

GEOLOGICAL AND GEOCHEMICAL REPORT ON THE
PGT 6, POT 7, POT 13 - POT 20, POT 15
(25353), POT 22, POT 25 - POT 28, POT 30,
POT 31, POT 33 - POT 38, POT 51, POT 56,
POT 57, POT 62, POT 63, POT 68 - POT 70,
POT 72 - POT 77 CLAIMS

Situated in the Harrison Lake Area, New
Westminster Mining Division

Lat. N 49°22'

Long. W 122°00'

Report by F. D. Gill, Project Geologist

Supervised by D. W. Heddle, P. Eng.

92G/8E, 92H/5W

3560

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 3560 MAP

3560

COMINCO LTD.

EXPLORATION
92 H/5W

WESTERN DISTRICT
March 13th, 1972

GEOLOGICAL AND GEOCHEMICAL REPORT ON THE POT 6, POT 7,

POT 13 - POT 20, POT 15 (25353), POT 22, POT 25 - POT 28,

POT 30, POT 31, POT 33 - POT 38, POT 51, POT 56, POT 57,

POT 62, POT 63, POT 68 - POT 70, POT 72 - POT 77 CLAIMS

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New Westminster Mining Division

Latitude N 49°22'

Longitude W 122°00'

Report by
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		1	Location Map	1" = 4 miles
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POT 62, POT 63, POT 68 - POT 70, POT 72 - POT 77 CLAIMS

Situated in the Harrison Lake Area

New Westminster Mining Division

Latitude N 49°22'

Longitude W 122°00'

1. INTRODUCTION:

A program of reconnaissance geological mapping and mercury rock geochemistry was carried out on this 40-claim property in an attempt to locate Cu/Zn/Ag mineralization.

The work was carried out by F. D. Gill, C. D. Saville, R. F. Nichols, R. Y. Watanabe, and R. A. Gannicott, under the supervision of D. W. Heddle, P. Eng.

The Pot claims are located in the New Westminster Mining Division at latitude N 49°22', longitude W 122°00'.

The property, which covers an area of modest to rugged topography in which elevations range from 400 feet to almost 4,000 feet above sea level, lies ten miles north of Harrison Mills, British Columbia.

Access is by logging roads from Harrison Mills, a distance of about 20 miles.

2. HISTORY:

The claims were staked in 1971. As far as is known, no previous exploration work has been carried out on the property.

3. GEOLOGY:

See Plate P - 2.

The claims cover a section of the Harrison Lake volcanic belt which comprises a sequence of acid and intermediate flows and pyroclastics of Middle Jurassic age. On the property, at least 2,500 feet of the Harrison Lake volcanic stratigraphy appears to be represented.

Only a very limited amount of outcrop is present on the property, most outcrop being confined to the more important creeks and some of the road cuts. The areas of low or no outcrop traverses are shown on Plate P - 2.

On the basis of lithologies and, in part, on information on the adjoining claims to the southeast which were mapped by the same personnel in 1971, the volcanic stratigraphy has been divided into two series; namely, the Footwall and Hangingwall Series.

The Footwall Series consists of a sequence of porphyritic rhyolite flows intercalated with acid pyroclastics up to about 1,000 feet thick. Quartz

feldspar porphyry bodies in the forms of plugs and irregular masses intrude the series.

The Hangingwall Series is made up of dacite and porphyritic dacite flows with minor intercalations of acid pyroclastic material, and includes the edge of what appears to be a major development of coarse volcanic breccia to the east.

4. LITHOLOGIES:

Rhyolite and Rhyolite Flows:

The acid flows are dense, compact, fine-grained rocks, pale grey to pale green in colour, and almost always porphyritic. Small euhedral and subhedral plagioclase phenocrysts are almost always present, while small ragged quartz phenocrysts have a more restricted development. Mafic phenocrysts are rare.

Acid Lapilli Tuffs:

Acid lapilli tuffs occur in both the Footwall and Hangingwall Series, where units roughly 75 feet thick have been mapped. They comprise angular acid porphyry fragments up to one inch across, set in a coarse ash to finer ash matrix of roughly the same composition. The ratio of fragments to matrix is approximately 1:1. In the Hangingwall Series, the acid lapilli tuffs differ only in that the matrix is more dacitic to andesitic in composition.

