Portland Canal

820165

To: W. M. Sirola

From: J. C. Lund

Subject: Exploration Report - June 1 - 30th, 1970

Portland Canal Project

Anomaly Number 1:

During the period June 1st to June 6th, Scott Boyd, Werner Gruenwald and myself laid out two lines crosscutting anomaly #1. These lines are for proposed I.P. traverses to test the mag anomaly.

Three days were spent in Stewart waiting for the weather to clear up in order that we could reach the property. Three days were spent on the property cutting lines and generally prospecting. Snow at that time was about $2\frac{1}{2}$ to 3 feet deep where we set up camp at elevation 3700 feet. I would anticipate 2 to 3 weeks before any I.P. work can be done.

Ramsey Creek Project

Winkie Drilling:

The drill and crew were moved onto the Ramsey Creek property on June 13th. The camp was repaired and drilling on D.D.H. 70-1 started on June 14th. DDH 70-1 is located on Line 8+30N 2875E. Bearing is southwest; inclination -60°.

After penetrating 22 feet of overburden and burning out one clutch, the hole was steepened to -90°. One clutch and 3 casing shoes later we were forced to abandon this hole (DDH 70-1A) at 18 feet. The drill was then moved to L7+85N 3220E. This set up (DDH 70-2) is on bedrock. The hole is drilling at N70°E on a -45° inclination.

Footage drilled to date:

DDH 70-1 (-60° incl)	=	22'	overburden
DDH 70-1A(-90° incl)	=	18'	overburden
DDH 70-2 (-45° incl)	=	153'	lithic tuff
Total footage to date:		193'	

Rock in DDH 70-2 consists almost entirely of slightly silicified lithic tuff. Fractures and occasional quartz veins cutting the tuff carry

(signed)

John C. Lund.

JCL/lk

cc Ramsey Creek

TO: W. M. SIROLA

FROM: J. C. LUND

SUBJECT: PORTLAND CANAL PROJECT - EXPLORATION REPORT, Period Ending August 31st, 1969.

Poor weather conditions continued to hamper exploration this period. The month of August had a rainfall of over 20 inches. All crews were brought in by August 29th in preparation for closing camp for the season.

Party A (Wilf Christian and Cap Cornwell) located and staked 6 claims on a copper-bearing breccia about 3 miles south of the Bern claims. Chalcopyrite occurs as masses between fragments in a quartz-carbonate breccia across a maximum width of 30 feet and estimated length of 100 to 150 feet. The Breccia occurs in a north-south fault that cuts a small intensely altered and pyritized intrusive rock and pinches in both directions from its maximum 30-foot width. Further work is needed to determine the extent and importance of the mineralization.

Drill core found on the outcrop from some early work showed a 45-foot intersection of about 1% copper. The location and hence inclination of this drill hole could not be ascertained.

Following staking of the above claims, Party A was put into the Kinsbuck area to check on anomalous silt sample #A-69-285 (500 ppm Cu). No apparent cause for the high silt could be found and the streams were resampled. Results of resampling failed to

reproduce the original 500 ppm.

Sampling on the west side of Kinsbuck Lake has turned up a marked anomalous zone. The samples from three small streams flowing into Kinsbuck Lake gave the following results for copper: 2150, 2000, and 650 ppm. These anomalous samples come from an area underlain by volcanic rocks that are cut by numerous diorite dykes. Wilf has also found a small occurrence here of what we believe to be complex Sb-As-Pb minerals. I expect to have a definite identification on these minerals at a later date. (Accompanying map shows silt sites and assay results.) This sampling was done on their last campsite, consequently, results were not back from the lab in time for follow-up work before the season closed. This needs to be checked out.

Party B continued to prospect the Donahue Creek area. This particular area has many small copper occurrences in quartz veins. The largest occurrence is a 2-foot wide quartz vein with fairly massive chalcopyrite occurring on the face of a 300 to 400-foot vertical cliff near its top. An E.M. line was run along the top of the cliff with negative results. This is a prolific area for copper however the occurrences found seem to be confined to quartz veins. An examination of the aeromag data shows nothing.

