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Vellums Available for Maps.



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EXPLORATION PROGRAM
PAPONT RESOURCES INC.
SHERATON-EGAN-McCANN SYNCLINE

LARDER LAKE MINING DIVISION
DISTRICT OF COCHRANE
ONTARIO





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#### INTRODUCTION

The following report was prepared by W.G. Wahl Limited at the request of Mr. Walter H. Hood, P. Eng., and was undertaken to meet the stated requirements in Form 1 - The Ontario Mineral Exploration Program Act, 1980, "Application for Designation" regarding "the purpose of the program and metal or minerals sought in the proposal".

#### **GENERAL**

The property on which the proposed program is to be carried out consists of 20 non-contiguous claim blocks located in Stock, Carr, Bond, Currie, Sheraton, Egan and McCann Townships, Larder Lake Mining Division, District of Cochrane, Ontario; all of which have been detailed as to lot and concession in Form 1, The Ontario Mineral Exploration Program Act, 1980, "Application for Designation".

Due to the patented nature of the claim blocks, no work has ever been recorded on the property and a check of the company files shows that the property has never been held under option for the purpose of doing work.

#### GEOLOGY

The property is situated within the geologic limits of the Abitibi Greenstone Belt, and lies in an area adjacent to and south of the Destor-Porcupine Fault. The Abitibi Greenstone Belt is part of the largest and probably the thickest Archean complex in the Superior Province. These

rocks underlie much of the Abitibi Subprovince. The oldest rocks are basic lava flows, about 4,000 feet thick, massive or pillowed, and with minor related phases such as variolitic flows, breccias, and basic tuffs.

Gabbro, diorite, and related differentiates intrude the lavas, and thin layers are conformably overlain by as much as 2,000 feet of acidic pyroclastics with minor lavas and related intrusions.

All of the Archean rocks are folded along easterly trending axes. These folds appear to be modified in places by cross folds of various orientations, and are cut by several easterly trending faults with wide chlorite-carbonate shear zones. Major faults of this type are the Destor-Porcupine and the Pipestone Fault zones. Lead isotope data from gold deposits within the fault zone or related structure suggest that they formed during the Kenoran Orogeny and accordingly the shearing probably took place during folding.

The Archean rocks are cut by granite of various compositions.

The younger, high level stocks tend to be richer in potash than the larger batholiths and granitic gneisses. Metamorphism, except near the contact with granitic rocks, is generally in the greenschist.

Several of the twenty non-contiguous potential claim blocks referred to as the property lie along the related fault structures associated with the chlorite-carbonate Destor-Porcupine Fault. All of the claim blocks are located along the flanks of the Sheraton-Egan-McCann Synclinorium which consists of a complex sequence of mafic to intermediate

to felsic metavolcanic and metasedimentary volcanic rocks. This regional structural feature trends easterly across Sheraton Township into Egan and McCann Townships where it has been disrupted by the Bradley Lake syenite intrusive and the Wildgoose Lake syenite intrusive respectively.

Numerous mineral occurrences are documental, in the assessment work library, lying on the flanks of the Sheraton-Egan-McCann syncline noticeably in the region lying between Sheraton and Moose Lake. These occurrences consist of sphalerite, galena, chalcopyrite, pyrite, pyrrhotite with trace amounts of gold and silver and are hosted by mafic to felsic metavolcanic tuffs and lean iron formations.

#### CONCLUSIONS AND RECOMMENDATIONS

The Destor-Porcupine Fault and the related cross faults have acted as channelways for mineralizing solutions. Several of the properties lie astride these cross faults.

The Sheraton-Egan-McCann synclinorium is an anomalous metaliferous structural feature exhibiting numerous base and precious metal occurrences. These occurrences are hosted by a complex sequence of mafic to intermediate to felsic metavolcanic and metasedimentary volcanic rocks. All of the claim blocks lie on the flanks of the Sheraton-Egan-McCann synclinorium.

The relative structural position of the Bradley Lake Syenite is also significant as a possible host rock for porphyry type sulfide mineralization. The numerous cross faults cutting both the metavolcanics and the intrusive body would provide the necessary plumbing system for the mineralizing solutions.

