

**LEGEND**

**JURASSIC (?)**

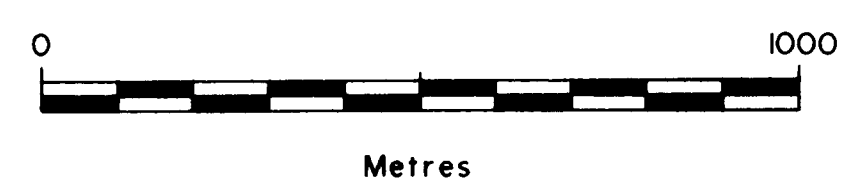
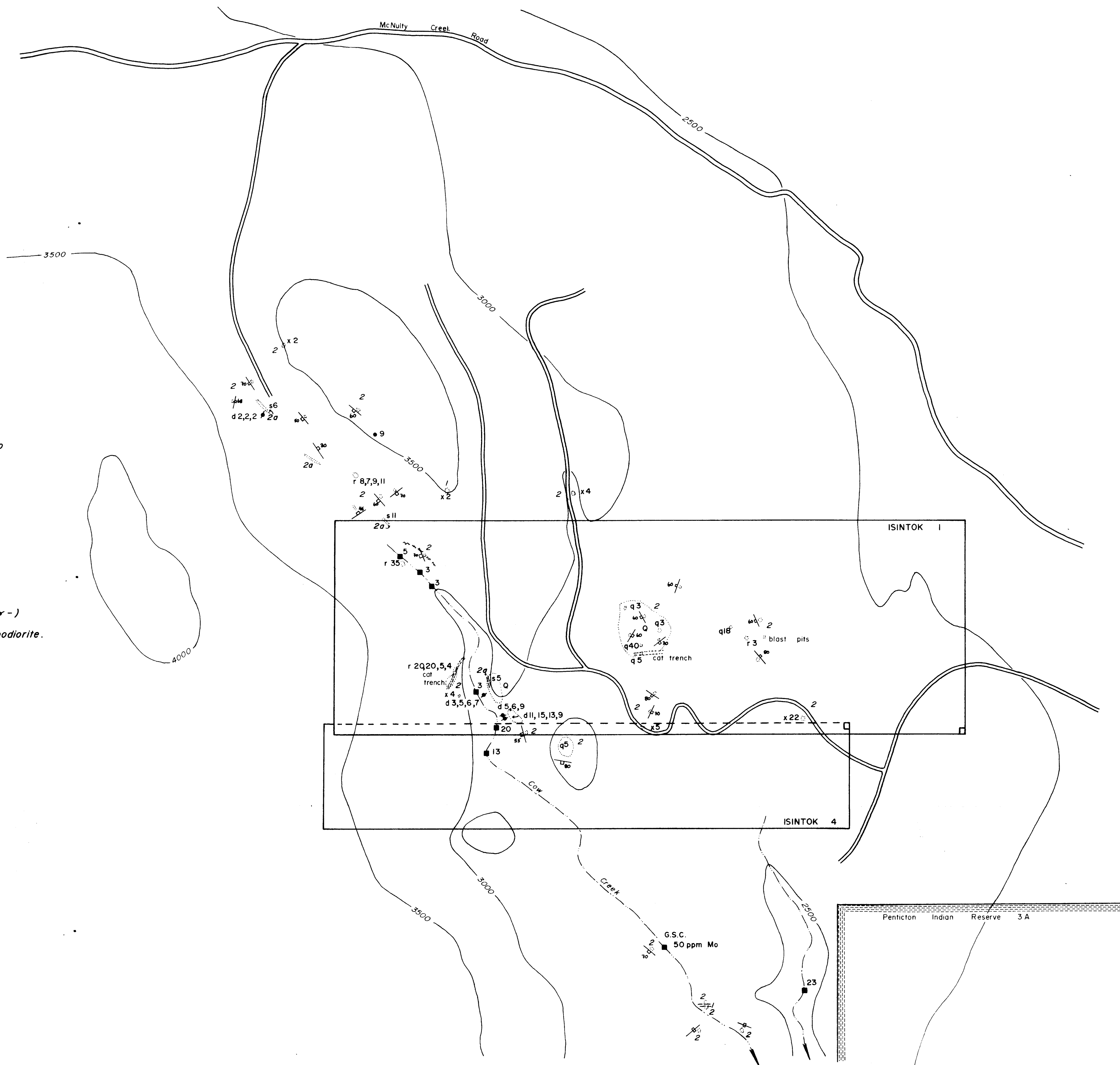
- 2 Hornblende - biotite granodiorite.
- 2a Sheared granodiorite altered to quartz siderite.
- 1 Felsic dykes.

**Materials Analyzed For Mo (ppm):**

- Mo in silt.
- Mo in soil. (Mo in soils up draw - -)
- x Mo in fresh hornblende biotite granodiorite.
- r Mo in propylitized granodiorite.
- s Mo in siderite - quartz.
- q Mo in quartz veinlets.

**SYMBOLS**

- Joint.
- ~ Shear.
- o Areas of quartz veining.



7885

*m. Ontario*

<b>ISINTOK PROPERTY</b>		82 E/12
Drawn by: GAM	Traced by: MJO	<b>GEOLOGY AND GEOCHEMISTRY</b>
Revised by: Date	Revised by: Date	
Scale: 1:10,000		Date: February 22, 1980
		Plate: 2

COMINCO LTD.

EXPLORATION  
NTS: 82E/12

WESTERN DISTRICT  
January 25, 1980

ASSESSMENT REPORT OF GEOLOGY  
AND SILT, SOIL AND ROCK GEOCHEMISTRY  
ON THE ISINTOK PROPERTY  
(ISINTOK 1 and 4 CLAIMS)  
SUMMERLAND AREA, OSOYOOS MINING DIVISION

(Work performed August 13 - September 2, 1979)

LATITUDE: 49°35'E

LONGITUDE: 119°47'W

REPORT BY:

G.A. Medford

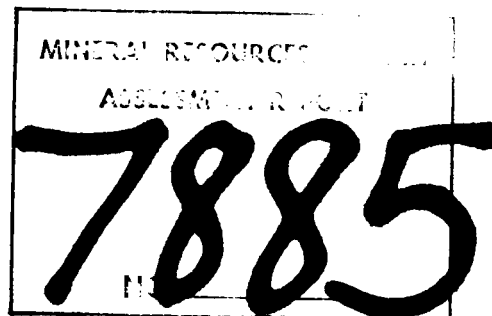


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ATTACHMENTS

1. Plate 1	Location of Isintok property;	1:50,000
2. Plate 2	Geology Map;	1:10,000

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SUMMERLAND AREA, OSOYOOS MINING DIVISION

SUMMARY

The Isintok property is located 5 km west of Summerland, B.C. Work done in 1979 consisted of mapping, rock geochem, and minor soil and silt sampling in order to explain an anomalous Mo stream silt value reported by the G.S.C. in 1977.

The host rock on the property is a grey (sometimes foliated) hornblende-biotite granodiorite, which is not a rock type that typically hosts Mo mineralization, but this rock has an anomalous Mo content of 4-22 ppm versus about 2 ppm for the average granodiorite.

Several areas of quartz veining (stockworks) and quartz shears, as well as a trench showing strongly chloritized and epidotized hornblende-biotite granodiorite are found in a zone 800 x at least 1500 m. A shear zone extends 1.5 km to the northwest from this central area and locally contains laminated quartz-siderite in zones up to 3 m thick. Samples of quartz or quartz-siderite from the above areas commonly contain 5 to 40 ppm Mo and erosion of this material into the drainage accounts for the stream silt anomalies.

Visible Mo mineralization was not observed on the property but the widespread occurrence of Mo and quartz veining suggests the presence of a hydrothermal system at depth that may have produced the mineralization.

It is recommended that further rock sampling of the host granodiorite in the region be undertaken to establish the extent of favourable ground for Mo mineralization, and that soil geochem be undertaken on the property to delimit the known areas of quartz veining and quartz-siderite alteration.

INTRODUCTION

The Isintok property was staked in March 1979 to cover a strong Mo stream silt anomaly reported by the G.S.C. in 1977. Mapping (1:10,000) and rock, silt and soil sampling was carried out during August and September 1979, by G.A. Medford.

### LOCATION AND ACCESS

The property is situated about 5 km west of Summerland B.C. Good road access exists to the property (Plate 1).

### TOPOGRAPHY AND VEGETATION

The area is mostly grassland with open forest at the very tops of mountains. Elevation ranges from 760 m to 1220 m.

### OWNERSHIP

The Isintok property (Osoyoos Mining District) is 100% owned by Cominco Ltd. and consists of the following claims:

<u>CLAIM</u>	<u>RECORD NUMBER</u>	<u>NUMBER OF UNITS</u>	<u>DUE DATE</u>
Isintok 1	714	12	March 28/82
Isintok 4	742	5	June 8/82

### PREVIOUS WORK

The central part of the property, formerly part of the Bluebird claims, was staked by a Penticton prospector in 1970, and there is evidence of pre 1970 bulldozer trenching. Minor blasting was carried out on a quartz veined area and assays of one sample reported .12% Mo and another 4.2 oz/ton Ag and 0.33% Cu. The property was examined by Cominco Ltd. in October 1970, but not recommended because of the limited extent of mineralization despite good exposure. A soil survey was carried out on the claims east of the blast pits but no Mo anomalies were found. The owner of the Bluebird claims subsequently located a shear zone about 1 km northwest of the property which purportedly contained quartz porphyry but this was not followed up.

At a later date (1977) the Agur claim was staked and work done west of the stream running north-south through the property. Evidence of soil sampling and cat trenching on the west bank of the stream was found. In addition, bulldozing of the stream bed was in evidence just upstream of the quartz stockwork located on the east bank. Within the trench on the west bank highly chloritized and epidotized granodiorite was exposed over 10 to 15 m.

### REGIONAL GEOLOGY

The host granodiorite is part of the Okanagan plutonic complex dated by Rb/Sr methods at approximately 156±6m.y. The areas was subsequently intruded by Tertiary plugs and covered by related Tertiary volcanic rocks.

## GEOLOGY AND GEOCHEMISTRY <sup>1</sup> OF THE PROPERTY

The property is underlain almost entirely by a grey hornblende-giotite granodiorite with the exception of a few irregular pink to grey felsic dikes (Plate 2). This granodiorite is not a typical host for porphyry Mo mineralization, but it has an anomalous Mo content. Of five samples analyzed, all but one had values greater than 2 ppm (and up to 22 ppm) which is unusual except in the immediate vicinity of productive properties (e.g. Brenda).

Several areas of quartz veining are found in a zone 800 x at least 1500 m. In the western part of this zone and on the east side of Cow Creek randomly oriented quartz veinlets (stockworks) are found in two areas. Occasionally, the quartz is present as open cavity fillings along with epidote. On the other side of the creek an old cat trench as exposed chloritized and epidotized hornblende-biotite granodiorite that is cut by quartz veinlets with minor pyrite. Soil and rock samples from these zones give anomalous Mo values of 5-20 ppm. Further up stream interlaminated quartz-siderite zones (3 m x at least 50 m) are found which dip eastward into the hill at about 30°. These zones give Mo values up to 11 ppm and with the anomalous rock and soil values in the quartz veined zone account for the anomalous stream silt values in Cow Creek. In the eastern part of the quartz veined zone most quartz is present in shears along with siderite and rarely tetrahendrite and malachite. The highest Mo value recorded from quartz veinlets in this area is 40 ppm, although previous assays by Cominco Ltd. reported up to 0.12% Mo. Ag assays of grab samples in this area are 0.3 and 0.5 oz/ton with a previous assay of 4.2 oz/ton.

In several locations rock resembling altered quartz oprphyry was observed. This material has been noted by previous workers but appears to be nothing more than an alteration product of the host hornblende-biotite granodiorite, with the result that the quartz stands out in relief against a brown to rusty clay matrix. Gradation of this pseudo-quartz porphyry into unaltered hornblende-biotite granodiorite has been observed.

### CONCLUSIONS

The claim group is underlain by foliated hornblende-biotite granodiorite which is cut by a quartz veined zone, about 800 x at least 1500 m. This zone shows anomalous Mo in both soils and rocks and is the source for the G.S.C. Mo silt anomaly.

1. All samples were analyzed in Cominco's laboratory in Vancouver. Soils were collected from the B horizon. Coefficient of variation is 15% for Mo. Value of 5 ppm Mo is considered anomalous for all materials analyzed.

RECOMMENDATIONS

1) Soil sampling (Mo,Cu,Zn) to cover the central zone of quartz veining and the northwesterly trending zone of quartz-siderite alteration should be undertaken. The west bank of the stream should be included in the coverage, especially west of the quartz stockwork.

2) Further rock sampling of the host intrusion on a regional basis should be undertaken to delimit the extent of any hydrothermal system that may have been operative in the area, with a view to providing a larger target within which more detailed prospecting could be undertaken.

Report by: *m. Oxtenk*  
for G.A. Medford  
Research Geologist

Endorsed by: *F.L. Wynne*  
F.L. Wynne  
Senior Geologist

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

Distribution:

Western District file  
Vernon Office file

GAM/sf

APPENDIX "A"  
STATEMENT OF EXPENDITURES FOR  
GEOLOGY AND GEOCHEMISTRY ON  
THE ISINTOK CLAIMS

SALARIES

G.A. MEDFORD

August 13,14,15,16,17,27,28,29,30,31; September 1,2 (12 days @ \$140/day)	\$ 1,680.
Report writing (4 days @ \$140/day)	560.

TRUCK

1 for 12 days @ \$25/day	300.
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DOMICILE

12 man days @ \$50/day	600.
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ANALYSES

4 soil samples @ \$2.00/sample	8.
7 silt samples @ \$2.00/sample	14.
18 rock samples @ \$3.00/sample	54.

\$ 3,216.

  
\_\_\_\_\_  
G.A. Medford  
Research Geologist



APPENDIX "B"

COMINCO LTD.

STATEMENT OF QUALIFICATIONS

EXPLORATION

WESTERN DISTRICT

I, GARY A. MEDFORD, OF THE CITY OF VANCOUVER, BRITISH COLUMBIA,  
HEREBY CERTIFY:


THAT I AM A GEOLOGIST, RESIDING AT 84 WHITESAIL DR., BOWEN ISLAND,  
BRITISH COLUMBIA WITH A BUSINESS ADDRESS AT 1486 E. PENDER, VANCOUVER,  
BRITISH COLUMBIA.

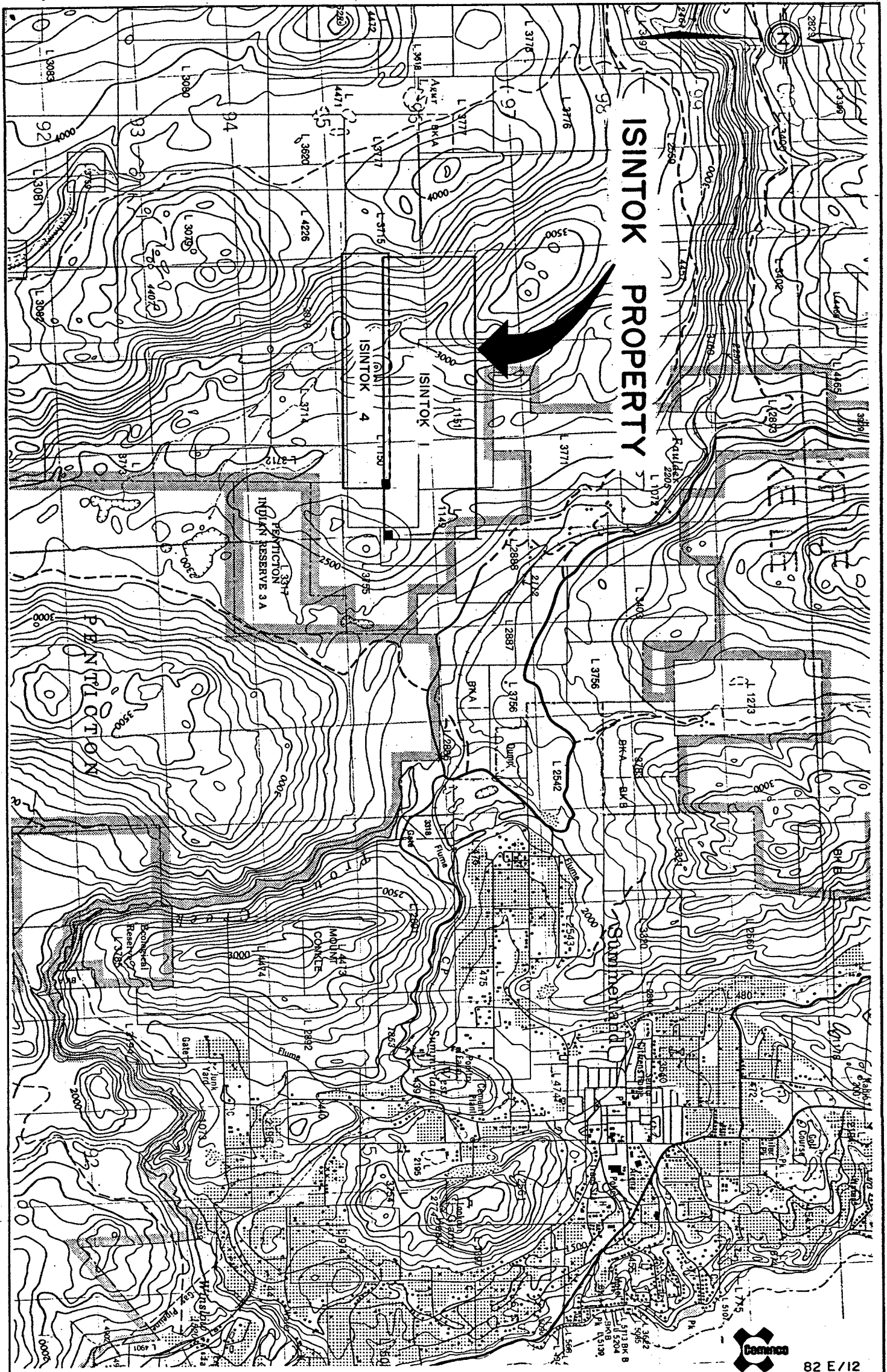
THAT I GRADUATED WITH B. Sc. AND M. Sc. DEGREES IN GEOLOGY FROM MCGILL  
UNIVERSITY OF QUEBEC IN 1968 AND 1970 RESPECTIVELY AND RECEIVED A PH.D.  
FROM THE UNIVERSITY OF BRITISH COLUMBIA IN 1974.

THAT I HAVE PRACTISED GEOLOGY WITH COMINCO LTD. FROM 1974 TO PRESENT.

DATED THIS 4th day of February 1980 at Vancouver, British Columbia.

SIGNED

  
for G.A. Medford, Ph. D.



**ISINTOK PROPERTY**

ISINTOK  
ISINTOK 4

INDIAN RESERVE 3A

PENTICTON

Sumner Rd

MOUNTAIN CONCRETE



82 E/12

Drawn by: RAR Traced by:  
 Revised by: [Signature] [Signature]  
**7885**

**ISINTOK PROPERTY  
LOCATION MAP**

Scale: 1:50,000 Date: February 25, 1980 Plate: 1