# Assessment Report

# of

# Geochemical Survey

# Southeast Deloro Township - Property I

# Deloro Township, Porcupine Mining Division, Ontario



D.R. Pyke, Ph.D.

December 2, 1981

Toronto, Ontario

# Table of Contents



## Figures

## Introduction

This report covers a geochemical survey carried out over six (6) claims in southeast Deloro Township, about 8 miles southeast of the city of Timmins (Figure 1). The six claims form part of a larger claim group, here referred to as Southeast Deloro Township - Property I. The claims covered by the geochemical survey are listed below.

### Claim Numbers

| | |
|---|---|
| P 584208 | Deloro Township |
| 584210 | Deloro Township |
| 584211 | Deloro Township |
| 584227 | Deloro Township |
| 584228 | Deloro Township |
| 584229 | Deloro Township |

D.R. Pyke, of 157 Burbank Drive, Willowdale, Ontario, is the current holder of the claim group.

## Location and Access

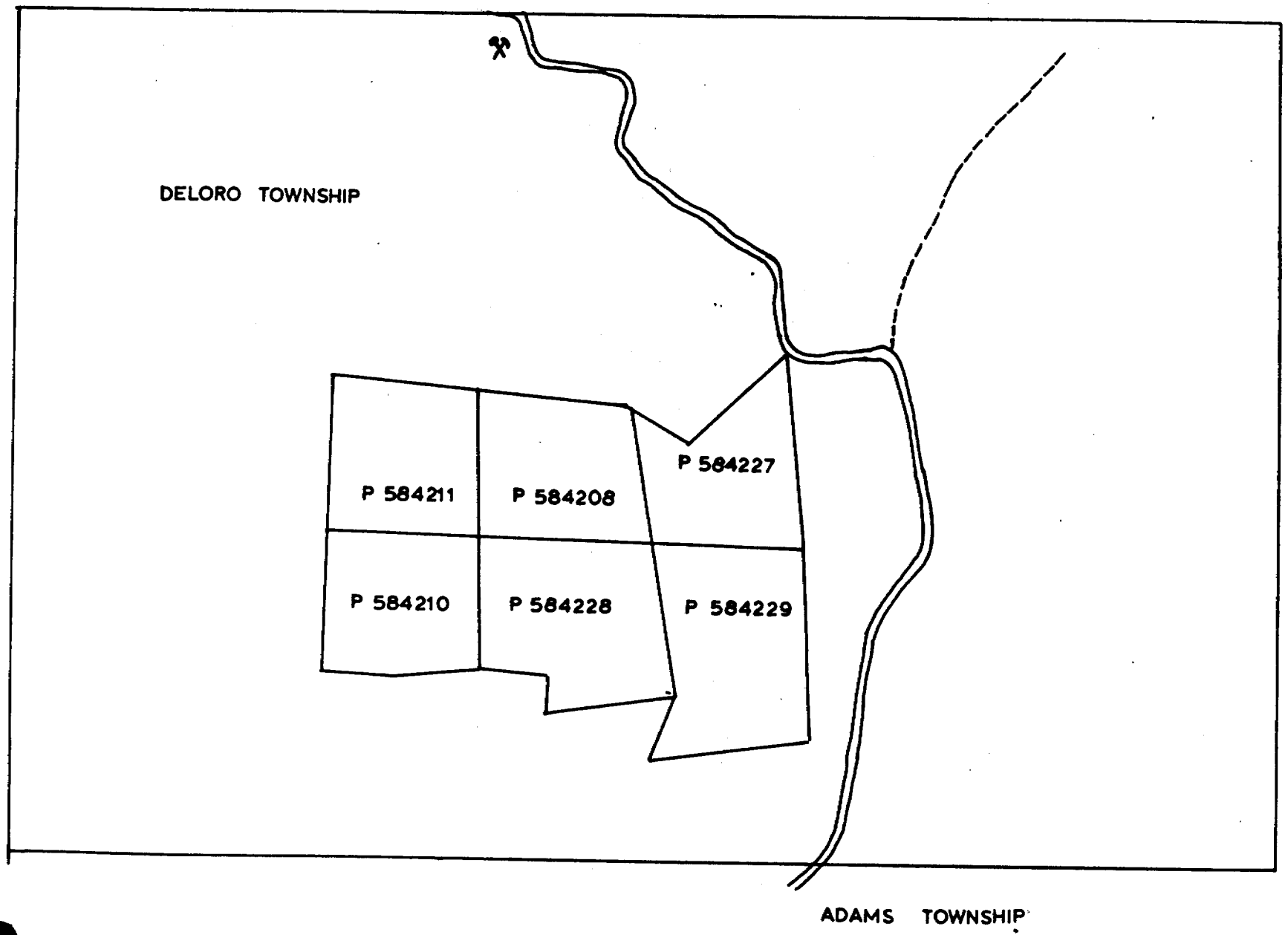
The claims are located near the southeast corner of Deloro Township, and are readily accessible via a bush road extending from the Buffalo Ankerite Mine, a distance of approximately 8 miles.

## Previous Work

The southeast Deloro Township area has been mapped by Burrows (1924), Hurst (1939) and Carlson (1967).

The property encompasses a portion of the claim group formerly investigated by Sylvanite Gold Mines Limited, a

LOCATION OF SOUTHEAST DELORO TOWNSHIP - PROPERTY I CLAIMS



company formed in 1937. Prior to this time the claims were held by the Deloro-Wright Syndicate.

In 1936, a shaft was sunk to a depth of 135 feet (Figure 2). A level was cut at 125 feet and a cross-cut driven 55 feet south. Seven drill holes were put down on the shaft zone and two test pits to a depth of 12 feet were excavated in the vicinity of the shaft. Considerable rock trenching was reportedly done on two other gold-bearing zones on the property. Visible gold was reported on the property in the outcrop area located one-half mile northwest of the shaft (File T-1478*); however, the best quoted assays from the property are 0.16 ounces of gold per ton (no widths indicated) and 0.09 ounces of gold per ton over four feet.

Topography, Drainage and Glacial Geology

The most prominent topographical feature observed is a multiple low-lying ridge trending northeasterly across the property (File T-1478*). The ridge complex, of glaciofluvial origin, extends from the northern portion of claim P. 584210 through to the northern-central area of claim P. 584227. The ridge complex consists largely of sand and scattered rock outcrops, and contains a healthy growth of poplar and lesser white pine trees.

The remaining property area north and south of the ridge consists largely of low-lying ground (swampy in places), populated by fairly dense second generation growths of black spruce, cedar and alder trees.

* Ontario Geol. Survey, Assessment Files, Timmins, Ontario

Overburden depths, as determined from previous drilling (File T-1478*) are generally shallow across the property area, generally ranging from 0 to less than 40 feet.

