1989 OPAP "HALKIRK" PROJECT

REINO PITKANEN - OPAP FILE - OP89-61

Location -

Halkirk Twp., Claims Map M-2081, Lots 11 and 12. Eight claims numbered K1104785 to K1104792 incl., staked by R.W. Pitkanen Licence No. E24147, located 30 Km. east of Fort Frances on Hwy.#11 and 2 Km. north on Hwy. #602. The claims lie on the east side of Hwy. #502. Old tractor roads and trails cross the property. The mineralized zone explored in this project crosses the S.E. corner of claim K1104785, S.W. corner of claim K1104788 and into claim K1104791 at a strike of 120° A.

History -

The property was previously held by G.A. Armstrong of Fort Frances. No work has been done in recent years.

General Geology and Summary -

The property lies between the Quetico (approx. 5 Km. N.), and the Rainy Lake - SeineRiver, (approx. 11 Km. S) faults. The rock types within this area include ultramafic to felsic metavolcanics, meta sediments, gabbro,lamprophyre, and quartz-feldspar porphyry dykes, schists and mylonites in fault areas. The area is underlain by archean rocks and was mapped by the O.G.S. -Kenora -Fort Frances Geological Compilation Series Map No. 2443 and O.G.S. Airborne Electromagnetic Survey Map No. 804496.

The mineralized zone explored contains a lens of massive PO PY dipping vertical or slightly north with sphalerlite and minor chalcopyrite. The sulphides are overlain by a narrow band of chert-magnetic within a mafic succession of gabbro, amphibolite and meta basalt.Biotite schists occur to the south. The zone strikes 120° and was traced for a distance of 221 M, 12 samples were taken from 9 trenches, values obtained were from .31% Cu and trace to 9% Zn. The location of the higher values are indicated on the attached map.

Work Plan and Progress -

Initally I prospected the entire 8 claims and found the most interesting area was the massive PO PY zone where some previous work had been done. Also a parallel zone of iron formation with

chert-magnetite and sulphide bearing carbonates was encountered approx. 170 m to the north of the main zone, but, lack of time and resources did not permit its examination.

We cut a baseline on the main zone and stripped manually, by bulldozer and washed with a Mark 3 Wajax fire pump prior to rock drilling, by Atlas Copco Cobra and blasting the trenches. The mineralization continues both east and west from our present work.

The work provided to me by Dave Pitkanen and Bill Ross was in lieu of assistance I gave them and therefore is fully paid

R.W. Pitkanen

ACCURASSAY LABORATORIES LTD.

P.O. BOX 604
KIRKLAND LAKE, ONTARIO, CANADA P2N 3J5
TEL.: (705) 567-6343

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

Certificate of Analysis

31477 Ray Pitkanen
P.O.Box 99
FORT FRANCES, ON
P9A 3M5

Date: January 11 19 90

Work Order # : T900004

Assay results are as follows

SAMPLE NUMBERS		Zinc
Accurassay	Customer	%
514402	167890	1.2520
514403	167891	9.0800

LF-30

Per: Sonya Benachek

ORIGINAL

ACCURASSAY LABORATORIES LTD.

P.O. BOX 604
KIRKLAND LAKE, ONTARIO, CANADA P2N 3J5
TEL.: (705) 567-6343

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

Certificate of Analysis

31450 Ray Pitkanen
P.O.BOX 99
FORT FRANCES, ONTARIO
P9A 3M5

Date: January 8 19 90

Work Order # : T900004
Project :

SAMPLE NUMBERS		Copper	Nickel	Zinc
Accurassay	Customer	ppm	ppm	ppm
514392	167880	680		2000
514393	167881	1500	490	5000
514394	167882			2600
514395	167883			1500
514396	167884	1700		2600
514397	167885	2000		3000
514398	167886			130
514399	167887	2600		6200
514400	167888			110
514401	167889			5400
514402	167890	860		>10000
514403	167891	3100		>10000

Per: Robin Dutch

ORIGINAL

ACCURASSAY LABORATORIES LTD.

