GEOLOGY PROSPECTING SUMMARY-OP92-070, OP92-130

Outlined below is a preliminary geological prospecting evaluation on the Big Dyke Property that was completed during this past 1992 OPAP program. A more detailed geological survey should be undertaken once exploration funds are available. However, this evaluation served as a useful guide in defining the geological parameters and hence the precious metal potential of the property. It also established a location for a stripping program that was part of the 1992 OPAP study.

Geologically, the property forms part of the Upper Deloro Group series of rocks. From south to north the property consists of east-west striking, generally vertical dipping mafic to ultramafic volcanics, fragmental volcanics, and carbonated volcanics followed by massive intermediate volcanics. A long, variable striking, variable dipping, oxide to sulphide facies iron formation apparently cross-cuts most rock units on the property. This iron formation strikes for over 3,000 feet and as a width of up to 200 feet. A moderate amount of exploration activity was concentrated on this structure. Several trenches and an 80 foot-2 compartment vertical shaft was developed by previous owners. The shaft muck pile contained several pieces containing

significant amounts of pyrite mineralization. Assay results from this area yielded gold values up to 0.274 ounces/ton (refer to 1992 OPAP report dated November 27th, 1992 for detailed information). Additional exploration work is recommended for this structure.

Another important structure located in the prospecting program was a quartz vein known as the Big Dyke Quartz Vein. Several trenches and small shafts were associated with this vein over a distance of 1,000 feet. This quartz vein generally striked east-west dipped north and was up to 4 feet wide. Minor pyrite mineralization was sporadically associated within the vein and previous assay results of up to 0.1 ounces/ton were recorded from previous owners. Additional exploration work is recommended for this structure.

The prospecting program also located several other pits, trenches and small shafts throughout the property. These areas were generally adjacent to massive, fresh-looking volcanics, however, all depressions were heavily overgrown and a proper geological evaluation could not be completed. Additional exploration work is recommended for these areas.

Best regards,

Ken Lapierre

Ken Lapierre HBSc. FGAC
Geologist

SUMMARY REPORT

OF THE

STRIPPING/WASHING/MAPPING PROGRAM

BIG DYKE PROPERTY

DELORO TOWNSHIP, TIMMINS, ONTARIO

OP92-070, OP92-130

November 27, 1992

Ken Lapierre HBSc. FGAC.

INTRODUCTION

This report was prepared for the purpose of:

1) Satisfying all OMIP regulations and requirements
2) Highlighting the geological and historical setting of the claim group.
3) Determining if the stripped areas are anomalous and worthy of further study.
4) Determining if the property should be retained for further study.

Sources of information contained in this report were obtained from Ministry of Northern Development and Mines assessment files, consultants reports and supervision, mapping and sampling of the 1992 OPAP study.

PROPERTY: LOCATION AND DESCRIPTION

The property is comprised of 2 unpatented mining units located in east central Deloro Township, Porcupine Mining Division, District of Cochrane, Ontario, Canada (figure 1).

The claim numbers of the claim group are outlined below (figure 2).

CLAIM NUMBER	# OF UNITS	ACRES(approximate)
P.1189183	4	160
P.1189189	1	40

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES

Access to the property can be accomplished by various routes (figure 3). One route is by means of the Langmuir road from South Porcupine a distance of approximately 2 miles to a gravel pit turnoff. At this point a well travelled logging road continues west then south a distance of approximately 2 1/4 miles to a washed out section of the logging road. Beyond the washout, a distance of approximately 1/4 mile, a well overgrown bush road abuts the main road and continues west for a distance of approximately 1800 feet to another washed out section of the road. Beyond this washout the road traverses the property, beginning at the #2 post of claim unit 1189183 and continuing southward to

