

GEOLOGICAL REPORT
ON THE
MINERAL HILL PROPERTY
Omineca Mining Division
British Columbia

for
DAFREY RESOURCES INC.

by
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Victoria, B.C.

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SUMMARY

Dafrey Resources Inc. holds an option to purchase 12 mineral claims known as the Mineral Hill property in the Omineca Mining Division of west-central British Columbia. The property is 14 km north of Houston and is accessible by road.

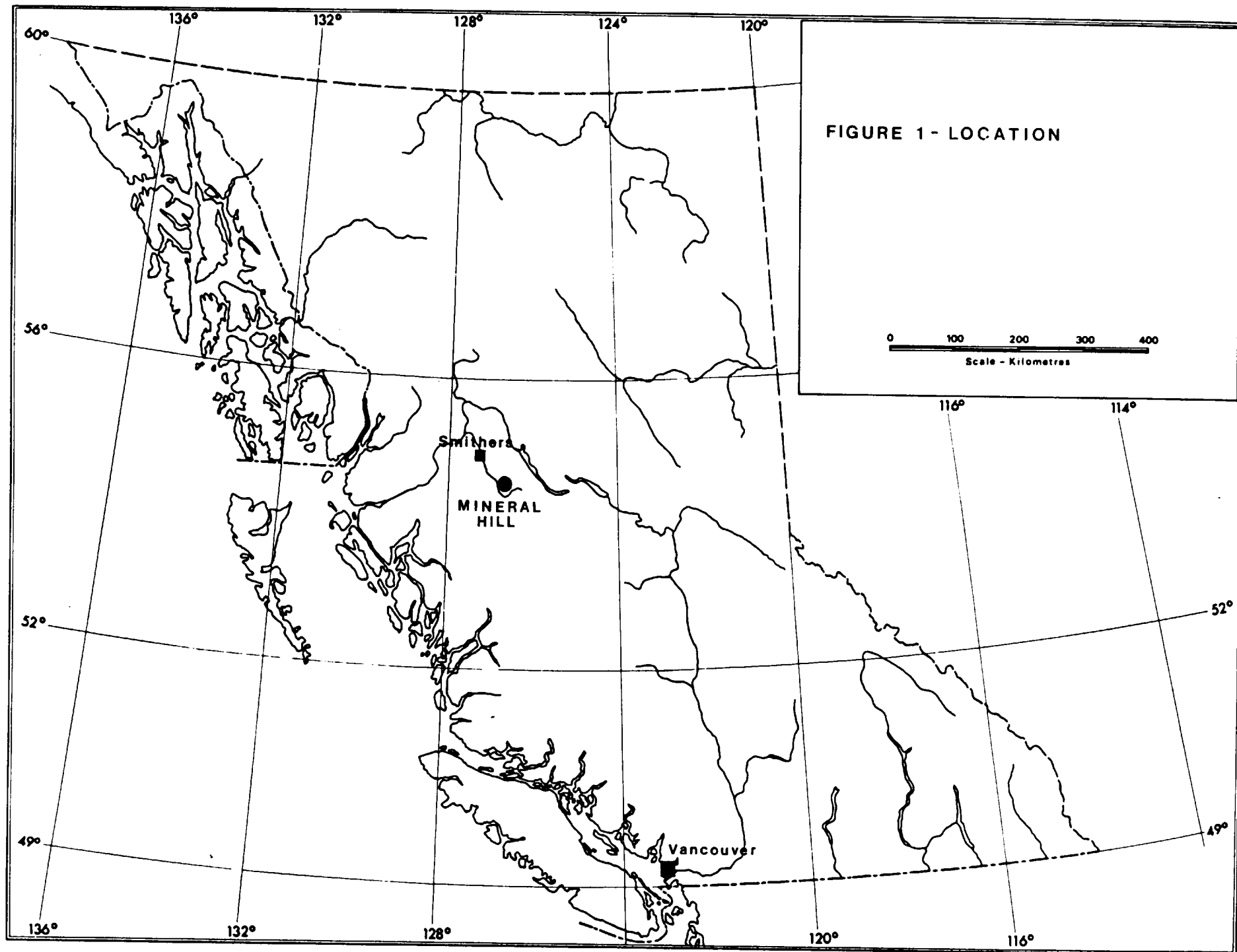
Exploratory work on the Mineral Hill property over the past 20 years has included geological, geochemical and geophysical surveys and considerable percussion and diamond drilling. Virtually all of this work was directed to the definition of molybdenum-copper potential of the property.

