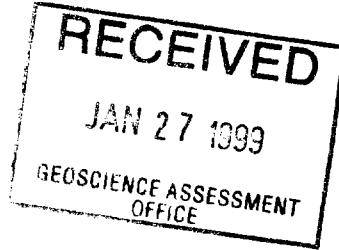




42A09SW2005 2.19194 CARR

010



**1998 SURFACE EXPLORATION PROGRAM
at the
McCHRISTIE PROPERTY**

2.19194

(Lot 5 & 6, Conc. II, Carr Township)

LARDER LAKE MINING DIVISION, ONTARIO

October 30, 1998

PENTLAND FIRTH VENTURES LTD.
Gordon R. Yule



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SUMMARY

On September 17, 1998, Pentland Firth Ventures Ltd. completed a Mobile Metal Ion (MMI) soil geochemical orientation survey across the interpreted Destor- Porcupine Fault Zone in the northern half of the McChristie Property. The survey was to delineate potential drill targets in the search for gold mineralization. The relatively new MMI soil geochemical survey technique was being evaluated to:

- 1) test the strike extension of significant gold bearing altered horizons adjacent to, or on the Destor Porcupine Fault Zone (DPFZ).
- 2) test the soil geochemical technique over extensive thicknesses of glacial lacustrine clay in an area on the Property interpreted to be underlain by the DPFZ.

Additional exploration is **RECOMMENDED**. The orientation survey suggests gold anomalies are present in areas of approximately 20 metres of clay overburden cover. The Property retains value due to its favourable position along the eastern projection of the gold-bearing DPFZ.

A diamond drilling programme (1000 metres total) is proposed to further test for auriferous alteration zones intersected in earlier drilling, and possibly delineated by this orientation MMI soil survey.

INTRODUCTION

Pentland Firth Ventures Ltd. ("Pentland") has been actively evaluating the mineral potential of its sizeable land package between Timmins and the Quebec border, along the Destor Porcupine Fault, since early 1994. Pentland acquired the McChristie claim block through an option with Misters McChristie, Ginn, and Parsons.

This report briefly describes the exploration activities conducted by Pentland on the property during 1998, and summarizes the results of a relatively new soil geochemical Mobile Metal Ion (MMI) technique utilizing a small orientation test program.

PROPERTY LOCATION and ACCESS

The McChristie Property is located in the southern half of Lots 5 and 6, Concession II, Carr township, District of Cochrane. More specifically, it is located approximately 2 kilometres north of the town of Matheson, Ontario, and approximately 800 metres east of the Black River. Refer to Map 1, a provincial map illustrating the Property's location, and Map 2, for access.

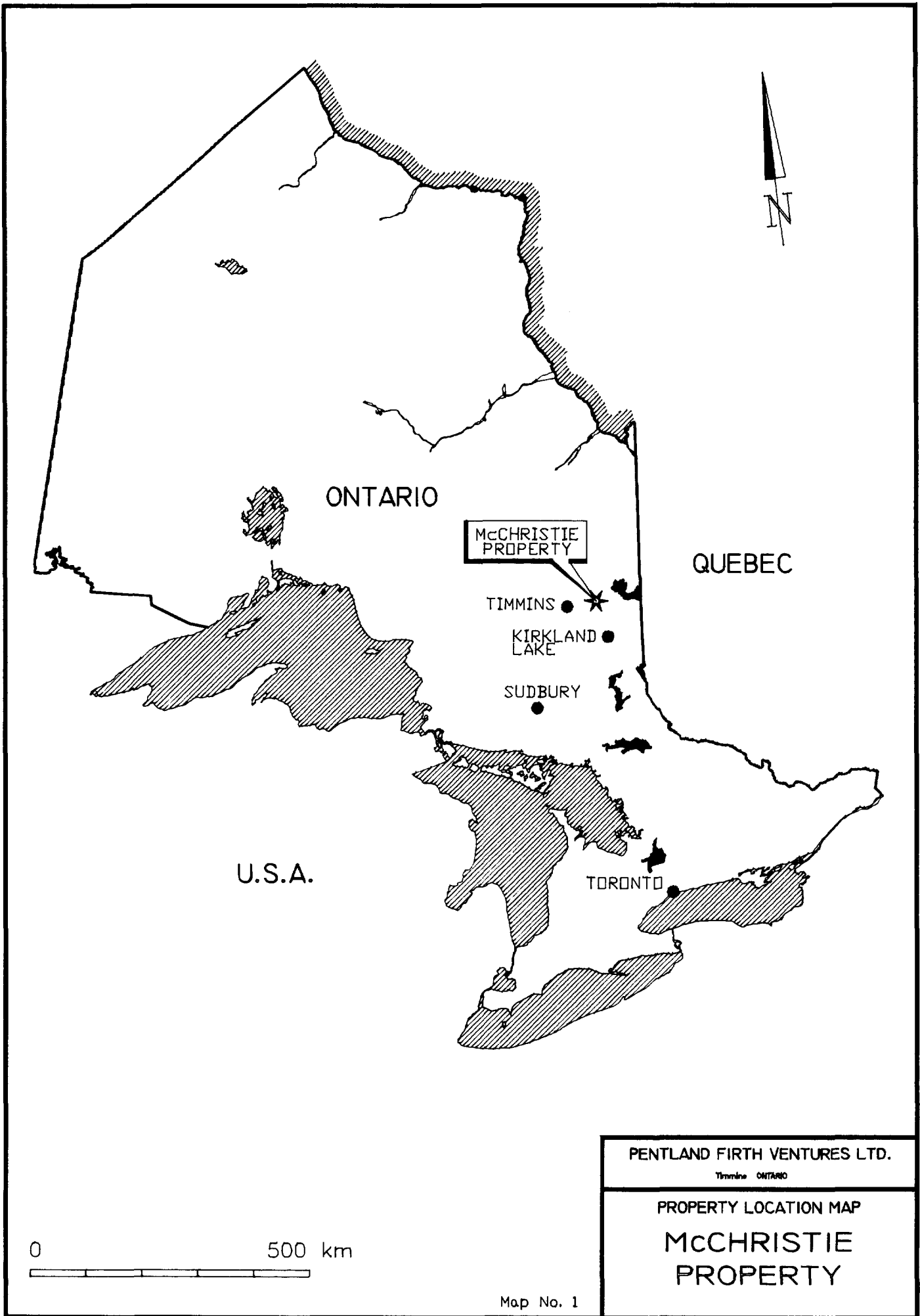
Access to the property is ideal. The town of Matheson is serviced by the Ontario Northland Railway as well as Highway #101, and Trans-Canada Highway #11. Highway #101 extends east from Matheson to the Quebec border, and west to Timmins, Ontario. The Highway crosses the Black River just north of the village of Matheson. A good, all-weather, gravelled road, representing the boundary of Lots 4 and 5, junctions Hwy #101 East just north of the Black River bridge, and extends north along the entire east boundary of the property. This road is locally referred to as Matheson Carr Road #2. Refer to Map #2.

