82-M-5

REPORT

ON

BARRIERE MOLYBDENITE
and
CHRISTINA LAKE
MOLYBDENITE.

Kamloops
and
Greenwood
MINING DIVISION

James J. McDougall
November-December, 1957
~~ENGINEER~~

R E P O R T

on

BARRIERE MOLYBDENITE PROSPECTING

November - December, 1957

INTRODUCTION:

Widespread low-grade molybdenite mineralization was discovered several years ago by Quebec Metallurgical Industries prospectors while searching for columbium in the North Thompson district of Central British Columbia. Recent interest in molybdenum prompted a limited exploration program and an attempt was made late this fall to explore several of the more accessible zones before winter set in. Work was concentrated on two such zones and detailed sampling carried out.

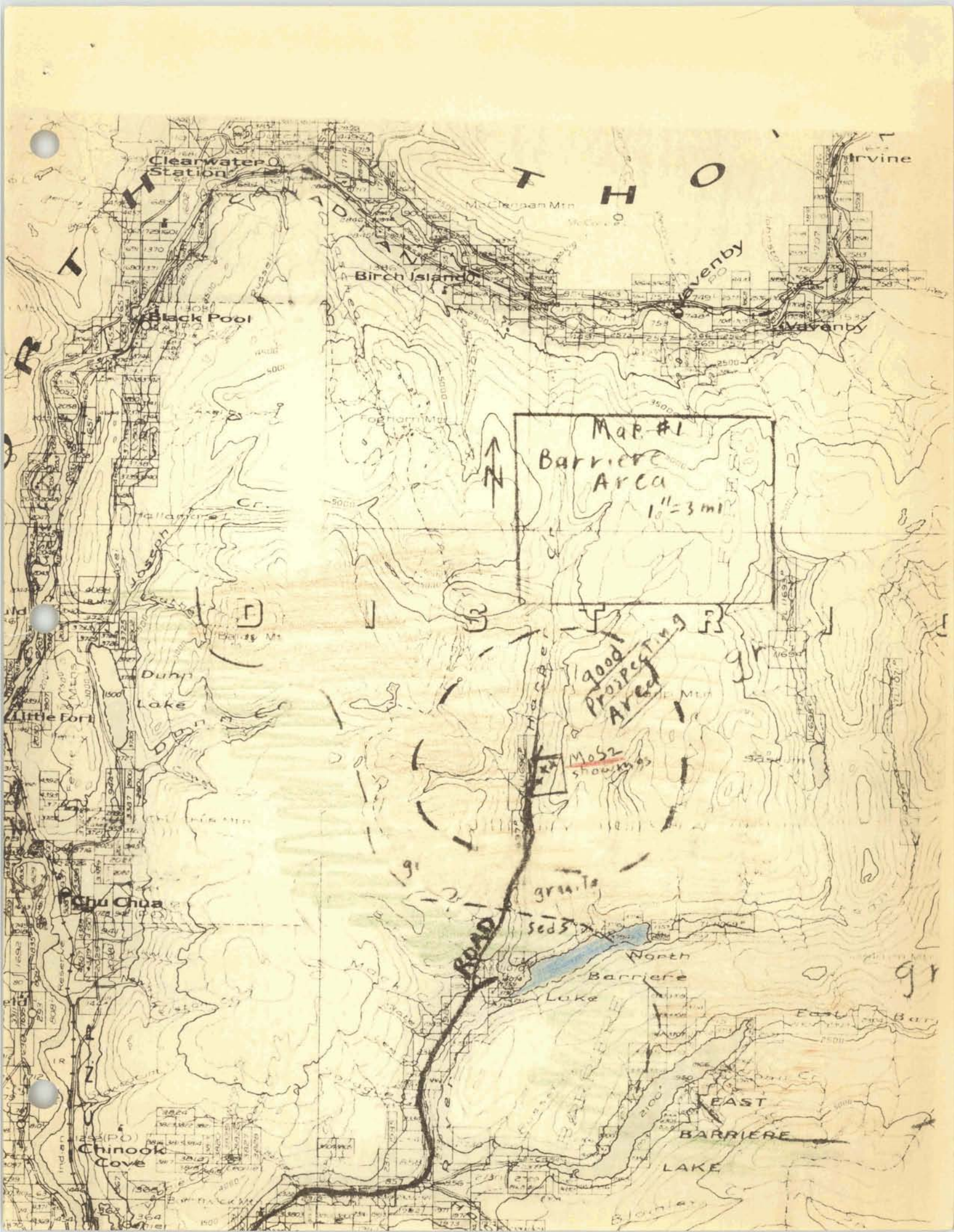
LOCATION AND ACCESS:

The deposits checked occur on the eastern slope of Harper Creek about 5 miles from its junction with Barriere River (see Map 1 enclosed). An unused logging road up Harper Creek connects with a 20 mile road to Barriere, a small settlement on #5 Highway and the C.N.R. about 40 miles north of Kamloops.

The showings occur on a steep hillside between elevations 3000 and 4500 feet over several square miles of burnt-over cedar forest (see airphoto B.C. 1511-24). Heavy snowfall above 4500 feet prevented prospecting, but below this work was carried out until early December.

PROPERTY AND HISTORY:

The "Pat" Group of 16 claims located by Quebec


Clearwater Station
Irvine
Birch Island
Black Pool
Map #1
Barriere Area
1" = 3 mi
Good Prospecting Area
Mo52 showings
Little Fort
Lake
Chu Chua
Road
North Barriere Lake
EAST BARRIERE LAKE
Chinook Cove

Metallurgical Industries prospectors, Russell and Hepler, covers the more easily accessible showing (see Claim Map #3). Pyrochlore-bearing placer ground was previously discovered and explored by Q.M.I. around M. Barriere Lake. The pyrochlore is associated with molybdenite in the granites to the north.

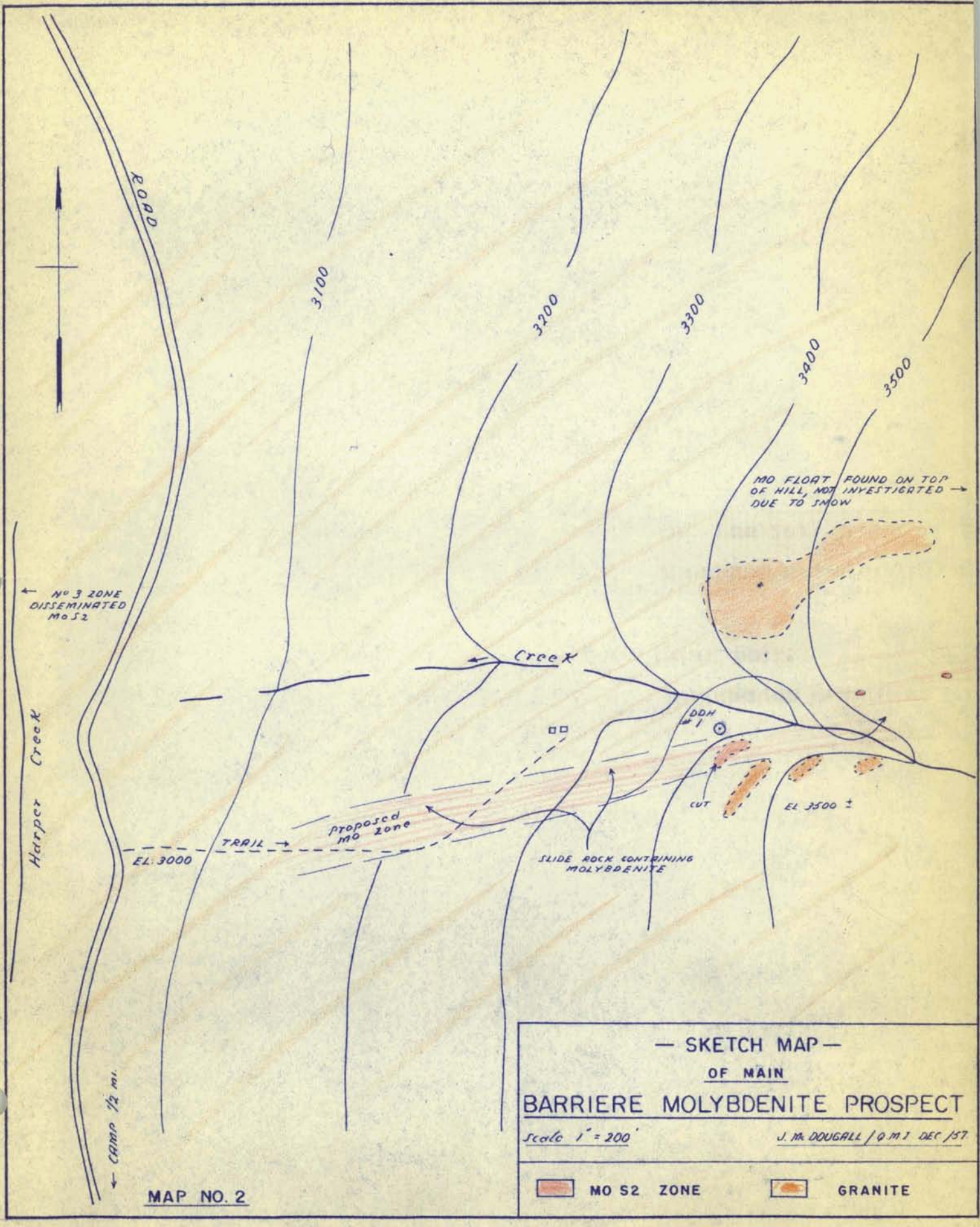
GEOLOGY:

Molybdenite occurs as a common accessory mineral within a large, unmapped granite mass whose southern contact cuts across Adams Lake and North and South Barriere Lakes. Concentrations of interest occur in several (as yet) poorly defined hydrothermally altered zones of shearing and closely spaced jointing. As these often weather more rapidly than the more massive country rock, exposures are poor.

Molybdenite, with its yellow oxidation product Molybdite, and small amounts of pyrite, occurs both as disseminations in the altered rock and minor massive concentrations in the shears. Surface weathering of the altered rock is severe and molybdenite in important amounts can seldom, if ever, be seen onthe surface. Due to the small but important pyrite associate, the zone of weathering may be quite deep.

Molybdenite concentrations were originally discovered due to their distinctly higher-than-background radioactivity. This is believed due to a minor pyrochlore content.

Attitudes of the mineralized sections, especially dip, are very hard to determine because of an intricate


ROAD
3100
3200
3300
3400
3500
MO FLOAT FOUND ON TOP OF HILL, NOT INVESTIGATED DUE TO SNOW
← No 3 ZONE DISSEMINATED MoS2
Creek
Harper Creek
DDH 1
CUT
EL 3500 ±
proposed MO zone
TRAIL →
EL. 3000
SLIDE ROCK CONTAINING MOLYBDENITE
← CAMP 1½ mi.
MAP NO. 2
— SKETCH MAP —
OF MAIN
BARRIERE MOLYBDENITE PROSPECT
Scale 1" = 200'
J. M. DOUGALL / Q.M.I. DEC /57
MO S2 ZONE
GRANITE

