GEOLOGICAL REPORT
ON THE PROPERTY OF
MT. WASHINGTON COPPER CO. LTD.
IN THE NANAIMO MINING DIVISION BY

W. G. STEVENSON, P. ENG.
CONSULTING GEOLOGIST

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Vancouver, B.C.

January 18th, 1967.

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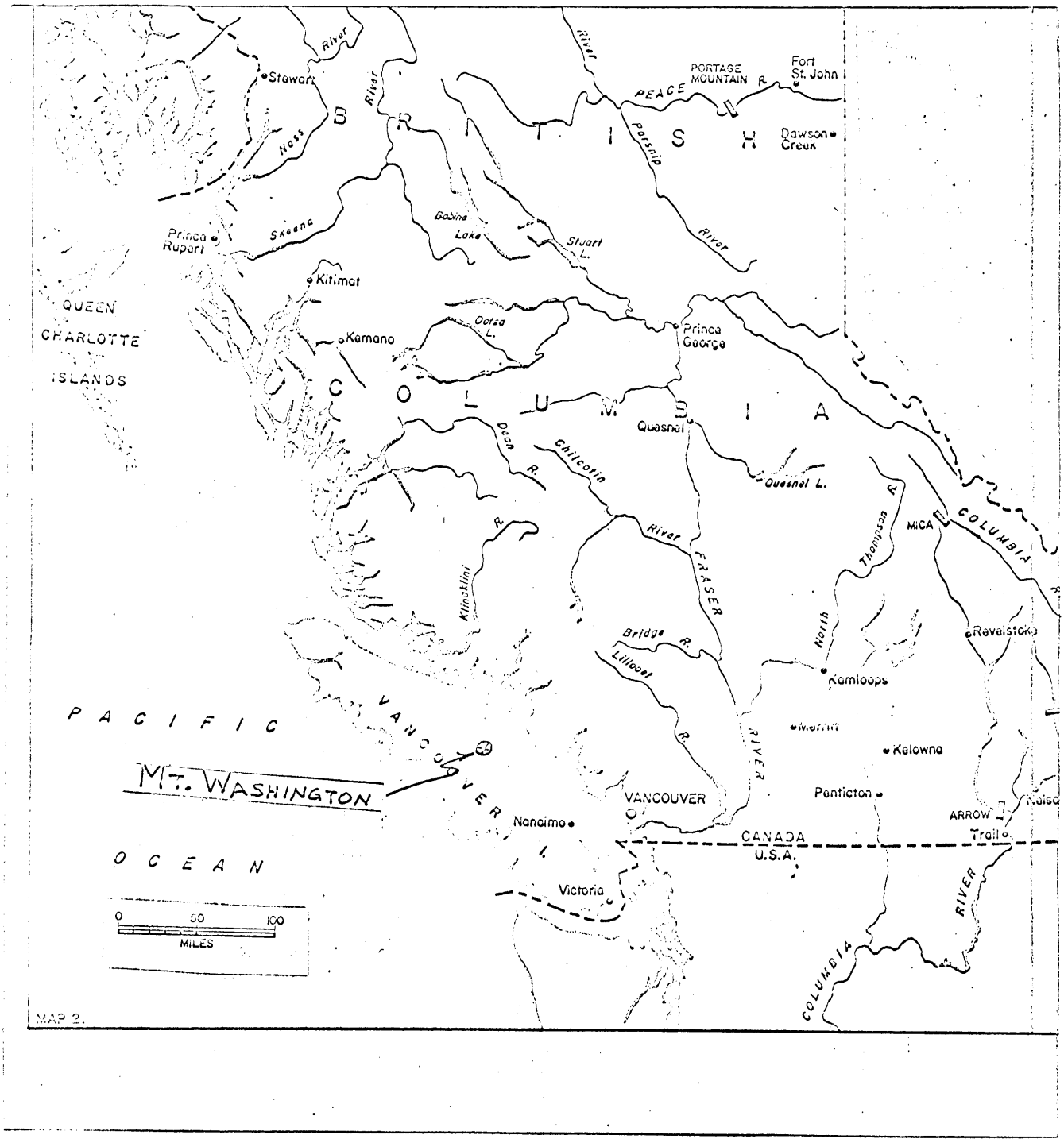
WILLIAM G. STEVENSON, P. Eng.
Consulting Geologist



INDEX MAP
showing location of
Mount Washington Property

Nanaimo Mining Division
British Columbia
Scale 1" = 100 miles

SUMMARY

Bold outcropping quartz veins were discovered on Mount Washington in 1940, and mineral rights to an area of 11 square miles were acquired in the name of Mt. Washington Copper Co. A mill was erected and in 1965 and 1966 some 400,000 tons of ore grade material from these veins was treated. Sporadic exploration and development of these veins since their discovery has indicated that the tonnage potential is limited.

A number of tertiary intrusives have been found within and extending beyond the limits of the Mt. Washington Copper property. The most prominent that has been recognised to date is located within the property near the summit of Mount Washington. This is quartz diorite, associated with porphyries and breccias intrusive into older volcanic and sedimentary rocks.

Noranda (1957-1959) and Cominco (1963-1964) performed exploration programmes. They have collected valuable data and have prepared excellent geological maps and reports pertaining to the Mount Washington property. Low grade copper mineralization which is widespread and which is difficult to assess can be found in all rock types on the property. Structural conditions, the intrusive complex and mineralization here present similarities with porphyry copper deposits found in many of the mining camps in the western cordilleran.

The programme which was conducted for Mt. Washington Copper Co. during 1966 has proven that soil and silt sampling is an effective exploration tool. The 1966 programme discovered two areas where high copper content in the soil suggests attractive exploration targets, 2 and 2½ miles easterly from the area of present production.

A programme designed to test these two areas in detail and to test other areas and particularly to test the applicability of induced potential geophysical equipment is proposed.

INTRODUCTION

On July 26th, 1966, I accepted an assignment to organize and supervise an exploration programme on the Mt. Washington Copper porperty for the 1966 field season.

To initiate the programme I studied various reports that have been written to cover the past exploration work and discussed this project with many engineers and geologists who have worked on the property.

