GEOLOGICAL REPORT
on the
VIMY RIDGE PROPERTY
of
PELANGIO-LARDER MINES LTD.

Hislop Township
Larder Lake Mining Division
District of Cochrane

Longitude: 80 25' W
Latitude : 48 29' N

September 24th, 1988

Douglas J. Brownlee, P.Geol.

Dual. on this file

TABLE OF CONTENTS

INTRODUCTION

Michael Smith Consulting was retained by Pelangio-Larder Mines Ltd. to conduct a geological survey of the Vimy Ridge Property for assessment purposes. The geological survey was conducted by D. J. Brownlee, P. Geol. (Alberta) between August 21st and 31st, 1988.

LOCATION and ACCESS figures 1 & 2

Access to the Vimy Ridge Property is via the Trans-Canada Highway No.11 from Matheson, Ontario. The Highway transects the southwest corner of the property and a all weather gravel road runs east west along the southern boundry of the property.

The property covers Lot 13, Concession 3, Hislop Township and is bounded on the west by Bowman Township. The property is located at approximately Longitude 80 25' W and Latitude 48 29'N.

PROPERTY figure 3

The Vimy Ridge Property consists of eight contiguous, unpatented mining claims comprising 320 acres. The property covers Lot 13, Concession 3, Hislop Township within the Corporation of the Township of Black River-Matheson, Larder Lake Mining Division, District of Cochrane, Ontario. The property consists of the following claims:

Claim #	# of claims	Record Date
L893567-74 incl.	8	June 6, 1986

Pelangio-Larder Mines Ltd. acquired all interest in the claims from the original claim staker, G. J. Mullan on May 12, 1987.

The surface rights in the area are patented and the present owners of these rights have not been determined by the writer.

The above information was supplied by Pelangio-Larder Mines Ltd. and has not been independently confirmed by the writer.

PHYSIOGRAPHY

The terrain of the property is relatively flat, comprising an essentially flat and featureless clay and sand covered plain. There are small localized alder and muskeg swamps occuring mainly in the southern portion of the property. The rest of the property is covered by relatively open woods and fields. Scattered outcrops occur in the west quarter of the property in an area of low sand covered hillocks.