CLAIM GROUP

The property consists of 10 contiguous claims, each one claim unit, in Carr Township as follows;

L-1186173	SW 1/4 N 1/2 Lot 5 Conc II
L-1188183	SE 1/4 N 1/2 Lot 5 Conc II
L-1151437	NW 1/4 S 1/2 Lot 6 Conc II
L-1151735	NE 1/4 S 1/2 Lot 6 Conc II
L-979580	NW 1/4 S 1/2 Lot 5 Conc II
L-979579	NE 1/4 S 1/2 Lot 5 Conc II
L-981450	SE 1/4 S 1/2 Lot 5 Conc II
L-981451	SW 1/4 S 1/2 Lot 5 Conc II
L-1151435	SE 1/4 S 1/2 Lot 6 Conc II
L-1151436	SW 1/4 S 1/2 Lot 6 Conc II

The project area is situated in the Ontario Ministry of Northern Development and Mines' Larder Lake Mining Division.



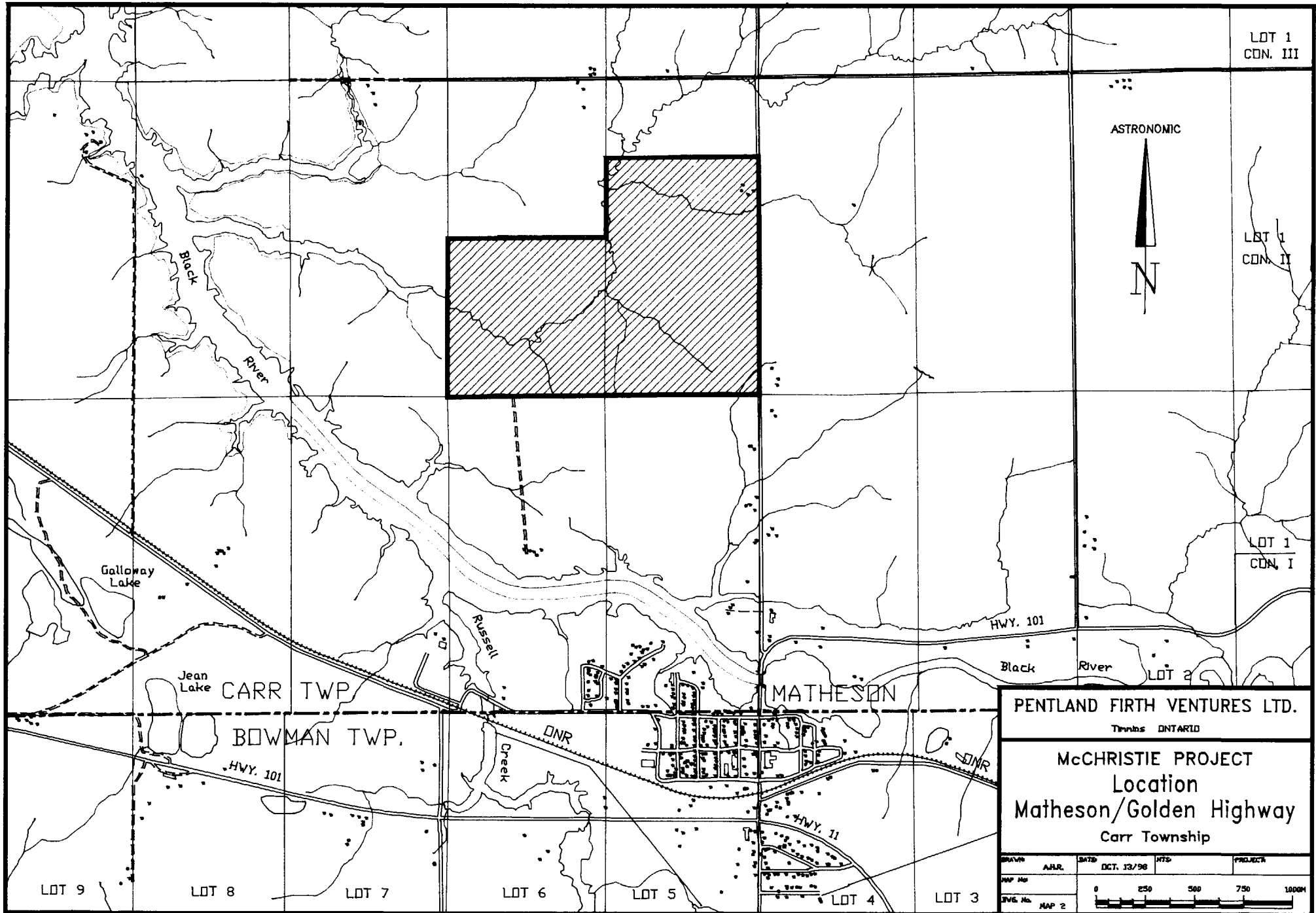
PENTLAND FIRTH VENTURES LTD.

Timmins ONTARIO

PROPERTY LOCATION MAP

McCHRISTIE
PROPERTY

Map No. 1



LOT 1
CON. III

ASTRONOMIC



LOT 1
CON. II

LOT 1
CON. I

LOT 2

CARR TWP.

BOWMAN TWP.

MATHESON

PENTLAND FIRTH VENTURES LTD.