General Geology

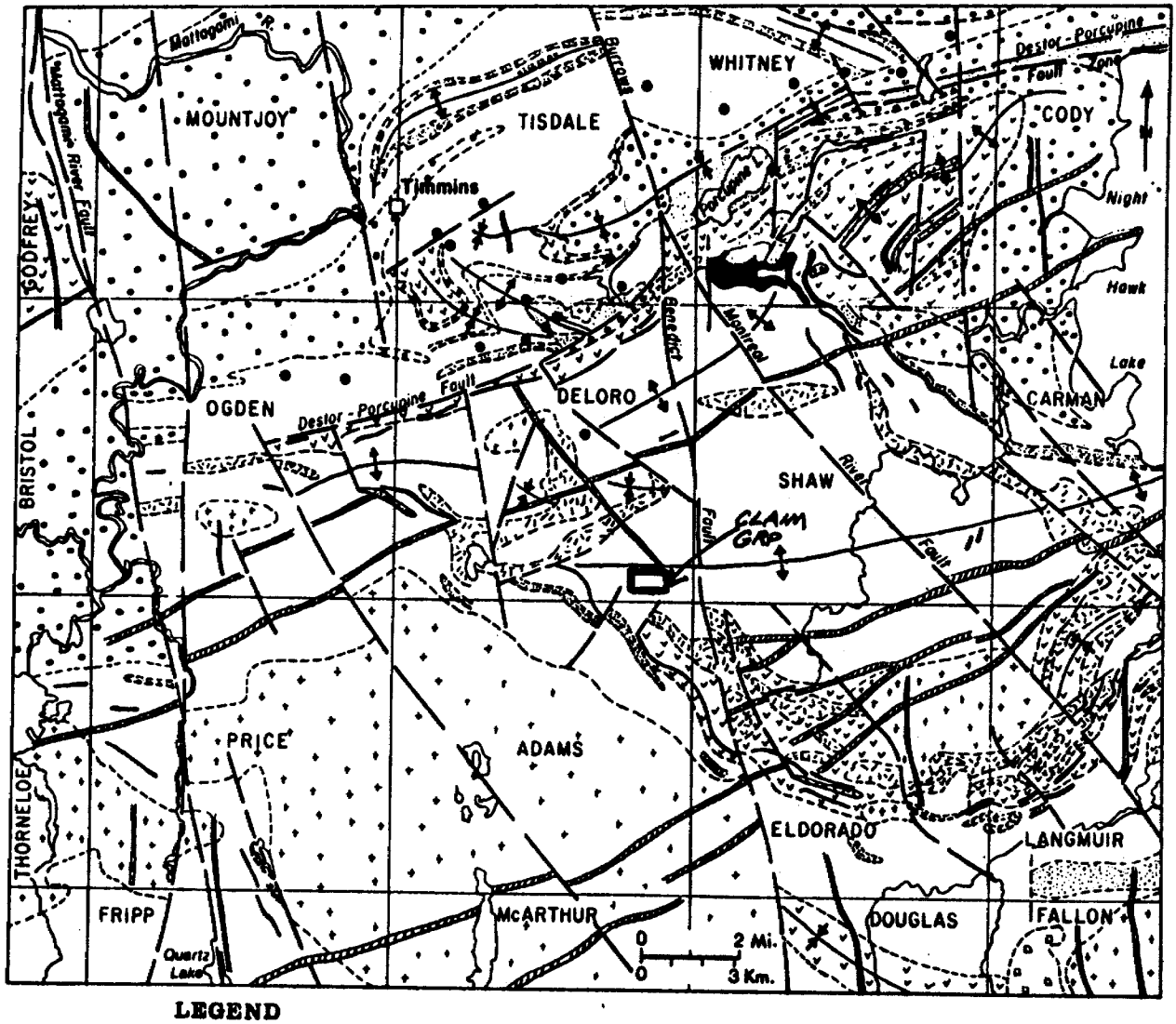
The claims are largely within the Deloro Group volcanics, near the southeast margin of the Shaw Dome (Figure 1). Outcrop is extremely sparse, and it is not yet known whether the ultramafic rocks reported north of the property area are intrusive, or represent an interfingering of ultramafic flows with the upper formations of the older Deloro Group.

Property Geology

Outcrop on the property is quite sparse; however, the area appears to be underlain largely by a sequence of pillowed and massive mafic volcanics (Figure 2).

Two prominent gold-bearing zones were found on the property by earlier surface prospecting, the Shaft Zone and the Central Zone. Both zones strike slightly north of east, dip steeply north and consist of variably sheared, carbonatized and pyritized basaltic and komatiitic (?) flows (File T-1478*). Green carbonate is locally prominent, as are porphyry dikes and quartz stringers. The carbonatized rocks generally occur within the prominent zones of shear; however, an outcrop exposure of massive, pyritized green carbonate rock occurs approximately 600 feet northeast of

* Ontario Geol. Survey, Assessment Files, Timmins, Ont.




**LEGEND**

**MIDDLE PRECAMBRIAN**

Cobalt Formation

Greywacke, arkose, argillite, conglomerate

*Unconformity*

**EARLY PRECAMBRIAN**

Diabase*

*Intrusive Contact*

Granitic intrusive rocks

*Intrusive Contact*

Ultramafic intrusive rocks

*Intrusive Contact*

Sediments (dominantly turbidites)

Iron formation

Felsic to intermediate volcanics

Mafic volcanics

Ultramafic volcanics

*Some diabase dikes are Middle to Late Precambrian

**SYMBOLS**

Location of gold mine (present and past producer)