Quartz - Feldspar Porphyry:

Quartz - feldspar porphyry masses intrude the Footwall Series in a number of areas and, since they do not appear to intrude the younger rocks, are probably high level sub-volcanic intrusions derived from the same magma which produced the acid extrusives. They are the predominant rock type that outcrops in the Footwall Series, and probably underlie a more extensive area than shown on the map. They are hard siliceous rocks with equal amounts of relatively coarse (up to four mm.) quartz and feldspar phenocrysts, and are rhyolitic in composition. In places, they are pyritic.

Dacite and Dacite Porphyry:

These rocks constitute the dominant rock types of the Hangingwall Series. They are fine-grained, pale-coloured, mostly porphyritic rocks. In the porphyritic varieties, small euhedral and subhedral phenocrysts of white and/or pink feldspar are always present. Quartz phenocrysts are rare and occur only in the more acid varieties. Mafic phenocrysts are more common than in the acid flows of the Footwall Series.

Acid Volcanic Breccia:

This unit is represented by only one small outcrop in the eastern part of the property, but it appears to mark the western edge of a thick development of acid breccias. It consists of subrounded to subangular fragments of acid volcanic material, ranging from fine lapilli size to breccia size, of which the largest fragments are 8 inches - 10 inches across. These acid fragments are set in a coarse ash matrix of dacitic composition.

5. STRUCTURE:

The structure of the volcanic pile which underlies these claims is interpreted as being fairly simple. No attitudes were determined from the limited outcrop available. However, the contact between the Footwall and the Hangingwall Series appears to parallel the topography, and it is inferred that the stratigraphy is either flat-lying or inclined at a low angle to the east. This interpretation is supported by mapping on the adjacent claims to the southeast, where considerably more outcrop is present.

Evidence of faulting exists in a creek at the 2,200-foot elevation in the southern part of the claims, where heavy gouge and intense fracturing were encountered. The major direction of faulting in this area appears to be north-northeast, but neither the direction nor the amount of displacement is known.

6. MINERALIZATION:

No base metal sulphide mineralization was encountered on the claims. Minor disseminated pyrite occurs in both the acid flows and intrusives of the Footwall Series.

7. MERCURY ROCK GEOCHEMISTRY:

See Plate P - 3.

A total of 45 rock samples was collected from outcrop areas on the property for determination of mercury content. In this geochemical method, small samples are collected and care is taken to see that they are free from organic material and visible sulphides. The individual samples are crushed and sieved to -40 mesh. A one gram sample of the sieved material is heated for approximately 60 seconds in an alcohol flame, and the resulting vapour is passed through a Lemaire S-1 mercury meter. This is an atomic absorption unit which utilizes the ultra-violet 2537 Å line for mercury and a photo-electric cell. Any mercury contained in the vapour absorbs the ultra-violet light. Changes in illumination are measured by the photo-electric cell and are shown on a meter which is calibrated to read in micrograms of mercury per litre of sample.

Previous surveys have indicated that background values in the Harrison Lake area are zero. Of the samples collected and tested, only one showed an anomalous or above background value, and is therefore of little significance.

8. CONCLUSIONS:

No evidence of Cu/Zn/Ag mineralization was found on the property.

Report by: F. D. Gill
F. D. Gill
Project Geologist, Exploration
Western District

Endorsed by: D. W. Heddle
D. W. Heddle, P. Eng.
Chief Geologist, Exploration
Western District

Approved for
Release by: W. T. Irvine
W. T. Irvine, P. Eng.
Manager, Exploration
Western District

FDG:jr
Vancouver Office
March 13th, 1972

COMINCO LTD.

EXPLORATION
92 H/5W

WESTERN DISTRICT
March 13th, 1972

POT CLAIMS

EXHIBIT "A"

STATEMENT OF EXPENDITURES

1. Salaries:					
R. Y. Watanabe	Project Geologist	1 day @ \$ 75	\$ 75		
F. D. Gill	Project Geologist	7 days @ \$ 75	525		
R. F. Nichols	Geologist	6 days @ \$ 55	330		
C. D. Saville	Student Geologist	6 days @ \$ 45	270		
R. A. Gannicott	Student Geologist	6 days @ \$.36	216		
D. W. Heddle	Chief Geologist	1 day @ \$100	<u>100</u>	\$ 1,516	
2. Groceries and accommodation					300
3. Transportation					350
4. Topographic map prepared by McElhanney Surveying					350
5. Report and drafting					<u>250</u>
					<u>\$ 2,766</u>

This work was performed during the period May 12th, 1971 - June 1st, 1971.