P.O. BOX 604
KIRKLAND LAKE, ONTARIO, CANADA P2N 3J5
TEL.: (705) 567-6343

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

Certificate of Analysis

31476 Ray Pitkanen
P.O.Box 99
FORT FRANCES, ON
P9A 3M5

Date: January 11 90 19 ____

Work Order # : T900004
Project :

Assay results are as follows

SAMPLE NUMBERS		Cobalt
Accurassay	Customer	ppm
514399	167887	560

LF-30

Per: Sonja Benischek

ORIGINAL

Ontario

Ministry of Northern Development and Mines

Ontario Geological Survey

77 Grenville Street
11th Floor
Toronto, Ontario
M7A 1W4
Telephone 965-1337

Geoscience Laboratories Report

Issued to:

MR. R. PITKANEN

R.R. #2

FORT FRANCES, ONTARIO P9A 3M3

0361-89

QUALITATIVE ICP-SPECTROMETRIC ANALYSIS

ELEMENT/SAMPLE	#1
ALUMINUM	LM
BARIUM	-
BERYLLIUM	-
CALCIUM	MH
CERIUM	-
CHROMIUM	-
COBALT	T
COPPER	TL
IRON	H
LANTHANUM	T
LEAD	-
MAGNESIUM	M
MANGANESE	LM
MOLYBDENUM	-
NICKEL	T
NIOBIUM	-
NEODYMIUM	-
PHOSPHORUS	-
STRONTIUM	-
TANTALUM	-
TITANIUM	TL
TUNGSTEN	-
VANADIUM	-
YTTRIUM	-
ZINC	T
ZIRCONIUM	-
TOT. RADIO.	-

(TOTAL RADIOACTIVITY EXPRESSED IN EQUIVALENT % URANIUM OXIDE)

This is an interim report for samples entered in your name on NOV.6,1989; additional work will follow as soon as possible.

LEGEND

H = 10 TO 100%
MH = 5 TO 10%
M = 1 TO 5%
LM = 0.5 TO 1%
L = 0.1 TO 0.5%
TL = 0.05 TO 0.1%
T = 0.01 TO 0.05%
- = <0.01% (NONE DETECTED)

Fees received: COUPONS

CHRIS RIDDLE, CHIEF ANALYST

Ministry of Northern Development and Mines

Ontario Geological Survey

77 Grenville Street
11th Floor
Toronto, Ontario
M7A 1W4
Telephone 965-1337

Geoscience Laboratories Report

Issued to:

MR. R PITKANEN
BOX 99
FORT FRANCES,ONTARIO
P9A 3M3

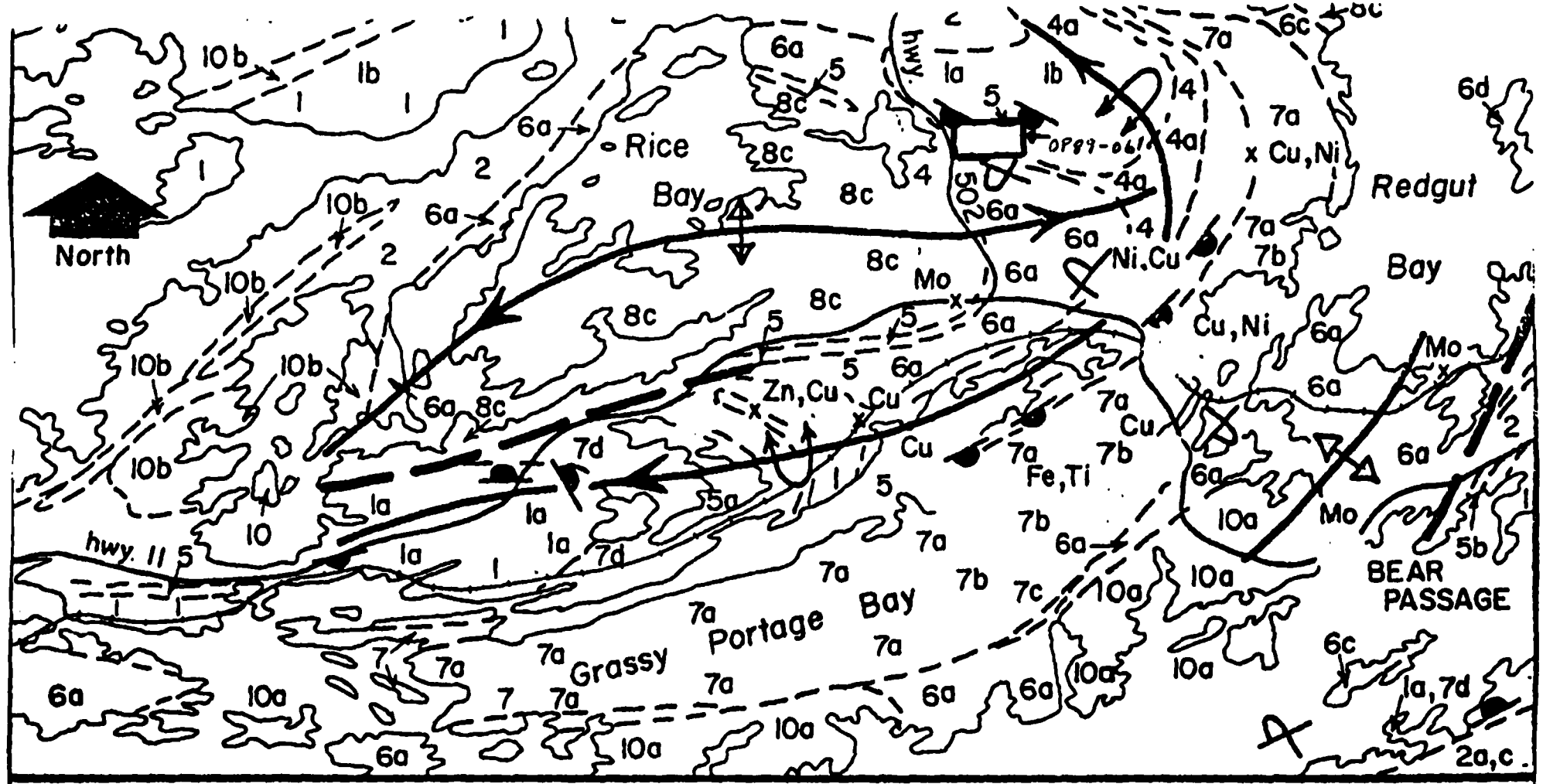
FURTHER TO CERTIFICATE #0361-89

SAMPLE NUMBER	ZINC Zn ppm
1	183

This completes all analytical work for samples entered in your name on NOV.6,1989

Fees Received: COUPONS

Chris Riddle, Chief Analyst DEC. 1, 1989



RICE BAY DOME AREA

- Fault
- pillow lava, top shown
- overturned graded beds
- Lithological contact
- 8c Lithotype (see table 1)
- Antiform (with plunge)
- overturned anticline (with plunge)