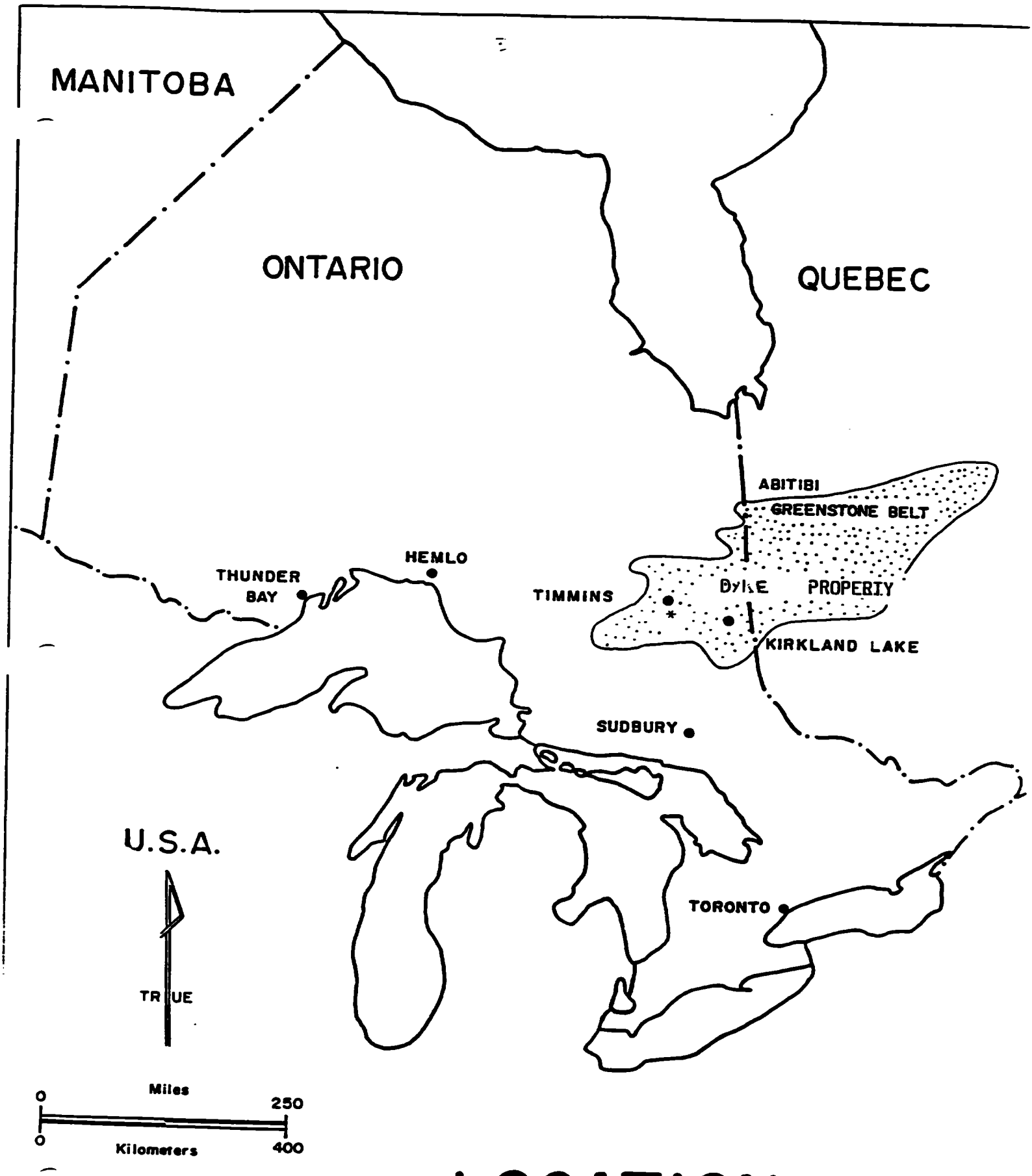


FIGURE 1: LOCATION MAP

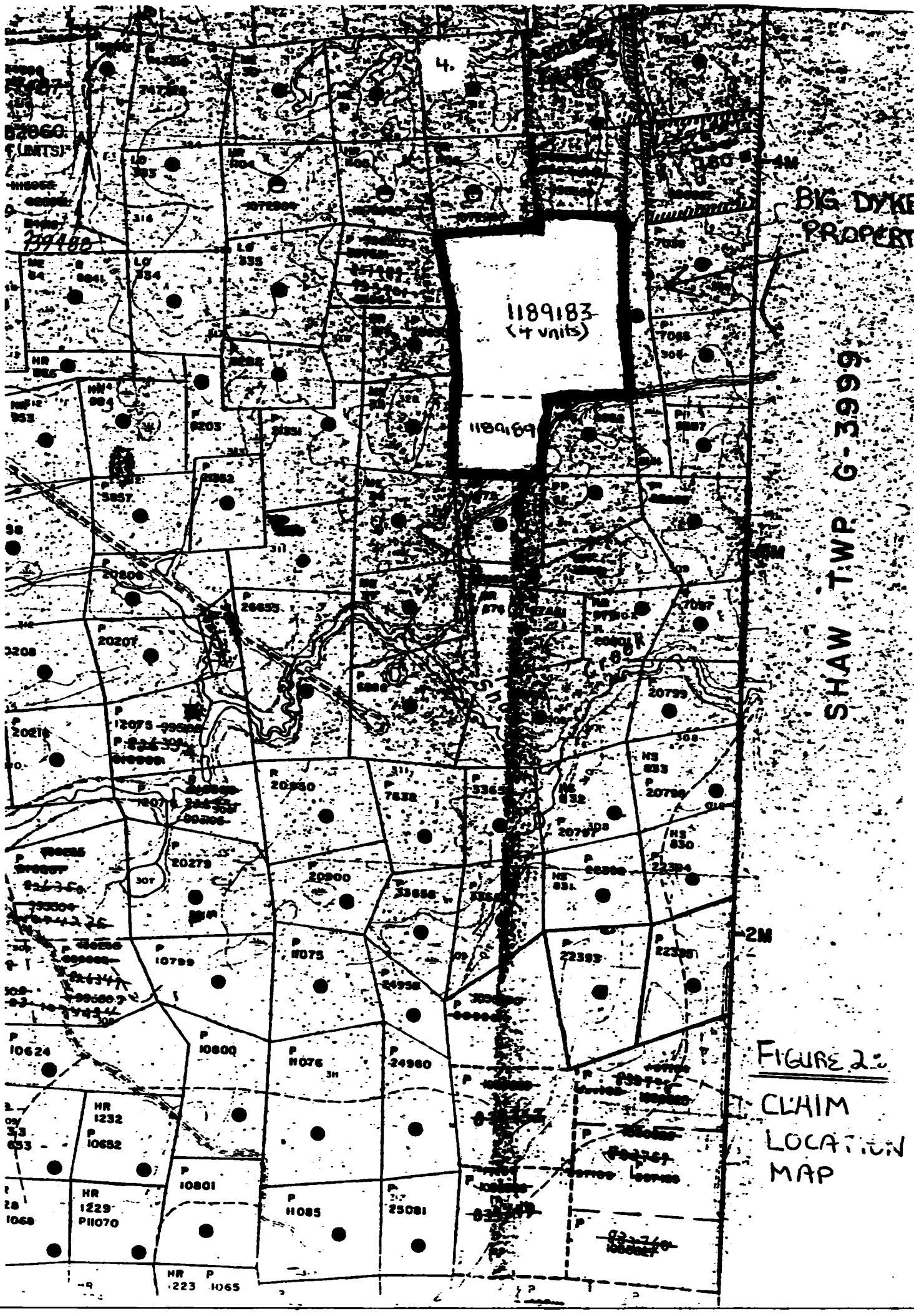


FIGURE 2:

CLAIM LOCATION MAP

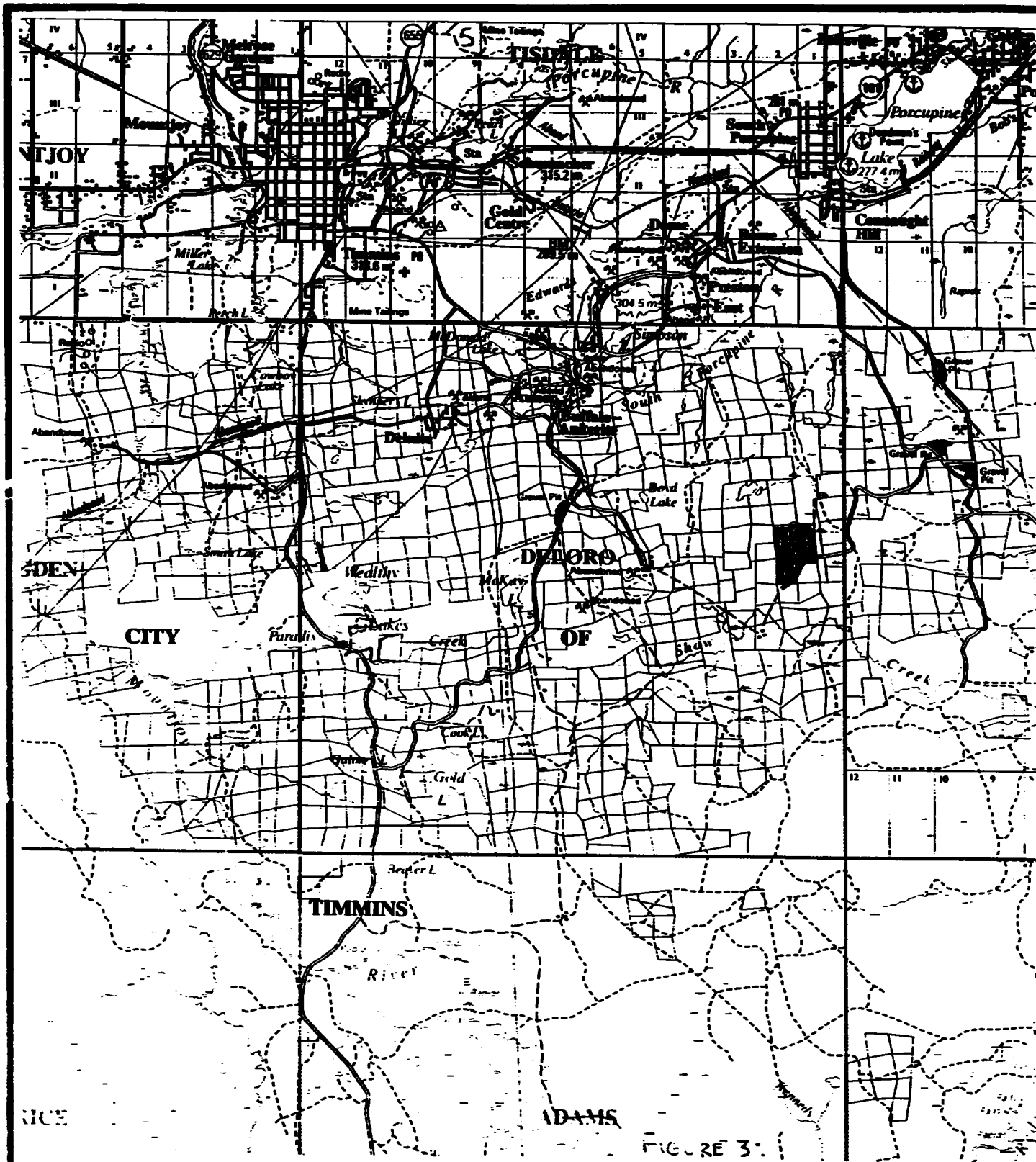


FIGURE 3:

LAPIERRE EXPLORATION SERVICES INC. P.O. Box 1021, P4N 7H6 Suite 17, Hollinger Bldg. Timmins, Ontario Telephone: 705 267-7389	
CLIENT: KEN LAPIERRE, RAY COLLINS	
PROPERTY: BIG DYKE PROPERTY	
TITLE: PROPERTY LOCATION	
DATE: NOV. 1992	SCALE: 1:100,000
DRAWN:	INTERP K. Lapierre

the #2 post of claim unit 1189189.

Another route would be from Placer Domes new tailings dam road which begins on the Timmins backroad in South Porcupine. This tailings road initiates at Placer Domes old townsite (now torn down) and continues generally southward to the north boundary of P.1189183. Permission from Placer Dome must be granted to individuals who wish to use this route.

Another route to the property is by means of the Timmins backroad to the Buffalo Ankerite turnoff then southward on a good gravel road to the junction of the Faymar Mine road. This road continues south eastward past the Faymar water tower to a an old deterioated bridge at Shaw Creek. At this point the property can be reached on foot in a northeast direction for a distance of approximately 3500 feet to the #3 post of P.1189189.

Climatic conditions are typical for this part of Northern Ontario. Temperatures range from +35 degrees celsius to -50 degrees celsius.

Water resources are available within the property. Mining supplies and manpower are located in Timmins and South Porcupine.