Mineral Hill is underlain by a northwest-striking sequence of early Jurassic Hazelton Group volcanic flows and pyroclastic rocks and lesser intercalated sediments cut by five intrusive types of late Cretaceous and early Tertiary age. Volcanic and sedimentary rocks have been converted to biotite hornfels over a broad area marginal to granitic intrusions in the central part of the property. Widespread Molybdenite mineralization with grades of 0.02 to 0.10% is contained in quartz veinlets and fractures developed in hornfels and granitic rocks. Silver-lead-zinc mineralization in quartz veins is generally marginal to the zones of molybdenum and lesser copper mineralization.

Four principal zones of molybdenite mineralization are known in the central part of the property. One of these, the Quartz Breccia Zone, contains locally significant silver values associated with tetrahedrite and argentiferous galena. Only limited investigation of precious metals potential was

undertaken during earlier exploratory work on the property and a two phase program is recommended to test this potential.

Phase one work is recommended to include the cleaning out and sampling of old trenches in the Quartz Breccia Zone at an estimated cost of \$18,000. Contingent on favourable results being obtained from this initial phase, Phase two would include diamond drilling estimated to cost \$61,000.



INTRODUCTION

Dafrey Resources Inc. holds an option to purchase 12 mineral claims comprising 62 units north of Houston in west-central British Columbia.

This report, prepared at the request of Dafrey Resources Inc. is based on numerous unpublished reports and maps provided the writer by Mr. Lorne Warren, one of the vendors of the property, on several visits to the Mineral Hill property a number of years ago and on the writer's general knowledge of the area.

References to much of the information used in the preparation of the report are listed in the appropriate section of the report.

LOCATION AND ACCESS

The Mineral Hill property is situated 14 km north of Houston in west-central British Columbia (Figure 1). Geographic centre of the claims area is at latitude 54°31' North and longitude 126°43' West in NTS Map-area 93L/10E.

Access to the central part of the property is by 4 km of dirt road east off highway 16 19.5 km north of Houston (Figures 2 and 3). The northern CN rail line follows the Bulkley River 7 km west of the property and a Hydro transmission line and natural gas pipeline parallel highway 16.

The town of Smithers, 45 km north of the claims, has daily scheduled airline service.