0 5 mi.
0 8 km

TABLE 1. TABLE OF LITHOLOGIC UNITS FOR THE MINE CENTRE-FORT FRANCES AREA

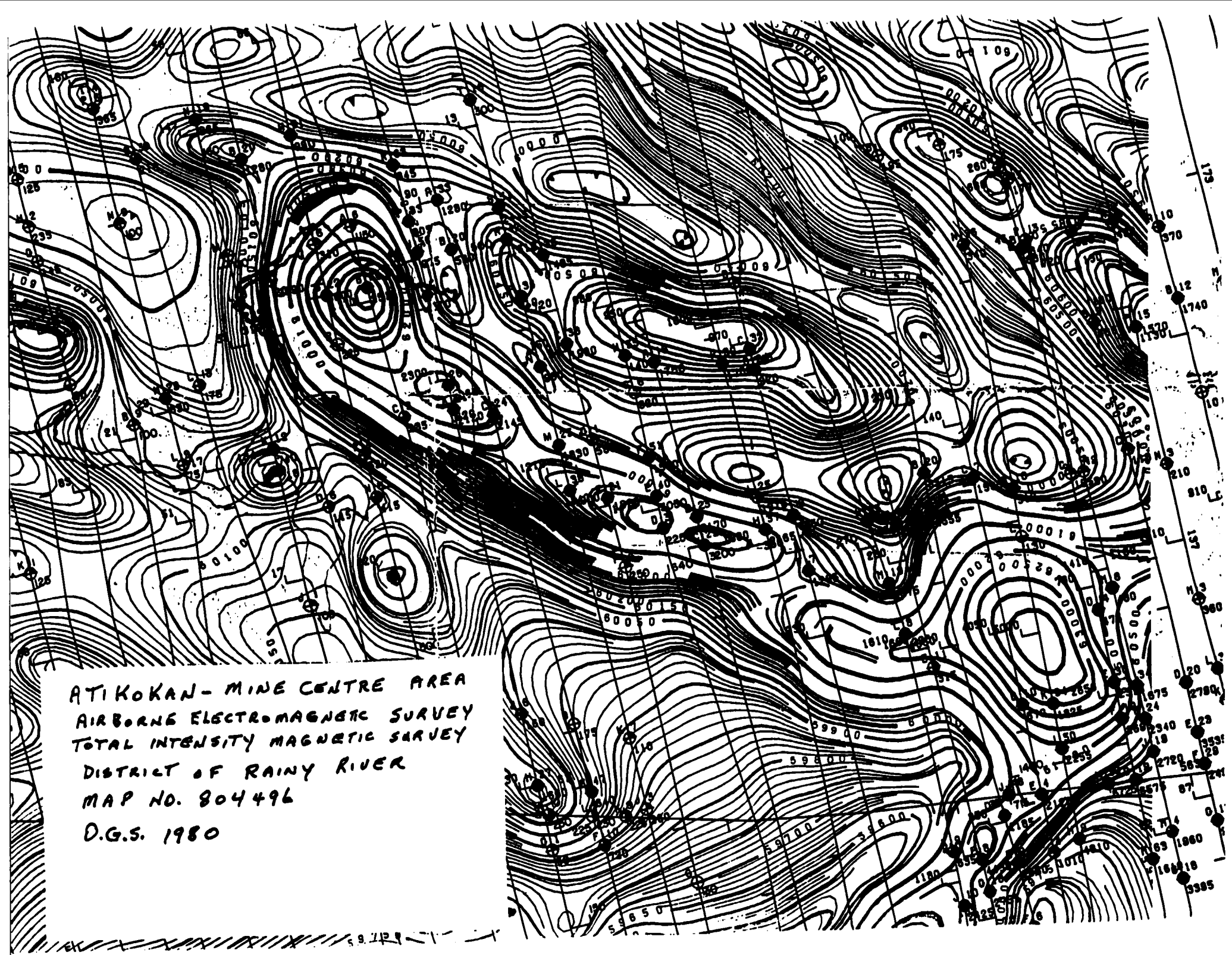
LITHOLOGIC UNIT	DESCRIPTION
Fault rocks (12)	Schists, mylonites, cataclastites developed on heterogeneous lithologies
	Fault Contact
Dyke rocks (11)	Diabase, gabbro, lamprophyre, quartz-feldspar porphyry
	Intrusive Contact
Unmetamorphosed granitoid rocks (10)	Granite, granodiorite, monzonite, monzodiorite, quartz monzonite, quartz monzodiorite
	Intrusive Contact
Metamorphosed conglomerate and sandstone (9)	Conglomerate, arkose, subarkose, lithic arenite, lithic arkose
	Angular Unconformity
Metamorphosed granitoid rocks (8)	Tonalite, trondhjemite, granite gneiss, quartzofeldspathic gneiss***
	Intrusive Contact
Metamorphosed gabbroic rocks (7)	Gabbro, melagabbro, leucogabbro, anorthosite, quartz gabbro, quartz diorite, metadiabase **, amphibolite
	Intrusive Contact
Metamorphosed wackes and mudstones (6)	Biotite schist, biotitic siltstone, slate, wacke, mudstone, migmatite (biotitic paleosome)
Metamorphosed chemical strata and related clastic rocks* (5)	Chert, chert-magnetite, pyrite-pyrrhotite, pyritic slates, slate, siltstone, wacke
Ultramafic metavolcanic rocks* (4)	Metamorphosed lapilli-tuff, tuff, magnetic chlorite schist
Felsic metavolcanic rocks (3)	Metamorphosed rhyolite and rhyodacite flows, amygdaloidal flows, tuffs, lapilli-tuffs, lapillistone, agglomerate and quartz sericite schist
Intermediate metavolcanic rocks (2)	Metamorphosed andesite to dacite flows, pillowed and amygdaloidal flows, chloritic tuffs, lapilli-tuff, agglomerate, breccia and quartz-chlorite schist
Mafic metavolcanic rocks (1)	Metamorphosed basaltic flows, mafic tuffs, amphibolite, chlorite schist, migmatite (amphibolitic paleosome)