Mr. K.L. Daugherty, an undergraduate from Carlton University, who is familiar with soil and silt sampling, was engaged to assist in training two prospectors in the proper procedure to be used in soil sampling on the Mount Washington property. Mr. Bill Lewis, an experienced prospector, and an assistant, were employed, and the field work commenced on August 13, 1966, and continued until October 20th, 1966.

The work of the prospectors was directed toward accomplishing three objectives. First to prospect the area, particularly along the new logging roads, in search for new exposures of copper mineralization, and to concentrate their efforts in five specific areas that we had selected as holding some exploration attraction. Second, to sample and map the exposures of mineralization which were discovered in rock outcrops and in road cuts. Third, to collect soil and silt samples over a wide area in an effort to turn up areas warranting follow up exploration.

During the course of the season I have called on Mr. James Scott, P. Eng., Consulting Geologist in Vancouver, for assistance in reviewing the work that was being accomplished and in assembling this final report.

NAME OF PROPERTY

The mineral rights to an area encompassing Mount Washington are held in the name of Qualicum Mines Ltd., a company controlled by Mt. Washington Copper Co. Ltd.

A small part of the area held by Qualicum has been relinquished to Mt. Washington Milling Company Ltd., an operating company formed by Mt. Washington Copper Co. Ltd. and Cumberland Mining Co.

LOCATION AND ACCESS

Mt. Washington is located at approximately 49° 45' North latitude and 125° 15' West longitude. It is situated 16 miles northwest of Courtenay, a station on the E. and N. Railway, which is on tide water. Access is gained over improved roads from Courtenay through the Crown Zellerbach timber licence. Concentrates are trucked 126 miles from the property to Hatch Point, a deep sea port. Vancouver is located 105 miles south easterly and the copper smelter of American Smelting and Refining Co., at Tacoma is located 240 miles southerly.

FACILITIES

A mill capable of treating 700 tons of ore per day is installed and in operation 4 miles from the open pits. A tailings pond has been established 1 mile from the mill. All of the mining is on contract with the contractor supplying all of the equipment.

OWNERSHIP AND TITLE

The Mount Washington property comprises an area of approximately 11 square miles held by a concession granted by the Canadian Pacific Oil and Gas Co. Ltd. This concession covers title to base metals. Mineral claims have been staked to acquire title to the precious metals.

You will find attached a map drawn to a scale of 1" = ½ mile which will show the outline at the concession boundary, the outline of the mineral claims and generalized geology.

I have reviewed the records shown in the B.C. Mining Recorder's office in Vancouver, and have attached a list of the mineral claims by name and record number, their expiry date and owner's name as shown by these records. I have also attached a photocopy of a part of Provincial Department of Mines mineral map which will show the position of these claims.

The concession and the mineral claims are held in the name of Qualicum Mines, which is owned by Mount Washington Copper Co., with Noranda Mines holding a minor share position. The terms of the agreement between Qualicum Mines and Canadian Pacific Oil and Gas Co. Ltd., can be summarized as follows:

> A minimum rental of $3,745.00 per year which is applied toward the production royalty, which is on a sliding scale, depending on grade of ore and price of copper. The lease is for 50 years, with an option to extend.

You will find attached a more detailed resume of this agreement. I have not made a study of the original agreement or the description of the boundary of

WILLIAM G. STEVENSON, P. Eng.
Consulting Geologist

M A P
showing location of
Mineral Claims
Mount Washington Copper Co. Ltd.

Nanaimo Mining Division
British Columbia
Scale 1" = 1 mile

the concession that has been granted by Canadian Pacific Oil and Gas Co. Ltd..

Nissho Canada Ltd. and Furukawa Mining Co. Ltd. of Canada, and Mt. Washington Copper Co. Ltd. have advanced funds to the Milling Company. These funds are to be repaid out of operating profits. After three repayments, and after the payment to Mt. Washington Copper Co. Ltd., for the copper contained in the concentrate (see below), the profits will be shared equally between Mt. Washington Copper Co. and Cumberland Mining Co.

An agreement was reached between Mt. Washington Copper Co. Ltd. and Atlas Investments (parent Company of Cumberland Mining Co.), covering an area ½ mile wise and 3/4 mile long, and including the area over the two open pits. This agreement called for the formation of an operating company called Mount Washington Milling Company, and provided for a split of profit, realized from any ore produced from the area within the Mount Washington Milling Company concession. The terms of this agreement call for payment ahead of operating expenses, to be made to the Mount Washington Copper Company of 2 -½ cents per pound on copper contained in the concentrate, and until the sum of $164,216.26 has been paid an additional 2 cents per pound on copper contained in the concentrate. You will find attached a more detailed resume of this agreement.

NEARBY PROPERTIES

A number of small porphyry stocks and sills of Tertiary age occur withing an area of approximately 140 Square miles, centred over Mt. Washington, Some of these intrusions are mineralized, and Falconbridge Nickel Mines Ltd., diamond drilled one of these which is located 7½ miles southwesterly from Mount Washington.

This was called the Gem Lake prospect and is described as a zone of disseminated copper mineralization associated with a breccia pipe.

The copper, lead, zinc, silver deposit of Western Mines, which commenced production during December 1966, is in Strathcona Park near the southern end of Buttle Lake, 19 miles southwest of Mt. Washington.

The Iron Hill (Argonaut) Mine, now dormant, 13 miles northwest of Mount Washington, produced two million tons of iron concentrate.

Shafts and tunnels near Comox Lake, which is 10 - 15 miles southeasterly from Mt. Washington, mark the position of several dormant coal mines.

HISTORY

Canadian Pacific Railway was granted title to a large block of land on Vancouver Island which encompasses the area surrounding Mt. Washington. Title to the mineral rights were transferred to Canadian Pacific Oil and Gas Co. Ltd.

The quartz veins which are the source of the present production were discovered and staked in 1940 as gold veins. During 1944-1945, Mr. Carl Springer financed and drove adits on these veins, which work was continued by Consolidated Mining and Smelting Co.

Mt. Washington Copper Company was formed by G.C. Murray, a prospector, in 1956 and the company, under agreement with Noranda, formed Qualicum Mines Ltd., and performed a major exploration programme during 1957, 1958 and 1959. Consolidated Mining and Smelting Company optioned the property and continued the substantial exploration programme during 1963 and early 1964, but relinquished

their option lat in 1964.

