COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

NTS: 105L/11&14

ASSESSMENT REPORT

DIAMOND DRILLING

ON THE

TUM PROPERTY

Situated at: 135°10'W, 62°44'N

WHITEHORSE MINING DISTRICT

YUKON TERRITORY

7 SEPTEMBER 1983

M.R. MURRELL

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ATTACHMENTS

	Scale
Plate A - Location Map - TUM Claims	1:2,500,000
Plate B - Drill Hole Location Map & Claim Map	1:50,000
Plate C - Plan, EM Survey, Detail of DDH T83-1	
Drill Log for hole on Claim TUM 150 (T83-1)	

Appendix A - Affidavit

Appendix B - Statement of Expenditures

Appendix C - Statement of Qualifications

COMINCO LTD.

EXPLORATION
NTS: 105L/11&14

WESTERN DISTRICT
7 September 1983

ASSESSMENT REPORT

DIAMOND DRILLING

ON THE

TUM PROPERTY

WHITEHORSE MINING DISTRICT

YUKON TERRITORY

I. INTRODUCTION

The TUM claims were staked in 1979 to cover the possible westerly and southerly strike extension of the stratigraphy that hosts the nearby Clear Lake lead-zinc deposit. Since 1979 Cominco has carried out geological mapping, prospecting, and geophysical surveying (EM and magnetometer). Outcrop is almost non-existent over much of the property, so most geological information is from mapping along a few creek cuts or from drill hole results from the Clear Lake deposit.

In the past, the rocks underlying the Tum area have been identified as belonging to the Cambrian "Harvey" Group and the Silurian-Devonian "Askin" Group. (Campbell, Memoir 353, 1967; and Gabrielse, Templeman-Kluit, Blusson and Campbell, Map 1398A, 1980). Recent work on the Clear Lake deposit (Morin, 1981) has shown that the assemblage hosting the Clear Lake deposit is an assemblage similar to the lower portion of the Devono-Mississippian Earn Group. This could infer that lower rocks would then be equivalent to the Ordovician-Silurian Road River Formation.

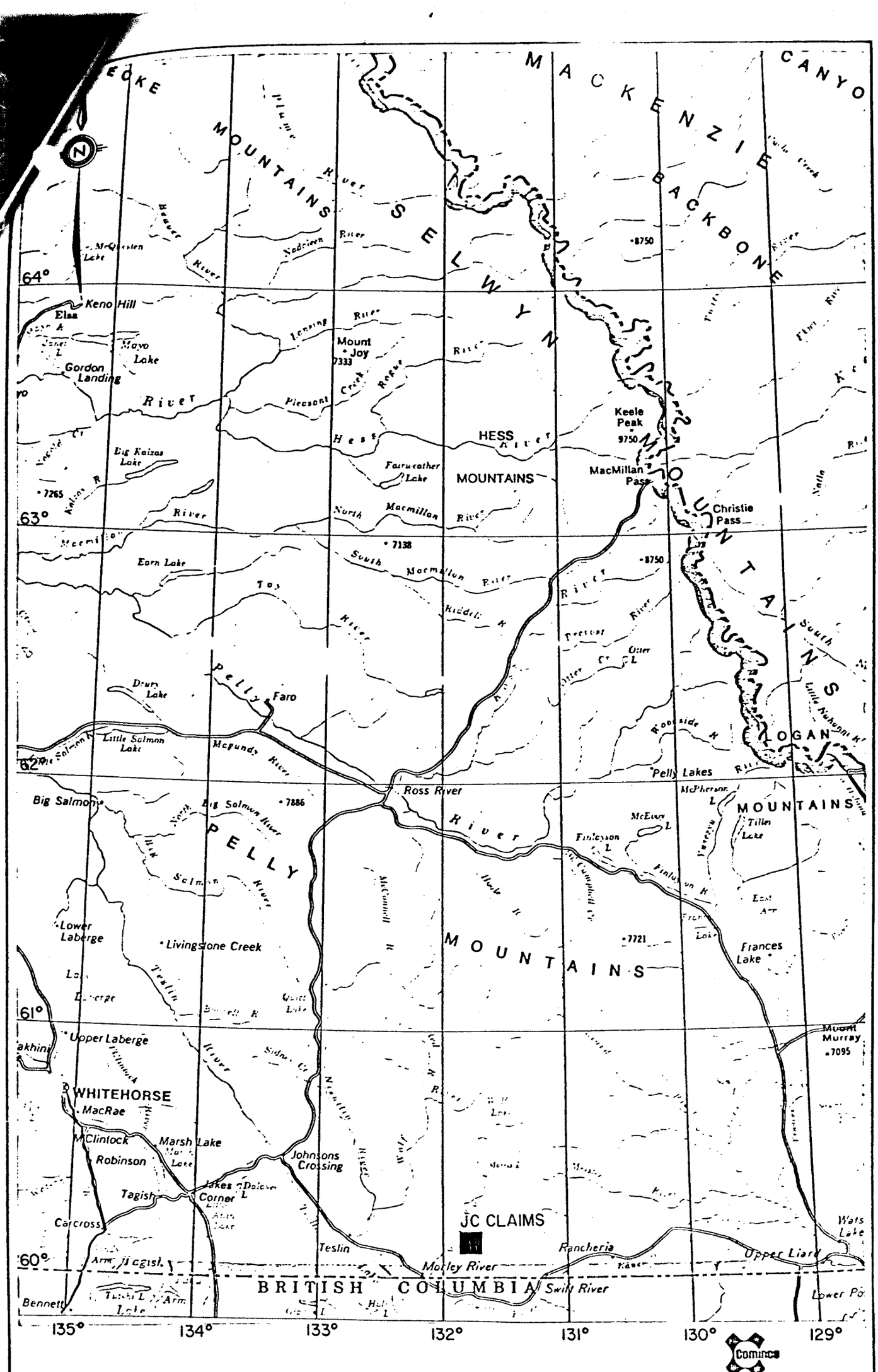
The purpose of the 1983 drill hole was to test a well defined EM anomaly a few kilometres south of the Clear Lake deposit.

II. SUMMARY

Field work on the TUM property was carried out during August 8 to August 24, 1983. Drilling was carried out by Caron Drilling and helicopter support was by Terr-Air; both of Whitehorse. The NQ hole was 149 metres (489 ft.) in length.

III. LOCATION AND ACCESS

Access to the TUM property is first by air to Getty's Clear Lake airstrip, 240 km north of Whitehorse; then by helicopter 5 km south to the drill



Drawn by:		Traced by: ALM	
Revised by	Date	Revised by	Date

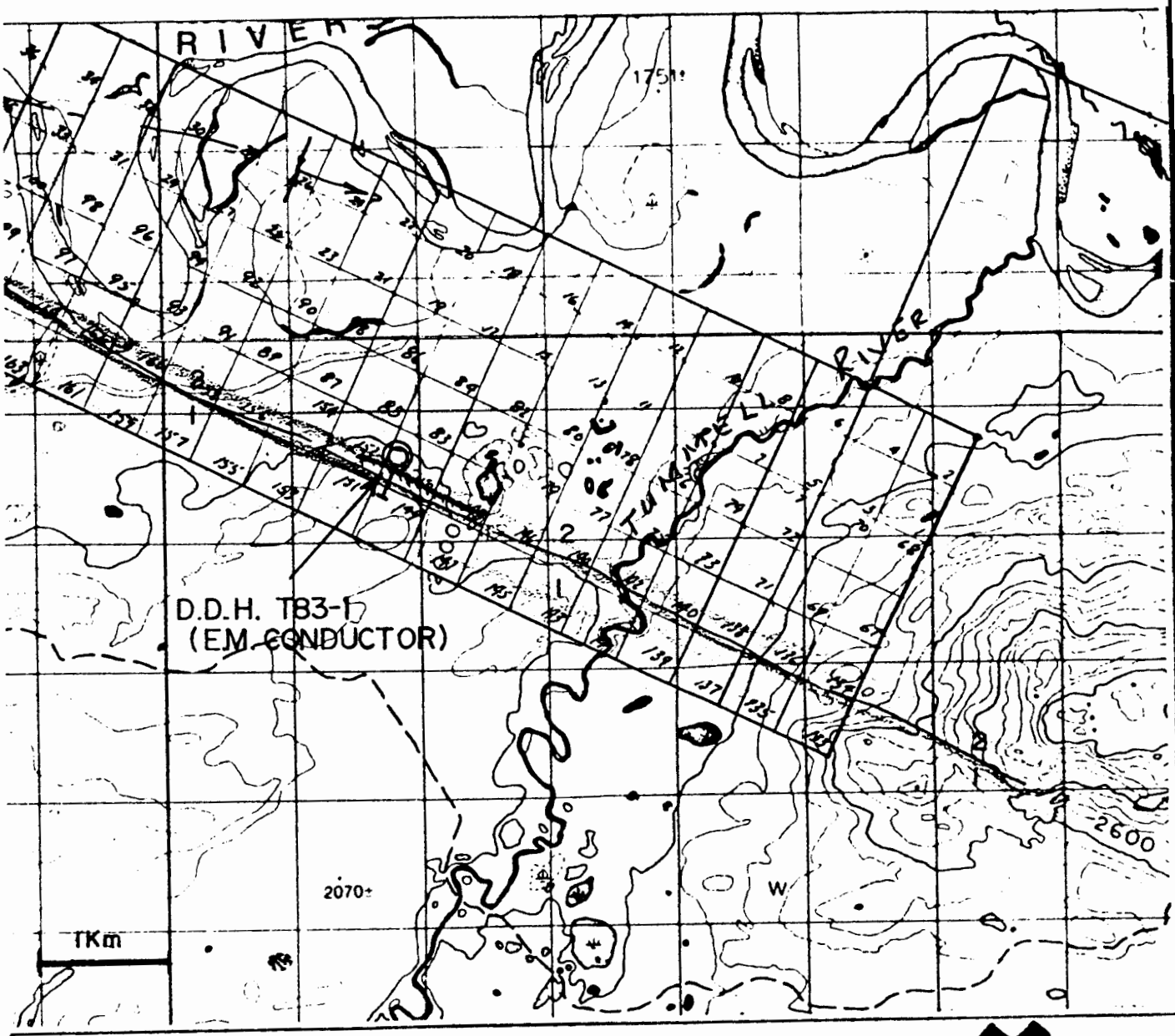
JC LOCATION MAP

N.T.S 105 B/4 WATSON LAKE MD.

Scale: 1" = 32 miles

Date: April 1992

112A - CI



TUM CLAIMS

Drawn by:		Traced by:	
Revised by	Date	Revised by	Date
ABM	Mar/84		

LOCATION MAP

NTS 105 L 11814

Scale: 1:50,000 | Date: Mar. 1984 | Plate: 2

210-0630

site. A temporary camp was established on a small lake 800 metres south-east of the drill site.

IV. TENURE

The TUM property consists of a contingent block of 198 claims within the Whitehorse M.D. They were recorded on August 9, 1979, and assessment work is due November 9, 1983. Work during 1983 exceeds the maximum allowable for assessment work under current Yukon regulations. The restriction of "grouping" to 16 claim-units does not allow 54 of the more westerly TUM claims to be maintained by this assessment work.

V. DIAMOND DRILLING

A total of 149 metres (489 ft.) of NQ was completed in one hole by Caron Drilling. The hole is located near the western boundary of the TUM 150 claim, at grid location 140+00W, 3+67N. Its bearing is 205° and its dip -45°. The purpose was to test an EM anomaly in an area of extensive overburden. The rocks intersected consisted mainly of black mudstones often subtly laminated with minor siltstone or streaky thin bedded pyrite. Limestone or dolomite was encountered in a few instances and a three metre tuffaceous bed was also cut. Much of the mudstone is carbonaceous and very often graphite is developed on fracture surfaces. Graphite is pronounced in several fault zones in the latter portion of the hole. Sphalerite was observed as a few specks at three localities - two in mudstone and one in limestone. Graptolites were found at one location near the top of the hole. The core to bedding angle was almost consistently at 25°, so to a great degree the hole was drilled along bedding.

The abundant graphite is the source of the EM anomaly in this area.

The core is currently stored at the Cominco office in Whitehorse.

Report by: A.B. Mawer for
M.R. Murrell, Project Geologist

Endorsed by: A.B. Mawer
A.B. Mawer, Senior Geologist

Approved for
Release by:
G. Harden, Manager
Exploration
Western District

MRM/skm
Distribution
Mining Recorder (2)
Western District (1)
MRM

APPENDIX A

IN THE MATTER OF THE YUKON QUARTZ MINING ACT

AND IN THE MATTER OF DIAMOND DRILLING

CARRIED OUT ON MINERAL CLAIMS OF THE TUM PROPERTY

LOCATED IN THE WHITEHORSE MINING DIVISION, YUKON TERRITORY

MORE PARTICULARLY N.T.S.: 105L/11&14

A F F I D A V I T

I, A.B. MAWER, OF THE DISTRICT OF NORTH VANCOUVER, IN THE PROVINCE OF BRITISH COLUMBIA, SENIOR GEOLOGIST, MAKE OATH AND SAY:-

1. THAT I am employed as a senior geologist by Cominco Ltd., and, as such have a personal knowledge of the facts to which I hereinafter depose;

2. THAT annexed hereto and marked "Appendix B" to this my affidavit is a true copy of expenditures on diamond drilling carried out on mineral claims on the TUM Property.

3. THAT the said expenditures were incurred between the 8th day of August, 1983 and the 24th day of August, 1983, for the purpose of mineral exploration on the above noted property.

Signed: A. B. Mawer
A.B. Mawer Senior Geologist

October 7, 1983

APPENDIX B

STATEMENT OF EXPENDITURES

ON THE TUM CLAIM GROUP

PERIOD OF FIELD WORK - AUG. 8 to AUG. 24, 1983

Diamond Drilling Carried out on TUM 150 claim

Direct Contract Costs	$24,414
Supplies, equipment, personnel mobilization	782
Communications & Expediting	766
Assaying	500
Supervision - M.R. Murrell 20 @ 244	4,880
Domicile - 16 @ 40	640
Transportation - Fixed Wing & shipping	6,728
- Truck Rent	442
- Helicopter	9,260
TOTAL	$48,412

APPENDIX C

STATEMENT OF QUALIFICATIONS

I, A.B. MAWER, SENIOR GEOLOGIST WITH BUSINESS ADDRESS IN VANCOUVER, BRITISH COLUMBIA AND RESIDENTIAL ADDRESS IN NORTH VANCOUVER, BRITISH COLUMBIA HEREBY CERTIFY THAT:

1. From 1944 to the present, I have been actively engaged as a prospector and geologist in mineral exploration.

2. I am a Fellow of the Geological Association of Canada.

3. I am a member of the Canadian Institute of Mining and Metallurgy.

4. I personally supervised the field work on the Tum Group and have interpreted the data resulting from this work.

A.B. Mawer

A.B. Mawer, Senior Geologist

October 7, 1983

References:

Morin, J.A. 1981 - "A Note on Rock Geochemistry of the Clear Lake Massive Sulphide" in Yukon Geology and Exploration 1979-80. Geol Section, Dept. of Indian and Northern Affairs. pp. 85 - 87.

Cominco Ltd. / 7th Floor / 409 Granville Street / Vancouver, B.C. / Canada V6C 1T2
Tel. (604) 682-0611 / Telex 04-507730

Exploration

Mr. R. MacIntyre
Northern Affairs Program
200 Range Road
Whitehorse, Yukon
Y1A 3V1

25 March 1985

Dear Mr. MacIntyre:

Frank Ferguson passed on to me the request you made for the drill log that accompanies the TUM drill core we have given to your department. Cominco's TUM claims are located near the Tummel River, NTS 105L 11 and 14, within the Whitehorse Mining Division. The requested drill log and a location map are enclosed. We trust you will find the information useful.

Yours truly,

R.J. Sharp,
Geologist
Exploration
Western District

Endorsed by:
A.B. Mawer,
Senior Geologist
Exploration
Western District

Approved for
Release by:
G. Harden,
Manager
Exploration
Western District

RJS/cgs

Enclosures

Cominco Ltd. / 7th Floor / 409 Granville Street / Vancouver, B.C. / Canada V6C 1T2
Tel. (604) 682-0611 / Telex 04-507730

Exploration

R.L. McIntyre
Manager
Canada Map Office
Northern Affairs Program
Indian and Northern Affairs Canada
200 Range Road
Whitehorse, Y.T.
Y1A 3V1

March 29, 1985

Dear Rob,

Enclosed are the logs for the core we gave you last week. I trust this will be of value to you even though most of the holes are incomplete.

Yours sincerely,

F.J. Ferguson
Technician IV
Exploration
Western District

FJF/mml

Encl.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FOR "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED 19 OCT 1983 MINING RECORDER'S OFFICE WHITEHORSE, Y.T. OFFICE DATE STAMP

I (Name) Sharon A. Weller Occupation Records Technician

(Postal Address) 700 - 409 Granville St., Vancouver, B.C.

MAKE OATH AND SAY, THAT :-

1. I ~~am the owner, or~~ agent of the owner, of the mineral claim(s) to which reference is made herein.

2. Cominco Ltd. ~~I have done, or~~ caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

Grant No.	Claim
YA 25206	Tum 150

situated at on the Pelly River Claim Sheet No. 105L/11+14

in the Whitehorse Mining District, to the value of at least 48,412.00

dollars, since the 8 day of August 1983.

to represent the following mineral claims under the authority of Grouping Certificate No. Group Tum 83-1
(Here list claims to be renewed by number and name in numerical order)

Grant No.	Claim
YA 25206 - 25207	Tum 150 - 151
YA 25209, YA 25211	Tum 153, 155
YA 25213, YA 25215	Tum 157, 159
YA 25217, YA 25219	Tum 161, 163
YA 25221, YA 25223	Tum 165, 167
YA 25225, YA 25227	Tum 169, 171
YA 25229, YA 25231	Tum 173, 175
YA 25233, YA 25235	Tum 177, 179

Please apply 3 yrs. to each ($ 4800)

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

DDH, (NQ Core), August 8 - 24, 1983 on Tum 150 work by E. Caron Drilling, Terr Air Rotary, Air North, all of Whitehorse, Y.T.

Amount available	48,412
Work applied	4800
Remainder	43,612

- Remainder to be used on Group Tum 83 - 2

Sworn before me at Vancouver, B.C.

this 13 day of October 1983

[signature]

~~A Commissioner for Oaths for Yukon Territory.~~

A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

[signature] S. Weller

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FOR "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

I (Name) Sharon A. Weller Occupation Records Technician	OFFICE DATE STAMP
(Postal Address) 700 - 409 Granville St., Vancouver, B.C.	

MAKE OATH AND SAY, THAT :-

1. I ~~or the owner, or~~ agent of the owner, of the mineral claim(s) to which reference is made herein.

2. Caminco Ltd.
~~I have done, or~~ caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

Grant No.	Claim
YA 25206	Tum 150

situated at on the Pelly River Claim Sheet No. 105C/11+14

in the Whitehorse Mining District, to the value of at least 43,612.00

dollars, since the 8 day of August 19 83.

to represent the following mineral claims under the authority of Grouping Certificate No. 9228
(Here list claims to be renewed by number and name in numerical order) Group Tum 83-2

Grant No.	Claim
YA25208	Tum 152
YA25210, YA25212	Tum 154, 156
YA25214, YA25216	Tum 158, 160
YA25218, YA25220	Tum 162, 164
YA25222, YA25224	Tum 166, 168
YA25226, YA25228	Tum 170, 172
YA25230, YA25232	Tum 174, 176
YA25234, YA25236	Tum 178, 180

Please apply 3 yrs. to each ($4500)

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

DDH, (NQ core), August 8 - 24, 1983 on Tum 150
Work by E. Caron Drilling, Terr Air Rotary, Air North, all of Whitehorse, Y.T.

Amount available	43,612
Work applied	4500
Remainder	39,112

Remainder to be used on Group Tum 83-3

Sworn before me at Vancouver, B.C.
this 13 day of October 1983

~~A Commissioner for Oaths for Yukon Territory.~~
A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

S. Weller
Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FOR "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED 19 OCT 1983 MINING RECORDERS OFFICE WHITEHORSE, Y.T.

OFFICE DATE STAMP

I (Name) Sharon A. Weller Occupation Records Technician

(Postal Address) 700 - 409 Granville St., Vancouver, B.C.

MAKE OATH AND SAY, THAT :-

1. I ~~or the owner, or~~ agent of the owner, of the mineral claim(s) to which reference is made herein.

2. Caminco Ltd.
~~I have done, or~~ caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

Grant No.	Claim
YA 25206	Tum 150

situated at on the Pelly River Claim Sheet No. 105L/11+14

in the Whitehorse Mining District, to the value of at least 39,112.00

dollars, since the 8 day of August 19 83.

to represent the following mineral claims under the authority of Grouping Certificate No. 9n259
(Here list claims to be renewed by number and name in numerical order) Group Tum 83-3

Grant No.	Claim
YA 25141, YA 25143	Tum 85, 87
YA 25145, YA 25147	Tum 89, 91
YA 25149, YA 25151	Tum 93, 95
YA 25153, YA 25155	Tum 97, 99
YA 25157, YA 25159	Tum 101, 103
YA 25161, YA 25163	Tum 105, 107
YA 25165, YA 25167	Tum 109, 111
YA 25169	Tum 113

Please apply 3 yrs. to each ($4500)

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

NDH, (NQ core), August 8 - 24, 1983 on Tum 150
Work by E. Caron Drilling, Terr Air Rotary, Air North, all of Whitehorse, Y.T.

Amount available	39,112.
Work applied	4500
Remainder	34,612

Remainder to be used on Group Tum 83-4

Sworn before me at Vancouver, B.C.

this 13 day of October 1983

~~A Commissioner for Oaths for Yukon Territory.~~
A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

S. Weller

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

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I (Name) Sharon A. Weller Occupation Records Technician

(Postal Address) 700 - 409 Granville St., Vancouver, B.C.

OFFICE DATE STAMP

MAKE OATH AND SAY, THAT :-

1. I ~~or the owner, or~~ agent of the owner, of the mineral claim(s) to which reference is made herein.

2. Caminco Ltd. ~~I have done, or~~ caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

Grant No.	Claim
YA 25206	Tum 150

situated at on the Pelly River Claim Sheet No. 105L/11+14

in the Whitehorse Mining District, to the value of at least 34,612.00

dollars, since the 8 day of August 19 83.

to represent the following mineral claims under the authority of Grouping Certificate No. ~~82-40~~ Group Tum 83-4
(Here list claims to be renewed by number and name in numerical order)

Grant No.	Claim
YA 25144, YA 25146	Tum 88, 90
YA 25148, YA 25150	Tum 92, 94
YA 25152, YA 25154	Tum 96, 98
YA 25156, YA 25158	Tum 100, 102
YA 25160, YA 25162	Tum 104, 106
YA 25164, YA 25166	Tum 108, 110
YA 25168, YA 25170	Tum 112, 114

Please apply 3 yrs. to each ($4200)

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

7OH, (NQ core), August 8 - 24, 1983 on Tum 150
work by E. Caron Drilling, Terr Air Rotary, Air North, all of Whitehorse, Y.T.

Amount available	34,612
Work applied	4200
Remainder	30,412

Remainder to be used on Group Tum 83-5

Sworn before me at Vancouver, B.C.

this 13 day of October 1983

A Commissioner for Oaths for Yukon Territory.

A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

S. Weller

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

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(Postal Address) 700 - 409 Granville St., Vancouver, B.C.

MAKE OATH AND SAY, THAT :-

1. I ~~on the owner, or~~ agent of the owner, of the mineral claim(s) to which reference is made herein.

2. Cominco Ltd.
~~Have done, or~~ caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

Grant No.	Claim
YA 25206	Tum 150

situated at on the Pelly River Claim Sheet No. 105L/11+14

in the Whitehorse Mining District, to the value of at least 30,412.00

dollars, since the 8 day of August 19 83.

to represent the following mineral claims under the authority of Grouping Certificate No. ~~YA 55~~ Group Tum 83-5
(Here list claims to be renewed by number and name in numerical order)

Grant No.	Claim
YA25079, YA25081 YA25083, YA25085 YA25087, YA25089 YA25091, YA25093 YA25095, YA25097 YA25099, YA25101 YA25103	Tum 23, 25 Tum 27, 29 Tum 31, 33 Tum 35, 37 Tum 39, 41 Tum 43, 45 Tum 47

Please apply 3 yrs. to each ($ 3900)

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

NOH, (NQ core), August 8 - 24, 1983 on Tum 150
Work by E. Caron Drilling, Terr Air Rotary, Air North, all of Whitehorse, Y.T.

