

527

CANEX AERIAL EXPLORATION LTD.

GEOCHEMICAL AND GEOLOGICAL PROGRAM
ON THE
BUR AND TOP MINERAL CLAIMS
FOR
CANEX AERIAL EXPLORATION LTD.

TASEKO RIVER AREA 92-0-3
CLINTON MINING DIVISION, B. C.

November 7, 1963

S. J. Melihercsik

RESUME

Scope :

The purpose of the project was to evaluate the copper and molybdenite potential of a group of claim blocks held by Copper Ridge Mines (N.P.L.) in the Taseko River area, Clinton Mining Division, B.C.

As carried out, the program involved an assessment of known mineralized areas and their projected extensions by carrying out systematic geochemical sampling coupled with geological mapping and channel sampling.

The program was carried out between August 1st and August 30th, 1963. Field personnel of Canex Aerial Exploration Ltd. carried out the program and included S.J. Melihercsik, K.E. Dawson and E. Cox. The overall program was under the direction of L. Adie.

Conclusions:

A review of the geochemical data indicates that the values for copper and molybdenite in no way represent a halo or pool effect that could be interpreted to reflect mineralization of economic significance. Again, channel sampling of exposed showings gives a weighted average of 0.048% Cu and 0.01% MoS₂. Values for gold range from Trace to 0.02 oz.

Furthermore, drilling and trenching of showings in the immediate vicinity, adjacent to the Copper Ridge claims has shown the copper mineralization to be lean and inconsistent.

Consequently, it is deemed that the Copper Ridge claims, although of some relative value, do not constitute an area of economic interest.

Recommendations:

From what has been said above, the obvious recommendation is that the claim blocks be abandoned and that no further work be carried out. Despite the truth of the matter, it is, however, deemed a valid proposition for Copper Ridge to retain those claims on which sufficient work has been carried out to justify the filing of assessment work affidavits. The reason for recommending retention of such claims is that both Phelps Dodge and Noranda Mines are pursuing an active exploration program on adjacent or contiguous claims and although it is improbable that a major discovery will be brought to light, it is possible that the unforeseen may happen. In such a case, the Copper Ridge claims may yet have some value as simple "real estate".

INTRODUCTION

According to a contractual agreement dated May 1, 1963 Canex Aerial Exploration Ltd. agreed to explore several groups of claims held by Copper Ridge Mines (N.P.L.) in the Taseko River area, Clinton Mining Division, British Columbia.

The purpose of the exploration program was to evaluate the reported copper and molybdenite potential on Copper Ridge's ground. The program was carried out during August of 1963.

Claims Explored:

For the purpose of this report the following claims were explored and evaluated viz:

<u>Claims</u>	<u>No. of Claims</u>
BUR No. 9 through 35	27
BUR No. 38 & 39	2
BUR Fraction	1
BUR Fraction No. 2	1
TOP No. 1 and 2	2

Upon termination of the field and office evaluation program, it was deemed that 12 of the above listed 33 claims had limited merit and consequently, Canex Aerial filed the requisite affidavits covering assessment work on 12 claims as listed below:

BUR No. 9 through 14
BUR No. 16 & 18
BUR No. 27, 29 & 31
TOP No. 3.

The affidavits were filed on October 1, 1963.

Location:

The BUR and TOP claims are located in the Taseko River area, Clinton Mining Division, B.C.

More specifically, the claim groups are situated some 8 miles southeast of the junction of Taseko Lake and Taseko River. Most of the BUR claims straddle the Taseko River between Granite Creek and Battlement Creek. The TOP claims are situated approximately 1 mile southeast of the BUR claims.

The latitude of 51°7' north and the meridian of longitude 123°22' west intersect at the approximate centre of the claim area.

Nature of Work Performed:

Inasmuch as the general claim vicinity has in the past been prospected by trenching and exploration drilling, it was decided to test the Copper Ridge showings by carrying out a systematic geochemical sampling program coupled with channel sampling of exposed mineralized showings.

As a general rule, the geochemical sampling was carried out by taking soil samples from the B horizon at 100 foot intervals along lines 400 feet to 500 feet apart. In addition, stream sediment samples were collected where such a procedure was deemed justified. All of the samples were sent to the University of British Columbia where quantitative geochemical analyses were run for molybdenum and copper. The analytical results were reported in parts per million Mo and Cu and are so shown on the accompanying maps.