Party C worked the South Kshwan River area with virtually negative results. A little copper was found and Pb-Zn float in a stream draining north from Mt. Evindson. The sides of the valley

are near vertical and difficult to scale, consequently the source of float was not found. The small amount of float does not suggest extensive mineralization. Silts from this area show slightly anomalous Cu and Pb but values are not high enough to be important.

I spent 2 days on the Bern claims mapping geology. Karl Huska took silt samples from the toe of the snowfield on the upper part of the claims. A sketch of geology and geochem results is enclosed.

The Bern claims cover a small, very altered intrusion that has invaded volcanic rocks of the Hazelton Group. These are mainly coarse, purple agglomerates and lithic tuffs with some lavas. The intrusion is leucocratic rock about 1000 feet in diameter now altered beyond recognition to a greenish pyritized mass. Areas of mineralization consisting mainly of massive coarse pyrite and in some places chalcopyrite, occur where the intrusive rock is highly fractured or brecciated, and along easterly faults zones of extensive pyrite veining are scattered throughout the intrusion. Amount of copper seen is small and considerable more work including detailed geological mapping is needed to see if there is a drill target. Geophysics would not be helpful - an I.P. would respond to the disseminated pyrite and the type of mineralization expected would not necessarily be picked up by the E.M. Diamond drilling would be the most effective exploration tool when and if a target can be found.

Analysis of the geochem for all the areas covered will be completed this fall and those silts which should be checked will

be scheduled for follow-up work next season.

(signed)

John C. Lund.

JCL/lk

TO: W. M. SIROLA

FROM: J. C. LUND

SUBJECT: PORTLAND CANAL PROJECT - Exploration Report, Period Ending August 15th, 1969.

The past two weeks have been most exasperating. Since August 4th we have had about 14 inches of rain; low cloud and fog have hung to the mountains and above 4,000 feet the mountains are draped in a fresh white blanket of snow. We have had two requests from field crews: Party A (Wilf & Cap) in Todd Creek asked when Christmas dinner would arrive and Party B requests dogteam and snow shoes to complete their traverses. At the 3,500-foot elevation in Todd Creek where Party A are, they report as of Aug. 17th 3" to 4" of fresh snow and as Wilf says, even the goats are leaving. Needless to say, under these conditions we have been unable to move crews when and where desired. The forecast calls for continued rain.

Party A continued to work the Bitter Creek area with little success. Rich-looking Pb float was found but the source could not be located. Narrow shears associated with northerly striking dykes cutting argillites carry galena and chalcopyrite and in some cases, tetrahedrite. Maximum width on massive mineralization is 6 inches. Quartz-healed breccia zones up to 8 feet wide have been found but carry only sparse mineralization.

Party A was moved briefly to Strohn Creek near Meziadin Lake to examine a reported quartz monzonite plug. Thick tangled tag

alder and devils club combined with heavy rain prevented moving far from their camp. The plug was not located. On one stream a positive test for Cu was traced as far as topography permitted but the source not located. The country is precipitous and with the low fog hanging close to slopes, it is difficult to traverse. From here this crew was moved to Todd Creek to check out reported intrusions. They have located small pods and lenses of quartz-barite carrying a little galena and chalcopyrite but these are not extensive. Two more days will be spent here then they will be moved back to Kitsault to check on geochem anomalies near Kinsbuck Lake.

Party B completed 6 lines over Anomaly #1 with the JEM 1800-3600 cps unit when the instrument ceased to work. The one cable was shorting and batteries were dead. The cable has been fixed and new batteries ordered. Small disturbances show up on the EM profiles with a maximum range to any profile of -3 to +6 over a distance of 400 feet. (Profiles are attached to this report). A profile was run over the Eden deposit (250,000 tons) and the Bonanza deposit - these were compared with those on Anomaly #1. The maximum range over these deposits were -14 to +18 and +9 to 8 respectively. If these can be used as a measure of the importance of the readings on Anomaly #1, then the latter would seem insignificant. If we consider depth of burial we can see from the experimental profiles that as depth increases, the profile becomes more and more negative. The profile over Anomaly #1 is mostly positive. In any case, when weather permits, we will rerun Line 22

and possibly 30 at 200-foot spacing as before but readings at 50 feet.

