EXPLORATION REPORT
ASSESSMENT REPORT
WX CLAIM GROUP

October 17, 1974
M. Steven Travis

PERIOD OF WORK
June 17, 1974 to July 5, 1974

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of $2,400.00.

Resident Geologist of
Resident Mining Commissioner

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

Commissioner of Yukon Territory
ADMINISTRATOR OF THE YUKON TERRITORY
GEOLOGICAL AND GEOCHEMICAL REPORT ON THE
WX MINERAL CLAIM GROUP SITUATE AT

64° 39' North Latitude
133° 08' West Longitude

in the Mayo Mining District of the Yukon Territory

Located claims on which assessment credits are requested:

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Work was done on the WX 1-24 Mineral Claims June 17, 1974 to July 5, 1974 inclusive.

Report by: M. S. Travis, B.Sc.
/ under the supervision of D.W. Heddle, P.Eng.
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# Attachments

Affidavit

Exhibit "A": Statement of Expenditures

Statement of Qualifications

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INTRODUCTION

Interest in the Bonnet Plume River area was initiated as a result of zinc discoveries by Barrier Reef Resources near the confluence of Goz Creek with the Bonnet Plume River in the summer of 1973. During January and February of 1974 Cominco staked the WX 1 - 24 mineral claims slightly north of Corn Creek, a large tributary of the Bonnet Plume River.

This report is based upon field studies made during the period June 17, 1974 to July 5, 1974 by Cominco personnel. This was initial work in this area by Cominco and was aimed at locating and investigating sulphide mineral occurrences.

LOCATION AND ACCESS

Physiographically, the WX Group lies within the northern Selwyn Mountains of the Yukon Territory, approximately 120 miles northeast of the town of Mayo. It lies 10 miles southeast of Pinguicula Lake and 1 mile north of Corn Creek.

The property lies within the Mayo Mining District, with coordinates of 64° 39' north latitude and 133° 08' west longitude and is located on NTS Sheet 106 C/11.

The property is topographically, one of moderate relief surrounded by an area of high relief. The valley bottoms are between 3400 and 3800 feet above sea level with the highest peak on the property at 5000 feet above sea level.

Access to the property is by float-equipped fixed wing aircraft to Pinguicula Lake and then by helicopter to the property.

SUMMARY

Work on the WX Group began on June 17, 1974, and ended on July 5, 1974. The claims were mapped in detail on a scale of 1" = 1000 feet. A soil geochemical survey was done over part of the property. A total of approximately 271 soil samples were collected and one 5 foot chip sample was collected for assay.

Geological mapping showed that the WX Group is underlain by three separate lithologic units which are separated by two disconformities. The rock units are oldest in the north and decrease continuously in age toward the south. All rock units dip south to southeasterly.

The oldest strata exposed on the WX Group are quartzite, slate and argillite of the Rapitan Group. These rocks are exposed in the northwest corner of the WX Group and are characterized by their typical rusty weathering due to their high iron content. This unit is Upper Proterozoic in age.

Disconformably overlying the Rapitan Group strata is a stratigraphic sequence with a thickness of approximately 700 feet and consists of dolomite, shaly dolomite and silty calcareous shale belonging to the Upper Proterozoic Keele Formation. These strata vary in coarseness of crystallinity and are stromatolitic in part.

Overlying the Keele Formation is a very coarse grained lithic arenite sandstone and a large sequence of grey and brown calcareous shale. These rock types are exposed on the southern third of the property and are of unknown age.

The geological mapping also indicated the presence of a small north-
striking normal fault. The fault cuts the Keele Formation strata and overlying units but could not be traced into the Rapitan Group strata due to lack of outcrop.

Minor galena and sphalerite occurrences were located on the WX Group. Only one occurrence was large enough to warrant sampling. A 5-foot chip sample from this one location returned an assay of Pb - 0.07%; Zn - 1.08%; Ag - 0.06 oz/ton.

The geochemical survey outlined a number of coincident lead and zinc anomalies associated with the galena-sphalerite occurrences.

GEOLGY

General Statement

The WX Group occupies a part of an area which is underlain predominantly by Upper Proterozoic rocks. There is an increasing predominance of Cambrian to Devonian rock to the south and west of the property due to the down-faulting of these younger units.

The Proterozoic rocks consist of a wide variety of clastic sediments ranging from very coarse boulder conglomerate to siltite, siltstone and shale. Compositionally, the clastic sequences are argillaceous and occasionally calcareous and frequently have a high iron content. Quartzite is commonly interbedded with the clastic units in this sequence.

Large stratigraphic thicknesses of dolomite and, less frequently, limestone are found in Upper Proterozoic strata in the Corn Creek area. These units generally weather white to dark grey and are readily distinguished from the rusty weathering clastic units.