In 1964 an agreement was reached between Mt. Washington Copper Co. Ltd. and Cumberland Mining Co., to form Mt. Washington Milling Co. as the vehicle for operations. The copper mill located at Greenwood, B.C. and owned by Cumberland was moved to Mt. Washington. Production commenced in 1965 and has continued to date.

PRODUCTION

From January 1, 1965 to April 30, 1966, 229,637 tons of ore were milled with an average grade of 1.29% copper, and from May 1, 1966 through November 30, 1966, 162,541 tons of ore were milled with an average grade of 1.08% copper.

ORE RESERVES

There is no known blocked out or reserve on the property, but the presence of a limited tonnage of ore grade material has been indicated by the past work in the vicinity of the present operations. However, my study has not included the area of the Milling Co. holdings.

GEOLOGY

The oldest rocks exposed in the area are massive, thick layered, gently dipping, dark basalt, with amygdaloidal and pillow structure along with tuff and breccia members,. This volcanic series is called the Karmutsen and is of Triassic Age. This formation extends over a large part of Vancouver Island and over the Lower Mainland of British Columbia. It is overlain unconformably by gently dipping

sandstone, quatzite and shale beds, which contain minor amounts of carbonaceous material here, and which are the source of much of the coal on Vancouver Island. These sediments are named the Comox Formation, and are of Cretaceous Age.

Mt. Washington is a land mass near the central part of Vancouver Island, which rises to a height of 5215', a distance of 12 miles from the ocean. The volcanic formation covers the lower slopes of Mount Washington and the sedimentary formation covers the upper slopes and top of the mountain. The core of the mountain is an igneous stock that has intruded these volcanic and sedimentary formations. This intrusive has a relatively complex composition, and has been classified as quartz diorite with associated porphyry and two or more intrusive breccias. These breccias vary in composition and appearance. Some contain a varied assemblage of angular fragments, both large and small, in a fine matrix of granular quartz, feldspar, and debris from porphyry and other rocks. Fragments of porphyry are invariably present, accompanied by fragments of volcanic rocks, quartzite and shale, depending on the adjacent country rock. Some of the breccias contain fragments of earlier breccias.

The igneous stock outcrops over an area of some two square miles. It has an irregular shape, possibly elongate in an easterly direction. Within a radius of 9 miles from Mt. Washington, a number of other Tertiary intrusives outcrop. These are shown on G.S.C. Geological Map 2 - 1965 Comox Lake by J.E. Muller as both sills and plugs. The sills which are concordant with the bedding, are more numerous. The plugs are considered pipe-like intrusive bodies, possibly representing volcanic vents with extruded, flat-lying sills of porphyritic dacite.

The breccias associated with the Mt. Washington intrusive extend easterly over a distance of several thousand feet over widths up to 1000 feet along the igneous contacts. The form, shape and extent of this porphyry-breccia intrusive complex is largely unknown.

A number of faults with north-south and northeast-southwest directions have been mapped in this area, and are more closely spaced in the vicinity of Mt. Washington. The most predominant faulting has a north-westerly direction parallel to the Regional Cordilleran trend. I believe these faults have provided a very definite control and guidance to the emplacement of the intrusive bodies and to the localization of mineralization.

MINERALIZATION

Mineralization is widespread and can be found in all Rock types exposed on the property. This mineralization is essentially pyrite, pyrrhotite, arsenopyrite and chalcopyrite, with variable amounts of gold, silver and molybdenite. Three types of mineral deposits have been observed.

i) veins in the sediments

ii) disseminated and very low grade mineralization in diorites and breccias and;

iii) massive sulphides in shear zones cutting the volcanic rocks.

A flat-lying quartz vein which occurs near the contact between sedimentary beds and a porphyry sill has been the source of all the production to date. This vein which has been mined from two open pits is extensive and averages possibly 5 feet thick though varies up to 20 feet.

In addition to vein mineralization, chalcopyrite, along with other sulphides, is disseminated within quartz diorite, porphyry, and all of the breccias. Where this mineralization has been tested in the past, it has been below ore grade, but small isolated high grade occurrences of copper and chalcopyrite have been noted at several widely spaced localities. These occur within steeply dipping shear zones, within the volcanic rock and are up to 5 feet wide but of indeterminate length.

Alteration products, mainly biotite, actinolite, chlorite, apidotite and quartz have been noted. As the altered rocks are generally fractured and often contain some copper mineralization, the alteration may be related to the main period of mineralization, and appears to be spatially related to the faulting.

EXPLORATION POSSIBILITIES

Of the three types of occurrance of copper mineralization in the concession area none has demonstrated profitability. The greatest commercial potential is offered by the disseminated type within intrusive rocks and breccias. Without losing sight of the other two types, it is recommended that exploration be oriented toward the location and testing of the disseminated type.

This recommendation would tend to restrict work to areas of know intrusive or breccia complex and to areas where these rocks might be expected. Within these areas a fairly intensive search is warranted by whatever useful techniques are available. Since no mineralization of ore grade is known to outcrop, the methods used should be selected for their ability to extend known exposures of rock types or structures into covered areas and to indicate mineralization under overburden.

The part of the concession area known or thought to be underlain by rocks of the intrusive and breccia complex is of the order of two square miles,. Much of the area is covered by overburden and heavy forest. Parts of this intrusive complex, by reason of geochemical evidence gained during 1966 should receive a higher priority of exploration effort.

The fault pattern as it affects this area is only imperfectly known. Faults or intersections offaults within the favourable belt of rocks should receive preferential attention. With these guide lines the intrusive zone warrants intensive exploration.

Considerable exploration has been accomplished in the past 10 years under the direction of able geologists. Recommendations for further work must be based on new exposures, improved techniques and more complete use of available data. An interpretation of the newly acquired and excellent air photography is an obvious first step. A study of regional aeromagnetic data should add to knowledge of fault patterns and rock distribution. Many new rock exposures are available which suggests the advisability of remapping parts or all of the geology within the concession using the maps which have recently been prepared from air photos, to a scale of 1" = 400 feet. Soil and silt surveys have proved effective in 1966 and full use of this tool should be made.

