

6036
#6036

GEOCHEMICAL REPORT

on a

SOIL SAMPLE SURVEY

RUM CLAIM GROUP.

MISSEZULA LAKE AREA, SIMILKAMEEN M.D., B.C.,

RUM CLAIM GROUP:

RUM

20 Miles North of the Town of
Princeton, B.C. and 2½ miles
S40W of the south end of
Missezula Lake.

49° 120° NW

N.T.S.:

92 H/10E

92 H/10E

Written for:

RUSKIN DEVELOPMENTS LTD
1819 Leabrook Place,
Victoria, B.C.

by:

David G. Mark
GEOTRONICS SURVEYS LTD
307-475 Howe Street,
Vancouver, B.C.

Dated:

August 24, 1976

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

NO. **6036**

Geotronics Surveys Ltd.

Vancouver, Canada

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SUMMARY

A soil sampling survey was carried out over the western half of the Rum Claim Group during July, 1976. The Rum claims are located on a ridge between Summers Creek and Allison Creek, 20 miles north of Princeton, British Columbia. Access to the property is gained by the microwave tower access road which travels easterly from Highway 5. The terrain is flat to moderately rolling with the vegetation being mainly small-to medium-sized conifers.

Much work has already been done on the property and includes soil geochemistry, induced polarization (IP), trenching, and drilling. The object of the present soil geochemistry survey was to better delineate the soil anomalies, so as to best ascertain the direction for future exploration.

The claim group is underlain by the Nicola Group of rocks through which passes the Missezula Mountain Fault. Extensive fracturing, alteration and occasional copper mineralization are associated with the faulting. A 10,000 by 2,000 foot sill-like body of hornblende-augite micro-diorite in the center of the property is cut off to the east by the Missezula Mountain fault. A variety of Nicola rocks encompass the intrusive.

The soil samples were taken every 200 feet on 500-foot separated lines and were later tested for copper. The results were statistically analyzed for threshold values, plotted, and contoured.

CONCLUSIONS

1. The soil geochemistry anomalies, as was already known, correlate excellently with IP anomalies B and C. This is especially true of anomaly C.
2. The anomalies fall along the Missezula Mountain Fault and therefore further prove the importance of this fault to the deposition of the mineralization.
3. A soil geochemistry anomaly was found within IP anomaly B where no physical work had previously been carried out. Further work should therefore be carried out.
4. Though the results of the soil geochemistry and trenching of IP anomaly A have been non-positive, the causitive source could well be below the bedrock surface.

5. Soil geochemistry anomalies E, F, G and H warrant further work to determine their causitive source because of their size, high values, and potentiality for possibly being larger.
6. The soil sampling along anomaly D has further confirmed the causitive source to be graphitic sediments.

RECOMMENDATIONS

1. Anomalies E, G and H should be further delineated by extending the soil sampling to the north for anomaly E and to the west for anomalies G and H.
2. The central part of IP anomaly B should be tested by trenching and/or drilling.
3. At least one drill hole should be placed within the center of IP anomaly A.
4. Soil geochemistry anomalies E, F, G and H should be drilled, as well as perhaps, trenched.
5. Considering that the IP measurements taken on the property was for shallow depth, it is recommended to rerun IP over a few of the lines at a greater

electrode spacing, say 400 feet. It would be preferable to run the lines through the IP anomalies as well as the geochemistry anomalies, such as H.

GEOCHEMICAL REPORT

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SOIL SAMPLE SURVEY

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RUM CLAIM GROUP

MISSEZULA LAKE AREA, SIMILKAMEEN M.D., B. C.

INTRODUCTION AND GENERAL REMARKS

This report discusses the survey procedure, compilation of data, and the interpretation of a soil geochemistry survey carried out over the Rum Claim Group during July, 1976.

The soil samples were tested for copper.

The field work was carried out by two men under the supervision of the writer. The writer visited the property on July 15, 1976, at the beginning of the survey. A total of 428 samples were picked up.

The primary object of the survey was to better delineate the anomalous values in copper from the soil sampling survey carried out by Amax Exploration, Inc. during 1971. Amax had only taken samples every 500 feet on 500-foot separated

lines starting 2000 feet west of the baseline (the main mineral showings were along the baseline). It was therefore felt the copper geochemical picture was incomplete.

