PRODUCT	COPPER	PROVINCE OR TERRITORY		N.T.S. AREA	94 D/15	REF.	CU 1

NAME OF PROPERTY **MARMOT**

OBJECT LOCATED - **main showing.**

UNCERTAINTY IN METRES 300. Lat. 56°45'20" Long. 126°35'

Mining Division **Omineca** District **Cassiar**

County Township or Parish

Lot Concession or Range

Sec Tp. R.

OWNER OR OPERATOR AND ADDRESS

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located at the head of Menard Creek some 25 miles east of the south end of Thutade Lake.

Mineralization was apparently first discovered by C.S. Lord while mapping for the Geological Survey of Canada during the period 1941 to 1945. Prospector W.D. Savage staked the Marmot group of 14 claims on these showings in 1965. New Wellington Mines Limited acquired the property and additional staking was done in 1966 to a total of 101 claims. Work during 1966 and 1967 included geological mapping, induced polarization and geochemical surveys, trenching and stripping, and 50 feet of diamond drilling in one hole. In 1968 the property comprised the Marmot 1-141 and Thorne 1-28 claims. Work during the year included bedrock stripping and geological mapping. Work in 1969 by Texada Mines Ltd. included geological and geochemical surveys on the Marmot 1-144 claims, bedrock stripping and 783 feet of diamond drilling in 5 holes. The company name (New Wellington) was changed in 1970 to New Wellington Resources Limited.

Wesfrob Mines Limited in 1973 carried out electromagnetic and airborne magnetometer surveys over 188 line-miles covering all claims and 900 feet of diamond drilling in 5 holes on Marmot 35, 90, 70, and 140.

DESCRIPTION OF DEPOSIT

A central area of Takla Group rocks, mainly basic volcanic breccias and lavas, is bounded on the west by Upper Cretaceous-Lower Tertiary sediments, mainly sandstone and conglomerate, and on the east by intrusives of the Omineca batholith. In addition a few smaller stocks and numerous dykes cut the Takla beds. The main plutonic body is grey fine to medium-grained granodiorite-diorite.

Mineralization on the claims is of three types: copper sulphides occurring in (1) fissures and (2) disseminations in the volcanic rocks, and (3) disseminations near the contact of igneous intrusions.

The most significant mineralization appears to be that in the fissures. The most important of these was described by Lord (1948, p. 61). This is a northwest-trending silicified shear, 5 feet wide, just east of the crest of Marmot Ridge. The shear contains notable amounts of chalcopyrite, malachite, and limonite; a grab sample taken by Lord assayed: gold, 0.13 ounce per ton; silver, 3.59 ounces per ton; and copper, 5.18 per cent.

see Card 2 ....

Associated minerals or products of value - **Gold, silver, molybdenum.**

Mineral Development Sector, Department of Energy, Mines and Resources, Ottawa.
503358

HISTORY OF PRODUCTION

MAP REFERENCES

#Geology of the Marmot prospect, Menard Creek Area, Sc. 1": 3,000 feet, Fig. 41, Geology, Exploration, and Mining, 1973, p. 434.

Map 962 A, McConnell Creek, (Geol.), Sc. 1":4 miles - accomp. Memoir 251, Geol. Surv. of Canada, 1948.

*Map 94 D, McConnell Creek, (Topo.), Sc. 1:250,000.

REMARKS

Comp./Rev. By	DMacR						
Date	10-76						

REFERENCES

Lord, C.S.; McConnell Creek Map-Area, Cassiar District, British Columbia; Memoir 251, p. 61, Geol. Surv. of Canada, 1948.

Reports of Minister of Mines, British Columbia: 1966, p. 82; 1967, p. 89; 1968, p. 118.

Mineral Development Sector; Corporation Files: "New Wellington Resources Limited".

Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1969, p. 104; 1973, pp. 434-443 + .

PRODUCT	COPPER	PROVINCE OR TERRITORY	British Columbia	N.T.S. AREA	94 D/15	Card 2 - REF. CU 1

NAME OF PROPERTY **MARMOT**

DESCRIPTION OF DEPOSIT (continued)

Similarly mineralized fissures have been uncovered in the area according to company reports. Assays on these average: copper, 1.5 to 3 per cent; gold, 0.02 to 0.05 ounce per ton; and silver, 0.3 to 3.0 ounces per ton. Although it is claimed that this type of mineralization is traceable for lengths of as much as 300 feet, there is doubt expressed concerning the continuity of metal grades.

The most widespread type of mineralization is the dispersal of copper sulphides in small cracks and replacements in the feldspathic basaltic andesite unit of the Takla. The southwest slope of Marmot Ridge has many such occurrences. Chalcocite and bornite, the most common sulphides, are found with quartz and calcite as fillings together with epidote which is also a replacement mineral. Small high-grade showings are not uncommon in this association, however, the continuity of such mineralization over any important widths is questionable.

The third type of occurrence seems to be of little importance since pyrite is the only sulphide present in abundance. The pyrite is dispersed through the hornfelsic rocks for 10 to 20 feet outward from the margin of the intrusion. Some molybdenite has been reported in the small southern stock but this appears to be very minor.