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A GEOLOGICAL REPORT ON THE D F CLAIMS (1 to 8, 11 to 19)

1031/8E

Location: South Side of Treasure Mountain,
Copper River Area B.C.
54° 29' N.Lat., 128° 01' W. Long.

BY

T. SADLIER-BROWN & R.J. MacNEILL P.Eng.

Holder: R.J. MacNeill

Prepared for Metron Explorations Ltd.

Dates - July 29, 1972 - September 24, 1972.

C O N T E N T S

SUMMARY

The DF property is a contiguous group of 18 claims on Treasure Mountain near Terrace, B.C. The claims are underlain by a sequence of volcanic rocks estimated to be over 5,000 feet thick in the general area and belonging to the lower Jurassic Hazelton Group.

Copper mineralization occurs in shears and veins and also to a lesser extent disseminated in the northern part of the group. Exploration appears to have been restricted to physical work on known showings and has, so far, been inconclusive. A broader approach to exploration is suggested and recommendations include Geochemical and IP Surveys and additional geology both detailed and reconnaissance.

INTRODUCTION

The DF Claim Group consists of 18 contiguous mineral claims recorded on September 28th, 1971 and assigned record numbers as follows:

DF 1 - 8	104404 - 104411
DF 11 - 18	104412 - 104421

They are held by R.J. MacNeill of West Vancouver, B.C. and the present survey was done on behalf of Metron Explorations Ltd. of Toronto, Ontario.

The claims were staked to cover an area in which a number of copper showings are known to occur.

Previous geological work has been limited to an area on claim DF 11 and consists of trenching and extensive diamond drilling but a road put in by the B.C. Telephone Company crosses the property and has also exposed considerable rock and uncovered at least one minor showing. The area has been geologically mapped on a four mile scale by the Geological Survey of Canada and by the Department of Mines (See GSC Mem. 329 and B.C. Department Mines Map 69-1).

The present survey was carried out during September, 1972 by T.L. Sadlier-Brown and N. Bedard. Geological traverses were controlled both by chain and compass corrected for Topography and by air photos (See B.C. Government air photos #5305-151 & 152). Topographical coverage is available at the 1:250000 scale (N.T.S. Sheet 103-I) and in provisional form at the 1:50000 scale (N.T.S. Sheet 103-I-8.).

LOCATION AND ACCESS

The claims lie on the southwest slope of the south shoulder of Treasure Mountain just north of the confluence of the Clore and Copper (or Zymoetz) Rivers and two miles east of Salmon Run Creek.

They are about 22 miles due east of the town of Terrace, B.C. from where they are conveniently accessible by helicopter and somewhat less so by road. Access by vehicle, however, may be less costly and consequently preferable if a boat is available. It is gained by driving east from the town on Highway 16 for about four miles, then southeast up the Copper River Road for about twenty miles to the sight of a washed out bridge just above the mouth of Salmon Run Creek. From here, a boat is required to cross to the north side of the river to the B.C. Telephone Company's road which leads to the Treasure Mountain Microwave Relay Station. This crosses the north part of the claim group about four miles from the river and about 2,500 feet above it. A trail motor bike light enough to be transported by boat proved to be a useful method of transportation here.

TOPOGRAPHY AND PHYSIOGRAPHY

The DF Group lies at an elevation of 3,000 to 3,500 feet on a southwest facing slope. Drainage is southwest to Salmon Run Creek via several streams often deeply incised into deep overburden of glacial and collovial origin. Outcrop is sufficient to give good geological control on the upper parts of the mountain but becomes scarce lower down.

The claims are entirely forest covered mainly by stands of mature Fir, Cedar, Hemlock and Spruce. Local clusters of dense second growth are present and deep gulleys may be clogged by devils club and alders but underbrush elsewhere is sparse. Thick moss covers most of the ground and nearly all of the outcrops.

Glacial Straie have been observed at about 3,500 feet elevation and indicate ice movement from the east.

Soil, probably glacial in origin is developed in places although there are a number of extensive areas of coarse talus often partly covered by humus. These areas aside, however, the terrain is one which should lend itself reasonably well to geochemical sampling.

GEOLOGY

The DF Claims are almost entirely underlain by the basic to intermediate volcanic rocks of the Lower Hazelton series which constitute the Jurassic sequence in the area.

The rocks are fairly distinctly layered and have a north-south strike with a moderate to steep easterly dip. This appears to be fairly consistent throughout the general area although local deviations apparently caused by faulting have been observed. The thickness of the sequence in the immediate area is estimated at a minimum of 5,000 feet although it is possible that this could

include repeated sections. This makes it difficult to determine which rocks are the oldest but, as the reddish brown basaltic flows and fragmentals appear at the apparent base of the local section, they are tentatively considered oldest and are assigned to unit 1. Occurrences further east, and consequently higher in the section, of the same rock are included in the unit though it should be borne in mind that these may be either subsequent layers or repeated sections, probably the former. The reddish basaltic rocks are interlayered with purple and grey basalts and andesites and the entire series is cut by dikes and faults some of which carry mineralization.

Three sets of topographic linears, which are probably vertical or very steeply dipping joints and faults have been identified on the air photographs. Their strike in order of prominence are 70°, 50° and 150°. No definite indications of direction and extent of movement along these linears have been observed but some evidence points to a right lateral slippage for the 70° linear passing through the northwest corner of claim DF 11.

Four different rock classification dominate the layered sequence, 1: the red brown basalts, 2: the purple basalts, 3: the grey andesites, and 4: the dark grey basalts. In addition, one occurrence of 5: a pink cherty tuff was observed. Possible intrusive rocks include 7: an occurence of diorite (although this could prove to be only a coarse grained phase of one of the dacitic

lavas) and 8: a possible porphyritic dike.

Detailed descriptions of the rock types are as follows:

Unit 1: The rocks of this unit generally consist of layers several feet or tens of feet thick of 1) red brown medium grained porphyritic basalt occassionally containing coarse lath like phenocrysts of plagioclase; 2) medium to fine grained red-brown fragmental basalt; 3) red brown basaltic agglomerate or fragmental; 4) or dark brown amygdaloidal basalt. Alterations were observed in these rocks only at one locality in the western part of claim DF 11 where the rock is a red amygdaloidal basalt.

Unit 2: A purple or greyish purple basalt which generally appears to overly unit 1. The group includes porphyrys, amygdaloids and fragmentals of fine to medium grain.

Unit 3: Grey andesite porphyry and andesitic tuff and possibly dacite. This rock is widespread in the central part of the map area, particularly on claims DF 3, 5 and 7. It is also present in the vicinity of the copper occurrence in claim DF 11. In places this rock is a densly packed medium grained feldspar porphyry nearly indistinguishable in hand specimen from a rock

of intrusive origin. In the northeastern part of DF 7, it is in contact with the diorite of Unit 7 with which it may be related.

Unit 4: Dark grey amygdaloidal basalt and basalt porphyry.

Unit 5: Pinkish cherty tuff. This was observed only in one locality, the trench on claim #11.

Unit 7: Diorite. A medium grained plagioclase rich rock with a granitic texture in hand specimen. May be intrusive into the volcanics or related to them as a feeder or coarse phase of one of the flows.

Unit 8: Green andesite porphyry. This possible dike rock was observed in two localities near the road southeast of the initial posts for claims 11 and 12. The two occurrences are in opposite sides of a topographic linear which could be a fault. If this is the case they might be used to determine the extent of offset.

MINERAL OCCURRENCES

Copper mineralization was observed on claim DF 11 in the open cut (referred to in earlier reports as the Zone 2 showings) and on the road to the north of it. Chalcocite, bornite, and a little chalcopyrite are present in shears and veins cutting the volcanic rocks and to a lesser extent locally disseminated in them.

Sulphides are generally accompanied by malachite staining on jointed surfaces and carbonate and quartz in the veins. In a few places such as the occurrence in a road cut in the eastern part of claim DF 3, malachite was the only copper mineral observed. No preferred host rock for copper mineralization has been identified. In the showings on claim 11, it is present in and near grey andesite (Unit 3) and purple-grey basalts (Unit 2). Elsewhere, notably uphill to the east at the site of extensive early workings now on the adjacent snow claims, bornite is disseminated in the red brown basaltic rocks.

Claim ... 9E SE, put SNOW block 1 mi S.

CONCLUSIONS AND DISCUSSION

Occurrences of copper are widely scattered throughout the general area in which the claims were staked and several are known in the northern part of the DF Group itself. The known showings are generally of limited extent but are found in rocks which are recognized throughout the region as favourable hosts for copper mineralization. These are the lavas and clastic volcanics of the Hazelton Group which underly the entire property.

Except for conventional prospecting, little effort seems to have been directed towards a broader approach to exploration in the general area of the claims. The bulk of the early work consists

of trenching, drilling, and drifting in rather confined zones. Given the favourable rock type and the abundance of known occurrences, it seems likely that a thorough program of exploration using geophysical and geochemical methods designed to cover the entire property would stand a reasonable chance of success.

RECOMMENDATIONS

1. Geochemical Sampling: Lines should run NW-SE 800 feet apart initially. Sample interval should be 100 feet. Chain and compass control corrected for topography should be sufficient for this phase. All drainages should be sampled.

2. Additional Geological work as follows:
   1. Detailed mapping of showing area on claim 11.
   2. The geologic section in the area should be established by one or two east-west traverses in the country above tree line north of the claims. Outcrop here is abundant and the resulting information could be extrapolated on to the claim group to give a better idea of the rock types than is presently possible.
   3. Rock geochemical samples should be taken to test for favourable horizons.

3. IP Survey to follow up geochemistry and to check known shown areas.

4. Additional conventional prospecting north of existing claims.

D E C L A R A T I O N

I declare that the following costs were assumed during the course of the geological survey described in the foregoing report on the DF Claims.

Wages: Geologist T.L. Sadlier-Brown (1307 Harwood Street, Vancouver, B.C.)	
July 29, 30; Sept. 13-21 11 days @ $80./day	$870.00
Prospector N. Bedard (General Delivery, Smooth Rock Falls, Ont.)	
Sept. 18-23 6 days @ $40./day	230.00
Truck and Trail Bike Rental	170.00
Boat Costs (pro rated)	50.00
Assays	5.00
Camp Costs, meals, and accommodation @ $17./day per man	260.00
Helicopter 1.4 hrs @ $160./hr.	227.00
TOTAL	$1812.00

T.L. Sadlier-Brown

Statement of Qualifications: T.L. Sadlier-Brown

Education: Carleton University, Ottawa; 4 years geology

Experience: Engaged in all phases of geological field work throughout Canada since 1958.

Recent Positions (in reverse chronological order):

Geological Contractor (Independent) 1971-72

Exploration Manager, Nicanex Mines Ltd. 1969-71

Geologist, Sevensma Consultants 1969

Geologist, Atlas Explorations 1966-69

Geologist, Mt. Costigan Mines 1965-66

Technical Officer, Geological Survey of Canada 1963-64

T.L. Sadlier-Brown

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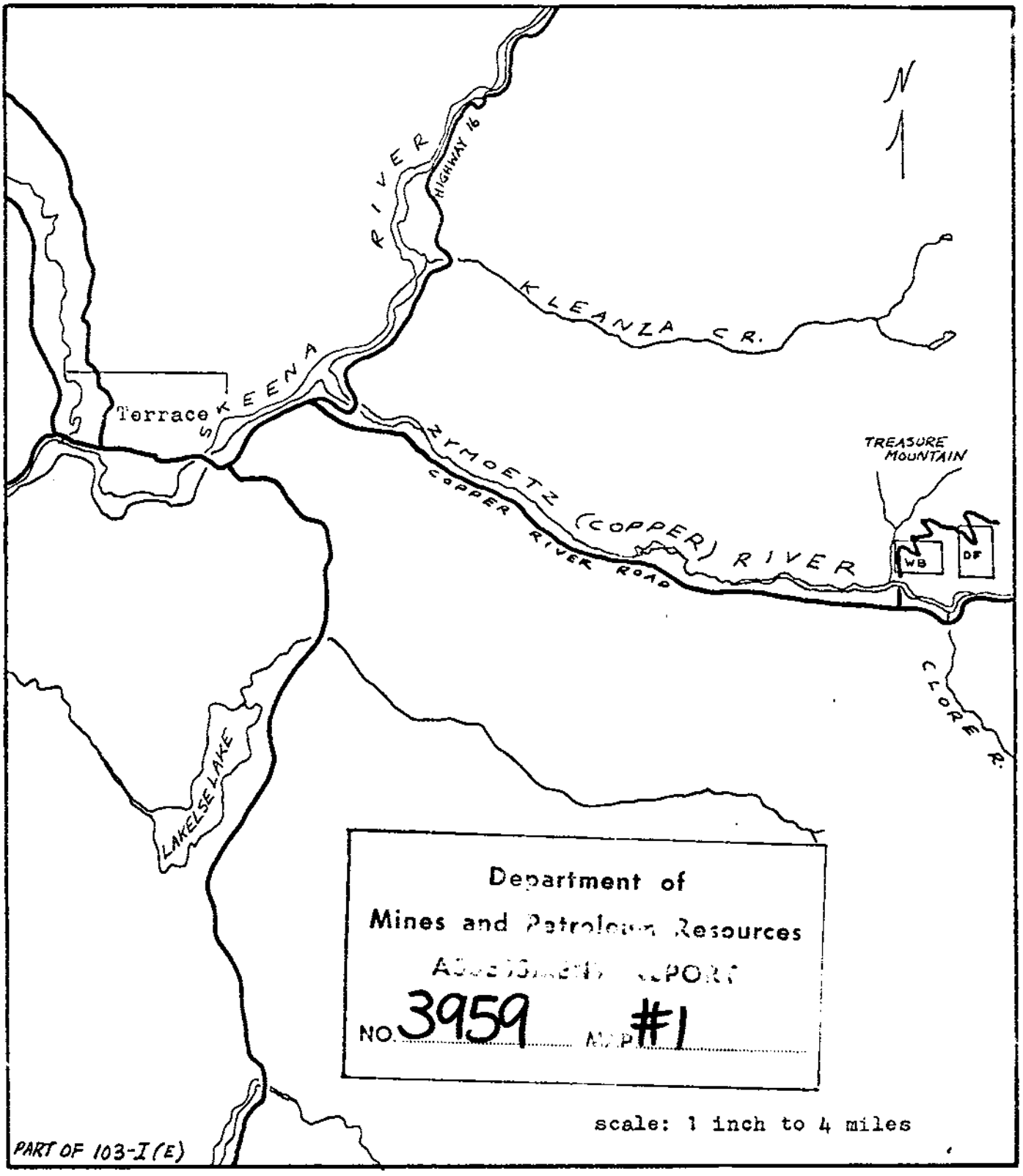
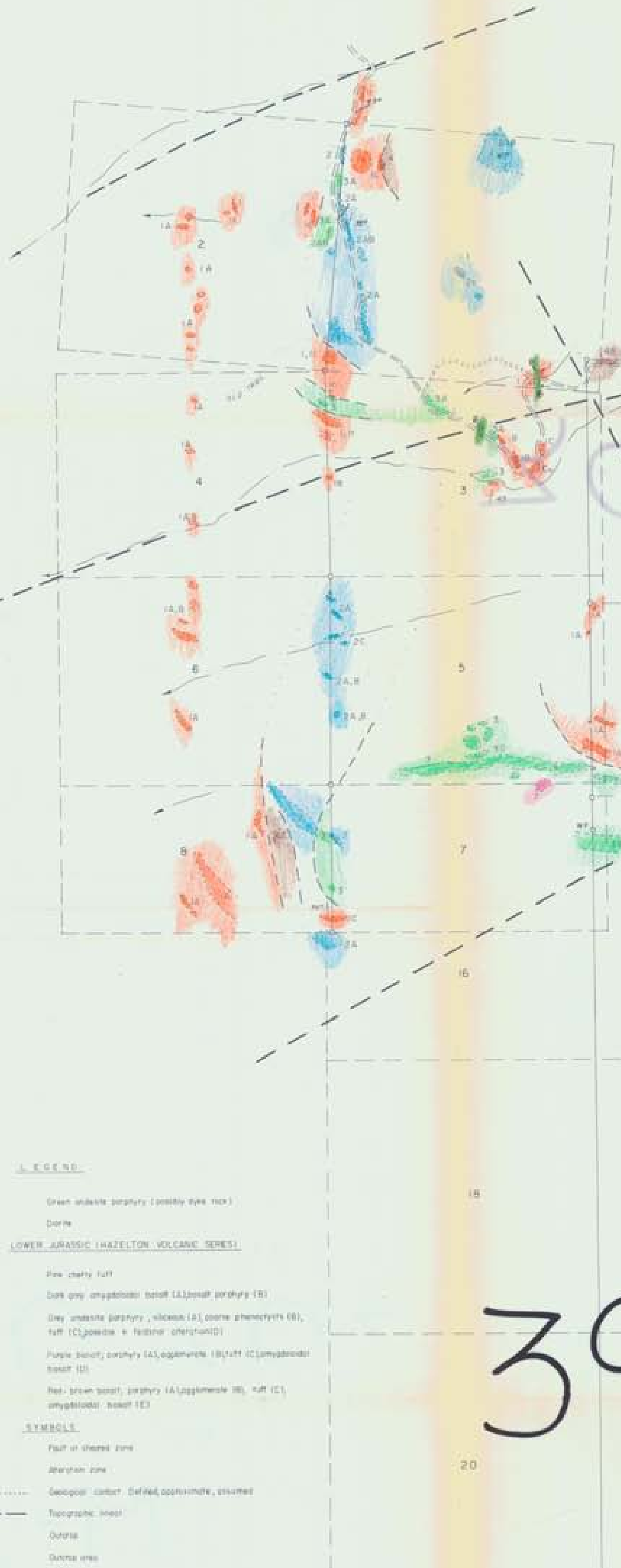


LOCATION MAP: DF and WB Claims, Treasure Mountain Area, Omenica M.D., B.C.



LEGEND

- Green andesite porphyry (possibly dyke rock)
- Diorite

LOWER JURASSIC (HAZELTON VOLCANIC SERIES)

- Fine cherty tuff
- Dark grey amygdaloidal basalt (A), basalt porphyry (B)
- Grey andesite porphyry, volcanics (A), coarse phenocrysts (B), tuff (C), breccia & fragmental material (D)
- Purple basalt; porphyry (A), agglomerate (B), tuff (C), amygdaloidal basalt (D)
- Red-brown basalt, porphyry (A), agglomerate (B), tuff (C), amygdaloidal basalt (E)

SYMBOLS

- Fault or sheared zone
- Alteration zone
- Geological contact: Defined, approximate, assumed
- Topographic break
- Outcrop
- Outcrop area
- Stream
- Road
- Tractor road
- Claim post
- Claim line
- Claim boundary

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METRON EXPLORATIONS LTD.

A GEOLOGICAL MAP OF THE D.F. CLAIMS (1-8, 11-20)

TREASURE MOUNTAIN AREA
OMENICA M.D., B.C.

SCALE

FEET 400 0 400 800 FEET

To accompany a report by T. Schiller-Brown and R.J. MacNeill P.Eng

R. J. MacNEILL
BRITISH COLUMBIA
PROFESSIONAL ENGINEER

SEPT. 28, 1972