RECOMMENDATIONS

The Mount Washington Copper Co. concession on Vancouver Island warrants additional exploration. The accompanying exploration ideas should be considered a preliminary test of some of the exploration targets outlined in 1966. The following programme could be accomplished for 1967 at a cost that is estimated to approach $60,000.00.

First- The newly acquired air photographs are unusually clear and these should be interpreted by an expert in this field to provide available geology.

Second- Acquire the airborne aeromagnetic data that has been prepared by C.P.O.C. and have this studied by a geophysist.

Third- The geology within selected parts of and possibly all of the concession should be remapped on the newly acquired topographic maps drawn to a scale of 1" = 400'.

Fourth- Establish a base line and controlled grid over 400' intervals along this line to cover what is now considered to be the most important part of the intrusive complex.

Five- A geochemical programme should be expanded to include sampling of silt in streams over the concession area. These would be designed to locate new or presently covered intrusives and/or shear type copper deposits.

The geochemical soil sampling programme should cover the grid pattern to detail the anomalies which were discovered during the 1966 programme. This programme should also test the fault patterns found by the air photograph study.

Six- The area within the grid which has been tested geochemically should be geologically mapped to a scale of 1" = 200'.

Seven- A geophysicist should be brought in to assess the various surveys that should be run over the property. He could also initiate a programme of I.P. over a portion of the area covered by the grid as indicated by the soil sampling results. In addition he could test electromagnetic equipment along fault traces and their projections.

Eight- Depending on the results of the work that has been accomplished diamond drilling or dozer work might appear to be justified.

COST ESTIMATE

1.	Air Photo Study	$ 1,000.00
2.	Study of Airborne Magnetic Data	1,000.00
3.	Geological mapping, Basis Geologist and Helper, transportation, Board and Expense - estimated time, including maps 5 - 6 weeks.	3,000.00
4.	Establishing a survey - Base line with cross lines picketed and chained over 400 feet. Basis - 12 miles picket line @ $50.00 line mile. This for grid to cover area 1½ miles by ½ mile.	600.00
5.	Geochemical - A. Regional Silt Survey Basis - Estimate 2 men, 2 months, with Board transportation and assaying	$ 8,000.00
	B. Detail Soil Sampling Basis - 1 man, 1 month - as above	3,000.00
6.	Mapping Basis - 1 man, 1 month	2,000.00
7.	Geophysical A. Induced potential over part of grid.	9,000.00
	B. 1 man, 1 month as above	3,000.00
8.	Assessment work	3,000.00
9.	Follow-up work - Basis - Bulldozer work	5,000.00
	Drill - say 2000 feet	9,000.00
10.	Contingencies - Basis 20%	9,500.00
		$57,100.00
	SAY	$60,000.00

W. G. STEVENSON, P. ENG.

A P P E N D I X

Notes on Geochemical Survey with histograms by J.S. Scott

List of Mineral Claims and Expiry Dates

Summary of Terms of Agreement between Qualicum Mines and Canadian Pacific Oil and Gas Ltd.

Summary of Terms of Agreement forming Mt. Washington Milling Co., and leasing ground to that Company.

MOUNT WASHINGTON COPPER

NOTES ON GEOCHEMICAL SURVEY

Introduction:

The following review of geochemical work on Mount Washington Copper accompanies a report by W.G. Stevenson dated Dec. 22, 1966. It outlines the objectives and method and assesses the results and value of the survey.

Scope and Method:

The survey was designed as a reconnaissance-type check directed toward certain target areas selected for known mineralization or projections of structure or rock types into covered areas.

Existing roads were used wherever their locations crossed target areas. Soil samples were taken at 200' intervals from undisturbed soil beside these roads and on traverses from the roads. Sample locations were established from known points on the roads and recorded on forms supplied to the sampler. Sampling was done by W. Lewis, and experienced prospector and his helper.

In this way partial coverage was obtained in most of the target areas and detection of any sizeable anomalous zone was relatively certain. The method, it must be recognized, is not infallible. Possible errors occur in sampling and in locating the samples. Plotting from field notes may be incorrect. Approximately ten percent of determinations from one laboratory should be checked at a second laboratory. No checking has been done.

A total of some 800 samples were taken and determinations for copper and zinc made in the North Vancouver laboratory of Bio Metals Corporation Ltd. The method used was atomic flame photometer applied to the minus 80 mesh fraction.

MOUNT WASHINGTON COPPER

NOTES ON GEOCHEMICAL SURVEY

Results:

The results of determinations for copper and zinc were plotted from samplers' record on two separate plans at a scale of one inch equals one thousand feet. These plans can be referred to geological maps prepared by Noranda in June, 1960 (1" = 1000') and Cominco in August, 1963 (1" = 500').

Histograms representing graphically the range of copper and zinc values are attached. These serve in a rough way to establish the normal or background values for the area and to indicate whether any significant number of anomalous samples exist and their range.

The zinc determinations fall in the range of 20 to 160 parts per million (P.P.M.) with a very small number above this range. Plotted on the zinc map these higher samples do not indicate an area of higher than normal values and must be considered erratics.

The copper values make a more significant histogram. Values in the range of 20 - 220 P.P.M. would be classed as background or normal. Some extension to the range 220 - 280 is a "possibly anomalous" group. Some 20 samples above 280 P.P.M. tend to group significantly in two areas. On the copper map samples greater than 280 P.P.M. are coloured red, 220 - 280 in yellow.

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NOTES ON GEOCHEMICAL SURVEY

Assessment of results:

The use of soil geochemistry as a reconnaissance method in this type of topography, growth and climate is justified by the results. It reflects the slight difference in copper background between volcanics and intrusives and should detect any sizeable zone of anomalous metal.

Along McKay Creek for a mile below the lake a group of 40 samples are 30% in the range of 220 - 280 P.P.M. This is taken to mean a slightly higher background in the intrusive which underlies this section as compared to the background in volcanics. Three samples greater than 280 P.P.M. are considered erratics and not indicative of a zone of higher values.