This crew did further work on Donahue Creek. They located narrow discontinuous lenses of chalcopyrite mineralization disseminated in schistose volcanic rocks associated with small shear zones. These are not extensive - the occurrence is similar to that on Mt. Clashmore. A gossan on the east side of the south branch of Donahue carried fairly massive chalcopyrite over a length of 40 feet and reported width of 18 inches. The occurrence is on a cliff face and not easily reached. Scott feels a rope and good weather is necessary to examine it properly. We have the rope but not the weather. The ridge has been fogged in and I have not examined it. Float heavily mineralized with chalcopyrite was found further up Donahue Creek. This also requires good weather to reach the cliffs from which it is believed to have fallen. These two situations will be examined at the first opportunity. I should add that there is no deflection on the aeromag tape in this area.

Scott & Doug were put in to the west Bonanza Creek area to check out a series of copper silt anomalies. They found discontinuous scattered areas of chalcopyrite mineralization in the schistose volcanic rocks. They had not completed the examination as of the 15th.

Party C completed the Sutton River area. The only mineralization found had been staked on May of this year. It consisted of disseminated chalcopyrite with some galena in argillaceous sedimentary rocks. It is exposed on a cliff 500 feet above the valley floor.

Mineralization does not appear extensive.

They continued to explore the south Georgia River area. Some disseminated chalcopyrite in black argillite occurs adjacent to the contact with a granodiorite intrusion. This has not been found to be extensive. They are now working south of the Kshwan River east of Hastings Arm.

On August 4th, I staked 9 claims on a large gossan area on Upper Todd Creek. From a brief examination of the claims before poor weather chased us out, it appears that an intensely altered and brecciated levcocratic intrusion has invaded Hazelton Group volcanic rocks. These consist of bedded tuffs, agglomerate, and lavas. There does not appear to be an extensive development of hornfels as one might expect. In fact, the agglomerates are fairly unaltered.

Mineralization is mainly massive to coarse crystalline pyrite in areas of criss-crossing veins trending westerly and northwesterly and as disseminated pyrite cubes throughout the intrusion. Chalcopyrite is present but not abundant. A massive vein of chalcopyrite 2 inches wide by several feet long occurs in one place, in another outcrop it may be with pyrite. The streams draining the occurrence have been silted and samples sent in. Outcrop is almost continuous but the upper or westerly part runs under a glacier. It would be an easy matter to put one or two winkie drill holes down to see what the copper content might be - certainly on the surface it will be low. Samples have been taken for assay for Cu, Ag, Au.

Stan Maurer arrived on the 5th of August to complete the aeromag survey southeast of B.C. Moly. At that time the Prince Rupert weather report was for clear weather and a high pressure area moving northward was to keep it that way. After 6 days of rain and a short course to me in operating the mag gear, Stan left for Vancouver. It does not look like this survey will get done.

GEOCHEMISTRY:

On this last batch of silts we have been having some problems with the field kits, particularly noticeable with Party B where there is considerable widespread copper in the rocks throughout the area. To better illustrate the problem, I have listed below the samples, nature of the test, and lab results.

Sample No.	Field Test	Lab Test
B69-232	Pink (+)	57 ppm
231	Green (-)	133 ppm
230	"	170 ppm
248	Pink (+)	69 ppm
227	"	61 ppm
222	Green (-)	105 ppm
225	"	122 ppm
214	"	100 ppm
244	Pink (+)	70 ppm

pH of streams is in the 5 - 7 range. It appears that in the range 50 to 70 ppm the field test is sensitive; above this there is no reaction.

PLANS FOR NEXT PERIOD:

1) Check out geochemical anomalies.

2) Examine the copper showing on Donahue Creek.

3) Continue exploration south of the Kshwan River and the South Portland Canal area.