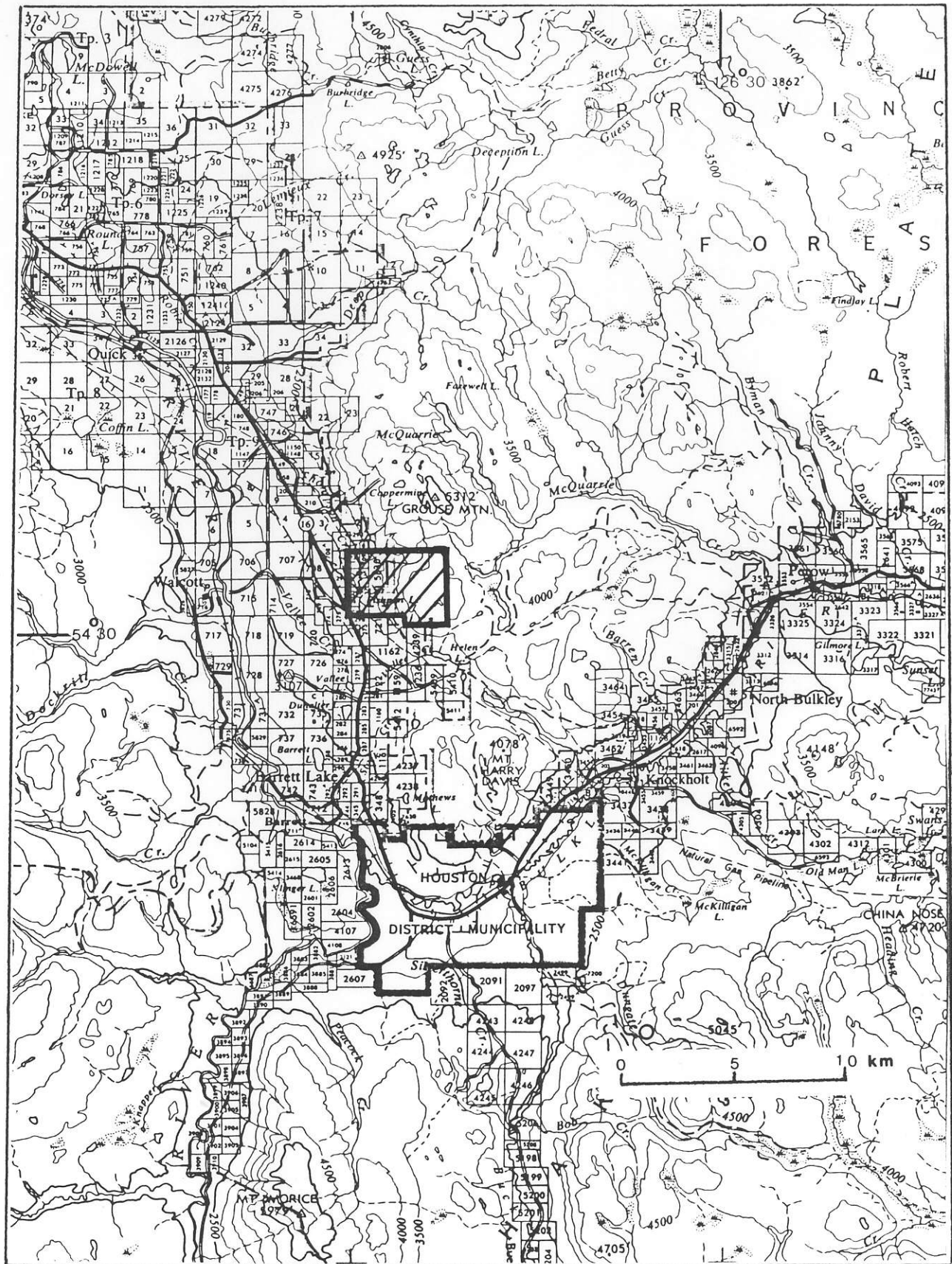


FIGURE 2- LOCATION - MINERAL HILL PROPERTY

MINERAL PROPERTY

The Mineral Hill property is comprised of 8 Modified Grid mineral claims including 58 units and 4 two post mineral claims in the Omineca Mining Division (Figure 3). These are owned jointly by L.B. Warren and P. Huber and are subject to an option agreement with Dafrey Resources Inc.

Details of the claims are as follows:

<u>Name of Claim</u>	<u>Units</u>	<u>Record Number</u>	<u>Expiry Date</u>
Mineral Hill	16	206	January 22, 1989
" " A	2	397	August 4, 1989
" " B	2	398	" "
" " C	4	1641	March 12, 1988
" " D	2	1642	" "
" " E	4	1643	" "
" " F	12	5215	June 14, 1988
" " G	16	5216	" "
Pete 1	1	4956	January 7, 1988
Pete 2	1	4955	" "
Pete 3	1	4953	" "
Pete 4	1	4954	" "

PHYSICAL SETTING

Mineral Hill is west of the Bulkley River at the south end of the Babine Range (Figure 2). Elevations on the property range from 725 metres in the northwest claims to 1360 metres at the summit of Mineral Hill near the eastern property boundary (Figure 3). The topographic gradient is relatively gentle to about 1060 metres elevation, above which steeper slopes and cliffs in the southeastern part of the property are prevalent to 1200 metres elevation. The area around the summit is plateau-like with small hills broken by swamps and small lakes.