As a whole, 271 geochemical samples were collected and analyzed.

Channel sampling was restricted to mineralized showings and as such, 10 channel samples were collected for a total length of 225 feet. The length of each channel varied from a minimum of 10 feet to a maximum of 30 feet. All samples were sent to Coast Eldridge at Vancouver where assays were run for Au, Cu and MoS₂. The analytical results appear plotted on the accompanying maps.

In addition to the geochemical sampling and channel sampling, an attempt was made to map the pertinent geological features of the claim area. In this respect, no difficulty was experienced in mapping the TOP group of claims, inasmuch as the entire area is underlain by exposed bedrock. However, most of the BUR claims are entirely covered by overburden and, therefore, the significant contact area shown on the present map is based mostly on inference aided by photogeological studies.

The accompanying base maps are on a scale of 500 feet to 1 inch; the contour interval is 50 feet in the low lying areas while the more elevated areas are contoured at 100 foot intervals. The compilation of the base maps was from aerial photographs and was carried out at the Vancouver office of the Hunting Survey Corp. Ltd.

GENERAL CONSIDERATIONS

Topography:

The topography of the area is that a precipitous mountain terrain with peaks ranging up to 10,000 feet in elevation.

Glaciation has completely scoured the area. Taseko River and Granite Creek follow deep glacial valleys which originate in U-shaped hanging valleys with cirques at their heads. In general, the lower portions of the valleys are gently inclined but the mountain slopes are steep and precipitous.

The elevation at the confluence of Granite Creek and Taseko River is 5208 feet. Most of the BUR claims are at a mean elevation of 5400 feet. The molybdenite showing on claim TOP No. 3 is at approximately 6950 feet.

Water Supply:

Granite Creek and Taseko River carry a strong flow of water throughout the year. However, since all of the streams are glacier fed, the volume of water flow diminishes rapidly with the advent of cold weather.

Power:

There is no developed power within the area. The old Taylor-Windfall mine, located on Battlement Creek, operated with several pelton wheels coupled directly to machinery and driven by a high head of piped water.

Timber:

Timberline is at approximately 6000 feet elevation. The lower slopes are covered by pine averaging about 6 inches in diameter. Areas of larger pine and spruce, up to 2 feet in diameter, occur on the property and in the general area straddling the Taseko River.

ACCESS

The most convenient means of reaching the property is to land via float plane at the southeast end of Taseko Lake. From this point a jeep road follows the north shore of Taseko River and leads to Granite Creek and the main area of the Copper Ridge claims.

Float planes are available for charter either from Vancouver or Williams Lake, B.C. The flying time from Vancouver is approximately 1 hour and 40 minutes; from Williams Lake the flying time is about 1 hour.

GEOLOGICAL SETTING

The regional geology has been described by J.D. MacKenzie in his report entitled "A Reconnaissance Between Taseko Lake and Fraser River, B.C." Canada Dept. of Mines, Summary Report, 1920, Part A, pp 70-81.

In broad outline, the geology of the general vicinity consists of a mixed series of Jurassic Volcanics intruded by rocks of the granodiorite clan of the Coast Range batholith. Mineralization is known to occur both in the granodiorite intrusives and in the intruded older volcanics.

Of particular interest is the contact zone between the granodiorite and the intruded volcanics. Here, copper and molybdenite mineralization has been noted and prospected in several isolated localities. Therefore, some investigators are of the opinion that the contact zone, in this instance,

represents an area of favourable host rocks for the formation of large scale base metal deposits.

In addition, the main granodiorite mass is known to contain small isolated pockets of altered and mineralized "breccia" zones. These brecciated zones are considered by some as indicating the possible presence of large scale "breccia pipes" akin to the ones which give rise to the so-called porphyry copper deposits in the United States.

DESCRIPTION OF CLAIM AREAS AND RESULT OF INVESTIGATIONS

BUR Claims - General

As previously stated, the BUR claims straddle the inferred intrusive contact between the granodiorite and the Denain volcanics.

Claims No. 9, 10 & 11 are adjacent to the old Empress copper showing presently held by Phelps Dodge Corporation of Canada Ltd. Copper Ridge Mines felt that the Empress showing had certain possibilities and as a consequence, their present claims were staked to cover the assumed extension of the showing.

Claims No. 14 & 16 were staked to cover a series of rusty, weathered showings which show minor chalcopyrite and molybdenite mineralization.

