

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

NTS 105 G/8

093728

1996 ASSESSMENT REPORT

ON PROPERTY

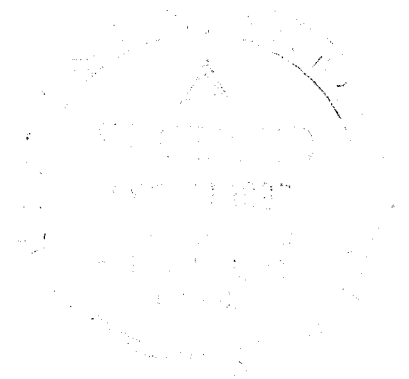
GEOLOGICAL MAPPING AND PROSPECTING

WATSON LAKE M.D., YUKON

PELLY MOUNTAINS AREA

WORK PERIOD

JUNE 11 and JUNE 14, 1996



LATITUDE: 61°25'

LONGITUDE: 130°40'

AUGUST, 1997

VICTORIA L. BANNISTER

This report has been examined by
the Geological Exploration Unit
of the Department of Yukon Quartz
and has been determined as
correct and true in the amount

1100.00

M. Burke
for Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

TABLE OF CONTENTS

	PAGE
1.0 SUMMARY	1
2.0 LOCATION AND ACCESS	1
3.0 PROPERTY AND OWNERSHIP	1
4.0 PREVIOUS WORK	3
5.0 REGIONAL GEOLOGY	3
6.0 1996 FIELD WORK	3
6.1 GEOLOGY AND PROSPECTING	
7.0 ON PROPERTY	4
7.1 GEOLOGY	
8.0 CONCLUSIONS AND RECOMMENDATIONS	4
9.0 REFERENCES	5

FIGURES

FIGURE 1	GENERAL LOCATION	2
----------	------------------	---

APPENDICES

APPENDIX I	STATEMENT OF QUALIFICATIONS	6
APPENDIX II	STATEMENT OF EXPENDITURES	8

ATTACHMENTS

FIGURE 2	CLAIM MAP (1:20,000)
FIGURE 3	GEOLOGY MAP (1:10,000)

1996 ASSESSMENT REPORT ON PROPERTY, YUKON TERRITORY

1.0 SUMMARY

The ON property, comprising 20 units, is located 11 kms east of Cominco's ABM VHMS Deposit, approximately 3 kms west of Wolverine Lake, 25 kms southeast of Finlayson Lake and 120 kms southeast of Ross River.

The property was staked in early 1994 to cover airborne geophysical targets identified during a Cominco survey.

The rocks underlying this area of the Yukon have been assigned to the Yukon Tanana Terrane (YTT). The YTT consists of a layered sequence of metamorphosed rocks comprising a "*lower unit*" of pre-Devonian quartzite, pelitic schist and minor marble, a late Devonian to mid-Mississippian "*middle unit*" comprised of carbonaceous phyllite and schist with interbanded mafic and, locally significant felsic metavolcanics, and an "*upper unit*" of Pennsylvanian marbles and quartzites. Volcanism within the "*middle unit*" was accompanied by the intrusion of late Devonian to Mississippian, mafic to felsic metaplutonic suites. Felsic volcanics of the "*middle unit*" are host to Cominco's ABM VHMS Deposit.

The ON property is underlain by a late Devonian to mid-Mississippian sequence of intermixed felsic metavolcanics and variably carbonaceous metasediments of the YTT.

Work completed on the ON property in 1996 included one day of geological mapping, and two person days of prospecting. Examination of this property resulted in the mapping of both mafic volcanics and several small sedimentary occurrences. No indication of base metal mineralization was found. No other work is recommended.

