

92I/16W, 92P/1W

GEOCHEMICAL REPORT

ON

RAVE GROUP

(24 miles N of Kamloops, lat. 51°00'N; long. 121°27'W)

N.T.S. 92P/IE 921 16E

KAMLOOPS M.D.

Work Done:
June 18, 1973 to
September 29, 1973

Owner: Amoco Canada
Petroleum Company Ltd.
Author: Henry E.O. Neugebauer,
P. Eng.

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Enclosures in Pocket:

- #1 Sample location map 1" = 1,000'
- #2 Sample location map (coloured)
- #3 Geochemistry (Cu ppm) 1" = 1,000'
- #4 Geochemistry (Mo ppm) 1" = 1,000'
- #5 Geochemistry (Zn ppm) 1" = 1,000'
- #6 Geochemistry (Ag ppm) 1" = 1,000'
- #7 Topographic map 1" = 1,000'



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Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **4665** MAP.....



INTRODUCTION

A reconnaissance geochemical anomaly had been located on the Rave Group in 1972. To evaluate the anomaly the Rave Group was mapped and prospected and a soil, silt and rock chip geochemical survey was carried out in the summer of 1973.

The area is underlain by quartz diorite which has intruded Cache Creek Group metasediments. These rocks are extensively covered by flat lying Plateau olivine basalts. Except for isolated outcrops, rock exposures of metasediment and quartz diorite are limited to the canyon of the southeast flowing creek.

For topographic control an airphoto mosaic with superimposed 50 ft. contour intervals was prepared by McElhanney Surveying & Engineering Limited.

METHOD OF SURVEY

Initially, the extent of the Plateau lavas was outlined. The remainder of the claim group was soil sampled on a regular grid with lines 1,000 ft. apart and a sample interval of 500 ft. A Cu-Mo anomaly was outlined in the northern half of the Rave claims and this anomalous area was sampled in more detail so that lines are 500 ft. apart and sample interval along the lines is 250 ft. While soil samples were collected on this grid all streams and outcrop were sampled as they were encountered.

Soil samples were collected with a grubhoe from the "B" horizon. Depth to the "B" horizons was 3" - 6". Colour of the soil was brown to yellow-brown.

W.S.

Silt samples were collected by hand from the active sediments; pH was measured with "p Hydrion" paper. Rock chip samples were collected from fresh surfaces and approximately six chips were collected from various locations on the outcrop.

All types of samples were stored in Kraft paper bags, the sample location was flagged and the location was noted on a topographic base map and in a notebook.

At the end of each day sample locations were identified using the U.T.M.grid. The U.T.M. co-ordinates plus all other pertinent information was then key punched. The location and geochemical results were then posted by computer.

LABORATORY TECHNIQUE

The drying, screening, crushing and chemical procedure was carried out by Min-En Labs Ltd. in North Vancouver. The analysts were A. Hanke and G. Henriouille.

After drying the samples at 95°C, soil and stream sediment samples were screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by jaw crusher and pulverized by ceramic plated pulverizer.

1.0 grams of the samples were digested for six hours with HNO₃ and HClO₄ mixture.

After cooling, samples are diluted to standard volume. The solutions are analyzed by Atomic Absorption Spectrophotometer.

Copper, zinc and silver were analyzed using the CH_2H_2 - air flame combination; the molybdenum determination was carried out by C_2H_2 - N_2O gas mixture directly or indirectly (depending on the sensitivity of detection limit required) on these sample solutions.

INTERPRETATION OF GEOCHEMICAL RESULTS

Two major problems were encountered in the interpretation of the Cu, Mo, Zn and Ag values on the property; little outcrop has been found and it is suspected that the geochemical conditions of the soil varies from place to place.

The geology has been superimposed on the sample location map and three main rock types are shown. Although very little outcrop was located, the relative abundance of float was also used to define lithologic boundaries.

Geochemical conditions of soils are suspected to be varied since part of the property is situated on a high flat plateau, while the remainder is located in a steeply incised valley. The plateau area contains numerous shallow lakes which almost completely dry out in the summer. Alkaline deposits precipitate around these lakes. It has been noted elsewhere, and is probably also true on the property, that these alkaline layers also precipitate in the soils. The effect would be that high pH conditions are developed which could inhibit the mobility of ions. For example, the "B" horizon may be sampled in an area which contains a caliche layer within the "C" horizon and consequently all ions are precipitated in the "C" horizon rather than the "B" horizon. This problem has not yet been resolved.

When geology and geochemistry is compared it will be noted that the anomalous values for all four elements are superimposed on the intrusive rock-metasediment contact in the eastern part of the property. The range of anomalous values within the contact zone and the remainder of the area are as follows:

| | <u>Contact Area</u> | <u>Surrounding Area</u> |
|----|---------------------|-------------------------|
| Cu | 108 - 4850 ppm | 8 - 44 ppm |
| Mo | 9 - 800 ppm | 1 - 8 ppm |
| Zn | 120 - 537 ppm | 19 -120 ppm |
| Ag | 1.5 - 3.5 ppm | 0.2 -1.4 ppm |

The best correlation exists between Zn and Mo; Cu is highly erratic, as is Ag. Geologic contact cannot be discerned from geochemistry.

The Mo anomaly is associated with pyrite-molybdenite mineralization. Although some chalcopyrite has also been noted, there appears to be no consistent expression in the soils. Tentatively, this is attributed to the erratic pH conditions of the soil.

