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GEOLOGICAL REPORT

on the

MIKE PORPHYRY COPPER PROSPECT

Dungate Creek - Houston Area
Omineca Mining Division
British Columbia

Latitude 54 22' North
Longitude 126 33' West
NTS 93L/7E

for

INSULAR EXPLORATIONS LTD.

by

N.C. CARTER, PH.D. P.ENG.
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SUMMARY

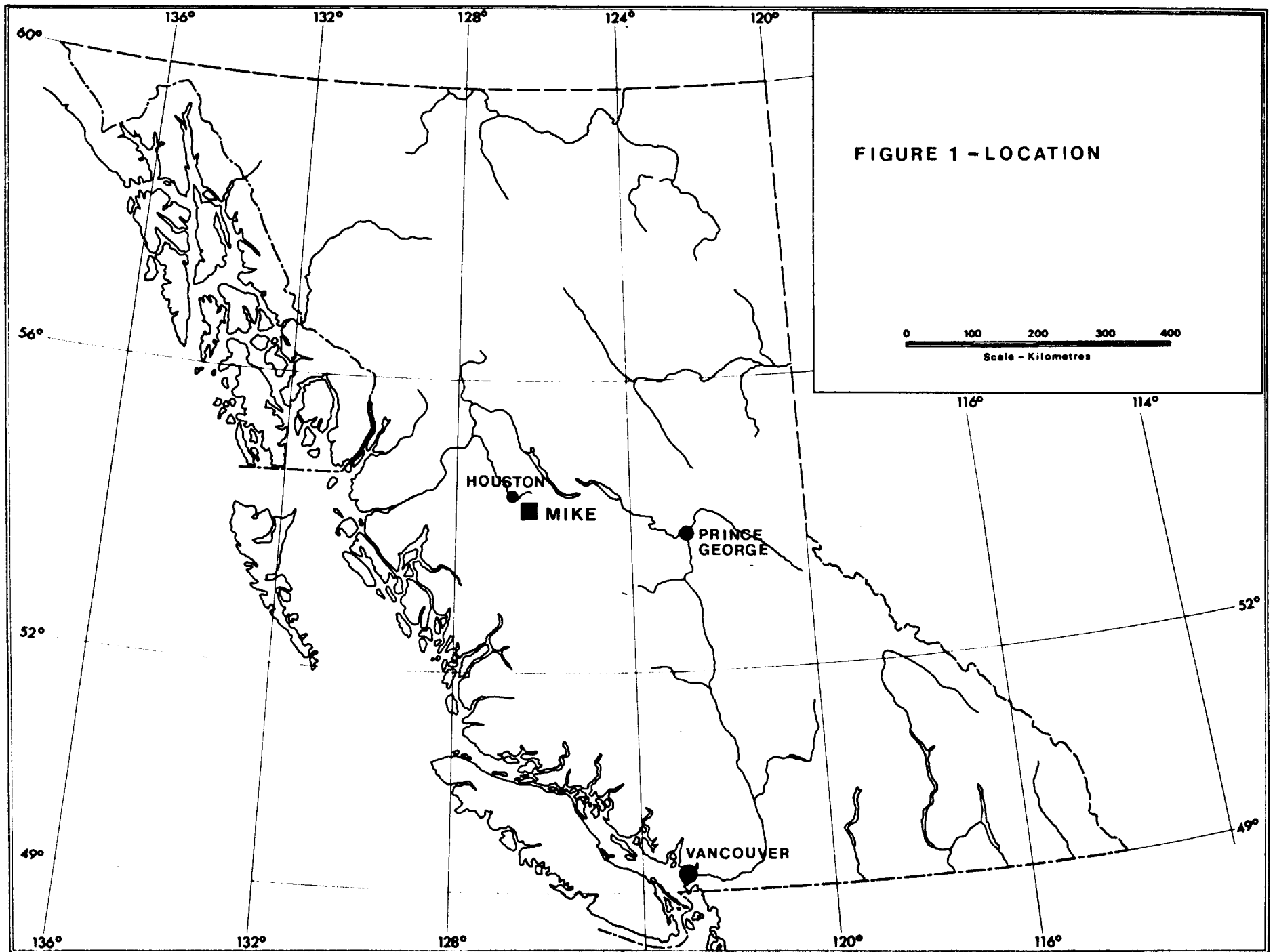
Insular Explorations Ltd. owns the MIKE porphyry copper prospect on Dungeness Creek 7 km southeast of Houston in west-central British Columbia.