A group of 71 samples covering approximately a mile of the headwaters of Murex Creek show background values. Four (4) consecutive anomalous samples (280 P.P.M.) at the north end of the traverse are plotted where the haulage road crosses Murex Creek. Geologically the 'No. 2 Fault' and the volcanic-intrusive contact cross the creek in approximately the same location. Several holes were drilled in this area by Cominco to test surface showings. Some follow-up work is needed to determine whether surface work and drilling have adequately explored the anomalous area suggested by geochemistry.

Some 6,000' S. 80° E. from the above, five (5) consecutive samples are anomalous. The location coincides roughly with a reported magnetic high and is mapped as andesite by Noranda. The Murex Creek intrusive probably lies west and north of this anomalous zone. Follow-up work in the form of an expanded and detailed soil survey is warranted here.

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NOTES ON GEOCHEMICAL SURVEY

Assessment of Results Cont'd:

In the area underlain by Murex intrusive lying along Murex Creek to the north-east the number of samples in the 220 - 280 P.P.M. range indicates a generally higher background. Within this area 5 samples 280 P.P.M. occur in erratic distribution. No anomalous zone is indicated by this sample group, but a detailed coverage by soil survey of the entire Murex Creek intrusive area should be considered.

A series of soil samples along the valley road by Wolfe Lake recorded only background values. This line crosses many small drainages from the easterly slope of Mount Washington, but these streams would have been more effectively sampled by using silt samples.

A group of samples plotted at 2000 N. - 22,000 E. was designed to test an area covering the intersection of two faults. Assuming the plotting is accurate, the survey does not cover the target and should possibly be repeated.

Located along the projection of No. 2 Fault at 14,000 S. 22,000 E. a group of 80 samples returned background values. The underlying rock is mapped as volcanic.

Summary:

The results of the survey indicate that the method employed is effective in this environment. The use of the many logging roads for sampling access and location control cuts the cost appreciably.

The two groups of anomalous samples in or close to the Murex Creek intrusive and No. 2 Fault require detailed follow-up work.

Determinations for molybdenum were not done on the current survey. The vein currently being mined carries some molybdenite. Future geochemical samples should be determined for molybdenum as well as copper.

Vancouver, B.C.
December 19, 1966.

J.S. Scott,
P. Eng.

	Claim Name	Record No.	Owner Company	Expiry Date
GEM	5	13790	Qualicum Mines Ltd.	May 25, '73
	6	13791	"	" "
	7	13792	"	" "
	8	13793	"	" "
	9	14423	"	Oct. 10, '73
	10	14424	"	" "
	12	14425	"	" "
	14	14426	"	" "
	16	14427	"	" "
	11	15181	"	Sept.12, '73
	13	15182	"	" "
	15	15183	"	" "
	17	13991	"	Aug, 6, '73
	19	13992	"	" "
KEN	1	13706	"	May 11, '73
	2	13707	"	" "
	3	13708	"	" "
	4	15022	"	" "
	5	13710	"	" "
	6	13711	"	" "
	7	13712	"	" "
	8	13713	"	" "
MUREX	9	14001	"	Aug. 7, '73
	11	14002	"	" "
	13	14003	"	" '78
	10	13331	"	July 5, '73
	12	13332	"	" "

	Claim Name	Record No.	Owner Company	Expiry Date
MUREX	14	13333	Qualicum Mines Ltd.	July 5, '78
PEARL	1	13962	"	Aug. 1, '73
	2	13963	"	" "
	3	13964	"	" "
	4	13965	"	" "
	5	13966	"	" "
	6	13967	"	" "
	7	13968	"	" "
	8	13969	"	" "
RONDO	1	19970	"	Aug. 1, '73
	2	19971	"	" "
	3	19972	"	" "
	4	19973	"	" "
	5	19974	"	" "
	6	19975	"	" "
	7	19976	"	" "
	8	19977	"	" "
EM	1	14707	"	June 15, '68
	2	14708	"	" "
	3	14709	"	" "
	4	14710	"	" "
	5	14711	"	" "
	6	14712	"	" "
	7	14713	"	" "
	8	14714	"	" "
	10	14716	"	" "
MAG	1	14717	"	" "

QUALICUM MINES LIMITED

Claim Name	Record No.	Owner Company	Expiry Date
CAM 1	14399	Qualicum Mines Ltd.	July 24, '73
2	14400	"	" "
3	14401	"	" "
4	14402	"	" "
5	14533	"	Sept.15, '73
6	14534	"	" "
7	14535	"	" "
8	14536	"	" "
CAMP 1	14537	"	" "
2	14538	"	" "
DOMINEER 2	12323	"	Aug. 31, '73
20	12325	"	" "
22	12327	"	" "
23	12328	"	" "
ENA 1	15122	"	Aug. 4, '78
2	15123	"	" '73
3	15124	"	" '72
4	15125	"	" "
5	15126	"	" "
6	15127	"	" "
7	15128	"	" "
8	15129	"	" "
GEM 1	13786	"	May 25, '73
2	13787	"	" "
3	13788	"	" "
4	13789	"	" "

	Claim Name	Record No.	Owner Company	Expiry Date
MAG	2	14718	Qualicum Mines Ltd.	June 15, '68
	3	14992	"	Nov. 23, '69
	4	14993	"	" "
ME	1	14980	"	" '66 Survey pending 4917/66
	2	14981	"	Nov. 23, '67
JACK	1	15944	"	Sept.7, '73
	2	15945	"	" "
	3	15946	"	" "
	4	15947	"	" "
	5	15948	"	" "
	6	15949	"	" "
	7	15950	"	" "
	8	15951	"	" "
	9	15952	"	" "
	10	15953	"	" "
	22	15965	"	" "
	24	15967	"	" "
	26	15969	"	" "
	28	15971	"	" "
	30	15973	"	" "
	33	15976	"	" "
	34	15977	"	" "
	35	15978	"	" "
	36	15979	"	" "
	37	15980	"	" "
	38	15981	"	" "