DECLARATION OF EXPENSES

Cost of Labour

| <u>Date</u> | <u>No. of Dys</u> | <u>Fee/Dy</u> | <u>Total Fee</u> |
|-----------------------|-------------------|---------------|-------------------|
| June 18 - July 4 | 17 | 32 | \$ 544.00 |
| June 18 - July 4 | 18 | 23 | 414.00 |
| Sept. 9 - Sept. 29 | 18 | 33 | 594.00 |
| Sept. 9 - Sept. 29 | 19 | 23 | 437.00 |
| June 18, 19, Sept. 14 | 3 | 85 | 255.00 |
| | | | <u>\$2,244.00</u> |

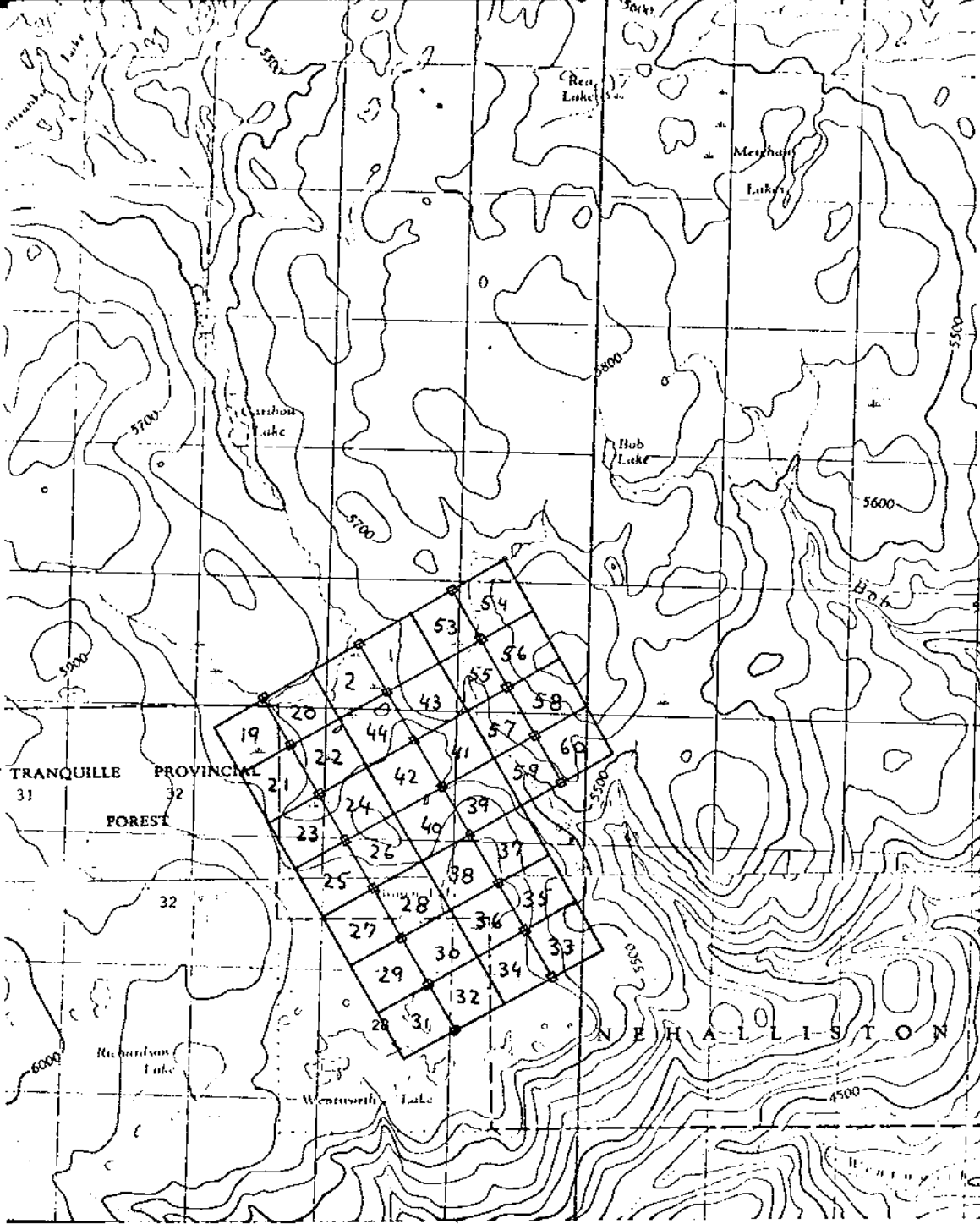
W.N.

| | |
|-----------------------------------|---------------|
| Truck Rental | \$ 429.00 |
| Geochemical Analysis | 1,200.00 |
| Topographic Map | 1,185.00 |
| Camp Equipment | 500.00 |
| Groceries | 444.00 |
| Radio Rental | 100.00 |
| Helicopter | 1,414.00 |
| Computer posting and key punching | 245.00 |
| Drafting | 100.00 |
| Report Preparation | <u>455.00</u> |
| | 6072 |

