## **APRIL 1968**

## Kyuquot Project

The published description of the alteration area on Easy Peninsula along the west side of Kashutl Inlet and the successful exploration by Utah Construction and Mining Co., 35 miles further north have combined to arouse considerable interest in the Kyuquot area. In mid-April, an exploration crew with helicopter support, working for Can Fer Mines Ltd. moved into the area.

The analytical results of the geochemical samples from the Kyuquot project indicated some anomalous streams. Because of the increasing activity, we decided to stake some claims for further investigation when weather conditions improve and we have our summer crew. Sixty-four claims have been staked and recorded.

The zone of solfataric (?) alteration (alunite, pyrophyllite, sericite) is slightly anomalous in molybdenum. One stream on the adjacent mainland is anomalous in copper; however this is probably caused by the pyritized and altered rock debris which fills the creek bed. While briefly investigating the copper anomaly and the surrounding country, I discovered minor disseminated copper in some volcanic rocks. Although nothing startling has been discovered yet, the above encouragement dictated that we stake the altered zone and adjacent mainland.

We have also staked a molybdenum anomaly on the south shore of Kyuquot Sound and have collected additional follow-up silt samples in the vicinity of other small copper anomalies.

After reviewing the photo-interpretative work of Mr. Tate Blanchet of Chapman, Woods & Griswold for the Endako area and the Highland Valley, we ordered special photographs of the Kyuquot area and requested Mr. Blanchet to spend up to a maximum of three days in an initial appraisal of these photographs for possible target areas.

## Alberni Project

The objective of the Alberni project was to search for stratabound sulphide deposits in the Permian Sicker Group of Vancouver Island. Two such deposits are known -- the deposit belonging to Western Mines which occurs in the upper part of the acidic lawas and pyroclastic rocks of the Sicker Group and the Tyee deposit, north of Duncan, which occurs in the immediately overlying cherty tuffs.

The Sicker Group consists of a series of volcanic rocks, grading from basic near the bottom to acidic near the top. These are overlain by relatively thinly-bedded cherty tuffs, then by a series of clastic

sediments and then by limestone. The Sicker Group has been mapped along the backbone of Vancouver Island in two places -- (1), north and southeast of Cowichan Lake, and (2), within Strathcona Park. Fossils of Permian age have also been found near Vernon Lake, 30 miles north of the Strathcona Park occurrence.

The land situation for this project has turned into a problem. The northern part of Strathcona Park (north of Western Mines Limited) is a nature conservatory and claim staking and prospecting are not allowed. Most of the favourable ground south of Western Mines within the Park is covered by claims which include some suitable mineralized areas. Exploration activity on these claim blocks is negligible and some of the claims could be acquired.

The largest and southernmost area of Sicker volcanics is within the E & N Land Grant and the mineral rights are controlled by the Land Grant or have been transferred to Canadian Pacific Oil & Gas. Exploration permits can be obtained for exploration over much of this Land Grant. However all of the Sicker volcanic area north of the 49th parallel was included in a permit taken out by Gunnex Mines Limited and much of the suitable ground has had sufficient exploration work to keep the permit in good standing until 1970.

The area between the 49th parallel on the north and Cowichan Lake on the south appeared to be very suitable for our initial exploration. It is an area where there is a transition from lavas and coarse pyroclastics on the southwest to thinly-bedded cherty tuffs on the northeast. Several manganese showings have been mapped within this transition area. Further to the northeast, this stratigraphic section may be repeated by folding or faulting.

Initially this block of ground was supposed to be available for exploration and the writer requested an exploration permit on it. Also after reviewing some unpublished geological maps belonging to C.P.O.G. the writer requested a subsidiary block of ground (Seymour Range Block) to the south of Cowichan Lake. The Seymour Range ground is not underlain by Sicker volcanics but appears to be geologically suitable for magnetite-copper deposits or for copper-molybdenum deposits.