Signed:

F. D. Gill
 F. D. Gill
 Project Geologist

This is Exhibit "A" to the Statutory Declaration of F. D. Gill declared before me this 13 day of March, A. D. 1972.

A Commissioner for Taking Affidavits in the Province of British Columbia

Declared before me at the city
 of Vancouver, in the
 Province of British Columbia, this 13
 day of March 1972, A.D.

F. D. Gill

Joan Turner
 A Commissioner for taking Affidavits within British Columbia
 A Notary Public in and for the Province of British Columbia

STATEMENT OF QUALIFICATIONS

F. D. Gill was responsible for carrying out the geological and geochemical surveys on the Pot claims and for the preparation of this report. Mr. Gill graduated as a Bachelor of Science from the University of Durham, United Kingdom, in Honours Geology in 1957. He obtained his M.A. degree from the University of Toronto in 1966, and has been working in a responsible capacity for Cominco Ltd. since July, 1957.

I consider him to be a capable and experienced geologist.

D. W. Heddle

D. W. Heddle, P. Eng.
Chief Geologist, Exploration
Western District

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.

To Wit:

In the Matter of

Statutory Declaration Relating
to Expenditures on a Geological
and Geochemical Survey of the
Pot 6, Pot 7, Pot 13 - Pot 20,
Pot 15 (25353), Pot 22, Pot 25
- Pot 28, Pot 30, Pot 31, Pot 33
- Pot 38, Pot 51, Pot 56, Pot
57, Pot 62, Pot 63, Pot 68 - Pot
70, Pot 72 - Pot 77 Mineral
Claims, New Westminster Mining
Division

I, F. D. Gill

of the City of Vancouver

in the Province of British Columbia, do solemnly declare that

1. I personally, with the assistance of others named in this report, performed the surveys and prepared the accompanying geological and geochemical report on certain mineral claims situated in the New Westminster Mining Division.
2. Copies of the said report are being filed with the Mining Recorder in New Westminster.
3. Attached hereto, and marked with the letter "A" upon which I have signed my name at the time of declaring hereof, is a statement of expenditures incurred in connection with the geological - geochemical survey of the said claims, showing in addition the period in which the said survey was carried out.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 13th
day of March 1972, A.D.

F. D. Gill

Joan Turner
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia. Sub-Mining Recorder

In the Matter of

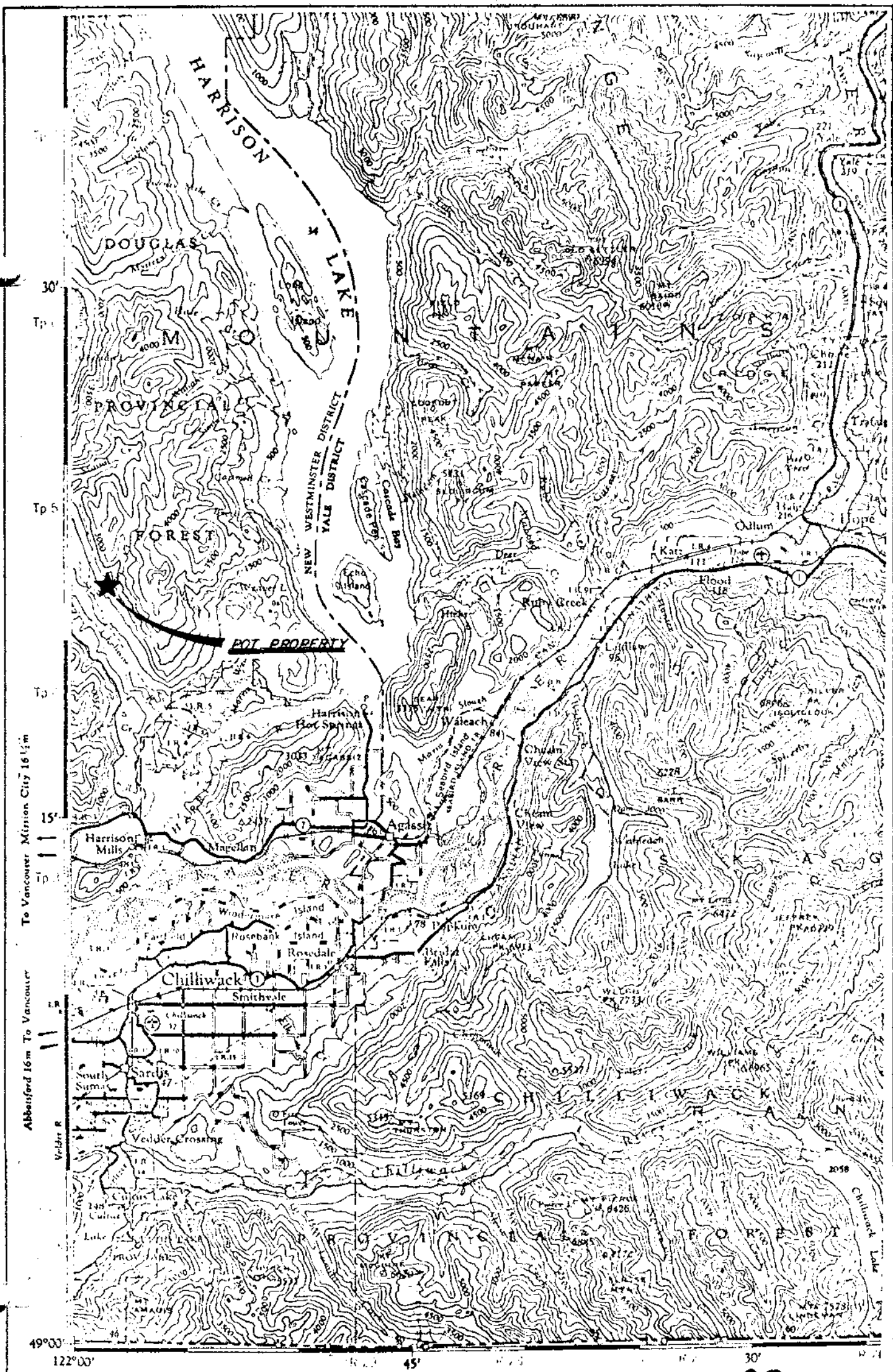
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Statutory Declaration
(CANADA EVIDENCE ACT)



POT GROUP 

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

LOCATION MAP

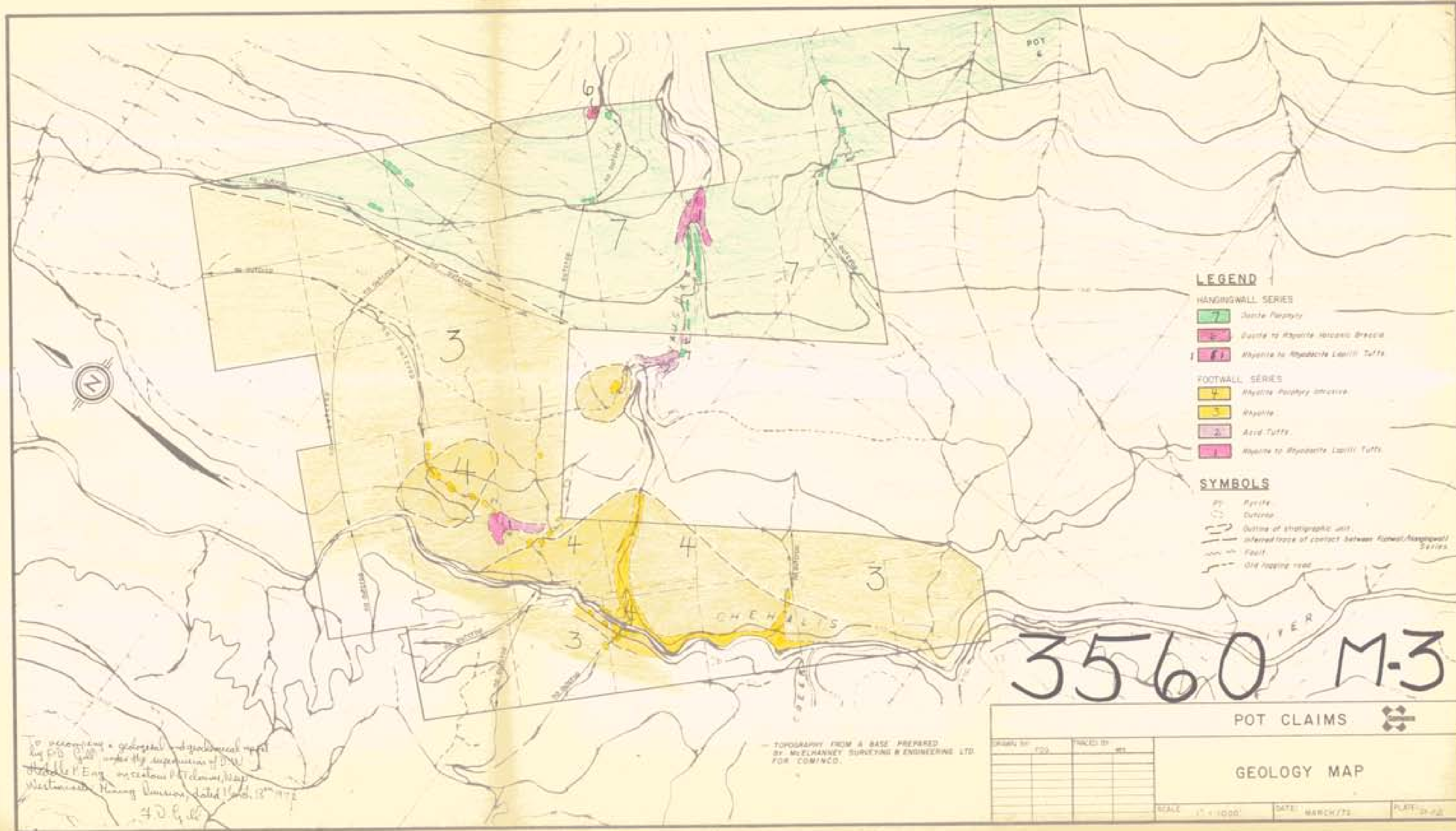
Scale: 1" = 4 MILES Date: FEBRUARY / 71. Plate:

Department of
Mines and Petroleum Resources

ASSESSMENT REPORT

3560 MAP

A1



LEGEND

HANGINGWALL SERIES

- 7 Santa Fe Group
- 6 Quartz to Rhyolite Volcanic Breccia
- 5 Rhyolite to Rhyolite Lava Tuffs

FOOTWALL SERIES

- 4 Rhyolite Flowery Intrusive
- 3 Rhyolite
- 2 Acid Tuffs
- 1 Rhyolite to Rhyolite Lava Tuffs

SYMBOLS

- Pit
- Outcrop
- Outline of stratigraphic unit
- Inferred trace of contact between Footwall/Hangingwall Series
- Fault
- Old logging road

3560 M-3

POT CLAIMS

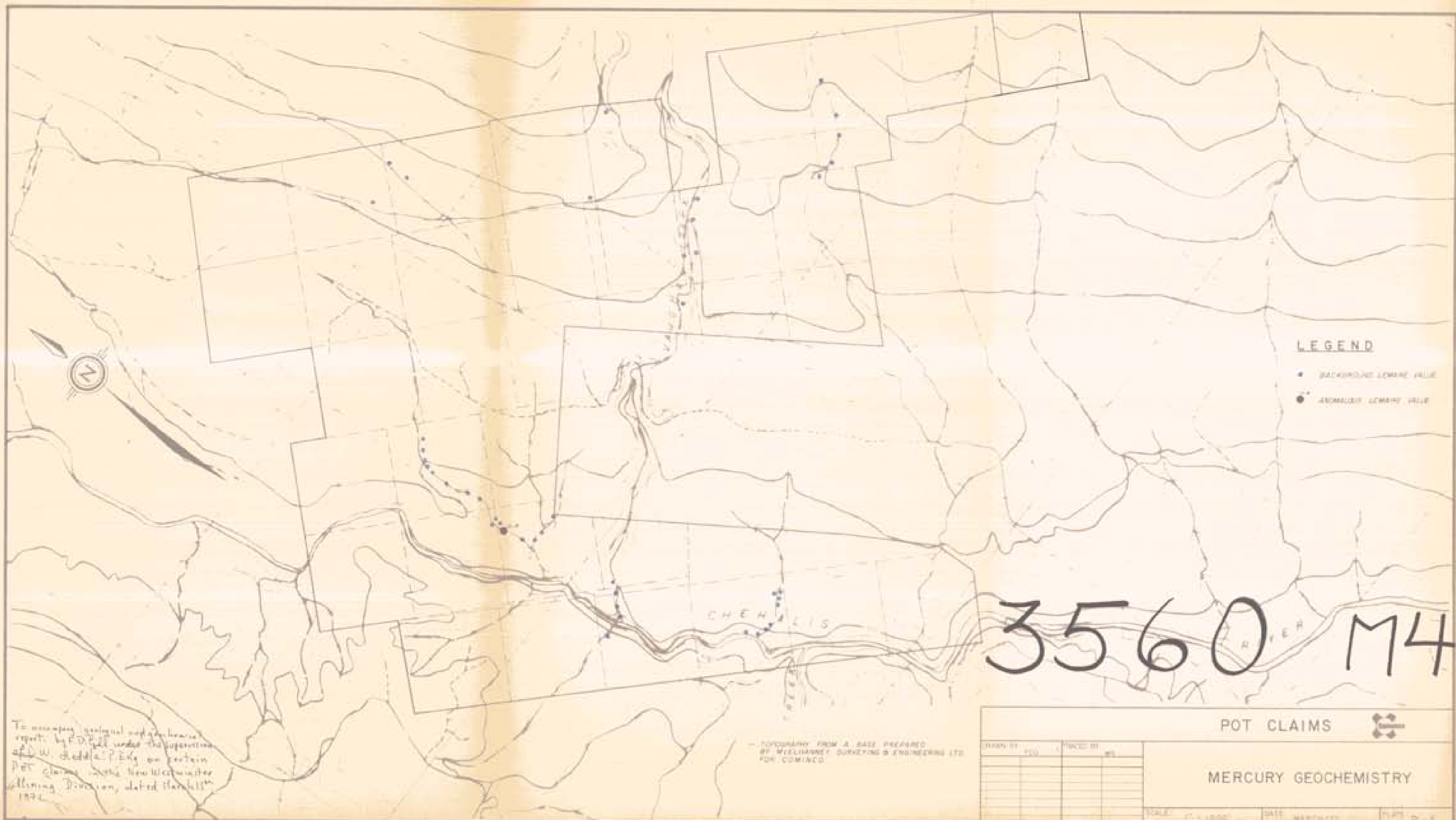
To accompany a geological and geophysical report
 by F.D. Galt, under the supervision of D.W.
 Strohle, P. Eng., in section 14, T14N, R10W,
 Westman Mining Division, dated March 18th 1972
 F.D.G.

TOPOGRAPHY FROM A BASE PREPARED
 BY MCELHANNAY SURVEYING & ENGINEERING LTD.
 FOR COMINCO.

NO.	DATE	BY

GEOLOGY MAP

SCALE 1" = 1000' DATE MARCH/72 PLAT 20/72



LEGEND

- BACKGROUND MERCURY VALUE
- ANOMALOUS MERCURY VALUE

CHEN L I S

3560 M4

To accompany geological map and bearing reports by F.D. Bell under the supervision of W. Chiddister, P. Eng. on certain POT claims in the New Westminster Mining Division, dated March 11th 1932.

— TOPOGRAPHY FROM A SATE PREPARED BY WELLSBURY SURVEYING & ENGINEERS LTD. FOR COMINCO

POT CLAIMS



MERCURY GEOCHEMISTRY

CLAIM NO.	FILE NO.	PLACED BY	DATE

SCALE: 1" = 1000' DATE: MARCH 1932 SHEET: 2 OF 3