	Claim Name	Record No.	Owner Company	Expiry Date
JACK	39	15982	Qualicum Mines Ltd.	Sept. 7, '73
	40	15983	"	" "
G. M. B.	1	16042	"	Nov. 2, '68
	2	16043	"	" "
	3	16044	"	" "
	4	16045	"	" "
	5	16046	"	" "
	6	16047	"	" "
	7	16048	"	" "
	8	16049	"	" "
	9	16050	"	Nov. 2, '67
S. J. O.	1	16051	"	" '68
	2	16052	"	" "
	3	16053	"	" "
	4	16054	"	" "
	5	16055	"	" "
	6	16056	"	" "
	7	16057	"	" "
	8	16058	"	" "
	9	16059	"	" "
	10	16060	"	" "
	11	16061	"	" "
	12	16062	"	" "
S.J.O. Fr.		16063	"	" "
J. B. Fr.		16064	"	Nov. 2, '73
J.L.G. Fr.		16065	"	" '68
T.S.M. Fr.		16066	"	" "

Claim Name		Record No.	Owner Company	Expiry Date
CHUCK Fr.		16067	Qualicum Mines Ltd.	Nov. 2, '68
J. GG. Fr.		16068	"	" "
SS	1	16069	"	" 14,"
	2	16070	"	" "
	3	16071	"	" "
	4	16072	"	" "
	5	16073	"	" "
	6	16074	"	" "
	7	16075	"	" "
	8	16076	"	" "
	9	16077	"	" "
	10	16078	"	" "
	11	16079	"	" "
	12	16080	"	" "
	13	16081	"	" "
	15	16083	"	" "
MJ	1	16085	"	" "
	2	16086	"	" "
	3	16087	"	" '73
	4	16088	"	" "
	5	16089	"	" "
	6	16090	"	" "
	7	16091	"	" "
	8	16092	"	" "
	9	16093	"	" "
	10	16094	"	" "
	11	16095	"	" "

	Claim Name	Record No.	Owner Company	Expiry Date
MJ.	12	16096	Qualicum Mines Ltd.	Nov.14, '73
	13	16097	"	" "
	14	16098	"	" "
MJ. Fr.		11109	"	" "
KM. Fr.		11110	"	" "

SUMMARY OF TERMS OF AGREEMENT FORMING MT. WASHINGTON MILLING CO. LTD. AND LEASING GROUND TO THAT COMPANY

The area under lease to the Mt. Washington Milling Co. Ltd. is described as follows:-

Between north-south lines located 750 feet east and 2,000 feet west of the present portal of the adit on the property driven by Mt. Washington in 1962 and 1963, and east-west lines located 2,000 feet north of and 2,500 feet south of that portal, lying above the elevation of 4,000 feet above sea-level.

The first agreement signed March 5th, 1964 between Atlas Investments Ltd. and Mt. Washington Copper Co. Ltd. provided for certain obligations of both parties and also a split in the profits.

Two further contracts were signed whereby Cumberland Mining Co., a subsidiary of Atlas Investments, assumed responsibility and set up with Mr. Washington Copper Co. Ltd. the Mt. Washington Milling Co.

The terms of these three agreements were modified in May of 1966 and in brief the terms were:-

1. A payment of 2½ cents per lb. on all copper milled from the Company's ore that is in the Milling Company Concession as long as the operation continues. This payment comes ahead of operating expenses.
2. A payment of an additional 2 cents per lb. of copper until the sum of $164,216.26 has been paid to your Company by the Milling Co. This payment comes ahead of operating expenses.
3. After certain sums advanced to the Milling Co. by Nissho Canada Ltd. and Furukawa Mining Co. Ltd. an additional $15,000 shall be paid to your Company.
4. After the sums set out above are paid, the net profits of the Milling Co. are to be divided equally between Mt. Washington Copper Co. Ltd. and Cumberland. The 2½ cents per lb. of copper paid to your Company comes ahead of any calculation of profit.

Iron - Concentrated Ore - 3% of the shipping value thereof, The minimum royalty shall be twenty cents (20¢) per ton of concentrated ore.

Direct-Shipping ore - 5% of the shipping value thereof, The minimum royalty shall be thirty-five cents (35¢) per ton of direct-shipping ore.

Other Metals - 3% of net smelter returns which shall be the gross value of the minerals other than copper and iron recovered and paid for as shown on the smelter return statement for any specified lot or shipment of ore or concentrates less that proportion of smelter treatment costs and transportation costs from concentrator to smelter which such gross value of the minerals other than copper and iron bears to the total gross value of the recovered contents of ore or concentrates as shown on the smelter return statement, or if concentrates containing such metals are sold other than to a smelter, 3% of the selling price thereof less any transportation costs from concentrator borne by the Lessee.

Non-Metallic Minerals - as the Lessor and the Lessee may agree, and if they cannot agree the same shall be submitted to arbitration by three arbitrators, one to be appointed by the Lessor, one by the Lessee, and the two so appointed to appoint a third and such arbitration shall be subject to the Arbitration Act of the Province of British Columbia. The arbitrators shall settle the royalty on a basis comparable to the foregoing royalties. None of such minerals shall be removed from the said land or sold or otherwise disposed of by the Lessee until the Lessor and the Lessee have agreed to the royalty payable or until such royalty has been settled by arbitration, provided that if such minerals are contained in a concentrate containing predominantly a metal or metals, such concentrate may be shipped by the Lessee and the agreed or arbitrated royalty shall thereafter be paid in respect thereof immediately it has been agreed or settled. The minimum royalty per year is 50¢ per acre on approximately 7,490 acres.

SUMMARY OF TERMS OF AGREEMENT BETWEEN QUALICUM MINES AND CANADIAN PACIFIC OIL AND GAS LTD.

The lease is for a term of 50 years and under certain conditions may be extended for a further period of 2,555 consecutive days.

Royalties are based on grade of ore and the price of copper. The details are as follows:-

The Lessee shall, so long as this lease continues in force, pay to the Lessor for all ore mined from the said lands by the Lessee and shipped, royalty as follows:

Copper - $R = \frac{G-1}{10} + \frac{(P-20)(6G+7)}{300}$ for ore grading up to and including 3%

$R = \frac{3G-5}{20} + \frac{(P-20)(12G-11)}{300}$ for ore grading above 3%

Where:

R = royalty in cents per pound of copper sold.