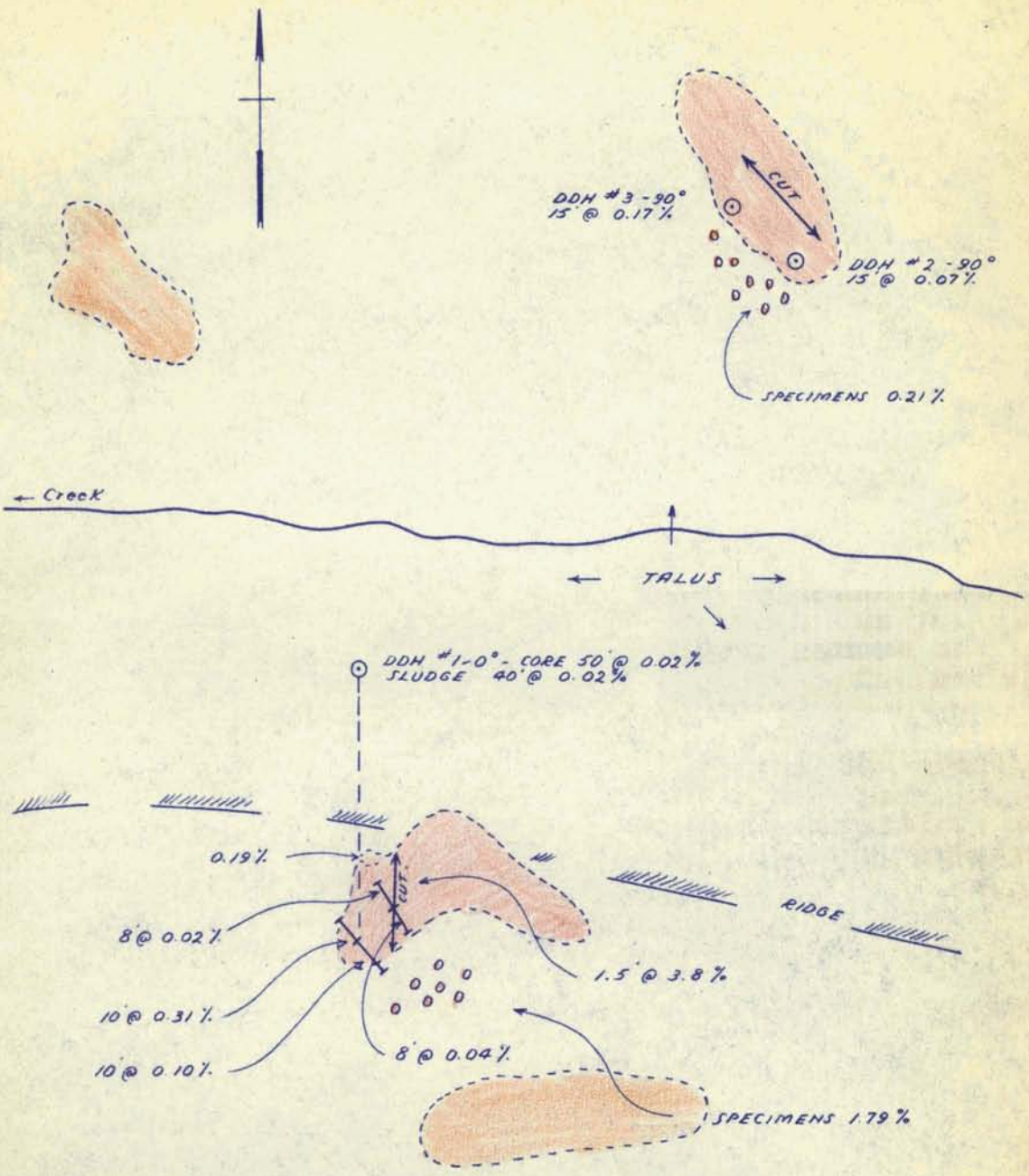
but inconsistent joint pattern control in part. However, an overall near vertical dip is suggested. Overburden is light on the steep hillside.

DESCRIPTION AND DEVELOPMENT:

Work to date has been confined to prospecting of several zones traceable on the surface for several thousand feet by a few boulders of highly leached rock containing molybdenum, plus trenching of two solid exposures found along them. Outcrop is limited at the lower elevations because of considerable talus material. Although there are several zones with as much or more showing on the surface than that concentrated on, no work was done on them as there was no nearby source of water for the Packsack drill.

The main zone partially exposed at present is about 100 feet wide and 300 feet long in an east-west direction. Talus obscured the linear extensions and low grade country rock bounds the zone on the north and south. Using a Ponjar drill a cut 10 feet deep was made across a relatively solid 30 foot exposure. A flat packsack diamond drill hole 80 feet long was put in to cut this zone projected at a depth of 50 feet. Two similar cuts and 2 sixteen foot drill holes were put in across about 25 feet of the most accessible "offset"? extension about 100 feet east of the first hole.

All cuts and drill core in the main zone were carefully sampled. Core recovery was poor in general dropping off to zero in highly weathered sections. Elsewhere only limited prospecting was carried out (see Map 2).



— SKETCH MAP —

OF

BARRIERE MOLYBDENITE, BARRIERE, B.C.