Fault

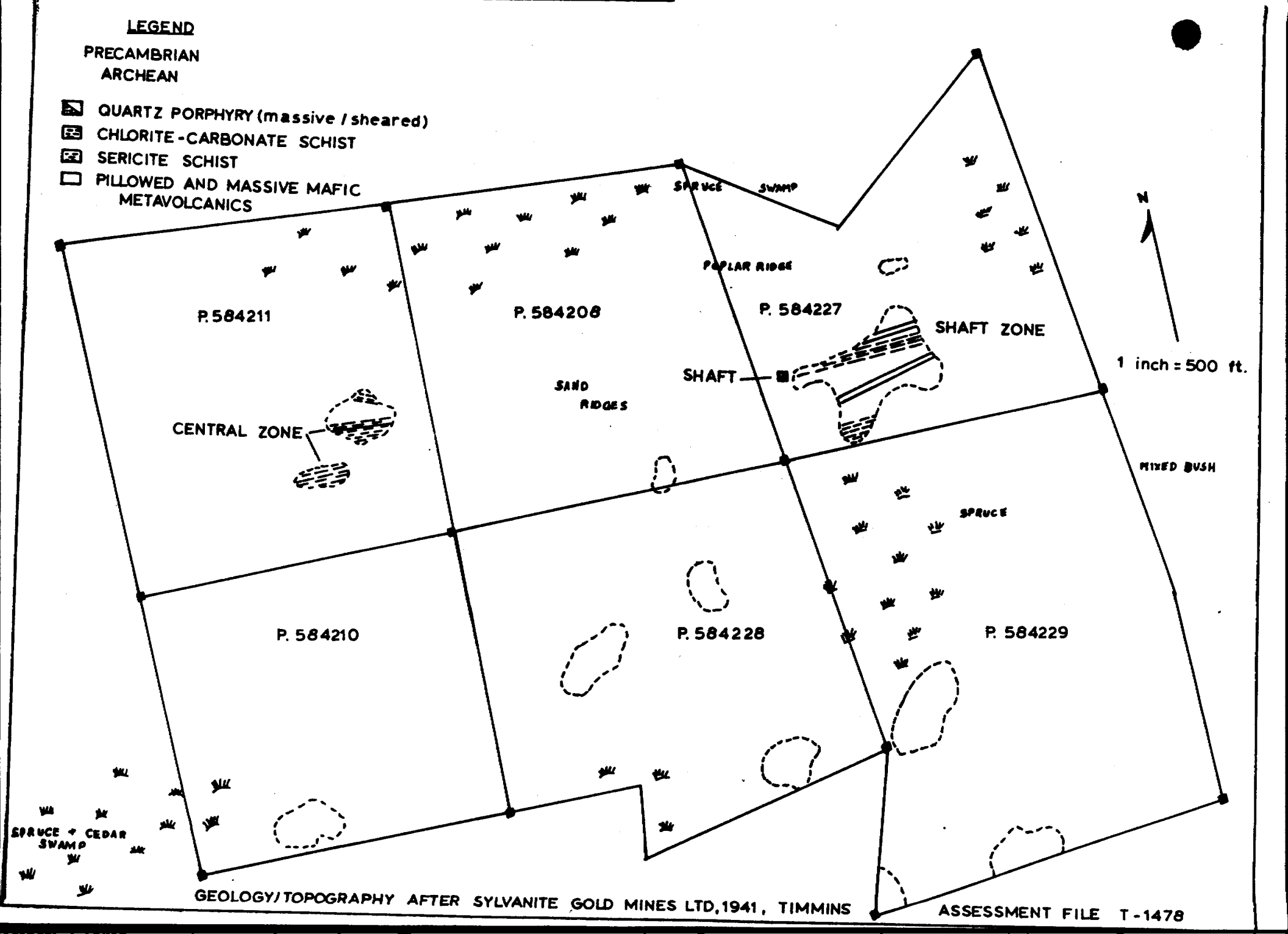
Anticlinal axis

Synclinal axis

Geological boundary

Figure 1. Geological sketch map of the Timmins area (after Pyke 1974a).

FIGURE 2: GEOLOGY OF SOUTHEAST DELORO TOWNSHIP - PROPERTY I



the main shaft on claim P. 584227.

Present Survey

The survey completed by Comstate Resources Ltd. was carried out on August 5-6, 1981. The work was performed by James Roberts and Edward Cook, both presently residing in Stanley Mission, Saskatchewan. All work was conducted under the direct supervision of D.R. Pyke, of D.R. Pyke and Associates, Ltd.

The survey entailed sampling of the humus ($A^o$) horizon. This horizon was variably developed over the property. Humus development was generally more pronounced along the central sand ridge traversing the property, ranging in thickness from 2-4 inches. In the low-lying areas occurring north and south of the ridge complex, the humus horizon was thinner (0 - 2 inches) and sporadically developed.

Sample location sites are plotted on Map A accompanying this report. Samples were collected at 100 foot intervals along twelve north-south lines traversing the property, using a line spacing of 400 feet.

A total of 270 samples were obtained from the property. The samples were subsequently hang-dried and submitted to X-Ray Assay Laboratories for geochemical analysis. The samples were analyzed for gold (parts per billion) and arsenic (parts per million) by neutron activation method.

## Survey Results

The survey results are plotted on Maps B and C accompanying this report, and are also displayed in Appendix A. The survey method is described in Appendix B.

### Gold Content in Humus - Map B

The survey outlined two general zones of anomalous gold concentration in the humus horizon. These zones, labelled "Zone 1" and "Zone 2" trend east-west across the property. Background gold content on the property ranges from 5 to less than 20 parts per billion.

#### Zone 1

Zone 1 trends roughly east-west across the southern and central regions of claims P. 584221, P. 584208 and P. 584227. The zone is characterized by six (6) prominent areas yielding gold values ranging from 31 to 76 parts per billion (labelled "A" through "F"). These areas occur within a larger, semicontinuous region (coloured red on Map B) yielding gold values between 20 and 30 parts per billion.

Area "A" is roughly coincident with the Central Zone (Figure 2) and Area "e" more or less coincides with the Shaft Zone. The distribution of humus values within Zone 1 suggests that the Central and Shaft Zones shown on Figure 2 may actually represent two separate parallel 'subzones'.

Zone 2

Zone 2 trends roughly east-west across the northern portion of claims P. 584210, P. 584228 and P. 584229. Zone 2 is less well-defined than Zone 1, being characterized by a single anomalous high (area "G") situated in an erratic zone of gold values ranging from 20 to 30 parts per billion.

Arsenic Content in Humus - Map C

While the gold values obtained (Map B) tend to outline distinct east-west zones, particularly on the eastern portion of the area surveyed, the arsenic values (Map C) in contrast, outline what appears to be the continuation of these zones on the western portion of the property.

The distribution of arsenic values indicate the presence of two sub-parallel east-west zones which are roughly coincident with Zones 1 and 2 outlined by the gold survey. The two zones outlined by the arsenic values are characterized by restricted (one to three sample station) anomalous highs ranging from 20 to 49 parts per million arsenic, occurring within erratic and semi-continuous zones yielding arsenic values of 10 to 20 parts per million.

Conclusions

The apparent east-west continuity of the anomalous zones plus the relatively high gold and arsenic values found in these zones indicate that the geochemical anomalies

detected may reflect a bedrock source for the gold and arsenic.

Sylvanite Gold Mines Limited documented the occurrence of 2 mineralized zones of highly schistose, variably carbonatized mafic volcanics, the Central Zone and the Shaft Zone (Figure 2). Results of the present survey indicate that these zones may in fact be parallel and distinct, rather than representing one wide, discontinuous area. In addition, the present survey also outlined the occurrence of a southerly third zone, (labelled Zone 2 on Maps B and C) not recognized previously.

## Recommendations

It is recommended that follow-up work consist of ground geophysics (V.L.F and magnetometer surveys) to aid in further delineation of mineralized shear zones occurring on the property. More detailed humus sampling followed by overburden drilling in the vicinity of coincident geophysical and geochemical anomalies (if they should occur) would perhaps best serve to further explore the mineral potential of the property.

## References

Burrows, A.G.

1924: The Porcupine gold area, Fourth Report; Ontario Dept. Mines, Vol. 33, pt. 2, 112 p. Accompanied by Map 33a, scale 1 inch to 2,00 feet

Carlson, H.D.

1967: Geology of Ogden, Deloro and Shaw Townships; Ontario Dept. Mines, Open File Report 5012, 117 p. Accompanied by Maps p. 341, p. 342 and p. 343. Scale 1 inch to ¼ mile

Curtin, G.C., Lakin, H.W., Neuerberg, G.J. and Hubert, A.E.

1968: Utilization of humus rich forest soil (mull) in geochemical exploration for gold; U.S. Geol. Survey Circ. 562, 11 p.

Gleeson, C.F.

1979: Consider geochemistry when seeking gold; The Northern Miner, Exploration issue, March 8, 1979, 4 p.

Hurst, M.E.

1939: Porcupine area, District of Cochrane; Ontario Dept. Mines, Map 47a, scale 1 inch to 2000 feet.

Lakin, H.W., Curtin, G.C., Hubert, A.E., Shacklette, H.T. and Doxtader, K.G.

1974: Geochemistry of gold in the weathering cycle; U.S.G.S. Bull. 1330, 80p.

