimeter to 5 meter) wide sills that strike northeasterly and dip steeply to the south. Average sill widths are between 50-100 centimeters. The northeasterly trend of these intrusive bodies is roughly concordant to the general attitude of the metavolcanic rock sequence. Late mafic intrusive dykes are not as common within the trench but tend to be more extensive in nature. A fine grained diabase dyke, in excess of 30 meters in width, dominates the southern extremity of trench #1W-02. Rare-trace, locally to 2%, pyrite is found in association to these mafic intrusive bodies. Sample # 2803, collected from a strongly foliated to schistose, early metagabbro unit returned very weakly elevated values of 72 ppm zinc and 132 ppm copper.

5.6 Section 3+00W Trenching:

Section 3+00W trenching was positioned to investigate an anomalous value of 1170 ppm zinc from a lithogeochemical sample

obtained by Noranda in 1985. The trench was also utilized to expose the southern portion of the felsic-mafic metavolcanic contact. Approximately 180 linear meters of trenching was conducted along section 3+00W. Unfortunately, due to time and funding constraints the southern trenches (#3W-04 and #3W-05) were not washed and mapped.

The northern portion of the 3+00W trenched section consisting of trenches #3W-01, #3W-02 and #3W-03 is dominated lithologically by feldspar phyric felsic volcanic rocks. Rare to locally 10%, flattened, breccia-size (5-15 centimeters), vesiculated/pumiceous, monolithic felsic fragments occur within the southern portion of trench #3W-01. Fragments appear unsorted in character and do not appear to form a distinct horizon. Felsic volcanic rocks are characterized by a moderate-strong, northeasterly trending (055-065 degrees), southerly dipping (60-75 degrees), penetrative foliation with weak, locally moderate, foliation controlled sericite and chlorite. Narrow zones of stronger deformation (shearing) with associated weak-moderate, locally strong, silica, sericite and chlorite alteration are common within the trench. Trace-2%, locally to 10%, reddish-brown, equantly shaped, garnets occur in a variety of locations within trench #3W-01. Garnets average 0.5-4 millimeters in diamter.

Sampling of the feldspar phyric felsic volcanic unit failed to return any anomalous base metal values, thus reflecting the relatively sulphide barren nature of the felsic unit within the northern portion of section 3+00W. As is the case throughout the trenched area, early northeasterly striking metagabbro sills are prevalent within the trenches along this line.

6. CONCLUSIONS AND RECOMMENDATIONS

In summary a recent compilation of exploration work conducted over the years appears to indicate that the felsic-mafic metavolcanic rock sequence trending across the northern portion of the T-H property is stratigraphically equivalent to a similar sequence that hosts the Geneva Lake and Stralak base metal deposits. Coincidental magnetic, electromagnetic and induced polarization anomalies with corresponding soil and lithogeochemical values are present along this potential mineral bearing horizon within the northern portion of the property.

Sampling of the prospective horizon during the 1993 trenching programme failed to reproduce anomalous base metal values (250-3180ppm) zinc obtained along the horizon during previous exploration ventures. However only 22 samples were collected along approximately 475 meters of mapped trenches which is by no means exhaustive for a lithogeochemical programme. In addition, the trenched sections provided good vertical representation but poor lateral exposure of the horizon with trench widths of 1-3 meters. The 1993 trenching programme did however expose moderate- strong deformation (shearing) with associated silica, sericite, chlorite and biotite alteration along the horizon in question. The trenches also provide geological information which allowed the felsic volcanic rocks to be tentatively interpreted as a pyroclastic flow unit. If this evidence is true then the area would be located in a relatively proximal environment.

Based on the results of work to date and the relatively unexplored nature of the northern portion of the T-H property and of

the potential base metal horizon in general, an on going exploration programme is recommended. To continue the evaluation of the T-H property and the area in general the following recommendations should be implemented:

1) As already planned by the property co-owners the remaining L3+00W and 5+00W trenches should be washed and subjected to detailed mapping.

2) Further detailed mapping to enhance and clarify the geological environment established so far.

3) The implementation of a detailed lithogeochemistry programme utilizing classical whole rock analyses. A study of the major oxides and trace elements may establish alteration patterns within the prospective horizon. In addition, a REE (rare earth elements) study should be conducted in order to determine if the felsic volcanic rocks in question correspond to the so called FIII group of felsic volcanic rocks with negative EU anomalies.

4) Conclusive to recommendation #3, the established geochemical alteration signature of the prospective horizon should be compared to alteration signatures associated with the Geneva Lake and Stralak base metal deposits.