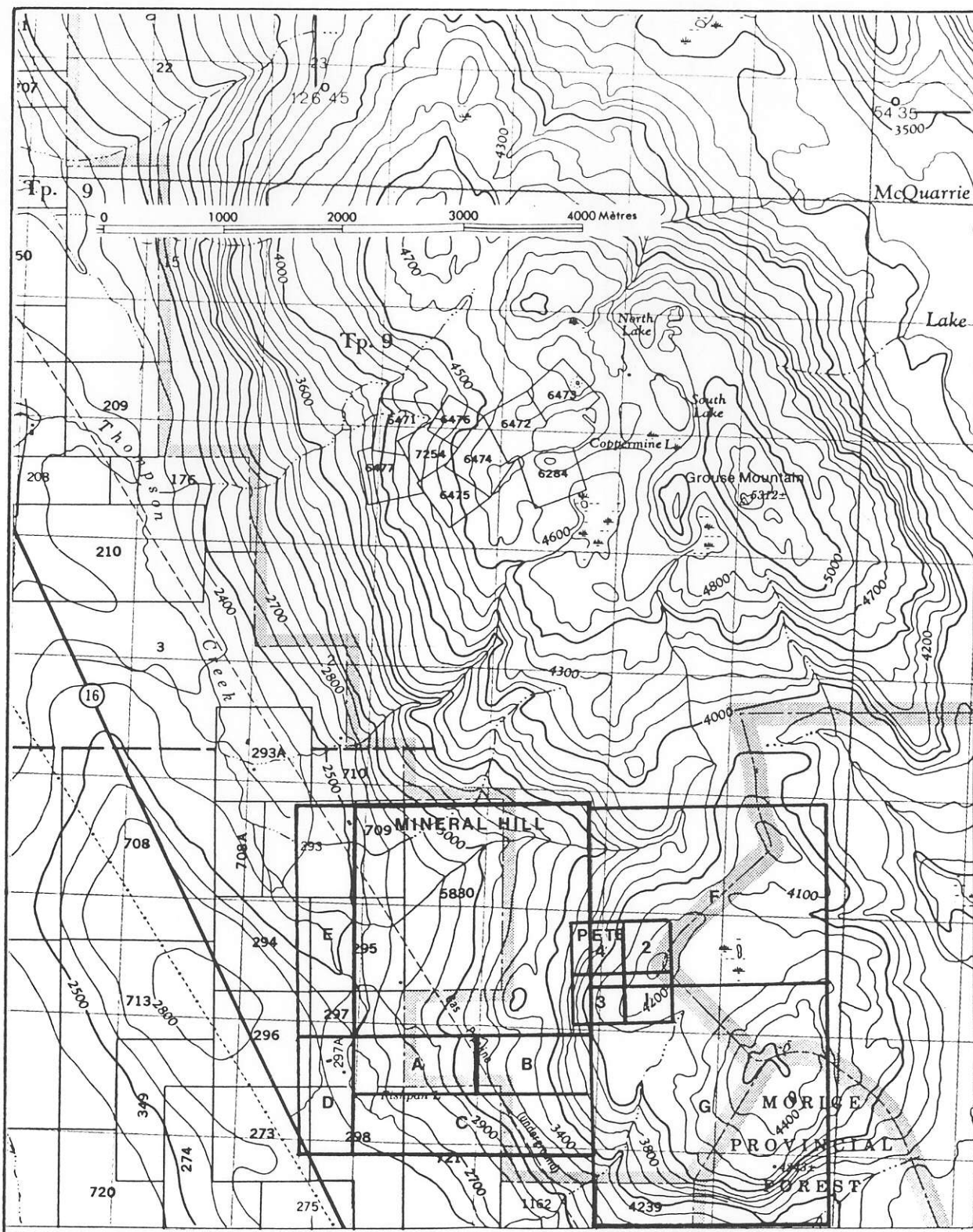


FIGURE 3 - MINERAL HILL CLAIMS

Tree cover is broken by grassy slopes and open meadows at lower elevations. Bedrock exposures are restricted to steeper slopes and larger drainages.

HISTORY

Earliest work on Mineral Hill was apparently carried out prior to 1914 when a 5 metre shaft was sunk on a narrow silver-lead-zinc-copper-gold bearing quartz vein. Additional veins discovered in the 1920's were explored by open cuts and short adits.

In the 1960's the property was investigated for molybdenite mineralization by a number of companies and work included geological, geochemical and geophysical surveys, trenching, 3500 metres of diamond drilling in 30 holes and 102 percussion drill holes totalling 2865 metres. Between 1976 and 1978 Granby Mining Corporation completed soil geochemical surveys, magnetometer and IP surveys, 3 diamond drill holes totalling 902 metres and 19 percussion holes totalling 1200 metres. Noranda Exploration Company Ltd. carried out prospecting, VLF-EM and IP surveys, soil, rock and stream sediment geochemistry between 1981 and 1983.

The property was returned to the original vendors in 1984 and an option agreement with Dafrey Resources Inc. was entered into in mid-1985.

REGIONAL GEOLOGICAL SETTING AND MINERAL DEPOSITS

The Mineral Hill property is situated within the Hazelton

Trough of the Intermontane tectonic belt, an area underlain principally by Mesozoic volcanic and sedimentary rocks intruded by a variety of granitic rocks ranging in age from early Jurassic to Tertiary. Flat-lying early Tertiary volcanic rocks are extensive south of Houston.

In the Smithers-Houston area, northwest trending lower Jurassic Hazelton Group subaerial to subaqueous red and green pyroclastic and flow rocks with intercalated sediments predominate. These are intruded by coeval Topley granitic rocks and by numerous granitic and lesser gabbroic stocks, dykes and plugs of late Cretaceous and Tertiary age.

Structure of the region is dominated by northwest-striking fault structures along which vertical movement has been most prevalent.

A variety of mineral deposit types have been recognized in the general area, most common of which are polymetallic vein and replacement deposits developed in Hazelton Group layered rocks commonly adjacent to younger granitic intrusions. The region is also well known for porphyry copper and molybdenum deposits of several styles and ages (Carter, 1981). Not as well defined are volcanogenic massive sulfide deposits, of which only a few have been recognized to date. Copper-zinc mineralization on Grouse Mountain 5 km north of Mineral Hill has massive sulfide affinities although cross-cutting relationships are evident.