A southerly-trending line was also run through the center of IP anomaly D with the object of determining the causitive source. Two 'cat' trenches had been placed across this long, narrow anomaly with the conclusion that the causitive source was graphitic sediments. However, because there was only two trenches on a 5400-foot anomaly, and because the cost would be relatively inexpensive, it was decided to pick up samples along the full length and test them for copper.

PROPERTY AND OWNERSHIP

The property is comprised of 38 contiguous located mineral claims as shown on Figure 2 and described as follows:

<u>CLAIM</u>	<u>RECORD NUMBER</u>	<u>EXPIRY DATE</u>
Rum 299-316 incl.	27188-27205 incl.	March 25, 1977
Rum 319	27208	March 25, 1977
Rum 321-325 incl.	27210-27214 incl.	March 25, 1977
Rum 459	29108	October 26, 1977
Rum 461-468 incl.	29110-29117 incl.	October 26, 1977
Rum 469	29177	October 30, 1977
Rum 470	29625	November 18, 1977
Rum 471-472 incl.	31883-31884 incl.	March 24, 1977
Rum 473	38343	October 24, 1977

These claims are wholly owned by Ruskin Developments Ltd (NPL) of Victoria, B.C.

LOCATION AND ACCESS

The property is located on a north-trending ridge between Summers Creek and Allison Creek. It is found 2.5 miles S40W of the southern tip of Missezula Lake and 20 air miles north of the town of Princeton, British Columbia.

The geographical coordinates are $49^{\circ} 45'$ north latitude and $120^{\circ} 32'$ west longitude.

Access to the property is easily gained by the two-wheel drivable access road to the microwave tower located on the western central part of the claim group. This access road is reached by travelling about 22 miles north of Princeton along Highway 5. The property is about 8 or 9 miles west of the highway. Another access road to the property is located about eight miles further north on the highway.

PHYSIOGRAPHY

The Rum Claim Group is found in the southern part of the Thompson Plateau which is part of the Interior Plateau System. The terrain varies from flat or rolling hills over most of the property to very moderate slopes in certain parts.

The general trend of the topography is north-south with the elevation ranging from about 3000 feet a.s.l. to 5,300 feet a.s.l. giving a relief of 2,300 feet.

Except for a few swamps, very little water is found directly on the property. However, Summers Creek, flowing southerly is located just off the eastern edge of the property.

The surface is well treed with small- to moderate-sized conifers. Generally, the underbrush is light.

HISTORY OF PREVIOUS WORK

The property was originally staked by Plateau Metals Ltd in 1962 when 40 KR claims were located covering mineralization discovered in this area.

Upon completion of some bulldozer trenching, a magnetometer survey and limited diamond drilling, the property was optioned by Adera Mining Ltd in 1966. The option was terminated in 1967 after soil sampling, a magnetometer survey and diamond drilling were carried out.

The KR claims were allowed to lapse and Amax restaked the property in 1970. Geological mapping, a geochemical survey, a magnetometer and an induced polarization survey were undertaken.

Logs of nine percussion drill holes were included in the Amax reports.

Kalco Valley Mines Ltd performed limited exploration work on the property in November and December 1972. The work included mapping and sampling of eight of the ten trenches that were excavated at this time. The option was subsequently terminated.

GEOLOGY

The following is quoted from Sookochoff's engineering report on the property.

" 1) REGIONAL

The property is situated within a belt of Upper Triassic Nicola volcanic rocks comprised of flows, pyroclastics, volcanic sediments and minor limestone.

"The Princeton-Aspen Grove copper belt in the area of the property narrows to approximately four miles wide and is banded by the Jurassic Okanagan batholith to the west and the Mt. Pike batholith to the east.

"Regional significant north-south structural breaks such as the Summers Creek fault and the Missezula Mountain fault are revealed by the highly fractured, extensively altered and

usually pyritic Nicola rocks of the immediate area. Chalcopyrite, bornite and chalcocite are occasionally associated with these faults.

"The axis of a regional syncline passes NNE through the claims.

2) PROPERTY

"The geology of the property as shown on the accompanying map was mapped by personnel of Amax Exploration Inc. in 1971.

"A 10,000 by 2,000 foot sill-like body of hornblende-augite microdiorite, probably related to flow rocks it has intruded, occupies the middle of the property. The stock is truncated on its east side by the Missezula Mountain fault and is encompassed by a variety of steeply dipping sedimentary and pyroclastic rocks east of the fault and volcanic rocks to the west.