THIRDS ONTARIO

McCHRISTIE PROJECT
Location
Matheson/Golden Highway
Carr Township

LOT 9

LOT 8

LOT 7

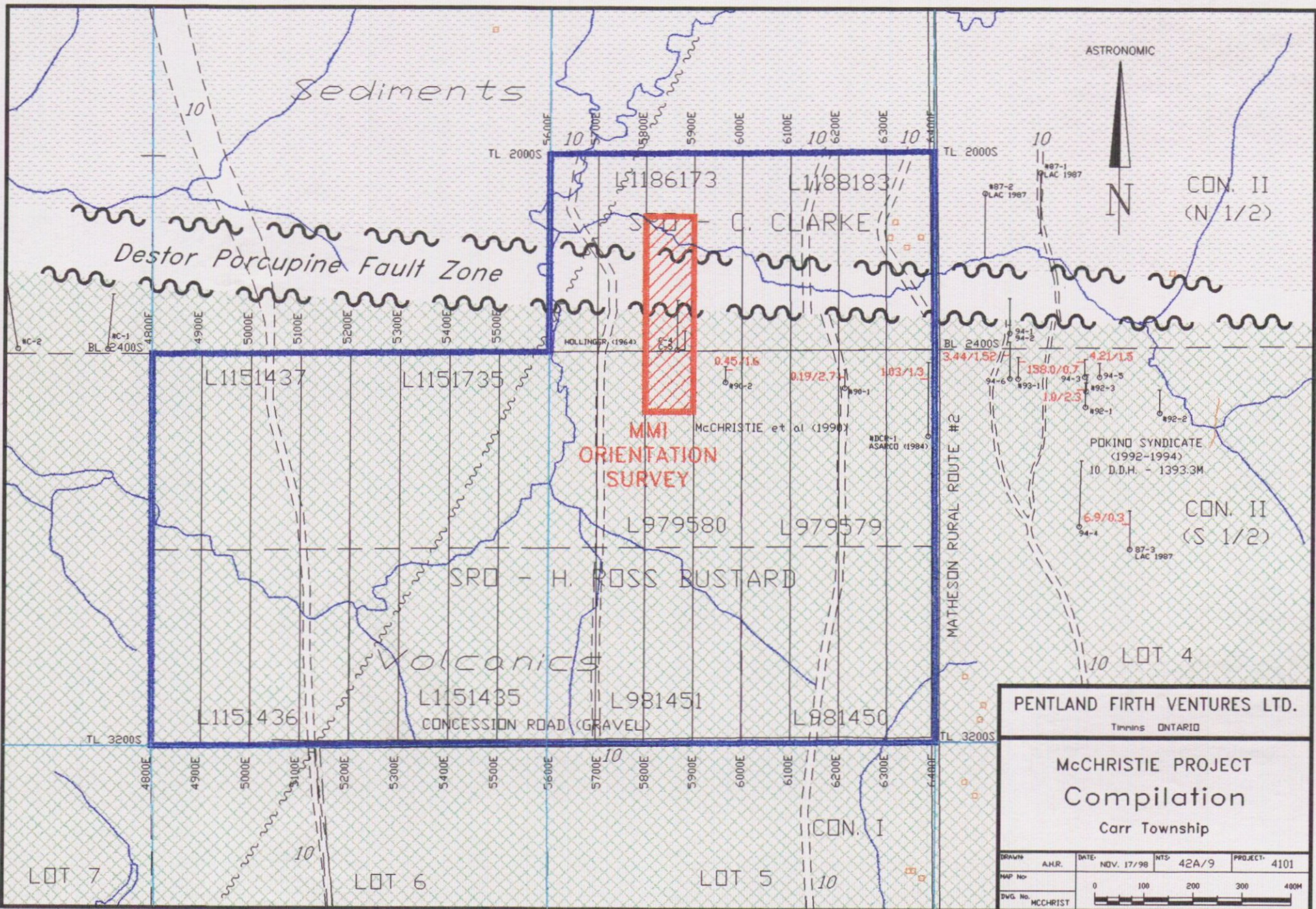
LOT 6

LOT 5

LOT 4

LOT 3

DATE	DRAWN	PROJ. ENGR.	DATE
OCT. 13/98	A.H.R.		
SCALE		PROJECT	
0 250 500 750 1000M			
MAP No. 2			



PENTLAND FIRTH VENTURES LTD.
 Timmins ONTARIO

McCHRISTIE PROJECT
Compilation
 Carr Township

DRAWN	A.H.R.	DATE	NOV. 17/98	NTS	42A/9	PROJECT	4101
MAP No	0 100 200 300 400M						
DWG No	MCCHRIST						

PREVIOUS WORK

Several major campaigns of exploration have been completed on this land, due to its proximity to the Destor Porcupine Fault Zone. In 1996, The Ontario Geological Survey ("OGS") completed a synoptic geological mapping programme in Carr Township.

The most recent geophysical survey work on the property was completed in 1994 by Pentland.

In 1964, Hollinger completed several diamond drill holes ("C" series) along the Destor Porcupine Fault. Variably altered mafic volcanic and felsic intrusive rocks were intersected. No assays were reported.

In 1984, Asarco completed one drill hole (Hole# DCR-1) in the northeast corner of the S 1/2 Lot 5 Conc II. Mafic volcanics, variably altered talc chlorite schist, and carbonate breccia within the DPFZ were intersected. No assays were given.

In 1990, The McChristie Syndicate completed two holes (#90-1 & #90-2) 250 metres apart in the north half of the S 1/2 Lot 5, Conc.II. Weak gold mineralization such as 0.31 g/t Au over 1.0 metres in Hole #90-1, and 0.45 g/t Au over 1.5 metres in Hole #90-2 was noted in variably altered hangingwall mafic volcanics.

Between 1992 and 1994, 10 drill holes were completed within the S 1/2 Lot 4, Conc. II, immediately to the east, by the POKINO Prospecting Syndicate (G.E. Parsons). Drilling intersected variably altered volcanics, and the Destor Porcupine Fault. One high grade intersection returned 157.8 g/t Au over 0.6 metres in hole #94-3, 175 metres east of the McChristie property boundary. This high grade mineralization was located within variably altered ultramafics in the footwall of the DPFZ.

REGIONAL GEOLOGY

The Porcupine Mining Camp, 35 kilometres to the west of the property, is situated within the western portion of the Archean-aged Abitibi Greenstone Belt which has contributed approximately 85% of Canada's total gold production. A regional northeast-trending structural zone known as the Destor-Porcupine Fault Zone (DPFZ) separates the two prominent volcanic cycles in the Timmins area. The older Deloro Assemblage (composed chiefly of calc-alkalic and felsic volcanics) predominates south of the break, while the intercalated mafic (tholeiitic) and ultramafic (komatiitic) flows of the Tisdale Assemblage prevail to the north. Approximately 98% of the Porcupine's historic gold production (61 million ounces to the end of 1996) has been associated with the DPFZ structure, and its related splay faults within the lower portion of the Tisdale Volcanics.

The bedrock of Carr Township is of Precambrian age. There are very few exposures due to the extensive glacial lacustrine clays, tills, and gravel with an average depth of 20 to 30 metres. The Precambrian rocks are crosscut by two ages of diabase dykes. The Matachewan dykes generally trend in a north-south direction and consist of diabase, and quartz diabase. They range in width from a few metres to over 30 metres wide.

