

GEOLOGICAL REPORT

ON

TRANS COLUMBIA EXPLORATIONS LTD. PROPERTIES,

CASINO AREA, YUKON TERRITORY

BY

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JULY 29th, 1970

VANCOUVER, B.C.

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INTRODUCTION

Trans Columbia Explorations Ltd. holds various parcels of ground in the Casino Area, Yukon Territory, Coppermine, Northwest Territories, and in McIntosh Lake Region, Saskatchewan. In addition, interests are held in a number of oil leases in the Browning, Carnduff, Buffalo Head and Innes Oil Fields in southeast Saskatchewan.

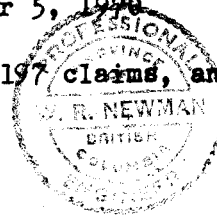
Most of these properties were described in the writer's report, dated September 10th, 1969.

The claims in the Casino Area will be the only ones discussed in this report.

List of Claims

| <u>Claim Name</u> | <u>Registered Number</u> | <u>Anniversary Date</u> | <u>Interest</u> |
|-------------------|--------------------------|-------------------------|-----------------|
| 50 { New 7-22 | Y 35952 - Y 35967 | August 1, 1970 | 50% |
| New 39-54 | Y 35984 - Y 35999 | August 1, 1970 | 50% |
| New 71-88 | Y 36016 - Y 36033 | August 1, 1970 | 50% |
| - New 5-6 | Y 35950 - Y 35951 | August 1, 1970 | 50% |
| - New 103-128 | Y 36048 - Y 36071 | August 1, 1970 | 50% |
| - Saul 1-8 | Y 38687 - Y 38644 | September 22, 1970 | 50% |
| - New 129-150 | Y 36074 - Y 36095 | August 1, 1970 | 100% |
| - Aztec 1-151 | Y 37004 - Y 37154 | September 5, 1970 | 100% |
| - Squaw 1-12 ✓ | Y 36980 - Y 36991 | September 5, 1970 | 100% |
| - Tlingits 1-12 ✓ | Y 36992 - Y 37003 | September 5, 1970 | 100% |

These total 283 claims with a 100% interest in 197 claims, and a 50% interest in 86 claims, by the Company.



Location and Accessibility

The claims lie within a range of 2 to 5 miles from the Casino air strip, which is capable of handling planes up to the size of D.C. 3's. Charter plane service is available from Great Northern Airways and Tintina Airways in Whitehorse. A number of helicopters are available for rental at the Casino air strip. A winter road traverses across the western claim group, which could without too much difficulty, be converted to a road suitable for 4-wheel drive vehicles.

The Casino area is 6 miles south of the Yukon river, 65 miles west of Carmacks, the possible road junction with the road to Whitehorse. Whitehorse lies 190 miles to the southeast of Casino.

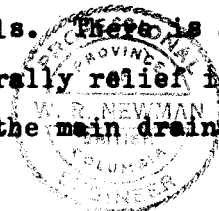
HISTORY

The Casino area has been explored since 1911 for placer gold, tungsten and silver-lead veins. Geochemical and magnetic surveys in 1968, outlined an area of interest on Patton Hill, which was followed by a drilling program in May 1969. A porphyry copper deposit with some molybdenum was discovered, with an inferred tonnage reserve estimate of 1.164 billion tons with a value of \$4.05 per ton, reported on December 19, 1970. An intensive drilling and exploration program is continuing during 1970 on the property.

TOPOGRAPHY

The claims are located in the Yukon Interior Plateau, in an area of rounded unglaciated topography, characterized by slopes covered with moss, peaty soil and bunch grass. Small spruce stands and buck brush are found in the creek valleys.

Ridges and summits of hills are often crowned by castellated outcrops. Talus flank the bare crests of the hills. There is a maximum 2,500 foot difference in relief, but generally relief is seldom more than 1,500 feet. The Yukon river is the main drainage system of the numerous creeks in the area.



