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REPORT

on the

GEOCHEMICAL SURVEY

of the

FAD GROUP

NEW INDIAN MINES LTD.

MERRITT, B.C.

December 17, 1970.

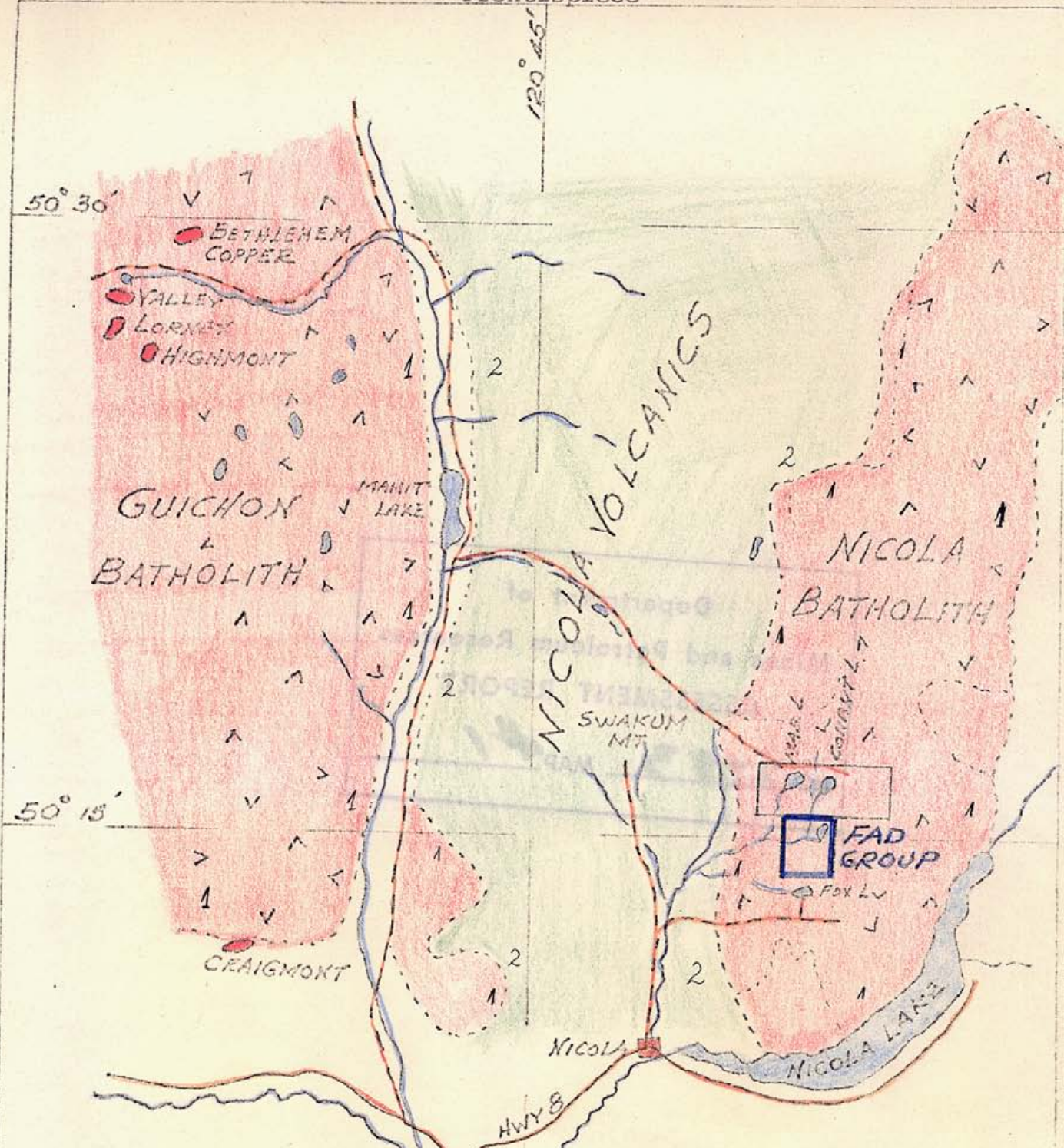
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Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 2783 MAP

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LOCATION MAP  
&  
REGIONAL GEOLOGY

CONANT LAKE PROJECT  
SCALE 1 in = 4 MI DEC, 1976

- LEGEND
- DRIFT COVERED
  - 1 INTRUSIVE ROCKS
  - 2 VOLCANICS - SEDIMENTS

*F. J. Hemsworth - PENG*

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INTRODUCTION

A geochemical survey for copper and molybdenum was carried out on the FAD group of 40 mineral claims, for New Indian Mines Ltd., during the 1970 field season.

The systematic sampling of soils, and the subsequent analyses of these samples for trace elements of copper and molybdenum has been successfully used throughout the Cordilleran region in the search for large porphyry-type bodies of copper-molybdenum mineralization.

Because of the discovery of several of these orebodies within the Guichon Batholith, the adjacent Nicola Batholith, about 20 miles east, was chosen as a geologically promising area for exploration. A preliminary reconnaissance was made by the writer in the spring of 1970, resulted in the area adjacent to Conant Lake, Mab Lake and Fox Lake being chosen for investigation. This area was open for staking and was apparently virgin, as no old claim posts, cut lines, or flagging were noted. A total of 120 mineral claims were located, two tent camps were established, and during the field season soil sampling and magnetometer surveys were completed over all the ground. This report is concerned only with the geochemical survey of the 40 FAD claims, and is submitted in compliance with the Mineral Act for assessment credits.