These dykes are cut by younger Keweenawan dykes which generally trend in a northeast direction. The largest of these angles across the centre of Carr Township, outcropping on Lot 2, Conc IV, as well as to the east and west of the township. These dykes are generally an olivine diabase. The township is generally underlain by volcanics to the south and central sections and sediments to the north. The Destor Porcupine Fault separates these rocks in central Carr Township, and the

Pipestone Fault trends across the north edge of Carr Township.

PROPERTY GEOLOGY

Geology of the property has been established by mapping the few available exposures in the area, compiling the few exploration drill holes, and from geophysical and geochemical studies conducted over the property. The bulk of the property is underlain by volcanics which have been crosscut by numerous Matachewan dykes. The northeast portion of the property is cut by the east-west trending, south dipping DPFZ which also separates the mafic metavolcanics to the south from metasediments to the north.

Map 3 illustrates the general geology and compilation of previous work completed in the area of the Property.

1998 FIELD WORK

Exploration activities consisted of a Mobile Metal Ion (MMI) soil orientation geochemical survey on a portion of the property that had greater potential for gold mineralization. Previously completed geophysical surveys on portions of Pentland lands indicate the Destor Porcupine Fault transects the property in the area of this orientation soil survey. The test survey was designed to identify gold anomalies associated with the DPFZ.

Pentland field assistant Joel Trivers was directly responsible for collecting the samples. The project was supervised by Gordon Yule. The raw data was corrected, plotted and interpreted by Gordon Yule.

MMI Soil Geochemistry:

The MMI soil technique is a relatively new exploration procedure attempting to detect economic mineralization in overburden-covered regions. The MMI soil technique utilizes "selective digestion". The analytical method of evaluating the enzymes of oxidized sulphide adhering to clay and till particles has been used with great success in the arid conditions of Australia. The MMI technique is a selective extraction of metals using newly-developed digestion techniques. Much of the success with this technique is due to significant advances in lab techniques, and higher quality precision instruments used to analyze for elements to a fraction of a part per billion (ppb). The McChristie property is a test case for the MMI technique to determine if the process of oxidation is active in temperate climates, and if mineralization and associated gold mineralization is identifiable in areas covered by thick clay overburden.

Pentland completed an orientation MMI soil geochemical test survey on two north/south grid lines spaced 100 metres apart (L-5800 E and L-5900 E), over a distance of 400 metres (2125 South to 2525 South), with sample intervals 25 metre apart along the grid lines. The Pentland east-west baseline follows the N 1/2 and S 1/2 of Conc. II at 2400 South. It was sampled at 25 metre intervals between the two grid lines for control purposes. Sample sites broken out by specific claim location are separated as follows:

<u>Claim #</u>	<u>Samples</u>	<u>Duplicate(QC)</u>	
L-1186173	22 + 3		= 25 samples
L-979580	15 + 1		= 16 samples
	Total		= 41 samples

This test area was considered a fair site, with thick clay coverage, along the DPFZ. Previous diamond drilling in this area had intersected gold mineralization associated with hydrothermal (carbonatized and sericitic) altered mafic volcanics, coincident with the Destor Porcupine Fault.

The orientation survey sample collection was completed by Pentland personnel in one day. A total of forty-one (41) samples were taken by soil spoon auger, or by shovel-sampling the "B" soil horizon. Numerous sites were not sampled due to swampy overburden cover. The spoon auger could only probe for a sample to a one (1) metre depth. At each sample site, approximately 0.5 kg samples of the soil medium were screened to remove coarse particles and bagged in plastic. Each sample was then tagged with its site coordinate. The samples were sent to X-RAL Laboratories, Don Mills, Ontario. At X-Ral Laboratories, the samples were washed to strip any mineralization residue, and the solution analyzed utilizing Induction Coupled Plasma - Mass Spectrometer (ICP-MS) equipment at X-RAL Laboratories. The equipment has a detection limit of 0.1 ppb for gold determinations.

The MMI process uses two leachant solutions specifically developed to selectively release any absorbed ions from the soil material. The selective leaching is to remove metals which are loosely bound on the surface of particles within the soil without attacking or influencing the natural mineralization of the soil. The precious and base metals (Au, Ag, Co, Ni, and Pd) are analyzed as part of X-Ral Laboratories - Digest "MMI-B" Analytical Package. This package utilizes a dilute Base leachant to strip the metals in the sample. A second Digest "MMI-A" Analytical Package utilizes an acid leachant to strip metals such as Cu, Pb, Zn and Cd. Only the MMI-B analysis was completed for this test survey.

Detection limits (ICP-MS) for

Gold	(Au) = 0.1 ppb
Cobalt	(Co) = 1.0 ppb
Nickel	(Ni) = 1.0 ppb
Palladium (Pd)	= 0.1 ppb
Silver	(Ag) = 0.1 ppb

All raw data has been converted to Response Ratios, and results were plotted, and contoured. Response Ratios (RR) are a method of estimating anomalous results by firstly removing the background value for the element sampled. An estimate of background is based on the lowest quartile (25%) of the data set. To calculate the MMI Response Ratio for each sample, each sample was divided by the background. This signal to background ratio (i.e. response ratio) for each of five element determinations for each sample was plotted, and results of the "B" soil horizon contoured to identify potential multi-line anomalies or trends. Appendix II tabulates the analytical results, and converted RR data.

Duplicate Samples: Four duplicate samples were included in the sampling programme to evaluate the reproducibility of analysis (Quality control/Quality assurance). The duplicate samples were taken at the identical location as the original sample.

Map 3 and Map 4 illustrate the drill data compilation, and significant contoured MMI gold results encountered by the MMI soil technique. Map 5 illustrates the MMI orientation soil geochemical survey results covering a portion of the property.

RESULTS

This MMI soil geochemical test appears to delineate the DPFZ. The initial orientation soil geochemical survey results suggest a correlation with previous drill-indicated "hydrothermal" altered zones, thought to represent the auriferous plumbing system associated with this regional fault system.

Duplicate sample analysis are within an acceptable range of variability, reflecting the nature of the sample medium. The duplicate samples also suggest that the analytical process can provide a repeatable result.

The analytical data is reported on X-Ral Laboratories Analytical Certificate #W.O.052329, dated September 30, 1998. The converted Response Ratios are also appended as a table.

Although geochemical anomalies were identified, which appear to correlate with previously known geological features, these results will remain inconclusive until a diamond drill hole can evaluate the bedrock beneath the MMI soil anomalies.