4) Weather permitting, complete the EM survey on Anomaly #1.

5) Close camp at the end of the month. Arrangements have been made to ship out the gear on Sept. 2nd.

6) All the crew except Wilf and Cap will leave here Sept. 1st.

7) Complete a map on the Todd Creek if weather permits.

(signed)

John C. Lund.

JCL/lk

TO: W. M. SIROLA

FROM: J. C. LUND

SUBJECT: PORTLAND CANAL PROJECT - Exploration Report, Period Ending July 31st, 1969.

Exploration continued this period with little success. Party B located scattered chalcopyrite along a north-northwesterly shear zone on Mt. Clashmore. This, however, was confined to a 2 to 4-foot wide zone possibly 100 feet long. The mineralization died out both to the northwest and southeast.

I examined a gossan area on Todd Creek that carried a little chalcopyrite. More work is anticipated here. Party C located chalcopyrite and galena over an area on the Sutton River but found it was already held as of May, 1969.

Party A located high grade Ag-Pb float on a tributary of Roosevelt Creek but could not locate the source. The boulder was 12" x 18" in size.

Weather during this period remained unsettled. I understand low clouds, fog, with periods of rain and an occasional sunny day is typical of the weather in this region. It certainly remained true to form this period.

Party A completed exploration east of the Kitsault River. Wilf has produced an excellent geological map of the area but did not find any mineralization. The area is underlain by Hazelton group volcanic and underlying sedimentary rocks. These appear to be intruded

by a basic rock consisting essentially of augite phenocrysts in a dark green groundmass. It has been called an augite porphyrite in older government reports. On July 25th this crew was moved to Bitter and Roosevelt Creeks to check the western slopes of the Cambria Range. The country is extremely rugged in Upper Bitter Creek and Wilf and Cap were unable to prospect much of the area.

On a tributary of Roosevelt Creek they found widely spaced quartz veins that carry chalcopyrite. These are narrow and widely spaced - they are of no economic interest.

Party B continues to explore the South Portland Canal area. On the western slopes of Mt. Clashmore there is scattered occurrences of disseminated chalcopyrite in a pale green chloritic volcanic rock. On the northwest side there is exposed disseminated and blebs of chalcopyrite in a narrow fault zone. The exposure is about 100 feet long and possibly 2 feet wide. The area was carefully examined on the surface and aeromagnetometer tapes checked. There is no indication that a bigger deposit may occur here. Some lead and copper float was found in the south branch of Donahue Creek. Further work is anticipated here.

Three long EM traverses were made on a reconnaissance basis. There was some variation but no distinct crossovers. On July 27th, Party B was moved to Anomaly #1 to do an EM survey with the JEM 1800 - 3600 machine. This work has yet to be completed.

Party C checked a magnetic anomaly between the Sutton and

East Georgia River. It was caused by a strongly magnetic dyke rock. On the Sutton River they located an occurrence of chalcopyrite and galena but found it was already staked, - staking date, May, 1969. They checked out an area south of the Georgia River with no success. Exploration on this northern area is almost completed.

I located a fairly extensive pyritic zone on the west side of Upper Todd Creek that carries a little chalcopyrite. The rock hosting the pyrite looks like an altered, and in places brecciated intrusion invading purple volcanic agglomerates tuffs and flows. The criss-crossing veins of pyrite are up to 6" across and are generally coarsely crystalline. The disseminated pyrite is in cubic form. Further work will be done and the area staked next period.

PLANS FOR NEXT PERIOD:

1) Much of this coming period will be spent checking silt anomalies and cleaning up unexplored corners in the south and north Portland Canal areas.
2) Party A will be m oved to the Todd Creek area to check on reported intrusions.
3) The geochem anomaly indicated by silts #B69 - to B69- occurs on the southeast slopes of Mt. Courtney. This area will be checked thoroughly.
4) Weather permitting, an aeromag survey will be flown southeast of B.C. Moly.

(signed)

John C. Lund.