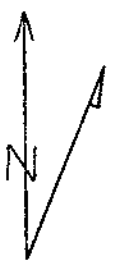
* * * * *



H. Neugebauer,
Vancouver, B.C.



LAT. 51° 00' N



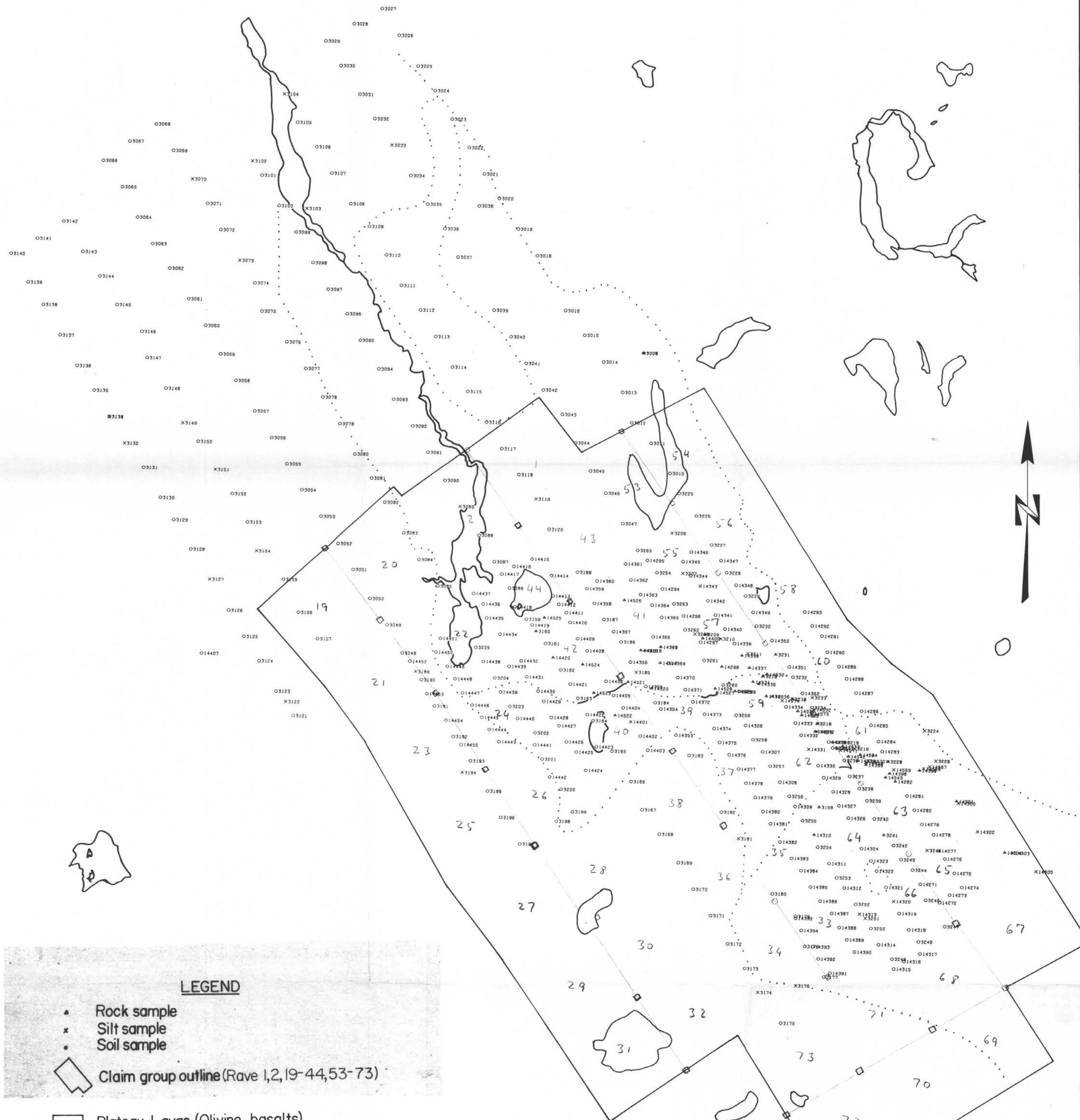
Scale 1:50,000

LONG. 120° 27' W

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RAVE GROUP INDEX MAP



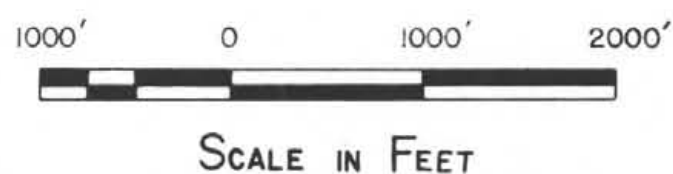
LEGEND

- ▲ Rock sample
- × Silt sample
- Soil sample
- Claim group outline (Rave 1,2,19-44,53-73)

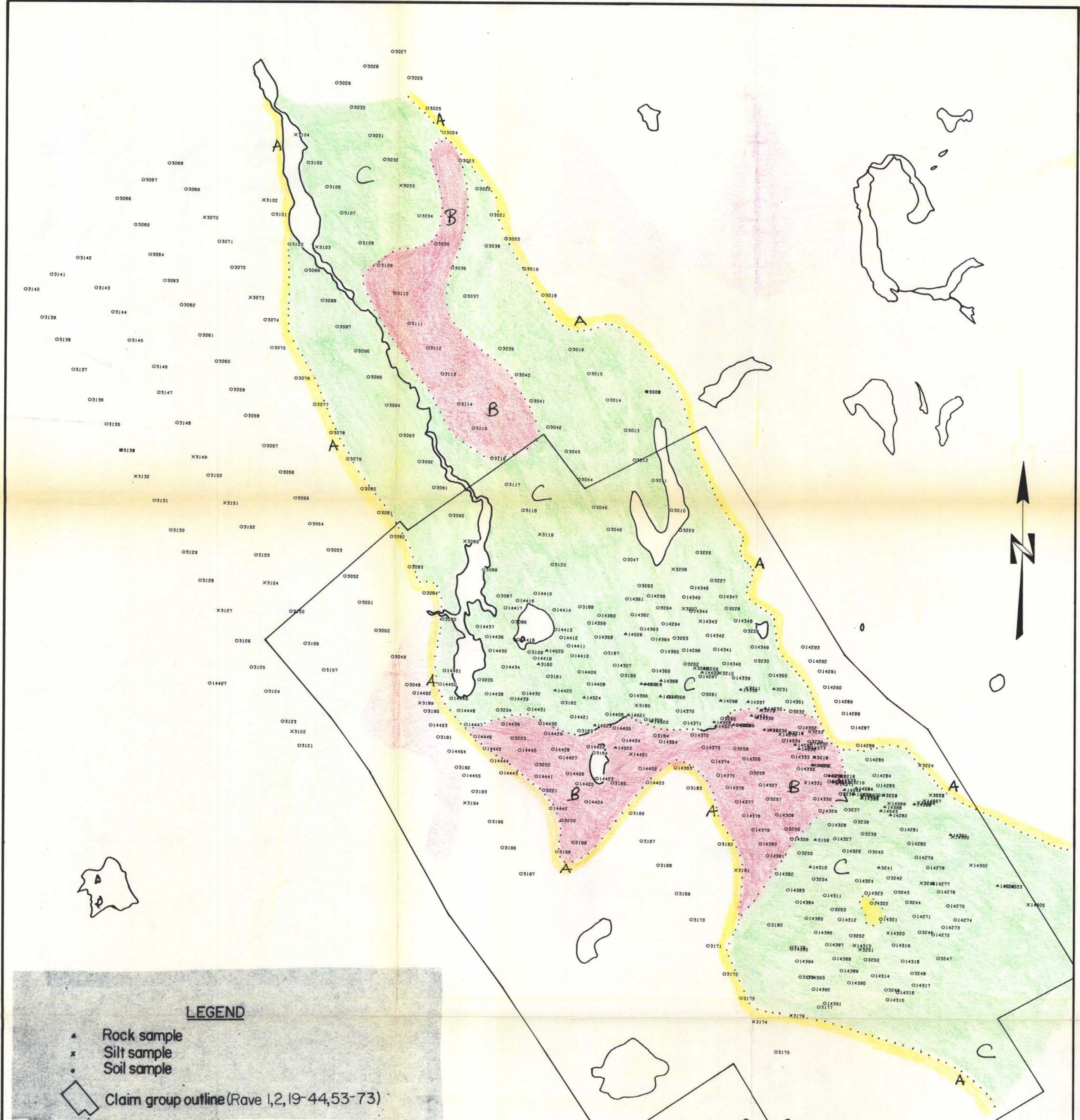
- Plateau Lavas (Olivine basalts)
- Thuya Batholith (Qtz. diorite)
- Cache Creek Formation (Metasediments)