Appended are Figures 4 & 5, representing the regional and property scale of the soil survey. Figure 4 represents a property scale contoured plot illustrating the limits of the test sample coverage. Sampling of the two complete lines through the northern portion of the property area was attempted, but due to topographical lows, (i.e. swamps) the "B" horizon was not always detected or sampled within a metre of surface.

Figures 5 depict the detailed test area coverage, and the results for the five elements. The results for Gold (Au) are noted in Figure 5a; Cobalt (Co) - Figure 5b; Nickel (Ni) - Figure 5c; Palladium (Pd) - Figure 5d; and Silver (Ag) - Figure 5e.

Stacked line profiles for each test line, L-5800 East and L-5900 East are appended to help illustrate possible cumulative multi-element anomalies.

CONCLUSIONS

Gold: The orientation MMI soil geochemical survey appears to have delineated two anomalous gold in soil trends across the McChristie Property survey area. The MMI technique delineated a gold response within the DPFZ (Anomaly "A"), and an anomaly in the hangingwall volcanics of the DPFZ (Anomaly "B"). (see Figure 5a). The northerly trend (Anomaly "A") is a single line, multi-station, 80 metre wide, 5 ppb anomaly located on L-5800 E, extending from 2225 m South to 2250 m South. This anomaly is within the interpreted DPFZ.

The southerly geochemical trend (Anomaly "B"), two hundred metres south of Anomaly "A", may represent a trend within the altered hangingwall volcanics. The wallrock alteration appears to be correlatable with the Anomaly "B" soil anomaly, traceable over the northern portion of the property adjacent to the DPFZ. This southern Anomaly "B" is a multiple line, 4-5 ppb MMI soil anomaly located at 2325 South on both L-5800E and L-5900E.

In this case, the MMI soil anomalies in the clay medium are very subtle. The MMI anomalies may not be of much use as a reconnaissance exploration tool at the property or regional scale. We do not know if the clay layer will act as a filter or an inhibitor, or as a total blocker of any geochemical signatures. Additional research is required to compare MMI soil techniques in both clay and till horizons, in temperate climate conditions.

Silver: The response ratios for silver in soil mimic the gold anomalies.

Nickel, Cobalt, and Palladium: The other metals such as Ni, Pd, and Co do not show any correlation with each other or with the precious metals.

A single sample "Anomaly C" on L-5800, at 2500 South was enriched in Au, Ag, and Pd.

RECOMMENDATIONS

Diamond drilling is warranted. This will thoroughly test the strike potential of Pentland's interpreted DPFZ and associated gold mineralization

The soil geochemical survey appears to help the prioritization of potential drill targets. The survey may have delineated extensions of the "Sericite Carbonate Zone" alteration. The survey did help to direct additional drilling along the target horizons. Drilling is required to validate the soil geochemical technique.

Drill targets include

- (1) MMI Anomaly "A" - Line 5800 E
- (2) MMI Anomaly "B" - Line 5800 E
- (3) MMI Anomaly "C" - Line 5800 E

In regard to soil sampling in general, it is recommended that a test line of MMI sampling be completed within the same sample medium, but removed from any area of potential mineralization. This should better reflect upon the nature and validity of any anomalies. This "barren test site" sampling would help with the interpretation of survey data. It was not done in this test case.

Respectfully submitted



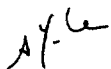
Gord Yule
Pentland Firth Ventures Ltd.

CERTIFICATE OF QUALIFICATIONS

I, Gordon R. Yule, do hereby certify:

- . I am a resident of Timmins, Ontario, Canada, with address 447 Kelly Ann Drive, P4P 1G9
- . I have been engaged in base metal, precious metal, and uranium exploration in Ontario, Quebec, Saskatchewan and the Northwest Territories since 1974.
- . I am a graduate of Lakehead University, Thunder Bay, Ontario.
(H.B.Sc. Geology, 1978 & 1979)
- . I have been employed by Pentland Firth Ventures Ltd. since its inception in 1994.
- . I was directly involved in supervision and data interpretation for the 1998 Surface Exploration Program at the McChristie Property.

Signature:



Name: Gordon R. Yule

Date:

- REFERENCES -

Wamtech Pty. Ltd.

1996: "Operations Manual for Mobile Metal Ion Geochemical Surveys," Copyright Wamtech Pty. Ltd., West Perth, Australia

**1997 SURFACE EXPLORATION PROGRAM
at the
McChristie Property**

APPENDIX 1: 1998 MMI Soil Geochemical Results

(a) McChristie Property

- Figure 4 - MMI Soil Geochemistry - McChristie Property: (Contour) Gold (Au) in Soils
- Figure 5a - MMI Soil Geochemistry - McChristie Property: (Contour) Gold (Au) in Soils
- Figure 5b - MMI Soil Geochemistry - McChristie Property: (Contour) Cobalt (Co) in Soils
- Figure 5c - MMI Soil Geochemistry - McChristie Property: (Contour) Nickel (Ni) in Soils
- Figure 5d - MMI Soil Geochemistry - McChristie Property: (Contour) Palladium (Pd) in Soils
- Figure 5e - MMI Soil Geochemistry - McChristie Property: (Contour) Silver (Ag) in Soils

(McChristie Property, Carr Township)

