

889901

GEOLOGICAL REPORT

ON THE

MACKTUSH PROPERTY

**Alberni Inlet
Alberni Mining Division
Vancouver Island
British Columbia**

**Latitude 49°08' North
Longitude 124°52' West
NTS 92F/2W**

FOR

SYMC RESOURCES LTD.

BY

**N.C. CARTER, PH.D. P.ENG.
July 10, 1991**

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SUMMARY

SYMC Resources Ltd. owns the Macktush gold prospect which is situated south of Port Alberni on Vancouver Island.

The Company's 10 Modified Grid mineral claims cover a northwest trending contact between Island Intrusions granitic rocks and Karmutsen Formation volcanic rocks. A number of gold-bearing quartz veins have been discovered marginal to this contact in the central property area. Surface sampling of several of these structures and limited diamond drilling of one zone indicates locally good gold values across reasonable widths and additional work to test the potential of these and other possible zones is warranted.

It is recommended that an initial program consisting of base map preparation, orientation geophysics, excavator trenching, detailed geological mapping and additional diamond drilling of two of the vein structures be carried out at an estimated cost of \$335,750.00. Phase II work, estimated to cost \$623,750.00, would include additional diamond drilling of the vein structures as warranted by the results of the first phase program.

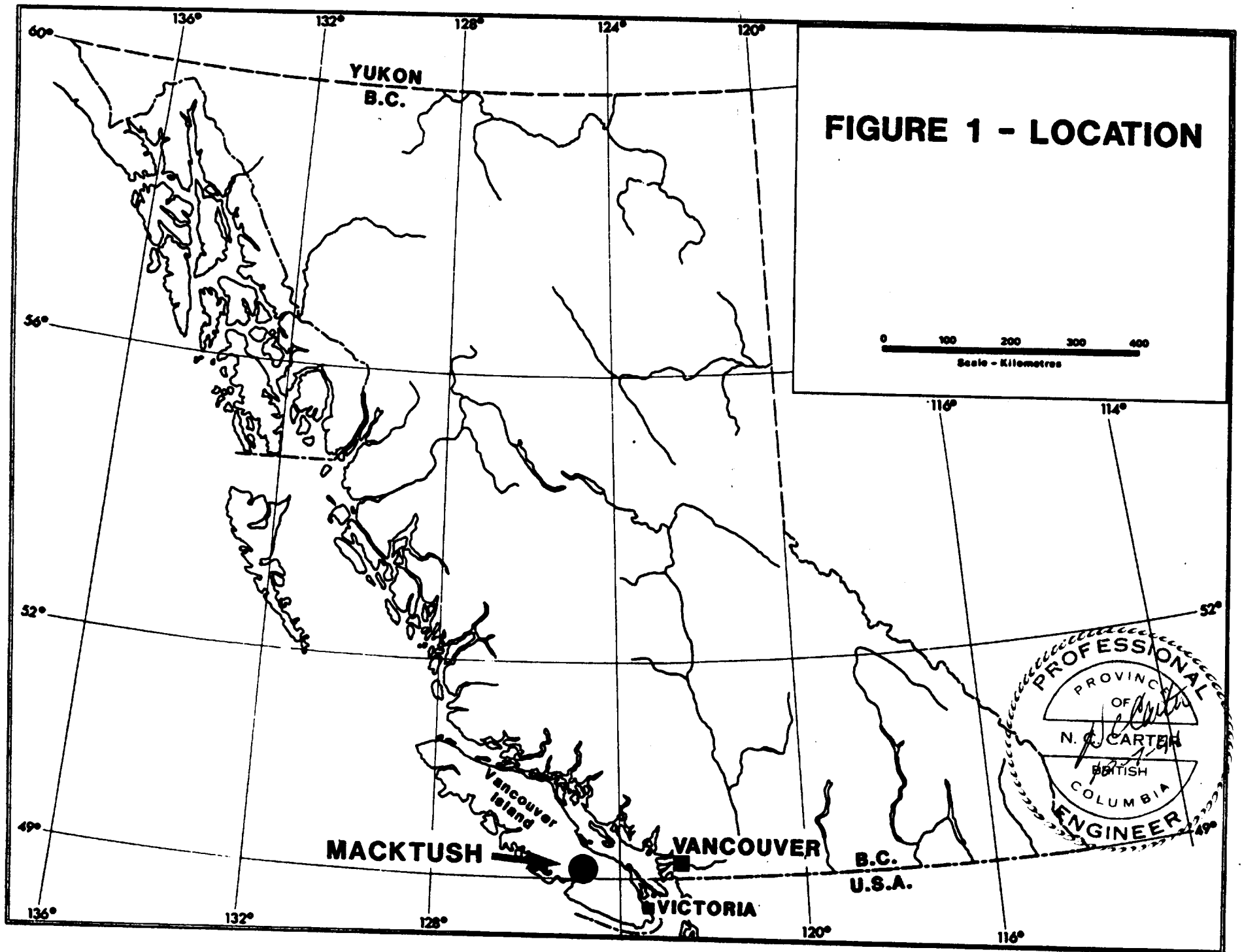
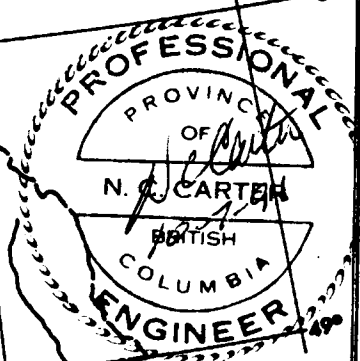


FIGURE 1 - LOCATION

0 100 200 300 400
Scale - Kilometres



INTRODUCTION

SYMC Resources Ltd. owns the Macktush property which consists of 10 Modified Grid mineral claims and is situated south of Port Alberni on Vancouver Island.

This report, prepared at the request of SYMC Resources Ltd., is a revision of an earlier report by the writer dated July 16, 1990. The previous report was based on examinations of parts of the Macktush property carried out by the writer April 26 and June 20, 1990, and on results of exploration work and other studies undertaken on the property since 1982. The writer also logged and sampled one previous diamond drill hole. The 1990 report and the present one include a compilation of previous surface sampling and diamond drilling prepared by John Wilson, FGAC, who also supervised a survey of part of the property.

Since completion of the July 1990 report, Mr. Wilson has re-logged available diamond drill core from three holes completed in 1987. These data have been incorporated into this report. Recent excavator trenching in three areas of the property was inspected by the writer June 10, 1991.

LOCATION AND ACCESS

The Macktush property is situated between 10 and 15 km south of Port Alberni on southern Vancouver Island (Figure 1). The mineral claims are located on the west side of Alberni Inlet

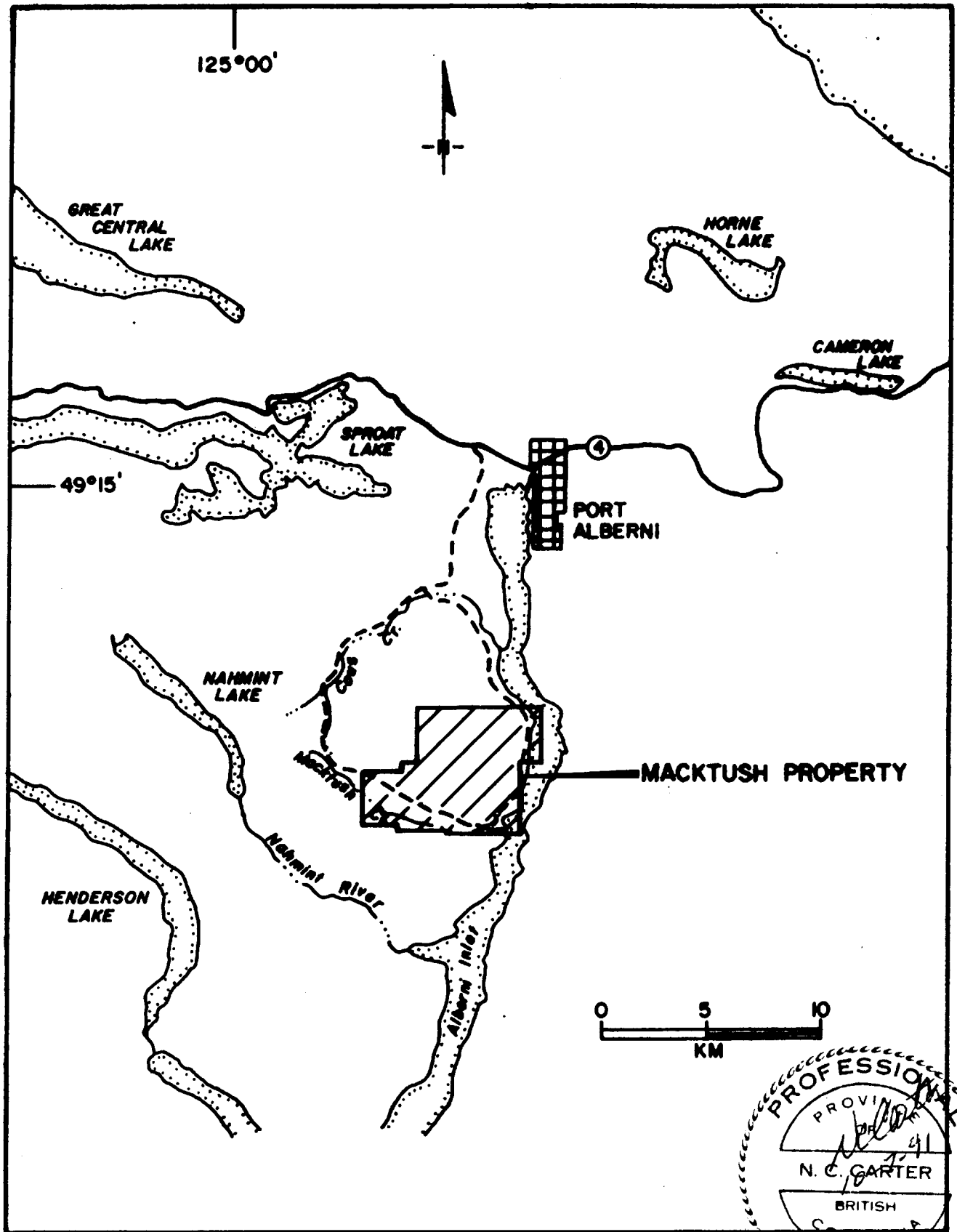


FIGURE 2 - LOCATION - MACKTUSH PROPERTY

immediately north of Macktush Creek (Figure 2) in NTS map-area 92F/2W. The geographic centre of the property is at latitude 49°08' North and longitude 124°52' West.