All of the BUR claims are covered by overburden with the exception of a few exposures on claims No. 14 & 16. Consequently, it was deemed best to investigate the mineral potential of the claims by carrying out a detailed geochemical survey coupled with channel sampling of exposed mineralized outcrops.

BUR Claims - Geochemical Results: Molybdenum

On claims No. 9, 10 & 11, a total of 186 soil samples were taken. The sample intervals were at 100 feet on seven north-south lines located 500 feet apart and on one east-west line bisecting the first 7 lines. All of the samples were from the "B" horizon and each sample was run quantitatively for parts per million Mo and Cu.

The results of the survey are plotted on the accompanying map and appear in summary form below:

<u>No. of</u> <u>Samples</u>	<u>Metal</u>	<u>Range</u> <u>PPM</u>	<u>Mean</u> <u>PPM</u>	<u>Location</u>
186	Mo	0.8-120	10	BUR claims No. 9,10 & 11

An analysis of the data shows that the Mo values in the vicinity of known mineralization range only from 0.8 to 24 ppm. The 120 ppm shown in the above table is a maximum obtained in one isolated instance and is therefore not to be construed as a significant figure. Consequently, the range of 0.8 to 24 ppm Mo is considered as indicative and this range of figures corresponds to the consistently low assay values of 0.01% MoS₂ as obtained elsewhere in the general area. Therefore, the Mo values on claims No. 9, 10 & 11 indicate no more than background, and as such, they in no way suggest a geochemical plateau effect that could be related to primary or secondary dispersions of the metal.

On BUR claims No. 14 & 16, the parts per million Mo fall into a range category of 0.8 to 24 ppm and as such, the values are not considered to represent more than background figures. An isolated instance of 2000 ppm Mo was recorded but this value is in no way representative, especially when compared to the assay values with a range of 0.01 to 0.03 MoS₂ as obtained from "mineralized" outcrops located 600 feet to the east of the erratically high geochemical value.

In summary, the geochemical results for BUR claims No. 14 & 16 are tabulated below:

<u>No. of Samples</u>	<u>Metal</u>	<u>Range PPM</u>	<u>Mean PPM</u>	<u>Location</u>
77	Mo	0.8-2000* 0.8-24	16	BUR Claims No.14 & 16

* As explained above, the 2000 ppm value is considered as an erratic value and is therefore discounted from the mean value. The range 0.8 to 24 ppm is considered to be more realistic.

Eight stream sediment samples were taken on BUR claims No. 27 and 28. All of the samples show only 0.8 ppm Mo and consequently the values strongly suggest that no molybdenum concentration exists in the immediate area. The reason: values of 0.8 ppm Mo, do not even correspond to what could safely be considered a background value.

BUR Claims - Geochemical Results: Copper

In a relative way, copper is the principal mineralization of the Taseko River area. Within the claim areas under discussion, the copper mineralization appears confined to the contact zone between the intrusive granodiorites and the older Denain volcanics. As such, the best known showing is the one termed "Empress" which lies immediately to the south of the southeast corner of BUR claim No. 9. Drilling and trenching of the "Empress" showing has, in the past, shown disappointing results. Nevertheless, the owners of the Copper Ridge claims postulated a possible extension and enrichment along the contact which here trends northeast. Consequently, the present survey is a test of Copper Ridge Mines' hypothesis.

Three principal claim blocks were tested viz: BUR claims No. 9, 10 & 11 and BUR claims No. 14 & 16 and BUR claims No. 27 & 28. The results of the survey appear tabulated on the accompanying map. For convenience, the same results are summarized in the following table:

No. of Samples	Metal	Range PPM	Mean PPM	Location
186	Cu	3-320	49	BUR claims No. 9, 10 & 11
77	Cu	4-3420	271	BUR " No. 14 & 16
8	Cu	8-32	20	BUR " No. 27 & 28

The above table shows that the mean parts per million copper represent less than threshold values in the case of BUR claims No. 9, 10 and 11. Background in this case was calculated at 100 parts per million and it is deemed that because of the shallow depth of overburden a mean value of any significance would have to be in the order of 10 to 15 times background.

On BUR claims No. 14 & 16 the mean value of 271 parts per million Cu is deemed to approach a value that is about 3 times background. However, here again the figure is not considered as indicative inasmuch as chemical assays show that the copper content of the underlying rocks ranges from 0.15% to 0.18% in the immediate vicinity of one of the highest geochemical values obtained, viz: 2770 parts per million Cu. Furthermore, chemical analyses on systematic channel samples taken from a series of exposed mineralized outcrops show a weighted average of only 0.048% Cu; select grab samples from the same locality show a range of 0.03% Cu to 0.18% Cu.