"Adjacent to the prominent north-south trending faults, rocks are highly fractured and are usually pyritic with traces of chalcopyrite, bornite and chalcocite.

"Less prominent fault directions are easterly, southeasterly and northeasterly."

SURVEY PROCEDURE

The soil samples were taken every 200 feet on the previously established 500-foot lines. The samples were taken at odd numbered stations on the even numbered lines (20, 30, 40 etc.) and at even numbered stations on the odd numbered lines (25, 35, 45, etc). In addition, samples were picked up every 200 feet on a 5400-foot line, labelled L-D, running in a southerly direction through the center of IP anomaly D.

The samples were taken with a D-handled shovel and the horizon sampled was B, the color of which varied from dark brown to light brown to red. The depth the sample was taken from varied from 4 inches to 15 inches. Samples were placed in brown wet-strength paper bags with grid co-ordinates marked thereon.

A total of 428 samples were taken.

TESTING PROCEDURE

All samples were tested by Acme Analytical Laboratories of Burnaby, B.C. The sample is first thoroughly dried and then sifted through a -80 mesh screen. For copper, 1 gram of the sifted material is then put into a test tube with subsequent measured additions of a solution of perchloric and nitric acid. This mixture is next heated for a certain length of time. The parts per million (ppm) copper is then measured by atomic

absorption.

TREATMENT OF DATA

The values in ppm copper were grouped into logarithmic intervals of 0.10. The cumulative frequency for each interval was then calculated and then plotted against the correlating interval to obtain the logarithmic cumulative frequency graph as shown on Figure 2.

The coefficient of deviation, indicative of the range or spread of values was calculated to be 0.17 a somewhat low figure. Therefore, the range of values is rather narrow. This statistical parameter is indicative of how well the element has been mechanically or chemically dispersed. Considering the lower than average value, one could then say dispersion rate is rather low.

The graph for copper shows the mean background value to be about 34 ppm taken at the 50% level. The sub-anomalous threshold value (a term used by the writer to denote the minimum value that is not considered anomalous but still important as an indicator of mineralization) is taken at one standard deviation from the mean background value which is at the 16% level and is in this case 50 ppm. The anomalous threshold value is two standard deviations away at the 2 1/2% level and is on this property 75 ppm.

The graph shows a break at the 21% level which therefore indicates that there is an excess of high copper values on the TT Claim. This is usually the case where copper sulphide mineralization occurs.

The copper soil data was plotted on Sheet 1 at a scale of 1 inch to 500 feet. The data was then contoured at an interval of one standard deviation. This gave contours of 50, 75, 110, 165, 245, 365, and 520 ppm. The 50 ppm sub-anomalous threshold contour was dashed in whereas the anomalous contours were drawn in solid.

A summary of the work done to date on the Rum claims has been placed on Sheet 1 as well, including outlines of the old IP and soil geochemistry anomalies.

DISCUSSION OF RESULTS

As can be seen on sheet 1, the main anomalous zones occur around the copper mineralization known to date. This is especially true of the soil anomalous values within IP anomaly C, and on the east side of IP anomaly B. These two IP anomalies correlate excellently with the soil results. Undoubtedly, some of the high soil geochemistry values are caused by the disturbing of the soil and uncovering of copper mineralization by the 'cat' trenches.

The soil geochemistry survey around the known mineralization may appear somewhat repetitious but the writer believes it has given better definition to the 'old' soil anomalies and therefore better indicate where future exploration should take place.

As mentioned above, on IP anomaly B, the copper mineralization uncovered to date and the main part of the soil geochemistry anomaly occurs east of and on the east side of this IP anomaly. The reason may be that the main causitive source may be pyritization. No work, however, has been done within the center of the anomaly where occurs a soil geochemistry anomaly. Considering the correlation between the IP and soil geochemistry, the causitive source could well be copper mineralization.

No soil geochemistry anomalies correlate with IP anomaly A, except in the northeast corner. Two trenches were dug on this anomaly as well and came up with non-positive results (one trench being on the soil geochemistry anomaly). However, it must be remembered that soil geochemistry and trenching can only search for mineralization on the surface of the bedrock. The causitive source of the IP may well be below the bedrock surface, especially considering only weak pyritization was found in the trenches.