Access to the property is by highway and road from Port Alberni by way of MacMillan Bloedel Limited Sproat Lake Woodlands Division Main roads along Cous and Macktush Creeks or a shore road along Alberni Inlet (Figure 2).

The mineral claims are situated in an active logging area and access to most parts of the property is afforded by numerous logging roads.

MINERAL PROPERTY

The Macktush property consists of 10 Modified Grid mineral claims (159 units) located in the Alberni Mining Division.

Three of the claims, COPPER 300, 400 and 500 were recently relocated. No claim posts or lines on the Macktush property have been examined by the writer but the claims are believed to have been located in accordance with procedures as specified in the Mineral Tenure Act Regulations of the Province of British Columbia. According to Mineral Titles maps, some overlapping of several of the claims is evident. The configuration of the mineral claims is shown on Figure 3 and details are as follows:

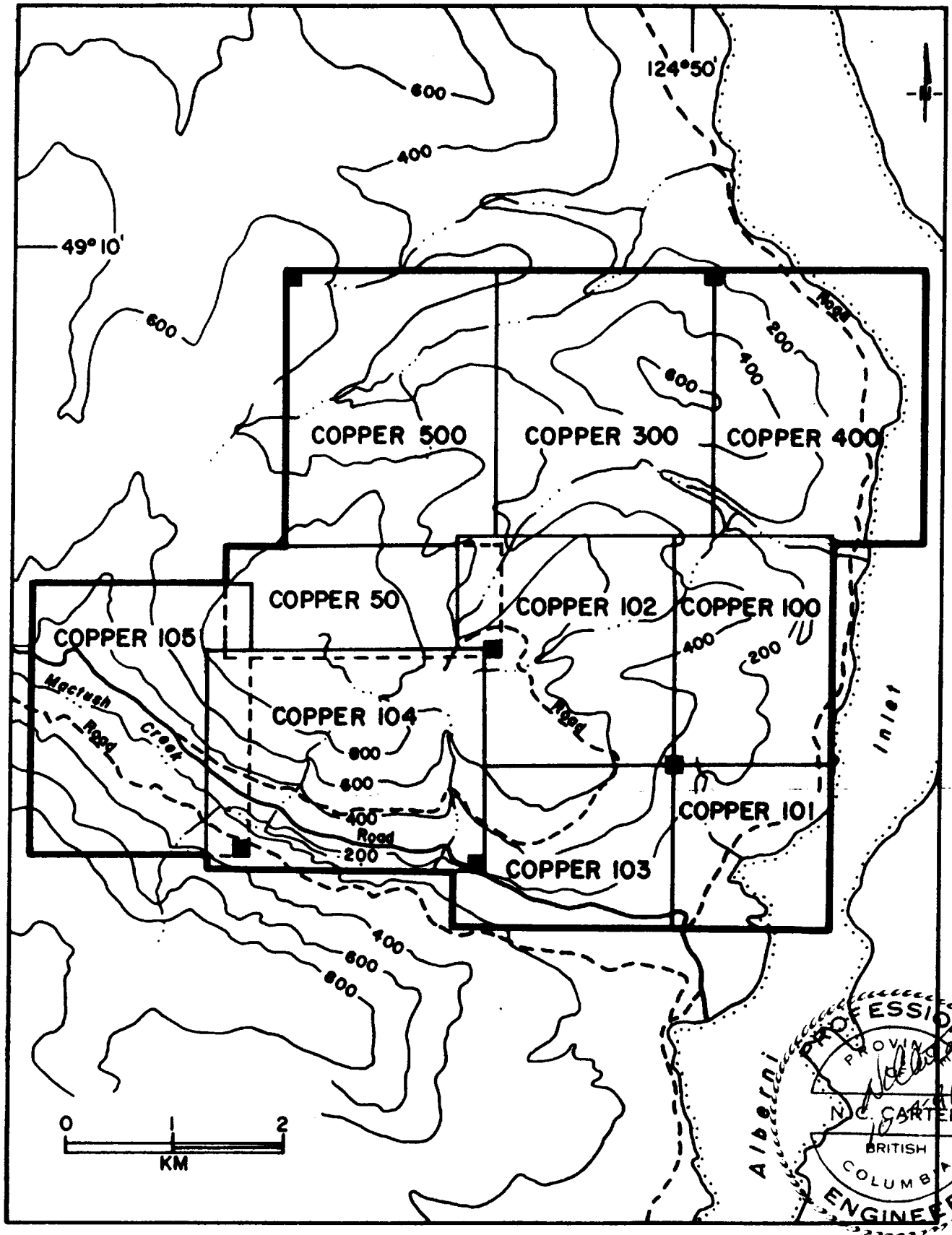


FIGURE 3 - MACKTUSH PROPERTY MINERAL CLAIMS

<u>Claim Name</u>	<u>Record Number</u>	<u>Units</u>	<u>Expiry Date</u>
COPPER 100	1909	12	October 31,1993
COPPER 101	1910	9	October 31,1992
COPPER 102	1911	16	October 31,1992
COPPER 103	1912	12	October 31,1992
COPPER 104	1913	20	October 31,1992
COPPER 105	1914	20	October 31,1992
COPPER 50	2474	10	February 13,1992
	<u>Tag Number</u>		
COPPER 300	111153	20	June 19,1992
COPPER 400	111152	20	June 19,1992
COPPER 500	111154	20	June 26,1992

PHYSICAL FEATURES

Mineral claims comprising the Macktush property cover an area of moderate to steep relief west of Alberni Inlet (Figure 3). Elevations range from sea level to 960 metres in the western claims area.

Steeper slopes are found north of Macktush Creek, west of Alberni Inlet and marginal to a number of drainages flowing east to Alberni Inlet. Active logging is underway in most parts of the claims area and bedrock is well exposed along logging roads, major drainages and some of the steeper slopes.

The climate is typical of the southwest coast of Vancouver Island with abundant rainfall in the fall and winter months. Mild winters allow for work on the property most months of the year.

HISTORY

The earliest record of prospecting and mining activity west of Alberni Inlet dates back to the turn of the century when copper-gold vein occurrences near the head of the Inlet were investigated and some 1900 tonnes of material containing copper-silver-gold were mined from the Three Jays skarn deposit south of Nahmint River. Sporadic exploration work, directed to several copper and/or precious metal prospects, has continued to the present time.

The current Macktush property includes a number of gold-silver-copper bearing quartz veins. The majority of these have been located by work over the past several years but at least one was explored a number of years ago by several pits and two short adits. Remains of an old cabin (now destroyed) attest to this earlier work and an old claim post with a claim tag characteristic of those in use up to the mid-1940's was observed adjacent to one of the known quartz veins. There are no records of this earlier work; references included in the B.C. Ministry of Energy Mines and Petroleum Resources Minfile (92F - Alberni, June 1990) description of the Macktush property pertain to descriptions of the regional geological setting.

The old workings on one of the vein structures were re-discovered by principals of SYMC Resources Ltd. in April of 1981. Mineral claims were located and work through 1986 included

prospecting, trenching and sampling. Ten diamond drill holes, totalling more than 900 metres, were completed in 1987 and 1988.

Preliminary metallurgical test work was carried out in 1988 (Broughton,1988) as were initial investigations pertaining to a possible tailings impoundment area (Palmer and Skirmer,1988) and potential mining methods. This work was undertaken in response to recommendations of the British Columbia Mine Development Steering Committee which had received a preliminary prospectus from SYMC Resources Ltd. earlier that year.

A survey of surface workings and drill hole collars on the main quartz vein structure was supervised by John Wilson, FGAC, in January of 1990 and a compilation of results of exploration work was completed by Wilson in April of that year. The writer completed a report on the property in July,1990 (Carter,1990) and three 1987 diamond drill holes were re-logged by Mr. Wilson in late 1990.

Additional excavator trenching was completed on two of the known quartz vein structures in early 1991.

REGIONAL GEOLOGY AND MINERALIZATION

Vancouver Island makes up the southern part of the Insular belt, the westernmost tectonic subdivision of the Canadian Cordillera. The southern Insular belt is dominated by Paleozoic and Mesozoic volcanic-plutonic complexes and lesser sedimentary

rocks which are overlain on the east coast of Vancouver Island by clastic sedimentary rocks of late Cretaceous age. Tertiary basic volcanic rocks are prevalent in the south Island area and granitic intrusions of similar age are widespread along the west coast of the Island.