GEOLOGY

The region lies on the eastern flank of the Coast Range intrusives. There was no glaciation in the area during the Pleistocene. The main intrusive body is the Klotassin granodiorite, containing quartz and muscovite, which in turn had been intruded by a younger quartz-monzonite porphyry of light green coloration.

The porphyry is considered to be similar to porphyry bodies of the southwestern United States, with mineralization, alteration and fracturing typical of porphyry copper deposits. Breccia pipes have been reported in the area.

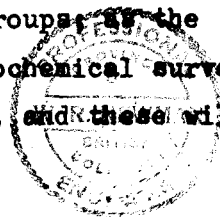
MINERALIZATION

The absence of erosion due to glaciation has created unique conditions for enrichment of mineralization, similar to conditions in the famous Porphyry Copper Belt of the United States. On the Casino property, the typical succession of a leached cap zone of about 150 to 250 feet in thickness, is underlain by a zone of supergene enrichment, with chalcocite 100 to 250 feet in thickness, finally passing into the protore zone of primary chalcopyrite, molybdenite and pyrite, the latter zone of as yet undetermined thickness.

Hydrothermal alteration, sericitization, kaolinization, with limonite capping, all characteristic of porphyry copper deposits have been reported.

CLAIM GROUPS

The claims will be discussed in two separate groups. The New 7-22, New 39-54, and New 71-88 claims, had a geochemical survey completed on them during September and October 1969, and these will be grouped as the Canadian Creek Group.



A geochemical survey is now underway on the remaining 225 claims, but it will be some time before the chemical analyses are completed, the work compiled and conclusions and recommendations made on the Western Group.

1. Canadian Creek Group

Canadian Creek cuts transversely across to the northeast of the 50 claim group, which lies along the northern boundary of the Casino property.

The soil sampling project was completed on October 7, 1969 by the firm of Archer, Cathro and Associates of Whitehorse.

Geology

Except for the eastern edge of the property, the claims are underlain by medium-grained hornblende-muscovite granodiorite of the Klotassin Batholith. The granodiorite is medium to coarse-grained, greyish in colour, and of massive appearance. The eastern edge of the property is underlain by metasediments of early Paleozoic age of the "Yukon Group".

Geochemistry

Soil samples were taken at 400 foot intervals on lines established by pace and compass traverses between picket points on surveyed base lines. Soil samples were taken from the "B" horizon where possible, but in talus areas the "C" horizon often would be the only one collected.

Samples were dried, screened and analysed for copper and molybdenum by the standard hot acid extraction technique and analyses were obtained in parts per million. No wide distribution of geochemical values exceeding 100 p.p.m. copper and 15 p.p.m. molybdenum were revealed in the course of the survey.

A number of isolated assays in the 100 p.p.m. range were found along Base Line A, and a trenching program in the vicinity of these higher concentrations of copper will be carried out at some future date, when the results of the complete field program will be available for review and study.

2. Western Group

A geochemical survey by Geo-X Surveys of Vancouver, is now in progress on the remaining 225 claims and should be completed shortly.

The topography is typical of the area, with small spruce trees and buck brush abundant on some slopes and valleys. Overburden and moss cover is also somewhat more widespread. When outcrop and talus are found the rock is usually a relatively coarse-grained hornblende muscovite granite. Some quartz mineralization has been found on the claims. Of particular interest is the occurrence in float of quartz porphyry or monzonite of greyish-green colorations, which contains considerable pyrite mineralization. The porphyry float is found mainly in the northeast corner of the claim group.

The occurrence of porphyry is of prime importance in evaluating the potential of the claims in this area. Sulphide mineralization including copper and molybdenum is associated with the porphyry and the Casino ore-body found in such a porphyry. Trenching will be necessary to determine if economic mineralization in the porphyry is present and if the float is derived from nearby bedrock.

It will be necessary to await the completion of the geochemical survey and the compilation and plotting of the geochemical analyses before any firm exploration program can be planned and recommended.

Respectfully submitted,


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Vancouver, B.C.

July 29th, 1970