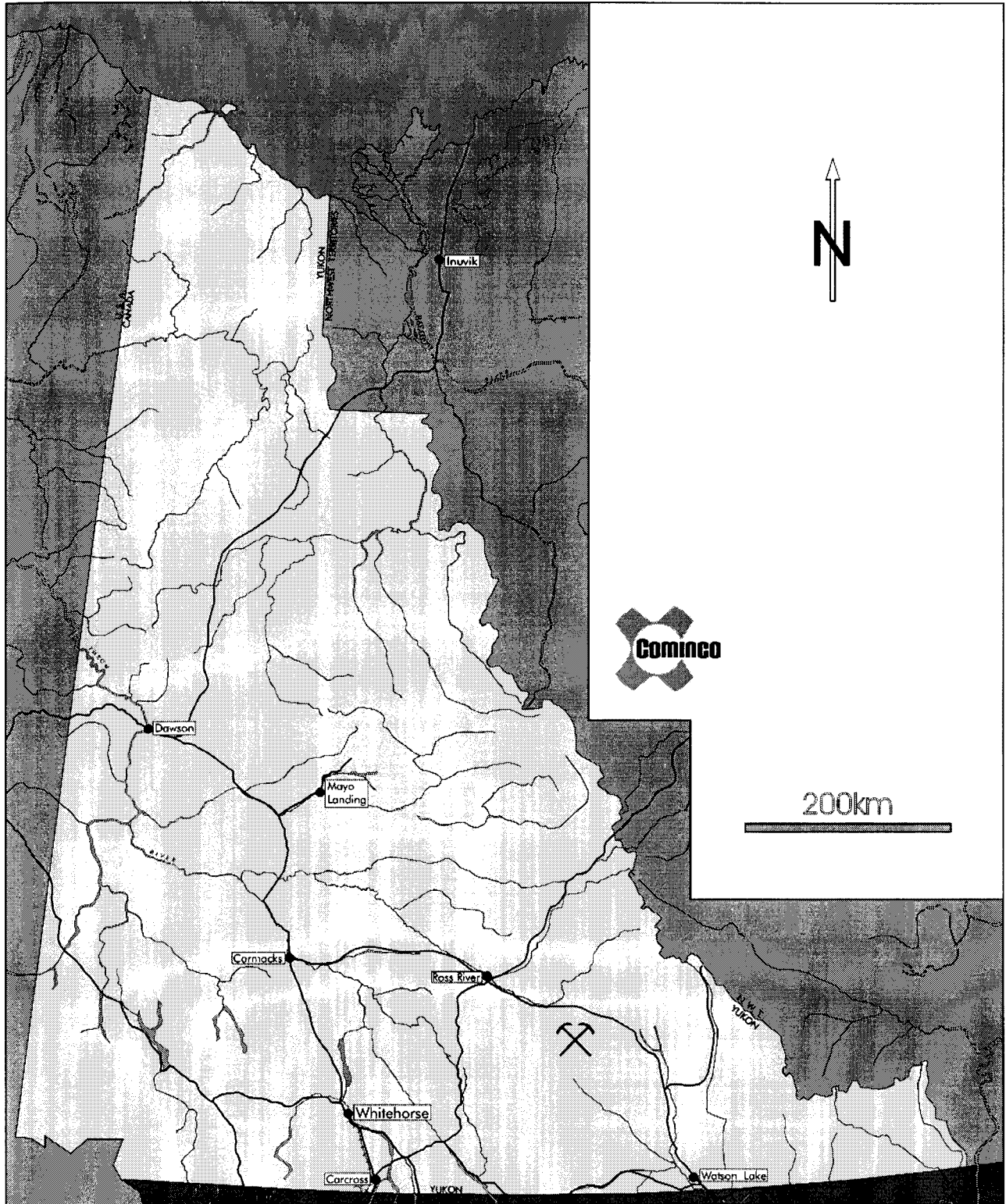
2.0 LOCATION AND ACCESS

The ON property is located 11 kms east of Cominco's ABM deposit, approximately 3 kms west of Wolverine Lake and 120 kms southeast of Ross River (Figure 1). The gravel, all weather Robert Campbell Highway provides access to within 15 kms of the property. Direct access is by helicopter. An old overgrown winter road is present, extending from the property to the highway at Wolverine Creek.

3.0 PROPERTY AND OWNERSHIP

The ON property, comprising 20 units, is 100% owned by Cominco Ltd. (Figure 2).

<u>Name</u>	<u>Units</u>	<u>Claim No.</u>	<u>Due Dates</u>
ON 1-20	20	YB47740-59	



Drawn by: Traced by: *a. m. a.*

Revised by:	Date:	Revised by:	Date:

ON PROPERTY LOCATION

105 G8

Scale: **As Shown**

Date: **August 1997**

Plate: **1**

4.0 PREVIOUS WORK

Cominco conducted broad heavy mineral stream sediment sampling of the immediate property drainage in 1977 and also conducted further soil sampling and 1:10,000 scale geological mapping in 1994.