On BUR claims No. 27 and 28, the parts per million copper range only from 8 to 32 with a mean value of 20. These values are considered as indicative of a barren zone and as such, they are insignificant and require no further comment.

TOP Claims - Discussion of Results

Interest was generated in the TOP group of claims by the discovery of a pegmatitic dikelet carrying molybdenite mineralization. The mineralized dikelet is located on claim TOP No. 3 and is shown on the accompanying map. The elevation of the showing is 6950 feet.

Geologically, the dikelet cuts rocks of the granodiorite clan and is essentially parallel to the major joints which strike at 130° and dip from 65° south to 90°. Minor chalcopyrite is associated with the molybdenite.

A thorough examination of the showings shows that the dikelet averages 0.6 feet in width and that it can be traced for 25 feet down dip. Prospecting on the flanks as well as along the down dip direction showed negative results. Consequently, it was concluded that the mineralization is of local extent and of no consequence from an economic point of view.

Two channel samples were taken and the following assay results were obtained:

Sample No.	Oz Au	% Cu	% MoS ₂	Width and Description
5939	0.01	0.16	0.61	10' - 0.5 ft. interval mineralized
5940	Tr	0.10	0.05	10' - 0.1 ft. " "

The reason for the 0.61% MoS₂ in sample No. 5939 is that 0.5 ft. of the 10 ft. channel was cut through the most highly mineralized portion of the pegmatite dikelet. In the case of sample No. 5940, the channel sample incorporated 0.1 ft. of the mineralized dikelet.

No geochemical sampling was carried out on the TOP group of claims. However, geochemical sampling of stream sediments outside the claim boundaries gave the following results:

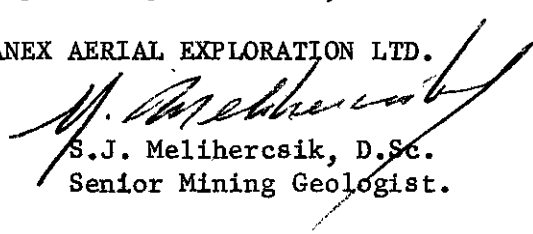
No. of Samples	Metal	Range PPM	Mean PPM	Location
15	Mo	2-8	5	In stream bed ½ mile south of molybdenite showing
15	Cu	8-24	15	As above

The above samples were collected from the main stream which drains the cirque in which the molybdenite is present.

An analysis of the results shows clearly that the mean values and the range in values for both Cu and Mo are too low to be of significance. Consequently, it is deemed that the molybdenite potential of TOP claim No. 3 is of no economic significance.

Respectfully submitted,

CANEX AERIAL EXPLORATION LTD.


S.J. Melihercsik, D.Sc.
Senior Mining Geologist.

SJM:jhw

STATEMENT OF QUALIFICATIONS

The following report covers geological and geochemical surveys carried out under my direction on the BUR and TOP Mineral Claims in the Taseko River area, Clinton Mining Division, B.C. by Dr. S.J. Melihercsik, a senior geologist on the staff of Canadian Exploration Limited. Dr. Melihercsik has a BSc degree from McGill University (1948) and a MSc and DSc degree from Laval University (1952). Dr. Melihercsik has had wide experience in the field of mining exploration and in my opinion his work meets the standard of qualifications required for acceptance of this report as credit for assessment work. I also believe that the calibre of his work is on a standard acceptable to the Association of Professional Engineers in B.C.



L. ADIE, P. Eng
Project Engineer.

LA: jhw
November 8, 1963.
Vancouver, B.C.

TABLE OF CONTENTS

	<u>Page</u>
RESUME	
Scope	
Conclusions	
Recommendations	
INTRODUCTION	1
Claims Explored	1
Location	1
Nature of Work performed	2
GENERAL CONSIDERATIONS	2
Topography	2
Water Supply	3
Power	3
Timber	3
Access	3
GEOLOGICAL SETTING	3
DESCRIPTION OF CLAIM AREAS AND RESULT OF INVESTIGATION	4
BUR Claims - General	4
BUR Claims - Geochemical Results - Molybdenum	4
BUR Claims - " " - Copper	5
TOP Claims - Discussion of Results	6
APPENDIX I - Statement of Costs - BUR Claims	
APPENDIX II - " " " - TOP Claims	

LIST OF ILLUSTRATIONS

- Map No. 1 Assays and Geochemical Results - BUR Claims
- Map No. 2 Assay and Geological Map - TOP Claims

<p>Department of Mines and Petroleum Resources ASSESSMENT REPORT</p> <p>NO. <u>527</u> MAP</p>
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APPENDIX I

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.