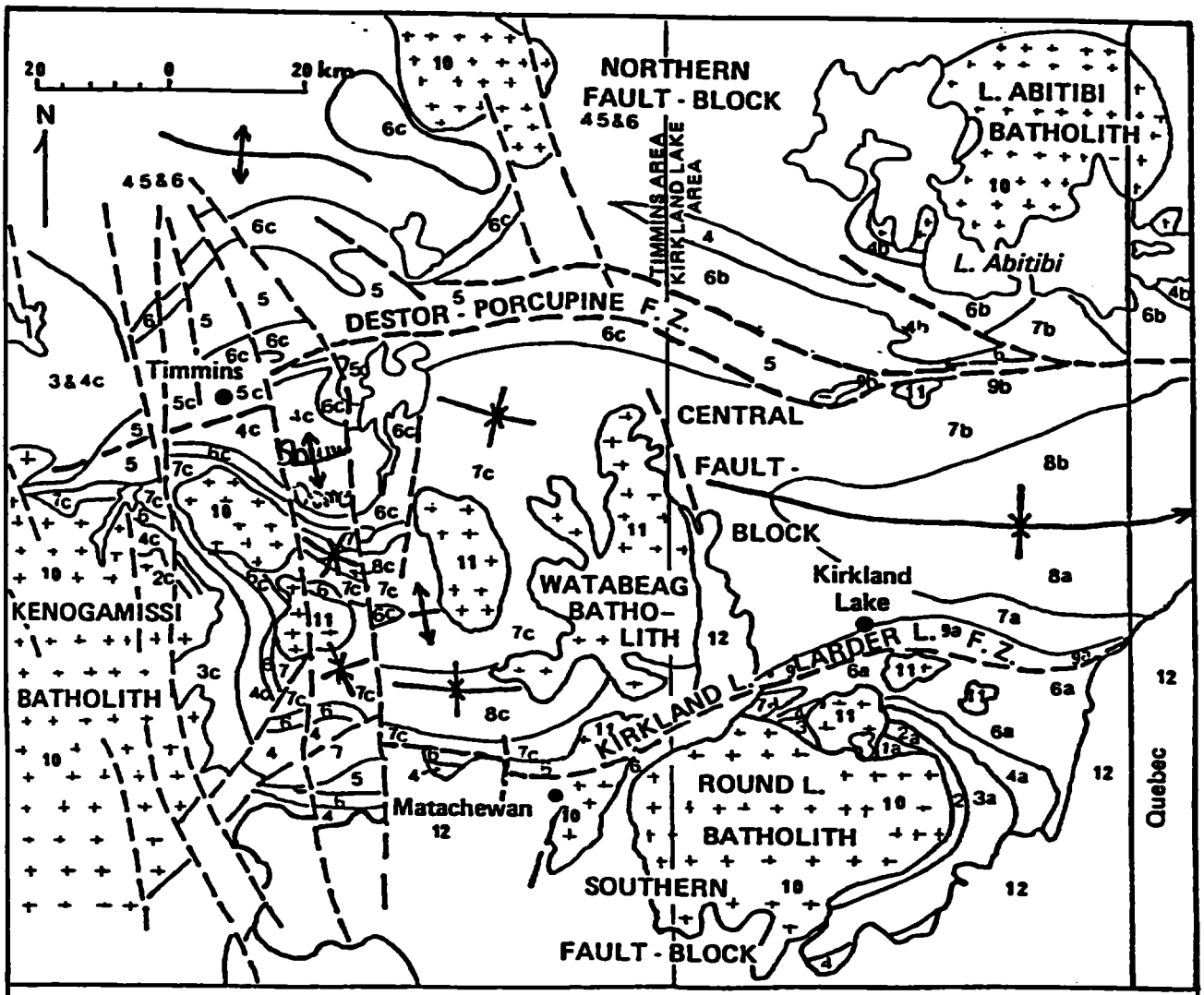
REGIONAL GEOLOGY

The Geology of the Timmins area consists predominantly of Precambrian metavolcanics and metasediments. The precambrian rocks were later covered partially by unconsolidated Cenozoic deposits (figure 4). The Precambrian rocks represent a 40,000 foot thick sequence of lower to middle greenschist facies volcanics and sediments that are divided into three groups. From oldest to youngest the three groups are known as the Deloro, Tisdale and Porcupine Groups. The Deloro Group is a 16,000 foot thick sequence composed of basal ultramafics, andesites and basalt flows followed by dacite flows, calc-alkaline rhyolites and dacite pyroclastic rocks and oxide to sulphide facies iron formations. The Tisdale Group is a 14,000 foot thick sequence composed of basal ultramafic volcanics and komatiites followed by tholeiitic basalts and calc-alkaline pyroclastic rocks. The Porcupine Group is a 10,000 foot thick sequence composed of interlayered wacke, silstone and conglomerate.

The rocks of the Timmins area were then intruded by sill-like bodies and dykes composed of felsic to mafic components.

Stratigraphic displacement of rock types range from tens of feet to thousands of feet. The most prominent and prolific fault in the area is known as the Destor-Porcupine

after – *L.S. JENSEN AND F.F. LANGFORD*



LEGEND

Proterozoic

Keeweenawan diabase (not shown)

12 Cobalt Group

Archean

Matachewan diabase (not shown)

Granitic rocks

11 Granodiorite, monzonite, quartz monzonite, syenite

10 Massive to gneissic quartz diorite, tonalite, trondhjemite

Upper Supergroup

9 9a* Timiskaming Group, 9b** Destor - Porcupine Complex

8 8a, 8n, Blake River Group, 8c*** Blake River (Upper Fm., Tisdale Group)

7 7a, 7b, Kinojevis Group, 7c Kinojevis Group, (Middle Fm., Tisdale Group)

6 6a Larder Lake Group, 6b Stoughton-Roquemaure Group, 6c Lower Fm., Tisdale Group

5 5c Porcupine Group

Lower Supergroups

4 4a Skead Group, 4b Hunter Mine Group, 4c Upper Fm., Deloro Group

3 3a Catherine Group, 3c Middle Fm., Deloro Group

2 2a Wabewawa Group, 2c Lower Fm., Deloro Group

1 1a Pacaud tuffs ****

*a refers to Kirkland Lake Area, south limb of synclinorium (Jensen 1978c, 1979).
**b refers to Kirkland Lake Area, north limb of synclinorium (Jensen 1976, 1978b).
***c refers to Timmins Area (Pyke 1980)
**** (Goodwin 1965).