# APPENDIX A

## Humus Sample Analytical Results - Southeast Deloro Property I

| SAMPLE | AU PPB | AS PPM | SAMPLE | AU PPB | AS PPM |
|---|---|---|---|---|---|
| A0-BL | 7 | 4 | A7-13S | 14 | 7 |
| A0-1S | 14 | 4 | A7-14S | 20 | 7 |
| A0-2S | 13 | 7 | A7-15S | 13 | 7 |
| A0-3S | 34 | 8 | A7-16S | 21 | 8 |
| A0-4S | 42 | 10 | A7-17S | 7 | 11 |
| A0-5S | 9 | 3 | A7-18S | 19 | 8 |
| A0-6S | 62 | 9 | A7-19S | 8 | 6 |
| A0-7S | 22 | 8 | A7-20S | 27 | 7 |
| A0-8S | 33 | 7 | A7-21S | 24 | 7 |
| A0-9S | 24 | 11 | A7-22S | 15 | 6 |
| A0-10S | 14 | 6 | A7-23S | 13 | 20 |
| A0-11S | 20 | 9 | A7-24S | 3 | 5 |
| A0-12S | 25 | 6 | A7-25S | 0 | 5 |
| A0-13S | 17 | 5 | A7-26S | <1 | 3 |
| A0-14S | 42 | 6 | A7-27S | 17 | 4 |
| A0-15S | 19 | 9 | A7-28S | 20 | 5 |
| A0-16S | 10 | 8 | A10-BL | 4 | 3 |
| A0-17S | 11 | 7 | A10-1S | 18 | 6 |
| A0-18S | 16 | 9 | A10-2S | 19 | 5 |
| A0-19S | 24 | 9 | A10-3S | 24 | 7 |
| A0-20S | 29 | 8 | A10-4S | 13 | 5 |
| A4-BL | 37 | 10 | A10-5S | 27 | 7 |
| A4-1S | 26 | 5 | A10-6S | 33 | 9 |
| A4-2S | 21 | 6 | A10-7S | 20 | 6 |
| A4-3S | 19 | 6 | A10-8S | 34 | 6 |
| A4-4S | 26 | 6 | A10-9S | 18 | 6 |
| A4-5S | 13 | 5 | A10-10S | 16 | 6 |
| A4-6S | 23 | 7 | A10-11S | 9 | 5 |
| A4-7S | 23 | 7 | A10-12S | 19 | 9 |
| A4-8S | 20 | 7 | A10-13S | 13 | 4 |
| A4-9S | 16 | 5 | A10-14S | 17 | 7 |
| A4-10S | 15 | 6 | A10-15S | 30 | 8 |
| A4-11S | 19 | 9 | A10-16S | 31 | 9 |
| A4-12S | 24 | 9 | A10-17S | 18 | 6 |
| A4-13S | 22 | 8 | A10-18S | 32 | 7 |
| A4-14S | 13 | 7 | A10-19S | 15 | 4 |
| A4-15S | 8 | 7 | A10-20S | 24 | 7 |
| A4-16S | 21 | 6 | A10-21S | 21 | 8 |
| A4-17S | 19 | 8 | A13-BL | 12 | 5 |
| A4-18S | 12 | 2 | A13-1S | 76 | 9 |
| A4-19S | 18 | 8 | A13-2S | 60 | 5 |
| A4-20S | 16 | 5 | A13-3S | 37 | 5 |
| A7-BL | 5 | 3 | A13-4S | 15 | 3 |
| A7-1S | 20 | 4 | A13-5S | 18 | 6 |
| A7-2S | 41 | 5 | A13-6S | 18 | 16 |
| A7-3S | 5 | 4 | A13-7S | 16 | 6 |
| A7-4S | 15 | 4 | A13-8S | 21 | 9 |
| A7-5S | 41 | 11 | A13-9S | 22 | 24 |
| A7-6S | 25 | 8 | A13-10S | 17 | 9 |
| A7-7S | 35 | 8 | A13-11S | 25 | 8 |
| A7-8S | 32 | 7 | A13-12S | 27 | 8 |
| A7-9S | 40 | 9 | A13-13S | 33 | 9 |
| A7-10S | 29 | 8 | A13-14S | 17 | 3 |
| A7-11S | 19 | 5 | A13-15S | 27 | 10 |
| A7-12S | 35 | 8 | A13-16S | 17 | 6 |

| SAMPLE | AU PPB | AS PPM | SAMPLE | AU PPB | AS PPM |
|---|---|---|---|---|---|
| A13-17S | 14 | 7 | A24-8L | 26 | 8 |
| A13-18S | 27 | 6 | A24-1S | 14 | 7 |
| A13-19S | 22 | 8 | A24-2S | 37 | 11 |
| A13-20S | 25 | 8 | A24-3S | 36 | 10 |
| A13-21S | 27 | 9 | A24-4S | 25 | 9 |
| A13-22S | 26 | 9 | A24-5S | 35 | 11 |
| A13-23S | 35 | 11 | A24-6S | 46 | 10 |
| A16-8L | 16 | 7 | A24-7S | 20 | 10 |
| A16-1S | 10 | 4 | A24-8S | 14 | 5 |
| A16-2S | 20 | 12 | A24-9S | 42 | 13 |
| A16-3S | 22 | 17 | A24-10S | 25 | 11 |
| A16-4S | 13 | 9 | A24-11S | 15 | 6 |
| A16-5S | 18 | 15 | A24-12S | 18 | 7 |
| A16-6S | 23 | 9 | A24-13S | 25 | 8 |
| A16-7S | 34 | 14 | A24-14S | 14 | 7 |
| A16-8S | 14 | 7 | A24-15S | 9 | 12 |
| A16-9S | 8 | 7 | A24-16S | 8 | 11 |
| A16-10S | 49 | 11 | A24-17S | 40 | 15 |
| A16-11S | 37 | 8 | A24-18S | 12 | 9 |
| A16-12S | 31 | 9 | A24-19S | 21 | 15 |
| A16-13S | 41 | 10 | A24-20S | 9 | 8 |
| A16-14S | 12 | 11 | A28-8L | 5 | 41 |
| A16-15S | 19 | 11 | A28-1S | 7 | 27 |
| A16-16S | 16 | 7 | A28-2S | 6 | 18 |
| A16-17S | 13 | 5 | A28-3S | 21 | 13 |
| A16-18S | 26 | 8 | A28-4S | 33 | 11 |
| A16-19S | 20 | 7 | A28-5S | 26 | 9 |
| A16-20S | 16 | 6 | A28-6S | 11 | 6 |
| A16-21S | 27 | 9 | A28-7S | 20 | 14 |
| A16-22AS | 25 | 7 | A28-8S | 5 | 6 |
| A16-22BS | 46 | 9 | A28-9S | 38 | 13 |
| A20-8L | 13 | 5 | A28-10S | 16 | 9 |
| A20-1S | 33 | 10 | A28-11S | 13 | 10 |
| A20-2S | 17 | 7 | A28-12S | 25 | 22 |
| A20-3S | 12 | 9 | A28-13S | 10 | 16 |
| A20-4S | 17 | 6 | A28-14S | 22 | 26 |
| A20-5S | 28 | 3 | A28-15S | <1 | 3 |
| A20-6S | 14 | 13 | A28-16S | 12 | 2 |
| A20-7S | 29 | 49 | A28-17S | 11 | 42 |
| A20-8S | 31 | 6 | A28-18S | 19 | 2 |
| A20-9S | 41 | 8 | A28-19S | 13 | 11 |
| A20-10S | 32 | 16 | A28-20S | 19 | 5 |
| A20-11S | 18 | 20 | A32-8L | 5 | 7 |
| A20-12S | 32 | 13 | A32-1S | 12 | 11 |
| A20-13S | 20 | 8 | A32-2S | 6 | 7 |
| A20-14S | 26 | 8 | A32-3S | 27 | 13 |
| A20-15S | 22 | 6 | A32-4S | 41 | 14 |
| A20-16S | 31 | 9 | A32-5S | 53 | 11 |
| A20-17S | 25 | 11 | A32-6S | 21 | 8 |
| A20-18S | 27 | 12 | A32-7S | 20 | 8 |
| A20-19S | 24 | 10 | A32-8S | 46 | 9 |
| A20-20S | 24 | 8 | A32-9S | 18 | 10 |
| A20-21S | 8 | 17 | A32-10S | 7 | 11 |
| A20-22S | 22 | 7 | A32-11S | 7 | 22 |
| A20-23S | 15 | 10 | A32-12S | 15 | 11 |