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NO. 4665 MAP #1



| | | | |
|--|-----------------|------------------|--|
| AMOCO CANADA PETROLEUM CO. LTD. | | | |
| MINING DIVISION | | | |
| WENTWORTH LAKE PROJECT | | | |
| SAMPLE LOCATION | | | |
| KAMLOOPS M.D. | 92P/IW 92 I/16W | British Columbia | |
| DRAWN BY | r.m.d. | CHECKED BY | |
| SCALE | 1"=1000' | APPROVED BY | |
| DATE | OCT. 1973 | DRAWING No. | |



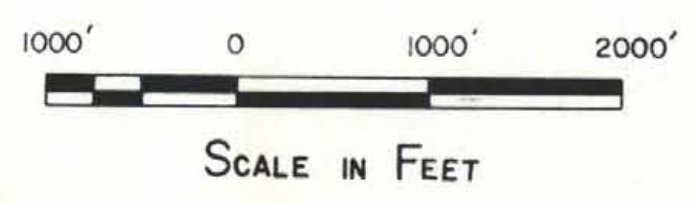
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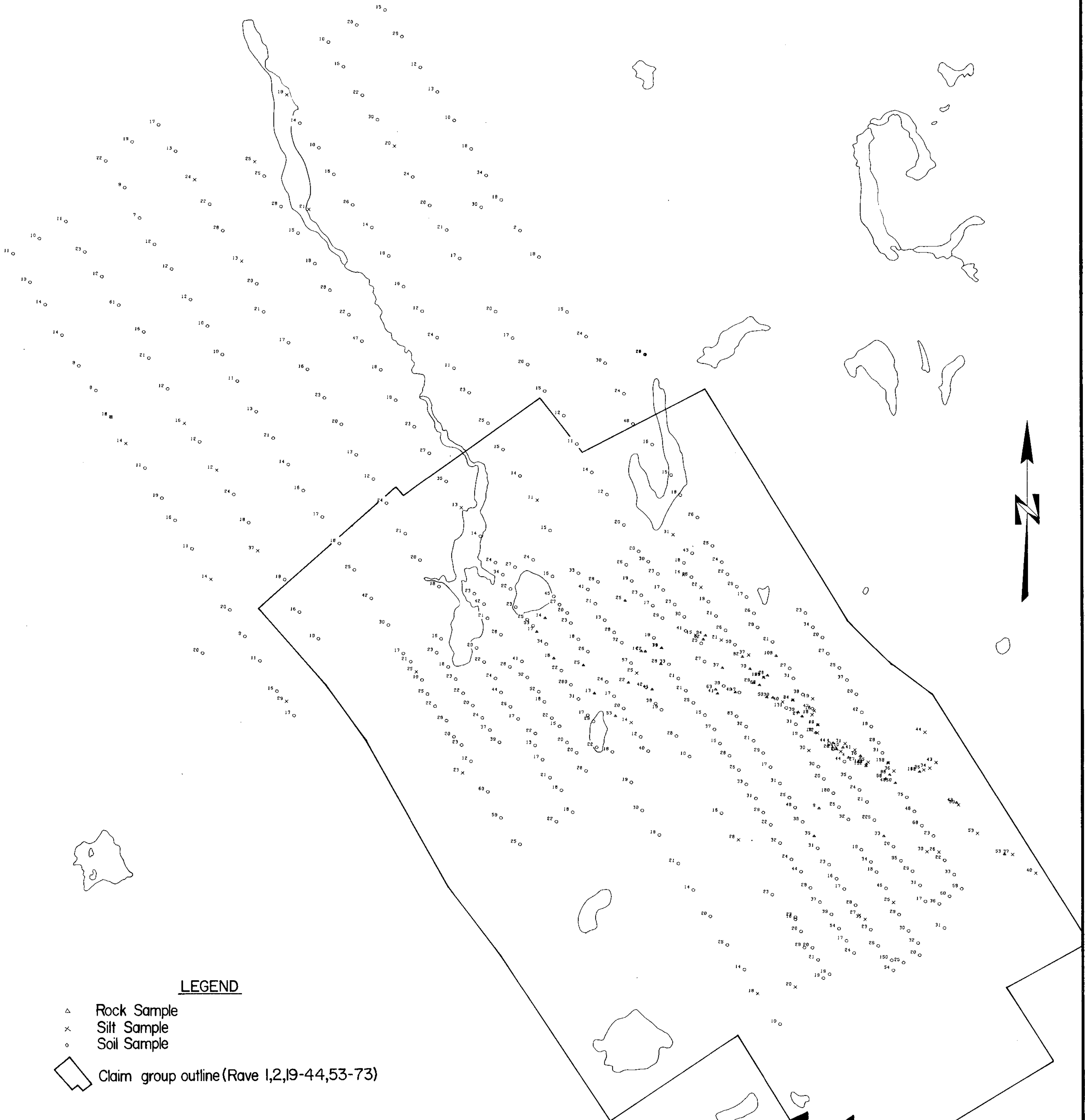
- ▲ Rock sample
- x Silt sample
- Soil sample
- Claim group outline (Rave 1,2,19-44,53-73)
- A** Plateau Lavas (Olivine basalts)
- B** Thuya Batholith (Qtz. diorite)
- C** Cache Creek Formation (Metasediments)