CERTIFICATE OF QUALIFICATION

I, Yves Pierre Clement do hereby certify:

1. that I am a geological technologist and reside at #209, 227 Notre Dame Avenue, Sudbury, Ontario, P3C-5K4,

2. that I graduated from Cambrian College in 1986 with a Geological Technologist Diploma,

3. that I have partially fulfilled the requirements (missing one credit) for a Bachelor of Applied Sciences in Geology at Lake Superior State University,

4. that I have practised my profession continuously for the past seven seasons,

5. that my report on the T-H Property, Moncrieff Township, Sudbury Mining Division, Ontario, is based on my personal knowledge of the area, my work on the property and a review of published and unpublished information on the property and surrounding area,

6. that I have no interest, whether direct or indirect , in the T-H Property.

Yves Pierre Clement

Yves P. Clement

Geological Technologist
January, 1994

References

Card, K.D.

1978: Geology of the Sudbury-Manitoulin Area, Districts of Sudbury and Manitoulin; Ontario Geological Survey Report 166, 238p. Accompanied by Map 2360 and 4 charts.

Card, K.D.and Innes, D.G.

1981: Geology of the Benny Area, District of Sudbury; Ontario Geological Survey Report 206, 117p. Accompanied by Maps 2434 and 2435, scales 1:31,680 and 4 charts.

Ontario Geological Survey

1985: Moncrieff Township, District of Sudbury; Ontario Geological Survey, Geological Data Inventory Folio 243, compiled by the staff of the Resident Geologist's Office, Sudbury, 20p. and 2 maps.

APPENDIX 1

SAMPLE DESCRIPTIONS

T-H PROPERTY SAMPLE DESCRIPTIONS

SAMPLE # 2801
TRENCH # 1W-02
NORTHING: 4+55N
EASTING: 1+05W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Sheared feldspar phyric, felsic volcanic rock exhibiting moderate foliation controlled silica and sericite alteration. No visible sulphides but rock contains rare-trace,light brown specks, (sphalerite?).

SAMPLE # 2802
TRENCH # 1W-02
NORTHING: 4+59N
EASTING: 1+05W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Strongly foliated/sheared, felspar phyric felsic volcanic in contact with a narrow metagabbro (EMI) body. Felsic volcanic contains 5% fine, drusy quartz (epidote) fracture fills. Rare, very locally trace, finely disseminated pyrite within felsic material and minor brownish, resinous, staining (sphalerite) along quartz fracture fills.

SAMPLE # 2803
TRENCH # 1W-02
NORTHING: 4+68N
EASTING: 1+03W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Strongly foliated to schistose, moderately chloritic metagabbro (EMI) containing rare-trace, locally 1%, foliation controlled pyrite.

SAMPLE # 2804
TRENCH # 0-02
NORTHING: 4+96N
EASTING: 0+08W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Strongly foliated, moderately chloritic, metagabbro (EMI) containing minor disseminated and foliation controlled pyrite.

SAMPLE # 2805
TRENCH # 0-01
NORTHING: 5+93N
EASTING: 0+21W
SAMPLE TYPE: Grab sample.
DESCRIPTION: Weakly-moderately foliated, feldspar phyric felsic volcanic exhibiting weak foliation controlled chlorite. Nil, locally rare, finely disseminated pyrite present. Rare foliation controlled, brownish, resinous specks (sphalerite?).

SAMPLE # 2806
TRENCH # 0-01
NORTHING: 5+87N
EASTING: 0+21W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Moderately foliated, feldspar subporphyritic metagabbro (EMI) exhibiting moderate fracture controlled epidote, chlorite and calcite. Rare-trace, locally 1-2%, very finely disseminated pyrite present within the metagabbro.

SAMPLE # 2807
TRENCH # 0-01
NORTHING: 5+75N
EASTING: 0+20W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Moderately foliated, feldspar phyric felsic volcanic exhibiting weak foliation controlled chlorite and biotite. Minor fine quartz-epidote fracture fills. Rare, locally trace, finely disseminated pyrite and rare-nil chalcopyrite.

SAMPLE # 2808
TRENCH # 3W-01
NORTHING: 5+15N
EASTING: 2+98W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Feldspar phyric felsic volcanic containing trace-2%, locally 5%, reddish-brown, round (equant) garnets? (Iron stained quartz?).

SAMPLE # 2809
TRENCH # 3W-01
NORTHING: 5+11N
EASTING: 3+01W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Moderately foliated feldspar phyric felsic volcanic exhibiting weak foliation controlled sericite/chlorite. Numerous fine foliation concordant and cross-cutting quartz (iron carbonate?) stringers. Rare, locally trace, fine pyrite within and/or proximate to the stringers.