Claims (Minfile #116; Charlie) were staked (not by Cominco Ltd.) near the ON property in 1990/91; however, no mineralization was noted and no work was recorded.

5.0 REGIONAL GEOLOGY

The rocks underlying this part of southeastern Yukon have been assigned to the Yukon-Tanana Terrane (YTT) (Mortensen, 1983a; Mortensen and Jilson, 1985).

The YTT consists primarily of a layered sequence of metamorphosed rocks comprising a "lower unit" (3I) of pre-Devonian quartzite, pelitic schist and minor marble, a late Devonian to mid-Mississippian "middle unit" (3F) comprising carbonaceous phyllite and schist with interbanded mafic and, locally significant, felsic metavolcanics (3G), and an "upper unit" of Pennsylvanian marbles and quartzite. Volcanism within the "middle unit" was accompanied by the intrusion of 2-3, late Devonian to Mississippian, mafic to felsic metaplutonic suites (Simpson Range suite and augen and monzonitic orthogneisses). This sequence appears to reflect stable platformal or shelf sedimentation with an intervening period of mafic to felsic arc volcanism developed within a more reduced basinal setting. Felsic volcanoclastics of the "middle unit" are host to Cominco's ABM VHMS Deposit.

A sub-horizontal to moderately north to northeast dipping, penetrative ductile deformation fabric (S2) and associated middle greenschist facies (chlorite-biotite grade) metamorphism affects all YTT rocks. This fabric reflects the first, and most significant, deformational and metamorphic event (D1) perhaps related to a continent-arc collision during late Permian to early Triassic time.

Late Triassic immature clastics comprising micaceous argillite, siltstone and sandstone unconformably(?) overlie the deformed and metamorphosed YTT rocks. These sediments are invariably in fault contact with YTT rocks.

6.0 1996 FIELD WORK

6.1 GEOLOGY AND PROSPECTING

Property scale mapping at 1:10,000 was completed by detailed traverses on the ON property. Examination for mineralization was also done through two person days of prospecting. The following table summarizes the 1996 fieldwork:

PROPERTY	GEOLOGY	PROSPECTING	GEOCHEMISTRY
ON	June 11; PO	June 14; ABM, GJ	None

7.0 COBB PROPERTY

7.1 GEOLOGY


The ON property generally has poorly exposed outcrop and such outcrops are restricted to the ridge along the northern edge of the property. The ridge is composed of well-foliated intermediate to mafic volcanic tuffs, with some pillowed flow breccias. Also, found near the centre of the property were small outcrops of argillaceous to siltstone metasediments. Very minor amounts of disseminated pyrite were seen in the volcanic units. (FIGURE 3)

This property, while dominantly overburden covered, may be the same as the YTT metasedimentary/metavolcanic package exposed to the west of the Kudz Ze Kayah (TAG) property.

8.0 CONCLUSIONS AND RECOMMENDATIONS


Work completed on the ON property in 1996 included one day of geological mapping, and two person days of prospecting. Examination of this property resulted in the mapping of both mafic volcanics and several sedimentary sequences. No indication of base metal mineralization was found beyond minor disseminated pyrite. An overburden covered AEM/Mag anomaly identified in 1994 may still warranted a ground geophysical survey but no new examination of this target has been done since 1994. No further work is planned at this time.

Report by:



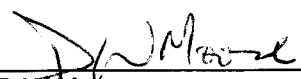
V.L. Bannister, M.Sc
Geologist I

Endorsed by:



D. Rhodes
Senior Geologist

Approved for
Release by:



D.W. Moore
Manager, Exploration
Western Canada

VLB/
DISTRIBUTION:
W.D. Files
Mining Recorder (2)

9.0 REFERENCES

MORTENSEN, J. K., 1983a. AGE AND EVOLUTION OF THE YUKON-TANANA TERRANE, SOUTHEASTERN YUKON TERRITORY [Ph.D. Thesis]; Santa Barbara, University of California, 155 p.

MORTENSEN, J. K. AND JILSON, G. A., 1985. EVOLUTION OF THE YUKON-TANANA TERRANE : EVIDENCE FROM SOUTHEASTERN YUKON TERRITORY; *Geology*, 13, p. 806-810.