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| | | | |
|--|-----------|-----------------|--|
| AMOCO CANADA PETROLEUM CO. LTD. | | | |
| Mining Division | | | |
| WENTWORTH LAKE PROJECT | | | |
| SAMPLE LOCATION | | | |
| KAMLOOPS M.D. | | 92P/IW 92/1/16W | |
| British Columbia | | | |
| DRAWN By | r.m.d. | CHECKED By | |
| SCALE | 1"=1000' | APPROVED By | |
| DATE | OCT. 1973 | DRAWING No. | |



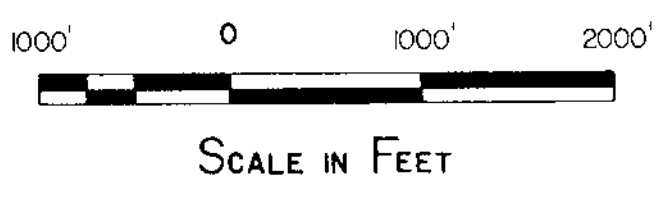


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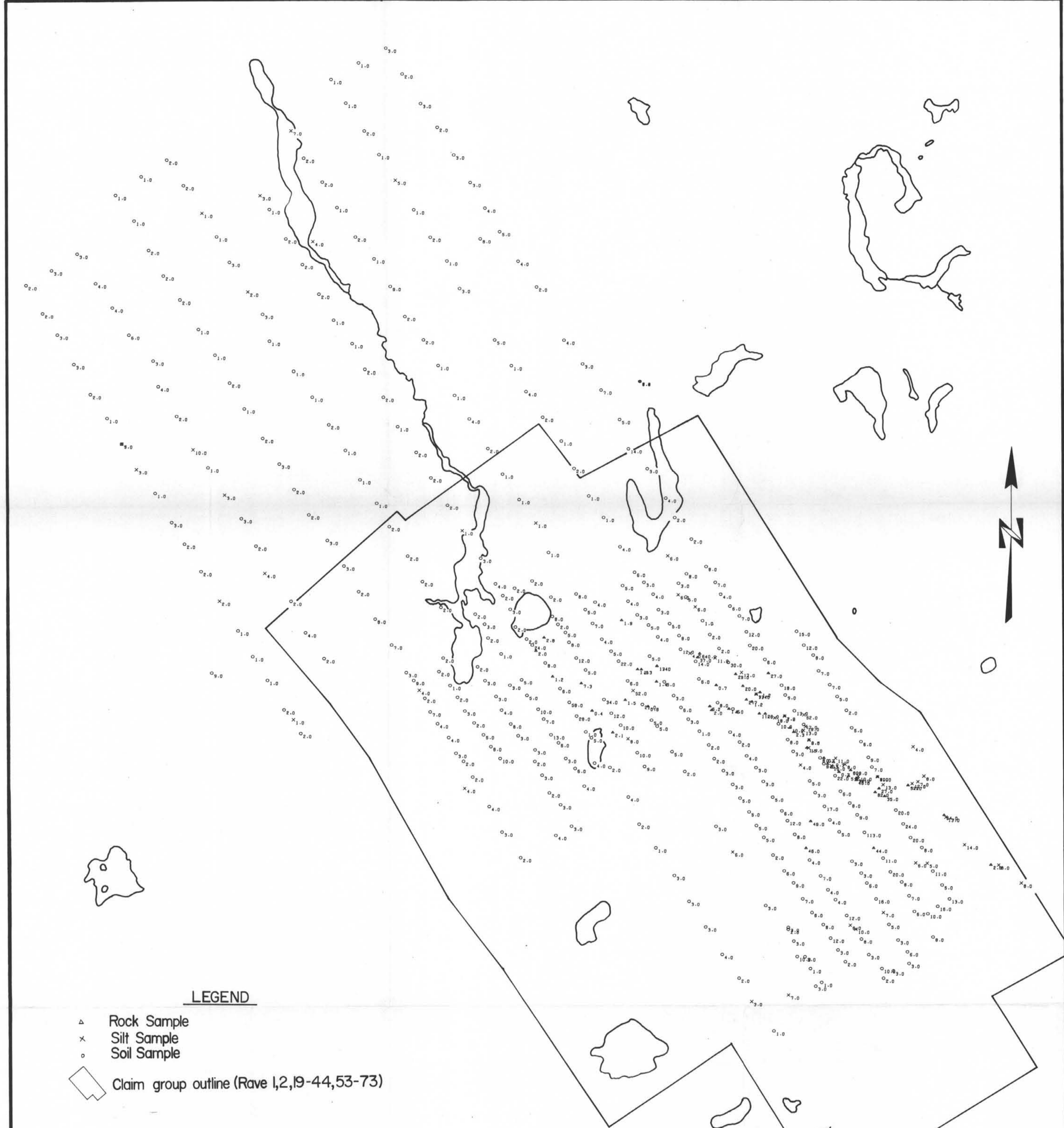
- △ Rock Sample
- × Silt Sample
- Soil Sample
- Claim group outline (Rave 1,2,19-44,53-73)