In the Matter of

To WIT:

I, L. Adie

of 700 Burrard Building, Vancouver, 5,

in the Province of British Columbia, do solemnly declare that the following expenditures have been incurred by Canex Aerial Exploration Ltd. in carrying out geochemical and geological work on the following Mineral Claims, viz:- BUR 9-14, BUR 16, BUR 18, BUR 27, BUR 29 and BUR 31.

Geochemical and Geological Survey

Between August 1, 1963 and August 30, 1963

Dates worked: August 12 to August 17; August 19 to August 24.

Supervising Geologist	12 days @ \$30/day	\$360.00
Field Geologist	12 days @ \$20/day	240.00
Field Assistant Geologist	12 days @ \$15/day	180.00
		<u>\$780.00</u>
Plus 25% General Supervision and Overhead		195.00
		<u>\$975.00</u>
Geochemical analyses for Cu & Mo on 271 samples @ \$1.50		406.50
Chemical analyses for Au, Cu, MoS ₂ on 11 samples @ \$9.50 per multiple analyses		104.50
Compilation of 6 square miles of topographic maps @ \$25.00 per square mile		150.00
		<u>\$1,636.00</u>

Supervisor of Program	-	S. J. Melihercsik
Field Geologist	-	K. E. Dawson
Field Asst. Geologist	-	E. Cox

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 8th
day of November 1963, A.D.

L. Adie

John M. McNeill
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

APPENDIX II

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
To Wit:

In the Matter of

I, L. Adie

of 700 Burrard Building, Vancouver 5, B. C.

in the Province of British Columbia, do solemnly declare that the following expenditures have been incurred by Canex Aerial Exploration Ltd. in carrying out geological prospecting work on TOP 3 Mineral Claim.

Geochemical Survey and Prospecting

Between August 1, 1963 and August 30, 1963

Dates worked: August 9 and August 10.

Supervising Geologist	2 days @ \$30/day	\$60.00
Field Geologist	2 days @ \$20/day	40.00
Field Assistant Geologist	2 days @ \$15/day	30.00
		<u>\$130.00</u>
Plus 25% General Supervision and Overhead		32.50
		<u>\$162.50</u>
Chemical analyses for Au, Cu and MoS ₂ on 2 samples @ \$9.50 per multiple analyses		19.00
Compilation of 6 square miles of topographic maps @ \$25.00 per square mile		150.00
		<u>\$331.50</u>

Supervisor of Program - S. J. Melihersik
 Field Geologist - K. E. Dawson
 Field Asst. Geologist - E. Cox

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 *8th*
day of *November* *1963*, A.D.

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

COPPER RIDGE MINES (N.P.L.)

ASSAYS & GEOCHEMICAL RESULTS

BUR CLAIMS
TASEKO RIVER AREA
CLINTON M.D. - B.C.

SCALE 1" = 500' OCTOBER 1963

per: CANEX AERIAL EXPLORATION LTD.
compiled by: S.J. MELIHERCSIK
L. ADIE

MAP No. 1. TO ACCOMPANY GEOCHEMICAL & GEOLOGICAL
REPORT BY J.S. MELIHERCSIK, D.Sc. ON BUR &
TOP MINERAL CLAIMS, TASEKO RIVER AREA,
CLINTON M.D., DATED: NOV. 7, 1963

