COMINCO LTD.

EXPLORATION
NTS 105 H/4

WESTERN DISTRICT
APRIL 1998

1997 ASSESSMENT REPORT

CHIT
PROPERTY

GEOLOGICAL MAPPING/PROSPECTING

WATSON LAKE M.D., YUKON

PELLY MOUNTAINS AREA

WORK PERIOD
July 29, 30th 1997

093862

LATITUDE: 60°08'

LONGITUDE: 129°45'

APRIL, 1998

VICTORIA L. BANNISTER

This report has been examined by the Geological Evaluation Unit under Section 53 (4) Yukon Quartz Mining Act and is allowed as representation work in the amount of $ 3800.00.

M. Burke

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

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COMINCO LTD.

Exploration
NTS: 105 H/4

Western Canada
April, 1998

1.0 SUMMARY

The CHIT property is composed of 262 units, located in the Pelly Mountains, 55 kms southeast of Cominco Ltd.'s ABM VHMS Deposit and 135 kms northwest of Watson Lake. The CHIT property was staked to cover airborne geophysical targets identified during a Cominco Ltd. survey conducted in early 1994.

The rocks underlying this part of the southeastern Yukon have been assigned to two terranes: the Yukon Tanana Terrane (YTT) and the Slide Mountain Terrane (SMT). The YTT is primarily a layered sequence of metamorphosed rocks forming three primary units. A "lower unit" of pre-Devonian quartzite, pelitic schist and minor marble, a late Devonian to mid-Mississippian "middle unit" composed of carbonaceous phyllite and schist with interbanded mafic, and locally significant, felsic metavolcanics, and an "upper unit" of Pennsylvanian marble and quartzite are identified within the YTT. The felsic metavolcanics of the middle unit are host to the ABM and the Wolverine/Lynx Zone VHMS deposits.

The CHIT property is underlain by mixed sedimentary and felsic +/- mafic volcaniclastic sequences of the YTT, proximal to a large Devono-Mississippian, synvolcanic granitic/granodioritic pluton. The stratigraphy generally trends west with shallow to moderate northerly dips.

Work in 1997 continued to outline zones of favourable lithologies in areas of geochemical anomalies (as reported in 1996 & 1995). The areas around (west of) the Kneil showing remains of interest with the recommendation of drill testing.

2.0 LOCATION AND ACCESS

The CHIT property is located within the Pelly Mountains, northeast of the Tintina Fault (Figure 1), approximately 10 kms southeast of Whitefish Lake, west of the Tuchitua River and 130 kms northwest of Watson Lake. The gravel, all weather Robert Campbell Highway provides access to within 25 kms of the property. Direct access is by helicopter.

3.0 PROPERTY AND OWNERSHIP

The CHIT property, totaling 262 units (Figure 2) is 100% owned by Cominco Ltd.

NAME	UNITS	CLAIM #	DUE DATES
CHIT 1-146	146	YB51060-205	JUNE 15, 2000
CHIT 147-216	70	YB71033-102	JUNE 15, 1999
CHIT 217-238	22	YB85747-768	JUNE 15, 2000
CHIT 239-250	12	YB85957-968	JUNE 15, 2000
CHIT 251-262	12	YB85769-780	JUNE 15, 2000

4.0 PREVIOUS WORK

The CHIT property includes the Kneil showing (Minfile #80) that was found and staked by Cyprus Anvil in 1981. During that year, geological mapping and soil geochemical surveys were conducted. The showing consists of small lenses of semi-massive pyrite-pyrrhotite+/-sphalerite-galena-chalcopyrite within a micaceous quartzite, in a sequence of carbonaceous phyllite and minor felsic volcaniclastics near the contact of a Devonian granodiorite. The soil geochemistry was weak and the claims were allowed to lapse.

