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GEOLOGICAL REPORT

on the

D. C. N. CLAIM GROUP

**NEW WESTMINSTER MINING DIVISION
BRITISH COLUMBIA**

for

**GOLD RIVER MINES LTD.
(N.P.L.)**

**March 26, 1972
Vancouver, B.C.**

**Thomas R. Tough, P. Eng.,
Consulting Geologist**

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MAP INDEX

LOCATION MAP	Scale 1" = 136 miles
PROPERTY MAP	Scale 1" = 1 mile
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SUMMARY

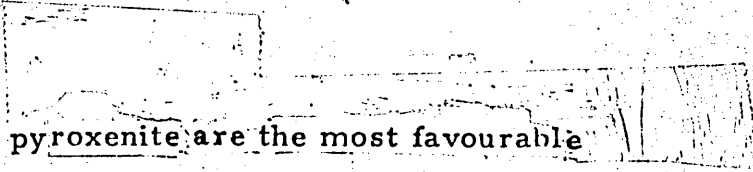
The D. C. N. group of claims, owned by Gold River Mines Ltd (NPL) Ltd (N. P. L.) consist of eight contiguous mineral claims held by location approximately 11 miles north of Hope, B. C. Access is by paved highway and gravelled logging roads. The property is located some three miles north of the producing nickel and copper mine of Giant Mascot Mines Ltd.

The topography is relatively steep but not precipitous with elevations varying between 2400 and 4200 feet. Dense stands of fir, cedar, hemlock and spruce occur on the slopes.

Water is available for all phases of exploration, development and domestic use. Hydroelectric power would be available if future requirements warrant it. Diesel electric power will be necessary for initial phases.

Year-round logging and mining operations are carried on in the general area which experiences moderate winters with fairly heavy snowfall. Summers are pleasant with moderate to heavy rainfall.

Railroad facilities are available at Yale or Hope and the Trans Canada Highway provides an excellent trucking route to Vancouver, some 120 miles west, where most supplies are available.



Pyroxenite and hornblende pyroxenite are the most favourable host rocks for disseminated to massive pyrrhotite, pentlandite, chalcopyrite and pyrite. Coast Range quartz diorite occurs as small stocks, bosses and apophyses cutting ultrabasic rocks. It is near the contact of such intrusive and ultrabasic rocks that the nickel-copper-chrome ore bodies at the Giant Mascot mine occur.

With proper preparation, work could be carried out on a year-round basis.

CONCLUSIONS

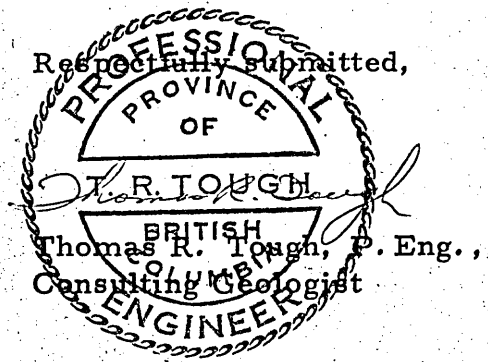
Because of the presence of ultramafic rocks existing on the property, and the discovery of nickel-copper mineralization near the south boundary of the property, it is concluded that the property warrants a detailed exploration programme.

The close proximity of the producing mine of Giant Mascot Mines Ltd, with its similar geological environment, further justifies a detailed exploration programme.

RECOMMENDATIONS

It is recommended that a geochemical survey, a magnetometer survey, and a geological survey be carried out over the entire property in conjunction with road building and trenching.

It is also recommended that Gold River Mines Ltd (NPL) allocate the sum of \$22,000.00 to implement and execute the recommended exploration programmes.



March 26, 1972
Vancouver, B. C.

INTRODUCTION

The following report is based on information obtained by the writer during an examination of the ground prior to staking and while working on the adjoining property of Dalton Resources Ltd (N. P. L.) on August 26, 1971. All available government publications and private reports were also studied wherein they related to the D. C. N. claim group.

LOCATION (49° 121° S. E.)

The claims are situated on Gordon Creek approximately 11 miles N. N. W. of the town of Hope in the New Westminster Mining Division in southwestern British Columbia.