Amount available	30,412
Work applied	3900
Remainder	26,512

- Remainder to be used on Group Tum 83-6

Sworn before me at Vancouver, B.C.

this 13 day of October 1983

~~A Commissioner for Oaths for Yukon Territory~~
A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

S. A. Weller

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

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OFFICE DATE STAMP

I (Name) Sharon A. Weller Occupation Records Technician

(Postal Address) 700 - 409 Granville St., Vancouver, B.C.

MAKE OATH AND SAY, THAT :-

1. I ~~am the owner, or~~ agent of the owner, of the mineral claim(s) to which reference is made herein.

2. Caminco Ltd.
~~I have done, or~~ caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

Grant No.	Claim
YA 25206	Tum 150

situated at on the Pelly River Claim Sheet No. 105L/11+14

in the Whitehorse Mining District, to the value of at least 26,512.00

dollars, since the 8 day of August 19 83.

to represent the following mineral claims under the authority of Grouping Certificate No. 96208
(Here list claims to be renewed by number and name in numerical order) Group Tum 83-6

Grant No.	Claim
YA 25082	Tum 26
YA 25084, YA 25086	Tum 28, 30
YA 25088, YA 25090	Tum 32, 34
YA 25092, YA 25094	Tum 36, 38
YA 25096, YA 25098	Tum 40, 42
YA 25100, YA 25102	Tum 44, 46
YA 25104	Tum 48

Please apply 3 yrs. to each ($ 3600)

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

DDH, (NQ core), August 8 - 24, 1983 on Tum 150
Work by E. Caron Drilling, Terr Air Rotary, Air North, all of Whitehorse, Y.T.

Amount available	26,512
Work applied	3600
Remainder	22,912

Remainder to be used on Group Tum 83-7

Sworn before me at Vancouver, B.C.
this 13 day of October 1983

~~A Commissioner for Oaths for Yukon Territory.~~
A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FOR "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

I (Name) Sharon A. Weller Occupation Records Technician	OFFICE DATE STAMP
(Postal Address) 700 - 409 Granville St., Vancouver, B.C.	

MAKE OATH AND SAY, THAT :-

1. I ~~am the owner, or~~ agent of the owner, of the mineral claim(s) to which reference is made herein.

2. Camnco Ltd.
~~I have done, or~~ caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

Grant No.	Claim
YA 25206	Tum 150

situated at on the Pelly River Claim Sheet No. 105 L/11+14

in the Whitehorse Mining District, to the value of at least 22,912.00

dollars, since the 8 day of August 19 83.

to represent the following mineral claims under the authority of Grouping Certificate No. 9278
(Here list claims to be renewed by number and name in numerical order) Group Tum 83-7

Grant No.	Claim
YA25191 - 25205	Tum 135 - 149

Please apply 3yrs. to each ($4500)

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

DDH, (NQ Core), August 8 - 24, 1983 on Tum 150
ork by E. Caron Drilling, Terr Air Rotary, Air North, all of Whitehorse, Y.T.

Amount available	22,912
Work applied	4500
Remainder	18,412

- Remainder to be used on Group Tum 83-8

Sworn before me at Vancouver, B.C.
this 13 day of October 1983

A Commissioner for Oaths for Yukon Territory.

NOTARY PUBLIC FOR THE PROVINCE OF BRITISH COLUMBIA

S. A. Weller
Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FOR "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

OFFICE DATE STAMP

I (Name) Sharon A. Weller Occupation Records Technician

(Postal Address) 700 - 409 Granville St., Vancouver, B.C.

MAKE OATH AND SAY, THAT :-

1. I ~~or the owner, or~~ agent of the owner, of the mineral claim(s) to which reference is made herein.

2. Caminco Ltd.
~~I have done, or~~ caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

Grant No.	Claim
YA 25206	Tum 150

situated at on the Pelly River Claim Sheet No. 105 L/11+14

in the Whitehorse Mining District, to the value of at least 18,412.00

dollars, since the 8 day of August 19 83.

to represent the following mineral claims under the authority of Grouping Certificate No. 96278
(Here list claims to be renewed by number and name in numerical order) Group Tum 83-8

Grant No.	Claim
YA 25123 - 25133	Tum 67 - 77
YA 25135	Tum 79
YA 25137	Tum 81
YA 25189 - 25190	Tum 133 - 134

Please apply 3 yrs. to each ($4500

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

DDH, (NQ core), August 8 - 24, 1983 on Tum 150
work by E. Caron Drilling, Terr Air Rotary, Air North, all of Whitehorse, Y.T.

Amount available	18,412.
Work applied	4500
Remainder	13,912

Remainder to be used on Group Tum 83-9

Sworn before me at Vancouver, B.C.
this 13 day of October 1983

~~A Commissioner for Oaths for Yukon Territory.~~
A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

D. M. Willis
Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FOR "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

I (Name) Sharon A. Weller Occupation Records Technician

(Postal Address) 700 - 409 Granville St., Vancouver, B.C.

OFFICE DATE STAMP

MAKE OATH AND SAY, THAT :-

1. I ~~or the owner(s) or~~ agent of the owner, of the mineral claim(s) to which reference is made herein.

2. Cominco Ltd. ~~have done, or~~ caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

Grant No.	Claim
YA 25206	Tum 150

situated at on the Pelly River Claim Sheet No. 105L/11+14

in the Whitehorse Mining District, to the value of at least 13,912.00

dollars, since the 8 day of August 19 83.

to represent the following mineral claims under the authority of Grouping Certificate No. 94491
(Here list claims to be renewed by number and name in numerical order) Group Tum 83-9

Grant No.	Claim
YA 25057 - 25066	Tum 1-10
YA 25134, YA 25136	Tum 78, 80
YA 25138 - 25140	Tum 82-84

Please apply 3yrs. to each ($4500)

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

NOH, (NQ core), August 8 - 24, 1983 on Tum 150
ork by E. Caron Drilling, Terr Air Rotary, Air North, all of Whitehorse, Y.T.

Amount available	13,912.
Work applied	4500
Remainder	9412

Remainder to be used on Group Tum 83-10

Sworn before me at Vancouver, B.C.

this 13 day of October 1983

A Commissioner for Oaths for Yukon Territory.

S. A. Weller

Applicant.

FOR PUBLICATION BY AUTHORITY OF THE
QUEEN'S PRINTER FOR THE PROVINCE OF BRITISH COLUMBIA

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FOR "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

I (Name) Sharon A. Weller Occupation Records Technician

(Postal Address) 700 - 409 Granville St., Vancouver, B.C.

OFFICE DATE STAMP

MAKE OATH AND SAY, THAT :-

1. I ~~or the owner, or~~ agent of the owner, of the mineral claim(s) to which reference is made herein.

2. Caminco Ltd. ~~I have done, or~~ caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

Grant No.	Claim
YA 25206	Tum 150

situated at on the Pelly River Claim Sheet No. 105L/11+14

in the Whitehorse Mining District, to the value of at least 9412.00

dollars, since the 8 day of August 19 83.

to represent the following mineral claims under the authority of Grouping Certificate No. 91308

(Here list claims to be renewed by number and name in numerical order) Group Tum 83-10

Grant No.	Claim
YA 25067 - 25078	Tum 11 - 22
YA 25080	Tum 24

Please apply 3 yrs. to each ($ 3900)

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

DDH, (NQ core), August 8 - 24, 1983 on Tum 150
work by E. Caron Drilling, Terr Air Rotary, Air North, all of Whitehorse, Y.T.

Amount available	9412.00
Work applied	3900.
Remainder	5512.

Remainder to be used on Group Tum 83-11

Sworn before me at Vancouver, B.C.

this 13 day of October 1983

~~A Commissioner for Oaths for Yukon Territory~~ A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FOR "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

OFFICE DATE STAMP

I (Name) Sharon A. Weller Occupation Records Technician

(Postal Address) 700 - 409 Granville St., Vancouver, B.C.

MAKE OATH AND SAY, THAT :-

1. I ~~or the owner, or~~ agent of the owner, of the mineral claim(s) to which reference is made herein.

2. ~~I have done, or~~ Caminco Ltd. caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

Grant No.	Claim
YA 25206	Tum 150

situated at on the Pelly River Claim Sheet No. 105L/11+14

in the Whitehorse Mining District, to the value of at least 5512.00

dollars, since the 8 day of August 19 83.

to represent the following mineral claims under the authority of Grouping Certificate No. ~~92537~~ Group Tum 83-1

(Here list claims to be renewed by number and name in numerical order)

Grant No.	Claim
YA 25142	Tum 86

Please apply 34rs. to each (#300)

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

JH, (NQ core), August 8 - 24, 1983 on Tum 150
Work by E. Caron Drilling, Terr Air Rotary, Air North, all of Whitehorse, Y.T.

Amount available	5512
Work applied	300.
Remainder	5212

Sworn before me at Vancouver, B.C.

this 13 day of October 1983

D. A. Weller

Applicant.

~~A Commissioner for Oaths for Yukon Territory.~~

A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

Drill Hole Record

191491

Cominco

Property	Tum property	District	Whitehorse M.D. Yukon	Hole No.	T83-1
Commenced	August 12, 1983	Location	West of Bouillabaise Lk.	Tests at	84.4m-(31°),148.4m(-30°)
Completed	August 20, 1983	Core Size	N.Q.	Corr. Dip	-35° end to end
Co-ordinates	140 + 00W, 3 + 67N			True Brg.	205°
Objective	To test a strong EM anomaly in stratigraphy similar to the nearby Clear Lake Pb, Zn, Ag deposit.			% Recov.	76%

Hor. Comp. 121.8m
Vert. Comp. 84.5m
Logged by M.R. Murrell
Date Aug 19, 22, 23, 1983

Claim Tum 150 | T Brg. 205° | Collar Dip -45° | Elev. 595m± | Length 149m | Hole No. T83-1 | Sheet 1

Metres From	Metres To	Description	Sample No.	Length	Analysis
0.00	12.2	Overburden - Recovered pieces mainly glacial boulders - mainly intrusives (granodiorite) and quartzite.			
12.2	23.0	Brecciated quartz and mudstone unit. Much is broken by surface weathering, but intact pieces consist of white quartz fragments - angular, usually 1 to 3cm across, with interstitial black mudstone. Quartz makes up 80% of the remaining core - much of the softer mudstone has likely been washed away in drilling. Contains a few gouge (or surface leached?) zones as at 13.4-16.0 (Black sand), and 20.9-21.6. All is silicified. Quite calcareous at the start becoming less so toward the end of the section.			
23.0	27.4	Dark grey to black fine grained very calcareous limestone massive, silicified where carbonaceous. No bedding apparent. Broken into chunks 2-3cm wide with occasional section to 8 cm, by irregular and random fractures. Contains a few wispy random calcite veins which gain in intensity down hole so that the last 30 cm is mainly white quartz - calcite in a stockwork or brecciated to stylolitic arrangment. Minor graphite is present on a few of the fracture surfaces. 23.0 - 25.5: Black carbonaceous muddy looking limestone. 25.5 - 27.4: Med grey f.g. limestone. Undulatory contact with above at about 25° but no bedding apparent in the limestone.			
27.4	46.0	Mudstone locally streaked with thin to laminated subtle siltstone and streaky pyrite. Overall is black, massive, fine grained. Usually broken into small (1cm to 3cm) chunks, as cherty looking fragments, but larger intervals present after 46.6. Hard and silicified throughout. Calcareous content varies from slightly limy to very limy.			

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Sheet 2 / Hole No. T83-1

Metres From	To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag		Ba
		27.4 - 31.7: Slightly calcareous							
		31.7 - 33.5: Non calcareous							
		33.5 - 35.1: Very calcareous							
		35.1 - 36.5: Moderately calcareous							
		36.5 - 37.8: Very calcareous at start grading to slightly calcareous down-hole.							
		37.8 - 42.4: same as 36.5 - 37.8							
		42.4 - 43.9: same as 36.5 - 37.8							
		43.9 - 45.7: Very calcareous							
		45.7 - 46.0: Non calcareous to very slightly calc.							
		Pyrite is present in three forms. The obvious as a few clasts or nodules up to 1½ cm (ie. at 34.4 ot 36.0), as thin disseminated semi-massive beds (ie. at 37.5 to 37.7). More subtle pyrite is found as thin dusty disseminations through much of this section, and gives the wet core its bedding definition (ie 31.2 - 37.6, diminishing down-hole). Locally pyrite cumulatively totals 2% over short intervals (20 - 30cm). Graphite is not abundant, but occassionally is pronounced as glossy mirror-smooth fracture surfaces likely parallel to bedding. Bedding can be seen in numerous places and runs a consistent 25° with no variations due to flexures, slumping, or other tectonism. Although much of this section is broken, no gouge or slickensides (inferring faulting) are present.							
		Samples:							
		31.2 - 32.2	39507	1.0	50	276	.9		829
		37.2 - 37.7	39508	0.5	9	273	<.4		777

Drill Hole Record

Cominco

Property	Tum Property	District	Hole No. T83-1
Commenced		Location	Tests at Hor. Comp.
Completed		Core Size	Corr. Dip Vert. Comp.
Co-ordinates			True Brg. Logged by
Objective			% Recov. Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. T83-1	Sheet 3

Metres From	Metres To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag		Ba
46.0	62.0	Calcareous mudstone: Black to dark grey, competent. Bedded throughout with very thin to wispy hair-lines of white discontinuous to streaky silt. Several 10 cm sections show better bedding, with silt forming perhaps 5%. Dusty (pin-point) pyrite disseminated, fairly evenly distributed throughout, but can only easily be seen in the darker portions of the core. In other areas a hand lens in necessary. Perhaps is only 1%, but could possibly account for a portion of the EM anomaly. Few thin calcite veins present between 48 and 54, usually cutting at 50 to 60°. Quite broken between 49.4 and 52, with possible gouge at 51.1 - 51.3. Minor graphite on broken (shear?) faces near 45, and in the broken zone (49.4 - 52). Broken piece of quartz vein at 50.6 contains 3 cm patch of f.g. pyrite. Bedding: 47.0 - 20°, 49.0 - 25°, 48.0 - 22°, 51.7 - 15°, 52.6 - 20°, 55.5 - 20°, 59.0 - 30°, 61.0 - 30°, Again - no folding or flexures.							
		Sample: 51.5 - 52.5	39509	1.0	14	682	<.4		482
62.0	76.8	Black laminated calcareous mudstone as above, but interbedded with wide zones (30cm) of medium grey massive to subtly bedded calcareous mudstone - Possibly the slight addition of silt, or more probably the lack of carbonaceous material gives the lighter colouration. Contacts are even, sharp and regular at 20°. Pyrite is present throughout as dusty disseminations, but is more pronounced in the darker portions. Would run less than 1% pyrite throughout. Locally, minute clots, or even very thin beds (to 3mm) are present - ie near 74.3. Much is broken into small pieces but overall longer core pieces are present - 10 to 15 cm. Glossy graphite is common on some surfaces, but most broken pieces are just carbonaceous. Random fractures.							

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Sheet 4 / Hole No. T83-1

Metres From	To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag		Ba
		Fossils - small graptolite fragments spotted at 67.3 - sample taken for identification.							
		67.4 - 67.5 - Coarser grained dirty limestone unit - soft.							
		Locally the bedding is slightly intercalated & a small disruption (subaqueous erosion) and							
		truncation of bedding is present at 68.8 (See litho sample). Could get "way-up" info from							
		this piece, but the piece is so small that it could be inverted.							
		Gouge zone with carbonaceous fragments at 67.1 - 67.3, and minor at 69.0. Other slightly							
		graphitic zones may be reflecting slight slips. Note poor recovery (12%) from 69 - 72, tube did							
		not lock. Two stages of calcite veining over the last metre: Earliest is a clean white coarse							
		grained calcite vein running parallel to core - about 0.4 cm wide. The second is a wispy to							
		irregular dirty medium grained cross cutting vein as seen at 76.0 (0.5cm wide) thats cutting							
		at 40°. Note that at this instance only, small specks of dark orange sphalerite grains to minute							
		clusters are present in the vein.							
		Bedding: Most is 25° with a few short sections as low at 17°.							
		Samples: 75.0 - 75.9	39510	0.9	49	724	.7		2291
		75.9 - 76.1	39511	0.3	17	883	<.4		2241
		76.1 - 76.8	39512	0.7	16	1290	<.4		706
76.8	77.6	Limestone - medium to dark grey. Very fine grained to aphanitic. Non bedded, but has an							
		overall slightly undulatory or mottled texture. Shot through with thin wispy random							
		calcite veins, likely sweated out of the limestone itself. One of the larger irregular dirty							
		veins (at 77.0) has a small 2mm patch of what looks like ZnS by eye, but doesn't look like ZnS							
		under hand lens - see litho sample. A few of the minute calcite veins of 76.9 have internal							

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Sheet 5 / Hole No. T83-1

Metres From	Metres To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag	Ba
		fine grained pyrite wisps.						
		Sample: 76.8 - 77.6	39513	0.8	10	158	<.4	5216
77.6	84.4	Black graphitic calcareous mudstone. Black, fine grained, massive to very subtly bedded. Local minor pyrite in only trace amounts, but is present as a few small clots or nodules and 80.5 - 81.0 as well as disseminated on bedding.						
		78.6 - 79.2: Broken carbonaceous fault zone, but no real muddy gouge development						
		80.2 - 84.3: Very graphitic. Bedding becomes almost parallel to core over most of this interval.						
		Overall is moderately to very calcareous with a few short (10cm) sections only slightly calcareous. Entire section is silicious and hard.						
		Sample: 80.5 - 81.0	39514	0.5	23	996	<.4	3409
84.4	91.8	Limestone light to medium grey, fine grained. Subtle mottled texture overall; but grades into it from a "typical" bedded mudstone - ie between 84.4 - 85.1 is more a mudstone, from 85.1 to 85.6 is very tight mottled to semibedded black and dark grey, and afterwards is very " wide mottled" with undulatory bands about 20-30 cm wide. Most are stylolitic along their boundaries. Whole section is shot through with 1-2% very thin calcite veins that become more intense in darker portions of the limestone (ie 86.7, 87.8 - 88.1, 90.0 - 90.2, 91.1 - 91.8.) (Crackle-zone). Bedding in upper, muddy portion is at 20°, rest cannot be determined. Note - ZnS present as two small (1-2mm) specks at 85.6, the contact point between the "tight mottled" and the wide mottled zones. Core is massive, unbroken, excellent recovery.						
		Sample: 85.4 - 85.8						

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Dips

Drill Hole Record

Comineo

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. T83-1 | Sheet 6

Metres From	Metres To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag		Ba
		Pyrite is present as irregular patches to streaks to aggregates (totalling 2-3%), in clots up to 1 cm wide from 87.5 - 89.3.							
		Sample: 85.4 - 85.8	39519	0.4	30	709	<.4		651
91.8	101.8	Dolomite: Medium to dark grey, subtly mottled. Grades from fine grained at the start to sandy textured by 96.0 and maintains the grain size to section end at 101.8. Most is hard and silicic, with a few short softer portions. Quartz-calcite veining is as per usual (thin wisps to local stockworks) but contain no pyrite or other sulphides. Irregularly broken into chunks 3 to 10cm long. No graphite or carbonaceous dust on surface except for minor amt at 95.2 and 95.7. A stockwork quartz and minor calcite vein zone is present from 97.0 to 97.8 where the core is completely shattered into angular 1 to 2 cm pieces. Unbroken pieces consist of mainly white quartz with small angular pieces of dolomite (60%). Local stylolite development, but quite minor. An 8 cm wide white calcite vein cuts at 60° at 101.5. Subtle bedding at 30° suggested at a few areas.							
101.8	109.1	Graphitic fault zone: Mainly black massive mudstone almost completely broken into 2 to 3 cm irregular core pieces. Glossy graphite on all fracture surfaces. Gouge is present only as a thin band (1cm) at 106.9 (50°) and 105.9. A few of the larger pieces show minor streaky pyrite which gains in intensity down hole so that by 107 the core looks very similar to that seen higher up the hole. Core is only slightly calcareous throughout, but in a few brecciated-calcite areas is very calcareous.							

Drill Hole Record

Cominco

Property	Tum Property	District	Hole No. T83-1
Commenced		Location	Tests at Hor. Comp.
Completed		Core Size	Corr. Dip Vert. Comp.
Co-ordinates			True Brg. Logged by
Objective			% Recov. Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. T83-1 | Sheet 7

Metres From	Metres To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag		Ba
		Small white specks (siderite or barite ?) present at 102.0 - 102.9.							
		ZnS present over 1cm as several minute dark orange fragments with calcite in a brecciated area							
		with pyrite at 106.5.							
		Sample: 106.2 - 106.8	39515	0.6	43	596	<.4		888
109.1	121.9	Black mudstone with streaky pyrite. Fairly massive and competent with many pieces around 10 cm							
		in length. Black silicious non-calcareous to locally slightly calcareous. Quartz and							
		calcite veining almost non-existent. Pyrite is the main structural feature found throughout							
		at 2 to 3% as very thin, sometimes discontinuous hair-line thickness. These streaks are							
		closely spaced and may actually make up a larger percentage of the total core. - difficult							
		to estimate. Starting at about 118, the streaking becomes more pronounced and appears, on							
		dry surface,there could be a fair amount of very fine grained silt present, giving a very-very fine							
		"pin-striped" effect.							
		Bedding is easily discernible throughout, consistently at 25°to 117, then changing to 35° for the							
		rest of the section.							
121.9	126.2	Graphitic Fault Zone - Essentially all graphitic black mudstone with several sections of black							
		gouge. Variably calcareous from thin black muddy sections with no reaction, to minor streaky							
		pyrite poritons which are moderately calcareous, to a few "crackle-zones" with quartz-calcite							
		veining. Most fracture surfaces are graphitic, many of which are highly-polished glossy.							
		Fragments vary from gravel sized angular to chunky 3-4cm pieces, with better recovered portions							

Drill Hole Record

Cominco

Property	Tum Property	District	Hole No. T83-1
Commenced		Location	Tests at
Completed		Core Size	Corr. Dip
Co-ordinates			True Brg.
Objective			% Recov.
			Hor. Comp.
			Vert. Comp.
			Logged by
			Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. T83-1 | Sheet 8

Metres From	To	Description	Sample No.	Length	Analysis
		(10cm) usually in the crackle zone. Gouge sections are 122.8 - 123.1, 125.0 - 126.2.			
		Bedding at 123.4 is at 25°.			
126.2	129.0	Very limy mudstone. Very thin bedded light and medium grey - regular bedding. Almost looks			
		laminated. No graded bedding apparent. Possibly is interbedded very fine black graphitic			
		mudstone with slightly granular lighter grey limestone (?). Graphite present on all bedding			
		plane partings. Most of this section is broken into chunky 1 to 3 cm sizes. A few minor			
		bedding plane stylolites are present in the more competent pieces. Bedding pronounced at 35°.			
		Non silicified.			
		NOTE: only about 10 cm recovered between 128.3 and 128.9.			
129.0	130.2	Fault zone: Almost all is gouge now, but it appears the original rock type was carbonaceous to			
		graphitic black mudstone grading down hole to medium grained red grey limestone, judging from			
		the few remaining fragments. Contains a few white quartz chunks which have trace amounts of			
		fine cubic pyrite. Recovery actually quite good through this gouge zone.			
130.0	133.2	Tuff: Overall is a light tan-grey colour, but when wet appears to consist of a fine light			
		grey matrix with minute black specks, with slightly larger ovoid to angular creamy white			
		fragments. (Question - could this be a fine grained intrusive?). But is fairly soft and			
		competent. Cut occassionally by a few grey quartz veins that often contain centerally located			
		pyrite streaks. Pyrite also found as disseminated granular patches which usually are associated			

Drill Hole Record

Cominco

Property	Tum Property	District	Hole No. T83-1
Commenced		Location	Tests at Hor. Comp.
Completed		Core Size	Corr. Dip Vert. Comp.
Co-ordinates			True Brg. Logged by
Objective			% Recov. Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. T83-1 | Sheet 9

Footage From	Footage To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag		Ba
		with healed fractures or minute quartz veins. The first 0.6m of this section is completely sheared up (see fault in previous section) and gone to gouge, but was mainly irregular quartz veins surrounding or impregnating the tuff. Trace amounts of minute pyrite cubes scattered throughout.							
		Sample: 130.2 - 131.7	39516	1.5	17	74	<.4		1269
		131.7 - 133.2	39517	1.5	16	81	<.4		1527
133.2	140.0	Black mudstone with local minor silt components. Quite broken now, but rock type is mainly very thin bedded to laminated medium and dark grey silicious silty mudstone to siltstone. Resembles much the 127-129 band, but is only very slightly calcareous. Overall is quite carbonaceous, but graphite is only developed on broken surfaces from the start to 135. Gouge is present locally through this graphitic portion. Calcite veining is developed as thin to wispy white veins near 135.5, 136.8, and 137.5. Brecciated stockworks of white calcite with angular mudstone fragments are present beneath the fault zone at 134.3 to 134.9, and well developed from 138.0 to 140.0. Within this last section is a 30 cm wide zone consisting of angular to sub-angular white (cherty?) silicious fragments less than 1 cm wide surrounded by 70% mudstones. (Somewhat resembles the debris flows or diamictites at Nidd property). Bedding at 35°.							
140.0	142.4	Black graphitic mudstone: Most is small jet black chunks of irregularly broken mudstone with graphite on all surfaces. Section starts off with a 5cm thick black gouge zone with minor yellowish mud, followed by 15cm of white quartz. Gouge also present at 141.7 and 142.1. Competent pieces between 141.7 and 142.1 resemble limestone in texture but are not calcareous.							