JCL/lk

TO: W.M.SIROLA

FROM: J.C.LUND

SUBJECT: PORTLAND CANAL PROJECT - Exploration Report, Period Ending July 15th, 1969.

Work during this period was hindered by adverse weather. Low cloud, fog, wind and rain prevailed during the interval July 6 to July 15 and it was not possible to reach crews to move them when and where wanted.

On July 5th the helicopter was grounded when the supercharger started making a peculiar noise. The machine was not operative again until July 11th. Apparently Trans West had sent a new blower via C.P. Air express AOG to ensure that it would get delivery priority. However, it was held by C.P.Air for three days before being shipped. It would seem that it doesn't matter whether you have an AOG stamp or not C.P.A. will bump it as they please.

Vancouver Island Helicopter was brought in to move crews on July 7th, when it was apparent that our own machine would not be fixed within the next two days and also the weather had cleared sufficiently to move crews.

Party A completed work in the White and Flat River areas with no encouragement and were moved south into the Jade Lake area. They are continuing to work southward from Jade Lake following the volcanic-sedimentary contact.From his work Wilf has found two sedimentary units separated by a volcanic unit. The volcanic rocks consist of flaws and agglomerates conformably and in places grading

into the underlying volcanic sediments and sedimentary rocks. Nick Carter of the B.C. Dept. of Mines feels that there is a distinct difference between the upper Bowser sediments and the lower sedimentary unit which he feels is part of the Hazelton Group. Whether this has any significance economically may be questionable. The silver and copper belts in the Kitsault River area would be in Hazelton rocks, the Moly deposits to the south would be in the Bowser rocks. Party A have found nothing during this period.

Party B continues to work the Bonanza River drainage. They also checked out an aeromag anomoly N. of Carney Lake east of the Hidden Creek Mine (Anomoly #4). Anomoly #4 was caused by a fine grained diorite plug cutting argillaceous sediments. The diorite is a clean rock with no sulphides associated with it. It did however carry disseminated magnetite that attracted the magnet rather strongly.

Four E.M. traverses are to be run over parts of the Bonanza basin on a reconnaissance basis designed to cross a major N-South fault near a small dioritic intrusion. Nothing of interest has been found by Party B.

Party C further explored the Brown Mtn molybdenum showing near its base but found nothing further. Because of low cloud we were unable to move them into the Sutton River to check for a possible NE extension to the mineralization. This will be done next period. They examined the East Georgia River with no success.

I made a reconnaissance trip along the eastern margin of the mountains between Bell Moly and Megiadrin Lake. The topography flattens somewhat but there would be only a small area that could be

flown with straight lines. Any aeromag work would have to be on contour. The rivers are fast flowing and generally fairly deep. Much of the ground is heavily wooded. Gravel bars or swamps would provide the only landing spots for setting crews in for follow up work.

I made a second reconnaissance trip south to the Mass River. During this trip I looked at a small quartz diorite plug intruding Bowser sediments. The plug occurs on the south east side of Hoan Creek at about the 4,500 ft.elevation. It is cut by north easterly quartz veins that carries rosettes of molybdenite. The quartz veins are fairly widely spaced and grade is low. The intruded rock is hornfelsed and in places is criss-crossed by quartz veins, some of which carry molybdenite. This showing was staked and dropped by Bell Molybdenum. No work has been done on it.

Plans for next Period:

1) Continue exploration on the three fronts.

2) Fly an areomagnetic survey over the area between B.C. Moly and the Mass River to the south east. This should be done either this coming period or first part of the following period.

(signed)

John C. Lund.

JCL/ejh

TO: W. M. SIROLA

FROM: J. C. LUND

SUBJECT: Portland Canal Project - Exploration Report, Period Ending June 30th, 1969.

Work continued in three areas: a) the north Kitsault, b) south Portland Canal, and c) the north Portland Canal. Weather during the period was mixed. Low cloud and early morning mists hindered free movement by the helicopter and crews occasionally had to wait for a day to be moved. About 6 man-days were lost because of rain.