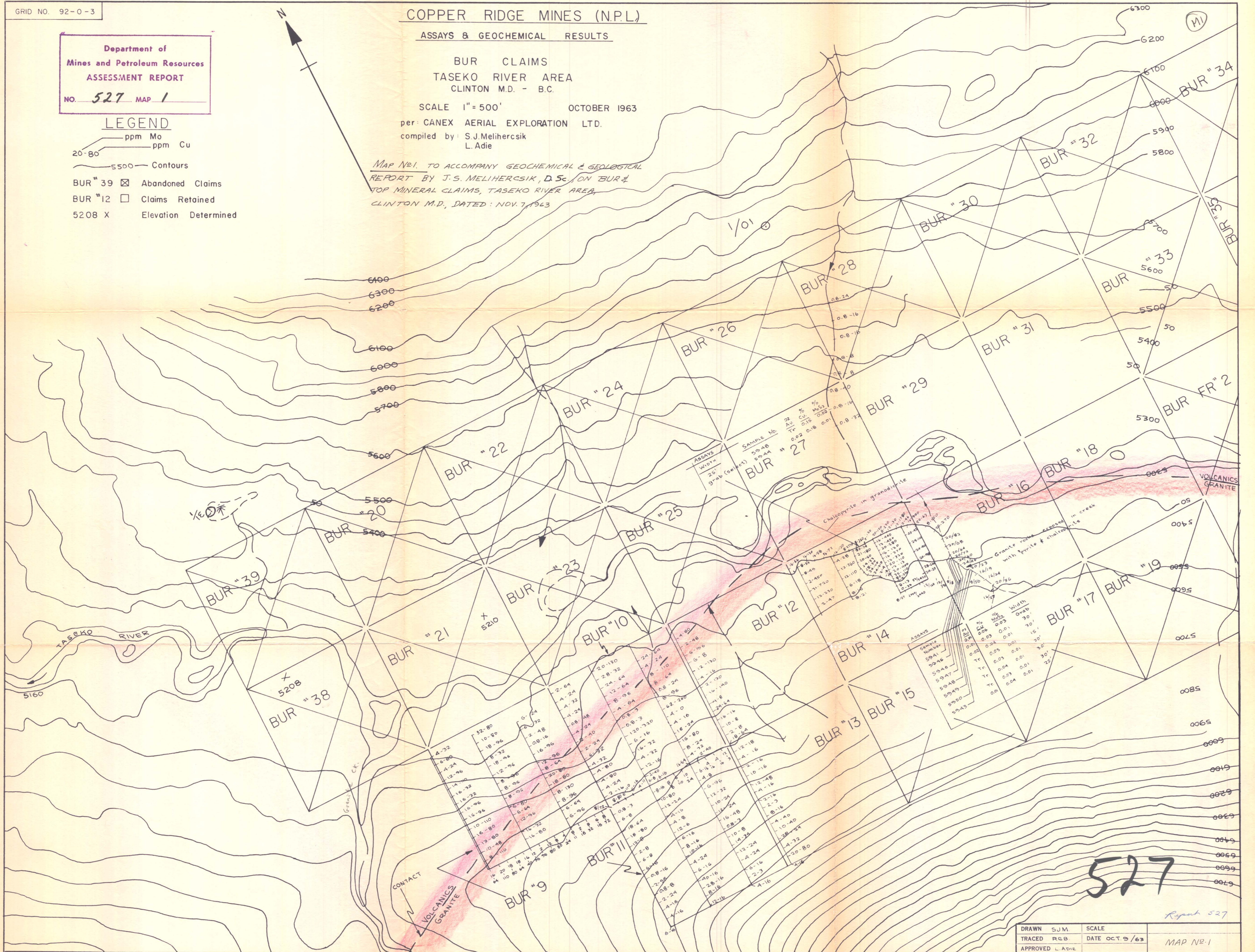
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 527 MAP 1

LEGEND

ppm Mo
ppm Cu
20-80
5500 Contours

BUR # 39 Abandoned Claims
BUR # 12 Claims Retained
5208 X Elevation Determined



1/01

Sample No.	As	% Cu	% MoS ₂
5948	0.15	0.02	0.08
5944	0.02	0.18	0.01

Sample Number	% As	% Cu	% MoS ₂	Width
5946	0.02	0.04	0.01	30'
5947	Tr.	0.03	0.01	30'
5948	Tr.	0.04	0.01	30'
5949	Tr.	0.03	0.01	30'
5950	Tr.	0.04	0.01	25'
5943	0.01	0.04	0.01	15'

Ma.

COPPER RIDGE MINES (N.P.L.)

ASSAY & GEOLOGICAL MAP

TOP CLAIM No. 3
TASEKO RIVER AREA
CLINTON M.D. B.C.

SCALE: 1"=500' OCTOBER 1963

per: CANEX AERIAL EXPLORATION LTD.