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 GEOCHEMISTRY REPORT
 NO. **4665** MAP #**3**



| | | | |
|---------------------------------|------------|----------------|--|
| AMOCO CANADA PETROLEUM CO. LTD. | | | |
| MINING DIVISION | | | |
| WENTWORTH LAKE PROJECT | | | |
| GEOCHEMISTRY (Cu ppm) | | | |
| KAMLOOPS M.D. | | 92P/1W 921/16W | |
| British Columbia | | | |
| DRAWN BY | a.m.b. | CHECKED BY | |
| SCALE | 1" = 1000' | APPROVED BY | |
| DATE | Oct. 1973 | DRAWING No. | |



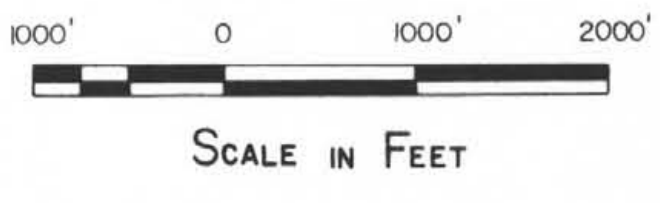
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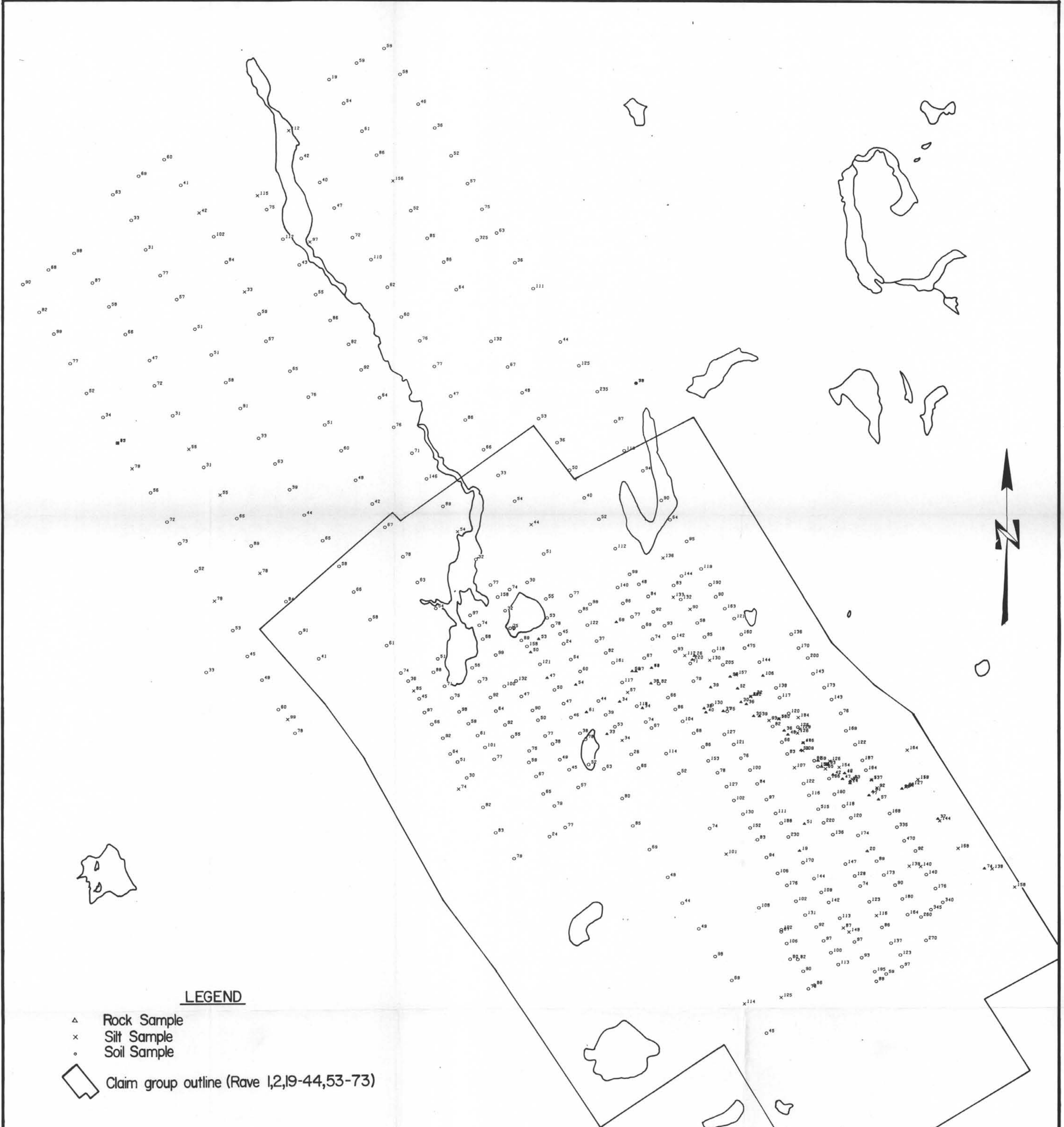
- △ Rock Sample
- × Silt Sample
- Soil Sample
- Claim group outline (Rave 1,2,19-44,53-73)