| SAMPLE | AU PPB | AS PPM | SAMPLE | AU PPB | AS PPM |
|---|---|---|---|---|---|
| A32-13S | 25 | 14 | | | |
| A32-14S | 19 | 11 | | | |
| A32-15S | 3 | 8 | | | |
| A32-16S | 6 | 7 | | | |
| A32-17S | 15 | 11 | | | |
| A32-18S | 14 | 12 | | | |
| A32-19S | 10 | 11 | | | |
| A32-20S | 26 | 9 | | | |
| A36-BL | 29 | 25 | | | |
| A36-1S | 18 | 15 | | | |
| A36-2S | 11 | 11 | | | |
| A36-3S | 28 | 13 | | | |
| A36-4S | 15 | 27 | | | |
| A36-5S | 19 | 48 | | | |
| A36-6S | 12 | 14 | | | |
| A36-7S | 29 | 21 | | | |
| A36-8S | 5 | 8 | | | |
| A36-9S | 4 | 13 | | | |
| A36-10S | 20 | 26 | | | |
| A36-11S | 8 | 6 | | | |
| A36-12S | 23 | 19 | | | |
| A36-13S | 11 | 13 | | | |
| A36-14S | 2 | 5 | | | |
| A36-15S | 19 | 9 | | | |
| A36-16S | 11 | 6 | | | |
| A36-17S | 1 | 2 | | | |
| A36-18S | 11 | 6 | | | |
| A36-19S | 15 | 9 | | | |
| A36-20S | 8 | 6 | | | |
| A40-BL | 13 | 10 | | | |
| A40-1S | 14 | 15 | | | |
| A40-2S | 12 | 15 | | | |
| A40-3S | 26 | 9 | | | |
| A40-4S | 7 | 12 | | | |
| A40-5S | 2 | 10 | | | |
| A40-6S | 7 | 9 | | | |
| A40-7S | 32 | 12 | | | |
| A40-8S | 13 | 11 | | | |
| A40-9S | 25 | 11 | | | |
| A40-10S | 7 | 6 | | | |
| A40-11S | 14 | 22 | | | |
| A40-12S | 22 | 13 | | | |
| A40-13S | 28 | 14 | | | |
| A40-14S | 23 | 9 | | | |
| A40-15S | 17 | 7 | | | |
| A40-16S | 35 | 13 | | | |
| A40-17S | 21 | 10 | | | |
| A40-18S | 15 | 13 | | | |
| A40-19S | 18 | 10 | | | |
| A40-20S | 12 | 10 | | | |

## APPENDIX B Survey Method

### Procedure

During the survey, humus samples were obtained either by hand or by exposing deeper levels of the humus layer with a grub hoe.

After hang-drying, the samples were shipped to X-Ray Assay Laboratories, 1885 Leslie Street, Don Mills, Ontario, for analysis. 270 samples were analyzed by neutron activation method for gold and arsenic.

Sample preparation entailed thoroughily blending each sample in a blender to homogenize the material, followed by hydrolic compression of a portion of the sample to form a pellet weighing eight grams, which was used in the neutron activation process.

### Humus as a sample medium

Gleeson (1979), Lakin et al (1974), Curtin et al (1968) and others have documented the successful use of humus (mull) as a sample medium for detection of auriferous bedrock zones in area covered by 3 to 120 feet of glacial material. Gleeson (1979) has found that anomalies in the humus generally occur directly over the subcrop of the auriferous zones, and their dispersion patterns are little effected by glacial transport.

The humus layer sampled consists of the partly decomposed plant debree found under trees or shrubs, and usually occurs as dark brown or black, humus-rich pads mixed with varying

amounts of mineral matter.

A summary of the geochemical processes involved in the accumulation of gold in the humus horizon is presented by Lakin et al (1974):

> "ample hydrogen cyanide is formed in the soil by hydrolysis of cyanogenic plants, animals and fungi to result in solution of gold in an oxygenated environment. The gold cyanide thus formed is absorbed by plants, but they do not use it as a nutrient. It is therefore found accumulating as a reject in the woody parts of a plant. The decomposition of plant debris results in the reduction of gold in the plant material and gold accumulation in the humus horizon of the soil."

Boyle and Dass (1967), through their work in the Cobalt area, have demonstrated that concentrations of such elements as arsenic, zinc, copper and lead also occur in the humus layers over known veins containing these elements.

## Certificate

I, D.R. Pyke, submit this document to certify that the following statements are, to the best of my knowledge, true and correct.

1. That I supervised the geochemical survey conducted on the Southeast Deloro Township - Property I claims in Deloro Township, conducted on August 5-6, 1981.

2. That I am the author of the corresponding assessment report entitled "Assessment Report of Geochemical Survey, Southeast Deloro Township - Property I, Deloro Township, Porcupine Mining Division, Ontario".

3. That I have received the following university degrees:

| | | |
|---|---|---|
| B.Sc. | University of Saskatchewan | 1959 |
| M.Sc. | University of Saskatchewan | 1961 |
| Ph.D. | McGill University, Quebec | 1967 |

4. That I have been working as a geologist in the general Timmins area for 15 years, and I am familiar with the geology of the area under consideration.

Respectfully,

D.R. Pyke

## Assessment Work Breakdown

1. Expenditure Credits for Geochemical Survey.
(see Technical Data Statement)

270 geochemical (humus) samples analyzed for gold and arsenic, at $7.50 per sample ..... $ 2,025.00

Assessment credits - one day's work for each $15 expended. Total number of assessment work credits obtained for chemical analyses ..... 135.0 days

Number of credits credited per claim, six claims to be credited ..... 22.5 days

2. Assessment Credits earned for total 8-hour technical days.
(see Assessment Work Breakdown Statement)

48 hours total technical, 6.0 8-hour days, X seven assessment credit days ..... 42.0 days

Number of tech. credits credited per claim, six claims to be credited ..... 7.0 days

Total number of assessment credits per claim earned from this survey work ..... 29.5 days per claim

D R Pyke

Submitted by D.R. Pyke on December 3, 1981 for purpose of obtaining assessment work credits for mining claims P. 584208, P.584210, P.584211, P.584227, P.584228, P.584229, comprising a portion of the Southeast Deloro Township-Property-1 Claim Group, Deloro Township, Porcupine Mining Division.

# Assessment Work Breakdown Statement

## Field Work

Type of Work: Geochemical Sampling

Name & Address:
1. Edward Cook
   Stanley Mission, Saskatchewan
2. James Roberts
   Stanley Mission, Saskatchewan

Dates Worked: Each worked August 5-6, 1981

No. 8-hr days: 4.0 8-hr. days total.

## General Office Work

Type of Work: Draughting/Typing

Name & Address: Kimberly M. Cunnison
180 Kennedy St. West, Aurora, Ont.