In the summer of 1994, Cominco Ltd. conducted geological mapping/prospecting and soil geochemistry on the CHIT property. Results from the soil lines indicated the presence of significant Ag (up to 5.7 ppm) and Cu (up to 2400 ppm) anomalies with supporting weaker Pb (up to 177 ppm), Zn (up to 1648 ppm), and locally elevated Ba (up to 8740 ppm) values in the area of the Kneil showing. In 1995, HLEM, magnetics and gravity geophysical surveys were completed in the CHIT 1 grid. Several conductors and significant magnetic features were detected on the northern part of the grid. Geochemical sampling was also completed on the grid. Results indicated the presence of significant Ag (up to 6.9 ppm), associated with elevated Cu (up to 199 ppm), and Pb (up to 233 ppm) values.

During 1996, Cominco Ltd. further sampled grids on the CHIT revealing several moderate to strongly anomalous zones of geochemistry. The results of several geophysical surveys done at the same time also showed areas of moderate to strong conductivity (HLEM) and magnetic response.

5.0 REGIONAL GEOLOGY

The YTT consists of a sequence of metamorphosed rocks comprising a *"lower unit"* (3l in Mortensen 1983a) of pre-Devonian quartzite, pelitic schist and minor marble, a late Devonian to mid-Mississippian *"middle unit"* comprising carbonaceous phyllite and schist with interbanded mafic and, locally significant, felsic metavolcanics, 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 volcaniclastics of the *"middle unit"* are host to Cominco's ABM VHMS Deposit.

The late Devonian to Triassic Slide Mountain Terrane (SMT) is composed of a heterogeneous package of mafic to ultramafic plutonic rocks, mafic volcanics, massive carbonates and cherts. This sequence is generally accepted to be structurally emplaced as thrust bounded klippen on YTT rocks or as thrust slices imbricated within YTT rocks during a period of crustal shortening.

Late Triassic immature clastics composed of micaceous argillites, siltstones and sandstones unconformably (?) overlie the deformed and metamorphosed YTT rocks. These sediments are often closely associated with SMT volcanics and are invariably in fault contact with YTT rocks.

The SMT, Late Triassic sediments and Late Triassic to Middle Jurassic plutons are all affected by a period of Middle Jurassic to Late Cretaceous thrust faulting, during which the Finlayson Lake Fault Zone was formed. This complex fault zone contains both thrust and steep, transcurrent (?) faults and separates the YTT from autochthonous North America (Mortensen, 1983a; Mortensen and Jilson, 1985).

6.0 PROPERTY GEOLOGY (including 1997 work)

The CHIT property is generally well exposed over the western part of the property that is dominated by ridges and steep slopes. The eastern half of the property lies in an area of thicker overburden cover. The general stratigraphy of the property is WNW-trending, with shallow to moderate NNE dips.

The western half of the property is dominated by felsic flows/tuffs intermixed with areas of argillites. This type of stratigraphy is host to the Kneil showing (Figure 3). To the south of the property there is a large intrusion of Devonian (?) granodiorite and some porphyries. Movement southwards on the property toward the intrusives, intermediate to mafic volcanics are

encountered. Further accounts that are more detailed appear in Senft 1997 and MacRobbie 1996.

1997's mapping did not identify any new lithologies or structures, but further defined previously mapped areas at more detailed scales. The area of the Kneil showing, and to the west of the showing was one focus of the detailed mapping.

7.0 CONCLUSIONS & RECOMMENDATIONS

With previous work, including geochemistry and geophysics, the 1997 mapping continued to outline zones of favourable lithologies and in areas that contained geochemical anomalies (as reported in 1996 & 1995). The areas around (west of) the Kneil showing remains of interest with the recommendation of drill testing.

Report by:

Victoria L. Bannister
Geologist

Endorsed by:

Paul A. MacRobbie
Project Geologist

Approved for
Release by:

David Moore
Manager, Exploration
Western Canada

VLB/vlb

Distribution:
W.D. Files
Mining Recorder (2)

8.0 REFERENCES

MACROBBIE, PAUL A., 1996. 1995 ASSESSMENT REPORT: CHIT PROPERTY: SOIL GEOCHEMISTRY, GEOPHYSICS & GEOLOGICAL MAPPING. 6p.

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.

