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MR-988

FALCONBRIDGE NICKEL MINES LIMITED  
METALLURGICAL LABORATORIES  
THORNHILL, ONTARIO

Rock Classification of Sample  
from Banks Island, B.C.

by  
R. Buchan  
July 13, 1976

PROJECT NO.: JO#2186

Rock Classification of Sample  
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103-G-8  
Banks Island, I

# FALCONBRIDGE METALLURGICAL LABORATORIES

MINERALOGY REPORT NO. 988

TO: A. M. Clarke  
FROM: R. Buchan  
DATE: July 13, 1976  
SUBJECT: Rock Classification of Sample  
from Banks Island, B.C.

PROJECT No. J0#2186-76713

SAMPLE No. L#76-306

KEYWORDS: Mineralogy, British-Columbia, Petrography

DISTRIBUTION: HTB/PGT, RAB/ARG, SNC, JJMcD/BM, FIC, Min. File

## DESCRIPTION, HISTORY OF SAMPLE:

A sample of drill core, from hole 7-76 @ 145', was submitted for rock classification on June 8th. The general geological environment from which the sample was taken is a series of acid intrusives, possibly one intrusive with separate phases, intercalated with a sedimentary series, predominantly limestone.

INFORMATION REQUESTED: Rock Classification

## PROCEDURES USED:

- Qualitative Spectrographic Analysis
- Optical Microscopy
- Chemical Analysis
- Other

- X.R.D.
- Microprobe

## RESULTS AND CONCLUSIONS:

PTS-4740 was prepared and examined. Results of the petrographic examination are given on the accompanying page. The rock is classified as a monzonite which displays weak alteration and vague gneissosity.

RB/cat



R. Buchan

Location Banks Island, B.C.

Lab. No. 76-306

Sample Description DDH 7-76 @ 145'

PTS No. 4740

MINERALS	Est. % by Vol.	Grain Size (m.m.)	
		Max.	Avg.
Feldspar Andesine $\pm$ An <sub>36</sub> (35%) Orthoclase (20%)	55	1.40	0.45
Hornblende	6	1.00	0.25
Biotite	6	0.75	0.25
Chlorite	6	0.80	0.20
Quartz	5	1.40	0.50
Sericite + Saussurite	15	-	-
Sphene	1	0.50	0.20
Apatite	Tr	0.10	0.03
Carbonate	3	1.00	0.20
Pyrite	1	0.55	0.15
Chalcopyrite	<1	0.12	0.04
Pyrrhotite	<1	0.15	0.08

## DESCRIPTION

A medium-grained, equigranular igneous rock displays vague mineral layering or weak gneissosity normal to the length of the drill core. In polished section, the major constituent is feldspar which is about 20% altered to sericite and/or saussurite. Intermediate plagioclase of composition  $\pm$  An<sub>36</sub> and orthoclase are both equigranular and occur with interstitial flakes of brown biotite, blocky grains of green hornblende and chlorite. The latter has formed mainly from the breakdown of biotite. Quartz occurs in scattered anhedral patches, but is not a major constituent of the rock. Sphene is prominent in coarse subhedral grains and carbonate occurs as vein infillings parallel to the direction of major stress. An acicular mineral which is heavily dusted with black oxide(?) inclusions was dug out from the section and identified as fluorapatite by X-ray powder diffraction.

## CLASSIFICATION

On the basis of feldspar composition and amount of quartz present, the rock is classified as a monzonite.