The Cambrian and younger rocks in the area are composed of black shale and argillite as well as light grey to black limestone. The Ordovician and Devonian limestone units are frequently fossiliferous indicating an extensive biothermal environment at that time.

Structurally, the Corn Creek area is comprised of generally easterly dipping beds which are cut by two major fault sets -- one striking east-west and another striking southeast. The major folds in the area are very gentle open folds which trend easterly to southeasterly.

LOCAL GEOLGY

The oldest and least exposed rocks on the WX Group belong to the Upper Proterozoic (Hadrynian) Rapitan Group. The outcrops of this unit are rare and are limited to the stream channel along the northern edge of the property and small boulder piles on the north slope of the east-west ridge that divides the property.

Only the upper 100 to 150 feet of the Rapitan Group is exposed on the WX Group and the contact with the overlying Keele Formation is covered but is interpreted to be disconformable because of the overall change from clastic lithology to carbonate lithology.

The Rapitan Group consists of black argillite and shale which are very fissile and have a well developed slaty cleavage. These rocks typically weather black or dark brown with dark brown to maroon iron stain on the surface.

Quartzite, also part of the Rapitan Group, overlies the shale and argillite. The quartzite is white to light brown in colour and is spotted with spherical patches of limonite 1/16 to 1/4 inch in width. The quartzite is also found with fine laminations of grey quartzite and orange limonite. This rock has a good fissility along the plane of lamination and weathers rusty yellow in colour.

Most of the property is underlain by Upper Proterozoic (Hadrynian) Keele Formation dolomite. This sequence averages about 700 feet in thickness and thickens slightly to the east. The dolomite is mostly fine to medium crystalline but some of the individual beds in this
formation are predominantly coarsely crystalline. The coarsely crystalline areas are frequently vuggy, with vug size ranging from 1/8 to 6 inches in width with very coarse euhedral crystals of quartz with dolospar or calcite filling these cavities.

One finely crystalline bed in the formation contains numerous stromatolites, some reaching 1 foot in width and 2 feet in height. This bed is the only fossiliferous unit on the property.

Black finely laminated shaly dolomite divides the formation roughly in half. This rock type is easily recognized by patches of platy bright orange weathering talus. This unit rarely appears in outcrop. Also found in the dolomite sequence is a thin bed of brown-grey shale which is horizontally discontinuous and is probably lensoid. This bed consists of interlayered shales of varying fissilities. Numerous pyrite nodules up to 1/2 inch in width are found in this unit.

Large local zones of brecciation are common in the dolomite sequence, more particularly in the well laminated beds. Brecciation is typically of a solution collapse form but larger zones may also be structurally initiated.

The dolomite sequence generally weathers light to medium grey in colour and is massive or blocky in appearance.

The youngest rocks exposed on the WX Group are limonite and silica cemented very coarse grained lithic arenite and dark grey to black argillaceous and calcareous shale. The exposure of these rocks is very limited, being restricted to a fault escarpment and small cliff faces on the heavily forested south slope of the ridge which divides the property. The calcareous shale is also exposed just outside the southwest corner of the property perimeter. Here it is very fissile, dark grey in colour and locally brecciated or intensely veined with calcite stringers. This shale is frequently very sandy with small detrital grains of silica in the fine grained matrix.

STRUCTURAL GEOLOGY

The rocks under the WX Group have undergone a relatively uncomplicated structural history. The bedding of all units dips about 30 degrees to the south-southeast. The property appears to be on the south limb of a large open anticline which plunges about 10 degrees to the south-east.

There are a number of normal and reverse faults transecting the region and these generally fall into one of two sets—one striking east-west and another striking southeast. A small normal fault, striking approximately north-south, cuts across the Keele Formation strata and younger strata on the WX Group. This fault is covered by vegetation where it should intersect the Rapitan Group strata and therefore its presence is only assumed in these lower units. The fault has undergone right lateral strike slip movement as well as dip slip movement. Only very minor tight folding was observed in some of the shales. The dolomite units deformed brittly and any structural deformation has resulted in brecciation of the dolomite units.

MINERALIZATION

Only minor galena and sphalerite mineralization was located on the property. This mineralization was not widespread and appeared to be concentrated near the small fault on the property. The mineralization occurred in vugs and small fractures only in the Keele Formation dolomite and was not restricted to any one dolomite bed. One chip sample taken from the dolomite assayed Pb-.07%; Zn-1.08%; Ag-.06 oz/ton over a 5 foot stratigraphic section.

Pyrite was the only other sulphide mineralization observed on the WX Group. It forms irregular, rounded nodules in one shale unit.
and was found as minor local disseminations in the dolomite.