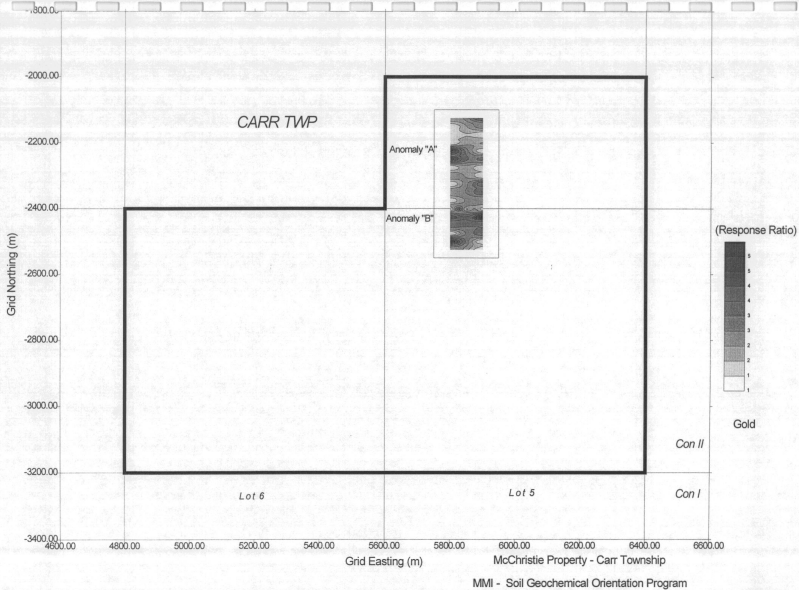
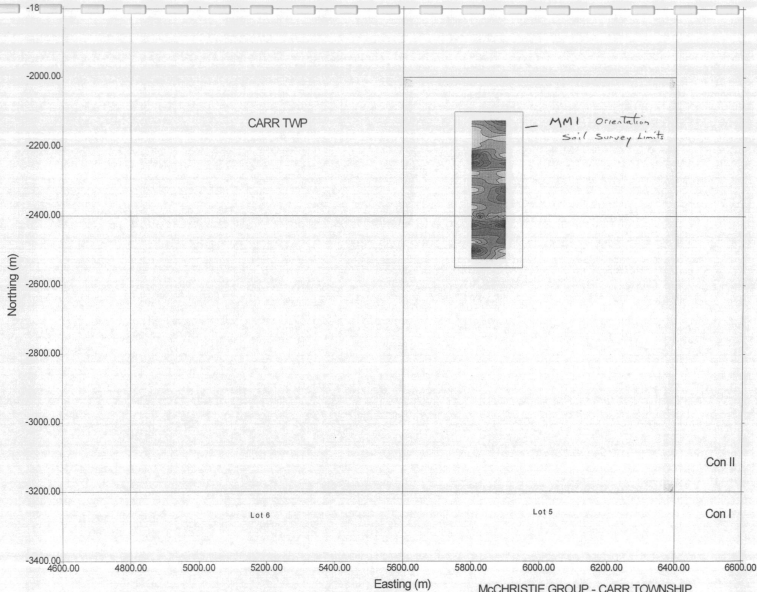


Figure 4



McCHRISTIE GROUP - CARR TOWNSHIP
Au (Response Ratios) - Contoured
MMI Soil Geochemical Orientation Program

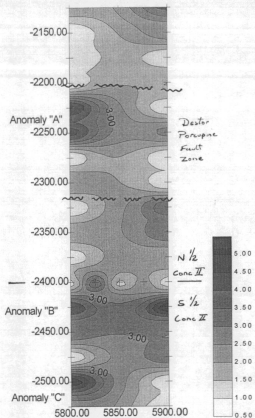


Figure 5a Au (Response Ratios)

+ Sample Sites

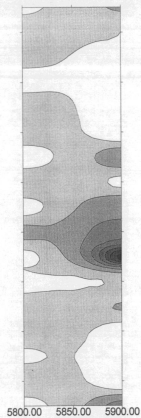


Figure 5b Co (Response Ratios)

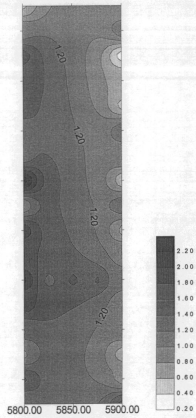


Figure 5c Ni (Response Ratios)

McChristie Property - Carr Twp.
MMI Soil Geochemical Survey
Orientation Study

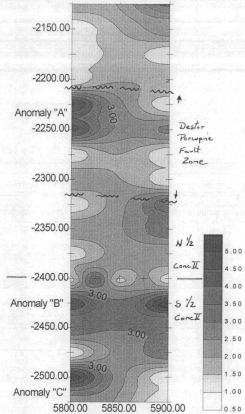


Figure 5a Au (Response Ratios)

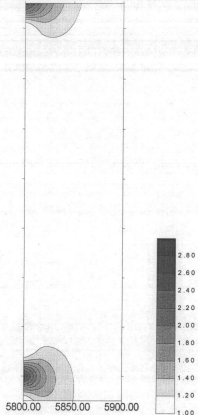


Figure 5d Pd (Response Ratios)

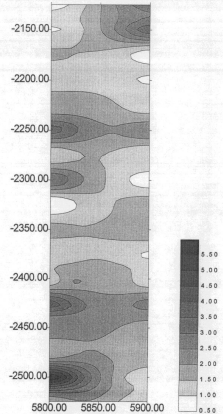
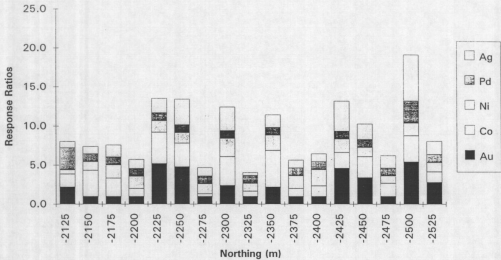
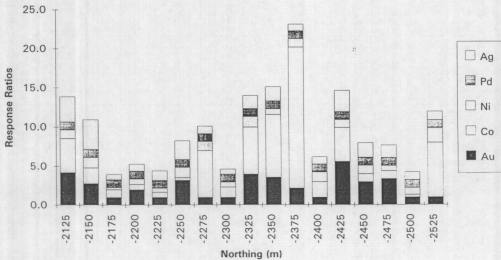


Figure 5e Ag (Response Ratios)

McChristie - L 5800 E



McChristie - L 5900 E



1998 SURFACE EXPLORATION PROGRAM
APPENDIX 2: Summary of Analytical Data

Certificates of Analysis
X-RAL Laboratories

Certificate # W.O.052329

Duplicate sample sites noted as Prefixed: "** Dup" MMI sample numbers

4101



XRAL Laboratories
A Division of SGS Canada Inc.

1885 Leslie Street
Don Mills, Ontario
Canada M3B 3J4
Telephone (416) 445-5755
Fax (416) 445-4152

CERTIFICATE OF ANALYSIS

Work Order: 052329

To: Pentland Firth Ventures Ltd.
Attn: Ken D. Tylee
P.O. Box 1690
Highway 101 East (at Hallnor Road)
SOUTH PORCUPINE
ONTARIO, CANADA PON 1H0

Date : 01/10/98

Copy 1 to :

Copy 2 to :

P.O. No. :
Project No. : 4101
No. of Samples : 37 SOIL
Date Submitted : 18/09/98
Report Comprises : Cover Sheet plus
Pages 1 to 1

Distribution of unused material:
Pulps: Pulps - no instructions
Rejects: Rejects - no instructions

Certified By :

Dr. Hugh de Souza, General Manager
XRAL Laboratories

ISO 9002 REGISTERED

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample
n.a. = Not applicable -- = No result
*INF = Composition of this sample makes detection impossible by this method
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion



XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 052329

Date: 01/10/98

FINAL

Page 1 of 1

Element.	Au	Co	Ni	Pd	Ag
Method.	MMI-B	MMI-B	MMI-B	MMI-B	MMI-B
Det.Lim.	0.1	1	1	0.1	0.1
Units.	ppb	ppb	ppb	ppb	ppb
5800-2125	0.11	5	83	0.14	5.22
5800-2150	<0.1	10	171	<0.1	6.05
5800-2175	<0.1	7	263	<0.1	9.87
5800-2200	<0.1	3	243	<0.1	7.53
5800-2225	0.26	12	228	<0.1	11.8
5800-2250	0.24	9	207	<0.1	21.1
5800-2275	<0.1	1	195	<0.1	7.06
5800-2300	0.12	11	360	<0.1	19.4
5800-2325	<0.1	2	154	<0.1	2.38
5800-2350	0.11	14	301	<0.1	10.4
5800-2375	<0.1	3	253	<0.1	6.47
5800-2400	<0.1	4	322	<0.1	6.53
5800-2425	0.23	6	266	<0.1	24.8
5800-2450	0.17	8	183	<0.1	13.0
5800-2475	<0.1	5	146	<0.1	10.3
5800-2500	0.27	10	251	0.14	38.6
5800-2525	0.14	4	184	<0.1	10.9
5900-2125	0.21	13	170	<0.1	21.0
5900-2150	0.14	6	206	<0.1	24.6
5900-2175	<0.1	3	44	<0.1	4.40
5900-2200	0.10	2	109	<0.1	5.86
5900-2225	<0.1	2	81	<0.1	8.05
5900-2250	0.16	1	205	<0.1	15.5
5900-2275	<0.1	18	178	<0.1	6.27
5900-2300	<0.1	4	101	<0.1	4.25
5900-2325	0.20	18	208	<0.1	11.0
5900-2350	0.18	24	112	<0.1	11.8
5900-2375	0.11	54	168	<0.1	5.65
5900-2400	<0.1	6	192	<0.1	6.14
5900-2425	0.28	13	156	<0.1	17.8
5900-2450	0.15	3	170	<0.1	12.2
5900-2475	0.17	3	103	<0.1	10.4
5900-2500	<0.1	1	140	<0.1	6.68
5900-2525	<0.1	21	290	<0.1	7.18
5825-2400	0.22	5	207	<0.1	13.8
5850-2400	<0.1	4	253	<0.1	12.9
5875-2400	0.11	5	252	<0.1	10.4
*Dup 5800-2125	<0.1	4	92	<0.1	5.80
*Dup 5800-2425	0.18	6	278	<0.1	24.5
*Dup 5900-2300	<0.1	4	101	<0.1	3.74
*Dup 5875-2400	<0.1	4	270	<0.1	10.3

Easting	Northing	Au MMI-B ppb	Co MMI-B ppb	Ni MMI-B ppb	Pd MMI-B ppb	Ag MMI-B ppb	Au (RR)	Co(RR)	Ni(RR)	Pd(RR)	Ag(RR)
		0.1		1	1	0.1	0.1				
5800	-2125	0.11	5	83	0.14	5.2	2.2	1.7	0.5	2.8	0.8
5800	-2150	0.05	10	171	0.05	6.1	1.0	3.3	1.1	1.0	0.9
5800	-2175	0.05	7	263	0.05	9.9	1.0	2.3	1.7	1.0	1.5
5800	-2200	0.05	3	243	0.05	7.5	1.0	1.0	1.6	1.0	1.2
5800	-2225	0.26	12	228	0.05	11.8	5.2	4.0	1.5	1.0	1.8
5800	-2250	0.24	9	207	0.05	21.1	4.8	3.0	1.3	1.0	3.3
5800	-2275	0.05	1	195	0.05	7.1	1.0	0.3	1.3	1.0	1.1
5800	-2300	0.12	11	360	0.05	19.4	2.4	3.7	2.3	1.0	3.0
5800	-2325	0.05	2	154	0.05	2.4	1.0	0.7	1.0	1.0	0.4
5800	-2350	0.11	14	301	0.05	10.4	2.2	4.7	2.0	1.0	1.6
5800	-2375	0.05	3	253	0.05	6.5	1.0	1.0	1.6	1.0	1.0
5800	-2400	0.05	4	322	0.05	6.5	1.0	1.3	2.1	1.0	1.0
5800	-2425	0.23	6	266	0.05	24.8	4.6	2.0	1.7	1.0	3.8
5800	-2450	0.17	8	183	0.05	13.0	3.4	2.7	1.2	1.0	2.0
5800	-2475	0.05	5	146	0.05	10.3	1.0	1.7	0.9	1.0	1.6
5800	-2500	0.27	10	251	0.14	38.6	5.4	3.3	1.6	2.8	6.0
5800	-2525	0.14	4	184	0.05	10.9	2.8	1.3	1.2	1.0	1.7
5900	-2125	0.21	13	170	0.05	21.0	4.2	4.3	1.1	1.0	3.2
5900	-2150	0.14	6	206	0.05	24.6	2.8	2.0	1.3	1.0	3.8
5900	-2175	0.05	3	44	0.05	4.4	1.0	1.0	0.3	1.0	0.7
5900	-2200	0.1	2	109	0.05	5.9	2.0	0.7	0.7	1.0	0.9
5900	-2225	0.05	2	81	0.05	8.1	1.0	0.7	0.5	1.0	1.2
5900	-2250	0.16	1	205	0.05	15.5	3.2	0.3	1.3	1.0	2.4
5900	-2275	0.05	18	178	0.05	6.3	1.0	6.0	1.2	1.0	1.0
5900	-2300	0.05	4	101	0.05	4.3	1.0	1.3	0.7	1.0	0.7
5900	-2325	0.2	18	208	0.05	11.0	4.0	6.0	1.4	1.0	1.7
5900	-2350	0.18	24	112	0.05	11.8	3.6	8.0	0.7	1.0	1.8
5900	-2375	0.11	54	168	0.05	5.7	2.2	18.0	1.1	1.0	0.9
5900	-2400	0.05	6	192	0.05	6.1	1.0	2.0	1.2	1.0	0.9
5900	-2425	0.28	13	156	0.05	17.8	5.6	4.3	1.0	1.0	2.8
5900	-2450	0.15	3	170	0.05	12.2	3.0	1.0	1.1	1.0	1.9
5900	-2475	0.17	3	103	0.05	10.4	3.4	1.0	0.7	1.0	1.6
5900	-2500	0.05	1	140	0.05	6.7	1.0	0.3	0.9	1.0	1.0
5900	-2525	0.05	21	290	0.05	7.2	1.0	7.0	1.9	1.0	1.1
5825	-2400	0.22	5	207	0.05	13.8	4.4	1.7	1.3	1.0	2.1
5850	-2400	0.05	4	253	0.05	12.9	1.0	1.3	1.6	1.0	2.0
5875	-2400	0.11	5	252	0.05	10.4	2.2	1.7	1.6	1.0	1.6
	Backgrou	0.05	3	154	0.05	6.47					
DUP-5800-	-2125	0.05	4	92	0.05	5.8					
DUP-5800-	-2425	0.18	6	278	0.05	24.5					
DUP-5900-	-2300	0.05	4	101	0.05	3.74					
DUP-5875-	-2400	0.05	4	270	0.05	10.3					