The property, originally located in the early 1960's, was tested by geological, geophysical and geochemical surveys, bulldozer trenching and diamond and percussion drilling between 1965 and 1976. This work identified geological features and geophysical signatures similar to those associated with significant porphyry deposits elsewhere in west-central British Columbia.

Copper and molybdenum mineralization on the Dungeness Creek property is associated with a biotite-quartz-feldspar porphyry stock of Tertiary age. Mineralization is best developed in steeply dipping fractures near the contacts of the stock. There is little information regarding precious metals values other than the results of composites of a few 1965 surface samples which yielded some gold and silver values.

Past drilling on the property has consisted principally of vertical percussion holes which returned mainly low copper values. Better grades, including a 6 metre section of 0.28% copper, were obtained from inclined diamond drill holes.

Two IP chargeability anomalies occur along the northern and southern contacts of the porphyry stock. Only the northern anomaly has been adequately investigated by previous drilling and it is recommended that the southern chargeability anomaly be further tested by two inclined diamond drill holes at an estimated cost of \$50,000.



INTRODUCTION

This report on the MIKE porphyry copper prospect on Dungeness Creek, prepared at the request of Insular Explorations Ltd., is based on records of previous exploration work on the property between 1965 and 1976 which are on public record and are referenced at the end of this report. The writer has an extensive background knowledge of porphyry deposits in west-central British Columbia and personally examined the Dungeness Creek property in September of 1969.

LOCATION AND ACCESS

The MIKE mineral claim, which includes the Dungeness Creek porphyry copper prospect, is situated 7 km southeast of Houston in west-central British Columbia (Figure 1). The geographic centre of the property is at latitude 54 22' North and longitude 126 33' West in NTS map-area 93L/7E.

Access to the central part of the claim is by 2 km of branch road which extends east from the Equity Silver mine access road 7 km southwest of Houston (Figure 2).