211-9437

Drill Hole Record

Cominco

Property	Tum Property	District	Hole No. T83-1	Claim	Sheet 10
Commenced		Location	Tests at / Hor. Comp.	T Brg.	Hole No. T83-1
Completed		Core Size	Corr. Dip / Vert. Comp.	Collar Dip	
Co-ordinates			True Brg. / Logged by	Elev.	
Objective			% Recov. / Date	Length	

Metres From	Metres To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag		Ba	
		Whole section is silicious. No bedding apparent.								
142.4	149.0	Mudstone streaked with pyrite. Overall is black with thin hair-line streaks of fine bedded pyrite to give an overall laminated to very thin bedded aspect to the usually fine grained core. Pyrite could run 2-3% but difficult to estimate. Resembles closely the pyritic sections seen higher in the hole. Much is broken into small chunks with either dull carbonaceous material on the irregular fractures, or commonly shiny glossy graphite section is slightly calcareous to locally non-calcareous. Hard, but not as silicious as most previous sections. Bedding starts off at 25°, but changes over to 50° by 146 (just past a gouge zone at 145.2 - 145.5) and up to 65° by 147, which it remains to the end of the hole.								
		Sample: 146.0 - 147.0	39518	1.0	26	62	<.4		585	
149.0		End of Hole.								

Drill Hole Record

Cominco

Property	TUM	District		Hole No.	
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. T83-1 | Sheet 11

Footage From	Footage To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag		Ba
		DRILL SAMPLING - ASSAYS ARE IN P.P.M.							
		DRILL FROM / INTERVAL TO / Pb ppm / Zn ppm / Ag ppm / Ba(4) ppm							
		39507 T83-1 31.2 32.2 50 276 .9 829							
		39508 T83-1 37.2 37.7 9 273 <.4 777							
		39509 T83-1 51.5 52.5 14 682 <.4 482							
		39510 T83-1 75.0 75.9 49 724 .7 2291							
		39511 T83-1 75.9 76.1 17 883 <.4 2241							
		39512 T83-1 76.1 76.8 16 1290 <.4 706							
		39513 T83-1 76.8 77.6 10 158 <.4 5216							
		39514 T83-1 80.5 81.0 23 996 <.4 3409							
		39515 T83-1 106.2 106.8 43 596 <.4 888							
		39516 T83-1 130.2 131.7 17 74 <.4 1296							
		39517 T83-1 131.7 133.2 16 81 <.4 1527							
		39518 T83-1 146.0 147.0 26 62 <.4 585							
		39519 T83-1 85.4 85.8 30 709 <.4 651							

Drill Hole Record

Cominco

Property	Tum Property	District		Hole No.	T83-1		
Commenced		Location		Tests at		Hor. Comp.	
Completed		Core Size		Corr. Dip		Vert. Comp.	
Co-ordinates				True Brg.		Logged by	
Objective	Overall recovery 40-489 ft. = 76%			% Recov.		Date	

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet

Description

Sample No. | Length | Analysis

Feet

Runs and Recoveries

From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%
0	40(?)	Overburden			98	102	4	2.0	50	133.5	134.5	1	0.8	80
40(?)	44	4	1	25	102	104	2	2.0	100	134.5	137	2.5	1.9	76
44	53	9	2	22	104	108	4	3.0	75	137	139	2	1.5	75
53	57	4	0.8	20	108	110	2	1.0	50	139	142	3	1.3	43
57	59	2	1.5	75	110	112	2	1.1	55	142	144	2	1.4	70
59	63	4	0.7	17.5	112	115	3	2.5	83	144	146	2	1.2	60
63	67	4	1.5	37.5	115	117	2	0.6	30	146	147	1	1.0	100
67	71	4	3.5	87.5	117	118	1	0.9	90	147	149	2	1.2	60
71	75	4	3.2	80	118	119	1	0.8	80	149	151	2	1.3	65
75	76.5	1.5	1.3	87	119	120	1	0.8	80	151	152	1	0.8	80
76.5	78	1.5	1.2	80	120	122	2	1.6	80	152	153	1	1.0	100
78	80	2	1.7	85	122	123.5	1.5	1.4	93	153	155	2	1.5	75
80	83	3	2.3	77	123.5	124.5	1.0	1.0	100	155	157	2	1.4	70
83	85	2	1.8	90	124.5	126	1.5	1.2	80	157	158	1	0.9	90
85	87	2	1.4	70	126	127.5	1.5	1.4	93	158	161	3	2.5	83
87	90	3	1.5	50	127.5	128	0.5	0.5	100	161	162	1	1.0	100
90	94	4	3.5	95	128	129	1	0.9	90	162	163	1	0.9	90
94	96	2	1	50	129	131.5	2.4	2.1	84	163	164.5	1.5	1.5	100
96	98	2	1.2	60	131.5	133.5	2.0	2.0	100	164.5	166	1	1.0	100

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet

From To (Feet)

Description

Runs and Recoveries

From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%
166	167.5	1.5	1.5	100	215	216.5	1.5	1.4	93	259.5	260	6.5	0.4	80
167.5	169	1.5	1.5	100	216.5	219	2.5	2.3	92	260	261	1	1	100
169	172	3	2.9	97	219	221	2	1.1	80	261	263	2	1.9	95
172	177	5	4.9	98	221	224	3	2.2	73	263	265.5	2.5	2.2	88
177	180	3	2.9	97	224	226	2	1.1	55	265.5	267	1.5	1.5	100
180	183	3	3.0	100	226	227	1	0.9	90	267	268	1	1	100
183	187	4	4.0	100	227	237	10	1.2	12	268	273	5	1.4	28
187	191	4	3.8	95	237	238	1	1	100	273	274	1	0.3	30
191	193	2	2.0	100	238	240	2	2	100	274	276	2	1.3	65
193	195	2	1.9	95	240	242	2	1.1	55	276	277.5	1.5	1.4	93
195	197	2	2.0	100	242	243	1	0.9	90	277.5	283	5.5	4.8	87
197	198.5	1.5	1.5	100	243	244	1	1	100	283	298.5	9.5	9.5	100
198.5	201	2.5	2.2	88	244	246	2	2	100	298.5	302	9.5	9.5	100
201	293.5	2.5	2.3	92	246	247	1	0.6	60	302	304.5	2.5	1.4	56
203.5	207	3.5	3.0	86	247	249	2	2	100	304.5	306.5	2	1.1	55
207	208	1	1	100	249	252	3	2.5	83	306.5	310	3.5	3.2	91
208	210	2	1.9	95	252	254.2	2.5	2.3	92	310	312	2	1.9	95
210	212.5	2.5	2.2	88	254.2	258	3.5	2.0	57	312	314	2	2.0	100
212.5	215	2.5	2.4	96	258	259.5	1.5	1.4	93	314	317.5	3.5	3.2	91

Sample No. | Length | Analysis

Drill Hole Record

Cominco

Property	Tum Property	District		Hole No.	T83-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet

Description

Sample No. | Length | Analysis

Runs and Recoveries

From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%
317.5	321	3.5	2.1	60	368	369	1	1	100	418	420	2	1.9	95
321	325.5	4.5	4.4	98	369	373	4	3.7	93	420	421	1	0.4	40
325.5	335	9.5	9.4	99	373	377	4	4	100	421	423	2	0.4	20
335.5	337.5	2	1.2	60	377	380.5	3.5	3.5	100	423	427	4	3	75
227.5	339.5	2	1.1	55	380.5	383	2.5	2.2	88	427	432	5	4	80
339.5	341	1.5	1.1	73	383	384.5	1.5	1.2	80	432	438	6	5	83
341	343	2	1.0	50	384.5	387	2.5	2.2	88	438	439	1	0.8	80
343	345	2	1.7	85	387	289	1	1.9	95	439	441	2	1.5	75
345	347.5	2.5	2.1	84	389	391	2	2.0	100	441	444	3	2.5	83
347.5	349.5	2.0	2.0	100	391	393.5	2.5	2.1	84	444	445.5	1.5	1.5	100
349.5	250.5	1	0.8	80	393.5	396.5	3.0	3.0	100	445.5	447	1.5	1	67
350.5	353	2.5	2.0	80	396.5	400	3.5	1.2	34	447	449	2	1.5	75
353	355	2	1.8	90	400	401	1	0.8	80	449	450.5	1.5	1.3	87
355	358	3	1.2	40	401	404	3	1.3	43	450.5	453.5	3.0	1.6	53
358	360	2	2	100	404	407	3	2.8	93	453.5	457	3.5	1.2	34
360	363	3	2.1	70	407	410	3	3	100	457	461	4	3.1	78
363	364.5	1.5	1.2	80	410	414	4	3	75	461	463.5	2.5	2.5	100
364.5	367.4	3.0	2.8	87	414	417	3	2.3	77	463.5	466.5	3.0	3.0	100
367.5	368	0.5	0.5	100	417	418	3	0.5	25	466.5	468.5	2.0	2.0	100

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet

Feet

From	To	Description	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%	Sample No.	Length	Analysis
		Runs and Recoveries																
468.5	469.5		1.0	0.9	90													
469.5	470.5		1.0	1.0	100													
470.5	472.5		2.0	1.3	65													
472.5	475		2.5	0.9	36													
475	477		2	1.2	60													
477	479		2	1.2	60													
479	481		2	1.5	75													
481	481.5		0.5	0.5	100													
481.5	485.5		4.0	3.7	93													
485.5	488.5		3.0	2.0	67													
488.5	489		0.5	0.3	60													

Scale

Colour Plot & Dips

0

Drill Hole Record

091491

Cominco

Property	J.C. Property	District	Watson Lake M.D.	Hole No.	JC 81-1		
Commenced	16 June 1981	Location	Yukon Territory	Tests at	p.11	Hor. Comp.	
Completed	22 June 1981	Core Size	BQ	Corr. Dip	-53°N	Vert. Comp.	
Co-ordinates	79+67E 92+14N			True Brg.	360°	Logged by	G.D.L.
Objective	Test skarn horizon for Sn mineralization.			% Recov.		Date	23 June 1981

Claim | T Brg. 360° | Collar Dip -53° | Elev. 4942' | Length 751'

Footage From	Footage To	Description	Sample No.	Length	Analysis
0.0	32.0	CASING			
32.0	87.5	QUARTZITE			
		Gray to gray-green; often with mauve coloured, irregular interbeds ('muddy' component);			
		hard, fine-grained; often with fine, dissem. py; small qtz.veinlets and narrow qtz. veins occur			
		occasionally; qtz. veinlets are fract. fillings; generally does not effervesce w/ HCl; some			
		carbonate along joint planes.			
		Core angle @ 37' 25°			
		Core angle @ 82' 25°			
87.5	91.6	AMYGDALOIDAL BASALT			
		Dark green to black; amygdules of ½-2mm filled w/ soft white calcite and py; also contains			
		small 1mm sub-angulsr to rounded grains or shards of dark lime-green glass; whole unit is			
		weakly magnetic; forms narrow (1cm) selvage at lower contact w/Quartzite; some py concentrated			
		at selvage; probably shallow intrusive dyke.			
		Core angle @ 91.6 (approx.) 50° Basalt/Quartzite contact			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. 360° | Collar Dip -53° | Elev. 4942' | Length 751'

Footage From	Footage To	Description	Sample No.	Length	Analysis
91.6	94.5	QUARTZITE BRECCIA			
		Fragments of quartzite; central section w/ soft, green chloritic (?) matrix; seems to			
		be fault breccia associated w/ basalt dyke; some small py grains w/ matrix.			
94.5	433.0	QUARTZITE			
		cf. 32.0-87.5; some white. almost cherty sections @ 217' some joints have pyritic coatings.			
		Core angle @ 218' 27°			
		@ 228'-230' ; greenish (chloritic?) pockets of 1-2 cm carry blebs and specks of py.; small			
		blebs of py are often visible in core from about 228' downwards; small sections may show light			
		green mineral (epidote?); calcite veinlets and fracture fillings up to 1cm are occasionally			
		visible from about 240' downwards.			
		Core angle @ 283' 20°			
		327.0-328.8' Rusty quartz vein (sulphate bearing, minor); at high angle almost 90°.			
		Core angle @ 359' 17°			
		Core angle @ 424' 20°			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. 348 | Collar Dip -53° | Elev. 4942' | Length 751'

Footage From	Footage To	Description	Sample No.	Length	Analysis
433.0	450.0	QUARTZITE BRECCIA			
		In part similar to 91.6-94.5; quartzite frags in soft, green chloritic(?) matrix; parts			
		have white quartz frags w/ chloritic and rusty matrix; fragments up to several cm.			
450.0	486.5	QUARTZITE			
		Generally light gray or light brown; rusty coloured veins (1-2cm) along fractures in			
		several directions; may also be darker coloured, mottled brown-black and slightly micaceous.			
486.5	504.0	GABBROIC DYKE			
		Dark green-white mottled; medium gr. (1-2mm); probably subophitic plag./px; whole unit is			
		weakly magnetic.			
504.0	538.5	QUARTZITE			
		Generally light brown or light gray quartzite; a few small veinlets of qtz. and black min-			
		eral (schorl(?)); very minor dissem. py; no mauve 'muddy' bands; bedding is indistinct			
		Scheclite -3% as 1-5 mm spots 525'-527'			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. 360° | Collar Dip -53° | Elev. 4942' | Length 574'

Footage From	Footage To	Description
538.5	566.5	SPOTTED SKARN
		Medium to coarse gr. garnet-diopside skarn (grain size 1-3mm); large spots of dk. green
		autinolite which may form prismatic/acicular crystals up to 1cm in length; spots often include
		rusty (sulphides(?)) calcite; throughout skarn are found tourmaline (black, striated, prismatic,
		1-5mm or more), axinite (green-brown, waxy, tabular (triclinic), often euhedral, up to 5mm),
		fluorite (white or sometimes purple, amhedral grains of a few mm, usually w/ tourm. or axinite;
		some calcite has bright lime-green colour (?); a few calcite (± qut.) veins (5-10mm) cross the
		core at low angles (almost parallel to core length); most carry stringers or pods of rusty
		(sulphides(?)) mineralization parallel to vein walls.
		Calcite vein (1cm, rusty mineralization) @ 561' 85°
566.5	574.5	AMYGDALOIDAL BASALT
		Dark green-black; grain size less than 1mm; sub-ophitic plag. laths and mafies(px); very
		small (1mm) calcite filled amygdules; small (½mm) black spots (glass(?)); small calcite stringers
		in parts; whole unit is weakly to moderately magnetic; top contact has a few cm of brownish
		alt^{n}.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg. 360°

Collar Dip -53°

Elev. 4942'

Length

Footage From	Footage To	Description
574.5	612.0	DIOPSIDE-ACTIN. SKARN; dk. green.
		Fine grained diopside-actinolite skarn; a few small spots, veins or pods of actinolite and
		calcite and/or tourm; seems bleached or altered, often rusty coloured, brecciated in part, w/
		calcite veinlets and fracture filling; some 1cm veins of soft (rotted) brown-black mineraliza-
		tion w/ calcite; garnet seems minor; "bleached and altered" portions extends from - 574.5'-594';
		below 594' rock is a fresher-looking skarn.
		582.0-584.0 Calcite vein (1cm) parallel to core axis; some rusty mineralization.
		583.5-587 Section resembling spotted skarn of 535.5-566.5; far fewer calc.-actin. spots.
		Rusty 1cm calcite vein @ 590' 80°
		Sulohide veins containing py, aspy, cpy and magn. (some po(?) as well)
		Sulphide vein @ 595' 62° aspy, po(?); 1cm
		@ 598.5 59° aspy, py magn; 1cm
		@ 599' 49° aspy, cpy, py; 1cm
		605.5-607.5 Brownish altered actinolite skarm; criss-crossed by numerous veins and veinlets of
		coarse calcite

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. 360° | Collar Dip -53° | Elev. 4942' | Length 751'

Footage From	Footage To	Description
612.0	613.5	AMYGDALOIDAL BASALT
		cf. 566.5-564.5
		Core angle (upper contact of basalt) @ 612' 58°
613.5	650.0	DIOPSIDE-ACTINOLITE SKARN
		Generally of 574.5-612.0; bleaching or alteration absent;
		621.2-622.3 Sulphide mineralization; po (magnetic), cpy, py, aspy, calcite
		Sulphide vein @ 625.5 60° aspy, py minor fluor and calc. (3cm)
		@ 629 aspy w/ qtz., calc, fluor.
		Some sections of fine-grained green skarn w/ slight eff.; from 624-629.5' thin veinlets of act-
		inolite (1mmor less) run parallel or subparallel to the sulphide veins.
		Sulphide vein @ 630.5' 67° aspy, cpy, tourm., qtz. mnr. calc. (5cm); thin seams or veinlets
		(1mm) run parallel or subparalled to this major vein from 629.5 to the lower contact of the skarn.

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim Anahim | T Brg. 360° | Collar Dip -53° | Elev. 4942' | Length

Footage From	To	Description
		633.0-633.5 Breccia; coarse angular frags of skarn w/ infilling of coarse white calcite.
		From 633.5-640.5 garnet becomes quite coarse grained (subhedral)and prominent (pink-red colour);
		Sulphide vein @ 643 78° aspy, py tourm, calc (2cm)
		Below 645' thin interveds of quartzitic rock begin to appear (esp. mauve coloured 'muddy' bands)
650.0	656.0	QUARTZITE
		Similar to top of hole; gray-freen to black; w/ mauve coloured muddy interveds (1-5mm); small bands (1-3cm) of 'banded' skarn; last 2' are brecciated, rusty white quartz.
		Some small bands of tourmaline; calcite and some fluorite in vein at 653' (2cm); sharp lower contact w/ granite.
656.0	751.0	QTZ. MONZONITE
		Buff to light gray; fine grained (1mm or less); qtz-rich granitec rock; minor boitite as 1mm flakes; tourmalinized fractures; slightly greenish (alteration(?)); occasionally contains large qtz. eyes (up to 4mm); minor fluorite.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg. 360°

Collar Dip -53°

Elev. 4942'

Footage From	Footage To	Description
		656.0-658.5 Fluoritic granite; up to 20-25% fluorite as clusters of 1mm purple grains; very soft.
		669.0-669.5 Band of tourmaline and chlorite(?) w/ pyrite.
		697.0-704.0 Altered ('bleached'(?)) granite. White to light brown; crumbly; lighter coloured than rest of granite.

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg. 360°

Collar Dip -53°

Elev. 4942'

Footage From	Footage To	Description
		End of hole 751'.
		Dip tests @ 202' 51°
		@ 442' 51°
		@ 600' 50°
		@ 751' 50°

Scale

Colour Plot & Dips

0 °

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. 360° | Collar Dip -53° | Elev. 4942' | Length

Footage From	Footage To	Description	Sample No.	Length	Analysis
0.0	32.0	CASING			
32.0	87.5	QUARTZITE			
87.5	91.6	AMYGDALOIDAL BASALT OYKE			
91.6	94.5	QUARTZITE BRECCIA			
94.5	433.0	QUARTZITE			
433.0	450.0	QUARTZITE BRECCIA			
450.0	486.5	QUARTZITE			
486.5	504.0	GABBROIC OYKE			
504.0	538.5	QUARTZITE			
538.5	566.5	SPOTTED SKARN			
566.5	574.5	AMYGDALOIDAL BASLAT OYKE			
574.5	612.0	DIOPSIDE-ACTINOLITE SKARN			
612.0	613.5	AMYGDALOIDAL BASALT OYKE			
613.5	650.0	DIOPSIDE ACTINOLITE SKARN			
650.0	656.0	QUARTZITE			
656.0	751.0	GRANITE			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	J.C. Property	District	Watson Lake M.D.	Hole No.	JC 81-3		
Commenced	1 July 1981	Location	Yukon Territory	Tests at	p.11	Hor. Comp.	
Completed	7 July 1981	Core Size	BQ	Corr. Dip	-70°N	Vert. Comp.	
Co-ordinates	84 + 00E 92 + 25 N			True Brg.	360°	Logged by	G.D.L.
Objective	Test skarn horizon for Sn mineralization			% Recov.		Date	8 July 1981

Claim | T Brg. 360° | Collar Dip -70°2 | Elev. 5054.08'

Footage From	Footage To	Description	Sample No.	Length	Analysis Cu	Mo	Sn	Ag
0.0	10.0	CASING						
10.0	52.5	QUARTZITE						
		Gray to gray-green; some bands and sections of mauve coloured (argillaceous) quartzite; fine grained; banding seems to reflect original bedding; may be slightly chloritic in parts						
		Core angle @ 13' 23°						
		26.5 3cm milky white. chloritic qtz vein.						
52.5	58.0	LAPILLI TUFF(?)						
		Gray to rusty brown; fine gr. siliceous rock; contains numerous irregular parallel to subparallel bands, 1mm-5mm width; fragments elongate parallel to banding.						
58.0	107.5	QUARTZITE						
		(cf. 10.0-52.2)						
		Occasional spots of po usually associated w/ smalls clots of chlorite; some small (usually about 5-10 cm) sections of core appear to have been contorted by soft sed. slumping or by folding.						