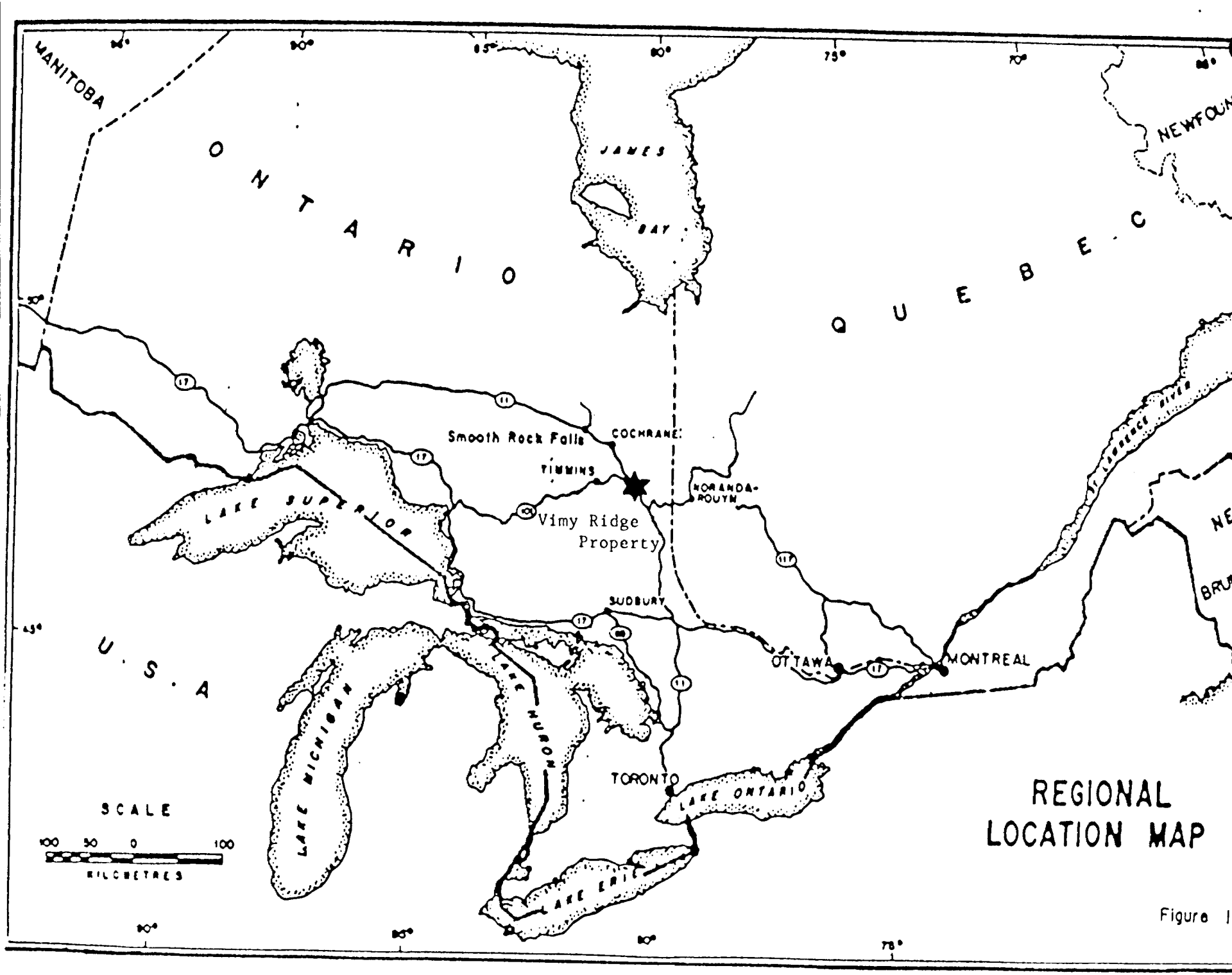
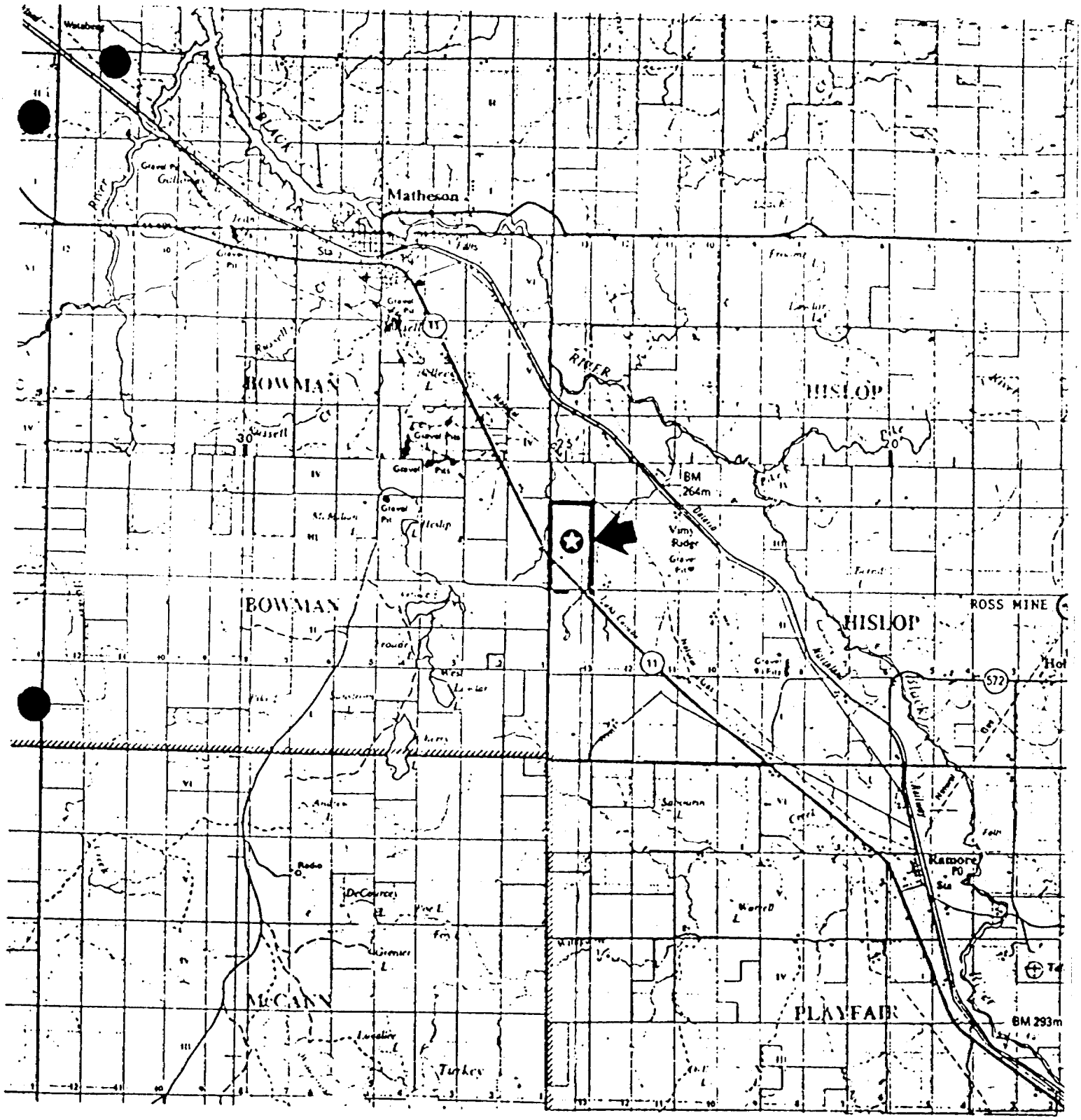