Vancouver Island hosts a variety of mineral deposit types which include volcanogenic massive sulphides at Buttle Lake and near Duncan which are hosted by late Paleozoic Sicker Group volcanic rocks. The Island Copper deposit near Port Hardy is a porphyry copper-molybdenum deposit with significant by-product gold which is related to Mesozoic subvolcanic intrusions. Iron-copper skarns, hosted by late Triassic limestones marginal to granitic intrusions, are numerous in the central and northern Island areas.

The west coast and central parts of Vancouver Island are noted for gold-bearing vein deposits. Many of these are at least spatially related to Tertiary granitic intrusions and examples include the Zeballos camp and deposits in the Kennedy Lake, Alberni Inlet and Mount Washington areas.

The oldest rocks exposed near Alberni Inlet are late Paleozoic Sicker Group volcanic and sedimentary rocks which underlie the northern part of the Cowichan structural uplift (Figure 4). Three volcanic formations comprise most of the Sicker Group in this area (Massey and Friday, 1989). From oldest

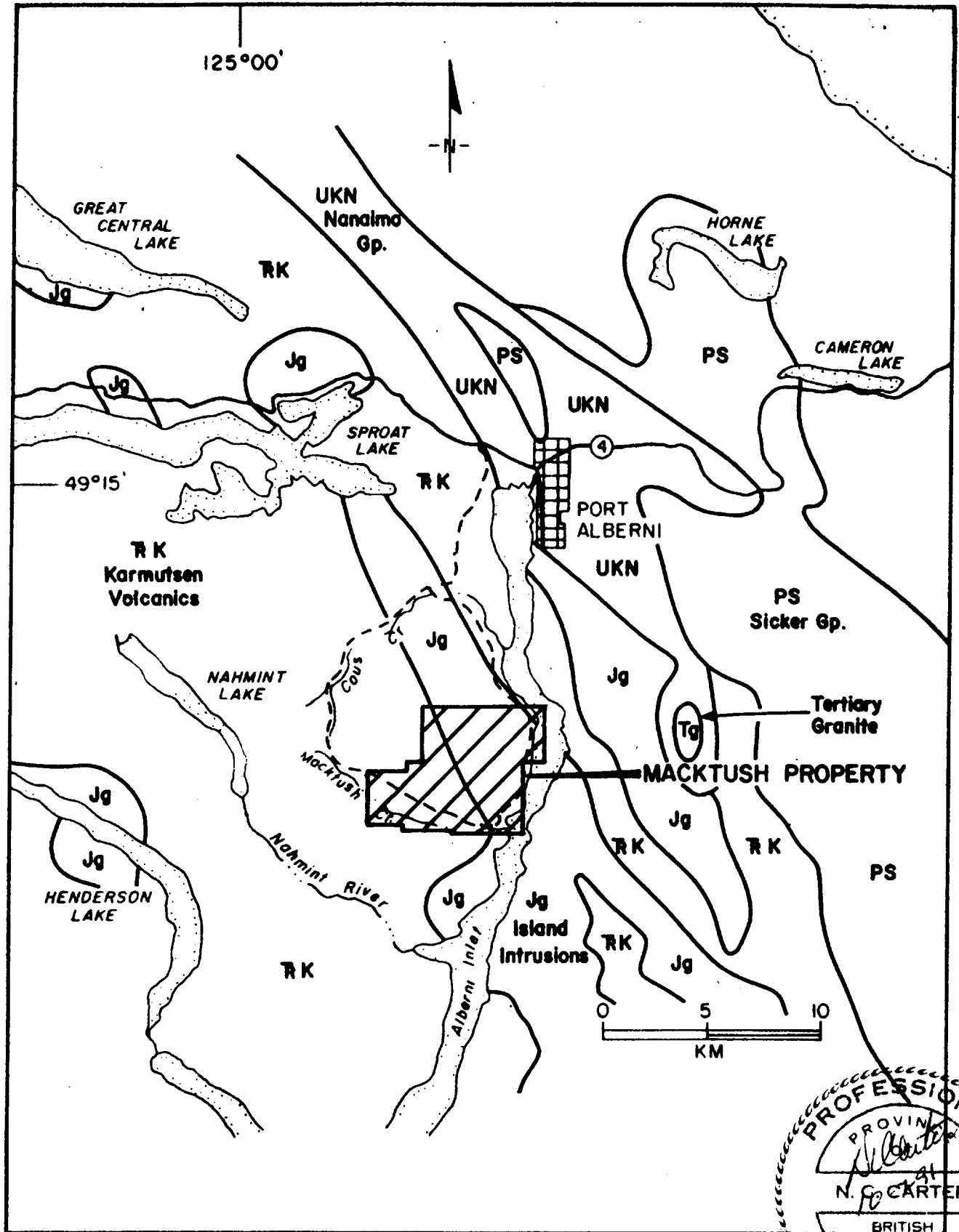


FIGURE 4 - GEOLOGICAL SETTING
 (After Muller and Carson, 1969)

to youngest these include a basal pillow basalt with minor felsic units, an intermediate fragmental andesite and an upper volcanoclastic-epiclastic sequence. The youngest sequence of the Sicker Group is comprised of cherty sediments, limestones, siltstones and sandstones.

Mesozoic volcanic and sedimentary rocks overlie Sicker Group rocks and include late Triassic Karmutsen Formation andesite and basalt pillow lavas, pyroclastics and massive flows and early Jurassic Bonanza Group fragmental andesites and lesser sedimentary rocks. Where complete Mesozoic sections exist, the Karmutsen Formation and Bonanza Group are separated by Quatsino Formation calcareous and clastic sedimentary rocks.

The Mesozoic sequences underlie much of the area west of Alberni Inlet (Figure 4) where they are intruded by granodiorites and quartz diorites of the Middle Jurassic Island Intrusions.

Youngest layered rocks include late Cretaceous Nanaimo Group clastic sedimentary rocks which underlie the fault-bounded Alberni valley (Figure 4). These are intruded by hornblende-feldspar porphyry dykes and sills of probable Tertiary (Eocene?) age (Massey and Friday, 1989).

The dominant northwest structural trend of the Alberni Inlet area is reflected by the Cowichan structural uplift, the elongate nature of Island Intrusion plutons and the distribution

of late Cretaceous sediments in the northwest trending Alberni valley. Regional northwest trending thrust faults mark the boundaries between Sicker Group and younger rocks east of Alberni Inlet (Massey and Friday, 1989).

Various styles of mineralization are recognized in the Alberni Inlet area (Muller and Carson, 1969; Massey and Friday, 1989). These include volcanogenic massive sulphide occurrences in the lower volcanic unit of the Sicker Group, porphyry copper and/or molybdenum mineralization associated with Island Intrusions granitic rocks and iron-copper skarn deposits and occurrences in Mesozoic sedimentary and volcanic rocks, some of which have yielded limited production in the past. The best example of one of these is the Three Jays prospect on the west side of Alberni Inlet. According to Wahl (1980), much of the copper mineralization at this prospect may be related to shear zones.

Considerable work has been done in recent years investigating similar styles of mineralization at the head of east-flowing tributaries of Cous Creek (Figure 4). Here, discontinuous massive sulphide lenses and pods containing copper, silver and gold values are developed in Karmutsen andesite flows near their contact with Island Intrusions granitic rocks and adjacent to felsic dykes of probable Tertiary age (Sookochoff, 1986; Laanela, 1987).

Other known deposit types west of Alberni Inlet include a number of copper occurrences in fracture zones in Karmutsen Formation volcanic rocks, examples of which include one prospect near Alberni Inlet 5 km north of the Macktush property and several occurrences immediately south of Macktush Creek. The latter prospect features pyrrhotite, pyrite and chalcopyrite in shear zones and in lenses in Karmutsen volcanics from which some silver values have also been reported (Stewart, 1983).

The most common mineral deposit types in the Alberni Inlet area are gold-bearing quartz-sulphide veins and fissure zones. These are widespread in the Franklin River-China Creek area east of Alberni Inlet where they are spatially and possibly genetically related to a north trending belt of Tertiary feldspar porphyry intrusions (Carson, 1969).

Gold-bearing quartz-sulphide veins also occur in shear zones in Karmutsen Formation basalts west of Alberni Inlet. Examples include the Ferguson prospect south of Two Rivers Arm on Sproat Lake and the Raven and Dauntless prospects due west of Port Alberni and 7-10 km north of the Macktush property. Gold values at these prospects is associated with quartz veins containing chalcopyrite, pyrite and pyrrhotite (LeRiche and Hopkins, 1988).

PROPERTY GEOLOGY AND MINERALIZATION

The Macktush property is underlain by late Triassic Karmutsen Formation basaltic pillow lavas and andesites which are in contact with granodiorites and quartz diorites of the Middle Jurassic Island Intrusions in the central property area.

As indicated on Figure 4 these granitic rocks, which underlie much of the eastern half of the property, are part of an elongate pluton which extends southeasterly from Sproat Lake through the property area and across Alberni Inlet.

According to recent mapping by Sutherland Brown and others (1986), the contact between the Karmutsen volcanics and Island Intrusions extends in a southeasterly direction through the claims just below the height of land (Figure 5). Tholeiitic pillow lavas are the dominant rock type west of the contact while andesitic varieties underlie the southwestern claims area along Macktush Creek.