Party A continues to work the north Kitsault River section. Work has been concentrated along sedimentary - volcanic contacts. The area is underlain by andesitic tuffs and lavas that are overlain by argillaceous sediments. The sediments include some sandstones and a basal fossiliferous calcareous unit. Near the White River glacier, the sediments are intensely folded with numerous small faults dissplacing the units along the axial plane of some of these tight folds. Cutting both sediments and volcanics are light coloured fine granular acidic dykes and sills. The sills in part follow bedding in the folded sediments. No mineralization has been found associated with these dykes. Party A examined a small quartz diorite plug near the White River that has some MoS_2 on fractures. This occurrence is at present held by Kennco. It is sparsely mineralized with pyrite and MoS_2. Nothing of interest has been found by Party A.

Party B checked out an aeromag anomaly on the southwest branch of Bonanza Creek and one on the northwest branch of Bonanza Creek (Anomaly #2 and Anomaly #3). Number 2 anomaly appears to be caused by magnetite in a fine-grained phase of a large granodiorite mass. It occurs near the contact with volcanic rocks at the intersection of a northerly and a northwesterly fault. The magnetite occurs with epidote in fine veinlets cutting the finer-grained intrusion. One veinlet up to 1/4" wide of massive magnetite was seen. There is no evidence of any copper mineral. The intrusion is cut by westerly striking, steeply dipping andesite dykes. Snow in the creek prevented a good examination of the valley floor.

Anomaly #3 occurs on the south slopes of Mt. Clashmore northeast of Bonanza Lake. This area marks the intersection of the Bonanza Creek fault with a prominent north-south fault. An intrusion that forms Mt. Clarkmore cuts both sedimentary rocks and chloritic schists. Small amounts of chalcopyrite with pyrite and/or pyrrhotite have been found in several places. More detailed examination, including some E.M. traverses will be done here. The anomaly is believed caused by a highly magnetic rock picked up in the anomalous zone. There does not appear to be any relation between the anomaly and the small copper occurrences so far located. This party also located a small diorite plug, carrying small rosettes of molybdenite and disseminated pyrite. Main alteration is sericite. Mineralization is sparse. Party B will continue to work this area.

Party C located a quartz monzonite intrusion carrying rosettes and coatings of MoS_2 on widely spaced fractures. The fractures average possibly one to three fractures every 6 feet; not all fractures are mineralized. The MoS_2 occurs on two sets of fractures along a major northerly break and along a 100-foot wide fracture zone running northeast. Mineralization is sparse but this party will continue to examine the area carefully. The occurrence is at the toe of a glacier on the south slope of Brown Mountain, North of Ashwood Lake. I spent two days on the showing.

Aeromag Survey:

Correlation of aeromag tapes with known geology is continuing. In the south region, the following has been found:

1) At least one mag high south of Donahue Creek correlates with an area underlain by serpintine and serpintinized rock that is strongly magnetic.
2) The granitic rocks tend to have a high magnetic background and produce an irregular profile on the tapes.
3) Schistose volcanic rocks produce a low even magnetic profile.
4) Volcanic rocks produce a smooth profile with a slightly higher background than the schists.
5) Chloritic schists are similar to volcanic rocks.
6) Sedimentary rocks in the Anyox area have a background about 75 gammas higher than volcanic rocks.

The above observations are based on the geology provided by the field crew, helicopter traverses and the geology as mapped by the Government. As we gain further information from the field party, the picture may change.

The north area is difficult to analyze because of the highly irregular profiles produced by much of the survey.

Plans for next Period:

1) Party A will be moved to the area south of Kshwan River.
2) Party B will continue to examine the Bonanza Creek area.
3) Party C will continue to work the Sutton River and East Georgia River area.

(signed)

John C. Lund.

JCL/lk

TO: W. M. SIROLA

FROM: J. C. LUND

SUBJECT: Exploration Report - Portland Canal Project, Period Ending June 15th, 1969.

Despite low lying fog and rain, all crews were put into the field June 1st. The weather cleared on June 4th and has remained hot and sunny.