MANITOBA
ONTARIO
QUEBEC
JAMES BAY
Smooth Rock Falls
COCHRANE
TIMMINS
NORANDA-ROUYN
Vimy Ridge Property
LAKE SUPERIOR
SUDBURY
OTTAWA
MONTREAL
U.S.A.
LAKE MICHIGAN
LAKE HURON
TORONTO
LAKE ONTARIO
LAKE ERIE
SCALE
100 50 0 100
KILOMETRES
REGIONAL LOCATION MAP

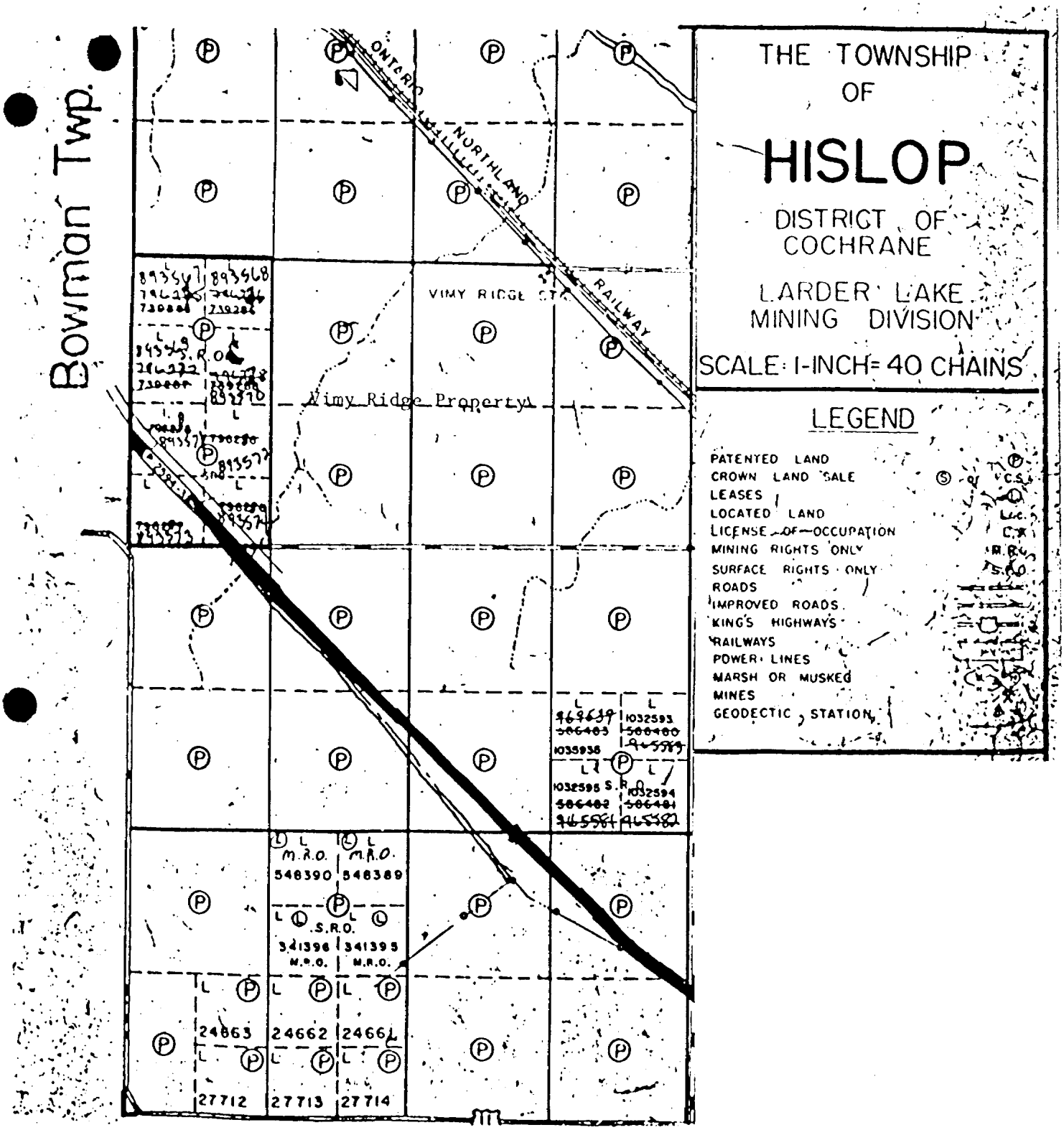
Figure 1



Scale 1:100,000

Access Map

figure 2



Vimy Ridge Property

Claim Map

figure 3

Asarco Exploration Co. of Canada Ltd. drilled three reverse circulation drillholes across the central portion of the property in 1981. The depth of the overburden encountered in a west east section was 37', 29' and 123' respectively.

Two small creeks drain the property and flow northerly into the Black River, part of the James Bay watershed.

HISTORY

Gold was first discovered in the Ramore area in 1905, however there was little exploration activity in Hislop Township between 1905 and the early 1920's. The Hislop Mining Syndicate sank a two compartment shaft to a depth of 80 feet on the property during the winter of 1922-23.