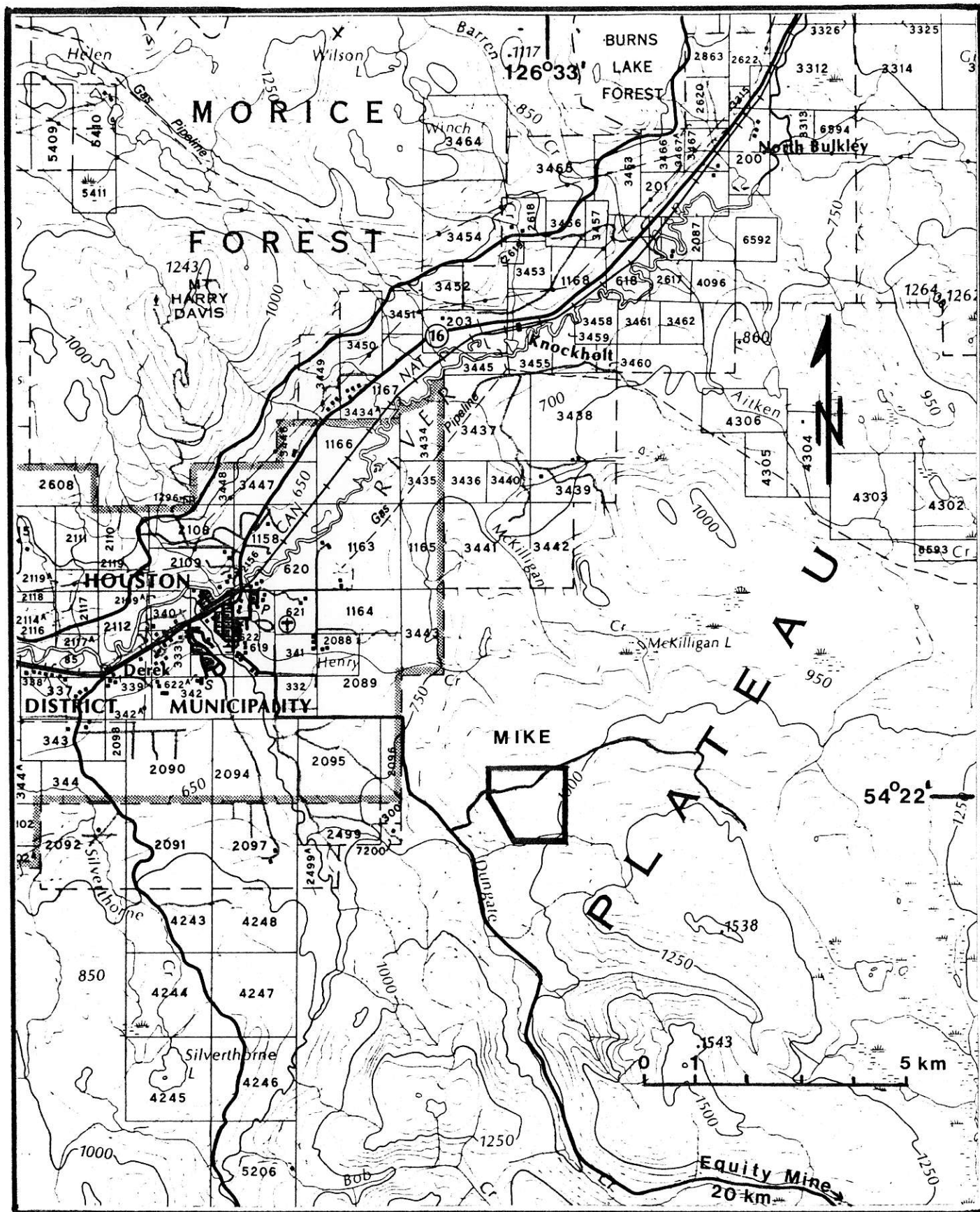


FIGURE 2 - LOCATION - MIKE CLAIM-DUNGATE CREEK

MINERAL PROPERTY

The Dungate Creek property consists of the MIKE Modified Grid (4 post) mineral claim of approximately 9 mineral claim units in the Omineca Mining Division. The mineral claim, located by R.R. Blusson in May of 1986, actually consists of approximately 8 units (Figure 3), probably due to the fact that 2-post claims were in good standing when the claim was originally located. Details of the claim are as follows:

<u>Claim Name</u>	<u>Record Number</u>	<u>Units</u>	<u>Expiry Date</u>
MIKE	239176	9	June 9, 1993

The MIKE claim is owned outright by Insular Explorations Ltd., subject to a production royalty payable to the vendor.

PHYSICAL SETTING

The Dungate Creek - Buck Creek area features relatively gentle topography typical of the northwestern part of the Nechako Plateau. The MIKE claim covers a flat, partially tree-covered bench along which elevations range from 900 to 1000 metres above sea level (Figure 3). Prominent bluffs, underlain by Tertiary volcanic rocks, occur immediately east and south of the property boundary.

Bedrock is exposed only in a few road cuts and in 1960's bulldozer trenches in the northern part of the MIKE claim. Glacial till covers most of the property; records of previous