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 NO. 4665 MAP #4

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| AMOCO CANADA PETROLEUM CO. LTD. | | | |
| Mining Division | | | |
| WENTWORTH LAKE PROJECT | | | |
| GEOCHEMISTRY (Mo ppm) | | | |
| KAMLOOPS M.D. | | 92P/1W 92 1/6 W | |
| British Columbia | | | |
| DRAWN BY | amb. | CHECKED BY | |
| SCALE | 1"=1000' | APPROVED BY | |
| DATE | Oct. 1973 | DRAWING No. | |



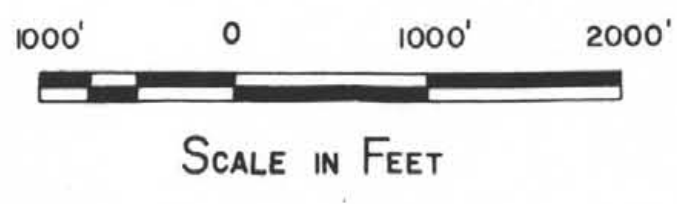


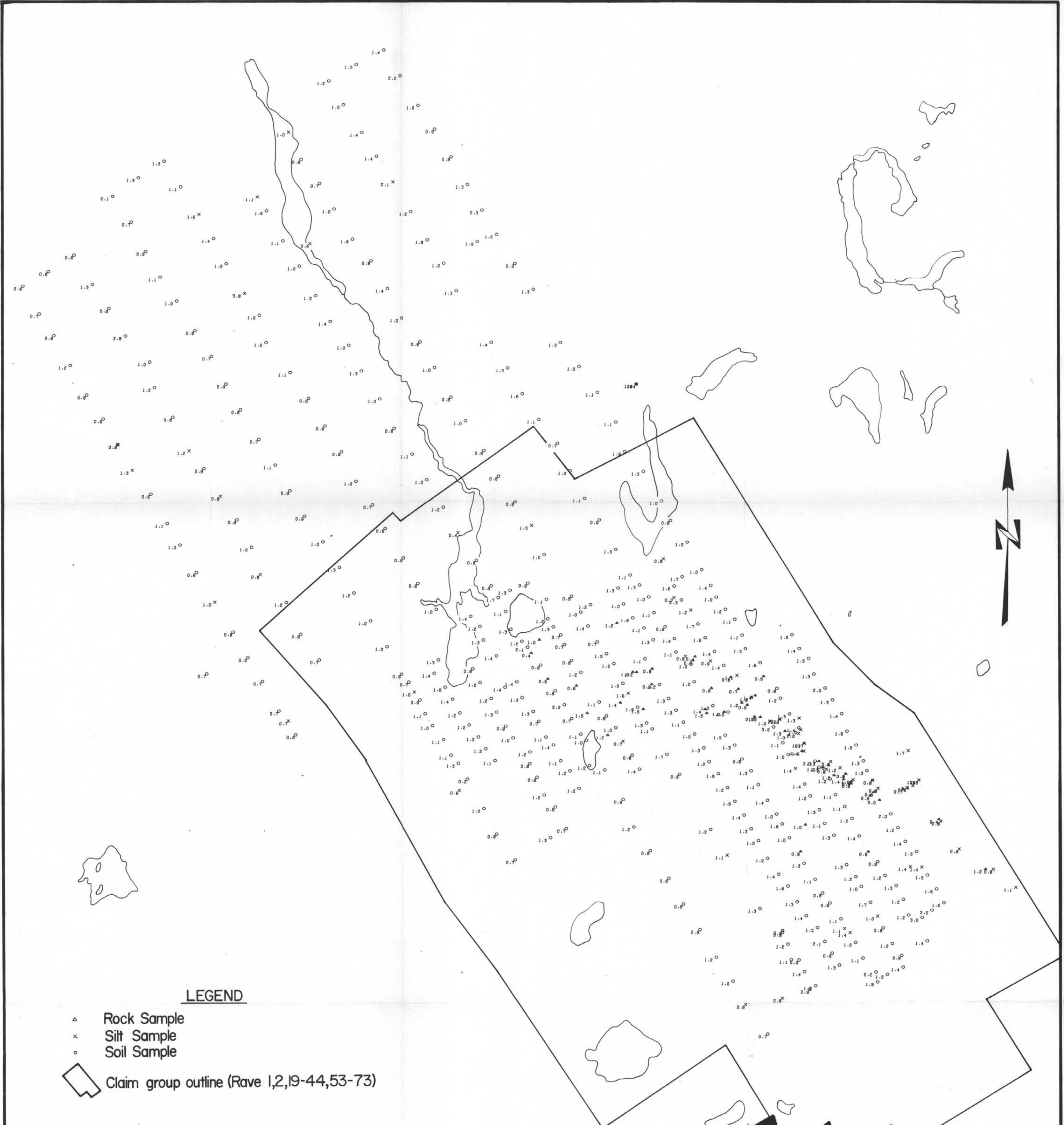
LEGEND

- △ Rock Sample
- × Silt Sample
- Soil Sample
- Claim group outline (Rave 1,2,19-44,53-73)

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 ASSESSMENT REPORT
 NO. **4665** MAP #5

| | | | |
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| AMOCO CANADA PETROLEUM CO. LTD. | | | |
| MINING DIVISION | | | |
| WENTWORTH LAKE PROJECT | | | |
| GEOCHEMISTRY (Zn ppm.) | | | |
| KAMLOOPS M.D. | | 92P/1W 92/1/16 W | |
| British Columbia | | | |
| DRAWN BY | r.m.d. | CHECKED BY | |
| SCALE | 1"=1000' | APPROVED BY | |
| DATE | OCT.1973 | DRAWING No. | |