No subsequent work on the property was recorded intill the Veterans patent on the property lapsed around 1981. The property has subsequently been restaked a number of times, the last being by G. J. Mullan in 1986.

Asarco drilled three reverse circulation drillholes on the property in 1981. No further work on the property was carried out intill January and February of 1988 when a magnetic and electromagnetic ground survey was completed over the property.

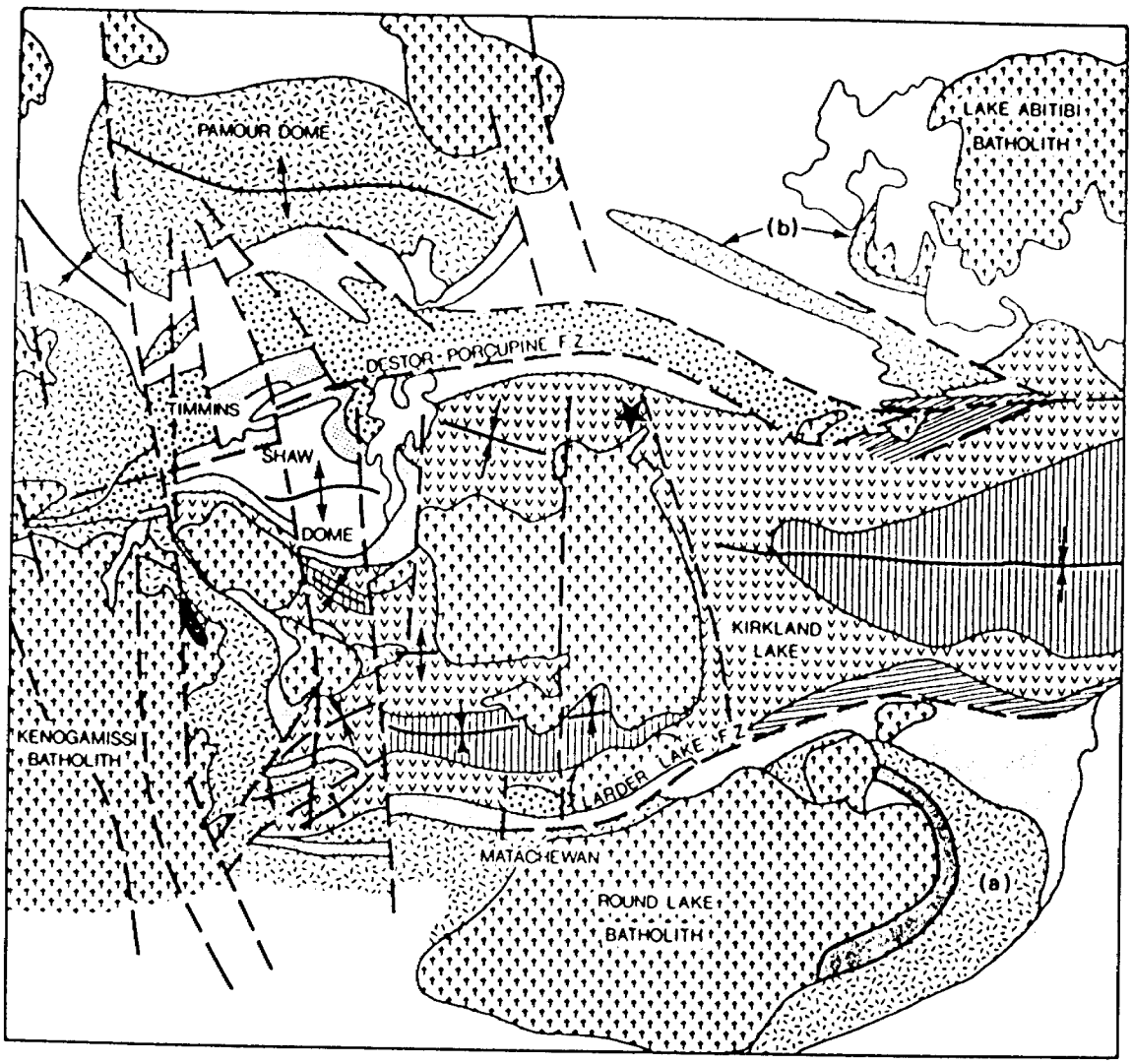
WORK PROGRAM

Michael Smith Consulting conducted a geological survey of the property from August 21st to 31st, 1988. The property was mapped at a scale of 1:5000 utilizing the 100 metre geophysical grid (figure 5). The southwest quarter of the property was mapped at a scale of 1:2500 (figure 6) and a total of seven rock samples were collected. The rock samples were geochemically analysed for gold and arsenic by Min-En Laboratories Ltd. of North Vancouver, B.C. (Appendix A).

REGIONAL GEOLOGY Figure 4

The general Timmins-Kirkland Lake area is underlain by a portion of the Abitibi Greenstone Belt of Precambrian age and lies within the Superior Structural Province. The Abitibi Greenstone Belt is comprised of Archean age metamorphosed volcanic and sedimentary rocks. Pyke and Jensen, 1981, divided the volcanic and sedimentary sequences into two main groups, the Upper Super Group and the Lower Super Group. The volcanic sequences were further subdivided according to their chemical composition, into Komatiitic, Tholeiite and Calc-alkaline series.