Based on the aforementioned conclusions, it is recommended that the following three year exploration program be carried out on the property:

#### 1st Year

During the first year, nearly all of the patented lots presently held by Papont Resources Inc. will have been evaluated on a reconnaissance basis. This will be accomplished utilizing a highly mobile three-man field crew, responsible for initiating reconnaissance magnetometer and electromagnetic surveys on a 400-foot controlled grid traverse. Geological mapping and geochemical sampling will be carried out at the same time. It is anticipated that the field crew will be able to cover two to four claim blocks every seven days.

#### 2nd Year

During the early part of the second field season, the remaining claim block will be investigated on a reconnaissance basis allowing the majority of the field season for detailed investigation of the more promising claim blocks. This will include line cutting, magnetometer and deep penetration electromagnetic surveys and geological mapping.

#### 3rd Year

During the early part of the third field season, the detailed investigations will be completed and the remaining time will be spent on diamond drilling and additional ground geophysics.

The first year's work program will be carried out by W.G. Wahl Limited at an estimated cost of \$103,300.00.

All of which is respectfully submitted.

Sincerely yours,

W.G. WAHL LIMITED

D.G. Wahl, P. Eng.

**President** 

DGW/smcb

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EXPLORATION PROGRAM

PAPONT RESOURCES INC.

SHERATON-EGAN-McCANN SYNCLINE

LARDER LAKE MINING DIVISION

DISTRICT OF COCHRANE, ONTARIO

DERRY, MICHENER, BOOTH & WAHL

D. G. Wahl, P.Eng. Consulting Engineer

Toronto, Ontario June 1, 1982

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S. & C. LTD.



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#### INTRODUCTION

The following report was prepared by Derry, Michener, Booth & Wahl at the request of Mr. Walter H. Hood, P.Eng., and presents the results of the 1981 exploration program, which was approved and was carried out under a certificate of designation (OM81-6-1-120) granted under the terms of the Ontario Mineral Exploration Program Act, 1980.

The program, as originally submitted, had to be reduced due to difficulties in assembling the anticipated funding.

#### **GENERAL**

The property consists of 33 patented half lots comprising 20 non-contiguous blocks located in Stock, Carr, Bond, Currie, Sheraton, Egan, McCann, Glackmeyer and Blount Townships, Larder Lake Mining Division, District of Cochrane, Ontario; all of which are tabulated on the following page.

#### GENERAL GEOLOGY

The property is situated within the geologic limits of the Abitibi Greenstone Belt, and lies in an area adjacent to and south of the Destor-Porcupine Fault. The Abitibi Greenstone Belt is part of the largest and probably the thickest Archean complex in the Superior Province. These rocks underlie much of the Abitibi Subprovince. The oldest rocks are basic lava flows, about 4,000 ft. thick, massive or pillowed, and with minor related phases such as variolitic flows, breccias, and basic tuffs.

Gabbro, diorite, and related differentiates intrude the lavas, and thin layers are conformably overlain by as much as 2,000 ft. of acidic pyroclastics with minor lavas and related intrusions

All of the Archean rocks are folded along easterly trending axes. These folds appear to be modified in places by cross folds of various orientations, and are cut by several easterly trending faults with wide chlorite-carbonate shear zones. Major faults of this type are the Destor-Porcupine and the Pipestone Fault zones. Lead isotope data from gold deposits within the fault zone or related structure suggest that they formed during the Kenoran Orogeny and accordingly the shearing probably took place during folding.

The Archean rocks are cut by granite of various compositions. The younger, high-level stocks tend to be richer in potash than the larger batholiths and granitic gneisses. Metamorphism, except near the contact with granitic rocks, is generally in the greenschist.

Several of the twenty non-contiguous potential claim blocks referred to as the property lie along the related fault structures associated with the chlorite-carbonate Destor-Porcupine Fault. All of the claims blocks are located along the flanks of the Sheraton-Egan-McCann Synclinorium which consists of a complex sequence of mafic to intermediate to felsic metavolcanic and metasedimentary volcanic rocks. This regional structural feature trends easterly across Sheraton Township into Egan and McCann Townships where it has been disrupted by the Bradley Lake syenite intrusive and the Wildgoose Lake syenite intrusive, respectively.