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-3	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg. 360°

Collar Dip -70°

Elev. 5054.08'

Length

Analysis

Footage From	Footage To	Description
107.5	114.0	BIOTITE QUARTZ-FELDSPAR PORPHYRY
		Gray BIOTITE QFP; groundmass is gray to bluish gray; biotite phenocrysts (1-3mm) are
		brown-black (brown on polished surface of core); feldspars are slightly elogate (up to 3 or 4
		mm long); qtz. phenos are bluish white or gray (2-4mm aug); rounded grains of po (sl. magn.)
		esp. near upper contacts (aug 1-2mm, largest is 1cm); lower 1ft. is finer gr. w/ fewer phenoc-
		rysts (chilled margin(?)); upper contact is distinct @ 45°, also shows slip fault (1.5cm displ.)
		parallel to core edge.
114.0	288.5	QUARTZITE
		(cf. 58.0-107.5)
		Core angle @ 118' 18°
		122.5' Rusty qtz vein. (3cm)
		129.5 Milky white, chloritic qtz. vein. (4cm)
		154' Milky white qtz vein w/ rusty hairline fracts. (6cm)
		165-165.5 Small rusty section which may be equivalent to LAPILLI TUFF unit of 52.5-58.0.
		Core angle @ 163' 7°

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-3	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. 360° | Collar Dip -70°? | Elev. 5054.08' | Length

Footage From	To	Description	Sample No.	Length	Analysis
		187'-197' Light gray white cherty section; slightly pinkish or greenish (chlorite) in parts; fine (1-5mm) parallel to subparallel bands of mauve (argillaceous) qtzite in parts.			
		Core angle @ 188' 6°			
		199.0-201.5 Small dark brown section, elongate frags up to 2cm by 4mm; equivalent to LAPILLI TUFF of 52.5-58.0'; frags are light gray, siliceous.			
		197.0-242.0 QUARTZITE is a 'marble cake' hybrid of regular quartzite and the cherty unit of 187'-197'; pinkish-greenish sections of cherty comprise about 30% of the rock unit as irregular patches.			
		;occasional small blebs of po w/ chlorite			
288.5	301.0	AMYGDALOIDAL BASALT Dark black with brown patches (weathered(?)); round, white calcite filled amygdules (1-3mm); whole unit is slightly magnetic; several thin calcite stringers; snakk (1-3mm) black phenocrysts glass(?); very small (less than 1mm) phenocrysts of plag.(?) sometines visible; lower contact @ approx. 70°; lower contact has 3cm of orange-cream coloured brecciation.			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-3	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. 360° | Collar Dip -70°? | Elev. 5054.08' | Length

Footage From	Footage To	Description	Sample No.	Length	Analysis
301.0	685.0	QUARTZITE			
		(cf. 114.0-285.0)			
		Core angle @ 307' 3°			
		Core angle @ 379' 2°			
		398'-400' Broken core			
		404.5'-407' Broken core			
		407.0'-432.5' 'Marble texture' rock (quartzite) cf. 197.0-242.0'; sometimes slightly fractured			
		or brecciated.			
		Core angle @ 446' 11°			
		453' A few large (1cm) irregular blebs of po w/ chlorite.			
		Core angle @461' 6°			

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-3	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. 360° | Collar Dip -70° | Elev. 5054.08' | Length

Footage From	Footage To	Description
		464.0-465.0 Possibly LAPILLI TUFF, (cf. 52.5-58.0); dark brown and mauve w/ a few grayish frags.(?) of 5-10mm.
		494.0-494.5 Breccia zone, white to pale green; large angular qtz. frags. (1mm-10mm); matrix is about 75%; matrix mostly qtz.
		506.0'-508.0' Pale green qtzite w/ brown speckles; brown is 1-2mm grains of biotite; gives qtzite a 'robin's egg' appearance.
		542.0-542.5' Chloritix qtz. vein (quartz 'sweat'(?)); quartzite occasionally shows irreg. veins of qtz. which may be metamorphic in origin; often w/ assoc. po/py.
		632.5-634.0 Chloritic qtz. vein; as above.
		637.0-638.0' Chloritic qtz. vein; as above.
		; Below about 660' QUARTZITE may show occasional irreg. grains of pink-red garnet(?) of a few mm in size (may be argillaceous material)

Scale

• Colour Plot & Dips

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Drill Hole Record

Cominco

Property	District	Hole No. JC 81-3	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. 360° | Collar Dip -70° | Elev. 5054.08'

Footage From	To	Description
		674.5-685.0' Cloudy gray-white quartz; very fine gr., veinlike; fine irregular blebs and stri-
		gers of chlorite throughout; seeems to be melted contact between granite and quartzite; coatings
		of py on joints.
		674.5 1cm chalcopy/po vein
		675.0 1cm po/cyp/moly(?) vein @ 57°
685.0	698.0	QUARTZ MONZONITE
		Light bluish gray, sl. greenish in parts; aug. grain size about 1mm; speckled w/black
		biotite flakes (1-2mm); shows melted irreg. contact w/ qtzite above; scattered gray qtz. eyes
		up to 4mm; greenish colour may be epidote; becomes greener and coarser grained towards 695'
		where large (1cm) crystals of purple fluorite occur.
698.0	703.0	QUARTZITE
		Green and mauve qtzite; irregular and patchy mauve coloured bands; somewhat chloritic esp.
		towards lower contact; some cloudy qtz. veins or 'sweats'.

Scale

•Colour Plot
& Dips

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Drill Hole Record

Cominco

Property	District	Hole No. JC 81-3	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg. 360°

Collar Dip -70?

Elev. 5054.08'

Length

Analysis

Footage From	Footage To	Description
703.0	708.0	QTZ. MONZONITE
		(cf. 685.0-698.0); again coarsening and becoming greener toward 704'; light green joint fillings of a talcose mineral; biotite does not seem to occur in coarser gr. sections.
708.0	819.0	GARNET-ACTINOLITE-DIOPSIDE SKARN
		Lighter green diopside-rich skarn w/ actinolite-rich bands occuring a darker green irregular 'tiger-stripes' (1-10mm aug. width); garnets as wide (often several cm.) pink-red gobs and stripes in some sections; occasional spots of black prismatic tourm. and white calcite also spots of light green epidote(?).
		Core angle @ 722' 21° (comp. banding)
		708.0-724.0 Predominantly 'tiger stripe' actinolite-diopside.
		724.0-804.0 Garnetiferous; very minor garnet above this zone; actinolite becomes minor to absent; tourm. and cale. spots still noted; garnets as coarse grain aggregates; comp. banding is far less pronounced; some qtz. x/5 w/ cale and tourm in spots; often hex. euhedral (up to 8mm)

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	District	Hole No. JC 81-3	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg. 360°

Collar Dip -70°

Elev. 5054.08'

Length 819.5'

Footage From	Footage To	Description
		745.5 10cm section of coarse gr. purple axinite, fluorite, calcite, epidote(?) garnet w/ minor actionlite.
		A few thin graphic calcite veins (1-2mm) w/ thin black(?) selvage; some minor arspy as small 1mm grains in parts; garnets seem to change from pink-red to orange toward bottom of section; last 20' displays blebs and spots of clear coarse gr. fluorite and qtz., core also becomes less garnet; ferous in last 20'.
		815.0-819.5 Clrar glassy qtz. w/ come fluorite may constitute up to 50% of the rock; skarn minerals (mostly diopside) seem to float in veinlike matrix of qtz.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-3	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim Anaktuvuk | T Brg. 360° | Collar Dip -70° | Elev. 5054.08' | Length

Footage From	To	Description	S N
819.5	827.5	QUARTZITE	
		Gray-green and mauve quartzite; where present, banding is broad and irregular; a few narrow veins w/ purple fluorite and calcite; py on joint coating; broadly similar to unaltered bandied quartzite at top of hole but has overall 'melted' appearance.	
827.5	862.5	PORPHYRITIC GRANITE(?)	
		Mauve and green porphyritic granite; greenish-yellow feldspar phenos. often larger than 1cm; 2-3mm flakes of biotite (and some chlorite) scattered throughout; some 'schorly' joints and patches of coarse black tourmaline; a few large (3-4mm) grayish qtz. eyes; some sections are gray and less porphyritic w/ only a few large feldspar phenos and qtz eyes; occasional spots of purple fluorite and fluoritic joint coatings; some joints are coated w/ talcose material.	
		Occasional high angle joints and; coarse porghyritic granite to about 836'; below 836' granite is grayer, finer gr. QTZ. MONZONITE; still shows feld. phenos and qtz eyes; gray, f.gr. granite often has a 'bleached' white appearance; grayer, f. gr. sections seem less biotitic.	

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-3	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. 360° | Collar Dip -70°2 | Elev. 5054.08' | Length 865'

Footage From	Footage To	Description	Sample No.	Length	Analysis
		E.D.H 865'			
		Dip tests @ 512' 70°			
		@ 700' 70°			
		@ 865' 69°			

211-943

Scale
Colour Plot & Dips

Drill Hole Record

Cominco

Property	J.C. Property	District	Watson Lake M.D.	Hole No.	JC 81-4		
Commenced	9 July 1981	Location	Yukon Territory	Tests at	p. 10	Hor. Comp.	
Completed	17 July 1981	Core Size	BQ	Corr. Dip	-70°	Vert. Comp.	
Co-ordinates	88 + 91E 91 + 38N			True Brg.	360°	Logged by	G.D.L.
Objective	Test skarn horizon for Sn mineralization.			% Recov.		Date	16 July 1981

Claim	T Brg.	Collar Dip	Elev.	Length
JC	360	-70	5168.9'	

Footage From	Footage To	Description	Sample	Length	Analysis
0.0	10.0	CASING			
10.0	96.0	QUARTZITE Largely light gray w/ irregular mauve coloured (argillaceous) interbeds; mauve sections are easily visible in gray sections; some lighter gray cherty sections; minor po as specks and spots throughout; occasional minor chlorite in small veinlets and as joint fillings. Core angle @ 95' 9°			
96.0	101.0	BIOTITE QUARTZ-FELDSPAR (PORPHYRY) Strongly resembles a f. gr. version of the BIOTITE Q.F.P. unit in JC 81-3; light gray; speckled w/ brownish 1mm spots of biotite; phenocrysts of qtz. or feld. are not readily visible; minor po and py dissem. throughout; trace cpy as small blebs (1mm); sl. chloritic w/ one 1cm pocket of green chlorite and dissem. sulphides; sulphide filled fractures and small veinlets in quartzite directly below 101.0'.			

Scale

Colour Plot & Dips

0

Drill Hole Record

Property	District	Hole No. JC 81-4	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. 360 | Collar Dip -70 | Elev. 5168.9' | Length

Footage From	Footage To	Description	Sample No.	Length	Analysis
101.0	211.5	QUARTZITE			
		Generally cf. 10.0-96.0; often contains thin darker coloured bands that are irregular and			
		folded or weblike (hornfels type texture); mnr po still common; occasional green chloritic vein-			
		lets, spots or joint fillings; occasional white patches of a few cm. may be limey interbeds			
		(but do not effervesce); several of these light coloured interbeds from 173'-177', often			
		pinkish or greenish w/ some chlorite and po/py;			
		Core angle @172' 10^{o}			
		Occasional qtz. veins or 'sweats' of 1-5cm, often chloritic;			
		Core angle @ 203' 9^{o}			
211.5	213.0	LAPILLI TUFF(?)			
		Light gray quartzitic rock; on polished surface of core light gray qtzitic frags(?) are			
		visible; frags(?) aug. 3-5mm by 10-20mm and are elongated parallel to apparent bedding; not			
		rusty like LAPILLI TUFF units of JC 81-2, 3; a few thin qtz/calcite stringers; sections are			
		somewhat chloritic; frags are rounded or ovoid in shape and often separated by thin weblike			
		stringers of darker coloured material.			
213.0	218.5	QUARTZITE			
		cf. 101.0-211.5			

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	District	Hole No. JC 81-4	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. 360 | Collar Dip -70 | Elev. 5168.9' | Length

Footage From	Footage To	Description	Sample No.	Length	Analysis
218.5	220.0	LAPILLI TUFF(?)			
		cf. 211.5-213.0			
220.0	324.5	QUARTZITE			
		Generally cf. 101.0-211.5; mauve coloured bands and sections becoming more common; often			
		quite massive w/ no banding; occasional qtz 'sweats' up tp 20cm, usually chloritic w/ chloritic			
		selvedges and minor po/py as small blebs.			
324.5	347.0	AMYGDALOIDAL BASALT			
		Black w/ brownish patches; speckled w/ white, calcite filled amygdules (1-2mm);			
		occasional thin calcite stringers; also speckled w/ small black glassy(?) grains of less than			
		1mm; some larger amygdules are filled w/ a green talcose mineral; parts of unit are weakly			
		magnetic; calcite stringers may also carry green talcose mineral (talc(?)); lower contact			
		appears to be at a steep angle, roughly 80^{o} ; little brecciation at either contact.			
347.0	407.0	QUARTZITE			
		cf. 220.0-324.5			

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-4	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim J.C. | T Brg. 360 | Collar Dip -70 | Elev. 5168' | Length

Footage From	Footage To	Description	Sample No.	Length	Analysis
407.0	412.0	BRECCIA-CONGLOMERATE			
		Polymictic; large angular frags of mauve and green gray qtzite up to 2 or 3 cm; smaller angular frags of these rocks and white qtz down to 1mm and less; fragment supported, up to 90% frags; may be quite calcareous in sections; underlying quartzite is brecciated for about 5' w/ qtz and calcareous infilling; upper contact w/ qtzite seems quite sharp;			
412.0	461.0	QUARTZITE			
		cf. 220.0-324.5; quite often mauve coloured (argillaceous); small section of BRECCIA-CONGLOMERATE at 425.0-425.5.			
		Core angle @ 443' 23°			
461.0	465.0	BIOTITE QUARTZ-FELDSPAR(PORPHYRY)			
		Very similar to 96.0-101.0; bluish-gray; large (1-3mm) spots of brown biotite scattered throughout; py/po in thin, discontinuous veinlets; biotite spots are often rectangular and lathlike (phenocrysts).	9		
465.0	577.0	QUARTZITE			
		cf. 412.0-461.0			
		516.0-522.0 Resembles 'marble-cake' hornfels of JC 81-3			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-4	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. 360 | Collar Dip -70 | Elev. 5168.9'

Footage From	To	Description	Sample	Length	Analysis
577.0	583.0	BIOTITE QUARTZ-FELDSPAR PORPHYRY			
		Very similar to 461.0-465.0; small 4cm xenolith of mauve and green QUARTZITE at 577.5; top contact w/ QUARTZITE @ approx. 60°; dissem. po/py			
583.0	601.0	QUARTZITE			
		Generally cf. 465.0-577.0; increasing number of chloritec quartz 'sweats'.			
601.0	602.0	BIOTITE Q.F.P.			
		cf. 577.0-583.0			
602.0	741.5	QUARTZITE			
		cf. 583.0-601.0			
*		670.0-741.5 Banded chlorite-biotite bearing rock; biotite as thin veins of 1mm flakes esp. w/ qtz. sweats; small (1mm) garnets also occur w/ qtz and bio; some py; some small qtz. veins (616') give pale green fluorescence; QUARTZITE from 610' down bears various proportions of chlorite, biotite and some garnet; banding is not usually apparent or is streaky and irregular; thin bands of biotite may sometimes parallel original bedding; large (3-4mm) spots of scheelite in qtz. veins below 739.5.			

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-4	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. 360 | Collar Dip -70 | Elev. 5168.9 | Length

Footage From	To	Description	Sample	Length	Analysis
*741.5	747.5	QTZ. MONZONITE			
		Pale greenish to light gray; aug. grain size approx. 1-2mm; speckled w/ black biotite			
		flakes (½-1mm aug.); afew large qtz. eyes up to 5mm; throughout section pale yellow biotite			
		free stripes (fractures or veins) cross core @ 43°			
*747.5	752.0	QUARTZITE			
		Very similar to 610.0-741.5; melted appearance; a few small spots of scheelite;			
*752.0	754.0	QTZ. MONZONITE			
		cf. 741.5-747.5			
754.0	760.0	QUARTZITE			
		cf. 747.5-752.0 small section of GRANITE @ 756.0-756.5			
*760.0	780.0	QTZ. MONZONITE			
		Generally cf. 741.5-747.5; some sections are pale yellowish colour (like cross cutting			
		veins or fractures described above); large yellowish (3-5mm) squarish feld. phenos. are occas-			
		ionally visible; below 766.5' thin black tourmaline veins or fractures filling crosscut the			
		core @ approx. 33°; yellowish crosscutting veins fade-out, trace dissem. py near bottom of			
		section.			

Scale -

Colour Plot & Dips

0

Drill Hole Record

Property	District	Hole No. JC 81-4	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. 360 | Collar Dip -76 | Elev. 5168.9 | Length

Footage From	To	Description	Sample	Length	Analysis
**780.0	830.0	SKARN			
		Extremely variable in colour and proportions of major constituent minerals (garnet, diopsi			
		actinolite); large sections are light yellowish green to pink green diopside-garnet skarn; these			
		sections often contain irregular subangular 'spots' of actinolite and/or tourmaline similar to			
		be SPOTTED SKARN of JC 81-1; darker green sections of garnet-diopside skarn conatain large			
		patches of actinolite and/or tourmaline; these sections also contain thin parallel to sub-			
		parallel veinlets of actinolite/tourmaline; py and cpy occur in groups of thin parallel veinlets			
		w/ actinolite; large (1cmor more) grains of purplish fluorite may occur w/ sulphides; purplish			
		axinite is also observed occasionally as large bladed crystals			
		780.0-783.0 Pyrite and lesser cpy throughout, dissem and in thin, close-spaced veinlets w/			
		actinolite crosscutting core @ 64°; also large (1cm or more) rounded grains of fluorite; large			
		(up to 1cm) grains of pink-red garnet; weakly magnetic (contains some po and/or magn.); trace			
		arspy(?).			
		783.0-802.0 Largely SPOTTED SKARN; varying proportions of garnet and diopside w/ actin. and			
		tourm in 'spots'.			

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	District	Hole No. JC 81-4	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. 360 | Collar Dip -70 | Elev. 5489'

Footage From	Footage To	Description	Sample	Length	Analysis
		796.0-796.5 Section w/ about 80% dark green actinolite; cpy as small blebs (about 3-4%); large pink-red garnet grains; slightly magnetic throughout.			
		802.0-828.0 Largely GARNET-DIOPSIDE SKARN; very few 'spots'; somewhat finer gr. on aug than above; still has larger 'patches' of actinolite.			
		807.0-808.5 About 75% massive to fibrous/acicular dark green actinolite; a few large (up to 1cm) pink-red garnets crystals; about 20% reddish bronze po as irreg grains 1-3mm; lesser cpy as small blebs; po seems exceptionally magnetic.			
		813.5-814.0 Vein(?) consisting largely of purple bladed/tabular crystals of axinite up to 1 cm; some large (3-7mm) light green grains of diopside(??); lesser calcite as wh. grains of several mm.			
		828.5-830.0 About 80% coarse gr. pink-red garnet; 'spots' of actinolite , sometimes w/ calcite; also larger patches containing actinolite,w/ lesser fluorite, diopside and minor calcite.			
830.0	853.5	QTZ. MONZONITE Generally cf. 741.5-747.5; seems to lack crosscutting veins and fractures; a few thin tourmalinised joints or fractures.			

Scale -

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-4	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. 360 | Collar Dip -70 | Elev. 5168.9' | Length

Footage From	Footage To	Description	Sample No.	Length	Analysis
		830.0-832.5 Section is pinkish red; could be pink feldspar or possibly garnets(??), sl. coarser	9		
		gr. than granite in general.	9		
			9		
			9		
			9		
853.5	861.0	GNT.-DIOPS. SKARN	9		
		Coarse gr. patchy garnet-diopside skarn; pink-red garnet grains up to 15mm (aug. 2-4mm);	9		
		Light green diopside is much finer gr.; patches and spots from a few mm. to several cm. of dark			
		green figr. actinolite; a few wh. grains of calcite w/ actinolite; minor py/arspy as 2-3mm			
		grains at bottom contact.			
861.0	878.0	QTZ. MONZONITE			
		861.0-868.0 Slightly pinkish and slightly finer gr. than gray sections; may display large rec-			
		tangular phenos of feldspar up to 15mm long; biotite grains up to 4mm; a few small veins or frac-			
		ure fillings of purple fluorite; veins of qtz.-feldspar pegmatite (aug. grain size 4-5mm) about			
		1cm thick are occasionally visible;			
		868.0-878.0 cf. 830.0-853.5; some sections have yellowish stripes or fractures			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-4	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. 360 | Collar Dip -70 | Elev. 5168.9' | Length

Footage From	Footage To	Description	Sample No.	Length	Analysis
		E.D.H. 878'			
		Dip tests @ 500' 70°			
		@ 878' test ruined at drill			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	J.C. Property	District	Watson Lake M.D.	Hole No.	JC 81-5
Commenced	19 July 1981	Location	Yukon Territory	Tests at	Hor. Comp.
Completed	22 July 1981	Core Size	BQ	Corr. Dip Vertical	Vert. Comp.
Co-ordinates	(approx.) 19+50E 109+50N			True Brg.	Logged by G.D.L.
Objective	Test 2 magnetomitic anomabis near west boundry of JC group			% Recov.	Date 22 July 1981

Claim JC | T Brg. | Collar Dip VERT. | Elev. 4606' | Length

Footage From	Footage To	Description	Sample No.	Length	Analysis
0.0	20.0	CASING			
20.0	216.0	QUARTZITE			
		Greenich-gray f. gr. quartzite; dissem. py throughout, generally as cubes less than 1mm; large irregular spots (aug 2-5mm) of chlorite/po; po is quite magnetic; some chlorite spots and small veinlets also contain py; also numerous subangular grains of white feldspar(?) resembling phenocrysts are usually discernible; chlorite also occurs as fine veinlets and stringers with or without po/py; unit as a whole is weakly to moderately magnetic; quite massive-bedding is not discernible; occasional mauve-coloured (argillaceous) patches;			
		89-91' Broken core			
		94-96' Broken core			
		115.5-116.0 25% po w/ lesser py; as small blebs and cubes (py) aug. 2mm; very magnetic.			
		134.5-152.5' Largely dark mauve coloured QTZITE w/ spots, patches and irregular stringers of greenish-gray QTZITE; still shows cloudy white, subangular phenocryst-like feldspar(?); still has po/py but in lesser amounts; far fewer spots and veinlets of chlorite; somewhat less magnetic on the whole than gray-green QTZITE.			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-5	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. | Collar Dip VERT. | Elev. 4606' | Length

Footage From	Footage To	Description
		170.0-200.0' Black tourmaline/qtz. veins or joint filling veins at high angle to core (approx.
		70^{o}-90^{o} variable); aug. width 2-4 mm; either tourmaline or tourmaline w/ tourmaline/qtz.
		towards contact of vein w/ QTZITE; about 10 major veins over this interval.
		192.0-201' Broken core.
		; below 200' tourmaline veins are uncommon but there is a good deal of rusting jointing and
		shattering at various angles; jointing averages about 75^{o}
216.0	234.0	QTZ MONZONITE(?)
		Bluish gray, f. gr. biotitic granite; aug. grain size 1mm; biotite as black specks and
		laths of 1-2mm; upper section has small pegmatitic veins of qtz./ feld up to 1cm thich (aug
		grain size 3-4mm); upper contact is very sharp @34^{o}; occasional rounded qtz. eyes of 3-4mm.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-5	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. | Collar Dip VERT. | Elev. 4,606' | Length

Footage From	To	Description
234.0	294.0	QUARTZITE
		cf. 20.0-216.0
		267.0-285.0 Mauve-coloured QTZITE; cf. 134.5-152.5
		274.0-275.5 Thin black, sl. magnetic po-bearing stringers.
		280.5 5mm. calcite, po, cpy, vein @ -70°
		285.0-286.0 Intrusive (?); small sill of coarse gr. greenish-yellow porphyritic looking rock;
		yellowish feldspar in phenocrysts of 3-4mm; groundmass is greenish; specks of brown-black
		biotite (1-2mm); has irregular, apparently intrusice contacts w/QTZITE
		286.0-294.0 cf. 276.0-285.0
294.0	299.5	DIOPSIDE SKARN
		Green, fine grain; largely light green diopside; very minor pale flesh-pink garnets as
		grains of a few mm; minor calcite throughout as thin stringers and small spots; last 1' of
		section is interbedded w/ white calc-silicate.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-5	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. | Collar Dip VERT | Elev. 4606'

Footage From	Footage To	Description
		296.0-298.0 Pyrrhotite-rich; up to 25% po as bands and separate blebs; bands seem to parallel original bedding; near top of section massive po is intergrown w/ small, black prismatic bundles of tourmaline (crystals 1-2 cm long).
299.5	336.5	CALC-SILICATE White to pale pink or green banded calc-silicate; bands generally parallel but fairly irregular, aug. width about 1cm; whole unit is effervescent in 10% HCl; thin (2-5cm) bands of sparry calcite; occasional po as small veinlets or spots; a few small sections have coarse (5mm) pale red garnet grains; occasional very minor chlorite.
336.5	377.0	DIOPSIDE SKARN Very similar to 294.0-299.5 but paler green (more siliceous (?)) parts of section have interbeds of garnet; ferous CALC-SILICATE; rounded garnets (aug. 4-5mm) become darker coloured and more plentiful toward bottom of section garnets occur as large separate grains or clusters of grains; most of unit effervesces in 10% HCl; Core angle @ 365' approx. 24^{o}

Scale

Colour, Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-5	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. | Collar Dip -45 | Elev. 4606' | Length

Footage From	Footage To	Description
		339.0-340.5 3cm wide sparry white calcite vein at high angle to core.
		355.0-358.0 Small section of amuve QTZITE; cf. 134.5-152.5
		359.5-362.0 Closely interbedded greenish skarn and white CALC-SILICATE; contains what appear
		to be elongate fragments (aug. 5mm-20mm long) of CALC-SILICATE in a weblike matrix of greenish
		material; large (5-10mm) pale red, rounded garnets throughout
377.0	441.5	CALC-SILICATE
		Very similar to 299.5-336.5 but banding is vague and irregular; very little sulphide; may
		contain small bands or pods of white sparry calcite (MARBLE remnants(?)); may contain small
		sections of SIOPSIDE SKARN; some sections are white w/ pale buff coloured bands.
		Core angle @ 395' 22°
		413.0-414.0 Calcite vein; cf. 339.0-340.5
		421.5-423.5 Several sections (1-5cm) of melted, patchy 'xenolithic' mauve qtzite.
		Core angle @ 434' approx.27°

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-5	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. | Collar Dip VERT. | Elev. 4606' | Length

Footage From	Footage To	Description
441.5	459.0	GARNET - DIOPSIDE SKARN
		Pale green; f. gr. diopside w/ soarser gr. (1-2cm) pale pink garnets; spots of wh. calcite throughout; fairly massive; some sections show very vague compositional banding; most of unit is effervescent in 10% HCl; lower 2' of sedtion is interbedded w/ irreg. beds of mauve-coloured QTZITE.
459.0	466.5	QUARTZITE
		Irregular intervands of mauve QTZITE w/ greenish CALC-SILICATE and a few bands of sparry white calcite; bands are aug. 1-2cm; a rew small bands of garnet ferous marble.
466.5	472.0	CALC-SILICATE
		White to pale green or pink; f. gr. ; similar to 299.5-336.5; no discernible sulphides.
472.0	477.0	QUARTZITE
		cf. 459.0-466.5
		477' E.O.H.