P = gross price, in cents per pound, quoted by smelter before any deductions for treatment, refining and marketing costs, provided however that if such selling price is less than 20 cents, P shall be 20.

G = Grade of ore expressed as the percentage which the tonnage of copper paid for by the smelter bears to the tonnage of ore treated in concentrator to yeild such tonnage of copper, provided however that if such grade is less than 2%, G shall be 2. The quantity of copper paid for shall be established by smelter return statements and the tonnage of ore treated in the concentrator determined by weightometer or similar acceptable method.

The Lessee shall submit to the Lessor within 90 days following the expiration of each year of the term of this lease, a yearly progress report.

The Lessor shall furnish monthly a certified accounting statement showing total tonnage and average grade of ore mined and shipped and also the royalty due.

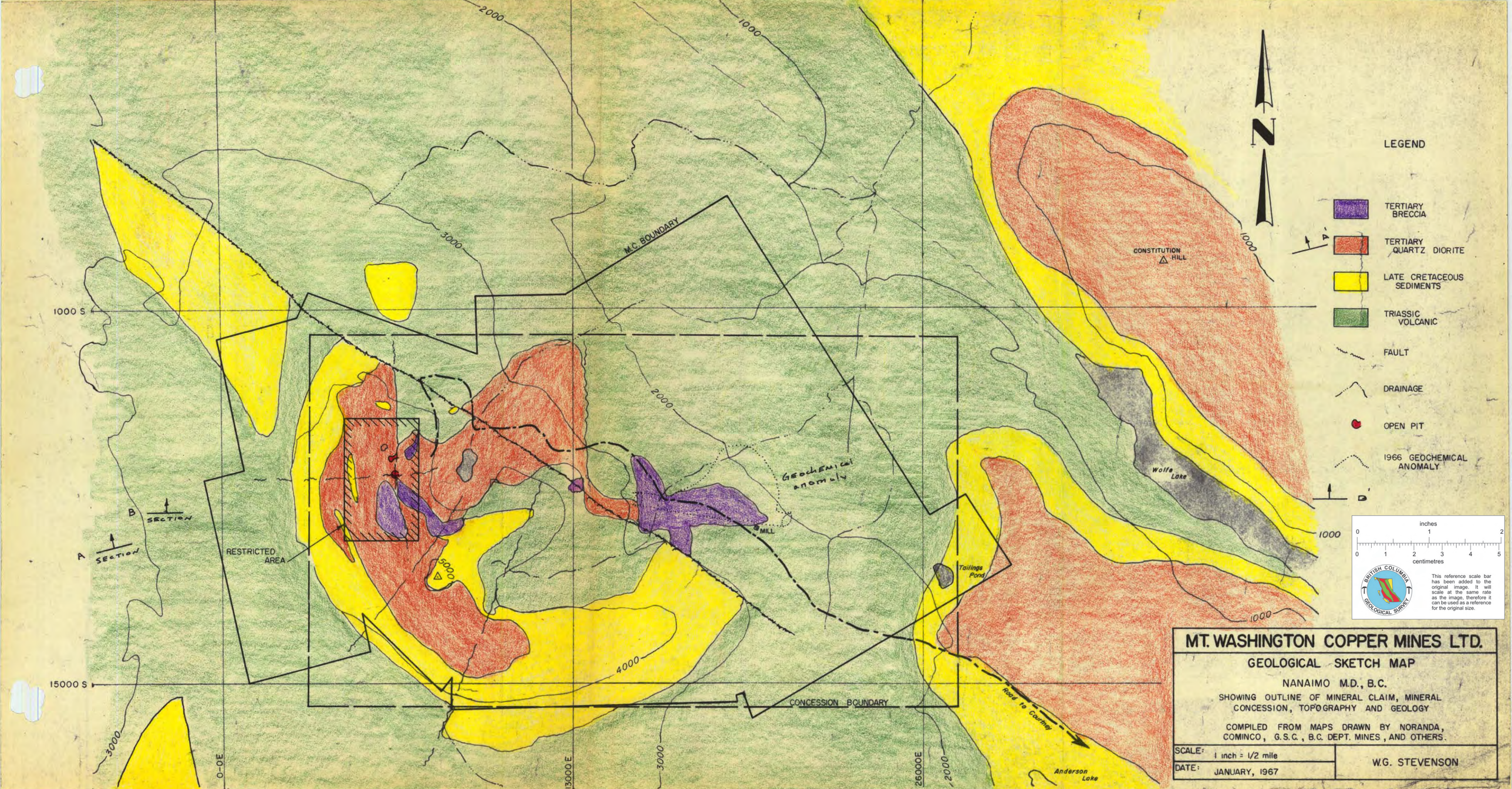
The Lessee shall perform each year assessment work equivalent to a minimum of $2.00 for each acre or fraction thereof.

There also are the usual provisions for miner-like work, insurance, determination of correct weights of ore, payment of all debts and taxes, access to reports, assignment and so forth. The Lessee may surrender at the end of any year any part or all of the said lands by giving written notice to the Lessor at least 90 days prior to the end of such year.

Any and all defaults must be remedied within a period of thirty days.

MAPS

Generalized Geological Map	Scale 1" = ½ mile
Cross Sections	Scale 1" = ½ mile
Assay Map	Scale 1" = 1000'
Reproduction and Enlargement of Geological Map prepared by Cominco (2)	Scale 1" = 400'
Geochemical Zinc Map	Scale 1" = 1000'
Geochemical Copper Map	Scale 1" = 1000'



MT. WASHINGTON COPPER MINES LTD.

GEOLOGICAL SKETCH MAP

NANAIMO M.D., B.C.

SHOWING OUTLINE OF MINERAL CLAIM, MINERAL CONCESSION, TOPOGRAPHY AND GEOLOGY

COMPILED FROM MAPS DRAWN BY NORANDA, COMINCO, G.S.C., B.C. DEPT. MINES, AND OTHERS.

SCALE: 1 inch = 1/2 mile	W.G. STEVENSON
DATE: JANUARY, 1967	

A

McKAY LAKE

A'

B

B'

WOLFE LAKE

inches
0 1
0 1 2
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

MT. WASHINGTON COPPER MINES LTD.