SHOWING

ASSAY PLAN AND DEVELOPMENT WORK

TO DEC. 10/57

MAP NO. 4

Scale 1" = 50'

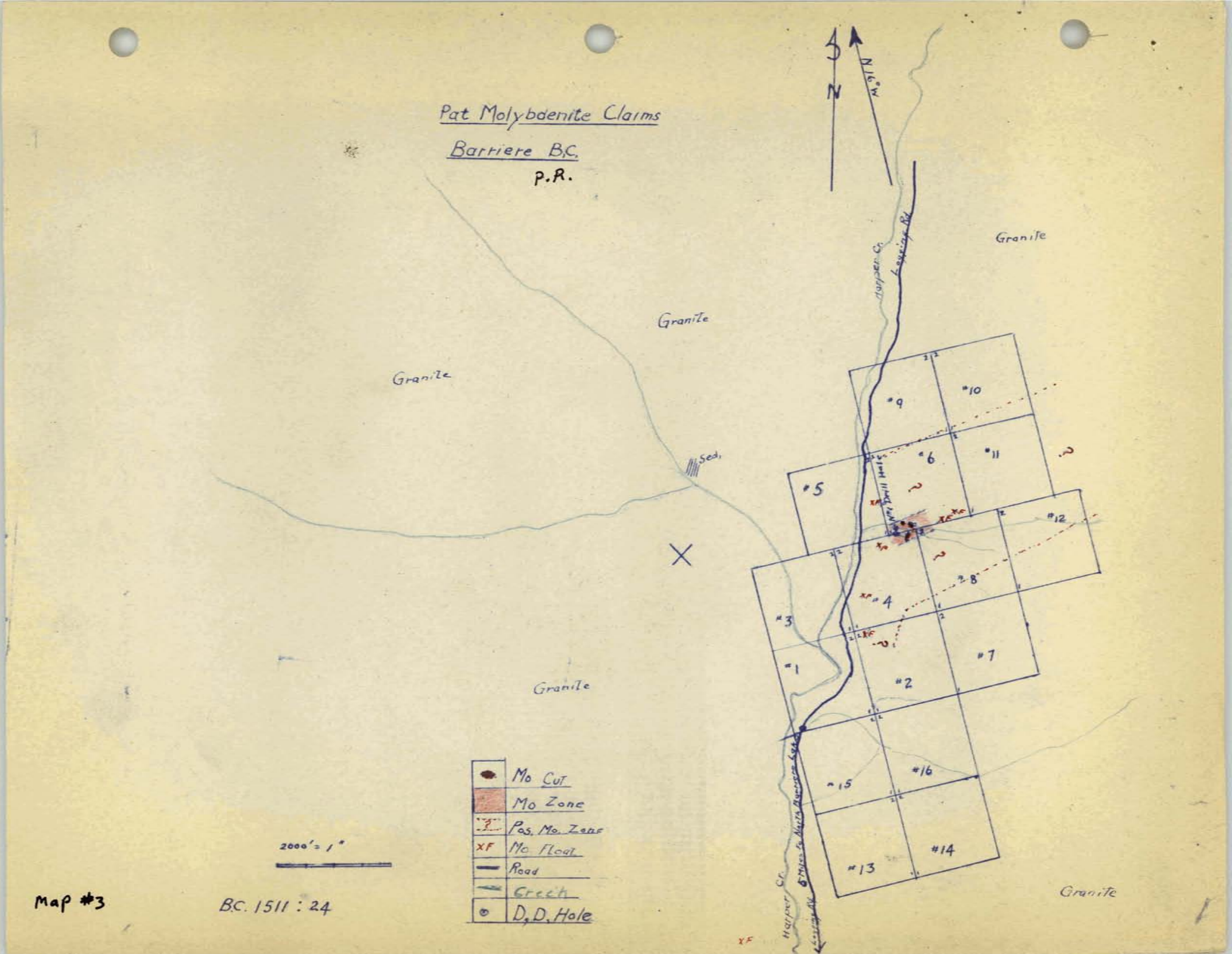
VM/O.M.I. DEC/57.

%Mo

Pat Molybdenite Claims

Barriere B.C.

P.R.



Map #3

B.C. 1511 : 24

ASSAYS AND RESERVES:

(See Map #4) - Mineralization is erratic across the main zone and extensive weathering has effected somewhat the higher grade sections even to depths of 50 feet. However, as these represent less than 10% of the zone as a whole, allowance can be made for them.

Six original samples of mineralized float assayed between 0.35 and 4.0% Mo. Surface chip sampling across two 10' widths of the original zone returned values of 0.31% and 0.1% with a 2 ft. section assaying 2%.

Core sludge from the 80 foot drill hole averaged about 0.02% with the best sections showing 0.07%. With deepening of the original zone to 10', sampling across two widths of 8 feet and one of 25 gave 0.04%, 0.02% and 0.06% respectively.