The rocks in the general area form a large easterly plunging synclinorium. The Porcupine and Kirkland Lake-Larder



Stratigraphy and structural geology of the Timmins-Kirkland Lake area.

OGS MP97; p. 60

LEGEND

UPPER SUPERGROUP

- Alkalic Volcanics (Timiskaming Group)
- Calcalkalic Volcanics (Blake River Group)
- Tholeiitic Volcanics (Kinojevis Group)
- Komatiitic Volcanics (Stoughton Roquemaure Group and Larder Lake Group)

LOWER SUPERGROUP

- Sedimentary Rocks (Porcupine Group)
- Calkcalkalic & Tholeiitic Volcanics (a Skead & Catherine Group) (b Hunter Mine Group)
- Komatiitic Volcanics (Watewada Group)

0 12 Mi
0 20 Km

Vimy Ridge Property

Regional Geology

figure 4

Lake Fault zones are located along the north and south limbs of the synclinorium respectively (Jensen 1981).

The two Super Groups have been intruded by felsic plutons and mafic and ultramafic stocks and plugs. All rocks have been intruded by Proterozoic age diabase and quartz diabase dikes.

PROPERTY GEOLOGY Figures 5 & 6

The area of the property is primarily underlain by tholeiitic volcanics of the Kinojevis Group of the Upper Super Group (figure 4). On the property the tholeiitic volcanics are comprised of massive, coarse textured and pillowed tholeiitic basalts. There is a sequence of interbedded tuffs, cherty sediments and massive basalts approximately 10 metres wide trending slightly south of east in the southwest central portion of the property.

Intruding this sequence of volcanics are feldspar porphyries in the southwest portion and the west central portion of the property. There are two small outcrops of syenite on the west central boundry of the property. All of the intrusive outcrops are limited in size and therefore it was not possible to determine if they were dikes or the edges of small plugs. Crosscutting all rock types is a large (up to 50 metre wide) north trending diabase dike. There are numerous 0.1 to 0.5 metre wide northerly trending diabase dikes in the north central portion of the property.

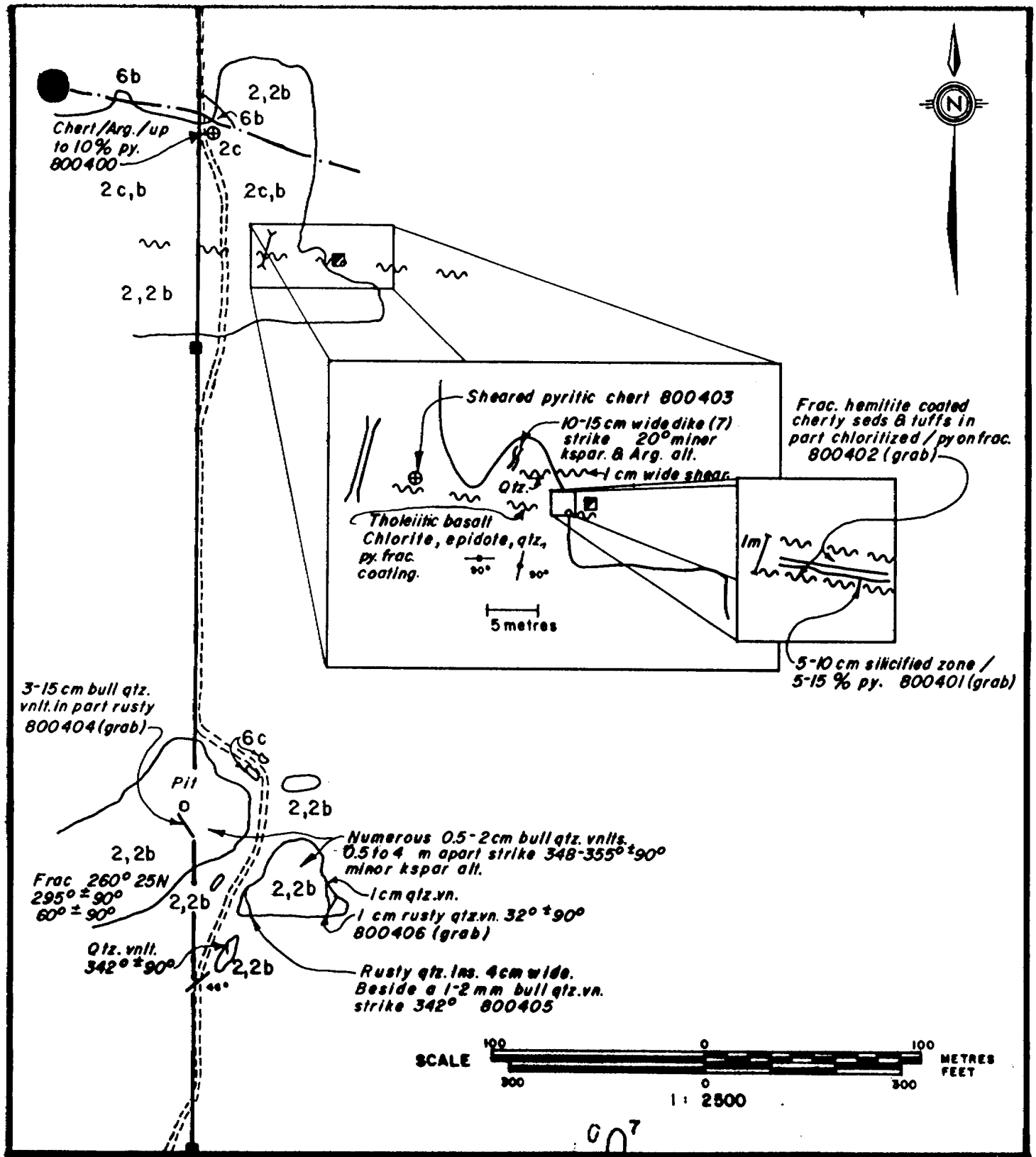
In the central portion of the property the diabase dike is offset approximately 15 metres to the west by a normal fault trending approximately 080 deg. The Hislop Mining Syndicate shaft was sunk on a normal fault (shaft fault) trending 100 deg. These two faults and several other possible easterly trending faults were delineated by the 1988 magnetic and electomagnetic surveys (K. Guy 1988).