Scale "

Cross Plot & Dip

0

Drill Hole Record

Cominco

Property	JC Property	District	Watson Lake M.D.	Hole No.	JC 81-7		
Commenced	24 July 1981	Location	Yukon Territory	Tests at		Hor. Comp.	
Completed	26 July 1981	Core Size	BQ	Corr. Dip	90°	Vert. Comp.	
Co-ordinates	83 + 84E 97 + 12N			True Brg.		Logged by	G.D.L.
Objective	Test skarn horizon for Sn mineralization.			% Recov.		Date	30 July 1981

Claim: SC | T Brg.: VERTICAL | Collar Dip: | Elev.: 4738.1' | Length: 375'

Footage From	Footage To	Description	Sample No.	Length	Analysis Cu	Zn	Sn	Ag	Au
0.0	10.0	CASING							
10.0	187.0	QUARTZITE							
		Pale green-gray to mauve coloured; fine grained; mauve coloured sections may have small							
		wh. 'phenocrysts' (1mm); small scale fine compositional banding is often apparent in mauve-							
		coloured sections; py as blebs of a few mm and w/ chlorite in qtz. 'sweats'; some sections sl.							
		magnetic, probably due to dissem po; occasional bands show chlorite- or biotite-rich banding; a							
		few small (5cm) irregular inclusions of cherty pink/greenish calc-silicate at 15' and 22.5'							
		occasional larger (3mm) blebs of magnetic po; ranges from massive to distinctly banded;							
		Core angle @ 44' 28°							
		77.0-78.0 Small section of LAPILLI TUFF(?); dark gray green to mauve coloured QTZITIC rock;							
		rounded frags of po/py/qtz. elongate parallel to vague banding; frags up to 3cm long and 5mm							
		wide; also smaller, rounded but more equidiminsional frags of gray qtzitic material;							
		Core angle @ 117' 33°							

211-9

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-7	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. VERTICAL | Collar Dip | Elev. 4738.1'

Footage From	To	Description
		;gray-green QTZITE tends to be quite massive whereas mauve-coloured sections are usually well
		blended.
		147'-187' Zone of low core recovery/broken core.
187.0	208.0	DIOPSIDE SKARN
		Largely very fine-grained siliceous diopside skarn; ple green; often massive but usually
		shows parallel to subparallel bands of either pale pink-red garnet or dark green actinolite;
		these bands are usually a few mm wide and may be spotty or patchy; some garnet may be very pale,
		almost white; a few white calcite bands and small stringers; may contain small blebs of py or
		arspy.
		187.5-191.0 Beryl/fluorite/tourmaline vein; eahedral pale green beryl (aug. 3mm length), black
		tourm. (aug. 3mm); purplish fluorite interstitial to beryl/tourm.; coarse (2-3mm) pale pink or
		flesh coulured garnet in close paragenesis w/ tourm.; upper 1' cuts massive DIOPSIDE SKARN
		(epidote may be present); tr. moly as 1-2mm flakes w/ beryl/fluorite; large milky wh. prismatic
		qtz. (or beryl) xls (3mm) are also present; thin (less than 1mm) rims of moly surround rounded
		2-3mm grains of pale flesh-coloured garnet assoc. w/ tourm; last 1' has very coarse pink garnet
		w/ small (1-2mm) specks of black tourm. (?).

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-7	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC

T Brg. VERTICAL

Collar Dip

Elev. 4738.1'

Length 375'

Footage From	To	Description	Sar No.
		Core angle @ 200' 35°	
		208.0' 3cm po vein w/ lesser py, cpy in fluoritic matrix.	
208.0	324.5	SPOTTED SKARN	
		Pale yellowish-green garnet-diopside(?) skarn; main constituants difficult to identify but	97
		rock may contain epidote as well; aug.. grain size seems to be about 3mm; 'spots' are irregular	97
		w/ numerous angular sides and range up to 1cm large; spots minerals include dark-green actinolite	
		white sparry calcite; waxy green euhedral axinite(?) up to several mm; prismatic black tourmal-	
		ine; po/arspy/cpy and minor py occur frequently as irregular but subparallel bands of small	
		(1-3mm) grains and blebs, often associated w/ actinolite; sulphides also occur in typical black	
		(tourm.(?)) sulphide bands w/ fluorite; occasional larger (few cm.) patches of act.	
		218.0-220.0 Numerous po/cpy/arspy bands w/ fluorite 'spots'	
		220.0-237.0 ALTERED BRECCIA	
		Greenish-brown to yellowish green, very soft, crumbly 'rotted' looking breccia zone; con-	
		tains angular frags of SPOTTED SKARN as well as frags. of white calcite and tourmaline; still	
		contains characteristic sulphides; intact 'graphic' calcite vein (3cm) @ 222'; 10cm of brecciated	
		'graphic' calcite tourm. (remnant of vein(?)) at 232' ; frags are angular and aug. about 5mm;	

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Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-7	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC

T Brg. VERTICAL

Collar Dip

Elev. 4738.1'

Length 375'

Footage From	To	Description
		below 234' rock is only slightly brecciated and has typical SPOTTED SKARN texture but retains a greenish-brown 'bleached and rotted' look; tourmaline (serpentine(??)) occurs as a shiny slick-enside-like coating on some joints.
		240.0-246.0 Po/cpy/arepy in patches w/ actin throughout this section
		;occasional qtz. bands @ approx. 0-10° w/ py and chlor(??) between 250.0-256.0;
		256.5-257.5 Section which has same 'rotted' look as 220.0-237.0 with only slight brecciation; calcite stringers.
		262.0-304.0 Section of altered SPOTTED SKARN; rock das similar colouration to 220.0-237.0 but is not crumbly or extensively brecciated; joint planes often show tourmaline (serpentine(??)) slickenside-like coating; thin wh. calcite stringers are quite common; small sections consist of relatively 'fresh' SPOTTED SKARN; most fracture surfaces are coated w/ black 'coaly' tourm(?) some sections are f. gr. DIOPSIDE SKARN more similar to 187.0-208.0.

Scale •

Colour Plot
1" Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-7	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC
T Brg. VERTICAL
Collar Dip
Elev. • 4738.1'
Length 375'

Footage From	To	Description	Sa No
		304.0-308.0 Fluorite-rich skarn; finer gr. diopside skarn 'floating' in 40-50% purplish to white fluorite.	
		308' 1cm tourm/actin vein @ 80°; contains coarse euhedral arspy (aug. 3mm) seemingly concentrated along selvage; minor calcite; surrounding skarn is still somewhat fluoritic.	9 9 9
		;below 308.0' actin. becomes more common in large patches.	
		312.0' 4mm py/arspy/cpy/fluorite vein @ 80°	
		319.0-320.0 Fluoritic (25%) rock similar to 304.0-308.0	

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-7	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | Brg. VERTICAL | Collar Dip | Elev. 4738.1' | Length 375'

Footage From	To	Description	Sam No.
324.5	375.0	QTZ. MONZONITE	97
		Very pale greenish to gray granite; aug. grain size 1mm; biotite less than 2% as very	97
		small black laths, often seems altered to chlorite; biotite more plentiful (5-10%) in some	97
		sections; yellowish discolouration (greisen?) about 1cm wide follows steep angle, often tourm-	97
		alinated, fractures; occasional large squarish yellowish feld. phenos. up to 1cm; rounded grayish	97
		qtz. eyes quite sommon (aug. 3-4mm); feld phenos sometimes wholly or partially altered to green	97
		talcose mineral; tracr f. gr. arspy; towards bottom of hole large sections may be yellowish in	97
		colour, emphasizing the presence of feld. phenos and qtz. eyes; tourm. joints @ 75-80°; tourm.	97
		fractures often carry mnr. arspy.	97
			97
		E.O.H. 375'	
		Dip test @ 375' 90°	

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	JC Property	District	Watson Lake M.D.	Hole No.	JC 81-8
Commenced	27 JULY 1981	Location	Yukon Territory	Tests at	Hor. Comp.
Completed	29 JULY 1981	Core Size	BQ	Corr. Dip	90° Vert. Comp.
Co-ordinates	79 + 95E 97 + 10N			True Brg.	Logged by G.D.L.
Objective	Test skarn horizon for Sn mineralization.			% Recov.	Date 31 July 1981

Claim JC | T Brg. | Collar Dip 90° | Elev. 4781

Footage From	Footage To	Description	Sample No.	Length	Analysis
0.0	10.0	CASING			
10.0	93.0	QUARTZITE			
		Gray-green to mauve; f. gr. ; often has fine irregular but subparallel banding; py and magnetic po common as small blebs or, occasionally, as disseminations; occasional milky white qtz. 'sweats' of a few cm are ofgen chloritic; some zones of 'shattering' or very weak brecciation; grayish quartzite is more prone to be massive (no banding visible); more massive sections of mauve-coloured QTZITE may show 1-2mm brown biotite specks; greenish sections may show fine specks of sericite (?); rare 1-3mm grains of pale red garnet; qtz. 'sweats' often contain sulphides (po/py)			
		Core angle @ 60' 25°			
		Core angle @ 83' 23°			
93.0	98.0	BIOTITE Q.F.P.			
		Bluish-gray; bluish wh. roundish qtz. eyes from 1-4mm; feldspar is whitish and finer grained speckled w/brownish fiotite as 1-2mm laths; has irreg. melted looking upper boundary w/quartzite; some question as to whether this is a true porphyry or merely a hornfelsed equivalent of the mauve-coloured (argillaceous) QUARTZITE.			

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-8	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. | Collar Dip 90 | Elev. 4981' | Length 747'

Footage From	Footage To	Description	Sample	Length	Analysis
98.0	187.0	QUARTZITE			
		cf. 10.0-93.0; toward bottom of hole some sections may contain f. gr. black biotite;	9		
			9		
		140.5-143.5 Mauve-coloured QTZITE w/well developed 3-4mm long laths of brown biotite; another small section at 150.5-151.5.			
		182.5 4cm sill or dyke of pale greenish wh. GRANITE; aug. grain size 2mm; biotite about 5% as 2-4mm flakes; cf. 187.0-189.0.			
187.0	189.0	QTZ. MONZONITE(?)	9		
		White w/ a pale greenish tinge; rounded grayish glassy qtz. grains aug. 2mm (about 30%); biotite as dark brownish black clusters of flakes of 4-5mm; greenish tinge may be chloritic alteration of biotite; soft, seems bleached or altered; fluoritic(?).			
189.0	199.0	QUARTZITE (CALC-SILICATE)	9		
		Banded gray-green to mauve QTZITE; often biotitic, sometimes chloritic; increasing amount of calcareous material towards bottom resulting in cherty pinkish or greenish banded sections;	9		

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-8	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. | Collar Dip 90° | Elev. 4781' | Length

Footage From	Footage To	Description
		194.0' 20cm vein of coarse bladed violet axinite (1cm crystals); also contains minor fine grained epidute(?) and actinolite(??) as well as calcite.
		198.0-199.0 Section of GRANITE similar to 187.0 - 189.0 but slightly coarser grained, contains a narrow vein of purplish axinite which seems to envelope remnant qtz. grains from the granite
199.0	211.0	SPOTTED SKARN Patchy light green-pale pink/red garnet-diopside skarn; contains many sided angular spots of a few mm to several cm; spots may contain varying amounts of dark green actinolite, wh. sparry calcite and occasionally tourmaline; coarse gr. arspy may also occur in 'spots' with or without other minerals; minor amounts of cpy also occur in this manner; main body if this unit may also contain small amount of epidote(?); major constituents are varying amounts of pale pink-red garnet and finer grained diopside; larger spots also contain pale purple-gray fluorite; some spots or patches w/actin. also contain significant masses of f. gr. magn.;
		205.0-205.75 Band of 85% coarse (approx. 2mm) granular magn; irreg. rounded pale pastel yellow garnets(?); very minor actin., fluorite(?)
		280.0' 6cm band of granular magn. w/ calcite, cpy, actin, epidote(?) as minor constituents
		208.5 10cm band w/ same mineralogy as above but only 65% granular (2-4mm) magn.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-8	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. | Collar Dip -90° | Elev. 4781' | Length 762'

Footage From	Footage To	Description	Sample No.	Length	Analysis
211.0	246.5	DIOPSIDE SKARN	9		
		Fine gr., light green diopside-bearing skarn; quite siliceous looking; very pale pink-red	9		
		garnets in scattered rounded grains (1-4mm) comprise about 5%; small patches of darker green actinolite but lacks 'spot' texture;			
		211.0-215.5 Retains pinkish-greenish banding of CALC-SILICATE but is more deeply coloured;	9		
		bottom 2' has rusty irregular calcitic banding			
		;below 218.5 rock contains varying proportions of po/cpy/arspy w/pale violet-gray fluorite;	9		
		sulphides and silicate minerals often seem to 'float' in a matrix of up to 35% fluorite; po is	9		
		the major sulphide w/long sections of up to 85-90% po; arspy up to 10% as often large euhedral	9		
		grains; minor cpy and py; major gangue minerals are fluorite and diopside; py rarely forms wide	9		
		bands (1-2cm); contains some vertical tourm coated fractures.	9		
			9		
		241.0-243.5 Actinolite-rich section w/ bands of f. gr. magn and arspy at centre; lighter			
		coloured sections at top and bottom resemble pale SPOTTED SKARN.			
		245.0' Thin (1.5cm) band of f. gr. magn in po-bearing skarn.	97		

Scale

Colour Plot & Dips

0

Drill Hole Record

Continued

Property	District	Hole No. JC 81-8	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. | Collar Dip 90° | Elev. 4781' | Length 762'

Footage From	Footage To	Description	S
246.5	269.0	SPOTTED SKARN	
		Similar mineralogy / textures to 199.0-211.0 but often very pale coloured;	
		246.5-249.0 Pale SPOTTED SKARN w/ thin (5-10mm) bands of f. gr. magnetite; dark green actinolite	S
		w/ magn; minor blebs of cyp; thin (2mm) vertical 'graphic' calcite vein;	S
			S
		;occasional thin bands of magn. and/or actinolite	S
		255.0-255.5 Pale green, coarse grain (aug. 3mm) fluorite vein.	
269.0	272.5	AMYGDALOIDAL BASALT	
		Black to dark brown; f. gr.; rounded calcite-filled amygdules up to 5mm; some amygdules	
		filled w/ soft f. gr. black material; small 1mm play laths; tiny balck 'glassy' grains; whole	
		unit is weakly magnetic; thin wh. calcite stringers.	
272.5	273.5	SPOTTED SKARN	
		cf. 246.5-269.0 but seems altered by BASALT	

Drill Hole Record

Colour Plot & Dips

Cominco

Property	District	Hole No. JC 81-8	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim JC | T Brg. | Collar Dip 90° | Elev. 4781' | Length 762'

Footage From	Footage To	Description
273.5	282.0	AMYGDALOIDAL BASALT
		cf. 269.0-272.5; contacts of both sections show thin bands of tectonic breccia; lowermost
		contact @ approx. 45°
282.0	289.5	DIOPSIDE SKARN
		Green, f. gr. diopside-bearing skarn; siliceous; whole section is similar to 211.0-215.5
		retaining cherty pinkish and greenish bands which may be a relict CALC-SILICATE texture; no vis-
		ible sulphide or magnetite mineralization;
289.0	311.0	SPOTTED SKARN
		Very pale SPOTTED garnet-diopside skarn; similar mineralogy / texture to 199.0-211.0 w/
		the exception that magnetite or sulphide mnlzation is not readily visible; most spots are actin-
		olite;
		306.5-307.5 Small section of AMYGDALOIDAL BASALT cf. 273.5-283.0; blocky angular contacts;
		small section again at 308.0

Property	District	Hole No. JC 81-8	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Footage From	Footage To	Description
		;skarn below 308.0 seems rusty and altered; last 0.5' is fragment supported tectonic breccia
		containing large angular frags of skarn and QTZITE(?)
311.0	342.0	QTZ. MONZONITE
		Brownish to grayish; f. gr. (aug. grain size 1mm); biotite as small (1mm) black laths (less
		than 5%); occasional rounded gray qtz. eyes up to 5mm; very qtz. rich (70%(??)); top 15' of
		hole is extremely crumbly; a few thin, near vertical tourmalinated fractures; talcose coatings
		on some joint planes; a few small pegmatitic qtz./tourm. veins at high angle to core.

Colour Plot & Dips

Drill Hole [illegible]

Property	JC Property	District	Watson Lake M.D.	Hole No.	JC 81-9		
Commenced	30 July 1981	Location	Yukon Territory	Tests at	p.7	Hor. Comp.	
Completed	4 August 1981	Core Size	BQ	Corr. Dip	-80°	Vert. Comp.	
Co-ordinates	L76E 95N (approx.)			True Brg.	360°	Logged by	G.D.L.
Objective	Test skarn horizon for Sn mineralization.			% Recov.		Date	4 August 1981

Claim | T Brg. | Collar Dip | Elev.

Footage From	Footage To	Description	Sample No.	Length	Analysis
0.0	10.0	CASING			
10.0	630.0	QUARTZITE			
		Gray-green to mauve-coloured (argillaceous); v.f.gr.; may be finely banded; occasional small			
		wh. qtz. stringers; more massive mauve-coloured sections may have hornfelsic texture w/ wh. spots			
		resembling phenocrysts(?); small sections may be sl. brecciated; occasional chloritic qtz.			
		'sweats' w/ py;			
		Core angle @ 55' approx. 19°			
		;some sections are light gray and massive w/ irreg dark grayer bands and stringers; occasional			
		minor po as blebs or sometimes as stringers;			
		122.0-160.5 'Marble-cake' textured hornfels; patchy, irregular hybrid of light gray f. gr.			
		QTZITE w/ mauve coloured QTZITE; sometimes shows small chloritic patches.			
		Core angle @ 208' 22°			
		256.5-261.0 Large qtz. vein or sweat in f. gr. gray QTZITE; chloritic w/ brownish stringers;			
		sl. shattered or brecciated			

Colour Plot & Dips

Property	District	Hole No. JC 81-9	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length

Footage From	To	Description
		603.5-606.0 Small section of LAPILLI TUFF(?); contains flattened elongate frags(?) of gray quartzitic material (up to 3cm length) in a matrix of weakly banded mauve-coloured QTZITE.
		; last 20' of section contain included sections of CALC-SILICATE rock w/ cherty pinkish and greenish bands;
		626.0-630.0 Zone of qtz. veins/sweats and brecciation; most of section is grayish QTZITIC rock heavily mottled w/brownish-yellowish qtz.-carbonate material; brecciated sections consist of small (less than 1cm) qtzitic frags in a soft greenish matrix; thin vert. qtz./carb. stringers through much of section.
630.0	729.0	GARNET-DIOPSIDE SKARN Green, f. gr. siliceous diopside-bearing skarn; pale pink-red garnets as coarse rounded grains and in patches; actinolite(?) occurs occasionally in narrow bands or irregular strips; small sections develop texture similar to SPOTTED SKARN; small sections contain dark-coloured fluorite(?) and qtz. as patches surrounding coarse-gr. garnet; occasional qtz./carb. bands and 'graphic' calcite stringers;
		641.5'. 1cm 'graphic' calcite vein @ 81°; adjacent rock has fluorite 'spots' up to 8mm.

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-9	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length

Footage From	To	Description
		Core angle @ 275' 21°
		288.5-316.5 Section of 'marble-cake' hornfels cf. 122.0-160.5.
		342.0-377.0 Qtz. breccia zone; section of massive, glassy light rusty brown qtz; shattered or brecciated for the most part; very small sections of gray f. gr. QTZITE.
		391.5-394.0 Several 1cm bands or frags.(?) of py/qtz.; seem to consist of angular brecciated py frags. in qtz. matrix.
		417' 1cm vein of qtz./chlorite w/ coarse flakes of muscovite(?); smaller veins or 'sweats' of this material occur infrequently toward bottom of hole.
		;towards bottom of section QTZITE becomes more chloritic and may be slightly biotitic in sections

Drill Hole F. Sord

Cominco

Colour Plot & Dips

Property	District	Hole No. JC 81-9	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | Brg. | Collar Dip | Elev. | Length

Footage From	To	Description	Sar No.
		;sections of f. gr. massive DIOPSIDE SKARN; these sections often have interstial fluorite prod-	
		ucing a 'float' texture w/ diopside in a matrix of fluorite	
		658' 4mm 'graphic' calcite vein @ 84°	
		659.5-660.0 Rusty qtz./carb vein-breccia zone; largely qtz/carb. w/ frags of SKARN; 2cm. angular	
		vug filled w/ small sparry qtz. xls.	
		655.0-689.0 Is largely f. gr. siliceous (often fluoritic) SIOPSIDE SKARN w/ very little garnet;	
			S
		665.0-669.0 Small sections showing cherty pinkish and greenish banding; possible remnants of	S
		banded CALC-SILICATE texture.	S
			S
		672.0-675.0 Coarse gr. qtz./beryl/fluorite vein; almost parallel to length of core; mnr. arspy	
		and axinite and some epidote; narrow brecciated selvedge w/ frags of host SKARN;	
		675.5-676.5 Brecciated qtz./'graphic' carbonate vein cf. 670.0-672.0; graphic calite appears	
		in a thin vein apparently postdating brecciation.	

Drill Hole Record

Cominco

Colour Plot & Dips

Property	District	Hole No. JC 81-9	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length

Footage From	Footage To	Description	Sample	Length	Analysis
		679.5-680.5 1cm qtz./'graphic' calcite/arspy/py vein @ approx. 80°; arspy as coarse euhedral xls up to 5mm; py mnr as smaller cubes.			
		680.0-681.0 Section w/ cherty pinkish and greenish bands; cf. 665.0-669.0			
		686.0 4mm 'graphic' calcite vein @ 70°			
		;from 689.0-709.0' skarn is very garnetiferous (up to 75% in some sections); rock is permeated by numerous parallel narrow ('sheeted') veinlets of act. or tourm(?) at about 80°; these veinlets may contain py or arspy in minor ammounts; cpy/py/arspy and minor po also occur in small actinolite patches (1-3cm) or rare 'spots' of actin,; occasional narrow 'graphic' calcite veinlets also at approx. 80°; actin. also occurs in sections as thin irregular bands or stripes of a few mm,. usually in diopside-rich sections;			
		;from 709.0-729.0' skarn is largely diopside w/ approx. 20% actin. as thin irreg. subparallel bands or stripes; small sections have a definite 'tiger-stripe' texture w/ actin as stripes in diopside; towards bottom arspy/cpy occur as scattered blebs and cubes as well as in veinlets and actin. patches described for 689.0-709.0'; minor po is present as well; scattered sulphides may be assoc. w/ sheeted veinlets.			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	District	Hole No. JC 81-9	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length

Footage From	Footage To	Description	Sample No.	Length	Analysis
729.0	745.0	QUARTZITE			
		Small section of f. gr. mauve-coloured and grayish-green QTZITE; small included sections of	S		
		pinkish/greenish banded cherty CALC-SILICATE interbanded w/ mauve-coloured QTZITE; somewhat	S		
		shattered or brecciated in parts; some dissem. py/arspy as fine xls on joints and fractures;			
745.0	762.0	QTZ. MONZONITE	S		
		Pale brown-buff to pale greenish; f. gr. (aug. less than 1mm); in greenish sections biotite	S		
		as small flakes less than 1mm seems largely sltered to chlorite; bio is not readily visible in	S		
		brownish sections except as occasional larger (2-3mm) flakes; occasional steep angled tourm.;			
		coated fractures; some joints w/ talcose coatings; frquent glassy gray qtz. eyes up to 4-5mm;			
		top of section may be fluoritic(?); small sections resemble relatively unaltered grayish granite.			
		E.O.H. 762'			
		Dip tests @412' 80°			
		@754' 77.5°			

Scale

Colour Plot
A Dips

Drill Hole Record

Cominco

Property	Tum Property	District Whitehorse M.D. Yukon	Hole No. T83-1		
Commenced	August 12, 1983	Location West of Bouillabaise Lk.	Tests at 84.4m-(31°), 148.4m(-30°)	Hor. Comp. 121.8m	
Completed	August 20, 1983	Core Size N.Q.	Corr. Dip -35° end to end	Vert. Comp. 84.5m	
Co-ordinates	140 + 00W, 3 + 67N		True Brg. 205°	Logged by M.R. Murrell	
Objective	To test a strong EM anomaly in stratigraphy similar to the nearby Clear Lake Pb, Zn, Ag deposit.		% Recov. 76%	Revised by AB Mawer Date Aug. 19, 22, 23, 1983	

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet

Meterage From	Meterage To	Description	Sample No.	Length	Analysis
0.00	12.2	Overburden - Recovered pieces mainly glacial boulders - mainly intrusives (granodiorite) and quartzite.			
12.2	23.0	Brecciated quartz and mudstone unit. Much is broken by surface weathering, but intact pieces consist of white quartz fragments - angular, usually 1 to 3 cm across, with black mudstone and quartz eye rhyolite fragments. Quartz makes up 80% of the remaining core - much of the softer mudstone has likely been washed away in drilling. Contains a few gouge (or surface leached?) zones as at 13.4-16.0 (Black sand), and 20.9-21.6. All is silicified. Quite calcareous at the start becoming less so toward the end of the section.			
23.0	27.4	Dark grey to black fine grained very calcareous limestone massive, silicified where carbonaceous. No bedding apparent. Broken into chunks 2-3 cm wide with occasional section to 8 cm, by irregular and random fractures. Contains a few wispy random calcite veins which gain in intensity down hole so that the last 30 cm is mainly white quartz - calcite in a stockwork or brecciated veining. Minor graphite is present on a few of the fracture surfaces. 23.0 - 25.5: Black carbonaceous muddy looking limestone. 25.5 - 27.4: Med grey f.g. limestone. Undulatory contact with above at about 25° but no bedding apparent in the limestone.			
27.4	46.0	Mudstone locally streaked with thin to laminated subtle siltstone and streaky pyrite. Overall is black, massive, fine grained. Usually broken into small (1 cm to 3 cm) chunks, as cherty looking fragments, but larger intervals present after 46.6. Hard and siliceous throughout. Calcareous content is variable.			