### LOCATION and ACCESS

The FAD claims are situated north of Fox Lake, 15 miles by road northeast of Merritt, B.C. Access from Merritt is via the Merritt-Kamloops Highway (No. 5) for six miles to Upper Nicola, then up Clapperton Creek for seven miles to Pleasant Valley, then north for two miles to Fox Lake. The geographical position is Latitude 50°15' North, Longitude 121°35' West.

### PROPERTY

The FAD 1-40 claims were located on June 28, 1970, and recorded at Merritt on July 9, 1970. Record numbers are 46435-46474 in the Nicola Mining Division. The property is held in the name of D.R. Foster as a trustee for New Indian Mines Ltd.

### GEOLOGY

The claims are located in the centre core of the Nicola Batholith. About 80 percent of the ground is covered with overburden, and no detailed geological mapping was done. \*Map 886A shows the area to be underlain by Coast Intrusives of Jurassic Age. The rocks are granite, granodiorite and gabbro. Some areas of granite gneiss were observed where the mafic minerals, hornblende and biotite occupied about 50 percent of the rock structure with the crystals oriented in a northwest direction.

No copper mineralization was found in any of the rock outcrops on the claims. However, two small pieces of granite float containing specks of molybdenite were picked up on the north side of Fox Lake.

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\* Geology and Mineral Deposits of Nicola Map-Area  
British Columbia by W.E. Cockfield.



## GEOCHEMICAL SURVEY

### Survey of Claims and Grid

The three location lines of the FAD claims, which run in a north-south direction, were cut out, and surveyed with Brunton compass and chain. Survey stations were established at 400-foot intervals along these baselines. At each station, sidelines were run east and west for 1,500 feet. Soil samples were taken at 200-foot intervals along these east-west sidelines, and the position was marked with flagging tape on which was printed the station number. The grid thus formed had 400-200 foot intervals as shown on the geochemical map which accompanies this report.

### Soil Sampling Method

At the sample intervals (200 feet) a hole was dug with a garden trowel. The hole was deep enough to get below the surface humus. Sample material was taken, wherever possible, from the upper sand or clay soil horizon, (A2 horizon), at least a few inches below the upper humus layer. This horizon was usually at a depth of four to eight inches. Extraneous material, such as pieces of root or bark, and small stones were picked out. About 200 grams of soil per sample was collected in pre-numbered Kraft paper sample bags. Notes were taken at each station on soil color and type, topography, and any other pertinent data.

### Analyses

Samples were boxed and shipped to Technical Service Laboratories (T.S.L.) at 325 Howe Street, Vancouver. All samples were analysed for parts per million of copper. After the discovery of the pieces of float rock containing molybdenite, every fifth sample was run for parts per million of molybdenum. Additional molybdenum analyses were made from the anomalous area at the south central section of the claims. Samples run for copper totalled 1,082, and for molybdenum 357.

After drying and sieving the samples, T.S.L. Laboratories Ltd extracted the metals with hot aqua regia and determined the parts per million content by atomic absorption.

FRED J. HEMSWORTH, P.Eng.

Certificates of analyses for all soil samples tested by T.S.L. are on file in the writer's office at 616-850 West Hastings Street, Vancouver.

Interpretation

A plan of the claims, on a scale of 400 feet to one inch, showing the results of the geochemical analyses is contained in the report envelope.

The average copper content in the soil is quite low, averaging about 14 parts of copper per million. Samples showing over 50 parts are colored orange on the plan, and samples showing over 100 parts per million are colored red. These occurrences are erratic and scattered and most of them coincide with swampy ground where a drainage concentration could be expected.


The results of the molybdenum analyses are also generally low, averaging about one part per million. However, on the four claims FAD 25-28, a strong increase in molybdenum soil content is noted. Samples containing five or more parts per million of Mo have been circled in red and the enclosed area has been colored.

Soil sampling has indicated a low-order molybdenum anomaly centered in the south central sector of the FAD claims. The cause of the anomalous values is unknown. The values might possibly reflect a zone of mineralized shears, a small intrusive body, or a weakly mineralized portion of the diorite. Due to the discovery of the diorite float containing disseminated molybdenite, the latter appears most probable.

Additional claims have been staked adjacent to Fox Lake to the south, and further investigations will be required before any positive statements can be made as to the significance of the geochemical values.

Respectfully submitted,

December 17, 1970.

  
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Consulting Mining Engineer.





Department of  
Mines and Petroleum Resources  
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NO. 2783 MAP #2

**GEOCHEMISTRY**  
**FAD MINERAL CLAIMS**  
**CONANT LAKE PROJECT**

SEPTEMBER 1970  
SCALE: 1 IN. = 400 FT.

SOIL SAMPLE RESULTS PARTS PER MILLION:  $\mu$  Cu  
 150 PPM Cu — ●  
 100 PPM Cu — ●  
 15 PPM Mo — ○

2783 M-2