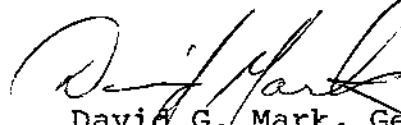
Soil anomaly E is found on the north boundary of the property and is therefore open to the north. It could well be an extension of the geochemistry anomaly to the south of anomaly E. An interesting feature is that this anomaly is found on a fault, as do the major anomalies and the known mineralization.

Anomalies G and H are found on the western boundary and are thus open to the west. The original sampling suggests that these anomalies may actually be one anomaly. The anomalies are fairly strong in that G reaches an intensity of 160 ppm, and H, 220 ppm.

Anomaly F is fairly strong reaching an intensity of 240 ppm. Its size is about 600 by 800 feet, and, therefore, in the writer's opinion bears further interest.

The results of the soil sampling carried out along IP anomaly D seems to confirm the causative source being graphitic sediments. Generally, the values were quite low with there being only one anomalous value. It is probably an extension of the geochemistry anomaly within IP anomaly C.

Respectfully submitted,
GEOTRONICS SURVEYS LTD



David G. Mark, Geophysicist

August 24, 1976

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K.R. Group, Missezula Lake Area, Similkameen M.D.,
B.C., March 1967.
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Geophysical Report on the Ketchan Creek Property
(Rum Claims)
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Rum Claims, Similkameen Mining Division, February
1973.
- Sargent, H. - Report on the Rum Claims of Kalco Valley Mines
Ltd., December 1972
- Sookochoff, L. - Geological Report on the Rum Claims of
Ruskin Development Ltd. (N.P.L.), Similkameen
M.D., B.C. T.R. Tough & Associates Ltd. February
25, 1974


GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices at 307-475 Howe Street, Vancouver, British Columbia.

I further certify:

1. I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.
2. I have been practising my profession for the past eight years and have been active in the mining industry for the past eleven years.
3. I am an active member of the Society of Exploration Geophysicists and a member of the European Association of Exploration Geophysicists.
4. This report is compiled from data obtained from a soil sampling survey carried out under the supervision of myself, during June and July, 1976 on the Rum Claim Group.
5. I have no direct or indirect interest in the properties or securities of Ruskin Developments Ltd (NPL), Victoria B.C., nor do I expect to receive any interest therein.


David G. Mark
Geophysicist

August 24, 1976

CERTIFICATE OF EXPENSES

I, DAVID G. MARK, Manager of Geotronics Surveys Ltd certify the following costs were incurred in carrying out a soil sampling survey on the Rum Claim Group in the Missezula Lake area of the Similkameen M.D., B.C. The survey started July 14, 1976 and was completed on July 18th, 1976.

FIELD

2 men, geophysical technician and helper for 61 hours at \$35/hour	\$ 2,135.00
Room and Board, 5 days at \$25/day	125.000
2-wheel drive rental	225.00
Survey supplies	25.00
	<u>\$ 2,510.00</u>

LAB

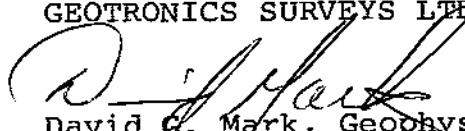
Soil testing, 428 samples at \$1.35/sample	\$ 577.80
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REPORT

Geophysicist, 8 hours at \$25/hour	200.00
Office helper, 4 hours at \$10/hour	40.00
Drafting and printing	100.00
Typing, xeroxing and compilation	105.00
	<u>\$ 445.00</u>

TOTAL	say	<u>\$ 3,533.00</u>
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Respectfully submitted,
GEOTRONICS SURVEYS LTD


David G. Mark, Geophysicist

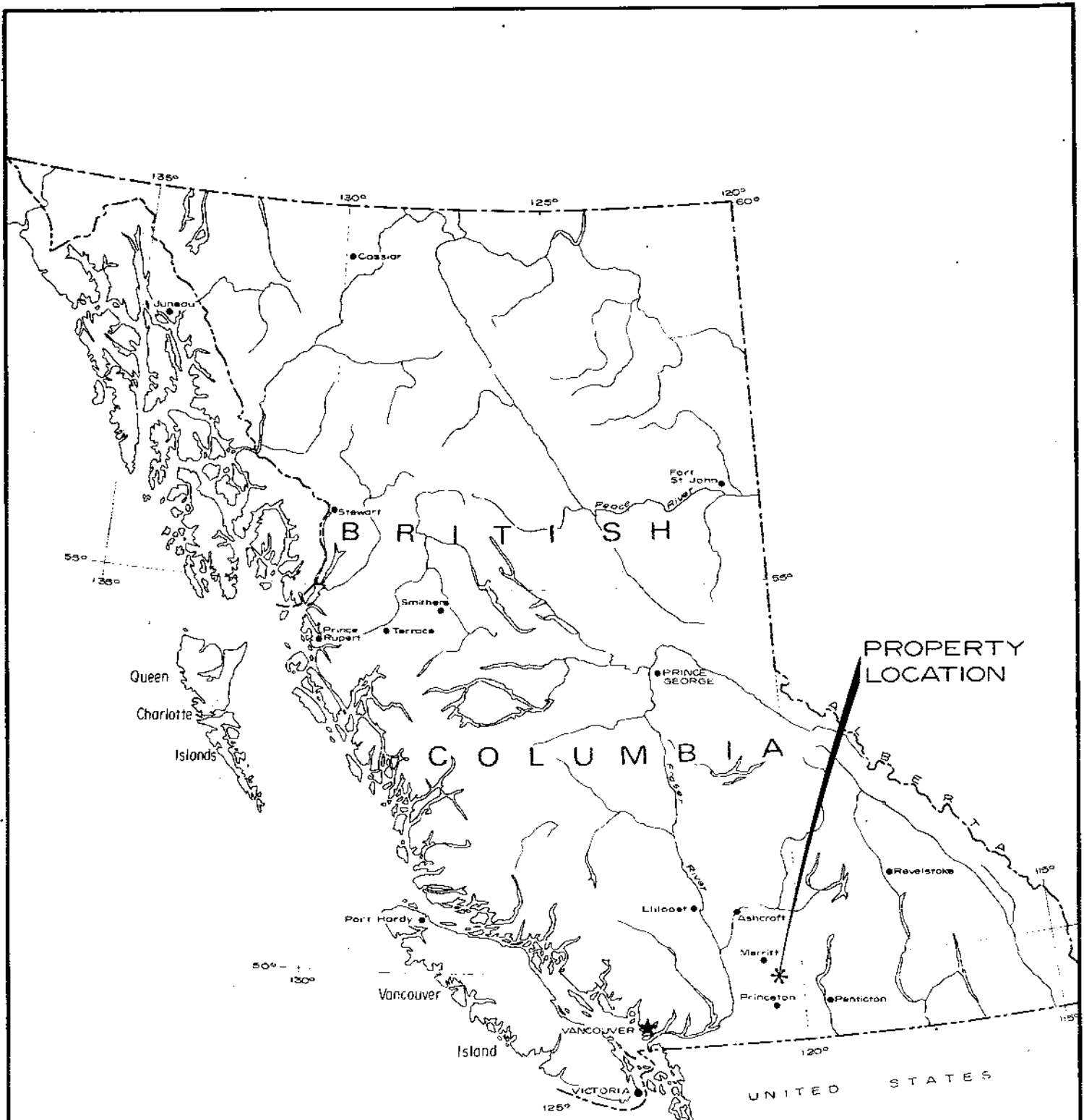


FIG. 1

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
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GEOTRONICS SURVEYS LTD.
 RUSKIN DEVELOPMENTS LTD.
 (N.P.L.)
 RUM GROUP
LOCATION MAP
 SIMILKAMEEN M.D., B.C.
 SCALE
 0 136 136
 MILES MILES

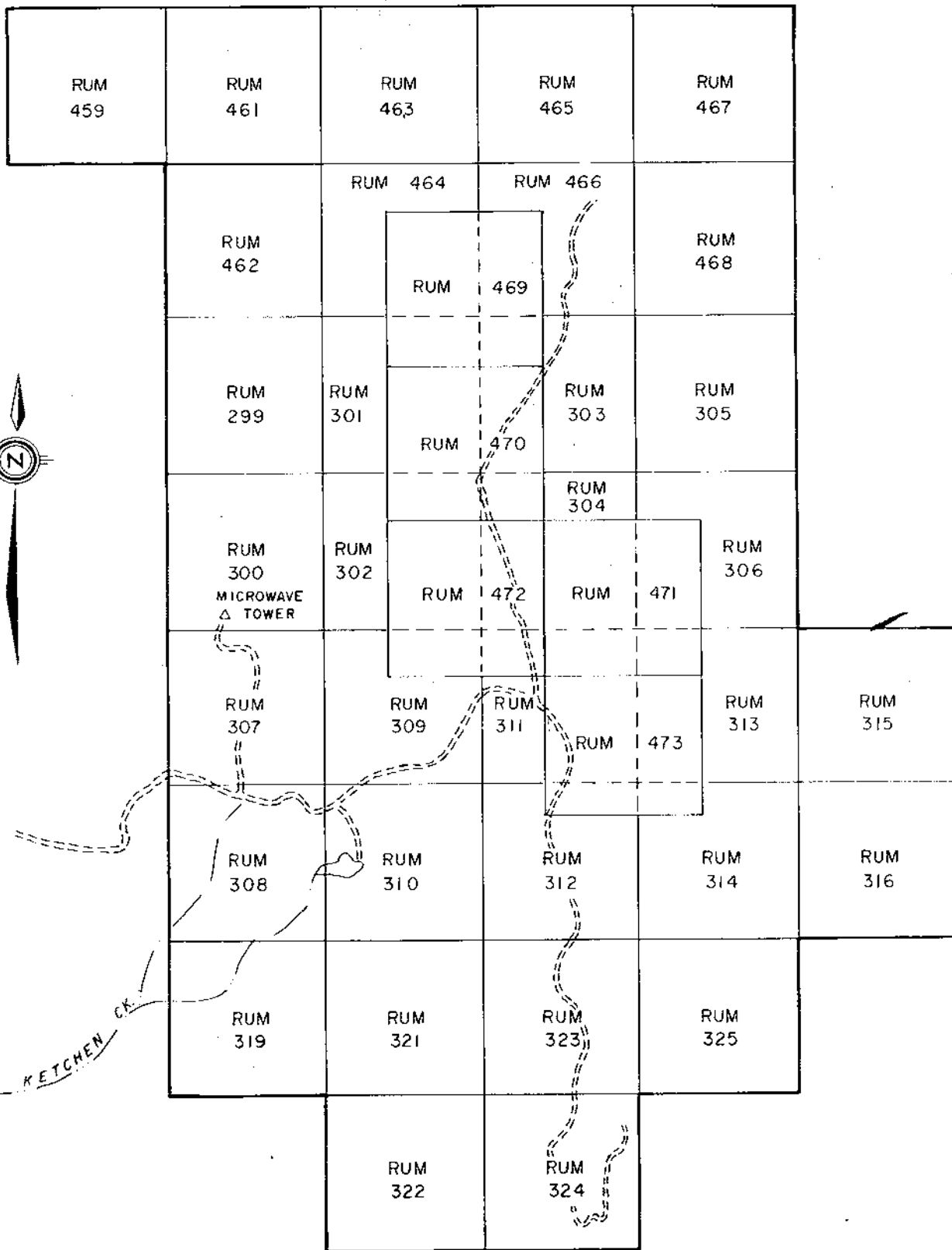
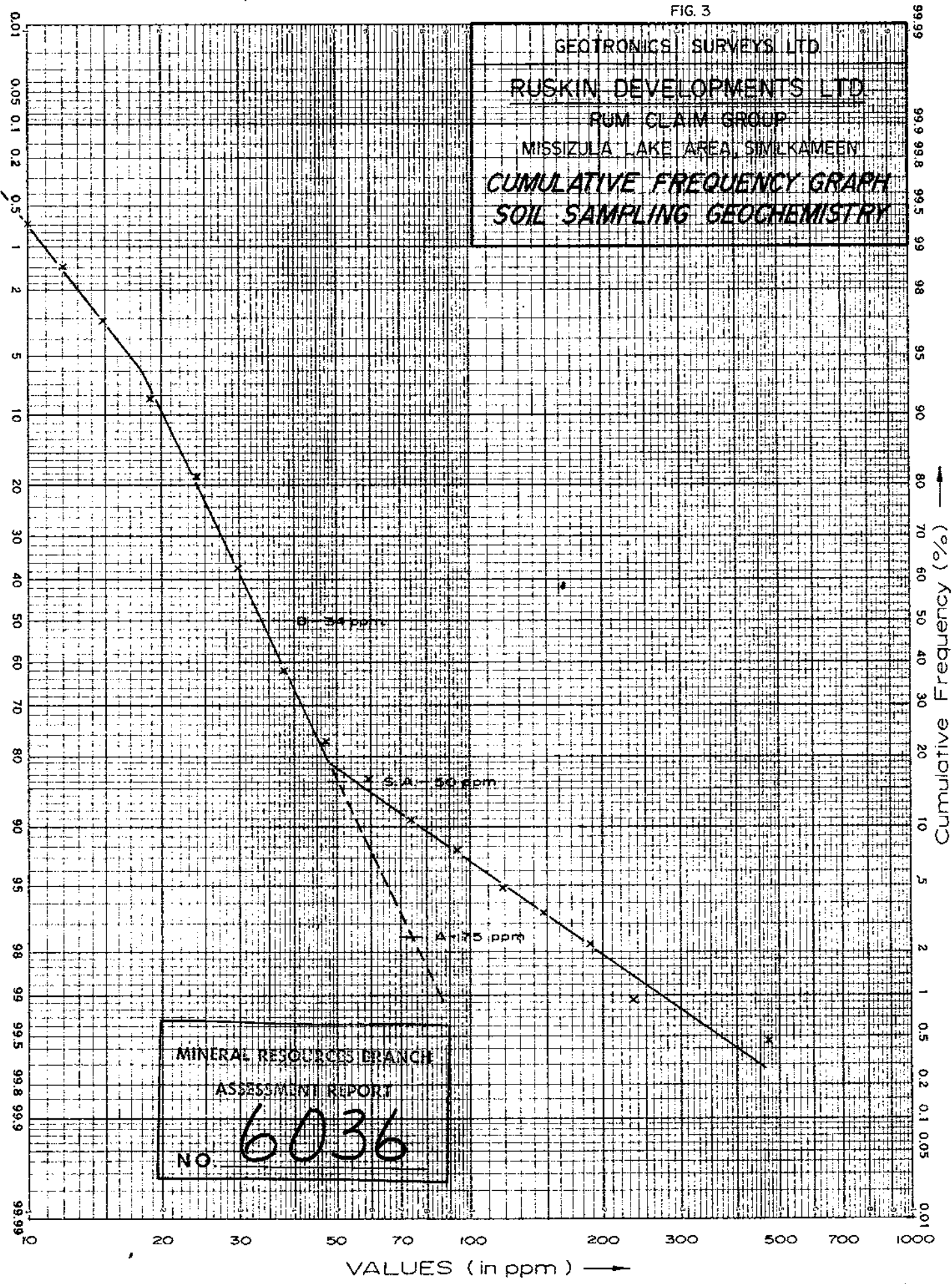