Silver-copper mineralization of the Equity Silver type,

40 km southeast of Houston, is a somewhat unique style of mineralization in the area. This deposit also has massive sulfide characteristics although a replacement origin is currently favoured.

PROPERTY GEOLOGY AND MINERALIZATION

The Mineral Hill property is underlain by a northwest-striking sequence of andesitic flow rocks and lesser pyroclastics with intercalated tuffs and siltstones. Possibly Tertiary age trachytic volcanic rocks are reported from the summit of Mineral Hill by Gill and Myers (1984).

Layered rocks are cut by five recognizable intrusive types. Near the south boundary of the Mineral Hill claim (Figure 3), dykes of aplite and fine grained monzonite are marginal to an elliptical east trending porphyritic granite stock measuring 500 by 300 metres. Age of intrusive activity in this area is 69.5 m.y. (Carter, 1981). Fine grained tuffs and sediments marginal to these intrusions have been converted to biotite hornfels over a broad area.

The other two intrusive types occur in the eastern claims near the summit of Mineral Hill and include medium grained diorites and a sill-like mass of basic feldspar porphyry which extends southeast from Grouse Mountain and is similar to the basic intrusions marginal to the Equity Silver property.

Molybdenum and lesser copper mineralization was the main target for exploratory work in the 1960's and 1970's. Better

grades (+0.10% MoS₂) were found to be associated with closely spaced quartz veinlets and fractures in hornfelsed rocks adjacent to the alaskite dyke in the southern part of the Mineral Hill claim. Silver-lead-zinc mineralization occurs in larger quartz veins marginal to this zone and includes some of the older workings.

Three other molybdenite zones have been investigated on the property. These include a zone in the eastern part of the porphyritic granite stock which where several percussion holes and one diamond drill hole by Granby (James,1979) intersected values of less than 0.05% MoS₂. An area of widespread hornfels in the northeast part of the Mineral Hill claim was tested by 12 percussion holes which yielded generally low molybdenite values (James,1979).

A zone 1000 metres north of the alaskite zone and referred to as the North α Quartz Breccia Zone received a fair amount of attention for copper-molybdenum mineralization in the late 1960's. A number of trenches were excavated and the zone was further tested by several drill holes and 75 percussion holes. The zone is developed in hornfelsed volcanic and sedimentary rocks and consists of variable sized fragments of several cm to more than 1 metre cemented by vuggy to massive quartz. The zone trends northwest across a major drainage (possibly a northeast fault) in the northern part of the Mineral Hill claim and has surface dimensions of 450 by 240 metres(Sharp,1968).

Principal sulfide minerals in quartz veins and brecciated areas

include chalcopyrite, pyrite, pyrrhotite, molybdenite and tetrahedrite and galena. A younger quartz vein system with tetrahedrite and galena has been recognized (Sharp,1968).

The general tenor of molybdenite mineralization in this zone, based on 1960's work (Sharp,1968) and later work by Granby (James,1979) is in the order of 0.05% with associated low copper values.

One 1960's angle drill hole (No. 16) intersected a narrow quartz vein with tetrahedrite which assayed 135.8 oz/ton silver. This hole was in the southern part of the Quartz Breccia Zone; hole 14 in the northern part of the zone yielded low but consistent silver values ranging from 0.06 to 3.7 oz/ton over the length of the hole. This is apparently the only hole for which complete silver analysis was carried out.

The geometry of this zone is complex - geophysical surveys are partially useful inasmuch as the zone appears to occupy a zone of lower magnetic susceptibility which includes some chargeability highs as indicated by IP surveys.

Soil geochemistry is of little value inasmuch as overburden depths averaging 8 metres are indicated by previous drilling programs.

Other quartz veins on the property are known to host precious metals mineralization. Many of these were previously explored by adits, shafts and open cuts.

CONCLUSIONS

Various styles and types of metallic mineralization have been identified by exploratory work to date on the Mineral Hill property. Much of this work over the past 20 years has been directed to molybdenum-copper mineralization and widespread but currently uneconomic concentrations of molybdenite have been identified.

Little work has been done to define precious metals mineralization. Encouraging silver values have been obtained from limited diamond drilling of the Quartz Breccia Zone in the north part of the Mineral Hill claim. This zone has also been tested by 75 rotary percussion holes; unfortunately, samples were analyzed for only copper and molybdenum. While records of this work are available, sample rejects or pulps have been lost. Older drill cores are only partially intact.

A limited program to assess the precious metals potential of the Quartz Breccia Zone is recommended.

RECOMMENDED PROGRAM

It is recommended that an initial phase of work consist of cleaning out old trenches in the Quartz Breccia Zone by utilizing a backhoe. Bedrock exposed by this program should be sampled in detail with samples analyzed for silver, gold, copper, lead zinc and molybdenum. Trench exposures will also provide a better understanding of the nature of this zone and should be mapped in detail. Pending favourable results, phase two would include diamond drilling in areas where silver mineralization is indicated.

COST ESTIMATE

Phase I

Backhoe trenching	\$7,500.00
Sample analyses	\$3,000.00
Supervision, engineering	\$5,000.00
Contingencies	<u>\$2,500.00</u>
Total	\$18,000.00

Phase II

Diamond Drilling - 600 metres @ \$70/metre	\$42,000.00
Sample analyses	\$6,000.00
Supervision, engineering	\$5,000.00
Contingencies	<u>\$8,000.00</u>
Total	\$61,000.00

N.C. Carter, PH.D. P.Eng.

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- Tipper, H.W. and Richards, T.A. (1976): Jurassic Stratigraphy and History of North-Central British Columbia; Geological Survey of Canada Bulletin 270

CERTIFICATE

I, NICHOLAS C. CARTER, DO HEREBY CERTIFY THAT:

1. I am a Consulting Geologist resident at 1410 Wende Road, Victoria, British Columbia.
2. I am a graduate of the University of New Brunswick with B.Sc.(1960), Michigan Technological University with M.S. (1962), and the University of British Columbia with Ph.D.(1974).
3. I am a registered Professional Engineer in the Association of Professional Engineers of British Columbia.
4. I have practised my profession in eastern and western Canada and in parts of the United States over the past 24 years.
5. This report is based on unpublished reports and maps provided by one of the vendors of the property, on several visits to the property a number of years ago, and on my background knowledge of the area.
6. I have no direct or indirect interest in the Mineral Hill property or in Dafrey Resources Inc.
7. Permission is hereby granted to Dafrey Resources Inc. to use this report in support of a Statement of Material Fact or any other document to be submitted to the Office of the Superintendent of Brokers and the Vancouver Stock Exchange.

N.C. Carter, Ph.D. P.Eng.