Numerous mineral occurrences are documented, in the assessment work library, lying on the flanks of the Sheraton-Egan-McCann syncline noticeably in the region lying between Sheraton and Moose Lake. These occurrences consist of sphalerite, galena, chalcopyrite, pyrite, and pyrrhotite with trace amounts of gold and silver and are hosted by mafic to felsic metavolcanic tuffs and lead iron formations.

#### EXPLORATION PROGRAM

As a result of the financial restraints imposed on the program the exploration activity was confined to the more readily accessible patented blocks located in Stock, Carr, Bond, Currie and Sheraton Townships and consisted primarily of line cutting and prospecting, but in the case of the Currie Township patented block magnetic and electromagnetic surveys were carried out in conjunction with geologic mapping.

#### Stock Township

#### Block N-26

Block N-26 is located in the northern half of Lot 10, Concession 4 and is readily accessible by conventional vehicle south from the village of Monteith via Highway 577 to the 4th line of Stock Township, then westerly for a distance of approximately 4.8 miles to Driftwood Creek, at which point a bush trail trends northerly to the property, a distance of approximately one-half mile.

The exploration carried out on N-26 during the 1981 program consisted of the establishment of a 2,640 ft. base line, a 2,640 ft. tie line, and grid lines 0 and 28W, totalling 5,280 ft. Limited prospecting failed to locate any outcrop on the property.

No additional work was carried out during 1981; however, additional line cutting and geophysics are planned for the upcoming exploration season.

#### Carr Township

#### Block N-6

Block N-6 is located in the north half of Lot 11, Concession 1 and is accessible by conventional vehicle and canoe southeast from the village of Monteith via Highway 626 to the Watabeag River, a distance of approximately 9.8 miles, at which point the property is accessible by canoe upstream from the highway bridge, a distance of approximately one-half mile. The exploration carried out on N-6

during the 1981 program consisted of the establishment of a 2,640 ft. base line trending east-west, a 2,640 ft. tie line and grid lines 0 and 26W, totalling 5,280 ft. Limited prospecting failed to locate any outcrop on the property.

No additional work was carried out during 1981; however, additional line cutting and geophysics are planned for next winter when the frozen Watabeag River will facilitate greater geophysical coverage of the patented block.

#### Block N-7

Block N-7 is located in the northwest quarter of the northern half of Lot 10, Concession 2 and it accessible by conventional vehicle and canoe southeast from the village of Monteith via Highway 626 to the Watabeag River, a distance of approximately 9.8 miles, at which point the property is accessible by canoe downstream from the highway bridge, a distance of approximately one-third mile. The exploration carried out on N-7 during the 1981 program consisted of the establishment of a 1,320 ft. base line trending east-west, a 1,320 ft. tie line and grid lines 0 and 13W totalling 2,640 ft. Limited prospecting failed to locate any outcrop on the property.

No additional work was carried out during 1981; however, additional line cutting and geophysics are planned for next winter when the frozen Watabeag River will facilitate greater geophysical coverage of the patented block.

#### Block N-9

Block N-9 is located kitty-corner to Block N-7 and is situated in the southeast quarter of the north half of Lot 10, Concession 2 and it is accessible by conventional vehicle and canoe southeast from the village of Monteith via Highway 626 to the Watabeag River, a distance of approximately 9.8 miles, at which point the property is accessible by canoe downstream from the highway bridge, a distance of approximately one-third mile. The exploration carried out on N-9 during the 1981 program consisted of the establishment of a 1,320 ft. base line trending east-west, a 1,320 ft. tie line, and grid lines 0 and 32W totalling 2,640 ft. Limited prospecting failed to locate any outcrop on the property.

No additional work was carried out during 1981; however, additional line cutting and geophysics are planned for next winter when the frozen Watabeag River will facilitate greater geophysical coverage of the patented block.

#### Bond Township

#### Blocks N-21 and N-22

Blocks N-21 and N-22 are located in the south half of Lots 10 and 11, Concession 4, respectively, and are accessible by four-wheel drive vehicle west from the village of Shillington via Highway 101 for a distance of approximately 7.7 miles at which point a secondary road trending southerly is followed for a distance of 3.6 miles then easterly along an old logging road to the property, a distance of approximately 2.1 miles.