Figure4 : Geological map of the Timmins - Kirkland Lake area.

Fault. This major structural break trends generally northeast, dips steeply north and has a width in excess of 400 feet. Other younger fault systems traversing the area are known as the Montreal River Fault and the Burrows Benedict Fault Systems.

Structurally, the area lies within the Superior Province of the Canandian Shield. North of the Destor-Porcupine Fault, 2 major series of deformational-metamorphic events altered the rocks in the region; initial north trending series of folds were subsequently refolded about an east-northeast trending series of folds(figure 5). South of the Destor-Porcupine Fault, an east-west trending series of folds produced a major structural domain known as the Shaw Dome.

LOCAL GEOLOGY

The Ontario Geological Survey's map 2455-`Precambrian Geology', map of Timmins, scale 1:50000, highlights the property geology. The property is underlain by pillowed flows of mafic calc-alkalic volcanic composition. It also consists of oxide to sulphide rich iron formations. The property has been intruded by mafic intrusive rocks of olivine composition. The Burrows Benedict fault system ocurrs immediately east of the claim block.

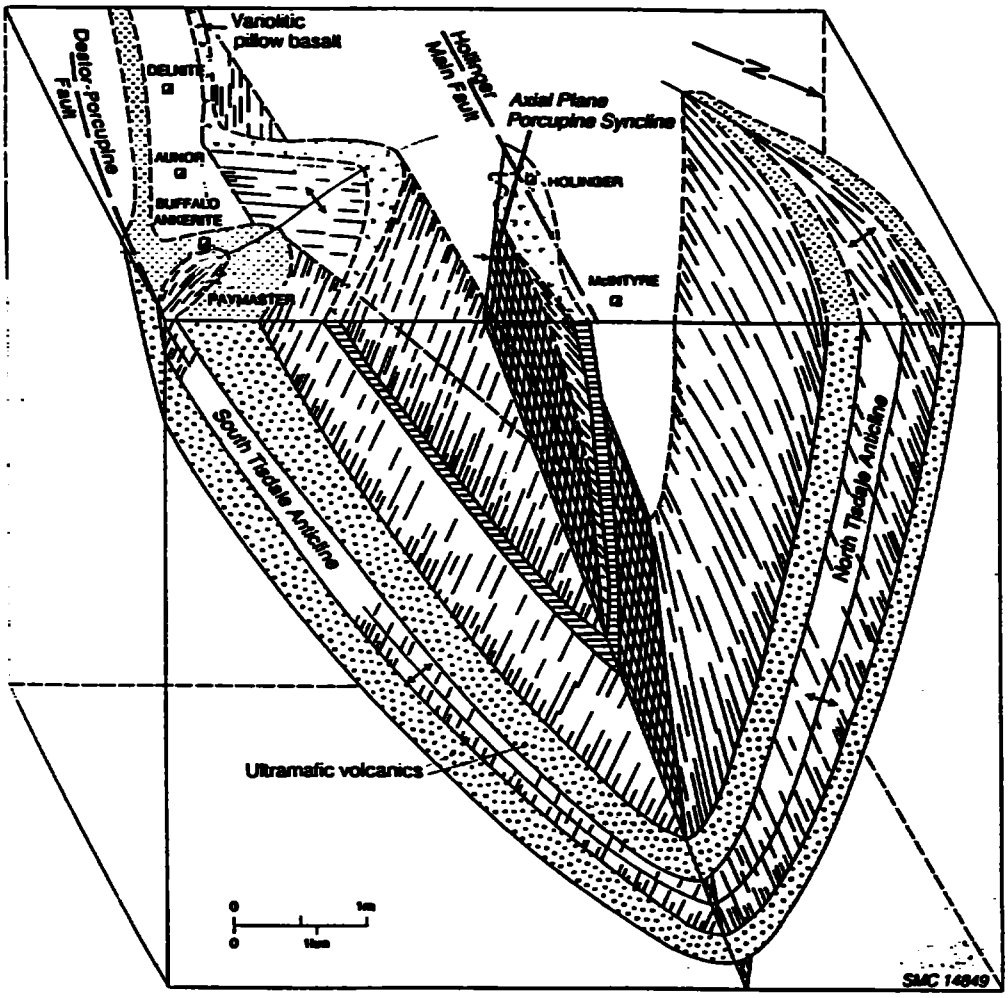


Figure 5 -Diagrammatic sketch showing interpretation of main part of the Timmins gold camp; illustrates the refolding of an anticlinal structure (now represented by the South and North Tisdale Anticlines) about the easterly trending Porcupine Syncline. For line of cross-section *see* Figure 15.

After D.R.Pyke, O.G.S. report # 219-Timmins Area

GENERAL HISTORY OF CLAIM GROUP

The history of the property is described by G.M. Thomas in a 1981 exploration report for Vatco Exploration Incorporated (assessment file #T-2733-Timmins branch).

In 1920, the property was controlled by Big Dyke Consolidated Gold Mines. Exploration centered on a northeast trending quartz dyke (big dyke zone) and a carbonatized sulphide rich iron formation. Four vertical shafts up to 80 feet deep and sporadically positioned pits and trenches developed the showings. Operations were closed down in 1923.

From 1926 to 1944, the company announced that underground development would continue as soon as funding was in place, however no exploration work was recorded. Finally, in 1961 the charter of Big Dyke Consolidated was allowed to lapse.