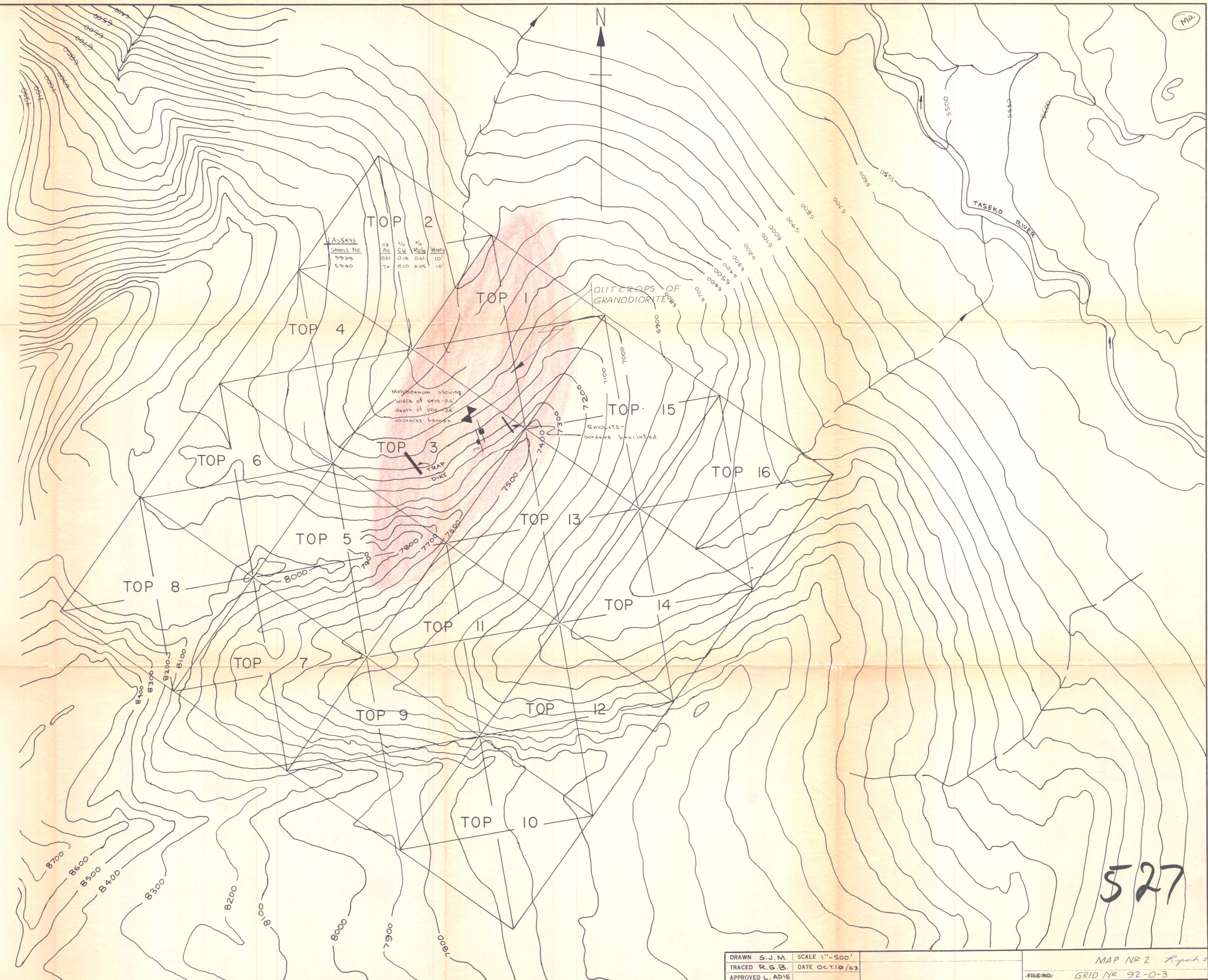
compiled by: S.J. Melihersik
L. Adie

Map No. 2. TO ACCOMPANY GEOCHEMICAL & GEOLOGICAL
REPORT BY S.J. MELIHERSIK, D.Sc. ON BUR & TOP
MINERAL CLAIMS, TASEKO RIVER AREA, CLINTON M.D.
DATED: NOV. 7, 1963

LEGEND

- ☒ CLAIMS ABANDONED
- ☐ CLAIMS RETAINED
- 8100 — CONTOURS
- ⌘ MOLYBDENITE SHOWING
- |— JOINTS VERTICAL
- /— JOINTS INCLINED

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 527 MAP 2



527