MACROBBIE, P. A., 1995. YEAR END REPORT : PELLY MOUNTAIN PROPERTIES, SOIL GEOCHEMISTRY AND GEOLOGICAL MAPPING; Cominco Report, 41p.

MACROBBIE, P.A., 1994. ON PROPERTY ASSESSMENT REPORT, Cominco Report 12 p.

APPENDIX I
STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Victoria L. Bannister, of #103-2168 W. 2nd Ave., Vancouver, B.C. hereby declare that I:

1. Graduated from The University of Toronto, Toronto, Ontario, with a B.Sc. in Geology in May, 1993.
2. Graduated from Queen's University, Kingston, Ontario, with a M.Sc. in Geology in May 1996.
3. Have acted as a contract geologist in Ontario and Yukon, Canada and in Martinique and Guyana since the summer of 1991.
4. Has been actively engaged in mineral exploration in Western Canada as a geological assistant with Cominco Ltd. during the summer and fall of 1996 and as a full-time geologist since November 1996.

Date: August, 1997



V.L. Bannister, M.Sc.
Geologist I

APPENDIX II
STATEMENT OF EXPENDITURES

ON PROPERTY

EXPENDITURE ITEM	<u>COST \$</u>
GEOLOGY STAFF COST	173
PROSPECTING STAFF COSTS	475
DOMICILE	210
HELICOPTER	325
TOTAL	\$ 1,183



093728

61°30'