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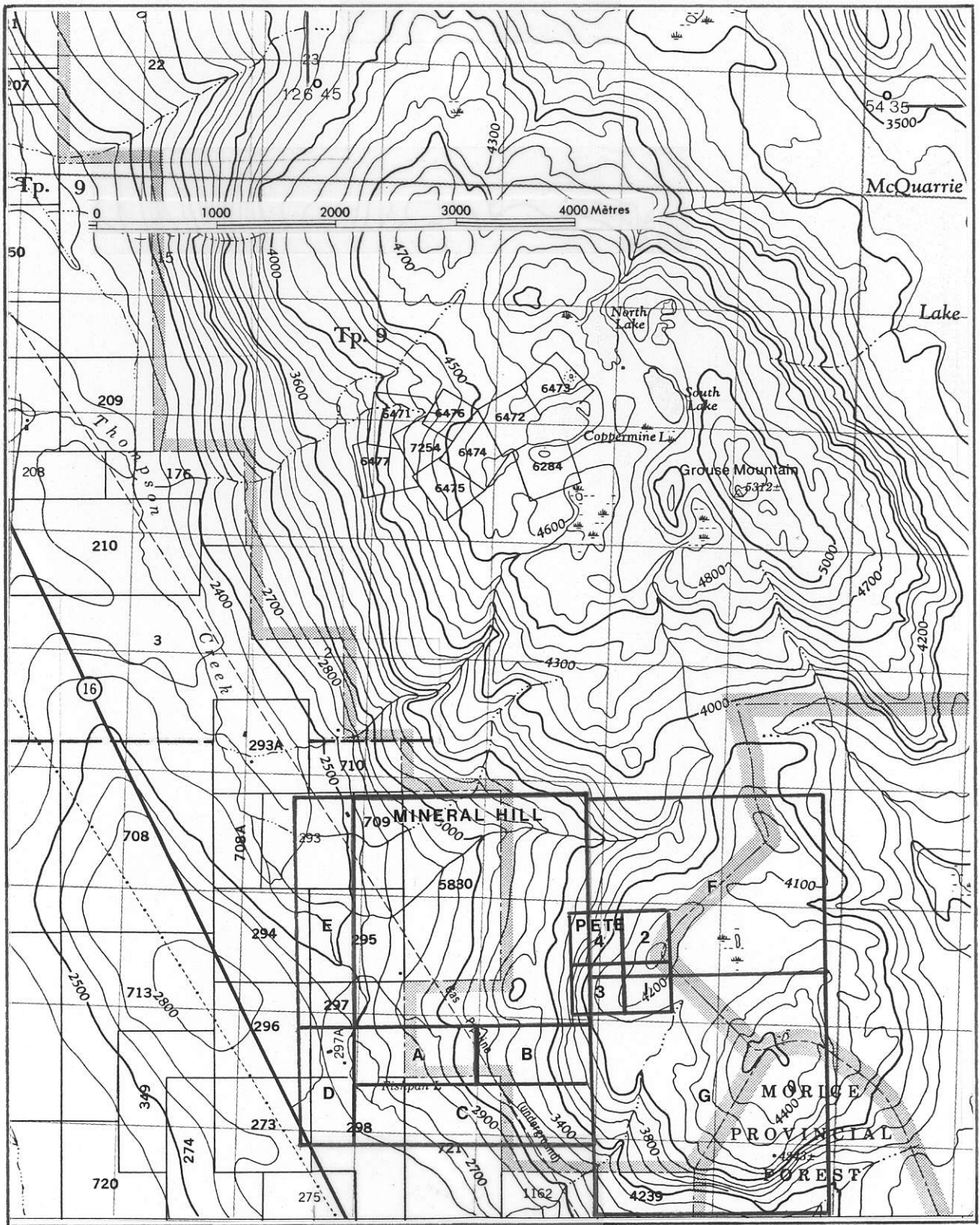
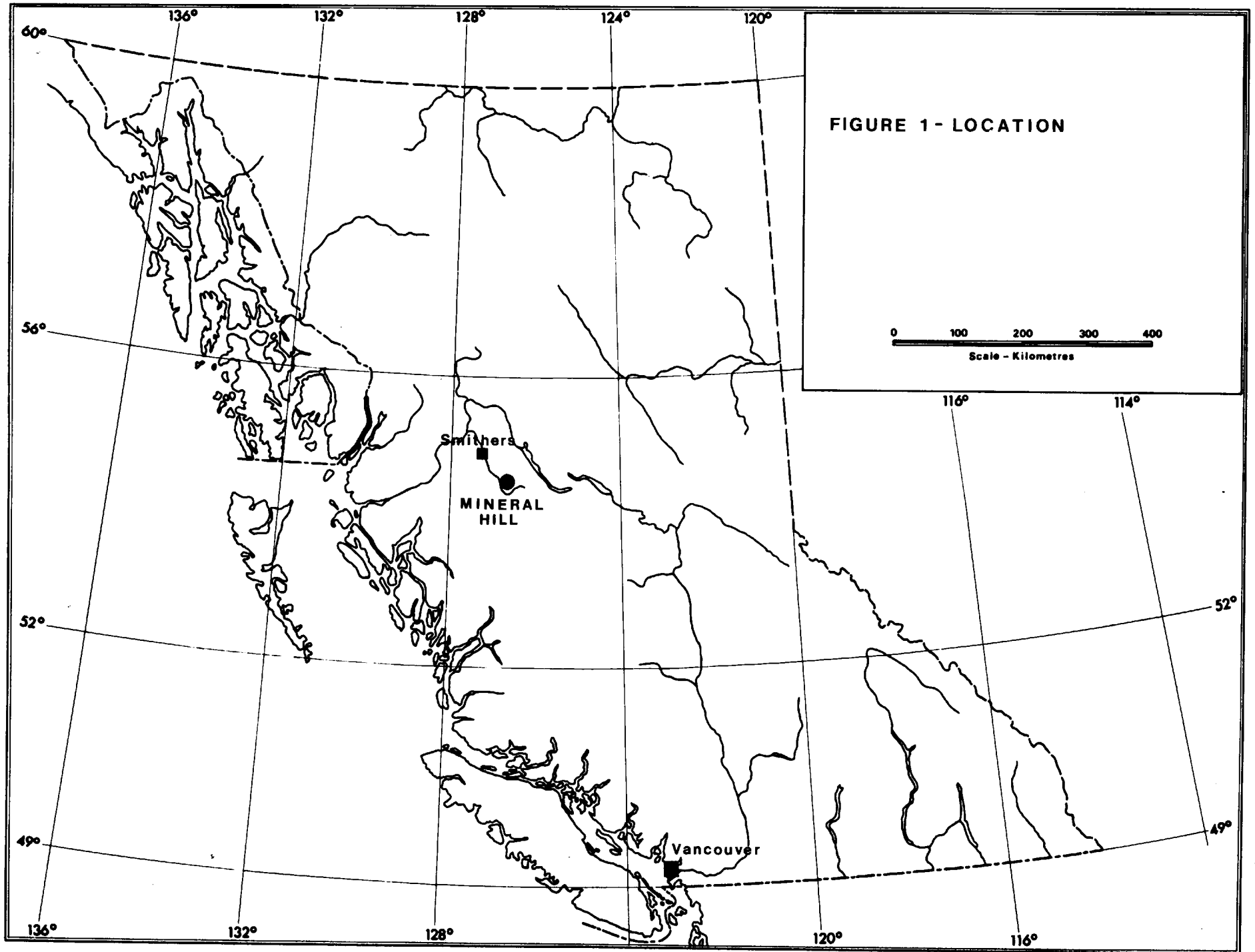