The discontinuous quartz vein (up to 10 cm wide) has been emplaced along the shaft fault. This quartz vein is sporadically mineralized with pyrite (up to 2%) +/- pyrrhotite, chalcopyrite and reportedly galena. In the area of the shaft and in the southwest corner of the property there are numerous 0.5 to 10 centimetre quartz veins, 0.5 to 5 metres apart trending between 340 and 010 degrees. Less than 3% of these veins contain any mineralization, and these contain less than 1% pyrite.

In the region of the shaft fault, the tholeiitic basalts and tuffs show minor hemitization and this decreases to the west.

ECONOMIC GEOLOGY

The first gold mine in Hislop Township was the Ross Mine which was discovered in 1933, located in the eastern part of the



LEGEND

SYMBOLS

- Trench
- Claim post, Claim boundary
- Outcrop boundary
- Geological contact
- Fault, Shear, Inferred

PRECAMBRIAN

Algoman

- 6b — Basalt, porphyritic
- 6c — Feldspar porphyry

Keewatin (basic volcanics)

- 2 — Massive volcanics
- 2b — Pillow lavas
- 2e — Bedded tuff, chert

(after ODM Map No. 1955-5)

PELANGIO LARDER MINES LTD.

VIMY RIDGE PROPERTY

HISLOP TOWNSHIP, ONTARIO

DETAILED PROPERTY GEOLOGY

MICHEAL SMITH CONSULTING

FIGURE 3

BOWMAN TWP.

HISLOP TWP.

CONCESTION III

CONCESTION IV

Track

Track

pit

2,2b

2,2b

2,2b

2b,c

6b

2

0.5 to 2cm (few up to 15cm) bull qtz. vns, few show rusty staining/minor pyrite strike 348-355°

6c

2c

6c

7

7

7

2

2

2

2

2

7

Numerous dikes of 7 from 0.1 to 1.5m wide strike 0-20°

6c dike, not noted during traverse from ODM m 1955-5

HIGHWAY 11

Conc/Sec Road

L 4W

L 3 W

L 2W

L 1W

L 0

L 1E

L 2E

L3E

L4E

7S 6S 5S 4S 3S 2S 1S BL 1N 2N 3N 4N 5N 6N 7N 8N

Section 13

Section 12

LEGEND

SYMBOLS

- Trench.
- Claim post, Claim boundary.
- Outcrop boundary.
- Geological contact.
- Fault, Shear, Inferred.

PRECAMBRIAN

Matachewan

- 7 — Diabase.

Algoman

- 6b — Syenite, porphyritic.
- 6c — Feldspar porphyry.

Keewatin (basic volcanics)

- 2 — Massive volcanics.
- 2b — Pillow lavas.
- 2e — Bedded tuff, chert.

(After ODM Map No. 1955-5)

PELANGIO LARDER MINES LTD.

VIMY RIDGE PROPERTY

HISLOP TOWNSHIP, ONTARIO

PROPERTY GEOLOGY

SCALE 200 0 200 METRES / 500 0 500 FEET

1 : 5,000

MICHEAL SMITH CONSULTING

FIGURE 6

township. Subsequently the Kelore and Hislop deposits were discovered to the north of the Ross Mine and the Golden Arrow and Vimy deposits to the south of the Vimy Ridge property.

Gold mineralization in the area, occurs within quartz veins and stockworks and/or within pyritic, siliceous, hematized and carbonatized zones. These are generally associated with faults and occur within metavolcanics, syenites and quartz feldspar porphyrys.