Party A (Wilf Christian and Cap Cornwell) were put into the east branch of the Kshwan River north east of Hastings Arm. Much snow still remains above the 2500-foot elevation, hence prospecting is limited to the lower valleys. Topography here is extremely rugged in part and this combined with fast running streams and heavy underbrush makes exploration difficult. Party A is at present at the toe of the Kitsault Glacier. They have been in what is considered good geology but have found little other than a trace of chalcopyrite. Rocks encountered are andesitic volcanic rocks and argillaceous sediments that have been cut by diorite and quartz diorite. There is a number of quartz, and quartz-calcite veins but other than a little pyrite, these are barren. As snow conditions permit, they will work south along the sedimentary volcanic contact west of the Kitsault River.

Party B (Scott Boyd and Doug Fraser) have been working the South Canal area, along Donahue Creek. Traversing is rough because of underbrush, steep cliffs and fast running creeks but work has been progressing satisfactorily. Rocks encountered to date include granitic,

andesitic volcanic rocks, chloritic diorite and diorite dykes (?). Some copper occurs along occasional shear zone but nothing of significance has been found.

Party C is working the North Canal area starting with the Georgia River valley. Some pyrrhotite with pyrite and chalcopyrite have been found in quartz veins but these can be considered hardly more than traces of chalcopyrite. Rocks here are mainly volcanic with a quartz monzonite dyke-like intrusions cutting them.

Both Party B and C will be checking aeromag anomalies next period.

The aeromag survey went very well. Fred Young, the pilot, did an excellent job of keeping or maintaining constant altitude. The weather was perfect. A complete study of the aeromag tapes hasn't been completed. There are at least two interesting anomalies in the south region. Party B ran a ground magcrometer survey over one to define it and we ran three E.M. lines across the anomaly. There was very little variation in the E.M. readings. Several soil samples were collected across the area. Some copper was found in a slightly schistose rock but otherwise rock examined was barren. Very little magnetic rock was found.

A line across the Anyox deposit from east to west and one from north to south was flown. These show up the Anyox deposit very distinctly.

Stan Maurer and the mag gear complete with boom, was shipped directly from the camp here to Fred's camp by a Trans Provincial Air

Services Cessna 180. Considering the possible tie-up that could evolve by shipping part of the gear by truck and the rest by air, I felt it best to have him fly direct to Little Salmon Lake. Stan left here June 12th.

PLANS FOR NEXT PERIOD:

1) Keep Party A in the Kitsault River area prospecting contact areas between the volcanic and sedimentary rocks.
2) Continue prospecting and checking anomalies in both the south and north canal areas.

(signed)

John C. Lund.

JCL/lk

TO: W. M. SIROLA

FROM: J. C. LUND

SUBJECT: Exploration Report - Portland Canal Project, Period Ending May 31st, 1969.

The crew left Vancouver via C.P.A. for Stewart on May 26th at 7:30 A.M. and arrived in Stewart at about 10:30 A.M. The helicopter arrived in Stewart on the 24th of May.

Movement of fuel and camp gear went as scheduled. There was a delay in transferring our gear from the Northland ship to the barge in Rupert. This may result in an increased charge on the barge - I won't know until we get North Arm Transportation invoice. Northland informed Sid Jacks, the North Arm Transportation manager in Rupert, that the barge could put alongside the ship at 1:30 P.M. to transfer the gear. It was not until between 7:15 P.M. and 7:45 P.M. that the transfer was made. We drank a lot of coffee that afternoon.

The barge arrived at Fords Cove May 27th at high tide but the tide was only a 16-foot tide and the barging dock at Fords Cove could not be used. All the gear had to be slung to shore by helicopter. Weather was good during the unloading and the move didn't take long.

May 28th to 30th was spent building camp. Rain, low clouds and wind had moved in but we were able to put the crews out on June 1st.

(continued - Page 2)

Arrangements have been made with Granduc Mines Ltd. geologist Eric Ostensoe to use their radio as an outlet to Stewart. They have a 2768 frequency and a daily standby time and are willing to pass on any messages.

(signed)

John C. Lund.

JCL/lk