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet

Metres From	Metres To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag		Ba
		27.4 - 31.7: Slightly calcareous							
		31.7 - 33.5: Non calcareous							
		33.5 - 35.1: Very calcareous							
		35.1 - 36.5: Moderately calcareous							
		36.5 - 37.8: Very calcareous at start grading to slightly calcareous down-hole.							
		37.8 - 42.4: same as 36.5 - 37.8							
		42.4 - 43.9: same as 36.5 - 37.8							
		43.9 - 45.7: Very calcareous							
		45.7 - 46.0: Non calcareous to very slightly calc.							
		Pyrite is present in three forms. The obvious as a few clasts or nodules up to 1½ cm							
		(ie. at 34.4 ot 36.0), as thin disseminated semi-massive beds (ie. at 37.5 to 37.7). More							
		subtle pyrite is found as thin dusty disseminations through much of this section, and gives the							
		wet core its bedding definition (ie 31.2 - 37.6, diminishing down-hole). Locally pyrite							
		cumulatively totals 2% over short intervals (20 - 30cm). Graphite is not abundant, but							
		occassionally is pronounced as glossy mirror-smooth fracture surfaces likely parallel to bedding.							
		Bedding can be seen in numerous places and runs a consistent 25° with no variations due to							
		flexures, slumping, or other tectonism.							
		Although much of this section is broken, no gouge or slickensides (inferring faulting) are							
		present.							
		Samples:							
		31.2 - 32.2	39507	1.0	50	276	.9		829
		37.2 - 37.7	39508	0.5	9	273	<.4		777

211-0437

Scale

Colour Plot
& Dips

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Sheet

Metres From	To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag		Ba
46.0	62.0	Calcareous mudstone: Black to dark grey, competent. Bedded throughout with very thin to wispy hair-lines of white discontinuous to streaky silt. Several 10 cm sections show better bedding, with silt forming perhaps 5%. Dusty (pin-point) pyrite disseminated, fairly evenly distributed throughout, but can only easily be seen in the darker portions of the core. In other areas a hand lens in necessary. Perhaps is only 1%, but could possibly account for a portion of the EM anomaly. Few thin calcite veins present between 48 and 54, usually cutting at 50 to 60°. Quite broken between 49.4 and 52, with possible gouge at 51.1 - 51.3. Minor graphite on broken (shear?) faces near 45, and in the broken zone (49.4 - 52). Broken piece of quartz vein at 50.6 contains 3 cm patch of f.g. pyrite. Bedding: 47.0 - 20°, 49.0 - 25°, 48.0 - 22°, 51.7 - 15°, 52.6 - 20°, 55.5 - 20°, 59.0 - 30°, 61.0 - 30°, Again - no folding or flexures.						
		Sample: 51.5 - 52.5	39509	1.0	14	682	<.4		482
62.0	76.8	Black laminated calcareous mudstone as above, but interbedded with wide zones (30cm) of dark grey massive to subtly bedded calcareous mudstone - Possibly the slight addition of silt, or more probably the lack of carbonaceous material gives the lighter colouration. Contacts are even, sharp and regular at 20°. Pyrite is present throughout as dusty disseminations, but is more pronounced in the darker portions. Would run less than 1% pyrite throughout. Locally, minute clots, or even very thin beds (to 3mm) are present - ie near 74.3. Much is broken into small pieces but overall longer core pieces are present - 10 to 15 cm. Glossy graphite is common on some surfaces, but most broken pieces are just carbonaceous. Random fractures.						

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet

Metres From	To	Description	Sample No.	Length	Analysis ppm Pb	Zn	Ag		Ba
		Fossils - small monograptus graptolite fragments spotted at 67.3 - sample taken for identification.							
		67.4 - 67.5 - Coarser grained dirty limestone unit - soft.							
		Locally the bedding is slightly intercalated and a small slip disruptions.							
		Gouge zone with carbonaceous fragments at 67.1 - 67.3, and minor at 69.0. Other slightly							
		graphitic zones may be reflecting slight slips. Note poor recovery (12%) from 69-72, tube did							
		not lock. Two stages of calcite veining over the last metre: earliest is a clean white coarse							
		grained calcite vein running parallel to core - about 0.4 cm wide. The second is a wispy to							
		irregular dirty medium grained cross cutting vein as seen at 76.0 (0.5 cm wide) that is cutting							
		at 40°. Note that at this instance only, small specks of dark orange sphalerite grains to minute							
		clusters are present in the vein.							
		Bedding: Most is 25° with a few short sections as low at 17°.							
		Samples: 75.0 - 75.9	39510	0.9	49	724	.7		2291
		75.9 - 76.1	39511	0.3	17	883	<.4		2241
		76.1 - 76.8	39512	0.7	16	1290	<.4		706
76.8 - 77.6		Limestone - medium to dark grey. Very fine grained to aphanitic. Non bedded, but has an overall							
		slightly undulatory or mottled texture. Shot through with thin wispy random calcite veins,							
		likely sweated out of the limestone itself. One of the larger irregular dirty veins (at 77.0)							
		has a small 2 mm patch of fine grained pyrite. A few of the minute calcite veins of 76.9 have							
		internal fine grained wisps.							
		Sample: 76.8 - 77.6	39513	0.8	10	158	<.4		5216

Scale

Colour Plot
A Dips

0

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length

Metres From	Metres To	Description	Sample No.	Length	Analysis ppm Pb	Zn	Ag		Ba
77.6	84.4	Black graphitic calcareous mudstone. Black, fine grained, massive to very subtly bedded. Local minor pyrite in only trace amounts, but is present as a few small clots or nodules and 80.5 - 81.0 as well as disseminated on bedding.							
		78.6 - 79.2: Broken carbonaceous fault zone, but no real muddy gouge development.							
		80.2 - 84.3: Very graphitic. Bedding becomes almost parallel to core over most of this interval.							
		Overall is moderately to very calcareous with a few short (10 cm) sections only slightly calcareous. Entire section is silicious and hard.							
		Sample: 80.5 - 81.0	39514	0.5	23	996	<.4		3409
84.4	91.8	Limestone light to medium grey, fine grained. Subtle mottled texture overall; but grades into bedded mudstone - ie. between 84.4 - 85.1 is more a mudstone, from 85.1 to 85.6 is very tight mottled black and dark grey, and afterwards is very "wide mottled" with undulatory bands about 20-30 cm wide. Most are stylolitic along their boundaries. Whole section is shot through with 1-2% very thin calcite veins that become more intense in darker portions of the limestone (ie. 86.7, 87.8 - 88.1, 90.0 - 90.2, 91.1 - 91.8) (Crackle-zone). Bedding in upper, muddy portion is at 20°, rest cannot be determined. Note - sphalerite occurs as several small (1-2 mm) ovoids and lenses (4 x 10 mm) at 85.6, the contact point between the "tight mottled" and the wide mottled zones. Core is massive, unbroken, excellent recovery.							
		Sample: 85.4 - 85.8							

Scale

Grid, Plot & Dips

Drill Hole Record

Cominco

Property	Tum Property	District	Hole No.	T83-1	
Commenced		Location	Tests at		Hor. Comp.
Completed		Core Size	Corr. Dip		Vert. Comp.
Co-ordinates			True Brg.		Logged by
Objective			% Recov.		Date

Claim | T Brg. | Collar Dip | Elev. | Length | Sheet

Metres From	Metres To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag		Ba
		Pyrite is present as irregular patches to streaks to aggregates (totalling 2-3%), in clots up to 1 cm wide from 87.5 - 89.3.							
		Sample: 85.4 - 85.8	39519	0.4	30	709	<.4		651
91.8	101.8	Dolomite: Medium to dark grey, subtly mottled. Grades from fine grained at the start to sandy textured by 96.0 and maintains the grain size to section end at 101.8. Most is hard and siliceous, with a few short softer portions. Quartz-calcite veining is as per usual (thin wisps to local stockworks) but contains no pyrite or other sulphides. Irregularly broken into chunks 3 to 10cm long. No graphite or carbonaceous film on surface except for minor amount at 95.2 and 95.7. A stockwork quartz and minor calcite vein zone is present from 97.0 to 97.8 where the core is completely shattered into angular 1 to 2 cm pieces. Unbroken pieces consist of mainly white quartz with small angular pieces of dolomite (60%). Local stylolite development, but quite minor. An 8 cm wide white calcite vein cuts at 60° at 101.5. Subtle bedding at 30° suggested at a few areas.							
101.8	109.1	Graphitic fault zone: Mainly black massive mudstone almost completely broken into 2 to 3 cm irregular core pieces. Glossy graphite on all fracture surfaces. Gouge is present only as a thin band (1cm) at 106.9 (50°) and 105.9. A few of the larger pieces show minor streaky pyrite which gains in intensity down hole so that by 107 the core looks very similar to that seen higher up the hole. Core is only slightly calcareous throughout, but in a few brecciated-calcite areas is very calcareous.							

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Sheet

Metres From	To	Description	Sample No.	Length	Analysis ppm Pb	Zn	Ag		Ba
		At 102.0 - 102.9 abundant small (1 mm) pseudomorphs of fibrous quartz and pyrite after gypsum							
		grains.							
		ZnS present over 1 cm as several minute dark orange fragments with calcite in a brecciated area							
		with pyrite at 106.5.							
		Sample: 106.2 - 106.8	39515	0.6	43	596	<.4		888
109.1 -	121.9	Black mudstone with streaky pyrite. Fairly massive and competent with many pieces around 10 cm							
		in length. Black silicious non-calcareous to locally slightly calcareous. Quartz and calcite							
		veining almost non-existent. Pyrite is found throughout at 2 to 3 % as very thin, sometimes							
		discontinuous hair-line laminae. These streaks are closely spaced and may actually make up a							
		larger percentage of the total core. Starting at about 118, the streaking becomes more pronounced							
		and appears, on dry surface, there could be a fair amount of very fine grained silt present,							
		giving a very very fine "pin-striped" effect.							
		Bedding is easily discernible throughout, consistently at 25° to 117, then changing to 35° for							
		the rest of the section.							
121.9 -	126.2	Graphitic Fault Zone - Essentially all graphitic black mudstone with several sections of black							
		gouge. Variably calcareous from thin black muddy sections with no reaction, to minor streaky							
		pyrite portions which are moderately calcareous, to a few fracture zones with quartz-calcite							
		veining. Most fracture surfaces are graphitic.. Fragments vary from gravel sized angular to							
		chunky 3-4 cm pieces, with better recovered portions (10 cm) usually in the crackle zone. Gouge							
		sections are 122.8 - 123.1, 125.0 - 126.2. Bedding at 123.4 is at 25°.							

Scale

Colour Plot
& Dips

0

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet

Metres From	Metres To	Description	Sample No.	Length	Analysis
126.2	129.0	Very limy mudstone. Very thin bedded light and medium grey - regular bedding. Almost looks laminated. No graded bedding apparent. Possibly is interbedded very fine black graphitic mudstone with slightly granular lighter grey limestone (?). Graphite present on all bedding plane partings. Most of this section is broken into chunky 1 to 3 cm sizes. A few minor bedding plane stylolites are present in the more competent pieces. Bedding pronounced at 35°. Non-silicified. NOTE: Only about 10 cm recovered between 128.3 and 128.9.			
129.0	130.2	Fault zone: Almost all is gouge now, but it appears the original rock type was carbonaceous to graphitic black mudstone grading down hole to medium grained red grey limestone, judging from the few remaining fragments. Contains a few white quartz chunks which have trace amounts of fine cubic pyrite. Recovery actually quite good through this gouge zone.			
130.2	133.2	Rhyolite: Overall is a light tan-grey colour, but when wet appears to consist of a fine light grey matrix with minute black specks, with slightly larger ovoid to angular creamy white fragments. Medium crystalline, with random oriented feldspar laths, a few quartz eyes and fine disseminated tan coloured rutile. Cut occasionally by a few grey quartz veins that often contain centerally located pyrite streaks. Pyrite also found as disseminated granular patches which usually are associated with healed fractures or minute quartz veins. The first 0.6 m of this section is completely sheared up (see fault in previous section) and gone to gouge, but was mainly irregular quartz veins surrounding or impregnating the tuff. Trace amounts of minute pyrite cubes scattered throughout.			

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet

Metres From	To	Description	Sample No.	Length	Analysis ppm Pb	Zn	Ag		Ba
		Sample: 130.2 - 131.7	39516	1.5	17	74	<.4		1269
		131.7 - 133.2	39517	1.5	16	81	<.4		1527
133.2	140.0	Black mudstone with local minor silt components. Quite broken now, but rock type is mainly very thin bedded to laminated medium and dark grey silicious silty mudstone to siltstone. Resembles much the 127-129 band, but is only very slightly calcareous. Overall is quite carbonaceous, but graphite is only developed on broken surfaces from the start to 135. Gouge is present locally through this graphitic portion. Calcite veining is developed as thin to wispy white veins near 135.5, 136.8, and 137.5. Brecciated stockworks of white calcite with angular mudstone fragments are present beneath the fault zone at 134.3 to 134.9, and well developed from 138.0 to 140.0. Within this last section is a 30 cm wide breccia zone consisting of angular to sub-angular white (cherty?) silicious fragments less than 1 cm wide, black mudstone and calcite fragments. Bedding at 35°.							
140.0	142.4	Black graphitic mudstone: Most is small jet black chunks of irregularly broken mudstone with graphite on all surfaces. Section starts off with a 5 cm thick black gouge zone with minor yellowish mud, followed by 15 cm of white quartz. Gouge also present at 141.7 and 142.1. Competent pieces between 141.7 and 142.1 resemble limestone in texture but are not calcareous. Whole section is silicious. No bedding apparent.							
142.4	149.0	Mudstone streaked with pyrite. Overall is black with thin hair-line streaks of fine bedded pyrite to give an overall laminated to very thin bedded aspect to the fine grained core. Pyrite could run 2-3%. Resembles closely the pyritic sections seen higher in the hole. Much is broken into small chunks with either dull carbonaceous material on the irregular fractures, or commonly							

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Sheet

Metres From	Metres To	Description	Sample No.	Length	Analysis ppm Pb	Zn	Ag		Ba
		shiny glossy graphite section is slightly calcareous to locally non-calcareous. Hard, but not as silicious as most previous sections. Bedding starts off at 25°, but changes over to 50° by 146 (just past a gouge zone at 145.2 - 145.5) and up to 65° by 147, which it remains to the end of the hole.							
		Sample: 146.0 - 147.0	39518	1.0	26	62	<.4		585
149.0		End of hole.							

211-0437

Scale

Colour Plot
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Drill Hole Record

Cominco

Property	TUM	District		Hole No.	
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Sheet

Footage From To | Description | Sample No. | Length | Analysis - ppm: Pb | Zn | Ag | | Ba

DRILL SAMPLING - ASSAYS ARE IN P.P.M.

	DRILL FROM	INTERVAL TO	Pb ppm	Zn ppm	Ag ppm	Ba(4) ppm
39507 T83-1	31.2	32.2	50	276	.9	829
39508 T83-1	37.2	37.7	9	273	<.4	777
39509 T83-1	51.5	52.5	14	682	<.4	482
39510 T83-1	75.0	75.9	49	724	.7	2291
39511 T83-1	75.9	76.1	17	883	<.4	2241
39512 T83-1	76.1	76.8	16	1290	<.4	706
39513 T83-1	76.8	77.6	10	158	<.4	5216
39514 T83-1	80.5	81.0	23	996	<.4	3409
39515 T83-1	106.2	106.8	43	596	<.4	888
39516 T83-1	130.2	131.7	17	74	<.4	1296
39517 T83-1	131.7	133.2	16	81	<.4	1527
39518 T83-1	146.0	147.0	26	62	<.4	585
39519 T83-1	85.4	85.8	30	709	<.4	651

211-0437

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	Tum Property	District	Hole No. T83-1
Commenced		Location	Tests at Hor. Comp.
Completed		Core Size	Corr. Dip Vert. Comp.
Co-ordinates			True Brg. Logged by
Objective	Overall recovery 40-489 ft. = 76%		% Recov. Date

Claim | T Brg. | Collar Dip | Elev. | Length | Sheet

From To (Feet) | Description

Runs and Recoveries

From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%
0	40(?)	Overburden			98	102	4	2.0	50	133.5	134.5	1	0.8	80
40(?)	44	4	1	25	102	104	2	2.0	100	134.5	137	2.5	1.9	76
44	53	9	2	22	104	108	4	3.0	75	137	139	2	1.5	75
53	57	4	0.8	20	108	110	2	1.0	50	139	142	3	1.3	43
57	59	2	1.5	75	110	112	2	1.1	55	142	144	2	1.4	70
59	63	4	0.7	17.5	112	115	3	2.5	83	144	146	2	1.2	60
63	67	4	1.5	37.5	115	117	2	0.6	30	146	147	1	1.0	100
67	71	4	3.5	87.5	117	118	1	0.9	90	147	149	2	1.2	60
71	75	4	3.2	80	118	119	1	0.8	80	149	151	2	1.3	65
75	76.5	1.5	1.3	87	119	120	1	0.8	80	151	152	1	0.8	80
76.5	78	1.5	1.2	80	120	122	2	1.6	80	152	153	1	1.0	100
78	80	2	1.7	85	122	123.5	1.5	1.4	93	153	155	2	1.5	75
80	83	3	2.3	77	123.5	124.5	1.0	1.0	100	155	157	2	1.4	70
83	85	2	1.8	90	124.5	126	1.5	1.2	80	157	158	1	0.9	90
85	87	2	1.4	70	126	127.5	1.5	1.4	93	158	161	3	2.5	83
87	90	3	1.5	50	127.5	128	0.5	0.5	100	161	162	1	1.0	100
90	94	4	3.5	95	128	129	1	0.9	90	162	163	1	0.9	90
94	96	2	1	50	129	131.5	2.4	2.1	84	163	164.5	1.5	1.5	100
96	98	2	1.2	60	131.5	133.5	2.0	2.0	100	164.5	166	1	1.0	100

Sample No. | Length | Analysis

211-043

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Dale

Claim | T Brg. | Collar Dip | Elev. | Length

Analysis

Description

From To (Feet)

Runs and Recoveries

From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%
166	167.5	1.5	1.5	100	215	216.5	1.5	1.4	93	259.5	260	6.5	0.4	80
167.5	169	1.5	1.5	100	216.5	219	2.5	2.3	92	260	261	1	1	100
169	172	3	2.9	97	219	221	2	1.1	80	261	263	2	1.9	95
172	177	5	4.9	98	221	224	3	2.2	73	263	265.5	2.5	2.2	88
177	180	3	2.9	97	224	226	2	1.1	55	265.5	267	1.5	1.5	100
180	183	3	3.0	100	226	227	1	0.9	90	267	268	1	1	100
183	187	4	4.0	100	227	237	10	1.2	12	268	273	5	1.4	28
187	191	4	3.8	95	237	238	1	1	100	273	274	1	0.3	30
191	193	2	2.0	100	238	240	2	2	100	274	276	2	1.3	65
193	195	2	1.9	95	240	242	2	1.1	55	276	277.5	1.5	1.4	93
195	197	2	2.0	100	242	243	1	0.9	90	277.5	283	5.5	4.8	87
197	198.5	1.5	1.5	100	243	244	1	1	100	283	298.5	9.5	9.5	100
198.5	201	2.5	2.2	88	244	246	2	2	100	298.5	302	9.5	9.5	100
201	293.5	2.5	2.3	92	246	247	1	0.6	60	302	304.5	2.5	1.4	56
203.5	207	3.5	3.0	86	247	249	2	2	100	304.5	306.5	2	1.1	55
207	208	1	1	100	249	252	3	2.5	83	306.5	310	3.5	3.2	91
208	210	2	1.9	95	252	254.2	2.5	2.3	92	310	312	2	1.9	95
210	212.5	2.5	2.2	88	254.2	258	3.5	2.0	57	312	314	2	2.0	100
212.5	215	2.5	2.4	96	258	259.5	1.5	1.4	93	314	317.5	3.5	3.2	91

Sample No. | Length

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	Tum Property	District	Hole No. T83-1
Commenced		Location	Tests at Hor. Comp.
Completed		Core Size	Corr. Dip Vert. Comp.
Co-ordinates			True Brg. Logged by
Objective			% Recov. Date

Claim | T Brg. | Collar Dip | Elev. | Length

Analysis

From To (Feet) | Description

Runs and Recoveries

From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%
317.5	321	3.5	2.1	60	368	369	1	1	100	418	420	2	1.9	95
321	325.5	4.5	4.4	98	369	373	4	3.7	93	420	421	1	0.4	40
325.5	335	9.5	9.4	99	373	377	4	4	100	421	423	2	0.4	20
335.5	337.5	2	1.2	60	377	380.5	3.5	3.5	100	423	427	4	3	75
227.5	339.5	2	1.1	55	380.5	383	2.5	2.2	88	427	432	5	4	80
339.5	341	1.5	1.1	73	383	384.5	1.5	1.2	80	432	438	6	5	83
341	343	2	1.0	50	384.5	387	2.5	2.2	88	438	439	1	0.8	80
343	345	2	1.7	85	387	289	1	1.9	95	439	441	2	1.5	75
345	347.5	2.5	2.1	84	389	391	2	2.0	100	441	444	3	2.5	83
347.5	349.5	2.0	2.0	100	391	393.5	2.5	2.1	84	444	445.5	1.5	1.5	100
349.5	250.5	1	0.8	80	393.5	396.5	3.0	3.0	100	445.5	447	1.5	1	67
350.5	353	2.5	2.0	80	396.5	400	3.5	1.2	34	447	449	2	1.5	75
353	355	2	1.8	90	400	401	1	0.8	80	449	450.5	1.5	1.3	87
355	358	3	1.2	40	401	404	3	1.3	43	450.5	453.5	3.0	1.6	53
358	360	2	2	100	404	407	3	2.8	93	453.5	457	3.5	1.2	34
360	363	3	2.1	70	407	410	3	3	100	457	461	4	3.1	78
363	364.5	1.5	1.2	80	410	414	4	3	75	461	463.5	2.5	2.5	100
364.5	367.4	3.0	2.8	87	414	417	3	2.3	77	463.5	466.5	3.0	3.0	100
367.5	368	0.5	0.5	100	417	418	3	0.5	25	466.5	468.5	2.0	2.0	100

Sample No. | Length

Drill Hole Record

Scale

Colour Plot & Dips

Cominco

Property: Tum Property	District	Hole No. T83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length

From | To (Feet) | Description | Sample No. | Length | Analysis

Runs and Recoveries

From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%	From	To	Length (ft)	Recovery	%
468.5	469.5	1.0	0.9	90										
469.5	470.5	1.0	1.0	100										
470.5	472.5	2.0	1.3	65										
472.5	475	2.5	0.9	36										
475	477	2	1.2	60										
477	479	2	1.2	60										
479	481	2	1.5	75										
481	481.5	0.5	0.5	100										
481.5	485.5	4.0	3.7	93										
485.5	488.5	3.0	2.0	67										
488.5	489	0.5	0.3	60										

Scale

Plotter Plot

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Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-1					
Commenced	14 JULY 1982	Location	YUKON TERRITORY	Tests at	180'	Hor. Comp.				
Completed	16 JULY 1982	Core Size	BQ	Corr. Dip		Vert. Comp.				
Co-ordinates	89E 113+20N			True Brg.	360°	Logged by	G.D.L.			
Objective	NORTH ZONE SKARN/MAGNETIC ANOMALY			% Recov.	98%	Date	17 JULY 1982			

Claim	T Brg.	Collar Dip	Elev.	Length
	360°	-45°N	4778'	180'

Footage From	Footage To	Description	Sample No.	Length	Analysis Sn%	Sn	Cu	W
0.0	18.0	CASING						
18.0	105.0	QUARTZITE						
		Gray to gray-green, very fine grained; mauve coloured sections of softer argillaceous quartzite; occasional small sections containing elongate 1-2 cm quartzitic fragments (?); shadowy bedding/ banding; minor green chloritic veins and stringers minor pyrrhotite makes some sections slightly magnetic; a few rusty quartz veins or 'sweats' of a few cm., often with chlorite.						
		51.5 - 59.0 Pale pinkish/greenish section; very fine grained; possibly slightly calcareous (?); numerous chloritic veinlets.						
		Core Angle @ 51' 70°						
		67.0 - 69.0 Broken, pebbly zone.						
		May contain disseminated sericite in some sections.						

211-9437

Drill Hole Record

Colour Plot & Dips

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-1
Commenced	14 JULY 1982	Location	YUKON TERRITORY	Tests at	180'
Completed	16 JULY 1982	Core Size	BQ	Corr. Dip	
Co-ordinates	89E 113+20N			True Brg.	360°
Objective	NORTH ZONE SKARN/MAGNETIC ANOMALY			% Recov.	98%

Hor. Comp.

Vert. Comp.

Logged by G.D.L.

Date 17 JULY 1982

Claim

T Brg. 360°

Collar Dip -45°N

Elev. 4778'

Length ' 180'

Footage From	Footage To	Description	Sample N	Length	Analysis
		74.75 - 75.75 Quartz vein/brecciated; chlorite comprises 10% of vein; chalcopyrite/pyrite/pyrrhotite occur with chlorite, comprising 2% of vein; minor scheelite as 3 mm grains.			
		Core Angle @ 91.5' 65°			
105.0	110.0	SKARN Pink-red and lime green garnet-diopside skarn with patches, bands and veinlets of dark green actinolite; poorly developed 'spot' texture in some sections with actinolite surrounding and partially replacing pale greenish yellow garnet cores of garnets largely replaced by actinolite; magnetic in small discontinuous bands and in spots with actinolite; lesser pyrrhotite/pyrite disseminated and in very small 'spots' (?); numerous parallel veinlets @ 28° contain pyrrhotite/pyrite/chalcopyrite/arsenopyrite sulphide veinlets are closely spaced (5 mm) over last 1.0 feet of section which is siliceous and contains small bands of argillaceous QUARTZITE.			
		Core Angle @ 109' 65°			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-1
Commenced	14 JULY 1982	Location	YUKON TERRITORY	Tests at	180'
Completed	16 JULY 1982	Core Size	BQ	Corr. Dip	
Co-ordinates	89E 113+20N			True Brg.	360°
Objective	NORTH ZONE SKARN/MAGNETIC ANOMALY			% Recov.	98%

Hor. Comp.

Vert. Comp.

Logged by G.D.L.

Date 17 JULY 1982

Claim | T Brg. 360° | Collar Dip -45°N | Elev. 4778' | 180' | Sheet

Footage From	Footage To	Description	Sample No.	Length	Analysis
110.0	118.0	CALC-SILICATE/QUARTZITE			
		Pale pinkish/greenish banded CALC-SILICATE; fine grained, siliceous interbedded with mauve-coloured argillaceous QUARTZITE.			
		113.0 4" section with coarse grained pink-red garnet; bands of dark green actinolite with pyrite/ pyrrhotite/chalcopyrite/ mineralization.			
		116.0 - 117.0 Section of siliceous pinkish/greenish CALC-SILICATE with irregular 2-5 mm brownish-red garnets in bands parallel to bedding/banding.			

Drill Hole Record

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-1
Commenced	14 JULY 1982	Location	YUKON TERRITORY	Tests at	180'
Completed	16 JULY 1982	Core Size	BQ	Corr. Dip	
Co-ordinates	89E 113+20N			True Brg.	360°
Objective	NORTH SKARN/MAGNETIC ANOMALY			% Recov.	98%

Hor. Comp.
Vert. Comp.
Logged by G.D.L.
Date 17 JULY 1982

Claim | T Brg. 360° | Collar Dip -45°N | Elev. 4778' | Length 1401

Footage From	Footage To	Description	Sample No	Length	Analysis
118.0	120.5	SKARN			
		Largely pink/green garnet-diopside skarn; large pink red garnets up to 1 cm; interbeds of pale pinkish/greenish CALC-SILICATE and mauve coloured argillaceous QUARTZITE; some narrow darker green bands contain actinolite or chlorite (?) with calcite and fluorite and trace pyrrhotite/chalcopyrite.			
		119.5 3 mm calcite vein @ 25°			
120.5	126.5	CALC-SILICATE/QUARTZITE			
		Generally similar to 110.0 - 118.0.			
		124.5 - 125.5 Breccia zone; angular fragments of QUARTZITE (average 1 cm) with calcite matrix.			
126.5	133.0	SKARN			
		Dark green actinolite-rich SKARN; bands containing pyrrhotite/fluorite/trace chalcopyrite/minor pyrite with chlorite (?) comprise up to 50% of this section; a few tiny veinlets with chalcopyrite/ arsenopyrite/pyrrhotite; calcite veinlets @ 35° near top of section.			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-1		
Commenced	14 JULY 1982	Location	YUKON TERRITORY	Tests at	180'	Hor. Comp.	
Completed	16 JULY 1982	Core Size	BQ	Corr. Dip		Vert. Comp.	
Co-ordinates	89E 113+20N			True Brg.	360°	Logged by	G.D.L.
Objective	NORTH ZONE SKARN/MAGNETIC ANOMALY			% Recov.	98%	Date	17 JULY 1982

Claim | T Brg. 360° | Collar Dip -45°N | Elev. 4778' | 180' | Sheet

Footage From	Footage To	Description	Sample No.	Length	Analysis ppm
		128.0 - 130.5 Largely CALC-SILICATE/QUARTZITE similar to 110.0 - 118.0.			
113.0	180.0	QUARTZITE			
		Generally similar to 18.0 - 105.0; some sections with abundant disseminated pyrrhotite; minor biotite in small quartz stringers and veins and in argillaceous sections; occasional small joints or veins with pyrite/calcite; occasional small porphyroblasts (?) (1-2 mm) of pinkish white mineral in argillaceous sections (garnet(?)).			
		E.O.H. @ 180'			
		Dip Tests @ 180' 47°			

Scale -
Plot

Drill Hole Record

Caminco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-2
Commenced	17 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	20 JULY 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	L91E 96+00N			True Brg.	Logged by G.D.L.
Objective	TEST MAIN SKARN HORIZON FOR TIN MINERALIZATION			% Recov. 98%	Date 21 July 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. | Length 4860'

Footage From	Footage To	Description	Sample No.	Length	Analysis
0.0	16.0	CASING			
16.0	250.0	QUARTZITE Gray to grayish green with interbeds of mauve argillaceous material; very fine grained gray sections are generally more massive while rest show distinct bedding/banding; often chloritic with chlorite bands or stringers; occasional minor pyrrhotite as small blebs; small sections may appear shattered or brecciated; occasional subvertical quartz/calcite fracture filling veins/stringers.			
		130.0 6" milky white quartz vein with chloritic selvage; @ 30° minor pyrite.			
		201.5 - 203.5 Coarse grain milky white quartz vein; minor chlorite as stringers/fracture coatings			
		Below 229.0 occasional small fleck and larger blotches of brownish tourmaline(?) (biotite(?)).			
		235.5 1" band with 1-5 mm irregular blotches of brown black tourmaline with quartz.			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-2
Commenced	17 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	20 JULY 1982	Core Size	BQ	Corr. Dip	VERTICAL Vert. Comp.
Co-ordinates	L91E 96+00N			True Brg.	Logged by G.D.L.
Objective	TEST MAIN SKARN HORIZON FOR TIN MINERALIZATION.			% Recov.	98% Date 21 JULY 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. ~860' | Length

Footage From	Footage To	Description	Sample No.	Length	Analysis Sn%	Sn	Cu	W	Zn
		237.5 5" quartz vein; chloritic selvage/stringers very minor pyrite; small blotches of black tourmaline.							

Scale

Colour Plot & Dips

0

Drill Hole Record

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-2
Commenced	17 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	20 JULY 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	L91E 96+00N			True Brg.	Logged by G.D.L.
Objective	TEST MAIN SKARN HORIZON FOR TIN MINERALIZATION			% Recov. 98%	Date 21 JULY 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 4860' | Length 425'

Footage From	Footage To	Description	Sample	Length	Analysis
250.0	265.0	CHLORITE/CALCITE/QUARTZ SKARN			
		Patchy white and pale brown with dark green blotches or clots of chlorite (2-10 mm); approximately 30% chlorite, 30% calcite; quartz comprises about 20% often as small clear or milky white prismatic euhedra (average 2 mm diameter); brownish colour is due to up to 25% sericite (?) or some other mica; some section have up to 20-25% green epidote often as bladed prisms up to 1 cm long; pale violet axinite occurs associated with epidote as bladed subhedral crystals 5-10 mm; occasional reddish-brown patches (1-3 mm) may be hematite (?); trace pyrite as tiny cubes; fluorite may be present but difficult to detect; minor small 1 mm glassy brownish grains of cassiterite (?) were noted at 260.0.			

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-2		
Commenced	17 JULY 1982	Location	YUKON TERRITORY	Tests at		Hor. Comp.	
Completed	20 JULY 1982	Core Size	BQ	Corr. Dip	VERTICAL	Vert. Comp.	
Co-ordinates	L91E 96+00N			True Brg.		Logged by	G.D.L.
Objective	TEST MAIN SKARN HORIZON FOR TIN MINERALIZATION			% Recov.	98%	Date	21 JULY 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 4860'

Footage From	Footage To	Description	Sample No.	Length	Analysis Sn%	Sn	Cu	W	Zn
265.0	273.5	CALC-SILICATE							
		Mixed section of very fine grained, banded, pinkish/greenish CALC-SILICATE and fine grained, siliceous DIOPSIDE SKARN; small sections and thin interbeds of mauve-coloured argillaceous QUARTZITE; a few small sections of coarser grained calcite/chlorite, with minor fluorite (??); subvertical thin calcite veins/fractures with dark green selvages;							
		268.0 - 269.0 Vein (?) with bladed axinite/epidote/calcite and lesser fine grained chlorite.							
273.5	282.0	GARNET-DIOPSIDE SKARN							
		Pink/green coarse grained skarn; pink-red garnets, subhedral, up to 1 cm; minor patches of dark green actinolite; minor white calcite in subvertical veinlets.							
		273.5 - 274.0 Vein with coarse grained axinite/epidote/purplish fluorite/calcite.							
		276.5 - 282.0 Altered zone; dark green chlorite (?) with calcite; schorly (?) black green slickensided joints; very coarse grained purplish fluorite bands of 1-2" @ 90°; some coarse grained axinite/epidote with fluorite.							

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-2
Commenced	17 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	20 JULY 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	L91E 96+00			True Brg.	Logged by G.D.L.
Objective	TEST MAIN SKARN HORIZON FOR TIN MINERALIZATION			% Recov. 98%	Date 21 JULY 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 4860' | Length 435' | Hole No. | Sheet

Footage From	Footage To	Description	Sample	Length	Analysis
282.0	310.0	SPOTTED SKARN			
		Garnet-diopside skarn with dark green actinolite in irregular polygonal 'spots' (average 1 cm); white calcite also appears in infrequent 'spots'; colour of garnet ranges from pink-red to pale greenish yellow; cores of isolated garnets surrounded by actinolite seem darker than rims; minor epidote/axinite in small blotches.			
		296.0 - 299.0 Largely very fine grained lime green siliceous DIOPSIDE SKARN.			
310.0	320.0	CALC-SILICATE			
		Pale pinkish/greenish, fine grained banded CALC-SILICATE; numerous fine interbeds of mauve argillaceous QUARTZITE.			
		313.0 - 320.0 Breccia zone; 60-90% coarse (average 1 cm) angular frags of above with dark green chloritic (?) matrix; calcite also apparent in matrix; zone continues into SKARN below.			

Scale -

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-2
Commenced	17 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	20 JULY 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	L91E 96+00N			True Brg.	Logged by G.D.L.
Objective	TEST MAIN SKARN HORIZON FOR TIN MINERALIZATION			% Recov. 98%	Date 21 JULY 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 4860' | Length 435' | Sheet | Hole No.

Footage From	Footage To	Description	Sample No.	Length	Analysis
320.0	356.0	SPOTTED SKARN			
		Generally similar to 282.0 - 310.0.			
		320.0 - 340.0 Alteration/Breccia Zone; upper 2.0' is brecciated with 95% frags of above; some chloritic (?) matrix; rest of section is variably altered and sometimes slightly brecciated; schorly (?) slickensided joints; calcite veins and stringers; generally 'rotted' appearance.			
356.0	362.5	CALC-SILICATE			
		Generally similar to 310.0 - 320.0.			
		356.0 - 357.5 Pale cream/greenish CALC-SILICATE with bands of light brown mica; mica in coarse laths up to 1 cm long.			

Scale .

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-2
Commenced	17 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	20 JULY 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	L91E 96+00N			True Brg.	Logged by G.D.L.
Objective	TEST MAIN SKARN HORIZON FOR TIN MINERALIZATION			% Recov. 98%	Date 21 JULY 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. | Length 4860'

Footage From	To	Description	Sample No.	Length	Analysis Sn%	Sn ppm	Cu %	W	Zn
362.5	370.0	GARNET-DIOPSIDE SKARN Lime green/pinkish red, coarse grained SKARN; irregular pink-red garnets up to 1 cm; diopside-hedembergite fine grained (less than 1 mm) ; a few small stringers and blotches of dark green actinolite; purplish fluorite associated with actinolite, minor axinite/epidote in small irregular veins (?). 369.0 - 370.0 Quartz/tourmaline/fluorite vein with pink garnet; 3 mm grain of brownish cassiterite (???).							
370.0	374.5	DIOPSIDE SKARN Pale lime-green; very fine grained, massive; very siliceous diopside/quartz SKARN; scattered laths of brownish mica (?) near top of section (1-5 mm); narrow subvertical quartz vein (3 mm wide) near top of section.							
374.5	385.0	QUARTZITE Gray to greenish gray; numerous mauve-coloured argillaceous bands; very fine grained; green chloritic bands and stringers. 377.5 2" vein of light gray quartz/fluorite rich granitic rock resembling QUARTZ MONZONITE below.							

Scale -

Drill Hole Record

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-2
Commenced	17 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	20 JULY 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	L91E 96+00N			True Brg.	Logged by G.D.L.
Objective	TEST MAIN SKARN HORIZON FOR TIN MINERALIZATION.			% Recov. 98%	Date 21 JULY 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 4860' | Length 435' | Hole No.

Footage From	Footage To	Description	Sample No.	Length	Analysis
		379.5 1" vein of quartz/fluorite pegmatite; with greenish chlorite (?) 1-2 mm brownish red grains of garnet, damalite or cassiterite (?); minor calcite.			
		381.0 4" vein similar to 379.0.			
		Numerous smaller quartz/fluorite veins and stringers similar to those at 379.0' and 380.0.			
385.0	386.0	SKARN Green actinolite-rich SKARN; with coarse quartz/fluorite bands; pyrite blebs; scattered 1-2 mm irregular grains of reddish damalite or cassiterite (?).	97300		
386.0	400.0	QUARTZITE Generally similar to 374.5 - 385.0.	97303 97304 97305		
		391.0 6" band of gray/white QUARTZ MONZONITE; 5% biotite as fine flakes; slightly more quartz rich than below.			

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-2
Commenced	17 JULY 1982	Location	YUKON TERRITORY -	Tests at	Hor. Comp.
Completed	20 JULY 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	L91E 96+00N			True Brg.	Logged by G.D.L.
Objective	TEST MAIN SKARN HORIZON FOR TIN MINERALIZATION			% Recov. 98%	Date 21 JULY 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 4860' | Length 435' | Sheet

Footage From	Footage To	Description	Sample No	Length	Analysis Sn%	Sr ppm	Cu	W
400.0	435.0	QUARTZ MONZONITE Gray to grayish green; fine grained (average less than 1 mm); biotite 5% or less as fine black flakes; long yellowish sections with little or no biotite; subvertical tourmaline coated fractures @ 85° - often with yellowish selvages; bands (veins) of quartz/flourite pegmatite up to 6"; brecciated section. 401.0 - 403.0 With yellowish angular frags of QUARTZ MONZONITE in greenish, soft talcose matrix; occasional minor pyrite in blebs/stringers and as tiny disseminated cubes; minor pyrite with tourmaline in fractures; a few coarse grained white calcite bands near top of section with breccia (as matrix); rounded quartz eyes of a few mm are not very common. 425.5 - 428.5 Fluorite (purple)/tourmaline/chlorite vein @ 80°; minor pyrite; yellowish green talcose replacement of squarish feldspar (?) phenos. E.O.H. @ 435'						

Scale

Colour Plot & Dr...

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Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-4
Commenced	26 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	1 AUGUST 1982	Core Size	BQ	Corr. Dip	VERTICAL Vert. Comp.
Co-ordinates	87+60E 94+70N			True Brg.	Logged by G.D.L.
Objective	TEST FOR TIN MINERALIZATION IN SKARN HORIZON			% Recov.	99% (Estimated) Date 2 AUGUST 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 5110' | Length ?' | Sheet

Footage From	Footage To	Description	Sample No.	Length	Analysis
0.0	12.0	CASING			
12.0	579.5	QUARTZITE			
		Gray to grayish green with mauve coloured argillaceous bands and sections; fine grained numerous quartz/chlorite bands and 'sweats', some with pyrrhotite blebs; minor subvertical calcite veining numerous chloritic stringers in some section.			
		75.0 - 80.0 Breccia Zone; larger angular frags (1 cm and larger) of massive grayish quartzite; less than 10% rusty, chloritic matrix; core recovery less than 20%.			
		Some massive 'hornfelsed' sections with scattered laths of biotite (1-3 mm)			
		316.0 - 351.0 'Marble-cake' hornfels' largely massive gray, slightly calcareous QUARTZITE (minor pale pink/green banding); irregular, distorted patches and bands of mauve argillite QUARTZITE which seem partially resorbed.			
		390.0 - 396.0 Breccia Zone; angular frags of gray QUARTZITE 1 mm and larger; 5-40% matrix of muddy, rusty calcite.			

Scale

Plot

Drill Hole Record

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-4
Commenced	26 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	1 AUGUST 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	87+60E 94+70N			True Brg.	Logged by G.D.L.
Objective	TEST FOR TIN MINERALIZATION IN SKARN HORIZON			% Recov. 99% (Estimated)	Date 2 AUGUST 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. | Length 5110'

Footage From	To	Description	Sample No.	Length	Analysis Sn%	Sn ppm	Cu	W	Zn
579.5	584.0	QUARTZ MONZONITE							
		Greenish gray, average grain size less than 1 mm; 5-10% black biotite as small 1 mm flakes; minor yellowish alteration along some joints; yellowish zones seem more quartz-rich and lack biotite; a few small (5 cm) xenoliths of argillaceous QUARTZITE; fairly distinct upper contact at 60°.							
		583.5 2" band of coarse grained quartz/chlorite with 30% mauve-white mica in large laths (1 cm).							
584.0	598.5	QUARTZITE							
		Generally similar to 12.0 - 579.5; sections seem shattered/brecciated; minor calcite veining.							
		594.5 - 595.0 Quartz monzonite/pegmatite dyke; fine grained quartz/feldspar with coarse grained material in dyke centre (1 cm); large euhedra of brown tourmaline with diameter up to 5 mm; small remnants of argillaceous QUARTZITE.							

Scale

Colour, Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-4
Commenced	26 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	1 AUGUST 1982	Core Size	BQ	Corr. Dip	VERTICAL Vert. Comp.
Co-ordinates	87+60E 94+70N			True Brg.	Logged by G.D.L.
Objective	TEST FOR TIN MINERALIZATION IN SKARN HORIZON			% Recov.	99% (Estimated) Date 2 AUGUST 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. | Length 5110' 7321

Footage From	To	Description	Sample No.	Length	Analysis Sn%	Sn ppm	Cu	W	Zn
598.5	607.0	GARNET-DIOPSIDE-ACTINOLITE SKARN Pale red to greenish-yellow ganrets up to 80% of section; fine grained pale green diopside; minor dark green actinolite occurs as poorly developed 'spots' very minor epidote/calcite, also in small 'spots'; minor subvertical calcite veining; some sections appear 'rotted' to a dirty brown-green colour; interbands of pale green siliceous DIOPSIDE SKARN toward bottom of section.							
607.0	629.5	CALC-SILICATE/AUARTZITE Mixed section of pale pink and green banded, fine grained CALC-SILICATE and QUARTZITE; QUARTZITE is largely mauve coloured argillaceous rock with indistinct 'hornfelsed' banding; fine subvertical chloritic veinlets throughout with trace pyrite; minor calcite veining.							

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-4
Commenced	26 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	1 AUGUST 1982	Core Size	BQ	Corr. Dip	VERTICAL Vert. Comp.
Co-ordinates	87+60E 94+70N			True Brg.	Logged by G.D.L.
Objective	TEST FOR TIN MINERALIZATION IN SKARN HORIZON			% Recov.	99% (Estimated) Date 2 AUGUST 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 5110' | Length 772' | Sheet

Footage From	Footage To	Description	Sample No.	Length	Analysis
629.5	633.5	CALC-SILICATE	9		
		Pale pink/green and white sections; banding indistinct; appears siliceous, may be wollastonite (?) rich.			
633.5	653.0	QUARTZITE	9		
		Greenish-gray with mauve-coloured sections; bedding/banding indistinct, largely massive in appearance; minor brecciation; some subvertical calcite veining; very minor calcite/epidote veinlets; trace purplish axinite in small discontinuous veinlets.	9		
653.0	672.0	ACTINOLITE SKARN	9		
		Dark green acicular actinolite comprises 80% or more of section; scattered pink red garnets 1-10 mm in diameter with rims replaced by actinolite; small sections with large spots (1 cm) of pyrrhotite/calcite/fluorite (?), csp. 657-658' trace brownish sphalerite(??) in 1-2 mm grains; magnetic in small bands and spots (?); much of section has rotted appearance; minor pyrite along black schorly (?)/chloritic joints; some coarse grained subvertical calcite veins.	9		

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-4
Commenced	26 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	1 AUGUST 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	87+60E 94+70N			True Brg.	Logged by G.D.L.
Objective	TEST FOR TIN MINERALIZATION IN SKARN HORIZON			% Recov. 99% (Estimated)	Date 2 AUGUST 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 5110' | Length 772' | Hole No.