Granitic rocks of the Island Intrusions, where observed by the writer in the central property area, include medium to coarse grained grey quartz diorite and granodiorite. Some potassium feldspar stringers were noted locally as were northwest trending 15 cm wide aplite dykes.

The contact between the granitic and volcanic rocks in the central property area is irregular with numerous inclusions of Karmutsen pyroxene porphyry flows and bleached andesites.

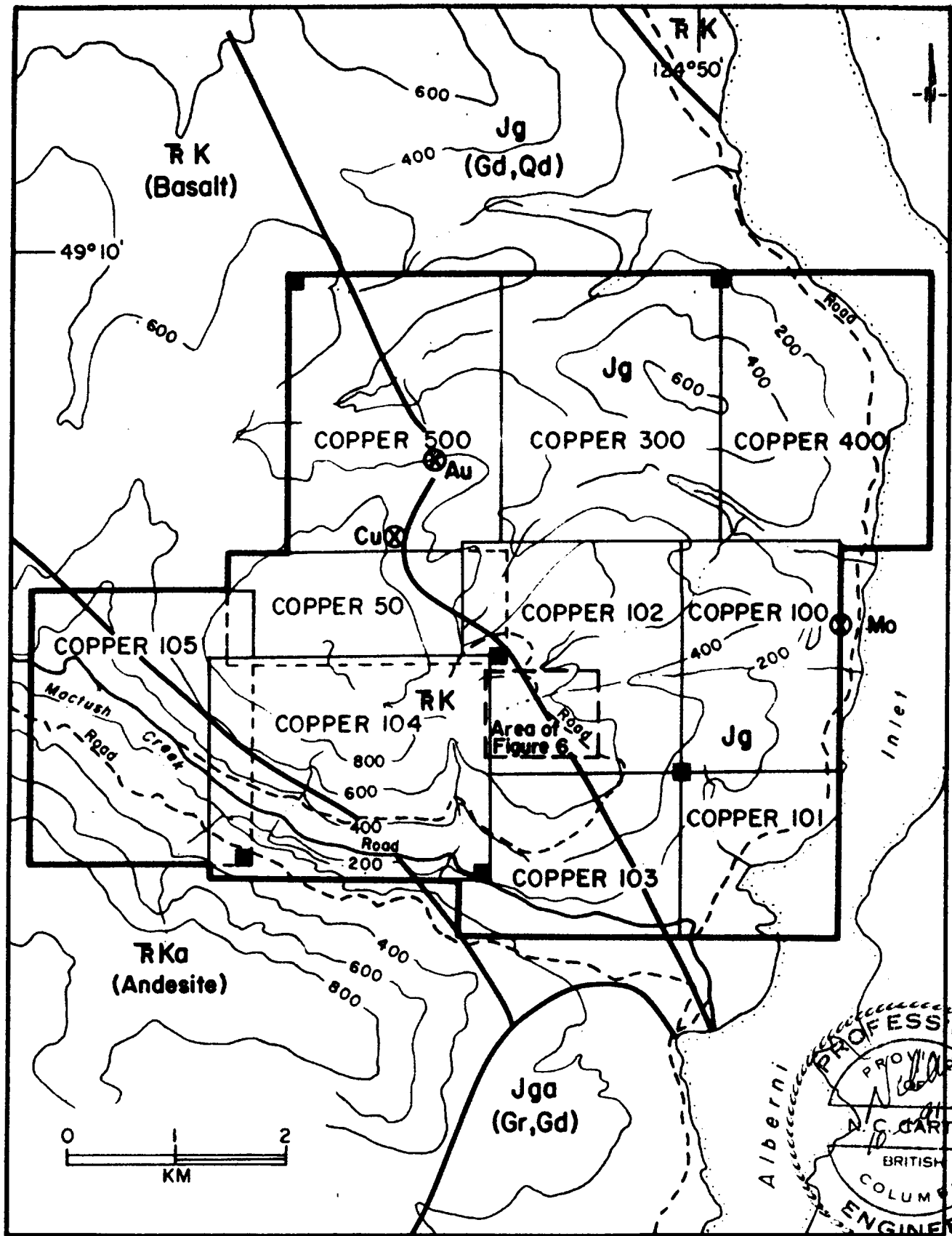


FIGURE 5 - MACKTUSH PROPERTY - GEOLOGY

Known mineralization on the property includes a small iron-copper skarn zone in Karmutsen volcanics in the central property area and porphyry style mineralization in at least two areas of the property. Examples of the latter include molybdenite in quartz veinlets and fractures in Island Intrusion granodiorite exposed in road cuts along Alberni Inlet in the eastern claims and disseminated chalcopyrite in K-feldspar altered diorites in the northern part of the property (Figure 5).

A number of gold-bearing quartz-sulphide veins in various parts of the claims area constitute the most significant mineralization found to date. A number of these veins occur within a 0.5 square km area in the western part of the COPPER 102 mineral claim (Figure 5) marginal to the contact between Karmutsen volcanics and Island Intrusion granitic rocks.

As indicated on Figure 6, most of the known veins strike northeasterly and dip moderately to steeply southeast. The strike direction is normal to the overall trend of the Island Intrusions contact which parallels the regional trend and the distribution of veins in this area is about equally divided between volcanic and granitic host rocks.

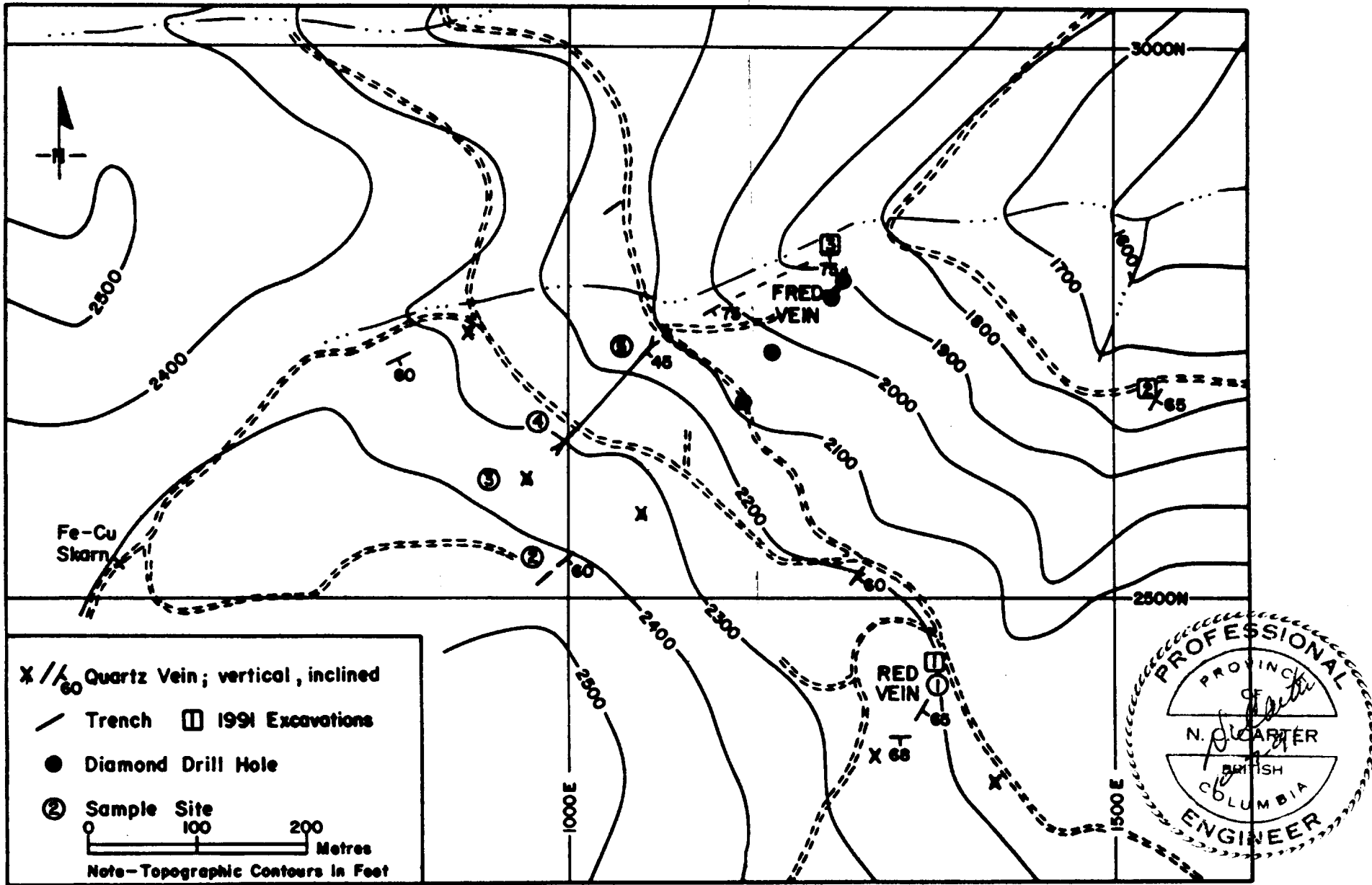
Vein widths range from 0.30 to several metres with an overall average of about 1.3 metre. Vein contacts are commonly sheared with 7-30 cm wide gouge zones developed in both foot- and hangingwall host rocks. Quartz stringers in wallrocks were

observed marginal to several of the vein exposures. This feature is particularly evident at the northeast end of the 130 metre long trench (Figure 6) where 0.30 metre wide quartz veins within a 3-7 metre wide zone of shearing are separated by wedges of altered volcanic and granitic rocks. Narrow basic dykes parallel the northeast shear direction and cut both the veins and wallrocks. Elsewhere, inclusions of volcanic rocks are present near quartz veins hosted by granitic rocks and the southwest trench on the main quartz vein structure exposes a 1.4 metre wide quartz vein with a quartz diorite footwall and an andesitic hangingwall.