From 1962 to 1979, various prospectors held the ground but no work was ever recorded at the ministry office. However, between 1980 and 1983 exploration programs of linecutting, geophysics, soil geochem, sampling and geological mapping were completed on the claim block by Vatco Exploration Inc. Grab samples yielding up to 0.30 ounces/ton gold were associated with a pyrite rich carbonate altered iron formation. The length of the iron formation was recorded as greater than 1,000 feet. The company concluded that this iron formation may host a series of possibly

economic gold enriched lenses. Furthermore, the Big Dyke Vein yielded values up to 0.1 ounces/ton. The company also concluded that soil geochemical anomalies occurred in conjunction with intermediate volcanics and at the edges of magnetic high anomalies.

In 1991, the claim block was staked and recorded for the purpose of verifying the existence of past accomplishments on the property. This verification, if successful, would necessitate continued exploration by optioning the property to a junior or major exploration company. The claim holders decided to apply to the Ontario Prospectors Assistance Program for the purpose of funding the first phase of exploration on the property.

OPAP PROGRAM

Purpose of Program

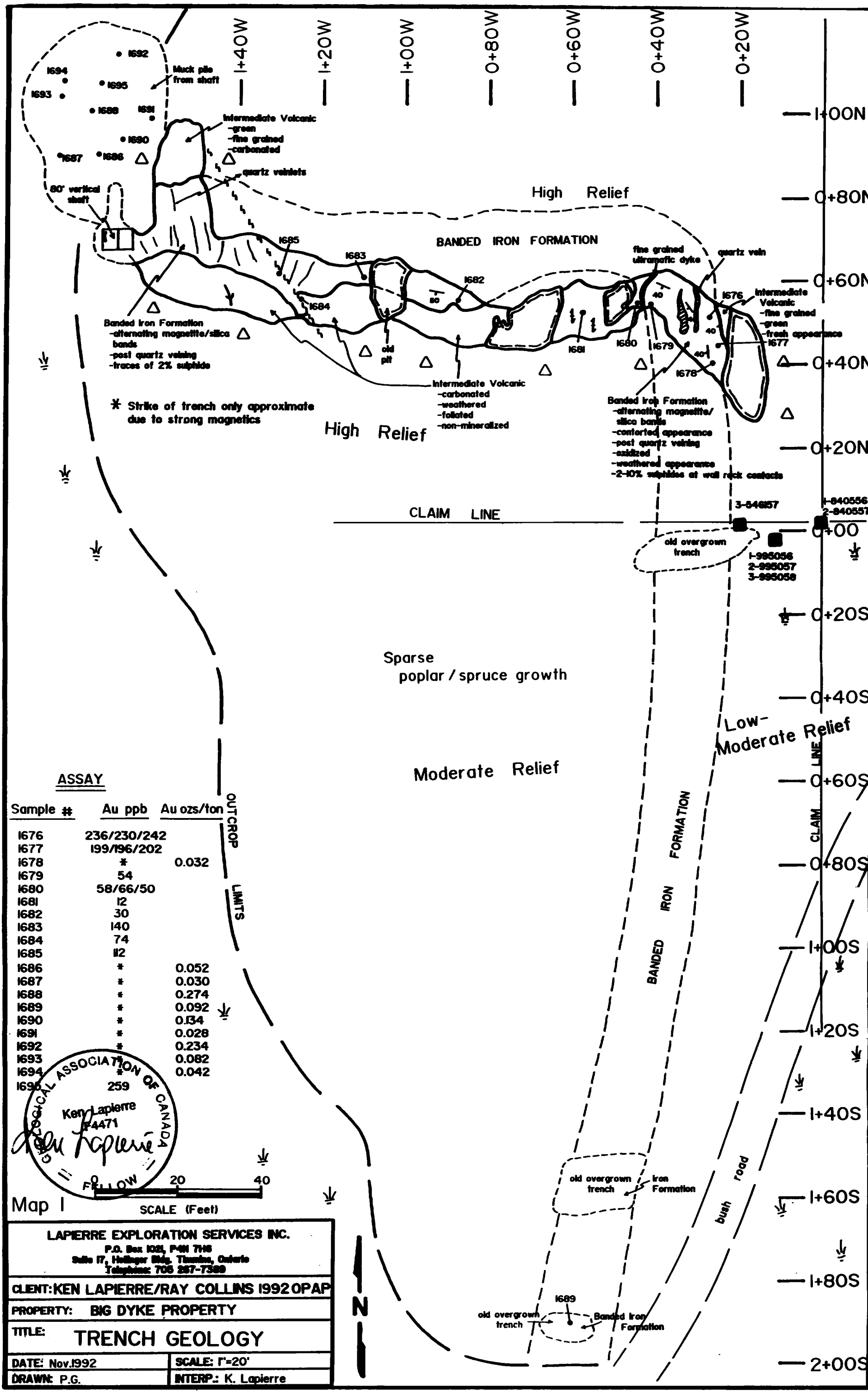
The purpose of the OPAP study was to remove the overburden and debris from the vicinity of the two shafts and overgrown trenches associated with the main mineralized iron formation where values up to 0.30 ounces/ton were recovered from previous exploration programs.

Property Prospecting

Prospecting of the property verified the geological parameters outlined by map 2455 produced by the Ontario Geological Survey titled `Precambrian Geology'. The property is underlain by pillowed flows of mafic calc-alkalic volcanic composition. It also consists of oxide to sulphide rich iron formations. The property has been intruded by mafic intrusive rocks of olivine composition. The Burrows Benedict fault system ocurrs immediately east of the claim block.

Stripping/Washing/Mapping/Sampling Program

Map 1 in this report, outlines the geology of the stripped area, sample locations, assay results and the location of the work area in relation to the nearest claim post. Prospecting located a two compartment, 80 foot deep, vertical shaft sunk on a sulphide rich iron formation.