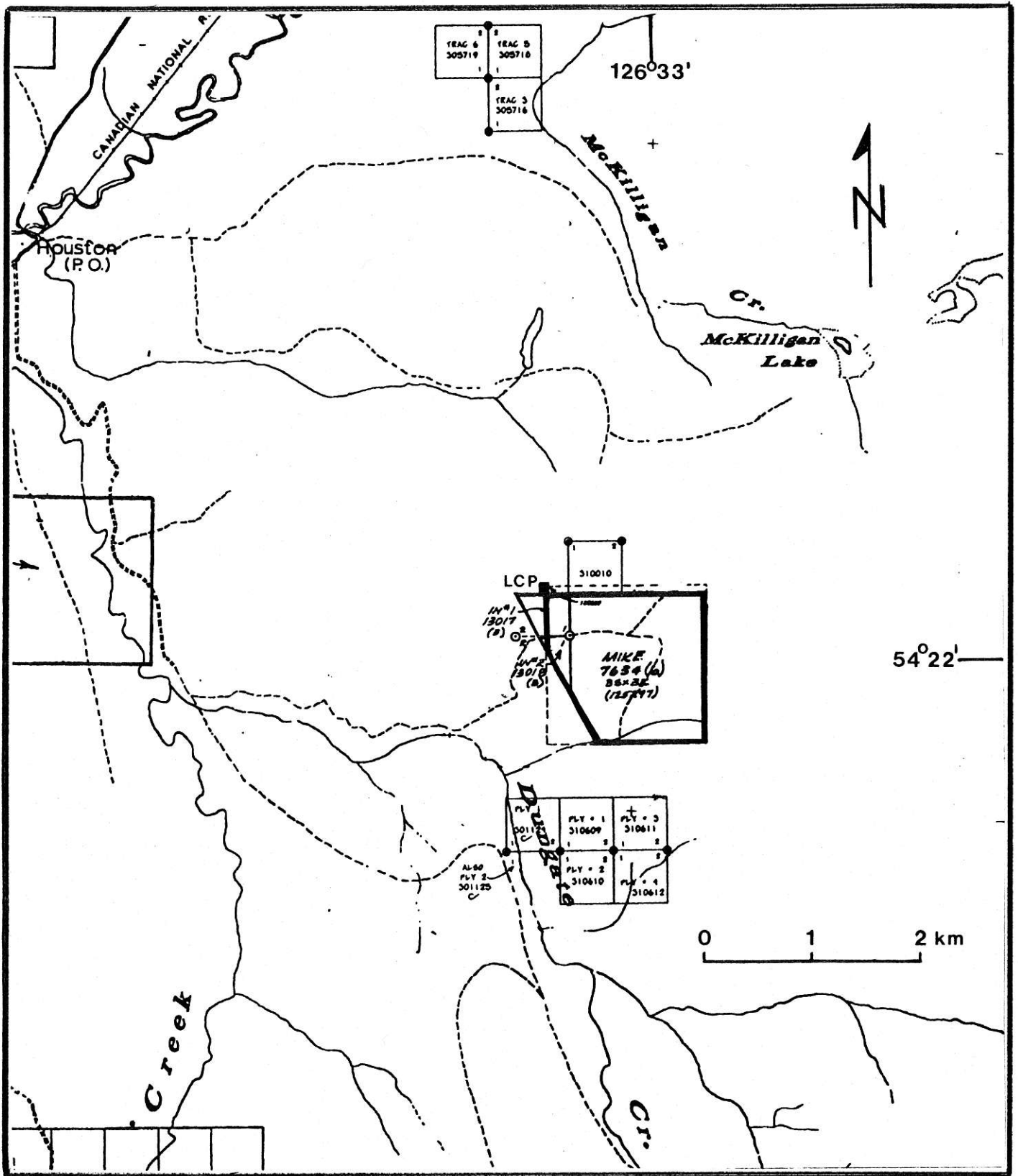


FIGURE 3 - MIKE CLAIM

drilling indicate overburden thicknesses of between 3 and 24 metres with an overall average of 6 metres.

PREVIOUS WORK

Copper and molybdenum mineralization was first discovered in the area of the present claim in the early 1960's. Southwest Potash Corporation optioned the property in 1965 and completed geophysical and geochemical surveys and 900 metres of bulldozer trenching. Normont Copper Ltd. continued exploratory work which included Induced Polarization surveys prior to negotiating an option with Noranda Exploration Company, Limited in 1967. Noranda completed 7 inclined diamond drill holes totalling 610 metres in 1968.

The property lay dormant until 1974 when Canadian Superior Exploration Limited conducted geochemical and alteration studies and completed 6 vertical percussion drill holes totalling 550 metres. Cities Service Minerals Corporation held the property in 1975 and 1976 during which time one inclined 332 metre diamond drill hole and 10 percussion drill holes totalling 870 metres were completed.

Only limited exploratory work has been undertaken since the mid-1970's.

REGIONAL GEOLOGICAL SETTING

The Houston - Smithers area of west-central British Columbia is within the Intermontane tectonic belt. Jurassic Hazelton Group calc-alkaline volcanics and sediments, the oldest rocks exposed in the area, are locally overlain by early Cretaceous felsic volcanics and together comprise what is referred to as Stikine terrane. Older sequences are intruded by coeval granitic rocks of the Topley intrusions and all sequences are cut by late Cretaceous and early Tertiary granitic plutons.

The older Topley intrusions occur along the axis of the Skeena Arch, a major northeast trending transverse structure which marks the southern limits of the Bowser Basin and its contained clastic sedimentary rocks of middle and late Jurassic age. Skeena Arch, which extends through the Dungate Creek area, also marks the northern limits of areally extensive, early to mid-Tertiary continental volcanic rocks which overlie older Mesozoic assemblages. The Buck Creek Tertiary outlier (Church, 1990), the northwestern margin of which is immediately south and east of the MIKE claim, is the northern extension of these Tertiary volcanics.

The area is well known for the number and variety of mineral deposit types. Perhaps best known are porphyry deposits and prospects which are associated with granitic

plutons of late Cretaceous (Bulkley intrusions - 70-80 million years) and Tertiary age (Babine and Nanika intrusions - 50 million years) which intrude Mesozoic volcanic and sedimentary rocks. The porphyry intrusions take the form of small stocks, plugs, dykes and dyke swarms of about 1 km in diameter. The intrusions range in composition from quartz diorite to granite and several intrusive phases are evident in most deposits.

Porphyry deposits in this part of British Columbia are typical of the classic or stock-related type. Potassic, phyllic and propylitic silicate alteration phases are developed in annular shells around the porphyry intrusions. Sulphide minerals occur within and adjacent to intrusions as disseminations, fracture fillings and in quartz veinlets and display a lateral zoning with an inner, weakly mineralized zone surrounded successively by molybdenum and copper zones and a pyrite-rich halo or shell.

Secondary or supergene copper mineralization is known at several porphyry deposits in west-central British Columbia. Best known examples are Bell Copper and Berg where supergene effects are evident to depths of between 50 and 135 metres below present surface levels. In both cases, secondary chalcocite enhances primary copper grades by 15 - 25%.

Porphyry deposits in the Babine Lake area, 80 km north

of Dungeness Creek, have been significant contributors to the local economy. More than 125 million tonnes milled from the Granisle and Bell open pit mines between 1966 and 1991 had recovered grades of 0.40% copper and 0.15 - 0.20 g/t gold.

This deposit type in west-central British Columbia has attracted renewed attention in response to recent drilling results on the Huckleberry porphyry copper prospect which include grades of 0.80% copper over significant intervals. The Huckleberry property is some 80 km southwest of Dungeness Creek.

PROPERTY GEOLOGY, MINERALIZATION, GEOCHEMISTRY AND GEOPHYSICS

Geology

The following comments are based on a report by Church (1990) and on the writer's observations from an examination of the property in September of 1969.

As noted previously, natural bedrock exposures are rare within the claim area. Hazelton Group volcanic flows and fragmental rocks, ranging in composition from basalt to dacite, underlie much of the property. These are intruded by an elongate 1200 x 400 metre granitic stock in the northwestern part of the claim (Figure 4). Only the western and southeastern limits of the stock are exposed in road cuts and bulldozer trenches and the overall outline of the