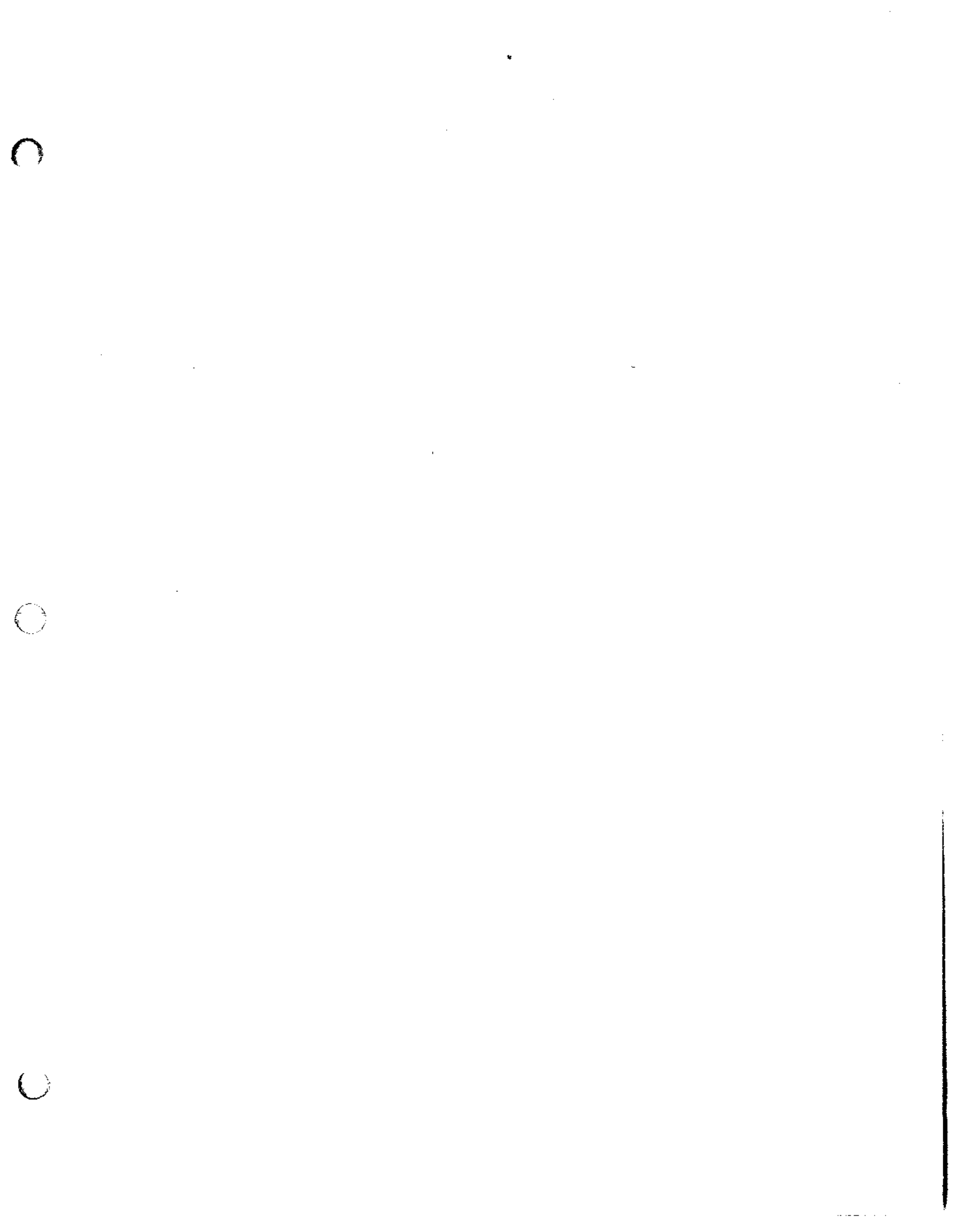
FIG. 2

MINERAL RESOURCES BRANCH
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GEOTRONICS SURVEYS, LTD.
RUSKIN DEVELOPMENTS LTD.
(N.P.L.)
RUM GROUP
CLAIM MAP
SIMILKAMEEN M.D., B.C.
SCALE
1500' 750' 1500'
FEET FEET FEET

FIG. 3







PRINCETON-MERRITT HIGHWAY-7 MILES



- LEGEND**
- GEOLOGY**
- 1 Sediments
 - 2 Felsic Breccias
 - 3 Crystal Tuff
 - 4 Lapilla Tuff
 - 5 Augite Porphyry, and Hornblende Augite Porphyry
 - 6 Hornblende, Augite Mordorite
 - 7 Igneous Breccia
- SYMBOLS**
- Induced Polarization Anomaly
 - Copper Geochemical Anomaly
 - Fault
 - Contact
 - Trench
 - Dirt Road
 - Drill Hole (PR - Percussion) (DD - Diamond)
- 1976 SOIL GEOCHEMISTRY PARAMETERS**
- BACKGROUND 34 ppm
 - SUB-ANOMALOUS THRESHOLD 50 ppm
 - ANOMALOUS THRESHOLD 75 ppm
- CONTOURS**
- 50 ppm
 - 75, 110, 165, 245, 365, 520 ppm

6036

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. **6036**
MAP NO. **#1**

GEOTRONICS SURVEYS LTD.
RUSKIN DEVELOPMENTS LTD.
 RUM CLAIM GROUP
 MISSEZULA LAKE AREA, SIMILKAMEEN M.D., B.C.
SOIL GEOCHEMISTRY-COPPER DATA & CONTOURS

SCALE: 1" = 500'

DRAWN BY: ALTAH DATE: AUG 1976 JOB No: 76-15 SCALE: 1" = 500' SHEET No: 1