Dates Worked: Draughting - November 29, 1981 (8.0 hours)
November 30, 1981 (4.0 hours)
Typing - December 2, 1981 (4.0 hours)

No. 8-hr days: 2.0 8-hour days total.

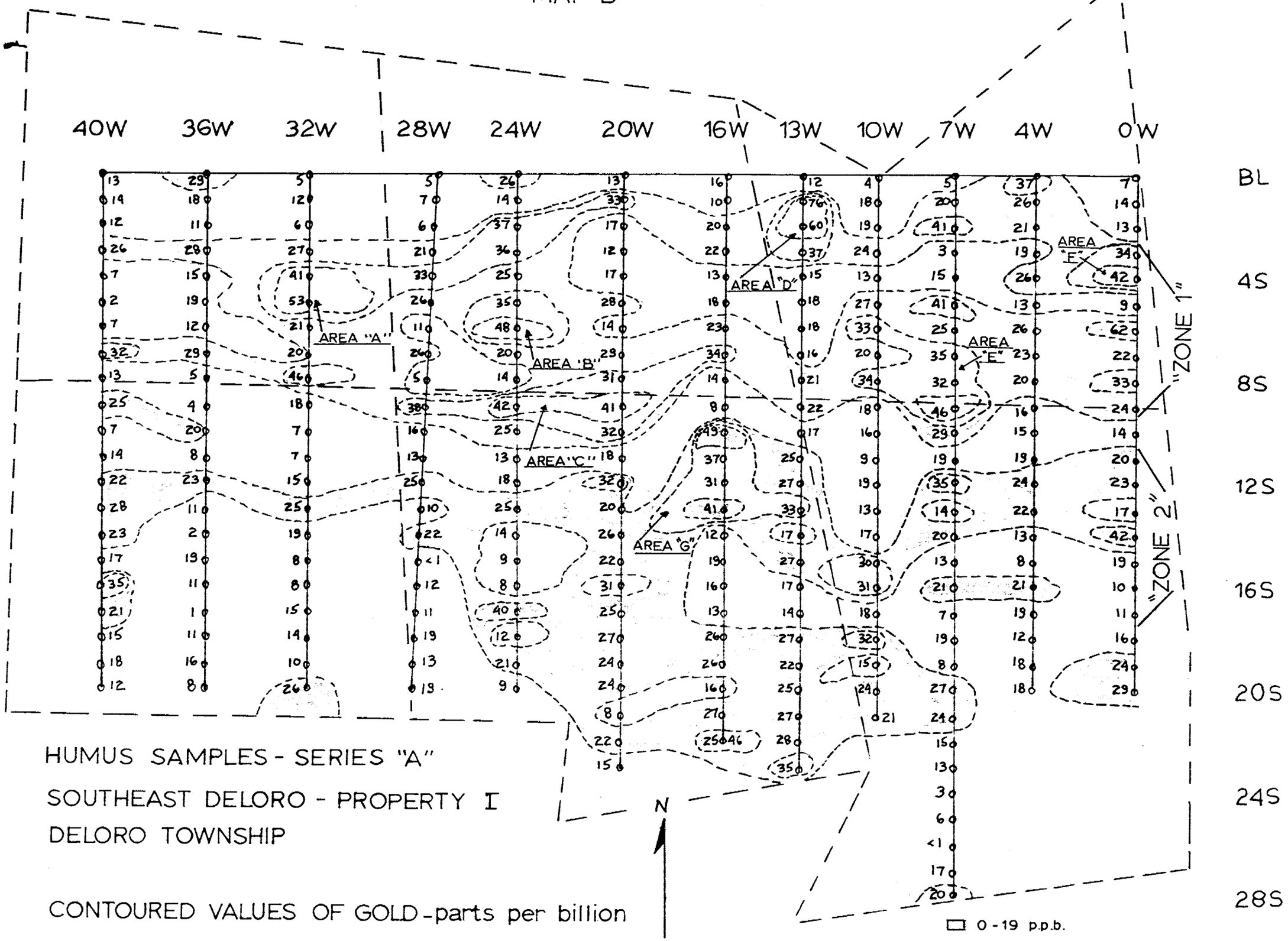
## Total number of technical days earned from this work:

6.0 8-hr technical days total

X 7 assessment credit days per 8-hr day ..... 42 credit days total

Technical days per claim,
(6 claims to be credited) ..... 7.0 days/claim

MAP B




HUMUS SAMPLES - SERIES "A"