The Esquimalt & Nanaimo Railway Land Tax Act posed a problem in that upon alienation of any lands from the Land Grant the purchaser was required to pay a tax of 25% of the assessed value. Our lawyer, Mr. Spencer, was asked to investigate this problem and expressed the opinion that for land which has already been alienated (e.g. to a logging company) it is unlikely that the tax would be imposed a second time when the mineral rights are alienated. In the case of ground not previously alienated, there is nothing to indicate that the Government would not impose the tax upon alienation of the mineral rights. No test case has come before the courts. However there are prior cases in which ore has been produced from mining leases on unalienated ground (e.g. Mount Washington Copper) and in these cases the Government has not imposed a tax.

After all this investigation and considerable delay I visited the office of the E & N Land Grant in Victoria and learned that they did not wish to have C.P.O.G. issue exploration permits on the unalienated ground to the north and to the south of Cowichan Lake. I have been informed that Pacific Logging in conjunction with the E & N Railway have a case in court concerning the taxation on ground transferred to Pacific Logging. Moreover, in respect to the unalienated ground north of Cowichan Lake, there is a third party who has an option to purchase this ground. Thus the E & N Land Grant officials will not at this time consent to an exploration permit on unalienated ground.

In regard to the Cowichan Lake block of ground, the creek valleys have been alienated and intervening ridges have not been alienated, thus there are alternating alienated and unalienated north-south strips of ground and our favourable transition zone cuts right across this pattern. After learning these facts I suggested to C.P.O.G. that we acquire only the Seymour Range Block and that we omit the Cowichan Lake Block from our present exploration permit. This limited program would enable us to become acquainted with the area so that we could more wisely choose ground for further exploration.

When making this later suggestion I believed that unalienated ground occurred only in four small blocks on the northwest end of the Seymour Range Block. However subsequently I received a sketch from C.P.O.G. which showed three more small unalienated areas within the Seymour Range Block. Mr. Rushton of C.P.O.G. has informed me of this fact and he also informed me that C.P.O.G. are proceeding with the agreement if we still wish to carry on.

The geology of the Seymour Range Block is shown on the accompanying sketch. Karmutsen volcanics overlain by Quatsino limestone form the dominant rock types. On Vancouver Island, the contact between these two formations is supposed to be a good locus for copper mineralization and for copper-magnetite mineralization. However, Dr. J. Muller of the Geological Survey suspects that a thin band (about 100 feet thick) of limestone occurs near the top of the Karmutsen volcanics and that this band may be the important horizon for mineralization (e.g. Texada Island). Some of the smaller areas of limestone on the accompanying sketch could be this thin limestone horizon within the Karmutsen.

The irregular shape of the central intrusive body relative to the topography indicates a sill. According to Dr. Muller this would be a Tertiary intrusive and some of the stocks that are associated with such sills on Vancouver Island carry copper-molybdenum mineralization.

Thus two exploration bets exist for the Seymour Range Block and presumably also immediately to the southwest of the Land Grant where geologic mapping is very sketchy (reconnaissance survey in 1912).

The above conclusions about working within the Land Grant have again been changed. On April 9, 1968, Mr. Spencer wrote to Mr. Bryon, Deputy Minister of Finance, inquiring about the possibility of imposition of tax under the E & N Railway Belt Land Tax Act and in his letter referred to ground both alienated and unalienated to logging companies. He has just received the following reply:

"Thank you for your letter of April 9th regarding the Esquimalt & Nanaimo Railway Belt Land Tax Act and Coranex Exploration Ltd.

"Although the points you set out are appreciated, the Department expects the tax provided under the above Act on any alienation of the land, whether for timber or minerals."

In view of the numerous legal problems, I recommend that:

- (1) We should not proceed with exploration within the Land Grant.
- (2) We could determine a stratigraphic section of the Sicker Group north of Cowichan Lake to help us in some work outside of the Land Grant.
- (3) We should consider the area outside the Land Grant and adjacent to the Seymour Range Block for some geochemical exploration if it can be fitted into our 1968 program.

## Rossland Project

A two-man crew started the stream-sampling program in the vicinity of Rossland at the beginning of May.

J. R. Woodcock

May 7, 1968