The exploration carried out on N-21 and N-22 during the 1981 program consisted of the establishment of a 5,280 ft. base line trending east-west, a 5,280 ft. tie line and grid lines 0, 24E and 52E, totalling 7,920 ft. Limited prospecting failed to locate any outcrop on the property.

No additional work was carried out during 1981; however, additional line cutting and geophysics are planned for the winter months when the swamps on the property will be frozen; thereby providing easier access and greater geophysical coverage.

#### Blocks N-38 and N-39

Blocks N-38 and N-39 are contiguous blocks located in the north half of Lot 11, Concession 5 and the south half of Lot 11, Concession 6 and are accessible by four-wheel drive vehicle west from the village of Shillington, approximately 5.25 miles at which point an old logging road is followed southerly for a distance of approximately 1.2 miles to the property. The exploration carried out on N-38 and N-39, during the 1981 program consisted of the establishment of a 2,640 ft. base line trending east-west, a north and south tie line totalling 5,280 ft. and grid lines 0 and 12E totalling 10,560 ft. Limited prospecting failed to locate any outcrop on the property.

No additional work was carried out during 1981; however, additional line cutting and geophysics are planned for the upcoming exploration season.

#### Currie Township

#### Block N-10

Block N-10 is located in the south half of Lot 11, Concession 4 and is accessible by four-wheel drive vehicle east from the village of Shillington via Highway 101, for a distance of approximately 2.0 miles then south on an all-weather road for a distance of approximately 30 miles, then westerly along the 4th Concession Road to Grindstone Creek, then westerly by bush trail for half a mile to the property.

The exploration carried out on the property during the 1981 program consisted of the establishment of a 2,800 ft. base line trending east-west, a 2,800 ft. tie line and grid lines totalling 21,200 ft. Favourable ground conditions also permitted magnetic and electromagnetic surveys to be carried out over the entire property along with geologic mapping and prospecting.

A magnetometer survey was carried out by M. E. Wilson, B.Sc., employing a Scintrex MP-2 total field proton magnetometer to record the earth's total magnetic field intensities at 50 ft. intervals on all lines of the established grid.

Diurnal fluctuations were monitored using a Scintrex MBS-2 total field base station and were recorded on a Simpson strip chart recorder. The data has been corrected and reduced to a local datum (59,000 gammas) and is presented on Drawing 100 as a contoured interpretation of these data.

An electromagnetic survey was carried out by R. Harwood, C.E.I.T., employing a Geonics EM-16 VLF survey unit to record the inphase and quadrature response

parameters at 50 ft. intervals on all lines of the established grid. The transmitting station used during the course of the survey is located in Seattle, Washington which broadcasts at an assigned frequency of <u>vs.6</u> kHz. The data are presented on Drawing 102 in profile form.

Due to the lack of outcrop on the property an inferred geologic map has been developed based on the results of the magnetometer and electromagnetic surveys. The property is believed to lie astride the contact between a mafic metavolcanic unit mapped in the west-northwestern portion of the survey area and an intermediate to felsic metavolcanic unit mapped to the south and east. The mafic metavolcanic unit is characterized by a region of moderate magnetic relief in the range of 350 to 550 gammas, whereas the intermediate to felsic metavolanic unit is characterized by a broad region of low to moderate magnetic relief in the range of 200 to 350 gammas. An olivine diabase intrusive characterized by a lenticular region of magnetic relief in the range of 500 gammas was mapped in the southeastern corner of the property trending north-northwesterly. The entire sequence has been structurally deformed by two parallel north-northwesterly trending fault zones exhibiting a left-hand displacement of approximately 400 ft.

The VLF-electromagnetic system used on block N-10 failed to penetrate the varved clays observed on the property in the banks of Grindstone Creek.

No additional work was carried out during 1981; however, detailed magnetometer and electromagnetic surveys will have to be carried out to further define the favourable geologic contact and to further define the fault zones which could have acted as channelways for mineralizing solutions.

#### Sheraton Township

#### Blocks N-11, N-40 and N-41

Blocks N-11, N-40 and N-41 are contiguous patented lots located in the north half of Lot 5 and the north half of Lot 4, Concession 1, respectively, and the south half of Lot 4, Concession 2, and are accessible by four-wheel drive vehicle west from the village of Shillington via Highway 101 for a distance of approximately 7.7 miles, then south along a secondary road for approximately 12.1 miles, then easterly along a logging road to the property, a distance of approximately 1.75 miles.