The quartz vein associated with the shaft fault and the numerous quartz veinlets in the southwest quadrant of the property were sampled to test for potential gold mineralization. A total of seven rock samples where collected and geochemically analyzed for arsenic and gold by Min-En Laboratories Ltd. of North Vancouver B.C. The rock discriptions are as follows:

Sample #	type	Discription
800400	grab	chert / up to 10% diss. py
800401	grab	5-10 cm wide silicified zone in fault / 5-15% py
800402	grab	FW & HW, fractured silic. tuffs in part chloritized / py frac. coating
800403	grab	sheared pyritic chert
800404	grab	3-15 cm bull quartz vn / <=2.5% py
800405	grab	4 cm wide rusty quartz vn
800406	grab	1-3 cm rusty quartz vn / <= 1% py

Two samples returned anomalous values of gold: sample #800401 returned 285 parts per billion (ppb) gold (0.008 oz gold/ton) and sample #800406 which returned 344 ppb gold (0.01 oz gold/ton). Also, a grab sample of mineralized cherty quartz taken from the shaft dump by Mullan in 1986 reportedly assayed 65 ppm gold (1.89 oz gold/ton).

CONCLUSIONS

The Vimy Ridge Property is underlain by similar sequence of metavolcanics, sediments and intrusives that host significant gold deposits elsewere in Hislop township.

The quartz veining associated with the shaft fault and the numerous quartz veins in the southwest corner of the property indicate the potential for gold-sulphide mineralized quartz-carbonate veins and/or stockworks. This is supported by the two rock samples which returned anomalous gold values (800401-285 ppb gold; 800406-344 ppb gold).

The possibility of pyritic, siliceous, hematized and carbonatized zones occuring can not be discounted.

Therefore the Vimy Ridge property has good potential for hosting gold bearing quartz veins and/or stockworks as well as

mineralized, hematized and silicified zones.

RECOMMENDATIONS

Therefore a further exploration program on the Vimy Ridge Property is reccomended.

A follow up to the January-February ground magnetic and electromagnetic survey on a east west grid over the southwest portion of the property is recommended. This would test for any northerly trending structures and would be followed by a limited I.P. survey and possibly basal till sampling of selected areas. Then if warranted a diamond drill program.

Douglas J. Brownlee

BIBLIOGRAPHY:

Darke, K.H.

1987: Geological Exploration Report on the Vimy Ridge Gold Property Hislop Township, Ontario; Internal report for Pelangio-Larder Mines Ltd.

Guy, K.

1988: Report on a Ground Magnetic and Electromagnetic Survey for Resont - Pelangio Joint Venture; Internal report.

Jensen, L.S.

1981: Gold Mineralization in the Kirkland Lake-Larder Lake Areas; p.59-65 in Genesis of Archean, Volcanic-Hosted Gold Deposits; Ont. Geological Survey, MP97, 175 p.

Jones, W.A.

1948: Ross Mine; p.570-579 in Structural Geology of Canadian Ore Deposits; CIM Symposium Volume, 1948, 948 p.

Leahy, E.J.

1965: Currie & Bowman Townships; Ont. Dept. of Mines, Geological Report No.40, 22 p. accompanied by Geol. Map No.2071, Scale: 1 in. = 2640 feet.

ODM

1971: Gold Deposits of Ontario, Part 1; Cochrane District, p.73-78 in Ont. Div. of Mines, Mineral Resources Circular No.13, 315 p.

1973: Timmins-Kirkland Lake Sheet; Cochrane, Sudbury & Timiskaming Districts; Ont. Dept. of Mines, Geol. Compilation Series Map 2205, Scale: 1 in. = 4 miles.

OGS

1983: The Geology of Gold in Ontario; Ont. Geol. Survey, Miscellaneous Paper MP110, 278 p.

Prest, V.K.

1956: Geology of Hislop Township; Sixty-Fifth Annual Report of the Ont. Dept. of Mines; Vol. LXV, Part 5, 1956, 51 p. accompanied by Geol. Map No. 1955-5, Scale: 1 in. = 1,000 feet.

Pyke, D.R.

1981: Relationship of Gold Mineralization to Stratigraphy and Structure in Timmins and Surrounding Area; p. 1-15 in Genesis of Archean, Volcanic-Hosted Gold Deposits; Ont. Geol. Survey, MP97, 175 p.

APPENDIX A

ANALYTICAL RESULTS

MIN
•EN
LABORATORIES LTD.

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
TELEX: VIA U.S.A. 7601087 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 887
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Certificate of GEOCHEM

Company: INGAMAR
Project: HISCOP
Attention: M. HIBBARD

File: 82-1196/P1
Date: SEPT. 7/88
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AS PPM	AU-FIRE PPB
B00 400	10	46
800 401	7	285
800 402	1	39
800 403	2	7
800 404	1	82
800 405	1	1
800 406	1	344

Certified by _____

MIN-EN LABORATORIES LTD.

APPENDIX B

STATEMENT OF QUALIFICATION

CERTIFICATE

I, Douglas J. Brownlee, do hereby certify that:

1. I am a Consulting Professional Geologist residing at Suite 101, 2615 Lonsdale Avenue, North Vancouver, British Columbia.