SENFT, D. A., 1997. 1996 ASSESSMENT REPORT ON THE TUC,CHIT, TUA AND JAYS PROPERTIES: LINECUTTING, GROUND GEOPHYSICS (HLEM/MAG & GRAVITY), SOIL GEOCHEMISTRY AND GEOLOGICAL MAPPING. 12p.

APPENDIX I
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. Have 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.

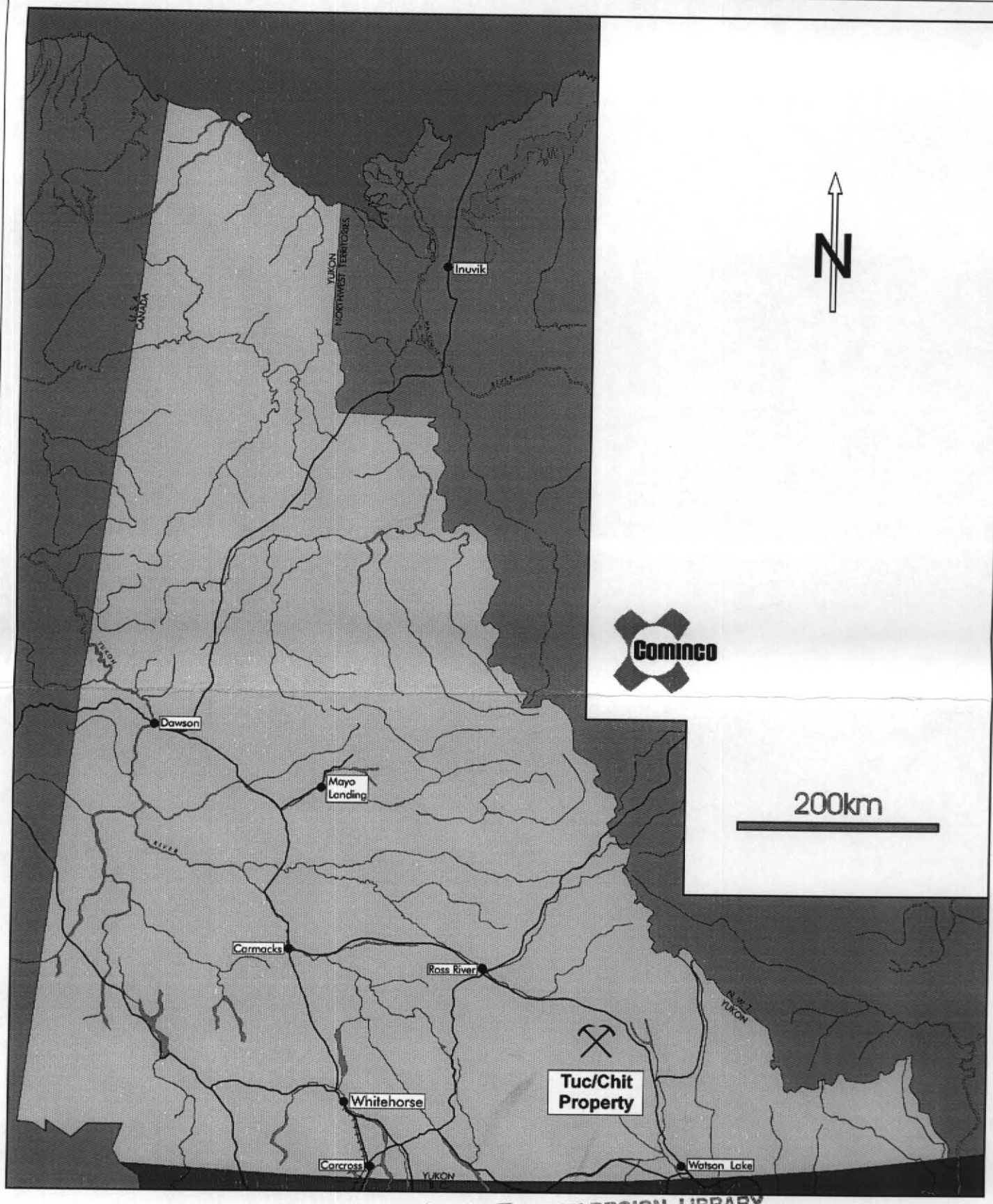
Date: April 1998

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

APPENDIX II
STATEMENT OF EXPENDITURES

CHIT PROPERTY

Geology Staff Costs	757.46
Prospecting Staff Costs	650.00
Domicile	625.00
Helicopter	2,015.00
Total	**$ 4,047.46**