SOUTHEAST DELORO - PROPERTY I

DELORO TOWNSHIP

CONTOURED VALUES OF GOLD - parts per billion

- ○ SAMPLE SITE
- —— FLAGGED LINE
- – – – CLAIM LINE

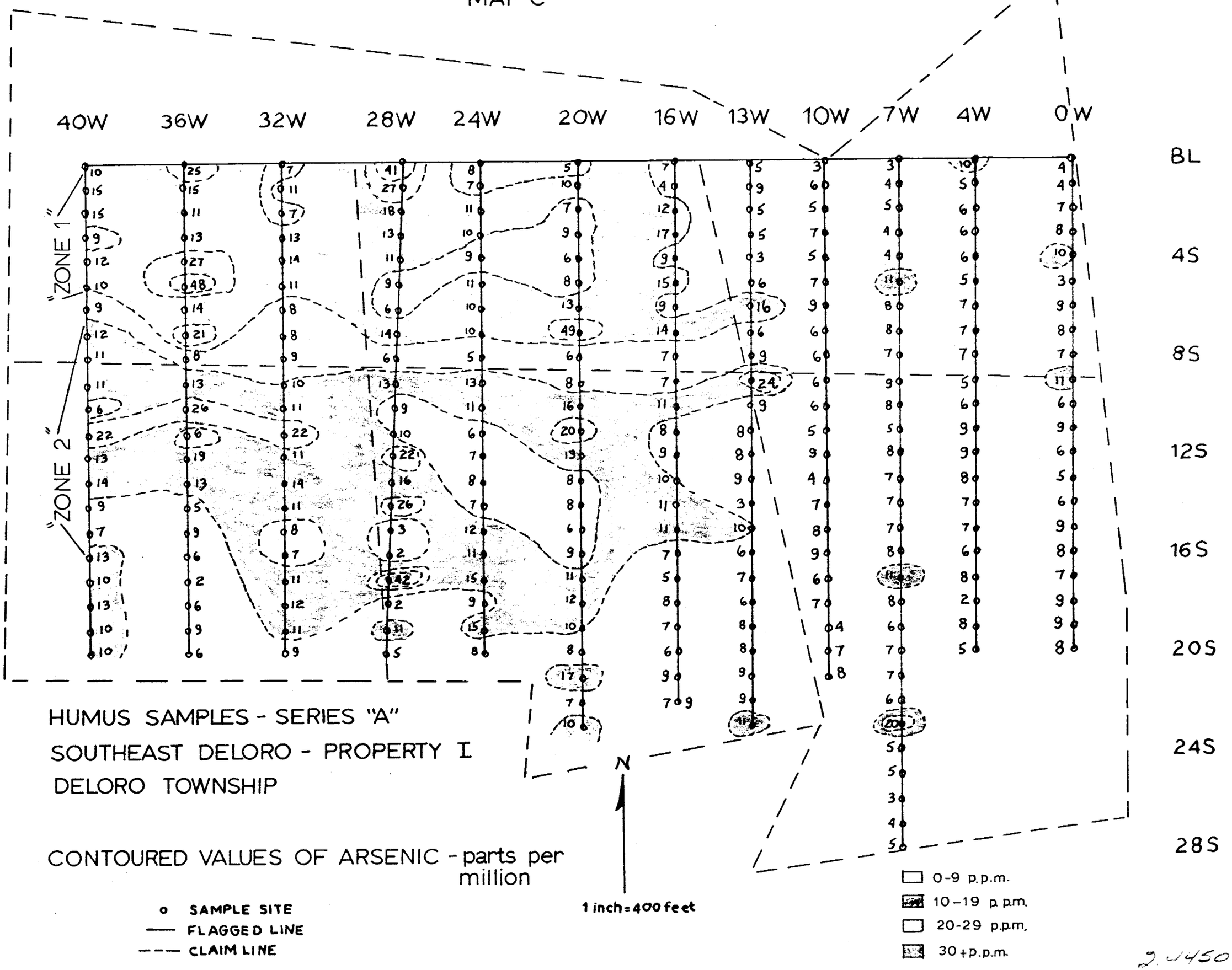
SURVEY CONDUCTED AUGUST 5-6, 1981

D.R. PYKE

NOVEMBER 1981

2.W450

MAP C




HUMUS SAMPLES - SERIES "A"
SOUTHEAST DELORO - PROPERTY I
DELORO TOWNSHIP

CONTOURED VALUES OF ARSENIC - parts per million

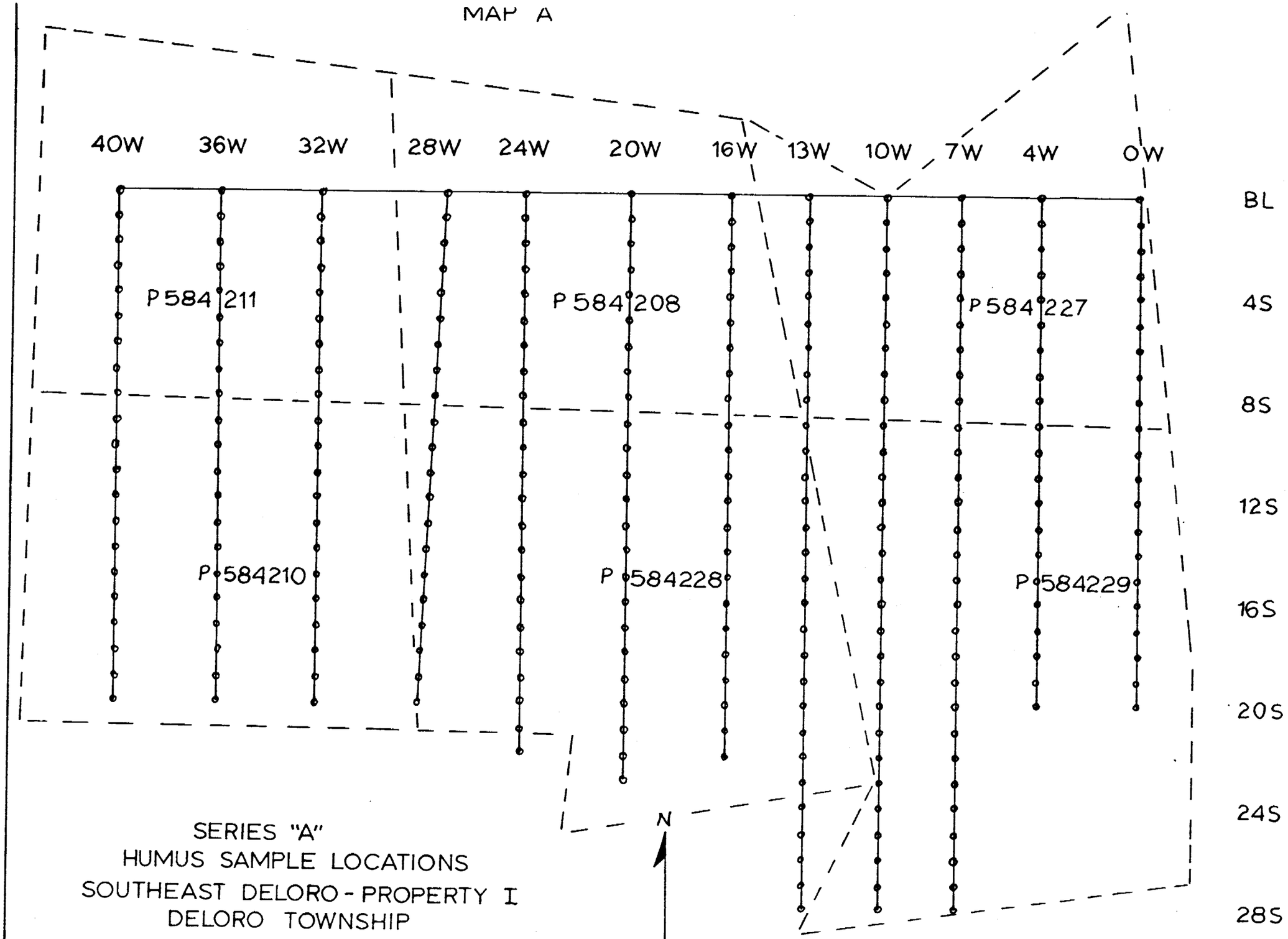
o SAMPLE SITE
—— FLAGGED LINE
- - - CLAIM LINE

SURVEY CONDUCTED AUGUST 5-6, 1981

D R PYKE
NOVEMBER, 1981

2.1450

MAP A




SERIES "A"
HUMUS SAMPLE LOCATIONS
SOUTHEAST DELORO - PROPERTY I
DELORO TOWNSHIP

o SAMPLE SITE
— SAMPLE LINE
--- CLAIM LINE

1 inch = 400 feet

SURVEY CONDUCTED AUGUST 5-6, 1981 D.R. PYKE

NOVEMBER 1981

1983 02 03 2.4450

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

RE: Geochemical Survey submitted on Mining Claims
P 584208 et al in the Township of Deloro

---

In accordance with the information received from your office that Claims P 584208, 584210-11 and 584227 to 29 inclusive have all been cancelled, the above mentioned survey has not been assessed. You are hereby authorized to deleted22.5 days per claim and to inform the recorded holder of these changes.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

A. Barr:sc

cc: D.R. Pyke
Willowdale, Ontario

cc: Resident Geologist
Timmins, Ontario

Ministry of Natural Resources
Ontario

# Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

Deloro Twp. #509

P-584208

The Mining Act

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

| | |
|---|---|
| Type of Survey(s): GEOCHEMICAL (HUMUS) | Township or Area: DELORO |
| Claim Holder(s): D. R. PYKE | Prospector's Licence No.: K19126 |
| Address: 157 BURBANK DR., WILLOWDALE, ONT. M2K1N9. | |
| Survey Company: COMSTATE RESOURCES LTD | Date of Survey (from & to): Day / Mo. / Yr. — Day / Mo. / Yr. |
| Total Miles of line Cut: | |
| Name and Address of Author (of Geo-Technical report): D.R PYKE, 157 BURBANK DRIVE, WILLOWDALE, ONT. | |