ACCESS

The property is accessible by means of gravelled logging roads west from the Trans Canada Highway at a point some 10 miles north of Hope. The road follows along the south bank of Gordon Creek thence to the vicinity of the claims for a distance of approximately seven miles.

TOPOGRAPHY AND TIMBER

The topography is relatively steep and generally typical of the Coast Range Mountains with an average local relief of 4,000 feet. Peaks in the area attain altitudes of up to 7,000 feet.

The slopes are covered with dense stands of fir, cedar, hemlock and spruce.

WATER AND POWER

Sufficient water is available for all phases of exploration, development and domestic use from numerous streams which traverse the property and feed into Gordon Creek which drains into the Fraser River at Yale. Hydroelectric power would be available in the area if future requirements warrant it. For initial development phases diesel electric power will be necessary.

CLIMATE

Winters are moderate with heavy snowfall, whereas summer months are warm with moderate to heavy rainfall.

TRANSPORTATION AND SUPPLIES

Rail service is available either at Yale or Hope which are serviced by the Canadian Pacific Railway. The Trans Canada Highway provides an excellent trucking route to and from Vancouver some 120 miles west, where most supplies are obtainable.

PROPERTY AND OWNERSHIP

The property consists of eight contiguous mineral claims held by location. They are as follows:

<u>Claim Name</u>	<u>Record Number</u>	<u>Expiry Date</u>
D. C. N. # 1 - 8 incl.	27240-47 incl.	January 12, 1973

The claims are owned by Gold River Mines Ltd (N. P. L.) of Vancouver, British Columbia.

HISTORY

To the best of the writer's knowledge there has not been any work carried out on the property.

GENERAL GEOLOGY

The geology of the area is shown on Map 12 - 1969 Hope (West Half) of the Geological Survey of Canada. The area is mainly underlain by granodiorite and quartz diorite of the Coast Range intrusives which trend N - S. On the western extremities of the intrusives lie the rocks of the Chilliwack Group of Pennsylvanian and Permian age. The Chilliwack Group consists of basic volcanic rocks, pelites, siltstone, sandstone, conglomerate and limestone. To the east lie pelitic schists, amphibolite, hornblendite, pyroxenite, peridotite, dunite, and locally associated diorite and gabbro. It is the ultra-mafic rocks above that contain economic nickel-copper-chrome deposits at the Giant Mascott Mine near the headwaters of Stulkawhits Creek 7 miles northwest of Hope.

The main faults in the region are the Hope Fault, Yale Fault, and Ruby Creek Fault which trend N - S. Faulting in the vicinity of The Old Settler Mountain trends northwesterly. Less than three miles south of the property boundary is the axis of a syncline which plunges northwest.

GEOLOGY OF GIANT MASCOT MINES

The rocks which occur on the Giant Mascot property have been identified as hornblendite, hornblendic pyroxenite, pyroxenite peridotite, diorite norite and dunite. Talcose alteration generally occurs along fractures and faults. The rocks mainly are pyroxenite with cores of peridotite and patches of hornblendic pyroxenite with a periphery of hornblendite. Generally the orebodies in the mine occur as disseminations, massive blocks, and vein type. The sulphides present are pyrrhotite, pentlandite and chalcopyrite. Chromite and magnetite also occur. The orebodies have a steep plunge to the north-west at approximately 65° , and occur close to contacts between diorite and pyroxenite, but in the pyroxenite and hornblendic pyroxenite. Massive sulphide zones of limited size occur in hornblendite. Faulting occurs in a northwesterly and northeasterly direction with slight movement in most cases. The dip of the faults varies from about 30° to 70° NW or NE.

The ratio of nickel to copper is approximately 3 : 1.

LOCAL GEOLOGY

The property is underlain by crystalline pelitic schists, pyroxenite, hornblendite, garnetite and quartz diorite. The lack of outcrop in the area makes rather difficult to map definite contacts. The pyroxenite generally grades into hornblendite and peridotite, and is a grey-green to black rock composed of bronzite, augite, hornblende, olivine and minor biotite. The pyroxenite and hornblendite vary in grain size from coarse to fine.