SAMPLE # 2810
TRENCH # 3W-02
NORTHING: 5+06N
EASTING: 2+94W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Feldspar phyric felsic volcanic exhibiting weak spotty fracture controlled chlorite and hematite. No visible sulphides but rock very weakly rusted on weathered surface. Surface also pitted in character.

SAMPLE # 2811
TRENCH # 0-01
NORTHING: 5+61N
EASTING: 0+25W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Strongly sheared/schistose metagabbro (EMI) containing 10-20% foliation concordant quartz-calcite stringers. No sulphides noted.

SAMPLE # 2812
TRENCH # 0-02
NORTHING: 5+07N
EASTING: 0+02W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Outcrop-large boulder? Chloritic metagabbro with irregular drusy quartz (chlorite/epidote) veining. Trace, locally 2-3%, pyrite within and/or proximate to veining.

SAMPLE # 2813
TRENCH # 0-02
NORTHING: 5+09N
EASTING: 0+05W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Moderate-strong pervasively silicified feldspar phyric felsic volcanic. Rock also exhibits moderate fracture controlled chlorite and calcite. Sample contains rare finely disseminated pyrite.

SAMPLE # 2814
TRENCH # 3W-01
NORTHING: 5+46N
EASTING: 2+99W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Strongly foliated/sheared feldspar phyric felsic volcanic containing 2-3% reddish-brown garnets? Rock contains rare-nil, locally trace, very finely disseminated pyrite.

SAMPLE # 2815
TRENCH # 0-02
NORTHING: 5+02N
EASTING: 0+06W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Weak-moderate semi-pervasively silicified, feldspar phyric felsic volcanic exhibiting moderate patchy pinkish bleaching (feldspathization?). Rock contains very rare, finely disseminated pyrite.

SAMPLE # 2816
TRENCH # 0-01
NORTHING: 5+20N
EASTING: 0+21W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Strongly foliated/sheared feldspar phyric felsic volcanic exhibiting moderate foliation controlled sericite. Unit appears to contain very rare, very fine foliation controlled pyrite.

SAMPLE # 2817
TRENCH # 0-01
NORTHING: 5+20N
EASTING: 0+21W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Strongly foliated/sheared feldspar phyric felsic volcanic exhibiting weak-moderate foliation controlled silica, sericite and chlorite. Few hairline fracture fillings of hematite present. No sulphide mineralization observed but locally very weakly rusted.

SAMPLE # 2818
TRENCH # 0-01
NORTHING: 5+30N
EASTING: 0+20W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Strongly foliated feldspar phyric felsic volcanic exhibiting moderate semi-pervasive bleaching (silica and sericite). Rock contains +/- 2% fine fractures which exhibit orangy-red alteration (feldspathization?). Rare, locally trace, very fine grained pyrite in fracture fills.

SAMPLE # 2819
TRENCH # 0-01
NORTHING: 5+37N
EASTING: 0+22W
SAMPLE TYPE: 30 centimeter chip sample.
DESCRIPTION: Chip sample along contact between feldspar phyric felsic volcanic and dioritic dyke. Sample consists of mostly weakly oxidized (rusty) felsic volcanic proximate to the contact. No visible sulphides.

SAMPLE # 2820
TRENCH # 0-01
NORTHING: 5+39N
EASTING: 0+21W
SAMPLE TYPE: Grab sample.
DESCRIPTION: Sheared feldspar phyric felsic volcanic material which exhibits moderate to strong foliation controlled chlorite and sericite. Rock contains rare-trace, locally trace-1%, finely disseminated pyrite.

SAMPLE # 2821
TRENCH # 0-01
NORTHING: 5+43N
EASTING: 0+23W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Strongly deformed, sheared, feldspar phyric felsic volcanic exhibiting moderate bleaching (silica?-sericite?). Minor iron oxides along foliation planes. No visible sulphides noted.

SAMPLE # 2822
TRENCH # 0-01
NORTHING: 5+70N
EASTING: 0+23W
SAMPLE TYPE: Composite chip sample.
DESCRIPTION: Sheared feldspar phyric felsic volcanic exhibiting weak-moderate foliation controlled silica. Sample contains very rare finely disseminated pyrite.

APPENDIX 2

ANALYTICAL RESULTS

XRAL

A DIVISION OF SGS CANADA INC.
1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA
TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 24198

TO: YVES CLEMENT
227 NOTRE DAME
#209
SUDBURY, ONTARIO
P3C 5K4

CUSTOMER No. 2228

DATE SUBMITTED
30-Aug-93

REF. FILE 15951-A6

Total Pages 4

22 ROCKS Proj. T-H PROPERTY

	METHOD	DETECTION LIMIT
AU PPB	FADCP	1.
BE PPM	ICP	.5
NA %	ICP	.01
MG %	ICP	.01
AL %	ICP	.01
P %	ICP	.01
K %	ICP	.01
CA %	ICP	.01
SC PPM	ICP	.5
TI %	ICP	.01
V PPM	ICP	2.
CR PPM	ICP	1.
MN PPM	ICP	2.
FE %	ICP	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5

	METHOD	DETECTION LIMIT
ZN PPM	ICP	.5
AS PPM	ICP	3.
SR PPM	ICP	.5
Y PPM	ICP	.1
ZR PPM	ICP	.5
MO PPM	ICP	1.
AG PPM	ICP	.1
CD PPM	ICP	1.
SN PPM	ICP	10.
SB PPM	ICP	5.
BA PPM	ICP	1.
LA PPM	ICP	.5
TA PPM	ICP	1.
W PPM	ICP	10.
PB PPM	ICP	2.
BI PPM	ICP	3.

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS IN 90 DAYS ***
AND REJECTS IN 30 DAYS FROM THE DATE OF THIS REPORT

DATE 16-Sep-93

CERTIFIED BY .....
Jean H.L. Opdebeeck, General Manager

SAMPLE	AU PPB	BE PPM	NA %	MG %	AL %	P %	K %	CA %	SC PPM
2801	<1	<.5	.09	.35	.58	.02	.05	.13	3.0
2802	<1	<.5	.09	.44	.60	.01	.04	.26	2.6
2803	<1	1.1	.05	1.97	2.72	.09	.87	.72	3.2
2804	<1	.8	.07	2.12	2.46	.12	.44	1.10	2.9
2805	<1	<.5	.08	.24	.66	.03	.18	.32	1.2
2806	<1	.9	.08	1.49	2.19	.08	.70	.49	3.3
2807	<1	<.5	.08	.38	.71	.03	.17	.30	2.0
2808	<1	<.5	.08	.29	.63	.02	.16	.18	1.8
2809	<1	<.5	.05	.09	.34	.01	.16	.15	.8
2810	<1	<.5	.08	.28	.55	.02	.12	.21	1.8
2811	<1	1.4	.02	2.37	2.36	.13	.08	.85	6.4
2812	<1	<.5	.05	.71	1.12	.04	.49	.33	2.3
2813	<1	<.5	.06	.58	.68	<.01	.11	.22	1.7
2814	<1	<.5	.05	.30	.50	<.01	.08	.10	1.3
2815	<1	<.5	.05	.49	.80	.03	.17	.22	2.0
2816	<1	<.5	.05	.68	.87	.02	.21	.09	.8
2817	<1	<.5	.04	.60	.65	<.01	.21	.05	.8
2818	<1	<.5	.05	.40	.59	<.01	.13	.06	1.0
2819	<1	.9	.04	2.55	2.29	.07	.16	.40	4.7
2820	<1	1.0	.03	3.05	2.74	.09	.23	.51	5.2
2821	<1	<.5	.04	.31	.57	<.01	.25	.06	.5
2822	<1	<.5	.04	.35	.72	.03	.26	.19	.9
D 2801	--	<.5	.08	.34	.56	.01	.05	.13	2.9
D 2813	--	<.5	.06	.59	.70	<.01	.11	.23	1.8

D - QUALITY CONTROL DUPLICATE

SAMPLE	TI %	V PPM	CR PPM	MN PPM	FE %	CO PPM	NI PPM	CU PPM
2801	.08	8	152	226	1.20	4	5	9.1
2802	.08	11	163	325	1.12	5	5	12.0
2803	.20	71	145	1370	4.94	24	37	72.7
2804	.15	70	184	756	4.20	27	82	50.5
2805	.06	11	115	229	1.10	4	6	8.7
2806	.17	102	66	680	4.50	19	24	17.2
2807	.03	18	110	236	1.42	6	6	27.6
2808	.07	6	98	271	.93	2	2	10.8
2809	.04	3	122	179	.44	2	3	4.1
2810	.07	5	116	274	.92	3	3	23.6
2811	.08	74	541	910	4.10	22	87	8.4
2812	.14	52	212	411	2.29	11	11	32.1
2813	.06	5	118	267	.91	3	4	12.2
2814	.05	3	69	365	.81	2	1	4.1
2815	.08	14	72	293	1.21	3	5	3.8
2816	.03	5	61	250	1.11	4	6	3.1
2817	.03	4	60	168	.75	4	2	4.3
2818	.03	4	70	166	.83	3	4	4.8
2819	.11	74	439	697	3.29	23	119	43.0
2820	.12	78	332	795	3.90	32	109	88.9
2821	.02	3	104	142	.58	2	4	5.6
2822	.05	8	66	158	.93	4	4	6.2
D 2801	.08	8	147	260	1.18	3	3	8.1
D 2813	.07	5	120	272	.92	3	4	12.5