A composite section of the two short holes on the eastern extension assayed 0.17% and a selected sample from this area returned 0.21%.

An average sample showed 0.02% niobium and one with excessive pyrite assayed 0.8 ounces of silver with trace gold. No uranium assays were made although slight radioactivity is associated with the better mineralized granite. Very small amounts of chalcopyrite have been identified.

CONCLUSIONS AND RECOMMENDATIONS:

It is quite evident that in this particular section, even allowing liberally for surface leaching, the average grade over mineable widths is between half and one-third of that required. However, the widespread occurrence of molybdenite in this large, "juiced-up" granite body is encouraging

from a prospecting point of view. Chances are good that prospecting to the north and east of the present zone will turn up better material than that so far investigated, as less than 10% of the exposed rock has been looked at.

Detailed prospecting along strike of the zones already outlined can be carried out. Considerable blasting powder must be used during the original prospecting as molybdenite, even in commercial quantity, seldom shows up in surface rock. There is also a good chance that the richest areas have been excessively eroded due to their relative softness and subsequently covered. Small pits should be put in near high grade float found in several places (F on our maps), especially those where the nearby granite shows signs of alteration or shearing. Parts of these areas may stand up slightly in relief due to silicification and depressions associated with them may represent an easily eroded but well mineralized zone.

The favorable and virtually unprospected area to the north and east should be checked as should several large gossan zones noted on surrounding mountains. In general, we know of no area in British Columbia more favorable to concentrate on at present in the search for molybdenite.

Vancouver, B. C.
December, 1957

James J. McDougall,
Geologist.

R E P O R T

on

CHRISTINA LAKE MOLYBDENITE

Grand Forks M.D., B.C.

INTRODUCTION:

Several days were spent examining an easily accessible molybdenite prospect near Christina Lake coincidental with current Quebec Metallurgical Industries interest in this mineral. Plans were to check previously untested possibly large low grade deposits in country rocks surrounding veins containing higher grade material.

LOCATION AND ACCESS:

The deposit occurs near the top of a wooded hill about 2000 feet north of McRae Creek from a pointabout two miles from its mouth. Christina Lake, which McRae Creek enters, is 12 miles east of Grand Forks in south-central B.C. An overgrown wagon road leads to within a few hundred feet of the main showings at an altitude of about 3000 feet. A new route for #3 Highway follows McRae Creek and the K.V. Branch of the C.P.R. parallels it about 1/4 mile to the south.

PROPERTY:

Two located claims owned by E.V.McDougall of Grand Forks cover the showings. The property was previously known as the "Molybdenum Group."

GEOLOGY:

The main molybdenite deposit consists of small

irregular sill-like bands of mineralized quartz conformable with the foliation of a gneissic country-rock resembling that found in the Shuswap Complex but mapped as the "Mount R Roberts Formation" by the G.S.C. These outcrop along a lightly overburdened ridge. The gneiss has been intruded by a coarse biotite-rich granite which itself occasionally contains enough scattered molybdenite to impart to it a distinct greenish-yellow tinge.

The paragneiss strikes northerly and dips 15 to 30° easterly over most of the area.

The molybdenite occurs both as large, disseminated grains in the quartz and as a fine-grained replacement of the bordering gneissic wall rock.

DEVELOPMENT:

A series of pits and trenches were put in many years ago at intervals along an 800 foot strike length. Molybdenite in readily visible amounts occurs only in the two northernmost trenches which are about 200 feet apart and cut across about 30 feet of the mineralized zone. Our work consisted of deepening these to about 6 feet and sampling them as well as blasting several spot holes in the stained country rock nearby.

ASSAYS AND RESERVES:

The width of the main quartz band varies from 1 to 3 feet and the mineralized wall rock from 0 to 1 foot. Assays across this zone ranged from 0.1 to 3.9% Mo with a probable average of about 0.6% across 2 feet. Continuity

between the trenches is uncertain due to light overburden. The yellow stained granite assayed 0.1%.

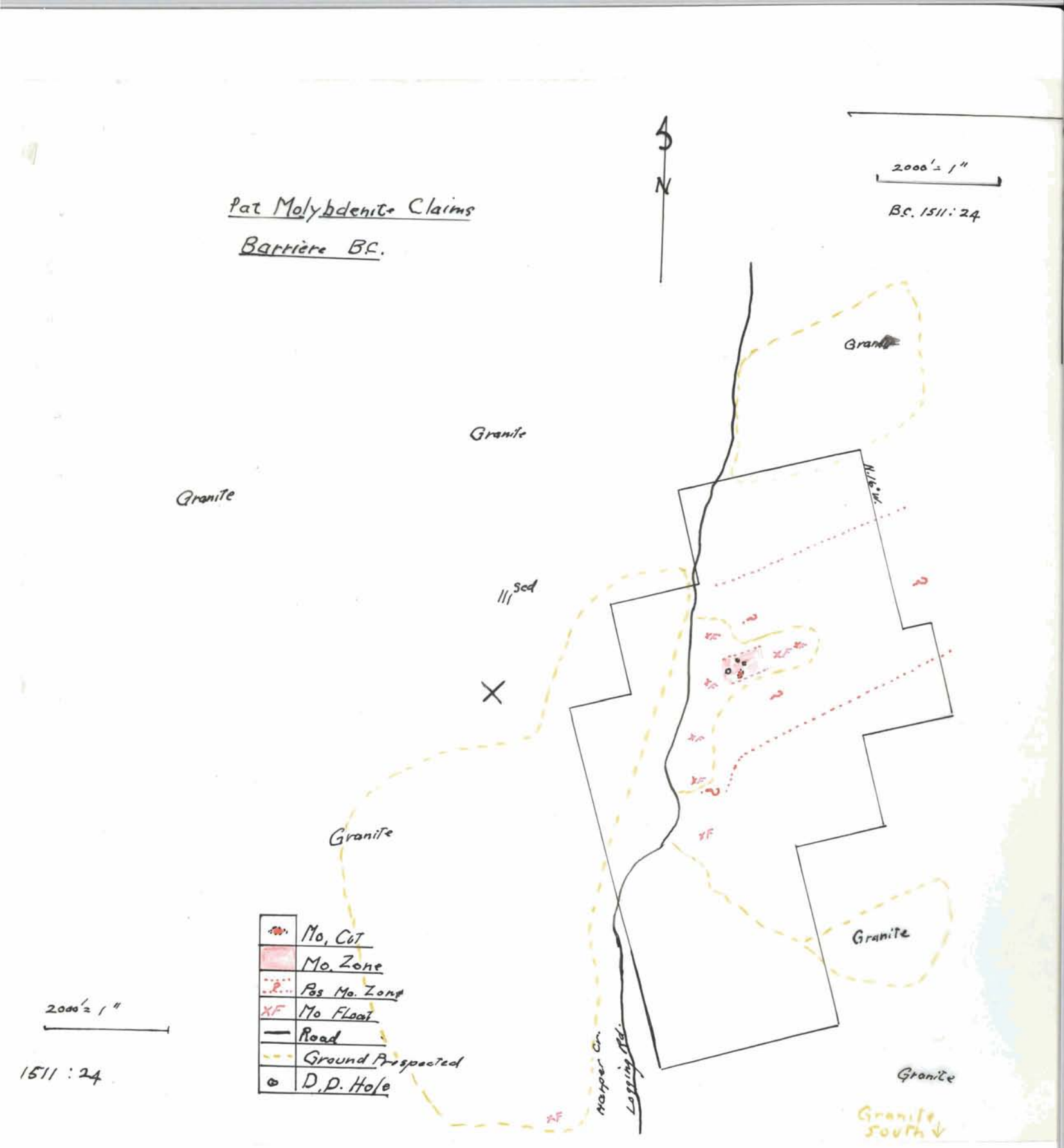
The molybdenite-bearing material is slightly more radioactive than that from Barriere.

CONCLUSIONS AND RECOMMENDATIONS:

Our intentions were to prospect the relatively large granitic masses for large, low grade deposits as the quartz vein type is obviously too small to deal with. This so far has been unsuccessful although less than 10% of the potential area has been covered. Several days prospecting with blasting powder can still be advantageously carried out when the ground is free of snow but beyond this no extensive work is warranted.