The quartz diorite is generally medium-grained and occurs as small stocks and apophyses cutting the various phases of ultramafic rocks and schist.

Garnetite occurs as sills in contact with the ultramafic and dioritic rocks.

On the north side of Gordon Creek between the elevations of 2400 and 4200 feet, outcrops of pyroxenite, granodiorite and sills of garnetite occur but definite contacts are difficult to locate as outcrops cover less than 20 per cent of the area.

Some masses of pyroxenite-hornblendite occur as bosses and massive displaced fragments trending northwesterly.

Pelitic schists occur on the north and northwest portion of the claims.

Nickel-Copper-bearing pyroxenite has been located near the south boundaries of D. C. N. #1 and D. C. N. #3 claims, on the adjoining property of Dalton Resources Ltd (N. P. L.)

EXPLORATION PROGRAMME

A systematic programme of soil sampling in conjunction with magnetometer and geological surveys will be necessary to elucidate structure and rock types as well as locate possible mineralized zones. Some road work will be necessary to provide adequate access to significant portions of the property. Where overburden is not deep a limited amount of bulldozer trenching will be required to check any geophysical and geochemical anomalies.

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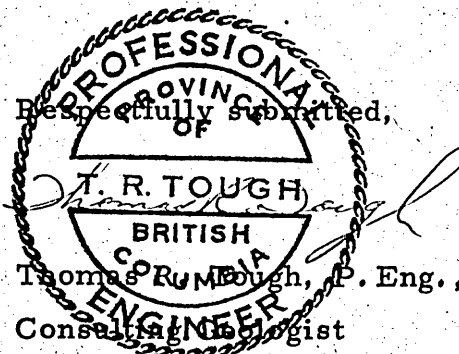
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ESTIMATE OF COSTS OF EXPLORATION PROGRAMME

Line cutting, 8 miles at \$150/line mile	\$1,200.00
Geochemical Survey, 400 samples at \$3.00/sample	\$1,200.00
Assaying 400 samples at \$1.65/sample	\$ 660.00
Magnetometer Survey 10 miles at \$100/line mile.	\$1,000.00
Geological Mapping	\$1,200.00
Engineering and Supervision	\$3,000.00
Travel and Living Expenses	\$1,000.00
Road construction and trenching	10,000.00
Contingencies	\$2,740.00
	<u>\$22,000.00</u>

It is estimated that the above programme should take approximately two months to complete.



March 26, 1972
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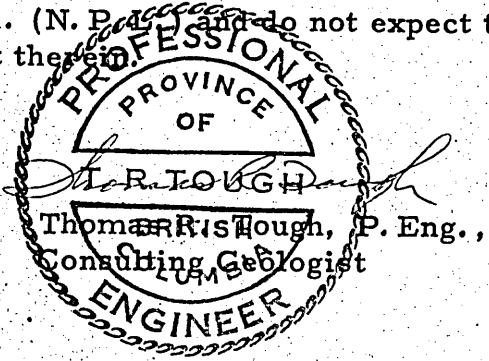
CERTIFICATE

I, Thomas R. Tough of the City of Vancouver, in the Province of British Columbia, do hereby certify:

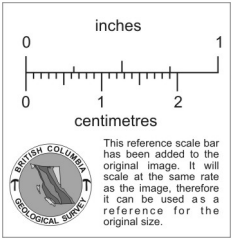
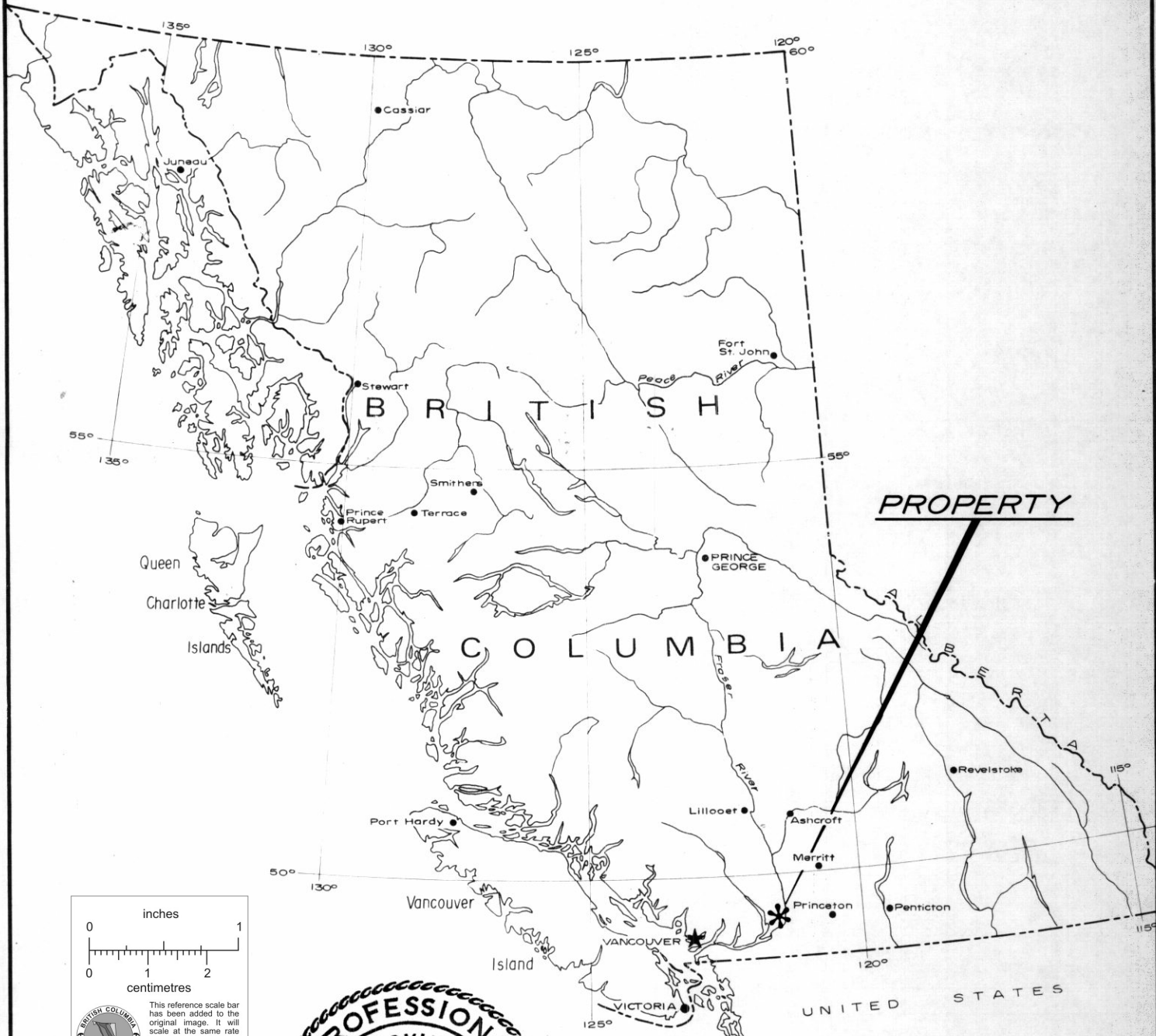
That I am a Consulting Geologist and an associate with T. R. Tough & Associates Ltd., with offices at 519-602 West Hastings Street, Vancouver 2, B. C.

I further certify that:

- 1. I am a graduate of the University of British Columbia (1965) and hold a B. Sc. degree in Geology.
- 2. I have been practising in my profession for the past six years and have been active in the mining industry for the past thirteen years.
- 3. I am registered with the Association of Professional Engineers of British Columbia.
- 4. This report is based on information obtained by the writer during an examination of the property on August 26, 1971 and from previous reports by F. J. Crossland, P. Eng., 1934, 1937, 1940; H. M. Wright, P. Eng., 1935; H. C. Horwood, Geological Survey of Canada Paper - 36 - 4, 1936 and Memoir 190, 1936; A. J. Gaul, P. Eng - 1938, and J. W. H. Monger, Geological Survey of Canada Paper 69 - 47, 1970.
- 5. I have no direct or indirect interest whatsoever in the property described herein, nor in the securities of Gold River Mines Ltd. (N. P. 1000000) and do not expect to receive any interest therefrom.

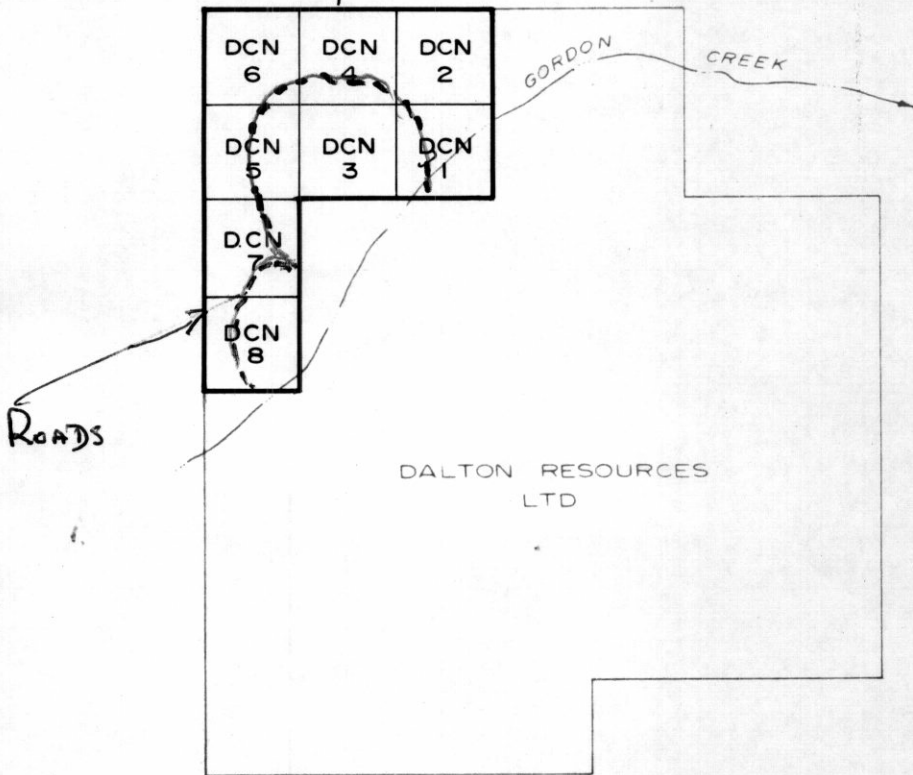


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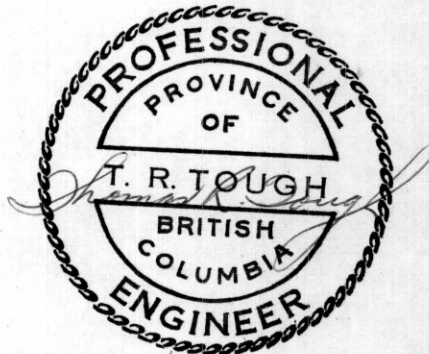
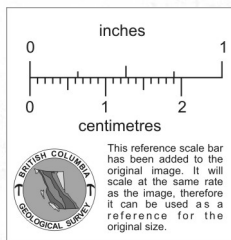


T.R. TOUGH & ASSOCIATES LTD.
 GOLD RIVER MINES LTD. (N.P.L.)
LOCATION MAP
 D.C.N. 1-8 CLAIMS
 YALE AREA
 NEW WESTMINSTER M.D., B.C.
 SCALE
 1" = 137 MILES