Most vein structures display multiple stages of quartz veining. Colloform banding is common as are drusy cavities. Sulphide mineralization within the veins includes fine to medium grained pyrite, pyrrhotite and chalcopyrite.

A number of the known quartz vein exposures occur along apparently persistent northeast structures. These include the Fred vein (Figure 6) which has an apparent strike length of at least 130 metres; the quartz veining in the long trench to the southwest may represent an extension of this structure or a parallel one.

The structure containing the Red vein (Figure 6) apparently extends several hundred metres down a northeast trending draw based on recent excavator trenching. Other exposures of quartz



**FIGURE 6 - PRINCIPAL MINERAL SHOWINGS -
COPPER 102 MINERAL CLAIM**

veins near the known southwestern limits of the Red vein may represent parts of more continuous, parallel zones.

Surface Sampling

A number of surface samples have been collected from various exposures by principals of SYMC Resources Ltd., Provincial Government geologists and the writer. Locations are shown on Figures 6 and 7 and analytical data are contained in Appendix I. Results for sites indicated on Figure 6 are as follows:

<u>Site</u>	<u>Number</u>	<u>Width(m)</u>	<u>Gold(oz/ton)</u>	<u>Silver(oz/ton)</u>	<u>Copper(%)</u>
1	130	Grab	0.318	0.31	0.42
	20773	1.1	0.073	0.20(ppm)	88(ppm)
2	20774	1.0	696(ppb)	0.30(ppm)	37(ppm)
3	E19511	Grab	0.192	1.56	0.57
4	E19510	Grab	0.166	1.23	0.42
5	E19509	Grab	0.074	0.76	1.12
	20775	Chips	817(ppb)	1.40(ppm)	26(ppm)

Recent excavator trenching along the trend of the Red vein 50 metres northeast of Site 1 (Figure 6) has exposed a zone of shearing in granitic rocks striking 040 and dipping steeply east. The zone, exposed along the logging road over a width of more than 6 metres, features multiple, narrow quartz veins with finely disseminated pyrite.

The probable extension of the same zone has been exposed by trenching along the lower logging road 350 metres northeast of, and 130 metres vertically below, the previously described exposure (Figure 6). Here, the zone is developed in dioritic rocks over a similar 6 metre width striking 035^o and dipping 60 - 80^o east. Margins of the zone are marked by 1 metre wide grey,

clay-rich gouge zones which contain quartz veins (Wilson, 1991). Dioritic rocks within the shear zone are deeply weathered and contain up to 3% disseminated pyrite. Ten chip samples, collected from a continuous line within and adjacent to the shear zone by Wilson (1991), yielded low gold, silver and copper values.

The Fred vein (Figure 6), apparently the original zone discovered years ago, is exposed in two short adits (now caved) and three pits as shown on Figure 7. The width of the vein, which strikes east-northeast and dips steeply south, ranges from 0.75 to more than 3 metres. Sample results for those sites indicated on Figure 7 are as follows:

<u>Location</u>	<u>Number</u>	<u>Width(m)</u>	<u>Gold(oz/ton)</u>	<u>Silver(oz/ton)</u>	<u>Copper(%)</u>
1 (Vein)	101	0.91	0.303	0.12	0.01
(Wall)	102	0.46	0.173	0.71	0.05
2 (Vein)	50	2.13	0.303	0.01	0.01
3 (Vein)	104	3.66	0.416	2.21	0.78
4 (Vein)	1003	0.76	0.218	1.43	1.34
5 (Vein)	1	4.88	0.952	0.34	0.60
(Vein)	20772	1.20	0.659	8.1(ppm)	1286(ppm)

Most of the foregoing sample locations, widths (where applicable) and results are as provided by SYMC Resources Ltd. and refer to samples collected on the company's behalf between 1983 and 1987. Note that all of the SYMC samples shown on Figure 6 are grabs or more properly, character samples of vein material. Sample number 20772 (and 20773-20775 - previous table) refer to samples collected by the writer in June of 1990. Results of sampling by B.C. Ministry of Energy Mines and

Petroleum Resources geologists at the lower adit include values of 4910 ppb gold, 3 ppm silver and 0.16% copper from a 1 metre chip sample and 7100 ppb gold, 34 ppm silver and 0.62% copper from a composite grab sample (H.P. Wilton, personal communication).

Recent excavator trenching in the area of the lower adit (Figure 7) has exposed a parallel, 1 metre wide quartz vein containing disseminated pyrite and chalcopyrite 2 metres into the footwall from the main vein structure exposed in the adit portal.

Diamond Drilling

As noted previously, 10 BQ-size diamond drill holes were completed on the Macktush property in 1987 and 1988. Most of the core recovered was stored on the property. Sections of three 1987 holes, drilled on the Fred vein (DDH 87-01,-03 and -08), were split and sampled under the direction of Frank C. Loring, P.Eng. Core boxes containing split core sections from holes 87-01 and 87-03 and most of hole 88-05 (not logged or sampled until June,1990) were stored in Port Alberni. Core from the other six holes drilled was tipped while unattended at the field site before any logging or sampling was done and unfortunately, is of little or no value in its present condition. These six holes included two shallow inclined holes on the Red vein, two inclined holes near the southwest end of

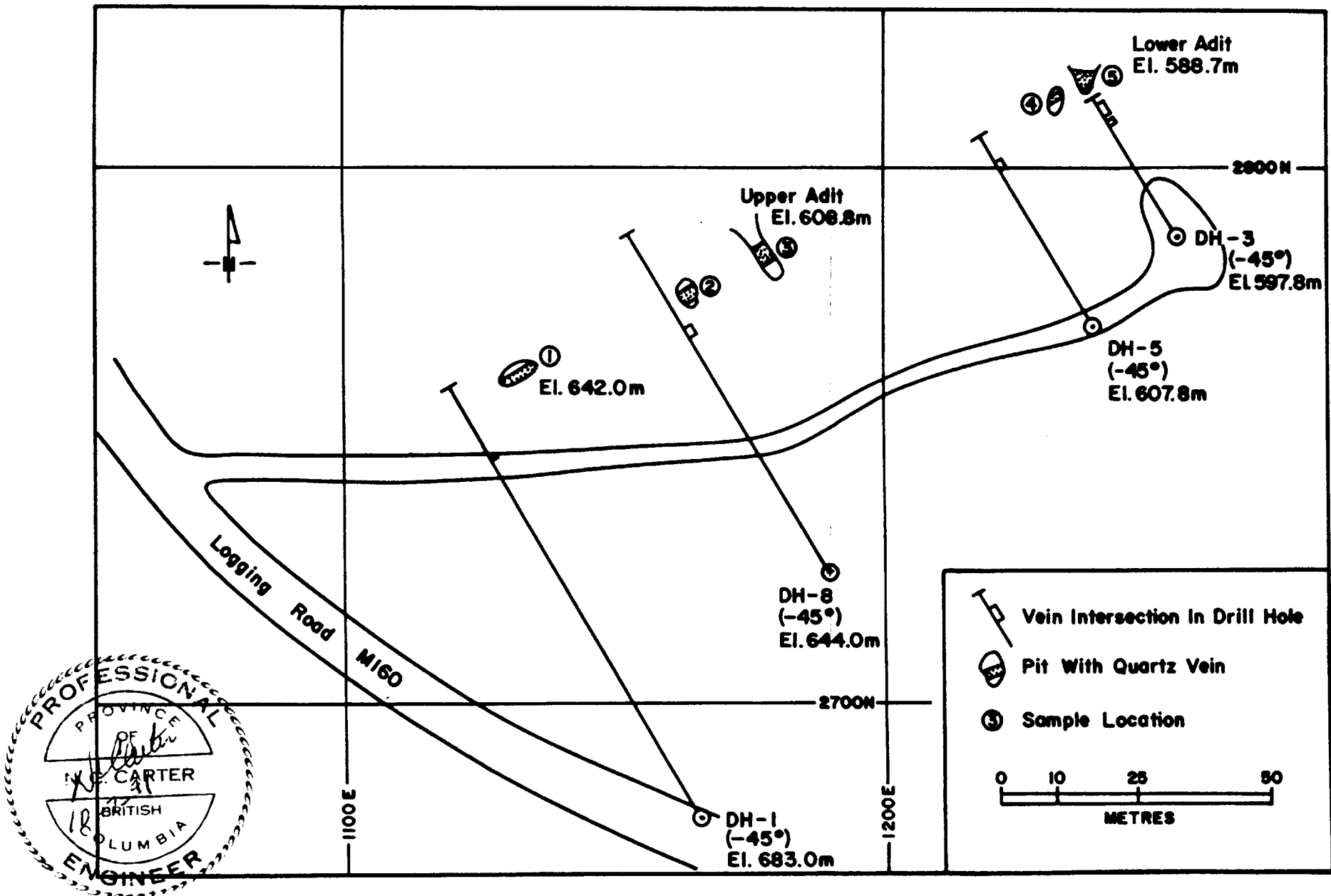


FIGURE 7 - DIAMOND DRILL HOLE PLAN - FRED VEIN

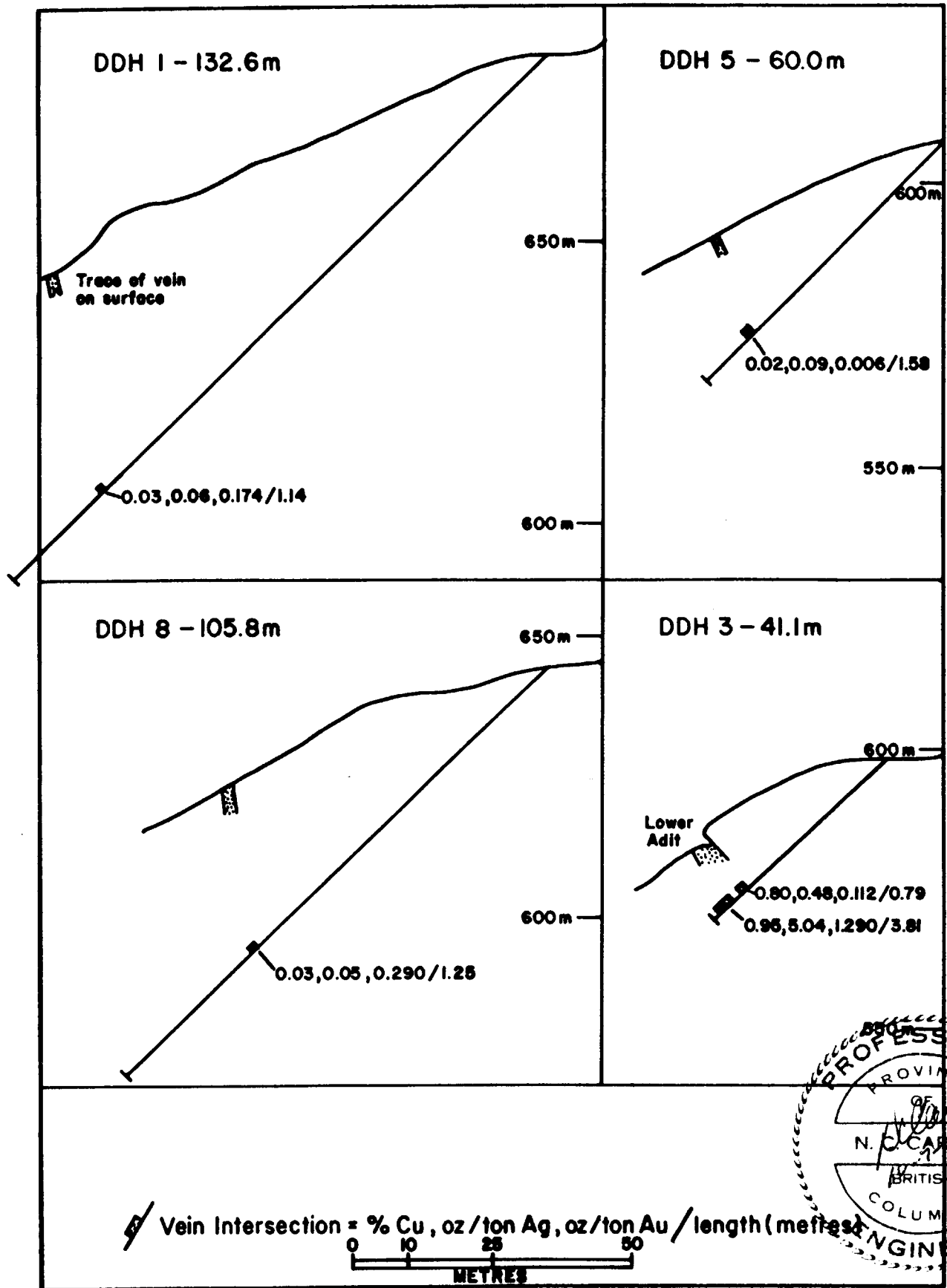
the large trench and two drilled to test parts of the Fred vein (H. McMaster-SYMC Resources Ltd.-personal communication).

Diamond drill cores from four inclined holes, totalling 321 metres and drilled to test the Fred vein, are in reasonably good order. These were drilled at -45° along 330° azimuths and tested the Fred vein along its exposed strike length to vertical depths of between 20 and 40 metres. Drill hole locations are shown on Figure 7 and sections, after those originally prepared by John Wilson, FGAC, are illustrated on Figure 8. Surveyed locations of the holes are as follows:

<u>Hole Number</u>	<u>North</u>	<u>East</u>	<u>Elevation(m)</u>
DDH87-01	2679.5	1165.5	683.0
DDH87-03	2787.4	1253.4	597.8
DDH88-05	2770.8	1238.5	607.8
DDH87-08	2725.0	1188.5	644.0

Results of core sampling for the three 1987 holes were provided by SYMC Resources Ltd. The writer logged and sampled DDH88-05 and the drill log and analytical data for this hole and analytical data provided by SYMC are contained in Appendix II.

Because of some uncertainties in establishing precise sample intervals for holes 87-01, -03 and -08, Mr. John Wilson undertook re-logging of these holes in December, 1990. Further information concerning the sample intervals was obtained from Mr. Frank C. Loring, P.Eng. Mr. Wilson's diamond drill core logging report, including drill logs for the aforementioned three holes, is contained in Appendix II.



**FIGURE 8 - DIAMOND DRILL CROSS SECTIONS
(Looking N 60°E)
FRED VEIN**

The Fred quartz vein structure was intersected in the 4 holes drilled and results confirmed a southerly dip of between 60 and 80 degrees. Core lengths of vein material ranged from 1.14 metres in the most westerly hole (DDH87-01) to 3.81 metres in DDH87-03 near the known eastern limits of the structure.

Geological relationships noted by the writer in DDH88-05 are believed to be representative of the Fred vein in the area drilled and they generally confirm relationships noted in surface exposures. The hole was collared in generally fresh, medium grained, grey quartz diorite locally cut by 0.5-5 metre wide, post-mineral basic dykes with chilled margins. Some 15 metres above the quartz vein intersection, the quartz diorite features an increasing number of quartz-carbonate-pyrite stringers plus increased silicification and argillic-carbonate alteration. Disseminated pyrite and pyrrhotite is also a feature of more intensely altered zones and inclusions of Karmutsen volcanic rocks are evident. A 2 metre length of quartz vein, intersected between 47.5 and 49.5 metres, exhibits multiple stages of veining, drusy cavities and disseminated pyrite, pyrrhotite and chalcopyrite. An 8 metre section of variably altered quartz diorite, with 0.5 metre Karmutsen volcanic inclusions and a basic dyke, follows the quartz vein intersection with the hole terminating at 60 metres in relatively unaltered quartz diorite.

Sampling of drill cores from the four holes drilled on the Fred vein yielded the following results:

<u>Hole No.</u>	<u>Interval(m)</u>	<u>Length(m)</u>	<u>Au(oz/ton)</u>	<u>Ag(oz/ton)</u>	<u>Cu(%)</u>
DDH87-01	109.58-110.72	1.14	0.174	0.06	0.03
DDH87-03	33.50-34.29	0.79	0.112	0.48	0.80
	36.58-40.39	3.81	1.290	5.04	0.95
DDH87-08	71.63-72.88	1.25	0.290	0.05	0.03
DDH88-05	47.22-48.80	1.58	0.006	0.09	0.02
			(219ppb)	(3.0ppm)	(190ppm)

Bulk Sampling

Four 6-8 kg samples were collected from the Fred vein in 1988 and submitted to Coastech Research Inc. for preliminary metallurgical testing. Average head grades of a composite sample were 0.126 oz/ton gold and 0.29 oz/ton silver. Test work on the composite sample included standard flotation, gravity concentration and cyanidation procedures.

Results of the test work indicated that good recoveries for gold, silver, and copper could be obtained by initial gravity concentration to recover free milling coarse gold followed by froth flotation to produce a sulphide concentrate containing copper and precious metals.

CONCLUSIONS

The Macktush property includes a number of gold-bearing quartz-sulphide veins. Work to date in the central property area, which includes mechanical trenching and diamond drilling, has partially defined several vein structures with apparent good

gold grades over reasonable widths. Recent excavator trenching indicates that structures containing these quartz veins may extend several hundred metres along strike. Further work is warranted to test these zones along strike and to depth.

Limited sampling of several of the veins indicates a wide variation in gold content. While this is a characteristic feature of deposits of this type, it does emphasize the need for detailed sampling to determine average grades.

As noted previously, most of the known quartz veins strike northeasterly, normal to the regional structural trend as reflected by the northwest trending contact between the Island Intrusions and Karmutsen Formation volcanic rocks. The quartz veins in the central property area are marginal to this contact which is considered to be prospective for the discovery of additional gold-bearing veins throughout the claims area.

Other styles of mineralization known on the Macktush property include iron-copper skarns and porphyry copper and molybdenum. Further investigation is necessary to determine the significance of these.

The Macktush property merits additional work as detailed in the succeeding section.

RECOMMENDATIONS

A two-phase work program is recommended for the Macktush property with the principal emphasis of the Phase I program being directed to additional diamond drilling of the Fred vein structure. This work should include -60° holes drilled from the four original drill sites, followed by infill drilling at 20 metre spacings between drill sites with two holes at -45° and -60° drilled from each site. Step-out holes, northeast and southwest of the strike length defined to date, are also recommended as are two deeper holes to test the vein at vertical depths in the range of 75 metres. This program of about 15 holes totalling 1700 metres is designed to thoroughly test the continuity of grade and structure within and adjacent to the known limits of the Fred vein. Three inclined holes of 100 metres each are recommended to test the Red vein structure between the two recently trenched areas.