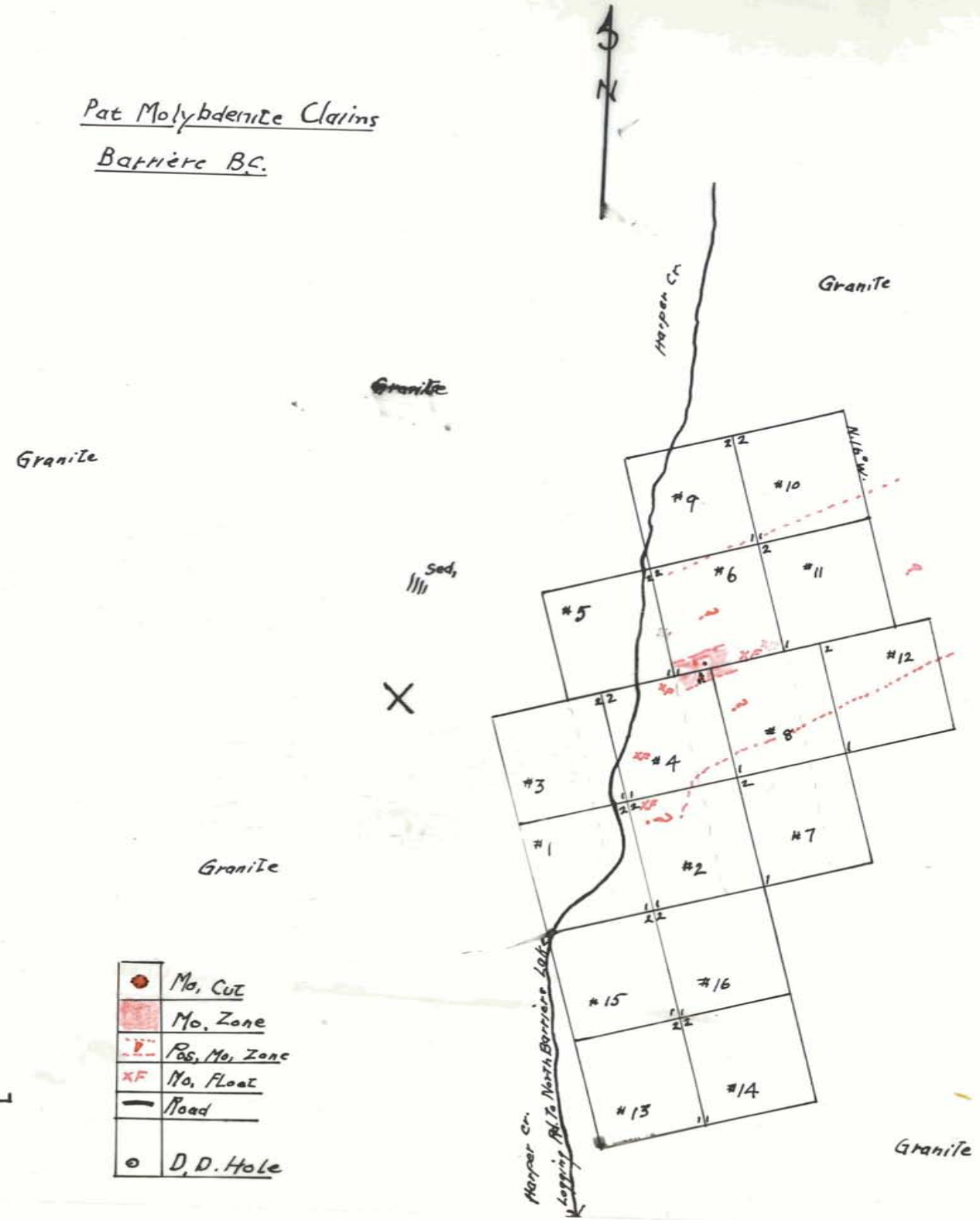
Vancouver, B. C.
December 19, 1957

James J. McDougall,
Geologist.


Pat Molybdenite Claims
Barriere B.C.
N
2000' = 1"
B.C. 1511 : 24
Granite
Granite
Granite
Granite
Granite
Granite
Granite South
Mo. Cut
Mo. Zone
Pos. Mo. Zone
Mo Float
Road
Ground Prospected
D.D. Hole
2000' = 1"
1511 : 24

Pat Molybdenite Claims

Barriere B.C.



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