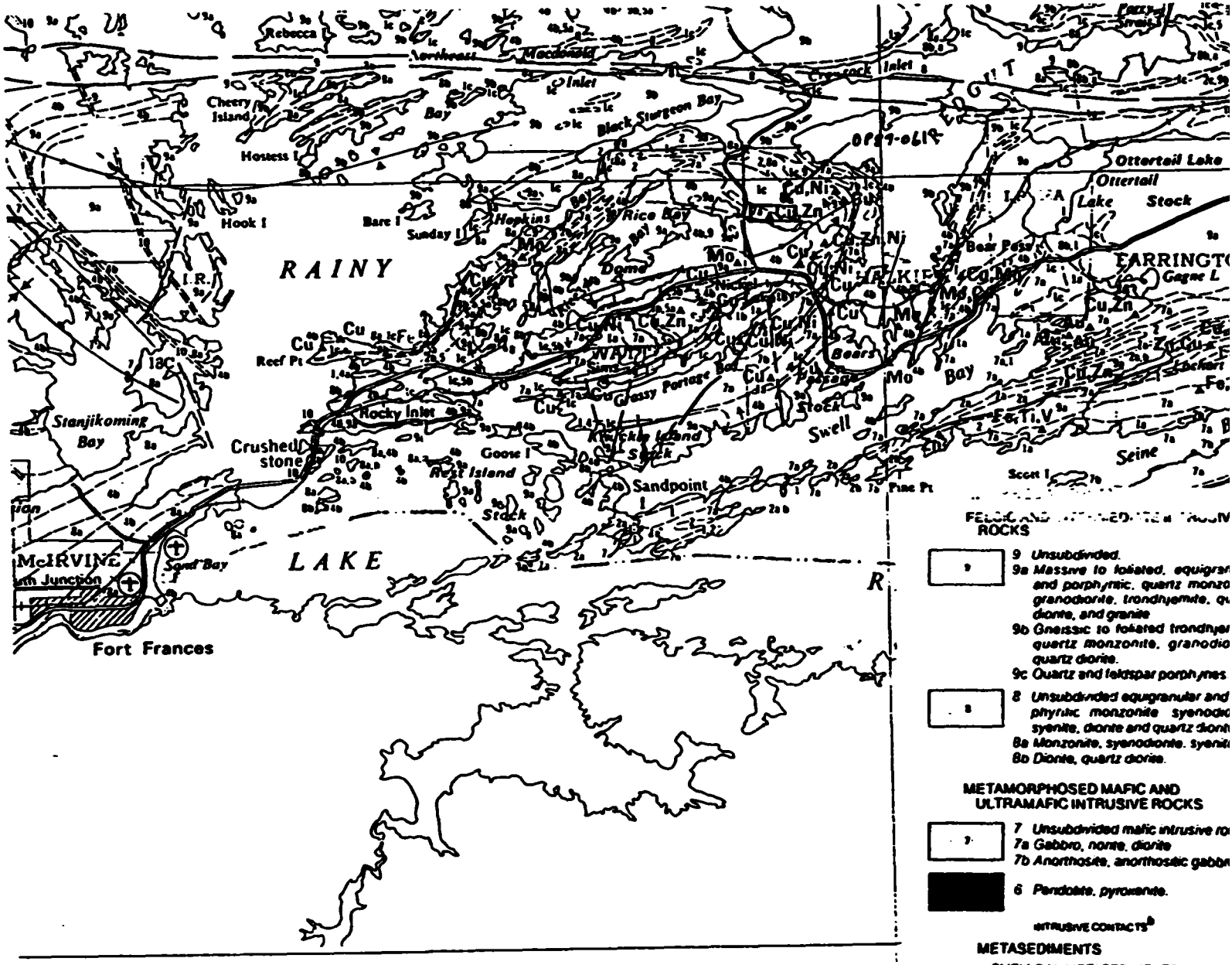
NOTES

* Although the table represents the broad stratigraphic order among these rock types, local intercalation of lithologies is common.

** Sills of this type are common throughout the volcanic succession and constitute a substantial fraction of the total thickness of metavolcanic rock.

*** Not necessarily orthogneiss.


ATIKOKAN - MINE CENTRE AREA
AIRBORNE ELECTROMAGNETIC SURVEY
TOTAL INTENSITY MAGNETIC SURVEY
DISTRICT OF RAINY RIVER
MAP NO. 804496
D.G.S. 1980



ROCKS

9 Unsubdivided.
9a Massive to foliated, equigranular and porphyritic, quartz monzonite, granodiorite, trondhjemite, quartz diorite, and granite
9b Gneissic to foliated trondhjemite, quartz monzonite, granodiorite, quartz diorite.
9c Quartz and feldspar porphyries

8 Unsubdivided equigranular and porphyritic monzonite syenodiorite, syenite, diorite and quartz diorite
8a Monzonite, syenodiorite, syenite
8b Diorite, quartz diorite.

METAMORPHOSED MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS

7 Unsubdivided mafic intrusive rocks
7a Gabbro, norite, diorite
7b Anorthosite, anorthositic gabbro

6 Peridotite, pyroxenite.

INTRUSIVE CONTACTS

METASEDIMENTS

CHEMICAL METASEDIMENTS

5 Unsubdivided ironstone.
5a Magnetite ironstone
5b Pyrite ironstone.
5c Chert.

CLASTIC METASEDIMENTS

4 Unsubdivided.
4a Pebble and boulder conglomerate
4b Sandstone, siltstone, argillite, derived schists.
4c Migmatite, metatexite