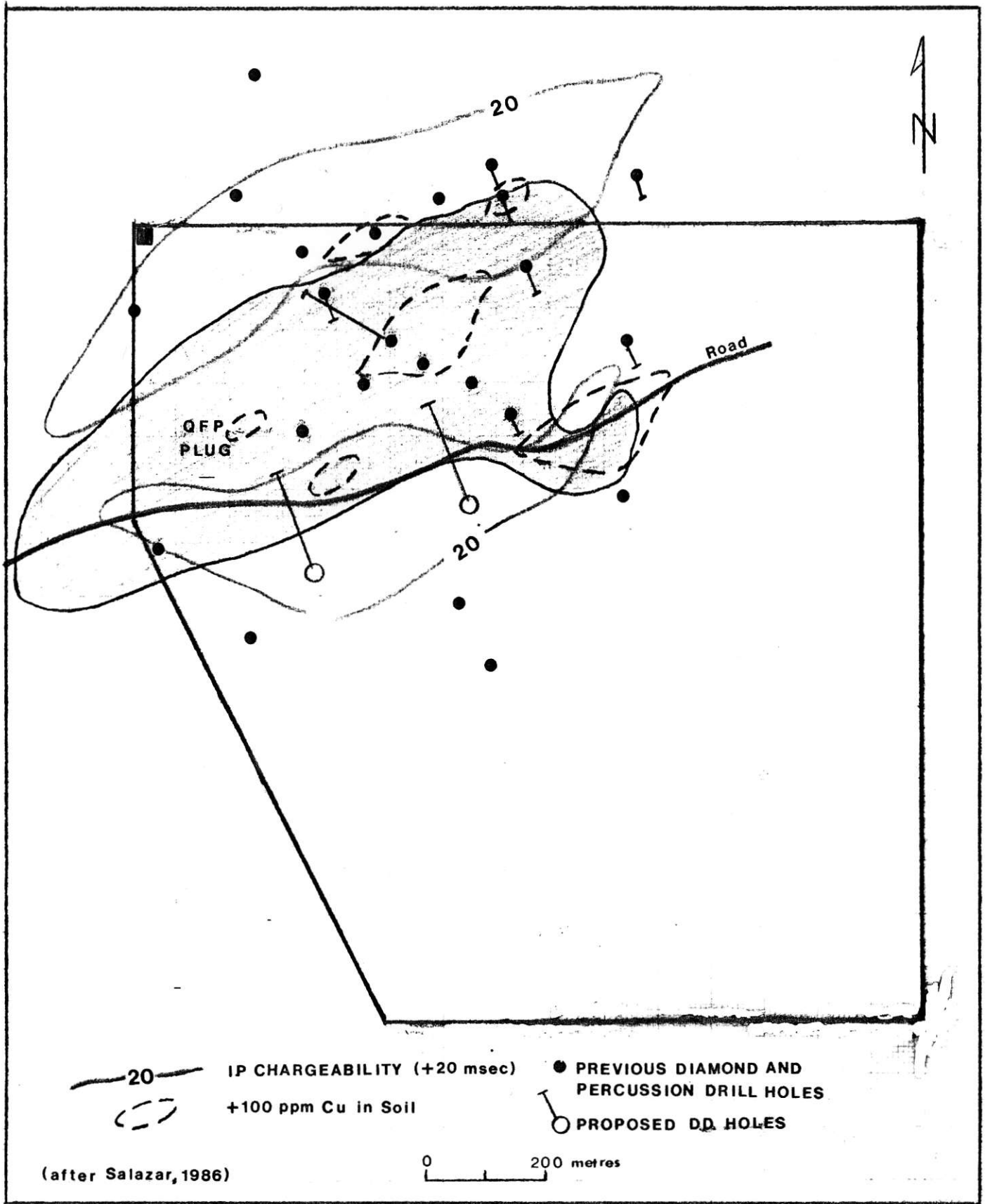


FIGURE 4 - COMPILATION - MIKE CLAIM - DUNGATE CREEK

intrusive is based mainly on previous interpretations of drilling results (Salazar,1986).

Exposures in trenches near the southeastern limits of the stock show the principal intrusive phase to be a light grey to buff, leucocratic biotite-quartz-feldspar porphyry in which 4-6 mm glassy quartz eyes, 2-4 mm chalky feldspar phenocrysts and 4 mm biotite books are set in a fine-grained matrix of K-feldspar and quartz. Overall composition would be that of a quartz monzonite.

Younger intrusive phases include dykes of a finer grained porphyritic variety with crowded 2 mm feldspar phenocrysts and intrusive breccias in which rounded 2-5 cm clasts of hornfelsed tuffs or sediments are contained in a porphyry matrix.

Steeply dipping east-northeast and north-northwest fracture sets at 5 to 15 cm spacings are locally well developed in trenches. The elongation of the granitic stock reflects the east-northeast structural trend.

The age of the porphyry body is not precisely known. The writer concurs with Church (1991) that it resembles the granitic stocks at Equity mine, Nadina Mtn. and the Berg porphyry prospect and is probably part of the Nanika intrusions of Tertiary (50 my) age.

Mineralization

Pyrite as disseminations and as coatings on fracture planes is widespread throughout bulldozer trenches near the southeastern limits of the porphyry intrusion. Lesser chalcopyrite with some bornite and molybdenite was also noted on fractures and in closely spaced 5-10 mm wide quartz veinlets in one of the trenches. Finely disseminated magnetite is locally widespread. Six grab samples collected from the trenches by Church (1990) returned copper grades of between 0.01 and 0.54%. Composite samples analysed by Southwest Potash Corporation in 1965 reportedly yielded trace to 0.7 g/t gold and 7 to 14 g/t silver.