GEOLOGICAL SECTIONS

NANAIMO M.D. B.C.

to accompany

GEOLOGICAL SKETCH MAP

SHOWING OUTLINE OF MINERAL CLAIM, MINERAL CONCESSION, TOPOGRAPHY AND GEOLOGY, COMPILED FROM MAPS DRAWN BY NORANDA, COMINCO, G.S.C., B.C. DEPT. MINES, AND OTHERS.

SCALE: 1" = 1/2 MILE	JANUARY, 1967	W.G. STEVENSON

West Boundary

Mt. Washington Milling Co. Concession

MT. WASHINGTON

WASTE DUMP

PIT

McKAY LAKE

North Boundary

Joins Sheet 1

LEGEND

- ALTERED VOLCANICS
- WASHINGTON INTRUSIVE BRECCIA MURRAY & OTHERS
- INTRUSIVE
- SEDIMENTS
- VOLCANICS
- D.D.H.

inches 0 1 2 — centimetres 0 1 2 3 4 5

This reference scale bar should measure 5 cm on original maps. It will scale at the same rate as the original and can be used as a reference for the original size.

BRITISH COLUMBIA DEPARTMENT OF MINES AND PETROLEUM RESOURCES

MT. WASHINGTON COPPER CO. LTD.

GENERALIZED GEOLOGY

enlarged from map drawn by

CONSOLIDATED MINING AND SMELTING CO., OF CANADA LTD.

to a scale of 1" = 500'

21-8-1963

SCALE	CONTOUR INTERVAL	DATE	FOR	SHEET NO.
400' = 1"	25 FEET	JANUARY 1967	W.G. STEVENSON	2 OF 2

Johns Sheet 2

18,000E
20,000E
22,000E
24,000N
26,000N
28,000N
30,000N

TAILINGS POND

FAULT LINE

East Boundary

North Boundary

LEGEND

- ALTERED VOLCANICS
- WASHINGTON INTRUSIVE BRECCIA MURRAY & OTHERS
- INTRUSIVE
- SEDIMENTS
- VOLCANICS
- D.D.H.

inches 0 1 2
centimetres 0 1 2 3 4 5

This reference scale bar was measured on the original maps. It will scale at the same rate as the maps and may be used as a reference for the original size.

MT. WASHINGTON COPPER CO. LTD.

GENERALIZED GEOLOGY
enlarged from map drawn by
CONSOLIDATED MINING AND SMELTING CO., OF CANADA LTD.
to a scale of 1" = 500'
21-8-1963

SCALE	CONTOUR INTERVAL	DATE	FOR	SHEET NO
400 ft	25 FEET	JANUARY 1967	W.G. STEVENSON	1 OF

49238 - 150' 0.38 % Cu.

49245 - 10' 0.03 % Cu

49240 - 200' 0.12 % Cu.

49251 - 730' 0.05 % Cu.

49252 - 180' 0.05 % Cu.

49253 - 90' 0.09 % Cu.

49254 - 100' 0.09 % Cu.

49255 - 100' 0.10 % Cu

49235 - 125' 0.30 % Cu.

49227 - 1000' 0.31 % Cu.

49256 - 0.32 % Cu
49257 - 0.05 % Cu
49258 - 0.34 % Cu

49226 - 1000' 0.22 % Cu.

49228 - 1000' 0.21 % Cu.

0.29% Cu
49237 - 30'

49260 - 40' 0.14% Cu.

49259 - 60' 0.12% Cu.

49250 - 800' 0.15% Cu.

49262 - 70' 0.31% Cu.

49261 - 30' 0.50% Cu.

49239 - 260' 0.14 % Cu.

49243 - 50' 0.03 % Cu.

49264 - 500' 0.12 % Cu.

49265 - 500' 0.22 % Cu.

49266 - 500' 0.06 % Cu.

0.05 % Cu
49244 - 40'
0.04 % Cu

49229 - 20'
0.04 % Cu

49230 - 40' 0.04 % Cu.

49248 - 400' 0.04 % Cu.

49234 - 100' 0.12 % Cu.

49241 - 20' 0.07 % Cu.
49232 - 50' 0.19 % Cu
49233 - 50' 0.35 % Cu.

49231 - 150'
0.09 % Cu.

49236 - 1600'
0.09 % Cu.

@49246 - 4' 0.65 % Cu

49247 - 1000' 0.08% Cu.

@ 2501' - 8' 2.40 % Cu.

@ 2502' - 5' 8.85 % Cu.

@ 2503 - 5' 1.65 % Cu.

@ 2504 - 4' 0.06 % Cu.

@ 2505 - 2' 0.05 % Cu.

49249 -
49242 - 0.02% Cu.

5000 S

15000 S

6000 E

16000 E

26000 E

36000 E

inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original drawing. It is to scale at the same rate as the image, therefore it can be used as a reference for the original size.

MT. WASHINGTON COPPER MINES LTD.

NANAIMO M.P., B.C.

ASSAY PLAN

SCALE 1" = 1000'

NOVEMBER 1966 | W.G. STEVENSON

M A P S

For Geochemical Appendix

Zinc Scale 1" = 1000'
Copper Scale 1" = 1000'

MUREX AREA

5000 S

15000 S

6000 E

16000 E

26000 E

36000 E

N

inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar added by the B.C. Department of Mines is not to scale at the same ratio as the image, therefore it is only a reference for the original scale.

BRITISH COLUMBIA GEOLOGICAL SURVEY

MT. WASHINGTON COPPER MINES LTD.

NANAIMO M.P., B.C.

GEOCHEMICAL MAP

COPPER PPM.

SCALE 1" = 1000'

NOVEMBER 1966 | W.G. STEVENSON

5000 S

15000 S

6000 E

16000 E

26000 E

36000 E

inches
0 1 2
centimetres
0 1 2 3 4 5

BRITISH COLUMBIA GEOLOGICAL SURVEY

This reference scale bar has been added to the original image. It will not be visible on prints as the image, therefore it can be used as a reference for the original size.

MT. WASHINGTON COPPER MINES LTD.

NANAIMO M.D., B.C.

GEOCHEMICAL MAP

ZINC PPM

SCALE 1"= 1000'

NOVEMBER 1966 | W.G. STEVENSON