METAVOLCANICS

ALKALIC MAFIC METAVOLCANICS

3 Unsubdivided
3a Flows

FELSIC TO INTERMEDIATE METAVOLCANICS

2 Unsubdivided.
2a Flows
2b Tuff, agglomerate, and breccia
2c Migmatite.

MAFIC METAVOLCANICS

1 Unsubdivided.
1a Massive and pillowed flows.
1b Tuff, agglomerate, and breccia.

Ontario Geological Survey

Map 2443

KENORA–FORT FRANCES

Geological Compilation Series

KENORA and RAINY RIVER DISTRICTS

Scale 1:253,440 or 1 Inch to 4 Miles

2 4 6 8 10 12 14 16 18 20 Miles

0 10 20 30 Kilometres

K1104785

K1104788

K1104791

AMPHIBOLITE

N

84m W

74m W

18m

7m x 3m

20m

2m x 2m

49m W

22m

61m

45m

79m W

3.5m x 3m

5m x 3m

2m

1.9m

5m W

3m

1.9m

1m W

2m

1.9m

0+00

53m E

1.25% 2K

9m x 3m

137m E

30m

9.08% 2K

2m x 3m

Trail

.5 KM

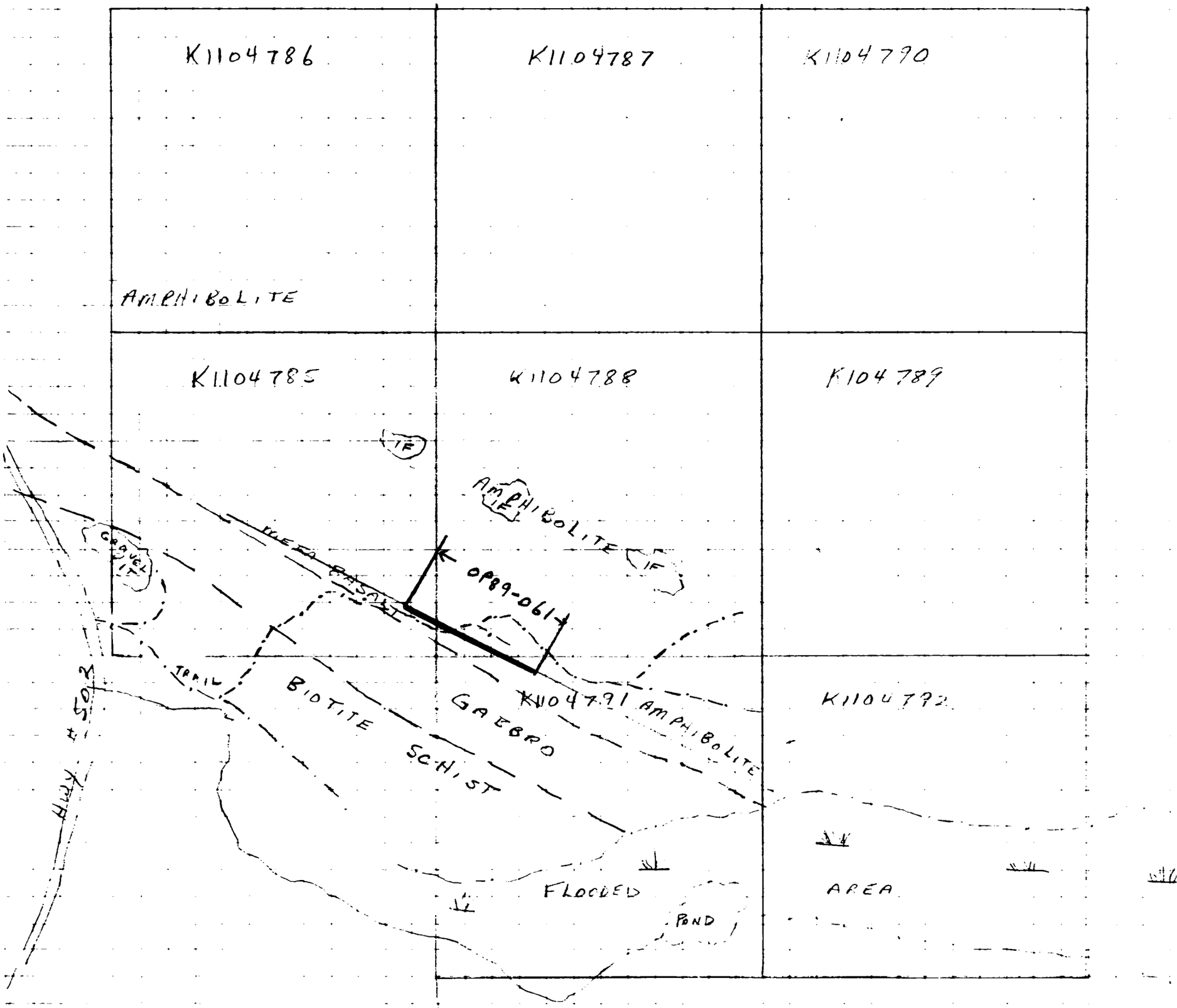
Hwy. 502

GABBRO

META BASALT

BIOTITE SCHIST

Rus Cuttle


K1104786
K1104787
K1104790
AMPHIBOLITE
K1104785
K1104788
K104789
IF
AMPHIBOLITE
IF
MEDIUM BASALT
COVERED
OP89-0617
TRAIL
BIOTITE SCHIST
GABBRO
K1104791 AMPHIBOLITE
K1104792
HWY 502
FLOODED
POND
AREA