GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.,

GEOLOGICAL AND GEOCHEMICAL EVALUATION OF THE SLATS CLAIMS YUKON TERRITORY

134 degrees, 27 minutes, West Longitude
65 degrees 02 minutes North Latitude

July to December 1975.

Mayo Mining Division
N.T.S. 106-E-1

B.D. Farion, P. Geol.
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This report has been examined by the
Geological Exploration Unit and is recom-
mended for approval subject to be consider-
ed as representing work in the amount of
2,700/-

W.D. Sinclair
Acting Deputy Geologist or
Resident mining Engineer

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

B.R. Baxter
Supervising Mining Recorder

Revised by Chief of Yukon Territory

RECEIVED
JUL 19 1976
MINING
INSPECTORS OFFICE
WHITEHORSE, Y.T.
A. SUMMARY

1. Following the recognition of environments favorable to the formation of stratabound lead-zinc deposits, Great Plains conceived of and operated a geochemical reconnaissance program in the Bonnet Plume area of Yukon Territory. The Slats claims, one of several groups staked during the 1975 exploration program will be the subject of this report.

2. The field crew assembled to complete assessment work on the claim group moved to the base camp at Margaret Lake by May 23rd, 1975.

Personnel included:

Bill Farion               Party Chief
Barry Edmonson           Student Geologist
Colin Winter             Geologist
Janet Helton             Student Geologist
Romulo Santos            Student Geologist
John Van der Lee         Geological Assistant
Nigel Lumsden            Geological Assistant
Janet Etzkorn            Cook
Mike Hofuis              Helicopter pilot
Paul Koovisk             Apprentice engineer.

Transwest Helicopters (1965) Ltd., of Burnaby, B.C., supplied a Hughes 500 C helicopter while Trans North Turbo Air supplied fixed wing support from Mayo. Expediting services were provided by Stirling Expediting Services, Mayo and assaying was performed by Barringer Research, Whitehorse.
B. INTRODUCTION

1. Location

The claims are located on Slats Creek (N.T.S. 106-E-I), 7 miles from the mouth of Slats Creek, where it enters the Bonnet Plume River, 112 miles northeast of Mayo, Yukon, in the Mayo Mining District.

2. Property

The property consists of 18 contiguous mineral claims.

<table>
<thead>
<tr>
<th>Claims</th>
<th>Grant Numbers</th>
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<tbody>
<tr>
<td>SLATS 1-18</td>
<td>Y97408 - Y97425</td>
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</table>

3. Field Methods

The area was mapped by using National Air Photo Library 9" x 9" airphotographs for traverse control. Structural geology was in part interpreted from the airphotos by using stereo-pairs and a mirror stereoscope. Pocket altimeters were used for elevation control.

The zinc spot test, an organic chemical which turns red in contact with the weathering products of zinc sulphides, was used as an aid to mapping. A cold extractable test for heavy metals was made on each stream sediment sample taken. Silt and rock samples (JV 5-6-13-1 and BF 5-6-14-1/7) were submitted to Barringer Research for analysis on the 25 element emission spectrometer. Other samples were analyzed on atomic absorption equipment by Barringer.

4. Geography

The claims are situated on the north flank of a rugged resistant mountain ridge. Vegetation consists of alpine shrubs and grasses.

C. GEOLOGY

1. Lithology

"Grit Unit" - The unit consists fine grained to conglomeratic interbedded metasediments. The conglomerates are primarily composed of pink clasts (granule to cobble size) with dark grey calcareous fragments in the more conglomeratic sections.
The matrix and fine-grained beds are fine-grained to silt size, indurate and have the appearance of a volcanic rock due to metamorphism.

Unit 2
Argillites - The unit consists of light grey-olive green-black, fissile to bedded (1/4"-1"), chloritic, graphitic argillites.

Unit 3
Phyllites. The unit consists of medium grey-green, chloritic, recessive, foliated phyllites with a high sheen.

2. Structure

Two major faults disecting the area can be interpreted from the airphotos. A normal fault cutting claims 1 and 2, trending north and several minor faults trending 065 degrees are visible. The "Grit" unit underlies the argillite. Beds dip to the northwest.

3. Mineralization

 Specularite and hematite are prevalent in the area. In places the iron mineralization is strataform. Associated with the faults trending 065 degrees are pods of specularite and hematite.

 Malachite and chalcopyrite-bornite were found on the claims and on adjacent ridges. The larger samples of copper mineralization were found as float and could not be traced back to source. Several of these were found on the Slats claims.

D. CONCLUSIONS

The area was staked on speculation when the Archer and Cathro crews were found to be staking a large group of claims. According to rumors, the Archer and Cathro crews were staking a uranium anomaly. However no anomalous uranium values turned up on the 25 element analyses.

E. RECOMMENDATIONS

The assessment work done to date should be filed. Further developments on the adjacent claims would decide whether further work should be done. If a program is carried out in the area, then a traverse with a scintolometer should be carried out.