## Credits Requested per Each Claim in Columns at right

| | | Days per Claim |
|---|---|---|
| Special Provisions: For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each) | Geophysical | |
| | - Electromagnetic | |
| | - Magnetometer | |
| | - Radiometric | |
| | - Other | |
| | Geological | |
| | Geochemical | |
| Man Days: Complete reverse side and enter total(s) here | Geophysical | Days per Claim |
| | - Electromagnetic | |
| | - Magnetometer | |
| | - Radiometric | |
| | - Other | |
| | Geological | |
| | Geochemical | |
| Airborne Credits: Note: Special provisions credits do not apply to Airborne Surveys. | | Days per Claim |
| | Electromagnetic | |
| | Magnetometer | |
| | Radiometric | |

## Mining Claims Traversed (List in numerical sequence)

| Mining Claim Prefix | Mining Claim Number | Expend. Days Cr. |
|---|---|---|
| P | 584208 | 22.5 |
| | 584210 | 22.5 |
| | 584211 | 22.5 |
| | 584227 | 22.5 |
| | 584228 | 22.5 |
| | 584229 | 22.5 |

| Mining Claim Prefix | Mining Claim Number | Expend. Days Cr. |
|---|---|---|
| | | |

RECEIVED
DEC 4 1981
MINING LANDS SECTION

RECORDED
DEC 4 1981

Total number of mining claims covered by this report of work: 6

## Expenditures (excludes power stripping) (Seed. 77-19)

Type of Work Performed: HUMUS SAMPLE Geochemical ANALYSIS - Au & As

Performed on Claim(s): P584208, P584210, P584211, P584227, P584228, P584229

Calculation of Expenditure Days Credits

Total Expenditures: $ 2025.00 + 15 = Total Days Credits: 135

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

| For Office Use Only | | |
|---|---|---|
| Total Days Cr. Recorded: 135 | Date Recorded: Dec. 4/81 | Mining Recorder: |
| | Date Approved as Recorded: | Branch Director / Regional Mining Recorder |

Date: Dec 2/81 — Recorded Holder or Agent (Signature): D.R Pyke

## Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: D.R PYKE 157 BURBANK DR. WILLOWDALE ONT M2K 1N9

DEC 4 1981
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Date Certified: Dec 2/81 — Certified By (Signature): D.R Pyke

1362 (81/9)

Ministry of Natural Resources
Ontario

# Geotechnical Report Approval

File 2.4450

**Mining Lands Comments**

- no receipt or cancelled cheques.
- maps not signed.

☐ To: Geophysics

**Comments**

| ☐ Approved ☐ Wish to see again with corrections | Date | Signature |
|---|---|---|

☐ To: Geology - Expenditures

**Comments**

| ☐ Approved ☐ Wish to see again with corrections | Date | Signature |
|---|---|---|

☑ To: Geochemistry Dr. J. Thomson

**Comments**

Maps not signed

| ☑ Approved ☐ Wish to see again with corrections | Date Jun 6 '83 | Signature |
|---|---|---|

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

January 13, 1982 2.4450

Office of the Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for a Geochemical Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims P.584208 et al, in the Township of Deloro.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

J. Skura/bk

cc: D.R. Pyke
Willowdale, Ontario

Ontario

Ministry of Natural Resources

File

# GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

RECEIVED
DEC 31 1981
MINING LANDS SECTION

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Geochemical (Humus sampling)

Township or Area Deloro Township

Claim Holder(s) D.R. Pyke

157 Burbank Dr., Willowdale, Ont. M2K 1N9

Survey Company ----------

Author of Report D.R. Pyke

Address of Author 157 Burbank Dr., Willowdale, Ont.

Covering Dates of Survey August 5-6, 1981, December 2, 1981
(linecutting to office)

Total Miles of Line Cut ----------

**SPECIAL PROVISIONS CREDITS REQUESTED**

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

| | DAYS per claim |
|---|---|
| Geophysical | |
| –Electromagnetic | |
| –Magnetometer | |
| –Radiometric | |
| –Other | |
| Geological | |
| Geochemical | |

**AIRBORNE CREDITS** (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Dec 2/81 SIGNATURE: D R Pyke
Author of Report or Agent

Res. Geol. _____ Qualifications 2.3899

Previous Surveys

| File No. | Type | Date | Claim Holder |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**MINING CLAIMS TRAVERSED**
List numerically

| (prefix) | (number) |
|---|---|
| P | 584208 |
| P | 584210 |
| P | 584211 |
| P | 584227 |
| P | 584228 |
| P | 584229 |

If space insufficient, attach list

TOTAL CLAIMS 6

OFFICE USE ONLY

# GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

**MAGNETIC**

Instrument _____

Accuracy – Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

_____

**ELECTROMAGNETIC**

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

**GRAVITY**

Instrument _____

Scale constant _____

Corrections made _____

_____

Base station value and location _____

_____

Elevation accuracy _____

**INDUCED POLARIZATION**
**RESISTIVITY**

Instrument _____

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time _____ Frequency _____

– Off time _____ Range _____

– Delay time _____

– Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

## SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

## RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

## OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

## AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken P. 584208, P. 584210, P. 584211, P. 584227, P. 584228, P. 584229

Total Number of Samples 270

Type of Sample soil sample - humus (Nature of Material)

Average Sample Weight 8 grams

Method of Collection sampled by hand/grub hoe

Soil Horizon Sampled humus -A°

Horizon Development Variable, 0-4 inches

Sample Depth 0-3 inches

Terrain One of low relief except for NE trending ridge traversing property.

Drainage Development Isolated swampy patches, but mostley moderate drainage.

Estimated Range of Overburden Thickness Overburden fairly shallow, ranging from zero inches on parts of ridge to approx. 30 feet in low lying areas.

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis Not applicable.

General Samples were blended in a blending machine for homogeneity of material. All samples were thoroughily dried before blending.

ANALYTICAL METHODS

Values expressed in: per cent ☐ p. p. m. ☒ p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, (As) (circle)

Others Gold (Au) - parts per billion

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (270 samples tested for Au and As tests)

Name of Laboratory X-Ray Assay Laboratory

Extraction Method ------

Analytical Method Neutron Activation

Reagents Used ---------

General 270 samples were tested each for gold and arsenic. Samples analyzed at X-Ray Assay Laboratories, 1885 Leslie St., Don Mills, Ontario. Blended sample material was hydrolically compressed to form a pellet weighing 8 grams.

TISDALE TWP. M-315

OGDEN TWP. M-305

SHAW TWP. M-311

ADAMS TWP. M-261

# THE TOWNSHIP OF DELORO

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 20 CHAINS

## LEGEND

| | |
|---|---|
| PATENTED LAND | (P) |
| CROWN LAND SALE | C.S |
| LEASES | (L) |
| LOCATED LAND | Loc. |
| LICENSE OF OCCUPATION | L.O |
| MINING RIGHTS ONLY | M.R.O |
| SURFACE RIGHTS ONLY | S.R.O |
| ROADS | |
| IMPROVED ROADS | |
| KING'S HIGHWAYS | |
| RAILWAYS | |
| POWER LINES | |
| MARSH OR MUSKEG | |
| MINES | |
| CANCELLED | C. |
| PATENTED S.R.O. | |

## NOTES

400' Surface Rights reservation along the shores of all lakes and rivers.

For status of fraction situated between Mg. Claims: H.R.1132; H.R.947 & M.E.42 see File No. 119653

Mining claims within the area shown thus ═══ are subject to rights & privileges granted under An Easement Order dated May 19, 1937 to Delnite Mines Ltd.

This township lies within the Municipality of CITY of TIMMINS.

DATE OF ISSUE
JAN 20 1983
Ministry of Natural Resources
TORONTO

PLAN No. - M-272

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH