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GEOLOGICAL REPORT

ON THE

MAMQUAM RIVER PROPERTY

NORANDA EXPLORATION COMPANY, LIMITED

(NO PERSONAL LIABILITY)

P.M. McAndless
Geologist

November 6, 1973

#1 Geology map

GEOLOGICAL REPORT ON THE MAMQUAM RIVER PROPERTY

Introduction

The Mamquam Property consists of 77 mineral claims that straddle the Mamquam River, approximately 10 miles east of Squamish.

Access is by way of a private logging road one mile south to Squamish. Logging roads provide access to most of the claim area as well as expose much of the outcrop on the properyy.

Elevation ranges from 2,500 to 4,500 feet a.s.l. with moderate to precipitous slopes.

Sections of the property have been logged off and thus provide outcrop exposure that would otherwise be difficult to locate in heavily forested areas.

In October, 1973, eleven days were spent mapping the claim area on a scale of 1000 ft. to 1 inch.

Summary

The Mamquam Property is located 10 miles east of Squamish on the Mamquam River.

The claim area is underlain by Coast Plutonic rocks including a quartz diorite-diorite complex, a few sizeable andesite-granulite-migmatite 'pendants', and andesite porphyry and granite aplite dyke swarms.

Alteration is widespread and somewhat zoned. A large propylitic zone extending across the northern section of the property is overprinted by a smaller 3500 by 1000 foot core of intense potassic-silica alteration.

Structure is expressed by two prominent features including north trending dyke swarms and north-east striking faults and fractures. Sulphide mineralization occurs mainly on fractures striking 050 to 090 and dipping moderately to the south.

Mineralization is fracture-controlled and includes pyrite, chalcopyrite, molybdenite, bornite and malachite. Pyrite is associated with intense propylitic alteration. Copper-molybdenum mineralization is coincident with the quartz-orthoclase alteration zone. Assayed sections within the zone vary from 0.6% Cu. and 0.05% Mo. to trace.

Depending upon the I.P. results, a minor diamond drill program is recommended to test the extensiveness of the known mineralization zone.

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Geology

The Mamquam Property is underlain by Coast Plutonic rocks including a quartz diorite-diorite complex, enclosed 'pendants' and dyke swarms.

The quartz diorite-diorite (13-10-6) complex is typically heterogeneous with no uniformity in grain size nor in ratio of feldspathic to dark minerals. Several discontinuous andesite porphyry (4-10-1) and granite aplite (11-10-1) 'dykes' occur as isolated swarms in the Plutonic rocks. (J.A. Roddick G.S.C. Memoir 335, suggests that some of these dykes are possibly pre-batholithic). A few substantial areas of non-granitic rock including andesite, granulite, and migmatite occur on the south side of the Mamquam River. These possibly represent partially disintegrated pendants.

Structural features including dykes, faults and fractures strike in two principal directions. Dyke swarms generally trend north while faults and dominant fractures strike north-east to east. Mineralized fractures range from 050 to 090 and dip moderately to the south.

Alteration is widespread and occurs in a zoned pattern. A large propylitic zone extending across the northern section of the property is overprinted by a 3500 by 1000 foot core of intense potassic-silica alteration that occurs adjacent to and north of Martin Creek. Propylitic alteration varies from minor mafic chloritization to wholesale saussuritization and albitization. Chlorite-sericite gouge zones are restricted to fault areas. Quartz and orthoclase occur primarily as fracture-filling constituents.

Mineralization occurs predominantly on fractures and includes pyrite, chalcopyrite, molybdenite, bornite and malachite. Pyrite is ubiquitous although particularly evident in areas of intense propylitic alteration. Copper-molybdenum mineralization is coincident with the quartz-orthoclase alteration zone. Mineralization can be traced over 200 feet in two places within the zone. Assayed sections vary from 0.6% Cu. and 0.05% Mo. to trace amounts.

Conclusions and Recommendations

Chalcopyrite, molybdenite, bornite and malachite occur on fractures within a 3500 by 1000 foot zone. Copper-molybdenum mineralization is coincident with pronounced quartz-orthoclase fracture-filling.

The potassic-silica/copper-molybdenum zone is haloed by an extensive propylitic/pyrite zone.

Copper-molybdenum mineralization appears to have been localized about the intersection of north-east trending potassic-silica fractures and north trending granite aplite and andesite porphyry dyke swarms.

Depending upon the I.P. results, a minor diamond drill program is recommended to test the extensiveness of the known mineralization zone.

P. McAndless
Geologist

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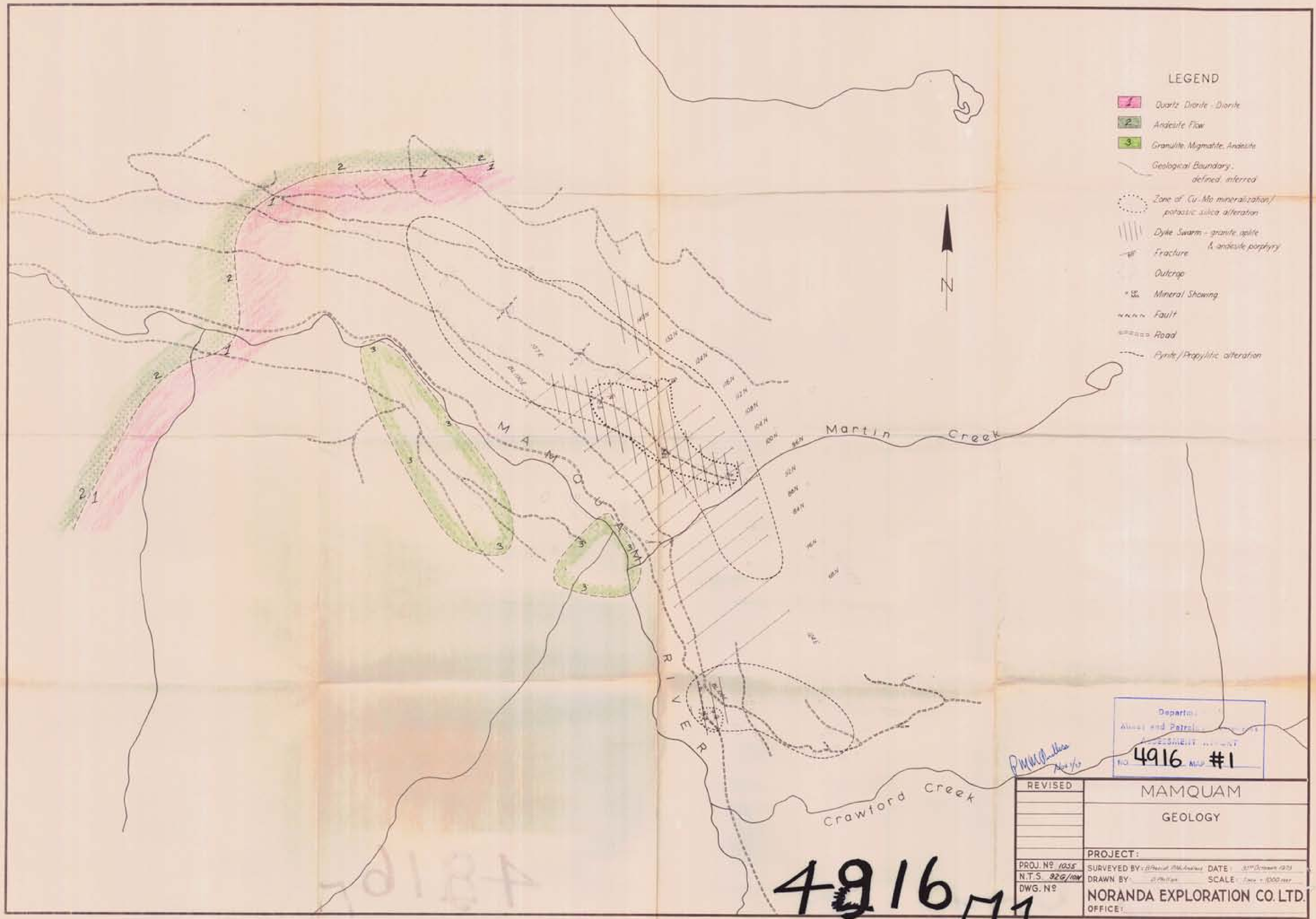
November 6, 1973


LEGEND
1 Quartz Diorite - Diorite
2 Andesite Flow
3 Granulite, Migmatite, Andesite
Geological Boundary: defined, inferred
Zone of Cu-Mo mineralization/ potassic silica alteration
Dyke Swarm - granite aplite & andesite porphyry
Fracture
Outcrop
Mineral Showing
Fault
Road
Pyrite/Propylitic alteration
N
MAMQUAM
RIVER
Martin Creek
Crawford Creek
Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4916 #1
REVISED
MAMQUAM
GEOLOGY
PROJECT:
PROJ. Nº 1055
N.T.S. 92G/10W
DWG. Nº
SURVEYED BY:
DRAWN BY:
DATE:
SCALE:
NORANDA EXPLORATION CO. LTD.
OFFICE:
4916 #1