The exploration carried out on N-11, N-41 and N-42 during the 1981 program consisted of the establishment of a 5,280 ft. base line trending east-west, a 2,640 ft. northern tie line and a 5,280 ft. southern tie line, and grid lines 0, 24E and 52E totalling 15,200 ft. Limited prospecting identified several outcrop exposures on the property.

No additional work was carried out during 1981; however, additional line cutting, ground geophysics and geologic mapping are planned for the upcoming exploration season.

#### CONCLUSIONS AND RECOMMENDATIONS

The Destor-Porcupine Fault and the related cross faults have acted as channelways for mineralizing solutions. Several of the properties lie astride these cross faults.

The Sheraton-Egan-McCann synclinorium is an anomalous metalliferous structural feature exhibiting numerous base and precious metal occurrences. These occurrences are hosted by a complex sequence of mafic to intermediate to felsic metavolcanic and metasedimentary volcanic rocks. All of the claim blocks lie on the flanks of the Sheraton-Egan-McCann synclinorium.

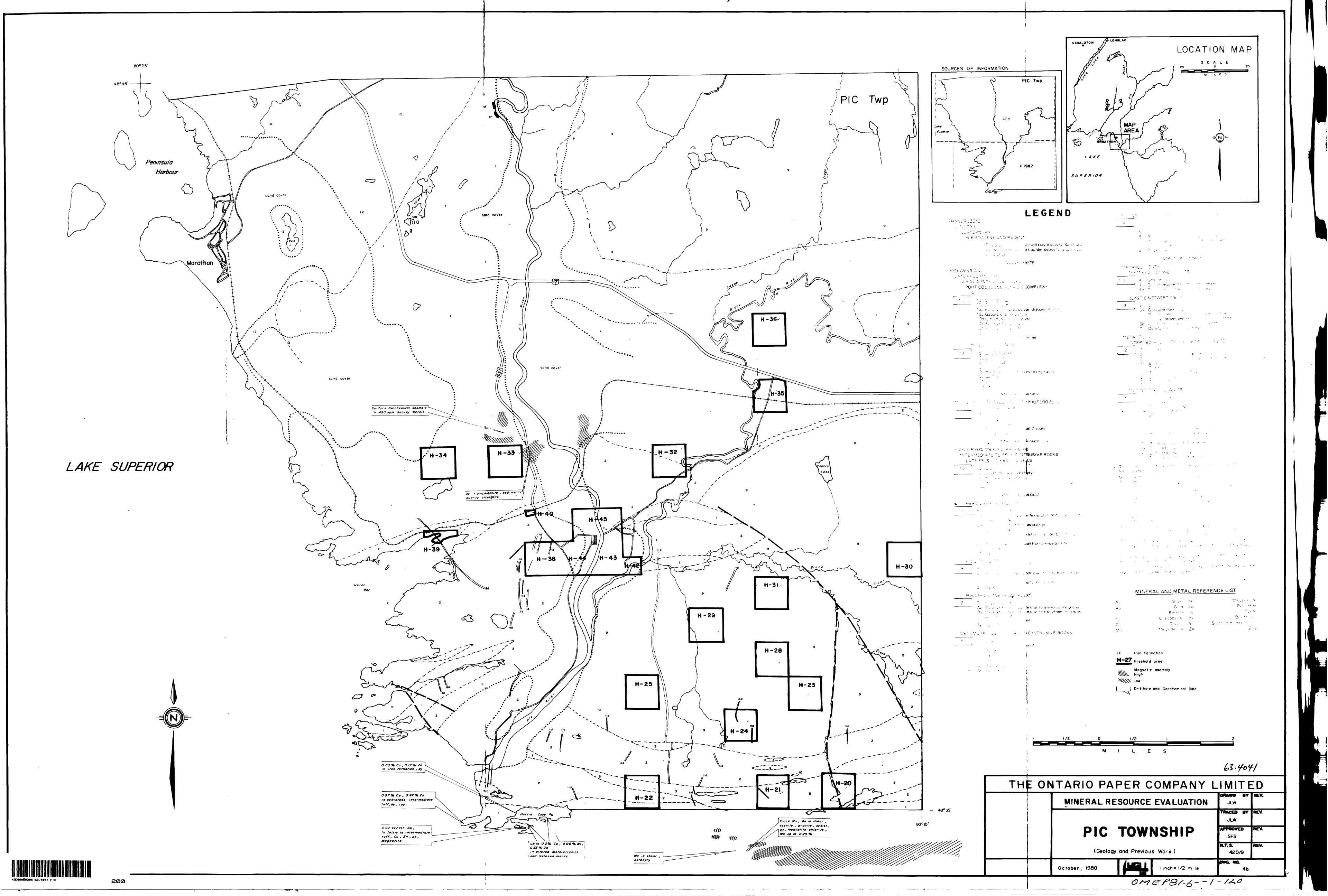
The relative structural position of the Bradley Lake Syenite is also significant as a possible host rock for porphyry-type sulphide mineralization. The numerous cross faults cutting both the metavolcanics and the intrusive body would provide the necessary plumbing system for the mineralizing solutions.

