

ARIS SUMMARY SHEET

District Geologist, Kamloops

Off Confidential: 89.06.17

ASSESSMENT REPORT 17669

MINING DIVISION: Kamloops

PROPERTY: Rag

LOCATION: LAT 50 37 07 LONG 120 40 07
UTM 10 5609789 664926
NTS 092I10E

CLAIM(S): Rag 1-3, Rag 19-20, Rag 24-30

OPERATOR(S): Cominco

AUTHOR(S): Elliott, I.L.

REPORT YEAR: 1988, 29 Pages

COMMODITIES

SEARCHED FOR: Copper, Molybdenum/Molybdenite, Gold

GEOLOGICAL

SUMMARY: An Early Cretaceous diorite-monzonite stock intrudes Upper Triassic Nicola Group intermediate volcanics that are in part overlain by Tertiary mafic volcanics.

WORK

DONE: Geochemical

SOIL 619 sample(s)
Map(s) - 1; Scale(s) - 1:2000

RELATED

REPORTS: 02511, 03713, 04008, 05673, 07337, 08238

MINFILE:

092INE045

EXPLORATION

COMINCO LTD.

FILE NO:

RD.

ACTION:

WESTERN DISTRICT

ASSESSMENT REPORT
GEOCHEMICAL SOIL SAMPLING
RAG 1-3, 19, 20, 24-30 MINERAL CLAIMS

DOMINIC LAKE AREA

FILMED

KAMLOOPS MINING DIVISION

NTS 92I/10

LATITUDE: 50°36'N LONGITUDE: 120°41'W

G E O L O G I C A L B R A N C H
A S S E S S M E N T R E P O R T

OWNER:
COMINCO LTD.
700-409 GRANVILLE STREET
VANCOUVER, B.C.
V6C 1T2

17,669

SUB-RECORDER
RECEIVED

AUG 5 1988

M.R. # \$
VANCOUVER, B.C.

WORK PERFORMED JUNE 6-9, 1988
REPORT BY I.L. ELLIOTT
SUBMITTED JULY 1988

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Exploration

Cominco Ltd.

Western Canada
July, 1988

GEOCHEMICAL REPORT
ON THE RAG 1-3, 19, 20, 24-30 CLAIMS
DOMINIC LAKE AREA
KAMLOOPS MINING DIVISION
LAT: 50°36'N LONG: 120°41'W NTS: 92I/10

1.0 INTRODUCTION

This report describes the results of geochemical soil sampling done on the RAG claims in June, 1988. The objective of this work was to assess the gold potential of the claims.

The area in the vicinity of Dominic Lake has been extensively explored for porphyry copper style mineralization in the past. Indications of feeble gold mineralization were obtained from percussion drilling work done in the seventies. Current work was concentrated on an extensive I.P. anomaly on the northern margin of the Durand Lake alkaline intrusive.

1.1 Tenure

The RAG claim group is 100% owned by Cominco and was acquired by staking in 1969. Work was done on the following claims:

| <u>Claim</u> | <u>Record No.</u> | <u>Record Date</u> | <u>Expiry Date</u> |
|--------------|-------------------|--------------------|--------------------|
| RAG 1-3 | 81476-78 | July 4, 1969 | July 4, 1988 |
| RAG 19 | 81494 | July 4, 1969 | July 4, 1988 |
| RAG 20 | 81495 | July 4, 1969 | July 4, 1988 |
| RAG 24-30 | 81512-81518 | July 8, 1969 | July 8, 1988 |

1.2 Location and Access

The RAG claims are located between 1350 m and 1650 m elevation on the west flank of Greenstone Mountain about 27 km west-south-west of Kamloops. Access is by a good gravel active logging roads to Dominic Lake Lodge which leave Highway 1/97 at Cherry Creek 35 km west of Kamloops.

1.3 Topography

Upland pine forests cover an area of moderate relief containing a number of small lakes. Kwilalkwila Creek is the principal active drainage. Glacial overburden ranging from none to as much as 30 m in thickness mantles the limited outcrops of Nicola volcanics and Durand Lake intrusive.

R 21

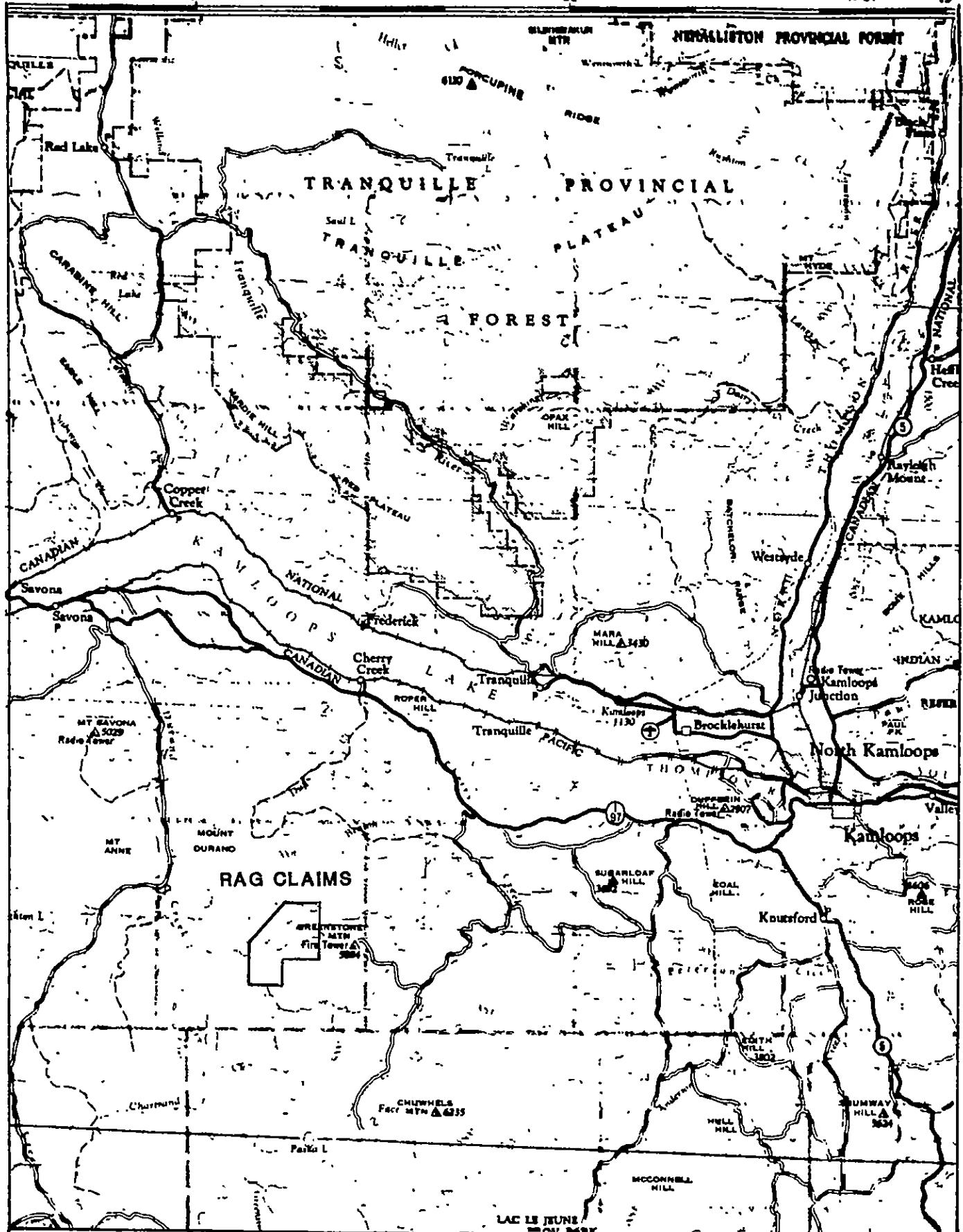
45' R 20

R 19

30' R 18

R 17

15'



RAG PROPERTY LOCATION MAP

92I/10E

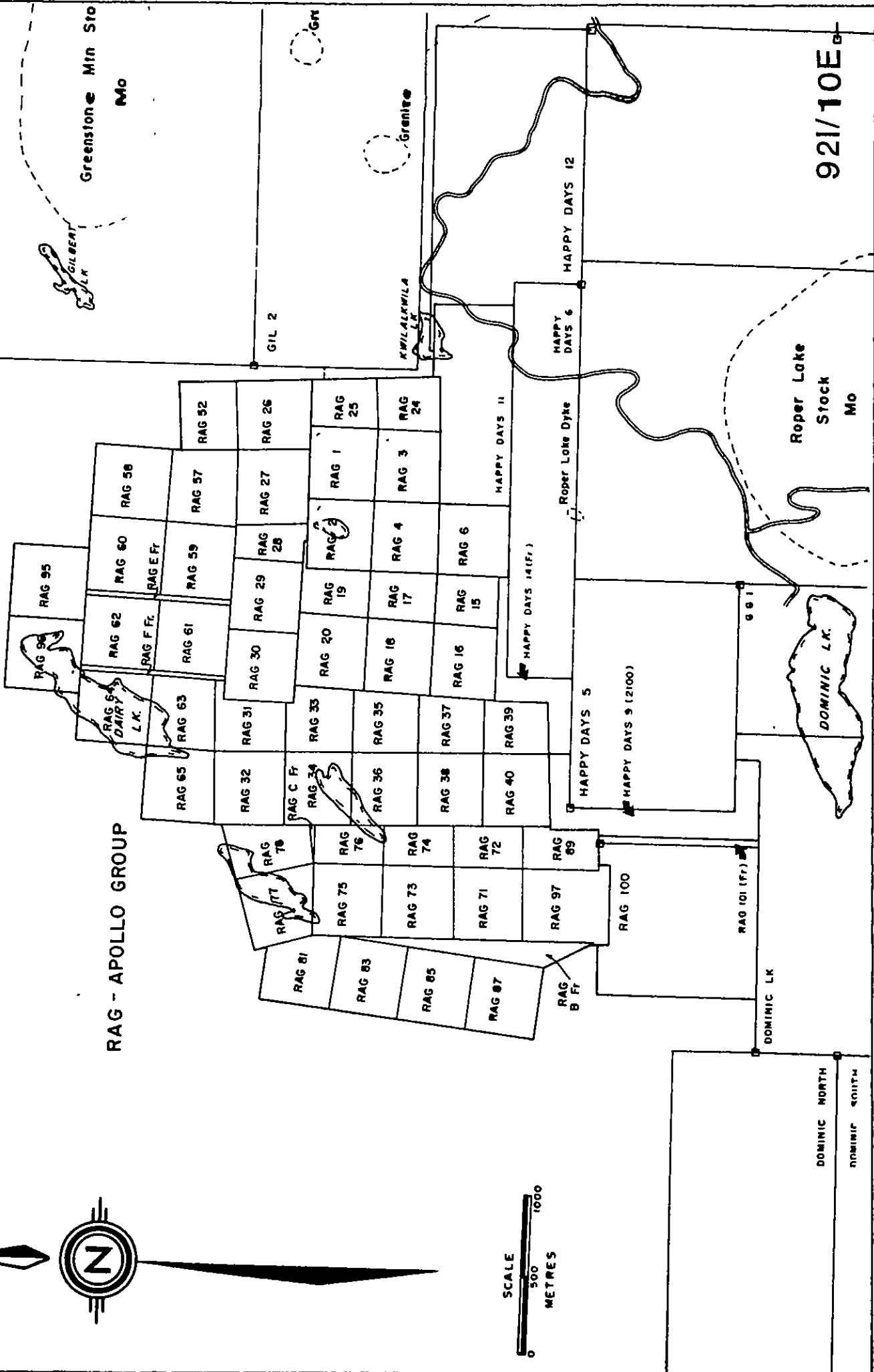
1:50000

JUNE 1988

FIG 1

RAG CLAIMS Fig 2

JUNE 1988



1.4 Previous Work

The general area of the Durand Lake and Roper Lake intrusives has been subjected to extensive exploration for porphyry Cu-Mo mineralization since 1960.

| | | |
|-------------------|------------|----------------------------|
| Assessment Report | 325 | Kennco 1960 |
| " | 1009 | Dominic Mining Co. 1967 |
| " | 1099 | Noranda 1967 |
| " | 2511 | Cominco 1970 |
| " | 3713, 4004 | Mid North Exploration 1972 |
| " | 5673 | Cominco 1975 |
| " | 7337 | Cominco 1979 |
| " | 8238 | Cominco 1980 |

1.5 Geology

The early Cretaceous (122 my) Durand Lake diorite-monzonite stock intrudes Upper Triassic Nicola Group intermediate volcanics that are in part overlain by Tertiary basic volcanics.

1.6 Mineralization

The intrusive is estimated to contain 185 m.t. of 0.05% Cu based on percussion and diamond drilling. The margins of the stock contain extensive pyrite (up to 8%) and significant amounts of magnetite. Gold determinations made on 50 ft. (15.25 m) composites from eight percussion holes indicated the presence of gold. One drill hole returned 180 ft. (55 m) averaging 267 ppb Au including 60 ft. (18 m) of 500 ppb Au.

2.0 GEOCHEMISTRY

2.1 Sampling

Six hundred and nineteen soil samples were taken using narrow bladed shovels from sites at 25 m intervals along lines 100 m apart oriented N-S. Most of the property is covered with glacial overburden of variable thickness which has developed a brown forest soil profile. A 5-10 cm thick black organic horizon overlies 10-30 cm of light to medium brown silty clay B horizon. Only weak ferruginization was noted and no podsolization or salinization. Occasionally a very sticky clay C horizon was encountered. Gleyed humic soils are found in the margins of small lakes and in the bottom of the Kwilalkwila Creek valley. The crest of one ridge in the northwest quadrant of the area is conspicuously lacking in tree cover and supports only grass. This appears to be a natural phenomenon and not due to logging. The soil profile is also distinctive in having a thick (30-50 cm) organic horizon overlying glacial clay. The majority of samples were taken at 15-20 cm depth in the B horizon.

2.2 Analysis

A 10 gram sub-sample of the minus 80 mesh fraction of the air dried soil was analyzed for gold using atomic absorption techniques on the M.I.B.K. extraction of a hot aqua regia leach. The analyses were done at Cominco's laboratory in Vancouver.

3.0 RESULTS AND INTERPRETATION

Gold values for soils range from <10 ppb Au (the detection limit of the method used) to a high of 137 ppb Au with the majority of values being less than 30 ppb Au (93%). Background level is 10 ppb Au or less.

Sites with gold concentrations greater than 30 ppb rarely form groupings which can be supported with any confidence. The highest gold concentrations occur as spot highs with no surrounding support (138 ppb at 400W, 1150N; 127 ppb at 1000W, 1200N; 97 ppb at 600W, 750N) with the exception of the 110 ppb at 300W, 50N which has a trail of 30-50 ppb values to the north but none on the adjacent lines.

Given the exotic nature of the overburden and the proximity of known, weak gold mineralization in the intrusive to the south the derivation of the low gold values, in the area sampled, from the intrusive cannot be discounted.

As a consequence, although low levels of gold are widespread throughout the area sampled it is difficult to define a coherent target for further work.

4.0 RECOMMENDATIONS

On the basis of the above results any further work needs to be directed at better defining targets worthy of trenching and/or percussion drilling. Analysis of the soil samples for arsenic may help to place priorities on these weak indications of gold.

Additional samples on a 25 m square grid around the low order anomaly at 300W, 50N would help to define the real extent of these gold values.



Ivor L. Elliott
Chief Geochemist

ILE/jd

APPENDIX A

ANALYTICAL RESULTS

| EXP LAN | FIELD | NUMBER | NO | MAP ZONE | EAST | NORTH | # | MATERIAL | DRIS | SITE | COLOUR | SIZE | ORG | NET CM | SLOPE | HORIZ | PPT | PH | DEPTH WIDTH FLOW | | Au | Ht Au | |
|-----------|--------|--------|------|----------|------|-------|------|-------------|------|-----------|--------|------------|-----|---------|-------|-------|-----|----|------------------|-----|----|-------|--|
| | | | | | | | | | | | | | | | | | | | GRAN | PPB | | | |
| SR8901011 | 689772 | | +800 | | +875 | 6 | Soil | Glac | | Hei-Brown | | SILT | Low | H'ST 20 | Low | B | | | <10 | 10 | | | |
| SR8901012 | 689773 | | +800 | | +850 | 6 | Soil | Glac | | LT-Brown | | SILTY-CLAY | Low | H'ST 20 | Low | B | | | | 21 | 10 | | |
| SR8901013 | 689774 | | +800 | | +825 | 6 | Soil | Glac | | Hei-Brown | | SILT | Low | H'ST 40 | Low | B | | | | 17 | 10 | | |
| SR8901014 | 689775 | | +800 | | +820 | 6 | Soil | Aluv Active | | Hei-Brown | | SANDY-SILT | Low | 5 | 1.5M | Hei | | | | 16 | 10 | | |
| SR8901015 | 689776 | | +800 | | +800 | 6 | Silt | Glac | | Hei-Brown | | SILT | Low | H'ST 30 | Low | B | | | <10 | 10 | | | |
| SR8901016 | 689777 | | +800 | | +775 | 6 | Silt | Glac | | Hei-Brown | | SILT | Low | H'ST 20 | Low | B | | | <10 | 10 | | | |
| SR8901017 | 689778 | | +800 | | +750 | 6 | Silt | Glac | | LT-Brown | | SILT | Low | H'ST 30 | Low | B | | | | 18 | 10 | | |
| SR8901018 | 689779 | | +800 | | +725 | 6 | Silt | Glac | | LT-Brown | | SILT | Low | H'ST 25 | Low | B | | | <10 | 10 | | | |
| SR8901019 | 689780 | | +800 | | +700 | 6 | Soil | Glac | | Hei-Brown | | SILT | Med | H'ST 20 | Low | B | | | <10 | 10 | | | |
| SR8901020 | 689781 | | +800 | | +675 | 6 | Soil | Glac | | Hei-Brown | | SILT | Low | H'ST 20 | Low | B | | | <10 | 10 | | | |
| SR8901021 | 689782 | | +800 | | +650 | 6 | Soil | Glac | | Hei-Brown | | SILT | Low | H'ST 20 | Low | B | | | <10 | 10 | | | |
| SR8901022 | 689783 | | +800 | | +625 | 6 | Soil | Glac | | LT-Brown | | SILTY-CLAY | Low | Day 20 | FLAT | B | | | <10 | 10 | | | |

I=INSUFFICIENT SAMPLE X=SMALL SAMPLE E=EXCEES CALIBRATION C=BEING CHECKED R=REVISED
If requested analyses are not shown results are to follow

ANALYTICAL METHODS

As Asx Axx RESSA DECOMPOSITION / SOLVENT EXTRACTION / AAS

Ht Au The weight of sample taken to analyse for gold (GEOTHEM)

APPENDIX B
STATEMENT OF EXPENDITURES
ON THE RAG 1-3, 19, 20, 24-30 CLAIMS
IN THE PERIOD JUNE 6-9, 1988

Salaries

| | |
|--------------------------------------|--------------------------------|
| I.L. Elliott, Chief Geochemist | 4 days @ \$295/day = \$1,180 |
| S.B. Noakes, Geochemical Technician | 4 days @ \$150/day = 600 |
| D.L. Craig, Geologist | 4 days @ \$112/day = 448 |
| R. McGillivray, Geological Assistant | 4 days @ \$100/day = 400 |
| R. Van Egmond, Geological Assistant | 4 days @ \$95/day = 380 |
| D. Woodsworth, Field Assistant | 4 days @ \$90/day = 360 |
| R. Van Heek, Field Assistant | 4 days @ \$80/day = 320 |
| S. Varley, Field Assistant | 4 days @ \$80/day = <u>320</u> |
| | \$4,008 |

Domicile

| | |
|--------------------------------|---------------|
| Motel, Kamloops 8 men x 3 days | \$933.12 |
| Meals | <u>411.30</u> |
| | \$1,344.42 |

Transportation

| | |
|-------------------------|---------------|
| Truck 5 days @ \$40/day | \$200.00 |
| 932 km @ \$0.15/km | 139.80 |
| Fuel, tolls | <u>119.50</u> |
| | \$ 459.30 |

Geochemical Analysis

| | |
|----------------------------------|---------------|
| Preparation 619 samples @ \$1.00 | \$619.00 |
| Analysis for gold 619 @ \$5.50 | 3,404.50 |
| Supplies; bags, boxes, etc. | <u>120.00</u> |
| | \$4,143.50 |

Report

| | |
|---------------------------------|---------------|
| I.L. Elliott 2 days @ \$295/day | <u>442.50</u> |
|---------------------------------|---------------|

| | |
|-------|-------------|
| TOTAL | \$10,397.72 |
|-------|-------------|

APPENDIX C

AFFIDAVIT

In the matter of the B.C. Mineral Act and in the matter of a soil geochemistry programme carried out on the RAG 1-3, 19, 20, 24-30 mineral claims located in the Nicola and Princeton mining division of British Columbia, more particularly, in N.T.S. sheet 92H/15E.

I, I.L. Elliott of the Municipality of Delta in the province of British Columbia, do make oath and say:

1. that I am employed as Chief Geochemist by Cominco Ltd. and as such have personal knowledge of the facts to which I hereinafter depose.
2. that annexed hereto and marked as Appendix B to this my affidavit is a true copy of expenditures incurred in a soil geochemistry programme on the RAG 1-3, 19, 20, 24-30 mineral claims.
3. that the said expenditures were incurred between the 4th day of June and the 11th day of June, 1987 for the purpose of mineral exploration on the above noted claims.



I.L. Elliott
Chief Geochemist
Cominco Ltd.

APPENDIX D
STATEMENT OF QUALIFICATIONS

I, Ivor L. Elliott, with a business address in Vancouver, British Columbia and a residential address in Delta, British Columbia hereby certify that:

1. that I have been employed since 1983 as Chief Geochemist by Cominco Ltd. with a business address at 700-409 Granville Street, Vancouver, British Columbia.
2. that I graduated with a B.Sc. (Hons) geology degree from the University of Manchester in 1959 and a Ph.D. degree in geochemistry from the Royal School of Mines, University of London in 1962.
3. that I am a member of the Association of Professional Engineers of British Columbia.
4. that I personally supervised the geochemical work on the RAG claims and have interpreted the data.


I.L. Elliott
Chief Geochemist
Cominco Ltd.