D - QUALITY CONTROL DUPLICATE

SAMPLE	ZN PPM	AS PPM	SR PPM	Y PPM	ZR PPM	MO PPM	AG PPM	CD PPM
2801	28.3	<3	2.2	7.0	13.4	<1	.2	<1
2802	47.3	<3	7.7	8.0	11.3	<1	<.1	<1
2803	132	<3	19.7	8.6	3.3	2	.5	<1
2804	112	<3	18.6	6.9	2.2	<1	<.1	<1
2805	75.1	<3	8.5	7.6	6.7	<1	<.1	<1
2806	112	<3	7.8	6.2	4.8	<1	.3	1
2807	28.2	<3	16.3	7.7	10.4	2	<.1	<1
2808	46.1	<3	10.2	8.4	14.4	<1	<.1	<1
2809	24.6	<3	8.8	5.9	10.4	<1	<.1	<1
2810	44.2	<3	8.0	8.3	10.6	<1	<.1	<1
2811	131	39	10.8	13.0	5.7	<1	<.1	<1
2812	51.1	<3	13.5	4.2	3.4	2	.5	<1
2813	30.3	<3	7.7	8.0	19.2	<1	.5	<1
2814	88.2	<3	2.2	5.5	15.1	<1	.7	<1
2815	44.9	<3	9.2	6.9	11.5	<1	<.1	<1
2816	37.1	<3	1.5	6.6	27.0	1	<.1	<1
2817	41.6	<3	1.3	6.7	36.2	<1	.3	<1
2818	28.8	<3	2.7	5.1	19.2	2	<.1	<1
2819	164	9	6.8	5.7	5.8	<1	.2	<1
2820	222	<3	10.6	6.6	6.1	<1	.5	<1
2821	28.3	<3	2.7	8.1	34.4	5	.5	<1
2822	35.4	<3	5.3	8.1	10.4	<1	<.1	<1
D 2801	27.0	<3	2.2	7.0	13.1	<1	<.1	<1
D 2813	30.8	<3	8.0	8.2	20.4	<1	.3	<1

D - QUALITY CONTROL DUPLICATE

SAMPLE	SN PPM	SB PPM	BA PPM	LA PPM	TA PPM	W PPM	PB PPM	BI PPM
2801	<10	<5	12	15.8	<1	<10	4	<3
2802	<10	<5	11	28.1	2	<10	36	<3
2803	<10	<5	56	19.2	3	<10	3	<3
2804	<10	<5	39	13.8	<1	<10	<2	4
2805	<10	<5	33	27.5	<1	<10	26	5
2806	<10	<5	89	17.6	<1	<10	<2	7
2807	<10	<5	20	30.7	<1	<10	<2	4
2808	<10	<5	38	25.0	4	<10	3	<3
2809	<10	<5	60	18.6	1	<10	4	3
2810	<10	<5	35	28.2	<1	<10	<2	<3
2811	<10	<5	28	15.7	3	<10	8	10
2812	<10	<5	48	8.7	3	<10	6	6
2813	<10	<5	21	30.7	2	<10	<2	<3
2814	<10	<5	20	19.5	3	<10	8	<3
2815	<10	<5	48	18.3	<1	<10	<2	<3
2816	<10	<5	29	10.6	<1	<10	<2	<3
2817	<10	<5	25	14.0	<1	<10	3	<3
2818	<10	<5	19	15.7	2	<10	<2	<3
2819	<10	<5	18	15.8	<1	<10	4	<3
2820	<10	<5	23	16.1	<1	<10	6	5
2821	<10	<5	20	13.0	3	<10	7	<3
2822	<10	<5	23	32.9	<1	<10	5	<3
D 2801	<10	<5	12	15.6	<1	<10	2	<3
D 2813	<10	<5	22	30.9	<1	<10	<2	<3

D - QUALITY CONTROL DUPLICATE