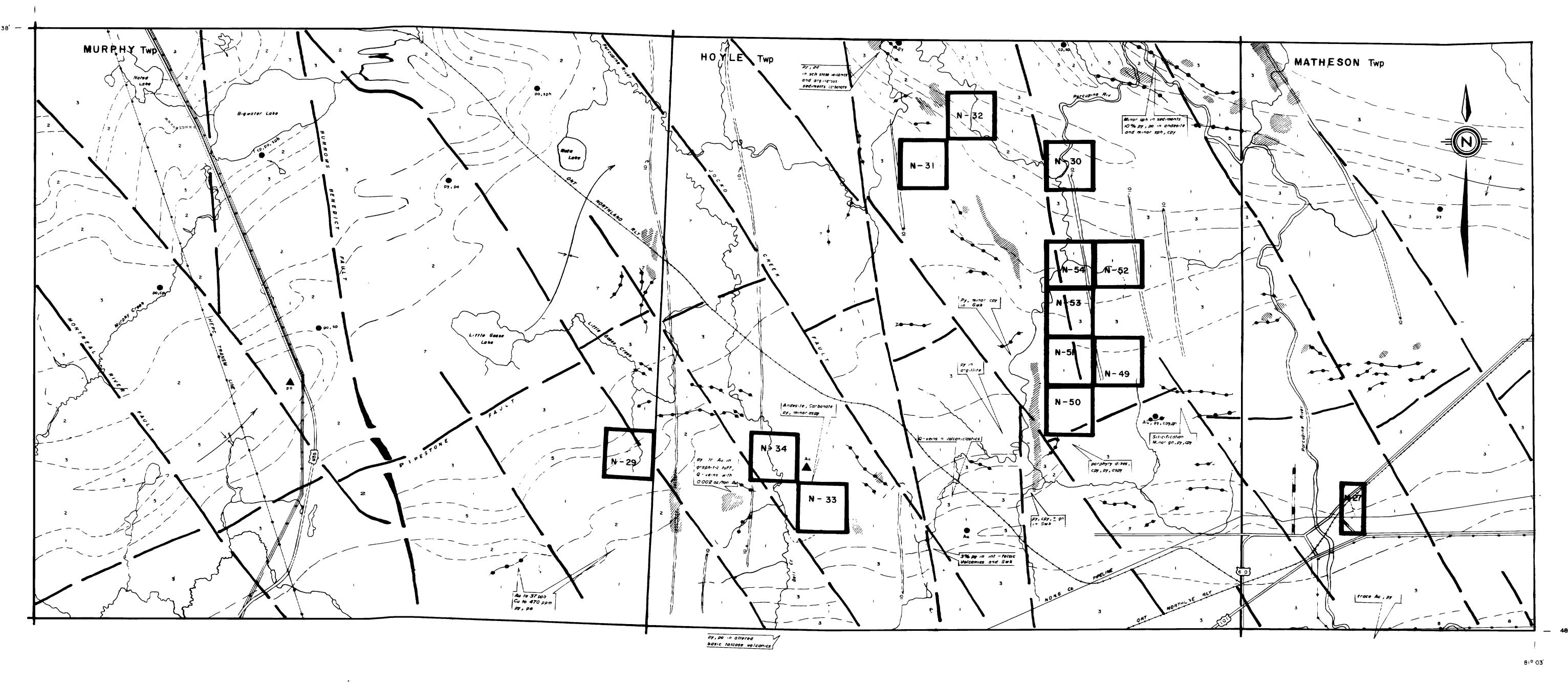
Based on the aforementioned conclusions and contingent on additional funds being arranged it is recommended that the original exploration program outlined in our designation report of September 23, 1981 be re-activated.