ASSAY

Sample #	Au ppb	Au ozs/ton
1676	236/230/242	
1677	199/196/202	
1678	*	0.032
1679	54	
1680	58/66/50	
1681	12	
1682	30	
1683	140	
1684	74	
1685	112	
1686	*	0.052
1687	*	0.030
1688	*	0.274
1689	*	0.092
1690	*	0.134
1691	*	0.028
1692	*	0.234
1693	*	0.082
1694	*	0.042
1695	259	

GEOLOGICAL ASSOCIATION OF CANADA
Ken Lapierre
#4471
FELLOW

Map 1

LAPIERRE EXPLORATION SERVICES INC. P.O. Box 1021, P4N 7H6 Suite 17, Hollinger Bldg. Timmins, Ontario Telephone: 705 267-7389	
CLIENT: KEN LAPIERRE/RAY COLLINS 1992 OPAP	
PROPERTY: BIG DYKE PROPERTY	
TITLE: TRENCH GEOLOGY	
DATE: Nov.1992	SCALE: 1"=20'
DRAWN: P.G.	INTERP.: K. Lapierre

Previous exploration in this area yielded gold values of up to 0.30 ounces/ton. The claim holders interpreted this area to be an attractive area for a overburden removal study. High, rugged topographical conditions in this area necessitated a slow, methodical approach to the stripping survey. This time consuming approach did provide a safe working environment for the contractors as well as exposing a geologically significant segment of the iron formation.

The main trench measured 170 feet in length, 10 feet in width and averaged 4 feet deep. The stripping program also located and exposed the shaft dump material that was located just north of the shaft.

The trench exposed a variable trending, variable south dipping, 20 foot wide, moderately contorted magnetite-silica banded, oxidized, weathered, sulphide-rich iron formation. Mineralization consisted of local concentration of fine to coarse grained, subhedral, disseminated pyrite proximal to and at the hangingwall and footwall contacts. Both footwall and hangingwall contacts consisted of a fine grained, green, carbonated, locally foliated, non-mineralized intermediate volcanic.

Stratigraphic displacement in the order of 5 feet was was exposed in the main trench.

The iron formation was then intruded by north-south trending fine grained mafic dykes and non-mineralized quartz

veinlets and veins.

Table 1 highlights the assay results from the OPAP study. Refer to Appendix 1 for assay certificate #2R-2061-RG1.

TABLE 1:

Sample Number	Gold-ppb	Gold-ozs./ton
1676	236/230/242	
1677	199/196/202	
1678		0.032
1679	54	
1680	58/66/50	
1681	12	
1682	30	
1683	140	
1684	74	
1685	112	
1686		0.052
1687		0.030
1688		0.274
1689		0.092
1690		0.134
1691		0.028
1692		0.234
1693		0.082
1694		0.042
1695	259	

Gold mineralization within the iron formation is apparently associated with the pyrite mineralization. The higher the pyrite content, the higher the gold content. Of importance is the fact that sample #1689, taken from an old overgrown trench approximately 240 feet south of the main trench, yielded a gold value of 0.092 ounces/ton. This gold value was associated with a pyrite rich iron formation.

Work Schedule and Dates, etc.

Refer to the 1992 OPAP final submission form for the dates the work was carried out, the names of all persons who performed the work and the equipment used for the program.

CONCLUSIONS AND OBSERVATIONS

1. Previous operators discovered several significant anomalous areas on the property. One area was associated with a sulphide rich iron formation. Previous results yielded vales up to 0.30 ounces/ton gold. The iron formation was traced for a distance of over 1,000 feet.
2. The present OPAP study focussed on exposing the anomalous iron formation in the vicinity of the old shaft for the purpose of determining the geological stratigraphy and precious metal content of the area.
3. The present OPAP study was successful in exposing a portion of the iron formation in contact with an intermediate volcanic. Consistent anomalous gold values of up to 0.274 ounces/ton were detected within the iron formation.
4. Gold content is interpreted to be spacially related to the pyrite content within the iron formation. Generally, the higher the pyrite content, the higher the gold content.
5. Of importance is the fact that an anomalous gold value of 0.092 ounces/ton was detected in a sulphide rich iron formation located approximately 240 feet south of the main iron formation showing. The potential exists that this iron formation is the on-strike continuation of the main showing.

RECOMMENDATIONS

Based on the successful results of past operators and the present OPAP study, the property should be kept in good standing. A follow-up program is justified and strongly recommended. The follow-up program should pay special attention to:

1. The on-strike continuation of the main iron formation showing.
2. The Big Dyke Zone
3. Any other areas of interest located on the property.

This multi-phase exploration program should include geophysical, geological and overburden removal surveys. The success of this program will solve the geophysical and geological complexities of the property, will uncover, if possible, any anomalous areas on the property and should bring the property to a diamond drilling stage.

Best regards,

Ken Lapierre

Ken Lapierre, HBSc. FGAC.
Geologist

DECLARATION

I, Kenneth Lapierre, of the city of Timmins, Province of Ontario, Cananda, do state:

1) That I am a practising Consultant Geologist with an office at Suite 17-Hollinger Building, 637 Algonquin Blvd. E., Timmins, Ontario, and that my mailing address is P.O.Box 1021, Timmins, Ontario, P4N 7H6.

2) That I am a graduate with the degree of Honours Bachelor of Sciene majoring in Geology from the University of Western Ontario, London, Ontario, Canada.

3) That I have practised my profession as Consultant Geologist since my graduation from The University of Western Ontario in 1983.

4) That I am a Fellow of The Geological Association of Canada, and member of the Prospectors and Developers Association of Canada.

5) That I am familiar with the material in this report, having examined the material myself.

Dated this 16th day of December 1992, Timmins, Ontario.

GEOLOGICAL ASSOCIATION OF CANADA
Ken Lapierre
F4471

Ken Lapierre HBSc, FGAC.
Consultant Geologist

BIBLIOGRAPHY

Assessment Office, Ministry of Northern Development and Mines Timmins, Ontario Branch: T-2539, T-2733.