2. I am a graduate in Geology Specialization from the University of Alberta (1980).

3. I have practised my profession since January, 1980.

4. I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.

5. This report is based on fieldwork completed by myself during the period of August 21st and August 31st, 1988.

September 24th, 1988
Vancouver, B.C.

Douglas J. Brownlee
P.Geol. (Alberta)

Ministry of Natural Resources
Ontario

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

DOC WE

42A08NW0044 2.12026 HISLOP

900

Support 2.1

Type of Survey(s): Geological	Township or Area: Hislop Twp.
Claim Holder(s): PELANGIO- LARDER MINES LIMITED	Prospector's Licence No.: T-971
Address: Cedar Hill, Connaught, Ont. P0N 1A0	
Survey Company: Micheal Smith Consulting	Date of Survey (from & to): 21 9 88 (Day Mo. Yr.) 31 9 88 (Day Mo. Yr.)
Total Miles of line Cut:	
Name and Address of Author (of Geo-Technical report): Douglas J. Brownlee, Suite 101, 2615 Lonsdale Ave., North Vancouver, B.C.	

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	· Electromagnetic	
	· Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	· Radiometric	
	· Other	
	Geological	20
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	· Electromagnetic	
	· Magnetometer	
	· Radiometric	
	· Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

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10:10am
LARDER LAKE MINING DIVISION

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	893567	
	893568	
	893569	
	893570	
	893571	
	893572	
	893573	
	893574	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES OFFICE
JAN 16 1989
RECEIVED

Total number of mining claims covered by this report of work: 8

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

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	Date Recorded	Mining Recorder
160	Nov. 14/88	
	Date Approved as Recorded	Branch Director
	Jan 8 89 AMB	

Date: Oct. 31, 1988

Recorded Holder or Agent (Signature): Maurice Hibbard

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: Maurice Hibbard, Cedar Hill, Connaught, Ont. P0N 1A0

Date Certified: Oct. 31, 1988

Certified (Signature): Maurice Hibbard

1362 (81/9)

MINING LANDS: PLEASE COMPLETE THIS FORM & RETURN IT WITH REPORT TO THE ASSESSMENT FILES OFFICE

DATE REMOVED: (from AFO) Sept 6/89

DATE RETURNED: (to AFO) _____

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES OFFICE
SEP 29 1989
RECEIVED

REPORT # : 2.12026

FICHE NO. : _____ (where applicable)

REASON FOR REQUESTING REPORT (complete #1-4 below):

1. INFORMATION ADDED TO EXISTING PAGES OF REPORT: ☐

IF YES, SPECIFY PAGES: _____
: _____
: _____

2. a) PAGES/MAPS ADDED TO THIS REPORT: ____ TOTAL PAGES ADDED
: ____ TOTAL MAPS ADDED

b) TYPE OF PGS ADDED: _____ CORRESPONDENCE
: _____ WORK REPORTS (AMENDED)
: _____ WORK RPTS (NEW)
: _____ MISSING PAGES OF TEXT
: _____ OTHER (PLEASE SPECIFY)

3. a) REMOVAL OF PGS FROM REPORT: _____ TOTAL PGS REMOVED

b) TYPE OF PAGES REMOVED : _____ CORRESPONDENCE
: _____ WORK REPORTS
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*NOTE: ENTER "X" IN APPLICABLE BOXES

THE TOWNSHIP OF HISLOP

DISTRICT OF COCHRANE

LARDER LAKE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

Beatty Twp.

Bowman Twp.

Guibord Twp.

Playfair Twp.

Surface Rights withdrawn application pending

Northern Ontario Natural Gas Pipe Line

Froome L.

Lowlar L.

Salve

Black

Pike

River

ONTARIO NORTHLAND RAILWAY

VIMY RIDGE STA.

SECONDARY HWY. 572

VI

V

IV

III

II

I

13 12 11 10 9 8 7 6 5 4 3 2 1

Northern Ont. Natural Gas Pipe Line file 16350

LEGEND

PATENTED LAND
CROWN LAND SALE
LEASES
LOCATED LAND
LICENSE OF OCCUPATION
MINING RIGHTS ONLY
SURFACE RIGHTS ONLY
ROADS
IMPROVED ROADS
KING'S HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKEG
MINES
GEODECTIC STATION

P
S or C.S.
L
L.L.
L.O.
M.R.O.
S.R.O.

NOTES

Holtyre Townsite Shown Thus:

Gravel Reserve. Shown Thus:

400' Surface rights reservation around all lakes and rivers.

NOTICE OF FORESTRY ACTIVITY

THIS TOWNSHIP / AREA FALLS WITHIN THE _____ WATABEAG MANAGEMENT UNIT

AND MAY BE SUBJECT TO FORESTRY OPERATIONS. THE MNR UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT: P.O. BOX 129
SWASTIKA, ONT.
P0K 1T0
705-642-3222

#12

PLAN NO.- M-355

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

42A08NW0044 2.12026 HISLOP

200

B.D.