All of which is respectfully submitted, DERRY, MICHENER, BOOTH & WAHL

D. G. Wahl, P.Eng. Consulting Engineer

Toronto, Ontario June 1, 1982





INDEX MAP LOCATION MAP AREA II MURPHY- WATHESON BLOCK

SOURCES OF INFORMATION

## LEGEND

## **PHANEROZOIC**

CENOZOIC

PLEISTOCENE AND RECENT

Till, clay, sand, gravel - unconformity -

## PRECAMBRIAN

## EARLY AND LATE PRECAMBRIAN

MAFIC INTRUSIVE ROCKS Diabase (dikes)

- intrusive contact -

### EARLY PRECAMBRIAN

## 9 FELSIC INTRUSIVE ROCKS

Granodiorite, quartz diorite, trondhjemite, quartz monzonite, granité, migmatite pegmatite, aplite and porphyritic felsite

— intrusive contact -

### 8 METASEDIMENTS

Volcanic – pebble conglomerate, greywacke, arkosic sandstone and quartzite, siltstone, slate (Timiskaming Group)

- unconformity -

Greywacke, greywacke-grit, siltstone, slate, slate

(Hoyle Group) - discoformable to gradational contact -

### MAFIC AND ULTRAMAFIC ROCKS

Gabbro, diante (simple sta**cks and sills);**Norite, anorthositic norit**e, noritic gabbro,**gabbro (layred complex in**trusions,** i.e. **Kam**is**k**otia Complex

Serpentinized peridatite, dunite and pyroxenite metagabbro (simple sill-like lenses, minor flows) Serpentinized peridotite, dunite and pyroxenite, gabbro granophyric gabbro (complex differentiated sills)

# EPIZONAL (SUB-VOLCANIC) INTRUSIVE ROCKS

Quartz porphyry, quartz-feldspar porphyry, feldspar porphyry, granophyre, quartz diorite diorite (stocks and dikes) - intrusive contact -

## METAVOLCANICS AND METASEDIMENTS

Felsic to intermediate lapilli, ash and welded tuff, graphitic tuff, ferruginous chert, tuffite, subordingte matic flows and interflow greywacke, siltstone, and slate

## FELSIC METAVOLCANICS

Porphyritic and spheruline rhyolite and rhyodacite, welded tuff, lapilli tuff, agglomerate and breccia, subordinate dacite to andesitic flows and pyroclastic rocks

## MAFIC TO INTERMEDIATE METAVOLCANICS

Amygdaloidal, pillowed, variolitic andesite basalt flows, mafic tuff and agglomerate, dacitic lavas , tuff , agglometate and breccia , minor felsic pyroclastic rocks and interflow

## SYMBOLS

Geological **boundry**, deduced from geolo**gy and** geophysics

Fault (assumed)

Anticline, syncline, with plunge

Mineral occurance at surface

Mineral occurrance in drill hole.

N-27 Freehold area

Magnetic anomaly

All like

## Arsenopyrite

Conductor Results of diamond drilling

Pyrite Sphalerite MILES

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THE ON	ITARIO PA	PER CO	DMPANY L	IMITE	D
	MINERAL R	ESOURCE I	EVALUATION	DRAWN BY	REV.
	MIRP	IY-MAT	HESON	TRACED BY	REV.
,	MURPHY-MATHESON BLOCK		APPROVED SFS	REV.	
	( Geold	ogy and Previou	s Work )	N.T.S. 42A/10,11 42H/2,3	REV.
1	October 1980	(ref)	l inch = 1/2 mile	DWG. NO. 5d	

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