PROPERTY



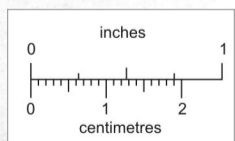
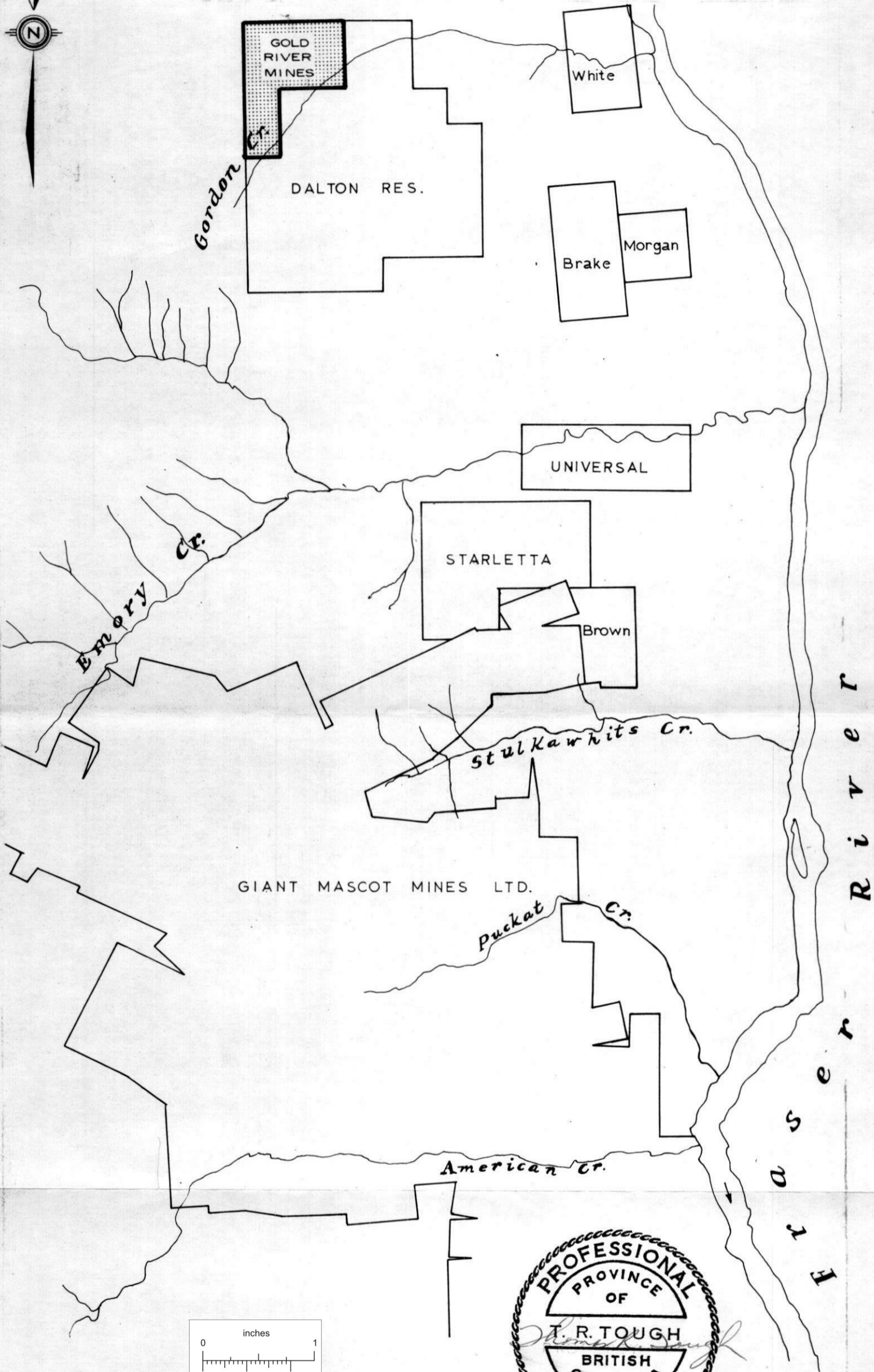
DALTON RESOURCES LTD



T. R. TOUGH & ASSOCIATES LTD
GOLD RIVER MINES LTD. (N.P.L.)
CLAIMS MAP
D.C.N. 1-8 CLAIMS

YALE AREA
NEW WESTMINSTER MD, BC





This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.



T. R. TOUGH & ASSOCIATES LTD.
GOLD RIVER MINES LTD. (N.P.L.)
PROPERTY MAP
D.C.N. 1-8 CLAIMS
YALE AREA.
NEW WESTMINSTER M.D., B.C.