Lapierre, K., 1992: OPAP Requirements for 1992 Prospecting Proposal Ken Lapierre/Raymond Collin Big Dyke Property Deloro Township Timmins Ontario. 6 p. unpublished report.

Pyke, D.R., 1982: Geology of the Timmins Area, District of Cochrane; Ontario Geological Survey Report 219, 141 p. Accompanied by Map 2455, Scale 1:50 000, 3 Charts, and 1 Sheet Microfishe.

APPENDIX I

ASSAYERS
LABORATOIRES/LABORATORIES
DIVISION DE/OF ASSAYERS CORPORATION LTD.
780, AV. DU CUIVRE, C.P. 665, ROUYN-NORANDA (QUÉBEC) J9X 5C8 TÉL.: (819) 797-4653 FAX: (819) 797-4601

Certificat/Certificate

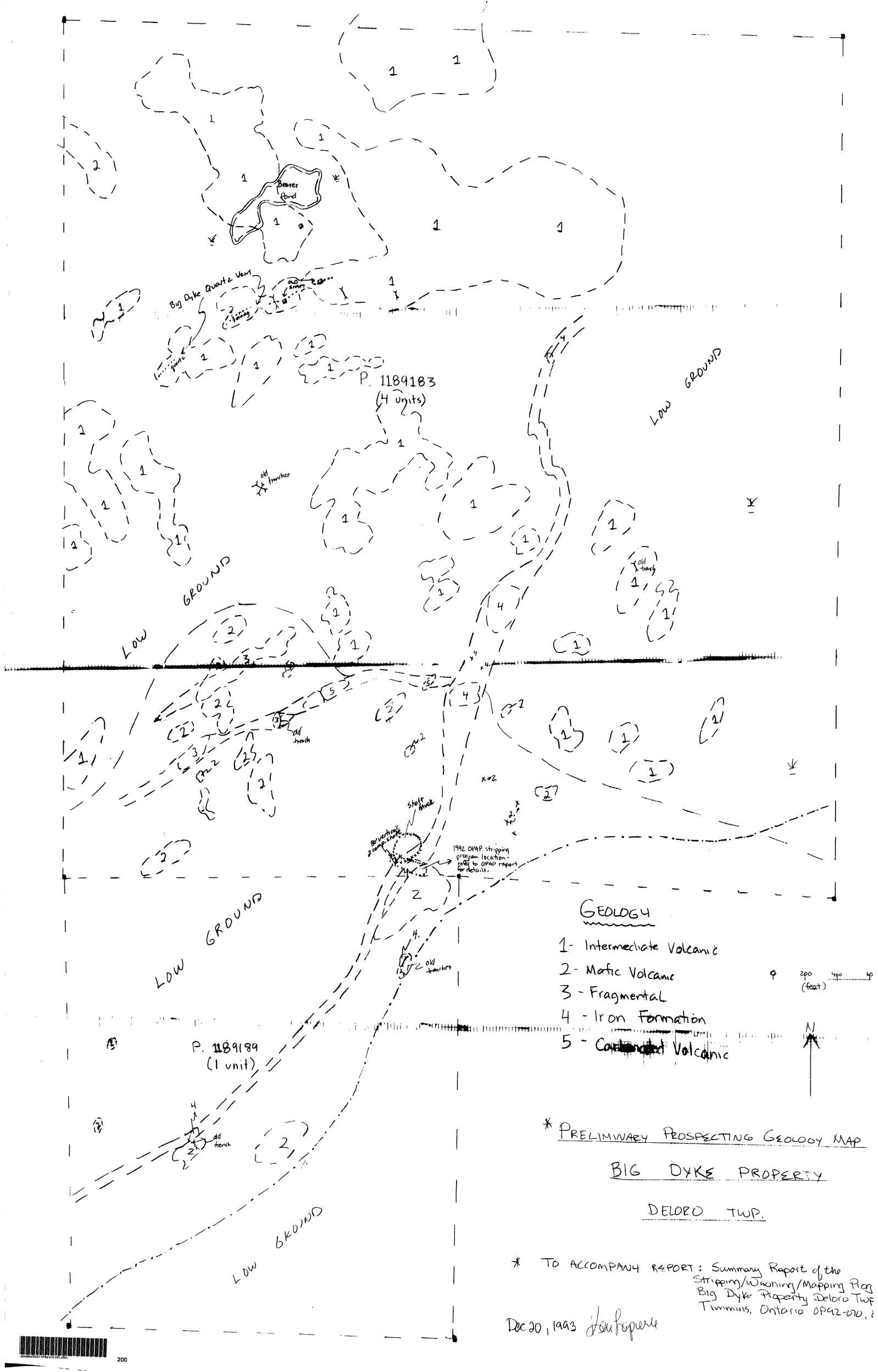
2R-2061-RG1

Comp: **KEN LAPIERRE** Date: DEC-15-92
Proj:
Attn:

Nombre D'Echantillons/No. of Samples:
Soumis le/Submitted: DEC-01-92

No. D'Echantillon Sample Number	AU PPB	AU CKS PPB	AU CKS PPB	AU ozs./ton
1676	236	230	242	
1677	199	196	202	
1678	*			0.032
1679	54			
1680	58	66	50	
1681	12			
1682	30			
1683	140			
1684	74			
1685	112			
1686	*			0.052
1687	*			0.030
1688	*			0.274
1689	*			0.092
1690	*			0.134
1691	*			0.028
1692	*			0.234
1693	*			0.082
1694	*			0.042
1695	259			

*Certifié par/Certified by*_____



* PRELIMINARY PROSPECTING GEOLOGY MAP

BIG DYKE PROPERTY

DELORO TWP.

* TO ACCOMPANY REPORT: Summary Report of the Stripping/Washing/Mapping Prog Big Dyke Property Deloro Twp Timmins, Ontario OP92-070, i

Dec 30, 1993