Drawn by:		Traced by: a. m. a.	
Revised by:	Date:	Revised by:	Date:

TUC/CHIT PROPERTY LOCATION

105 H/4

Scale: As Shown | Date: August 1997 | Plate: 1

DIAND - YUKON REGION, LIBRARY

Cominco	COMINCO LTD.
Date:15/4/1998	CHIT Property 1997 Assessment Report Tenure Map
Author: vib	
Office: W CAN	093862
Drawing:	
Scale: 1:12500	Projection: UTM Zone 9 (NAD 27 for Canada)

0 200 400 800
metres

093862

Geology Legend

S Meta-sediments

- Sa,Si argillite,siltstone
- Sg grit
- Ss,Sq arenite,quartzite
- Sm marble
- Sk wacke
- Sl limestone
- Sc chert
- Sb breccia

F Felsic metavolcanics

- FRf rhyolite
- Ft tuff
- Ff flow
- Fs sill
- Fd dike
- aFt argillaceous felsic tuff
- Fta ash
- Ftl lapilli
- Ftb bomb
- Ftv vitric
- Ftc crystal
- Fth lithic

N Intermediate Metavolcanics

- AN Andesite
- Nt Intermediate Tuff
- Nf flow
- Ns sill
- Nd dike
- Nta ash
- Ntl lapilli
- Ntb bomb
- Ntv vitric
- Ntc crystal
- Nth lithic

M Mafic metavolcanics

- BM Basalt
- Mt Mafic Tuff
- Mf flow
- Ms sill
- Md dike
- Mta ash
- Mtl lapilli
- Mtb bomb
- Mtv vitric
- Mtc crystal
- Mth lithic
- x non-specific
- m lamprophyre

I Meta-intrusives

- Iu "Slide Mountain" ultramafics
- Ifp,Iqfp,Ifqp Porphyries
- Igt granite
- Igd granodiorite
- Iqm quartz monzonite
- Igb gabbro
- Id diorite
- Imo monzonitic augen orthogneiss
- Igm two mica granite/migmatite

MODIFIERS

- a argillaceous
- b biotittic
- c carbonaceous
- d feldspar phyric
- e graded
- f fragmental textured
- g granular textured
- h cherty
- i silty
- l calcareous
- m mottled
- n carbonatized
- o chloritic
- p quartz phyric
- r ribboned
- s spherulitic
- t tuffaceous
- z quartz phyric

- Talus/subcrop
- Outcrop
- Small outcrop
- \+ 1997 geology station location
- Conformable contact
- Intrusive contact
- Fault
- S_0 dip
- S_1 foliation, vertical
- S_2 foliation
- Lineation with plunge
- Laminations
- Cleavage

1500 1200 1600 1300 1200 1500 1200 1900 1500 1300

KNEIL SHOWING

Laminated, sideritic siltstone to siliceous mudstone

Cherty Ft interbedded with dark grey Sa

lapilli and crystal fragments in mafic tuff

Ft with minor cherty Sa interbeds

fine siliceous Ft

Mt,minor Sa/c interbeds

Phyllitic to schistose Mt, fine euhedral pyrite-magnetite disseminations

Sa,minor rusty Ft interbeds

mixed rusty Ft with thin grey Sa interbeds

banded cherty Ft (exhalite);5%pyrite

rusty massive to thin bedded Fog

Sc with interbanded Fog,minor Mt

FLFf(locally pyritic and Fe carbonate veined)

Quartz Diorite

rusty weathering Ft

COMINCO LTD.

CHIT Property
Yukon Territory
Geological Map
1997 Assessment Report

Date: 14/4/1998
Author: vtb
Office: W.CAN
Drawing:

Scale: 1:12500 Projection: UTM Zone 9 (NAD 27 for Canada)

0 200 400 800
METRES