Footage From	Footage To	Description	Sample No.	Length	Analysis
672.0	679.5	SPOTTED SKARN			
		Pale red to greenish yellow garnet with fine grained diopside; actinolite in irregular bands and in well developed irregular polygonal spots; some axinite/epidote in streaks and bands; minor pyrrhotite/pyrite near top of section.			
679.5	683.0	CALC-SILICATE/DIOPSIDE SKARN			
		Largely pale lime green siliceous DIOPSIDE SKARN; indistinct pale pink/green bands of CALC-SILICATE; minor dark green actinolite(?) bands.			
		680' 3" QUARTZ MONZONITE (?) dyke; largely fine grained quartz with minor biotite; upper contact @ 60°.			
683.0	700.0	SPOTTED SKARN			
		Similar to 672.0 - 679.5; spot texture less well developed; vertical calcite veining; minor axinite/epidote as in 672.0 - 679.5; pyrite and soft black chlorite (?) with calcite veins.			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-4
Commenced	26 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	1 AUGUST 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	87+60E 94+70N			True Brg.	Logged by G.D.L.
Objective	TEST FOR TIN MINERALIZATION IN SKARN HORIZON			% Recov. 99% (Estimated)	Date 2 AUGUST 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 5110' | Length 772' | Hole No. JC82-4

Footage From	To	Description	Sample No	Length	Analysis
		689.5 - 694.5 Section of about 50% fine grained massive gray QUARTZITE (??) chlorite/pyrite up to 50% seems concentrated along 1 cm subvertical vein @ 5°; black chloritic joint coatings.			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-4
Commenced	26 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	1 AUGUST 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	87+60E 94+70N			True Brg.	Logged by G.D.L.
Objective	TEST FOR TIN MINERALIZATION IN SKARN HORIZON			% Recov. 99% (Estimated)	Date 2 AUGUST 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 5110' | Length

Footage From	Footage To	Description	Sample No	Length	Analysis
700.0	716.0	DIOPSIDE SKARN			
		Pale lime green fine grained siliceous; minor bands and veinlets of dark green chlorite or actinolite(?); some pale gray, massive, extremely siliceous sections.			
		704.0 - 706.5 1 cm vertical vein; pyrite/quartz/clacite/fluorite (?); minor arsenopyrite; soft black mineral associated with calcite may be chlorite.			
		707.5 - 710.0 Same as 704.0 - 706.5.			
		713.0 - 714.5 Corase grained axinite/clacite/quartz/chlorite/fluorite (?); minor pyrrhotite/pyrite.			

Scale

Colours Plot & Dips

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-4
Commenced	26 JULY 1982	Location	YUKON TERRITORY	Tests at	Hor. Comp.
Completed	1 AUGUST 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	87+60E 94+70N			True Brg.	Logged by G.D.L.
Objective	TEST FOR TIN MINERALIZATION IN SKARN HORIZON			% Recov. 99% (Estimated)	Date 2 AUGUST 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 5110' | Length 772' | Sheet

Footage From	Footage To	Description	Sample No.	Length	Analysis
716.0	754.0	QUARTZITE Greenish gray with mauve-coloured bands and sections; banding often indistinct, with hornfelsed appearance; chloritic stringers and fractures; a few irregular calcite veins; many sections speckled with 1-2 mm brown biotite laths.			
		754.5 - 747.0 QUARTZ MONZONITE (?) dyke similar to 680.0; large angular xenoliths of QUARTZITE			
		749.0 5 mm quartz/calcite/chalcopyrite vein @ 24°.			
754.0	772.0	QUARTZ MONZONITE Gray to greenish gray; average grain size about 1 mm; biotite about 5% a 1 mm black laths; a few rounded quartz eyes about 5 mm diameter; feldspar phenocrysts are rare and indistinct; large sections of yellowish alteration with a smaller percentage of biotite; bands or veins or quartz-feldspar pegmatite; narrow vertical tourmaline fractures.			

Scale

Colour Plot & Dips

0

Drill Hole Record

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-4
Commenced	26 JULY 1982	Location	YUKON TERRITROY	Tests at	Hor. Comp.
Completed	1 AUGUST 1982	Core Size	BQ	Corr. Dip VERTICAL	Vert. Comp.
Co-ordinates	87+60E 94+70N			True Brg.	Logged by G.D.L.
Objective	TEST TIN MINERALIZATION IN SKARN HORIZON			% Recov. 99% (Estimated)	Date 2 AUGUST 1982

Claim | T Brg. | Collar Dip VERTICAL | Elev. 5110' | Length

Footage From	Footage To	Description	Sample No	Length	Analysis
		757.0 - 760.0 2 cm vertical tourmaline/purplish fluorite vein; about 2% arsenopyrite as 1-3 mm subhedra; bright yellow siliceous selvage; lower 1.5 feet is massive milky white quartz with minor tourmaline joints; trace pyrite associated with tourmaline.			
		761.0 - 761.5 1 cm vertical tourmaline joint with trace pyrite.			
		E.O.H. 772'			

Scale

Plot

Drill Hole Record

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-5
Commenced	2 AUGUST 1982	Location	YUKON TERRITORY	Tests at	672'
Completed	6 AUGUST 1982	Core Size	BQ	Corr. Dip	-85°S
Co-ordinates	L100E 95+15N			True Brg.	190°
Objective	TEST EASTERLY STRIKE EXTENSION OF MAIN SKARN ZONE FOR TIN MINERALIZATION.			% Recov.	99% (Estimated)

Hor. Comp.

Vert. Comp.

Logged by G.D.L.

Date 7 AUGUST 1982

Claim	T Brg.	Collar Dip	Elev.	Length
	190°	-85°S	5090'	

Footage From	Footage To	Description	Sample No.	Length	Analysis Sn%	Sn	Cu	W
0.0	10.0	CASING						
10.0	428.0	QUARTZITE						
		Gray to grayish green; fine grained; mauve coloured argillaceous bands and sections; occasional subvertical calcite veinlets, a few up to 1 cm wide with coarse crystalline calcite; quartz veins and sweats with minor chlorite/pyrrhotite.						
		166.0 - 223.0 'Marbel-cake' hornfels; very similar to 316.0 - 351.0 in JC82-4						

211-8427

Scale

Colour Plot
Dips

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-5		
Commenced	2 AUGUST 1982	Location	YUKON TERRITORY	Tests at	672'	Hor. Comp.	
Completed	6 AUGUST 1982	Core Size	BQ	Corr. Dip	-85°S	Vert. Comp.	
Co-ordinates	L100E 95+15N			True Brg.	190°	Logged by	G.D.L.
Objective	TEST EASTERLY STRIKE EXTENSION OF MAIN SKARN ZONE FOR TIN MINERALIZATION.			% Recov.	99% (Estimated)	Date	7 AUGUST 1982

Claim | T Brg. 190° | Collar Dip -85°S | Elev. 5090' | Length 672'

Footage From	Footage To	Description	Sample No.	Length	Analysis
428.0	430.0	QUARTZ MONZONITE			
		Fine grained greenish dyke; no visible biotite; small veinlets of quartz/feldspar pegmatite; sharp upper contact @ 50°.			
430.0	458.0	QUARTZITE	973		
		Similar to 10.0 - 428.0.	973		
458.0	461.0	GARNET-DIOPSIDE SKARN	973		
		Pale lime green/pale pink red; garnet up to 50% as irregular grains (5-10 mm); diopside is fine grained granular; some sections quite siliceous.			
461.0	516.5	QUARTZITE/CALC-SILICATE	973		
		QUARTZITE similar to 10.0 - 428.0 interbedded with white wollastonite (?) rich CALC-SILICATE;	97		
		some pinkish/greenish banding in CALC-SILICATE; about 50% of section is calcareous rock with well	97		
		developed irregular pinkish garnets (5mm) along bedding planes; minor chlorite/quartz veins in	97		
		QUARTZITE with trace pyrrhotite.	97		
			97		
			97		
			97		
			97		

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-5		
Commenced	2 AUGUST 1982	Location	YUKON TERRITORY	Tests at	672'	Hor. Comp.	
Completed	6 AUGUST 1982	Core Size	BQ	Corr. Dip	-85°S	Vert. Comp.	
Co-ordinates	L100E 95+15N			True Brg.	190°	Logged by	G.D.L.
Objective	TEST EASTERLY STRIKE EXTENSION OF MAIN SKARN ZONE FOR TIN MINERALIZATION.			% Recov.	99%	Date	& AUGUST 1982

Claim | T Brg. 190° | Collar Dip -85°S | Elev. 5090' | Length 672' | Hole No. | Sheet

Footage From	Footage To	Description	Sample No.	Length	Analysis
516.5	525.5	SPOTTED SKARN Largely pink-red to pale greenish yellow garnet; up to 50% dark-green actinolite as irregular bands and polygonal 'spots'; small irregular, discontinuous veinlets of epidote with lesser axinite; numerous calcite veinlets and calcite-filled brecciation over bottom 1.0 feet.			
525.5	535.5	CALC-SILICATE Cream-white quartz/wollastonite (?) rock; about 20% pink garnets as irregular grains developed along bedding planes; minor pale green diopside; minor brownish garnets with pink garnet; a few rusty subvertical calcite veinlets.			
535.5	538.5	QUARTZITE Similar to above.			

Scale

Calcul Plot & Dips

0

Drill Hole Record

Cominco

Property	JC PROPERTY	District	WATSON LAKE M.D.	Hole No.	JC82-5		
Commenced	2 AUGUST 1982	Location	YUKON TERRITORY	Tests at	672'	Hor. Comp.	
Completed	6 AUGUST 1982	Core Size	BQ	Corr. Dip	-85°S	Vert. Comp.	
Co-ordinates	L100E 95+15N			True Brg.	190°	Logged by	G.D.L.
Objective	TEST EASTERLY STRIKE EXTENSION OF MAIN SKARN ZONE FOR TIN MINERALIZATION.			% Recov.	99% (Estimated)	Date	7 AUGUST 1982

Claim	T Brg.	Collar Dip	Elev.	Length	Hole	Sheet
	190°	-85°S	5090'	672'		

Footage From	Footage To	Description	Sample No.	Length	Analysis Sn%	Sn ppm	Cu	W	Zn
538.5	541.0	CALC-SILICATE							
		Similar to 525.5 - 535.5; minor sphalerite as 3-5 mm irregular pale brown grains.							
541.0	563.0	SPOTTED SKARN							
		Same as 516.5 - 525.5 but with actinolite comprising only 20% or less of section; minor fluorite (5%) associated with actinolite; small sections of garnetiferous CALC-SLILICATE and minor siliceous DIOPSIDE SKARN; subvertical calcite veining and minor brecciation over bottom 5 feet.							
563.0	670.0	QUARTZITE							
		Generally similar to 10.0 - 428.0.							
		574.5 - 580.0 Quartz vein; massive milky white quartz with minor chlorite/pyrrhotite; near bottom of section vein is crosscut by 4" dyke of greenish quartz/feldspar pegmatite @ 47°.							
		634.0 - 635.0 1 cm wide vertical, vuggy vein filled with clear crystalline calcite and muddy green chlorite; slightly rusty in parts; may contain trace sphalerite (??).							
		E.O.H. 672'							
		Dip Test @ 672' 86°							

TUM PROPERTY

Drawn by: MRM.		Traced by:	
Revised by	Date	Revised by	Date

TUM PROPERTY
LOCATION MAP

191491

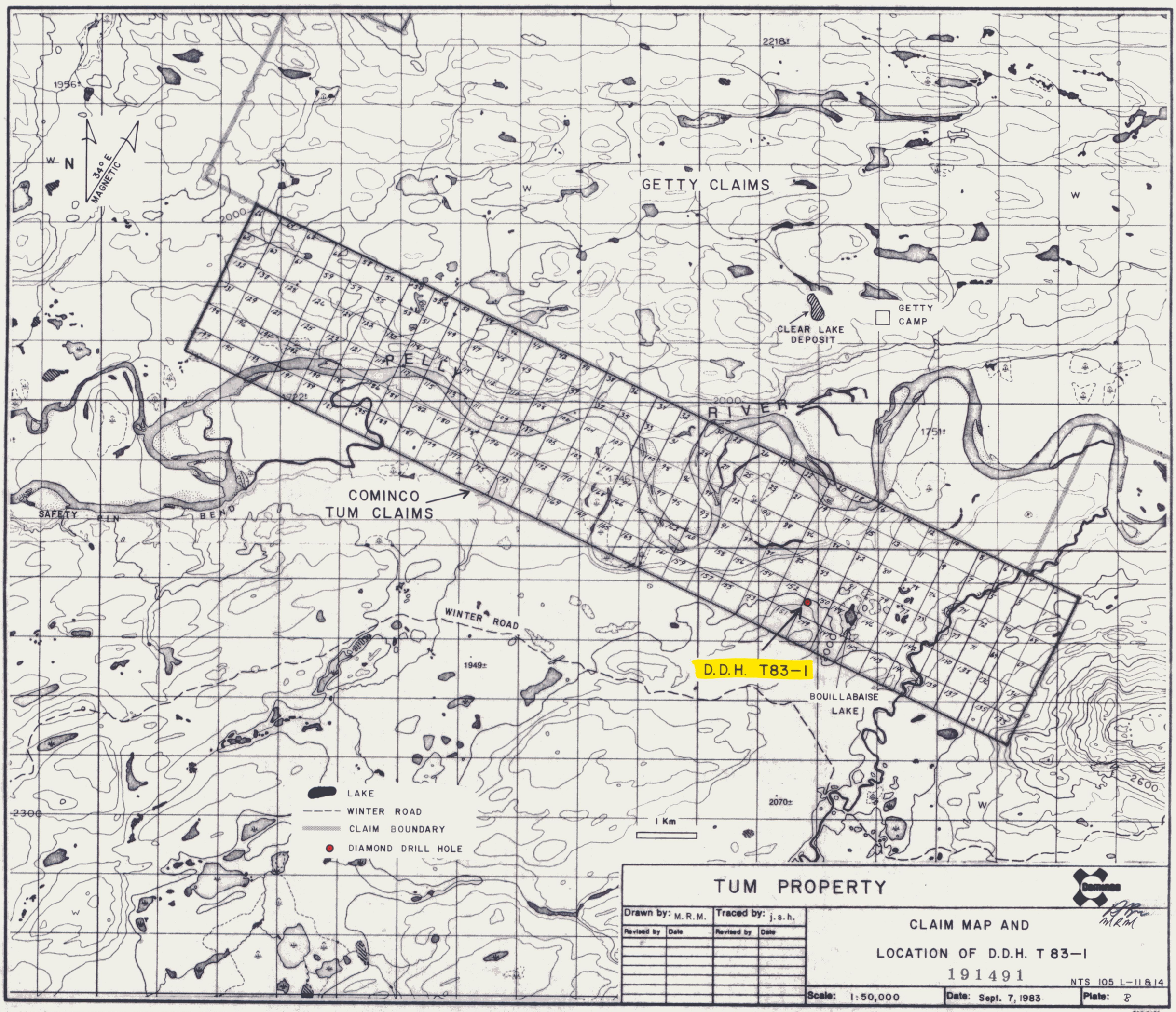
Scale: 1:2,500,000

Date: Sept 8, 1983

Plate: A

NCI 112A CL

210-0610



TUM PROPERTY

Drawn by: M.R.M.		Traced by: j.s.h.	
Revised by	Date	Revised by	Date

CLAIM MAP AND LOCATION OF D.D.H. T 83-1

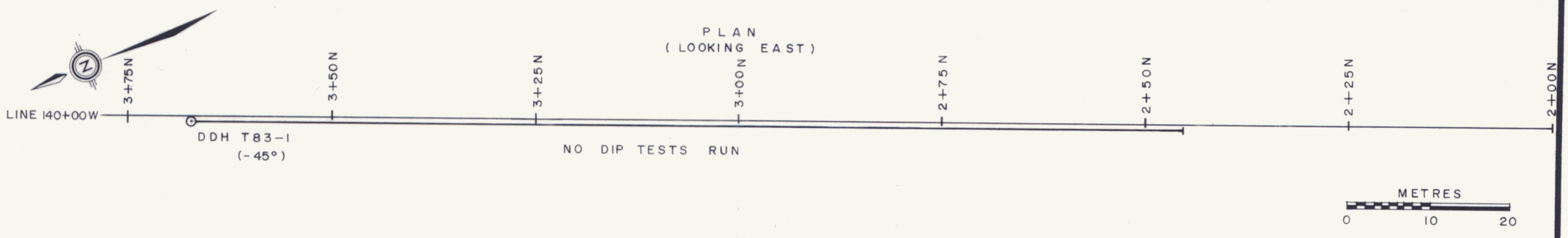
191491

NTS 105 L-11 & 14

Scale: 1:50,000 | Date: Sept. 7, 1983 | Plate: B

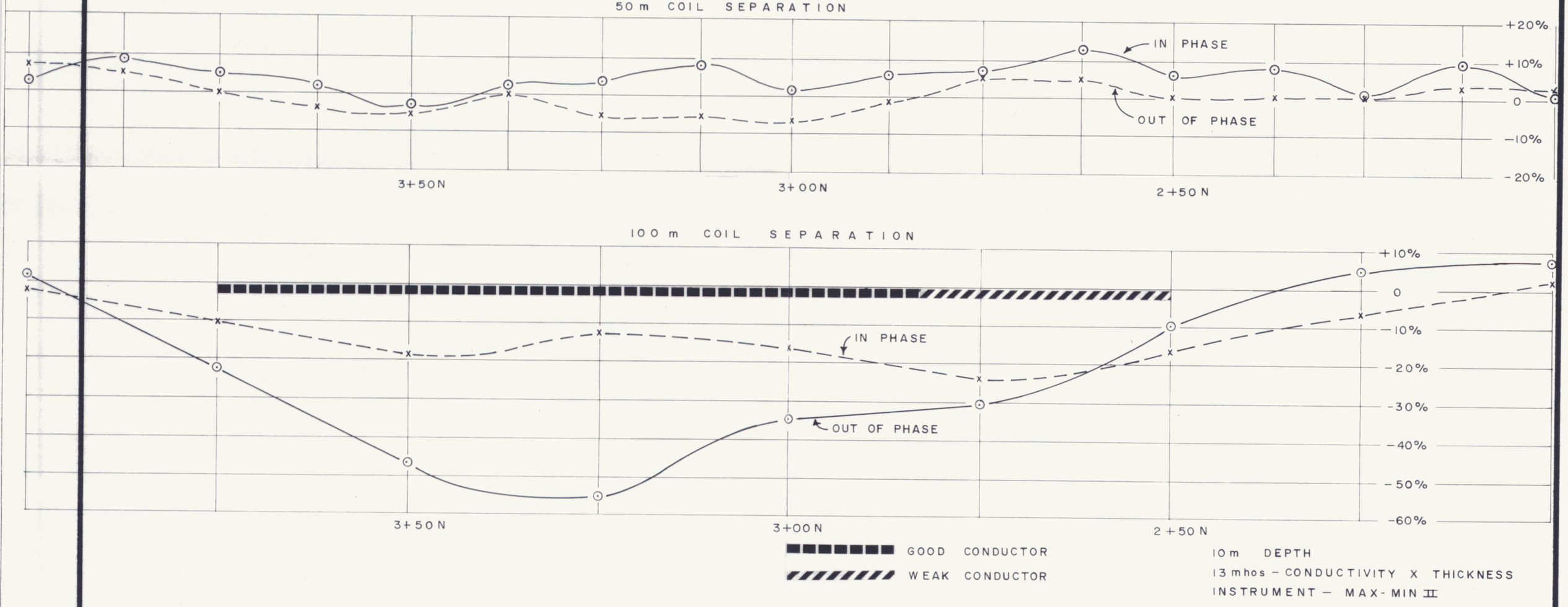
210-0620

PLAN
(LOOKING EAST)



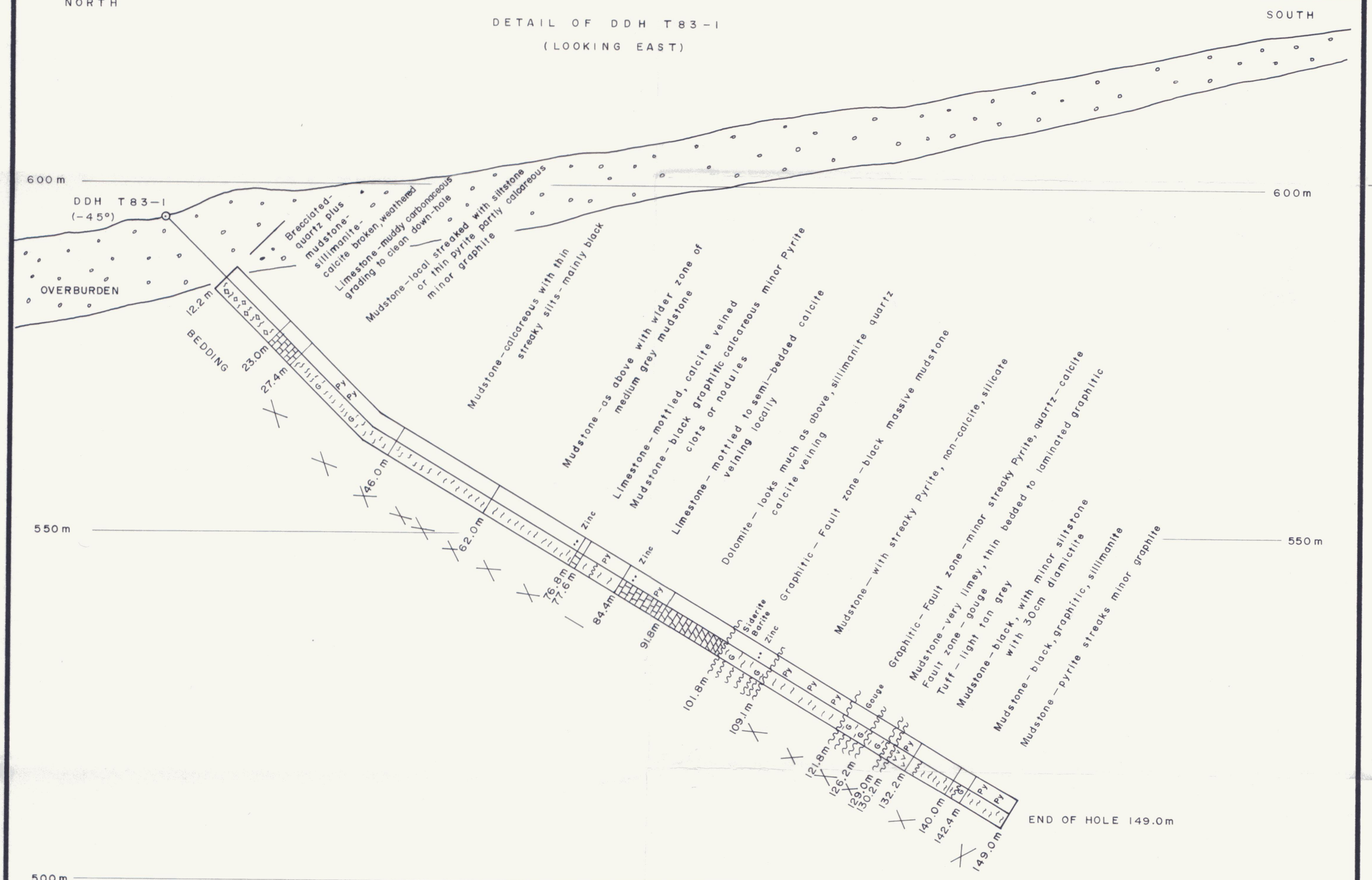
HORIZONTAL LOOP ELECTROMAGNETIC SURVEY 1777 Hz

(LOOKING EAST)



DETAIL OF DDH T83-1

(LOOKING EAST)



DIAMOND DRILL HOLE T83-1

SUMMARY OF MINERALIZED INTERSECTIONS:

FROM	TO	LENGTH	Pb (ppm)	Zn (ppm)	Ag (ppm)	Ba (4) (ppm)
31.2m	32.2m	1.0m	50	276	.9	829
37.2m	37.7m	0.5m	9	273	<.4	777
51.5m	52.5m	1.0m	14	682	<.4	482
75.0m	75.9m	0.9m	49	724	.7	2291
75.9m	76.1m	0.2m	17	883	<.4	2241
76.1m	76.8m	0.7m	16	1290	<.4	706
76.8m	77.6m	0.8m	10	158	<.4	5216
80.5m	81.0m	0.5m	23	996	<.4	3409
85.4m	85.8m	0.8m	30	709	<.4	651
106.2	106.8	0.6m	43	596	<.4	888
130.2m	131.7m	1.5m	17	74	<.4	1296
131.7m	133.2m	1.5m	16	81	<.4	1527
146.0m	147.0m	1.0m	26	62	<.4	651

LEGEND

- MUDSTONE
- SILTY MUDSTONE
- LIMESTONE
- DOLOMITE
- TUFF
- BRECCIATED
- G GRAPHITIC

SYMBOLS

- FAULT
- BEDDING ANGLES
- Py PYRITE
- Zinc TRACE ZINC
- Siderite TRACE SIDERITE

TUM PROPERTY 191491

Cominco NTS 105 L-11,14

Drawn by: M.R.M.		Traced by: J.P.S.	
Revised by	Date	Revised by	Date

PLAN, EM SURVEY,
DETAIL OF DDH T83-1
WHITEHORSE M.D., YUKON

Scale: AS SHOWN | Date: SEPT, OCT, 1983 | Plate: C

NCI-229-C.L.