I.R. 16

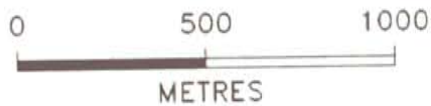
1300

DIAND - YUKON REGION, LIBRARY

Watson Lake Mining District

N.T.S. 105G/8

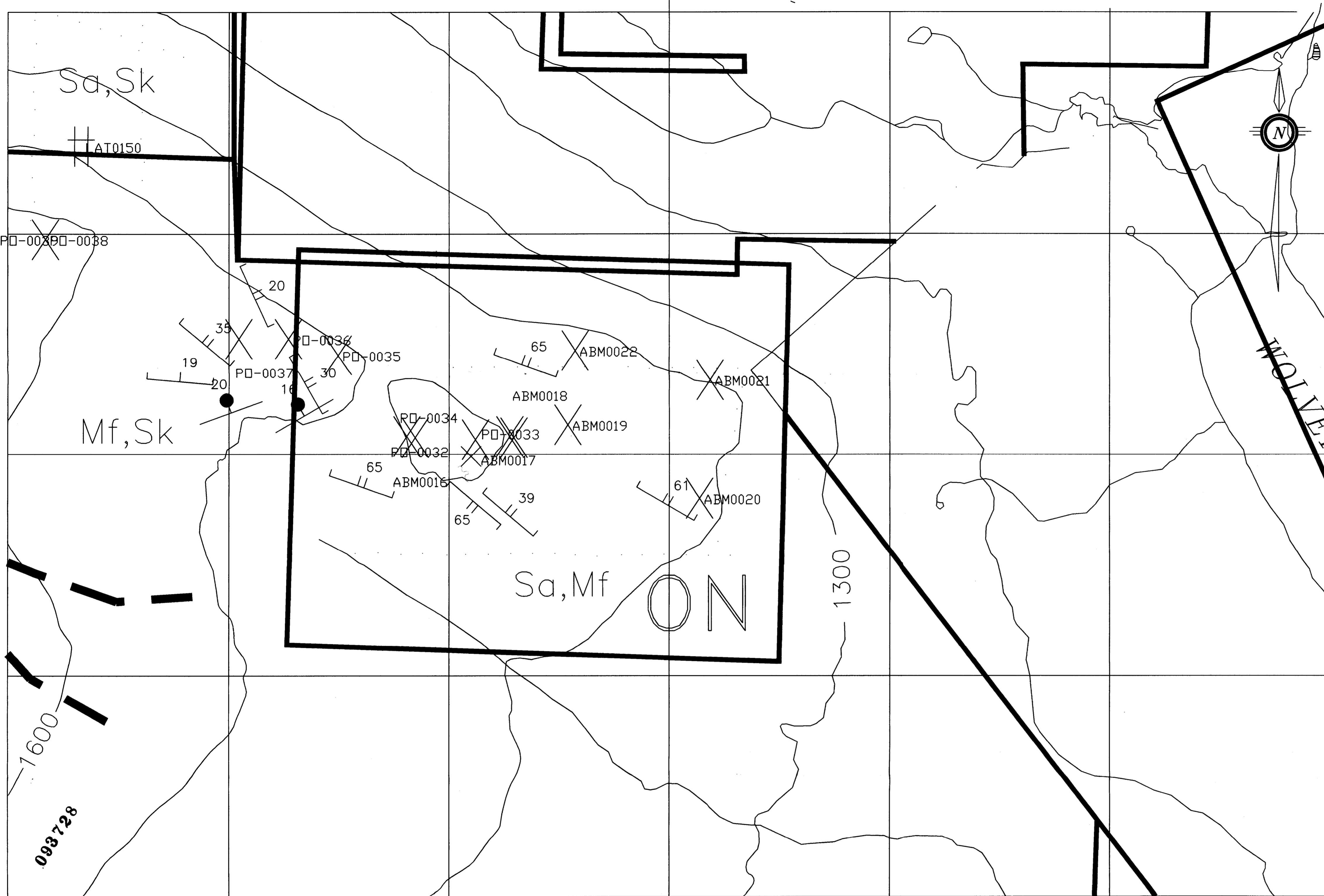
ON PROPERTY



Drawn by: APR	Traced by:
Revised by: Jabe	and the ONCLAIM

CLAIM MAP

SCALE: 1:20,000 DATE: Aug. 1997 PLATE NO: 2



Geology Legend

S Meta-sediments		Sa, Sl argillite, siltstone	
	Sg grit	Ss, Sq arenite, quartzite	
	Sm marble	Sk wacke	
	Sl limestone	Sc chert	
	Sb breccia		
F Felsic metavolcanics		RF rhyolite	
	Ft tuff	Fta ash	
		Ftl lapilli	
		Ftb bomb	
		Ftv vitric	
		Ftc crystal	
		Fth lithic	
		x non-specific	
		aFt argillaceous felsic tuff	
	Ff flow		
	Fs sill		
	Fd dike		
N Intermediate metavolcanics		AN andesite	
	Nt tuff	Nta ash	
		Ntl lapilli	
		Ntb bomb	
		Ntv vitric	
		Ntc crystal	
		Nth lithic	
		x non-specific	
	Nf flow		
	Na sill		
	Nd dike		
M Mafic metavolcanics		Mf flow / basalt	
	Mt tuff	Mta ash	
		Mtl lapilli	
		Mtb bomb	
		Mtv vitric	
		Mtc crystal	
		Mth lithic	
		x non-specific	
	Ms sill		
	Md dike	m lamprophyre	
I Meta-intrusives		lu "Slide Mountain" ultramafics	
	lfp, lqfp, lfqp porphyries	lgt granite	
	lqd granodiorite	lqm quartz monzonite	
	lsy syenite	lgb gabbro	
	ld diorite	lmo monzonitic augen orthogneiss	
	lgm two mica granite/migmatite		

—	Conformable contact	□	BARITE
- - -	Intrusive contact	○	SULPHIDE (VHMS Style)
	Fault	△	SULPHIDE (Skarn style)
—#—	HLEM Conductor	○	Fe formation
—	Talus/subcrop	△	Mineralized float
○	Outcrop	●	"Kill Zone" or Ferricrete
x	Small outcrop		
#	Float		
□	Cominco heavy mineral sample		
■	Lithochem sample		
▲	Rock sample		
●	Drill Hole		

swamp	outcrop	small outcrop	talus/subcrop	at	at 2	at 3	bedrock
↑	↑	↑	↑	↑	↑	↑	↑
↑	↑	↑	↑	↑	↑	↑	↑
↑	↑	↑	↑	↑	↑	↑	↑
↑	↑	↑	↑	↑	↑	↑	↑
↑	↑	↑	↑	↑	↑	↑	↑
↑	↑	↑	↑	↑	↑	↑	↑

N.T.S. 105 G/8

ON

Drawn by: vlb	Traced by:	ON PROPERTY
Revised by:	Date:	Acad file: ON2.dwg
SCALE: 1:10,000		DATE: 1997 08
		PLATE NO: 3