Previous diamond and percussion drilling yielded generally low copper and molybdenum grades with the best value being 0.28% copper over 6 metres near the bottom of one of the original diamond drill holes collared near the northern stock contact. No analytical results are available for a deeper 1975 hole drilled toward the earlier hole (Figure 4) but it is assumed that results obtained were encouraging enough to warrant the follow-up 10 hole percussion drilling program in 1976.

The 1974 and 1976 percussion drilling programs yielded grades of between 0.01 and 0.21% copper and 0.001 and 0.031% molybdenite (Blanchflower, 1974; Murton and Silversides, 1976).

Most of the holes contained average copper grades of 0.01 - 0.05% with the exception of three holes drilled marginal to the northern intrusive contact (Figure 4) where grades averaged slightly less than 0.10%. These holes were in the general vicinity of the two diamond drill holes which apparently yielded better copper values.

Geochemistry

Figure 4 shows the distribution of +100 ppm copper values in soils. One anomalous area is coincident with the trenched area in the southeastern part of the granitic stock and an area of similar size to the northwest has been previously tested by drilling with negligible results.

Two smaller anomalous areas along the northern contact of the intrusive have also been tested by drilling with slightly better results. Two areas in the central and southern part of the intrusive have not been drilled.

Geophysics

Two well developed Induced Polarization chargeability highs (+20 msec) are developed marginal to the northern and southern contacts of the intrusive (Figure 4). These undoubtedly reflect higher sulphide contents associated with pyrite "shells" developed peripheral to typical porphyry systems.

The chargeability high along the northern contact has

been tested by previous drilling and it may be significant that holes drilled near the central and southern parts of this anomaly yielded some of the better copper values.

CONCLUSIONS AND RECOMMENDATIONS

The MIKE prospect near Dungeness Creek exhibits features typical of classic or stock-related porphyry deposits in west-central British Columbia. These features include evidence of multiple intrusion (the later, crowded porphyry phase and breccias exposed in the bulldozer trenches in the southeastern part of the porphyry stock) and the development of fractures and quartz veinlets and contained sulphides in the marginal areas of the intrusive. The porphyry is believed to be of Tertiary age and is of similar appearance to others known to host copper (and molybdenum) mineralization in this part of British Columbia.

While previous diamond and percussion drilling on this prospect has not yielded overly encouraging results, it is considered significant that better copper grades (including 0.28% copper over a 6 metre interval) were contained in holes drilled in the central and inner parts of an IP chargeability high developed along the northern intrusive contact. It is also apparent that better results have been obtained from deeper, inclined diamond drill holes.

Most of the previous drilling has consisted of vertical, relatively shallow (90 metres) percussion holes. In view of the fact that observed mineralization in bedrock is associated with steeply dipping to vertical fractures, it is the writer's opinion that inclined holes provide better samples in this geological setting.

Precious metals grades are largely unknown. Indications of gold and silver values were obtained from 1965 surface sampling of the property and further investigation of this potential is warranted.

The IP chargeability high marginal to the southern intrusive contact remains largely untested and it is recommended that two inclined diamond drill holes of 350 metres each be drilled to test this contact area.

COST ESTIMATE

Diamond Drilling - 700 metres @ \$57/metre	\$39,900.00
Program supervision, reporting	\$4,500.00
Travel and support	\$1,600.00
Sample analyses	<u>\$4,000.00</u>
Total	\$50,000.00

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CERTIFICATE

I, NICHOLAS C. CARTER of 1410 Wende Road, Victoria, British Columbia, do hereby certify that:

1. I am a Consulting Geologist registered with the Association of Professional Engineers of British Columbia since 1966.
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 have practised my profession in eastern and western Canada and in parts of the United States for more than 25 years.
4. The foregoing report on the MIKE mineral claim, Dungeness Creek, is based on a property examination in 1969, on the writer's extensive background knowledge of the geology and mineral deposits of west-central British Columbia and on various readily available reports and maps.
5. I hold no interest, directly or indirectly, in the MIKE mineral claim or in the securities of Insular Explorations Ltd.
6. Permission is hereby granted to Insular Explorations Ltd. to use this report in support of any submissions to the Vancouver Stock Exchange and/or the British Columbia Securities Commission.

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Victoria, B.C.
May 3, 1993

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