GEOLoGICAL REPORT

on the GARY claims,
located about 15 miles SSW of Macmillan Pass
on the North Canol Road.
Claim sheet 105-0-1, 63°04'N 130°13'W.

by

Clyde L. Smith, Ph.D., P.Eng.
June 8, 9, 10, 11 & 30, 1975.

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Fig 1. Location Sketch
Fig 2. Geological sketch of part of GARY claims
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 $2,100.00.

[Signature]

Resident Geologist of
Resident Mining Engineer

Considered as representation work under Section 56 (4) Yukon Quartz Mining Act.

[Signature]

Supervising Mining Recorder

[Signature]

Commissioner of Yukon Territory

Office of the Supervising Mining Recorder

SEP 20 1975
WHITEHORSE
Yukon Territory
I. INTRODUCTION

In June of 1975 Oglivie Joint Venture carried out geological, geochemical and geophysical (gravity) work on the GARY claims, located about 15 miles SSW of Macmillan Pass, on the North Canol Road (Fig 1). This report deals with the results of the geological work, separate reports being submitted on the geochemical and geophysical surveys.

The GARY claims were staked in 1974 to cover the extension of bedded barite that outcrops on the MOOSE claims and that has similarities to the barite at the TOM Pb-Zn-Ag deposit some 7 miles to the NNE. Interest in the GARY property, which has little outcrop, was enhanced when some soil samples (1974 survey) were found to have anomalous zinc contents (to 1600 ppm). The 1975 work was intended to more accurately define the anomalous zones by geochemical sampling and a gravity survey on a cut grid.

II. LIST OF CLAIMS

<table>
<thead>
<tr>
<th>Claim Name</th>
<th>Holder</th>
<th>Recording Date</th>
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<tbody>
<tr>
<td>GARY 1-3</td>
<td>C. McDaniel</td>
<td>Aug. 21-23, 1974</td>
</tr>
<tr>
<td>&quot; 5-8</td>
<td>C. McDaniel</td>
<td>&quot;</td>
</tr>
<tr>
<td>&quot; 9-11</td>
<td>R. Wigen</td>
<td>&quot;</td>
</tr>
<tr>
<td>&quot; 13-15</td>
<td>R. Wigen</td>
<td>&quot;</td>
</tr>
<tr>
<td>&quot; 17-24</td>
<td>T. Pham</td>
<td>&quot;</td>
</tr>
</tbody>
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III. GENERAL GEOLOGY

Regional geology of the Macmillan Pass area is shown on the Niddery Lake sheet (open file map 205) of the Geological Survey of Canada. The stratigraphic sequence in the general vicinity of the GARY claims is as listed below:
**Fig 2. Geological Sketch of Part of Moose and Gary Claims**

- **A**: Shale (Rock Ruler?)
- **B**: Banded Barite, 10' to 100', Banded, Barite in Places Some Interbeds of Nephelic, Sulfur, Barite
- **C**: "Wob-Brooked" Member (2'-6" Argillite Bands)
- **D**: Micaceous Silicified (Orange Spots)
- **E**: Outline Horn Group
- **F**: Outline Gray Group
- **G**: Geophysical and Gravity Grid
- **H**: Outline North Shore River
- **I**: Orientation North North West
- **J**: Alkali Drain at South Alaska River
- **K**: Clear Areas on Air Photo A1235S-441

Sketch Section of Structure Along A-A' (Not to Same Scale)

Lake
Devonian and Mississippian (?)

"Unit 4": Brown-weathering siltstone, often cross-bedded.

"Unit 3": Black carbonaceous shale, laminated, massive, siliceous or argillaceous in places. Barite in lower part both bedded and as spots. Host to mineralisation at TOM deposit.

"Unit 2": Resistant, craggy-outcropping conglomerate. Cherty, quartzitic and argillaceous clasts to 6". Some interbedded sandstone.

"Unit 1": Rust brown-weathering argillite characteristically with ½ to 1 inch alternating light and dark grey bands.

Ordovician - Silurian

Road River Formation: Silver-weathering black graptolitic shales. Grey limestone, tan siliceous dolomite.

Stocks of Cretaceous granitic rock intrude and hornfels these sediments and modify structures.

Bedded barite is exposed both as natural outcrops and by trenching on the MOOSE claims, reaching approximately 100' maximum thickness, and presumably continues southward onto the GARY claims. No lead or zinc mineralisation has yet been found in this barite (although fine pyrite is present) but in other respects, such as the finely laminated appearance, the barite resembles bedded barite that contains galena and sphalerite at the TOM deposit near Macmillan Pass. Initially it was thought that the barite horizon at the MOOSE and GARY claims was the same as at the TOM property, but mapping several miles to the north suggests that the barite on the MOOSE and GARY claims is within "unit 1", apparently near the contact with the underlying Road River Formation.

The barite bed on the MOOSE and GARY claims is strongly folded both on a megascopic scale and on the scale shown by the cross-section (Fig. 2). The minor folds characteristically have steep and often overturned east limbs and flatter-dipping west limbs, their style resembling
that of the larger folds. Argillaceous interbeds occur within parts of the barite zone, particularly the top, and are siliceous, often pyritic, and dark brown weathering.

IV. CONCLUSIONS AND RECOMMENDATIONS

Geological mapping shows that the barite exposed on the MOOSE claims should continue beneath overburden onto the GARY claims. Geochemical and gravity surveys were conducted across the projected extension of the folded barite sheet, and are described in separate assessment reports. These results show anomalous zinc values and several strong gravity anomalies and exploratory drilling should be considered to test the barite horizon for lead-zinc mineralisation.

V. PERSONNEL EMPLOYED

Clyde L. Smith, geologist; 5354 6th Ave., Delta, B.C.
P. C. LeCoufeur, geologist; 989 Canyon Blvd., N.Vancouver, B.C.

VI. QUALIFICATIONS OF C. L. SMITH, AUTHOR

Education: Carleton College, Northfield, Minn., U.S. - B.A. rec'd 1959
University of B.C., Vancouver, B.C. - M.Sc. rec'd 1962
University of Idaho, Moscow, Ida., U.S. - Ph.D. rec'd 1966

1968-1970: Director and Exploration Mgr., Spartan Explorations

Professional: Registered Professional Engineer, Association of Professional Engineers, Province of British Columbia
VII. EXPENDITURES: June 8, 9, 10, 11 & 30, 1975

Helicopter: 8 hrs @ $140/hr $1120.00
Fuel: 128 gal @ $1.20/gal 150.00
Salaries 900.00
Subsistence: 2 men, 5 days @ $15/man/day 150.00
Equipment and Expediting 100.00
Assays 70.00

TOTAL $2490.00