FIGURE 3 - MINERAL HILL CLAIMS



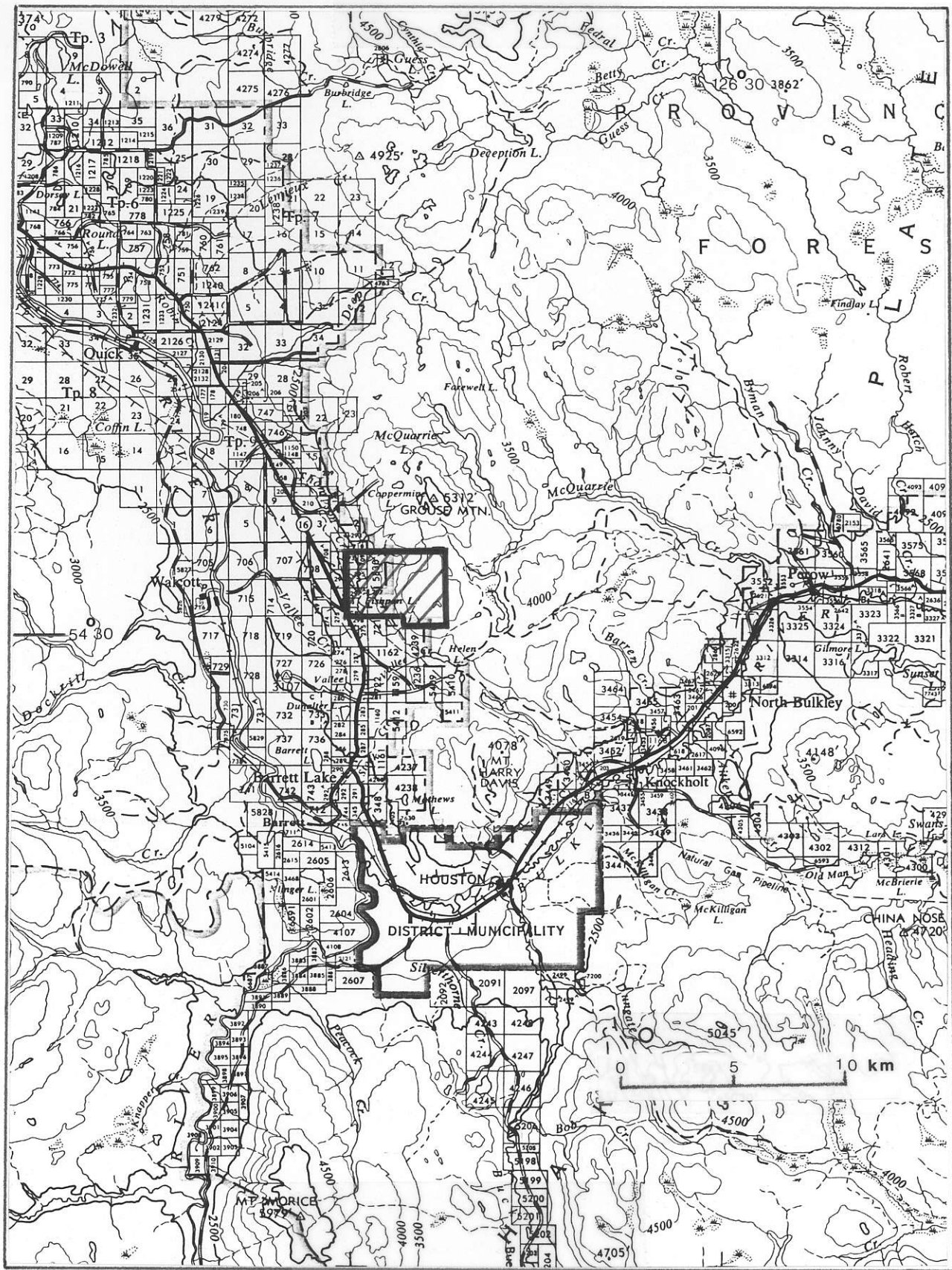


FIGURE 2- LOCATION - MINERAL HILL PROPERTY