Ministry of
Northern Development
and Mines

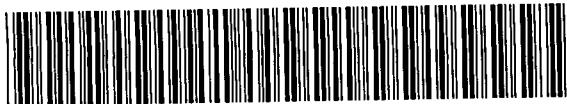
**Declaration of Assessment
Work
Performed on Mining Land**

Transaction Number (office use)

W9980.00068

Assessment Files Research Imaging

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990



42A09SW2005 2.19194 CARR

900

ie authority of subsections 65(2) and 66(3) of the Mining Act. Under rd. This information will be used to review the assesment work and action should be directed to a Provincial Mining Recorder, Ministry ad, Sudbury, Ontario, P3E 6B5.

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240.
- Please type or print in ink.

1. Recorded holder(s) (Attach a list if necessary)

2.19194

Name Pentland Firth Ventures Ltd.	Client Number 300694
Address Box 1690, South Porcupine, Ontario, P0N 1H0	Telephone Number (705)235-2311
	Fax Number (705)235-2433
Name	Client Number
Address	Telephone Number
	Fax Number

2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

- Geotechnical: prospecting, surveys, assays and work under section 18 (regs) Physical: drilling stripping, trenching and associated assays Rehabilitation

Work Type Geochemical Orientation Survey (MMI) ✓	Office Use Commodity Total \$ Value of Work Claimed 2928
Dates Work Performed From 17 09 1998 To 17 09 1998 Day Month Year Day Month Year	NTS Reference
Global Positioning System Data (if available)	Township/Area Carr M or G-Plan Number G-3613
	Mining Division Porcupine Resident Geologist District

Harder Lake
Kirkland Lake

- Please remember to:
- obtain a work permit from the Ministry of Natural Resources as required;
 - provide proper notice to surface rights holders before starting work;
 - complete and attach a Statement of Costs, form 0212;
 - provide a map showing contiguous mining lands that are linked for assigning work;
 - include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

Name Gord Yule	Telephone Number 705-235-2311
Address Box 1690, South Porcupine, Ontario P0N 1H0	Fax Number 705-235-2433
Name	Telephone Number
Address	Fax Number
Name	Telephone Number
Address	Fax Number

RECEIVED

JAN 27 1999
10:00G/3
GEOSCIENCE ASSESSMENT
OFFICE

4. Certification by Recorded Holder or Agent

1. Kathryn Andrews-Smith (Print Name), do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent <i>KAD</i>	Date Jan. 26/99
Agent's Address Box 1690, South Porcupine, Ont.	Telephone Number (705)235-2311
	Fax Number (705)235-2433

Deemed April 27/99

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

W9980.00068

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date
eg TB 7827	16 ha	\$26,825	N/A	\$24,000	\$2,825
eg 1234567	12	0	\$24,000	0	0
eg 1234568	2	\$ 8,892	\$4,000	0	\$4,892
1 L1186173	1	\$1,552	\$0	0	\$1,552
2 L979580	1	\$1,376	\$0	\$400	\$976
3 L1151735	1	\$0	\$400	0	\$0
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
Column Totals		\$2,928	\$400	\$400	\$2,528

I, Kathryn Andrews-Smith, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing: [Signature] Date: January 26, 1999

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only
Received Stamp

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JAN 27 1999
10:10:55
GEOSCIENCE ASSESSMENT
OFFICE

Deemed Approved Date	Date Notification Sent
Date Approved	Total Value of Credit Approved
Approved for Recording by Mining Recorder (Signature)	



W4980.00068

2.19194

Personal information collected on this form is obtained under the authority of subsection 6 (1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, this information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to a Provincial Mining Recorder, Ministry of Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Work Type	Units of work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
Assay Samples	41 samples	\$19.54/sample	\$801
Pentland Salaries	2 days	\$175/day	\$350
Report Writing/Analysis	5 days	\$325/day	\$1,625
Drafting	1.5 hours	\$39/hour	\$59
Associated Costs (e.g. supplies, mobilization and demobilization).			
	Shipping		\$22
	Field Expenses		\$7
	Transportation Costs		
	Truck Lease (one day)		\$23
	Gas		\$41
	Food and Lodging Costs		
Total Value of Assessment Work			\$2928

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 JAN 27 1999
 10:00 AM
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 OFFICE

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK x 0.50 = Total \$ value of worked claimed.

Note:
 - Work older than 5 years is not eligible for credit.
 - A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, Kathryn Andrews-Smith (please print full name) do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying

Declaration of Work form as Agent I am authorized to make this certification. (recorded holder, agent, or state company position with signing authority)

Signature 	Date Jan. 26, 1999
---------------	-----------------------

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (888) 415-9846
Fax: (877) 670-1555

March 12, 1999

Kathryn Andrews Smith
PENTLAND FIRTH VENTURES LTD.
BOX 1690
HIGHWAY 101 EAST
SOUTH PORCUPINE, ON
P0N-1H0

Visit our website at:
www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Dear Sir or Madam:

Submission Number: 2.19194

Status

Subject: Transaction Number(s): W9980.00068 Deemed Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact Steve Beneteau by e-mail at steve.beneteau@ndm.gov.on.ca or by telephone at (705) 670-5855.

Yours sincerely,



ORIGINAL SIGNED BY
Blair Kite
Supervisor, Geoscience Assessment Office
Mining Lands Section

Work Report Assessment Results

Submission Number: 2.19194

Date Correspondence Sent: March 12, 1999

Assessor: Steve Beneteau

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9980.00068	1186173	CARR	Deemed Approval	March 12, 1999

Section:

13 Geochemical GCHEM

Correspondence to:

Resident Geologist
Kirkland Lake, ON

Recorded Holder(s) and/or Agent(s):

Kathryn Andrews Smith
PENTLAND FIRTH VENTURES LTD.
SOUTH PORCUPINE, ON

Assessment Files Library
Sudbury, ON