LEGEND

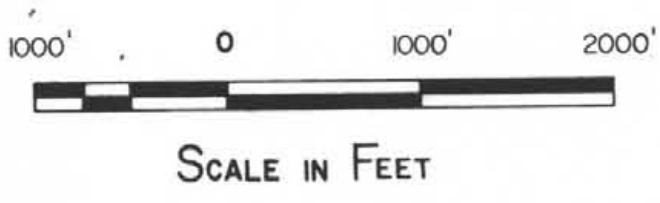
- △ Rock Sample
- × Silt Sample
- Soil Sample
- Claim group outline (Rave 1,2,19-44,53-73)

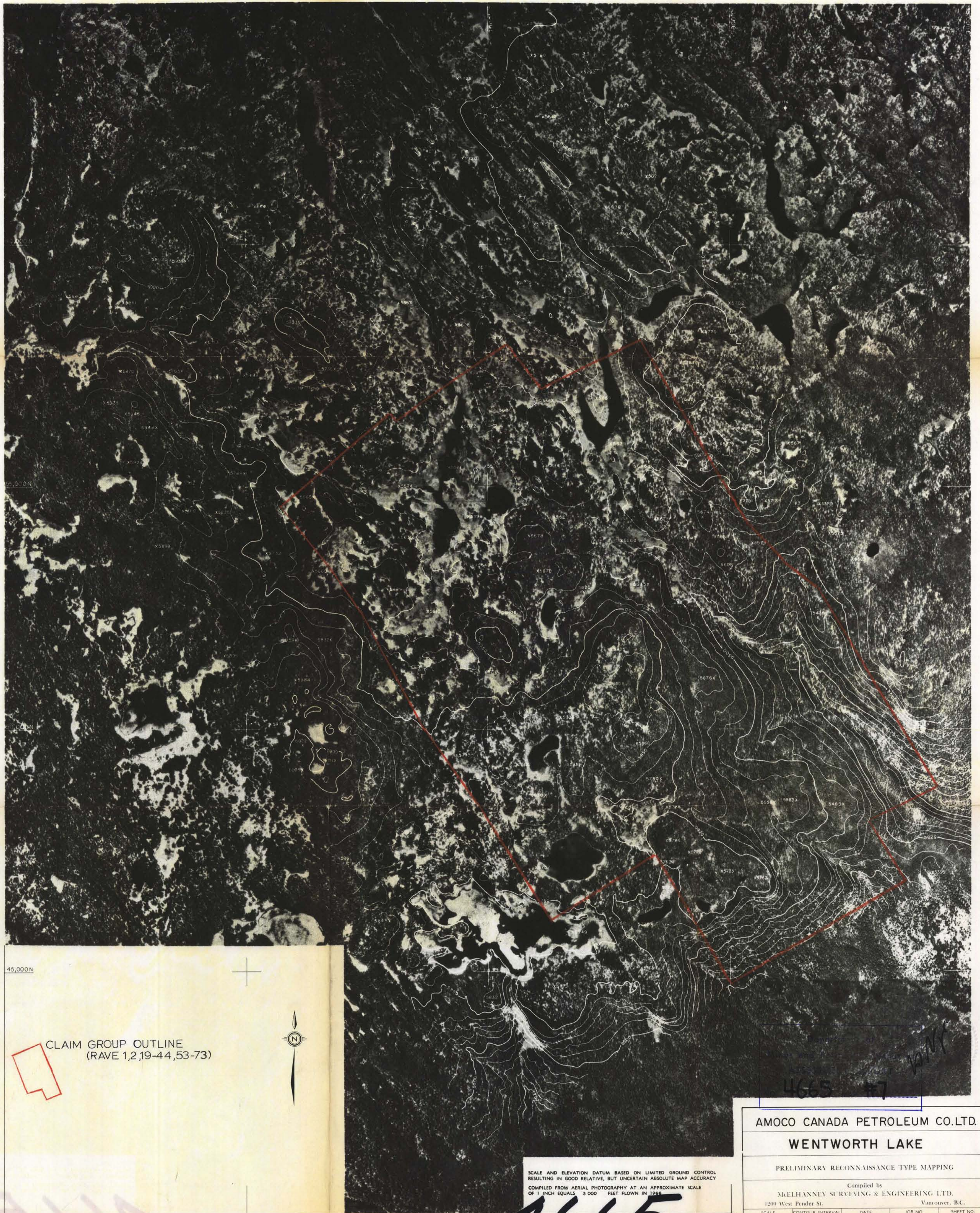
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Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **4665** MAP #**6**

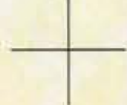
W.M.

| | | | |
|--|-----------|---------------|--|
| AMOCO CANADA PETROLEUM CO. LTD. | | | |
| MINING DIVISION | | | |
| WENTWORTH LAKE PROJECT | | | |
| GEOCHEMISTRY (Ag ppm) | | | |
| KAMLOOPS M.D. | | 92P/W 92I/16W | |
| British Columbia | | | |
| Drawn By | amb. | Checked By | |
| Scale | 1"=1000' | Approved By | |
| Date | Oct. 1973 | Drawing No. | |





45,000N



CLAIM GROUP OUTLINE
(RAVE 1,2,19-44,53-73)

SCALE AND ELEVATION DATUM BASED ON LIMITED GROUND CONTROL
RESULTING IN GOOD RELATIVE, BUT UNCERTAIN ABSOLUTE MAP ACCURACY
COMPILED FROM AERIAL PHOTOGRAPHY AT AN APPROXIMATE SCALE
OF 1 INCH EQUALS 3 000 FEET FLOWN IN 1968

AMOCO CANADA PETROLEUM CO.LTD.

WENTWORTH LAKE

PRELIMINARY RECONNAISSANCE TYPE MAPPING

Compiled by
MCELHANNAY SURVEYING & ENGINEERING LTD.
Vancouver, B.C.

| | | | | |
|------------|------------------|------------|---------|-----------|
| SCALE | CONTOUR INTERVAL | DATE | JOB NO. | SHEET NO. |
| 1" = 1000' | 50' | APRIL 1973 | 05931-0 | 1 of 1 |

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