**GEOCHEMISTRY**

A soil geochemical survey was done over the eastern end of the UX Group. A baseline 6000 feet long was flagged on an azimuth of 180 degrees. Crosslines were turned off the baseline at right angles at 400 foot intervals and soil samples were collected at intervals of 200 feet along the crosslines. A total of approximately 271 samples was collected on this grid.

The geochemical survey outlined a number of coincident lead and zinc anomalies over the dolomitic units.

**Statistical Analysis**

**Lead**

The background values for lead are calculated to be those values less that 184 ppm and threshold values are between 184 and 270 ppm. Anomalous values are those values between 270 ppm and 356 ppm and very anomalous values are calculated to be greater than 356 ppm. Two very anomalous zones were clearly outlined. A number of smaller anomalous zones were also outlined. The highest value within the anomalies was 1950 ppm lead.

**Zinc**

The background values for zinc are calculated to be those values less than 445 ppm and threshold values are between 445 and 649 ppm. Anomalous values are those between 649 and 853 ppm and very anomalous values are calculated to be greater than 853 ppm.

A number of scattered very anomalous zones were outlined as well as anomalous zones. The largest of the anomalies is approximately 2000 feet long and 500 feet wide. Most of the very anomalous zinc values overlap the very anomalous lead zones. The highest value within the anomalous area was 6200 ppm zinc.

**CONCLUSIONS**

The 1974 work was unsuccessful in locating economical mineralization; geological mapping and prospecting located only minor sulphide mineralization. The chip sampled location produced only low grade mineralization over 5 feet. The geochemical survey failed to outline any anomalous zones of significant interest.

Report by: Steve Travis, B.Sc.

Endorsed by: D.W. Heddle, P.Eng.
Chief Geologist

Manager, Exploration
Western District
IN THE MATTER OF THE
YUKON QUARTZ MINING ACT
AND
IN THE MATTER OF A GEOLOGICAL AND GEOCHEMICAL SURVEY
CARRIED OUT ON MINERAL CLAIMS WX 1-24
Located in the Mayo Mining District of the
Yukon Territory
More Particularly, NTS 106 C/11

AFFIDAVIT

I, STEVEN TRAVIS OF THE DISTRICT OF NORTH VANCOUVER IN THE PROVINCE OF BRITISH COLUMBIA, GEOLOGIST, MAKE OATH AND SAY:

1. THAT I AM EMPLOYED TEMPORARILY AS A GEOLOGIST BY COMINCO LTD. AND, AS SUCH, HAVE A PERSONAL KNOWLEDGE OF THE FACTS TO WHICH I HEREAFTER DEPOSE;

2. THAT ANNEXED HERETO AND MARKED AS EXHIBIT "A" TO THIS MY AFFIDAVIT IS A TRUE COPY OF EXPENDITURES ON A GEOLOGICAL AND GEOCHEMICAL SURVEY CARRIED OUT ON MINERAL CLAIMS WX 1-24;


Sworn Before Me at the City of Vancouver in the Province of British Columbia this day of October, 1974.

A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

M. STEVEN TRAVIS
EXHIBIT "A"

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

WX GROUP OF MINERAL CLAIMS

Situate at

66° 39' North Latitude
133° 08' West Longitude

N.T.S. 106 C/11

Salaries: S.B. Butrenchuk (1 day) $50.00
M.S. Travis (14 days) 468.00
G. H. Popp (14 days) 392.00
S. Leung (7 days) 223.00
G. Bloy (7 days) 196.00

Transportation: Helicopter 884.50

Camp Costs: 100.00

Analyses: Lead and Zinc 474.25
TOTAL: $2,787.75

Signed: M. S. Travis

THIS IS EXHIBIT "A" TO THE STATUTORY DECLARATION OF EXPENDITURES RELATING TO THE GEOLOGICAL AND GEOCHEMICAL SURVEY DECLARED BEFORE ME ON THE 24th DAY OF OCTOBER, 1974, A.D.

A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA
COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

STATEMENT OF QUALIFICATIONS

I, Steven Travis with business address at 2200-200 Granville Square, Vancouver 2, British Columbia, do hereby certify that I have supervised the field work and have assessed and interpreted the data resulting from this geological and geochemical survey on the WX mineral claims.

I also certify that:

1. I am a graduate of the University of British Columbia, B. Sc. Majors Geology,

2. I have engaged in mineral exploration since graduation.

Respectfully submitted: ____________________________

M. Steven Travis

Vancouver, B.C.

Steve Travis was responsible for supervising the geological and geochemical survey described herein. Mr. Travis received his B. Sc. degree in Majors Geology from the University of British Columbia in 1974. He has worked for Cominco Ltd. for three summer field seasons and is presently employed temporarily by Cominco Ltd. I consider him a competent geologist.

Signed by: ____________________________

W. T. Irvine, P.Eng.
Manager
Western District Exploration