As previously noted, a number of additional gold-bearing quartz veins are known in the vicinity of the Fred and Red veins. In order to determine precise locations of these and other structures, a topographic map on a scale of 1:5000 should be prepared utilising available colour air photography and the existing survey control in the area of the Fred vein. It is intended that such a map would cover the entire property area with more detailed (1:1000) coverage prepared for the area of

COST ESTIMATEPhase I

Topographic mapping	\$5,500.00
Picket line grid - 20 km @ \$350/km	\$7,000.00
Geological mapping, sampling	\$10,500.00
Geophysics - 20 km @ \$300/km	\$6,000.00
Excavator trenching - 50 hours @ \$115/hour	\$5,750.00
Diamond drilling - 2000 metres @ \$115/metre	\$230,000.00
Analytical Work	\$11,000.00
Engineering, supervision, reporting	\$17,000.00
Contingencies	<u>\$43,000.00</u>

Total Phase I \$335,750.00

Phase II

Diamond drilling - 4000 metres @ \$115/metre	\$460,000.00
Excavator trenching - 50 hours @ \$115/hour	\$5,750.00
Analytical Work	\$23,000.00
Engineering, supervision, reporting	\$55,000.00
Contingencies	<u>\$80,000.00</u>

Total Phase II \$623,750.00

Total Phases I and II \$959,500.00



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

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

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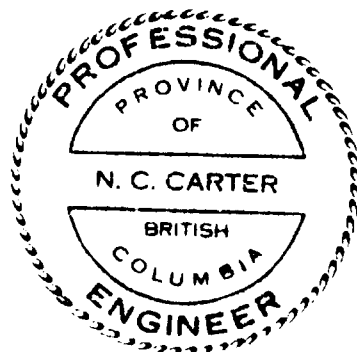
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Resources Ltd.

CERTIFICATE

I, NICHOLAS C. CARTER of 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 Macktush Property, Alberni Mining Division, British Columbia, is based on personal examinations of parts of the property in 1990 and 1991, on a review of published and unpublished reports and maps and on information provided by SYMC Resources Ltd. which includes a compilation of previous work and re-logging of previously drilled holes by John Wilson, FGAC.
5. I hold no interest, directly or indirectly, in the mineral claims comprising the Macktush property or in the securities of SYMC Resources Ltd. nor do I expect to receive any such interest.



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

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

Victoria, B.C.
July 10, 1991

N.C. CARTER, Ph.D., P.Eng.
CONSULTING GEOLOGIST

APPENDIX I

Analytical Results - Surface Sampling

**N.C. CARTER, Ph.D., P.Eng.
CONSULTING GEOLOGIST**

COMP: N.C.CARTER
 PROJ: MACKTUSH PROPERTY
 ATTN: N.C.CARTER

MIN-EN LABS — ICP REPORT
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

FILE NO: OV-0774-RJ1
 DATE: 90/07/02
 * CORE * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU PPM
20772 (ROCK)	8.1	6130	47	3	49	.7	1	710	.1	12	1286	28270	1430	4	4150	121	33	50	29	210	37	1	2	1	1	24.9	20	1	1	4	137	22000
20773 (ROCK)	.2	2130	32	1	25	.3	1	580	.1	7	88	12220	770	1	1220	123	31	60	3	80	22	1	1	1	1	7.4	9	1	1	4	143	2450
20774 (ROCK)	.3	7370	18	2	21	.5	1	7350	.2	5	37	16760	1720	2	4860	520	13	50	3	130	20	1	1	1	1	14.9	22	1	1	5	151	696
20775 (ROCK)	1.4	3460	36	2	18	.3	1	750	.5	5	26	11240	1530	1	930	52	17	50	4	180	22	1	1	1	1	9.7	8	1	1	3	119	817
20776 (CORE)	1.5	20250	1	8	163	1.1	3	40420	1.1	16	217	32440	1950	13	19400	741	8	180	36	480	34	1	1	1	1	70.2	42	6	1	6	164	76
20777 (CORE)	2.2	4050	56	5	15	.6	2	48730	1.0	10	276	21030	1100	10	6040	595	10	70	12	230	29	36	1	1	1	25.8	38	3	1	5	140	155
20778 (CORE)	3.7	3530	71	3	19	.6	2	11250	1.8	10	106	19620	1500	6	2960	274	29	60	10	170	303	19	1	1	1	16.6	292	2	1	22	560	281
20779 (CORE)	1.3	6430	21	7	44	.9	3	17800	.9	15	27	25440	2320	22	6300	406	12	80	10	450	88	2	4	1	1	31.4	42	2	1	4	126	62
20780 (CORE)	1.2	16110	1	7	203	1.2	4	30350	.7	16	19	36460	2320	11	15560	761	3	470	4	610	33	1	14	1	1	92.8	44	5	1	3	74	12
20781 (CORE)	1.7	9580	18	8	121	.8	2	12000	.1	16	35	24940	2680	55	4040	389	7	110	5	390	86	6	6	1	1	39.2	35	2	1	6	169	81

20772 - Sample Location 5 - Figure 7
 20773 - Sample Site 1 - Figure 6
 20774 - Sample Site 2 - Figure 6
 20775 - Sample Site 5 - Figure 6



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FAX (604) 980-9821

THUNDER BAY LAB.:
TELEPHONE (807) 622-8958
FAX (807) 623-5931

SMITHERS LAB.:
TELEPHONE/FAX (604) 847-3004

Assay Certificate

OV-0774-RA1

Company: **N.C.CARTER**
Project: **MACKTUSH PROPERTY**
Attn: **N.C.CARTER**

Date: **JUL-02-90**
Copy 1. **N.C.CARTER, VICTORIA, B.C.**

We hereby certify the following Assay of 2 ROCK samples submitted JUN-27-90 by N.C.CARTER.

Sample Number	AU q/tonne	AU oz/ton
20772 (ROCK)	22.60	.659
20773 (ROCK)	2.50	.073

20772 - Sample Location 5 - Figure 7

20773 - Sample Site 1 - Figure 6

Certified by

[Handwritten Signature]
MIN-EN LABORATORIES

ASSAY CERTIFICATE

1.00 GRAM SAMPLE IS DIGESTED WITH 50ML OF 3-1-3 OF HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR,
AND IS DILUTED TO 100ML WITH WATER. DETECTION FOR BASE METAL IS .01%.

- SAMPLE TYPE: ROCK CHIPS AU## 10 GRAM FIRE ASSAY

DATE RECEIVED: MAR 11 1985 DATE REPORT MAILED: *March 18, 1985* ASSAYER: *T. Saundry* DEAN TOYE OR TOM SAUNDY, CERTIFIED B.C. ASSAYER

SY.E. TRESIERRA FILE # 85-0238

PAGE 1

SAMPLE#	Mo %	Cu %	Pb %	Zn %	Ag oz/t	Ni %	Co %	Mn %	Fe %	As %	U %	Th %	Cd %	Sb %	Bi %	Au ** oz/t
124	.001	.35	.01	.01	.01	.01	.00	.04	4.02	.01	.002	.01	.00	.010	.010	.002
125	.002	.01	.01	.01	.02	.01	.00	.03	2.15	.01	.002	.01	.00	.010	.010	.036
126	.010	1.26	.01	.01	3.09	.01	.00	.01	9.00	.01	.002	.01	.00	.010	.010	.465
127	.002	.81	.01	.01	.12	.01	.00	.01	2.44	.01	.002	.01	.00	.010	.010	.031
128	.001	.01	.01	.01	.01	.01	.00	.03	11.12	.02	.002	.01	.00	.010	.010	.005
129	.001	.01	.01	.01	.01	.01	.00	4.05	.25	.01	.002	.01	.00	.010	.010	.001
* 130	.004	.42	.01	.01	.31	.01	.00	.03	3.35	.01	.002	.01	.00	.010	.010	.318
STD 6-1	.088	.84	1.37	2.31	2.95	.02	.01	.08	7.02	.23	.010	.01	.05	.160	.02	

* Sample Site 1 - Figure 6

ASSAY CERTIFICATE

- SAMPLE TYPE: Rock Chips

DATE RECEIVED: OCT 14 1987

DATE REPORT MAILED: Oct 24/87

ASSAYER: D. Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

H. MCMASTER PROJECT-SYMC File # 87-4953

SAMPLE#	MO %	CU %	PB %	ZN %	AG OZ/T	NI %	CO %	MN %	FE %	AS %	U %	TH %	CD %	SB %	BI %	AU OZ/T
*E 19509	.006	1.12	.01	.01	.76	.01	.01	.01	3.96	.01	.002	.01	.01	.01	.01	.074
**E 19510	.021	.42	.01	.01	1.23	.01	.01	.04	6.43	.05	.002	.01	.01	.01	.01	.166
***E 19511	.008	.57	.01	.01	1.56	.01	.01	.03	7.68	.08	.002	.01	.01	.02	.01	.192

* Sample Site 5 - Figure 6

** Sample Site 4 - Figure 6

*** Sample Site 3 - Figure 6

ACME ANALYTICAL LABORATORIES
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: MAY 8 1987

DATE REPORT MAILED: *May 11/87...*

ASSAY CERTIFICATE

- SAMPLE TYPE: Rock Chips

ASSAYER: *D. Toye*. DEAN TOYE, CERTIFIED B.C. ASSAYER

H. MCMASTER File # 87-1220

SAMPLE#	CU %	AG OZ/T	AU OZ/T
S5 ✓ #100	1.85	1.08	.364
S6 * #101	.01	.12	.303
S7 * #102	.05	.71	.173
S8 #103	.01	.08	.011

* Sample Location 1 - Figure 7

ASSAY CERTIFICATE

- SAMPLE TYPE: Rock Chips

DATE RECEIVED: JUNE 17 1987 DATE REPORT MAILED: June 20/87 ASSAYER: *D. Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER

H. MCMASTER File # 87-1823

SAMPLE#	MO %	CU %	PB %	ZN %	AG OZ/T	NI %	CO %	MN %	FE %	AS %	U %	TH %	CD %	SB %	BI %	AU OZ/T
25	.001	.01	.01	.01	.01	.01	.01	.04	2.27	.01	.002	.01	.01	.01	.01	.002
* 50	.009	.01	.01	.01	.01	.01	.01	.01	1.67	.01	.002	.01	.01	.01	.01	.303
75	.006	.01	.01	.01	.01	.01	.01	.03	1.92	.01	.002	.01	.01	.01	.01	.008

* Sample Location: 2 - Figure 7



To: Mr. H. McMaster
3009 Kingsway
Port Alberni, B.C.

ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B. C. V6A 1R6

Telephone: 253 - 3158

83-1038

File No. _____

Type of Samples Rock

Disposition _____

ASSAY CERTIFICATE

No.	Sample	Cu%	Ag oz/ton	Au oz/ton	Total MoS ₂ %			No.	
1	100	.01	.01	.001				1	
2	101	.01	.01	.001				2	
3	102	.01	.01	.001				3	
4	103	.01	.10	.012				4	
5	* 104	.78	2.21	.416				5	
6	105	4.59	1.92	.006	1.740			6	
7	106	.01	.02	.002				7	
8	107	.01	.01	.001				8	
9	108	.01	.01	.001				9	
								10	
11								11	
12		* Sample Location 3 - Figure 7							12
13								13	
14								14	
15								15	
16								16	
17								17	
18								18	
19								19	
20								20	

All reports are the confidential property of clients.

DATE SAMPLES RECEIVED July 4, 1983

DATE REPORTS MAILED July 7, 1983

ASSAYER

D. Toye
DEAN TOYE, B.Sc.
CHIEF CHEMIST
CERTIFIED B.C. ASSAYER

ASSAY CERTIFICATE

SAMPLE TYPE: ROCK CHIPS ANALYSIS: 10 GRAM REGULAR ASSAY

DATE RECEIVED: APRIL 4 1986 DATE REPORT MAILED: *April 4/86* ASSAYER: *D. J. ...* DEAN TOYE, CERTIFIED B.C. ASSAYER.

H. MCMASTER FILE # 86-0431

PAGE 1

SAMPLE#	Mo %	Cu %	Pb %	Zn %	Ag OZ/T	Ni %	Co %	Mn %	Fe %	As %	U %	Th %	Cd %	Sb %	Bi %	Au OZ/T	Pt** OZ/T	Pd** OZ/T
* 1003	.008	1.34	.01	.01	1.43	.01	.02	.01	7.51	.01	.002	.01	.010	.010	.010	.218	.001	.001
1004	.001	.01	.01	.01	.02	.01	.01	.03	2.22	.01	.002	.01	.010	.010	.010	.001	.001	.001
1005	.001	.01	.01	.01	.01	.01	.01	.09	5.83	.01	.002	.01	.010	.010	.010	.001	-	-
1006	.001	.01	.01	.01	.02	.01	.01	.04	2.39	.01	.002	.01	.010	.010	.010	.001	-	-

* Sample Location 4 - Figure 7



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CERTIFICATE OF ANALYSIS A871. 26

To: LORING, F. C.

R. R. #2
QUALICUM BEACH, B.C.
VOR 2T0

*Page No. : 1
Tot. Pages : 1
Date : 11-MAY-87
Invoice # : I-8714226
P.O. # : NONE

Project :
Comments :

SAMPLE DESCRIPTION	PREP CODE		Cu ppm	Mo ppm	Ag ppm Aqua R	Au ppb FA+AA		Cu %	Mo %	Ag Oz/T	Au Oz/T
	SAMPLE NO. 1 * SAMPLE NO. 2	205 205	-- --	6000 5280	----- 930	11.7 7.2	>10000 345		0.60 0.53	- 0.093	0.34 0.21
* Sample Location 5 - Figure 7											

CERTIFICATION :

P. L. Swate

APPENDIX II

Diamond Drilling Data

**N.C. CARTER, Ph.D., P.Eng.
CONSULTING GEOLOGIST**

DIAMOND DRILL RECORD

PROPERTY MACKTUSH

HOLE No. 88-05

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. _____ Sheet No. 1
 Section _____
 Date Begun _____
 Date Finished _____
 Date Logged June 24, 1990

Lat. 2770.8
 Dep. 1238.5
 Bearing -45° @ 330°
 Elev. Collar 607.8m

Total Depth 53.24m
 Logged By N.C. Carter
 Claim _____
 Core Size BQ

DEPTH	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE				
FROM	TO									
0	4.88	CASING								
4.88	14.60	QUARTZ DIORITE - medium grained, grey, uniform appearance; occasional 2 cm quartz veins @ 45° to core axis(CA)								
14.60	20.00	ANDESITE - DIORITE DYKE - chilled contacts; occasional dark grey, rounded inclusions								
20.00	30.00	QUARTZ DIORITE as previous; quartz-carbonate stringers near end of section								
30.00	30.20	GOUGE ZONE								
30.20	33.00	QUARTZ DIORITE cut by narrow basic dykes; siliceified zones with pyrite in QD, also some bleaching - basic dykes not affected; post mineral								
33.00	46.05	QUARTZ DIORITE - increasing disseminated pyrite and quartz stringers - inclusions of basic Karmutsen volcanics also cut by quartz stringers.								
46.05	46.94	QUARTZ DIORITE - argillic alteration of feldspars; 1-3 cm qtz-carb str @ 40° to CA Minor disseminated pyrite in matrix; Dissem. pyrite-pyrrhotite in qtz veins and in 0.5 cm veinlets - 2 stages qtz veining								

DIAMOND DRILL RECORD

PROPERTY MACKTUSH

HOLE No. 88-05

DIP TEST		
		Angle
Footage	Reading	Corrected

Hole No. _____ Sheet No. 2 Lat. _____ Total Depth _____
 Section _____ Dep. _____ Logged By _____
 Date Begun _____ Bearing _____ Claim _____
 Date Finished _____ Elev. Collar _____ Core Size _____
 Date Logged _____

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE		Au (ppb)	Ag (ppm)	Cu (ppm)
FROM	TO										
46.94	47.22		KARMUTSEN PX PORPHYRY - 0.5 cm qtz strcs @ 45° to CA								
47.22	47.50		DIORITE - bleached to buff colour; original texture destroyed; clay-carbonate alt'n; 1 cm qtz strcs; dissem pyrite-pyrrhotite possible MoS ₂	20776	46.33	47.22	0.89		76	1.5	217
47.50	49.50		QUARTZ VEIN - some brown carbonate; drusy cavities in part - multiple stages of quartz. Disseminated pyrite-pyrrhotite, minor chalcopyrite. Sulphides to 3%. Good qtz vein to 48.80 then argillically alt'd diorite with 0.5 cm qtz strcs to 49.32, qtz vein to end of section. Dissem py in alt'd diorite	20777	47.22	48.00	0.78		155	2.2	276
				20778	48.00	48.80	0.80		281	3.7	106
				20779	48.80	49.50	0.70		62	1.3	27
49.50	51.46		DIORITE - medium grained, alternating clay-carbonate alt'n	20780	49.50	50.40	0.90		12	1.2	19
51.46	53.10		KARMUTSEN BASIC VOLCANIC inclusions to 52.02; 52.65-end of section; qtz veining to 52.21; 4 cm gouge zone @ 52.02 @ 70° to CA followed by qtz vein to 52.21	20781	52.02	52.21	0.19		81	1.7	35
53.10	54.50		BASIC DYKE								
54.50	57.50		QUARTZ DIORITE - bleached with gouge zones occ qtz stringers								
57.50	60.0		QUARTZ DIORITE unaltered								

COMP: N.C.CARTER
 PROJ: MACKTUSH PROPERTY
 ATTN: N.C.CARTER

MIN-EN LABS — ICP REPORT
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

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SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SH PPM	W PPM	CR PPM	AU PPB
20772 (ROCK)	8.1	6130	47	3	49	.7	1	710	.1	12	1286	28270	1430	4	4150	121	33	50	29	210	37	1	2	1	1	24.9	20	1	1	4	137	22000
20773 (ROCK)	.2	2130	32	1	25	.3	1	580	.1	7	88	12220	770	1	1220	123	31	60	3	80	22	1	1	1	1	7.4	9	1	1	4	143	2450
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20775 (ROCK)	1.4	3460	36	2	18	.3	1	750	.5	5	26	11240	1530	1	930	52	17	50	4	180	22	1	1	1	1	9.7	8	1	1	3	119	817
20776 (CORE)	1.5	20250	1	8	163	1.1	3	40420	1.1	.16	217	32440	1950	13	19400	741	8	180	36	480	34	1	1	1	1	70.2	42	6	1	6	164	76
20777 (CORE)	2.2	4050	56	5	15	.6	2	48730	1.0	10	276	21030	1100	10	6040	595	18	70	12	230	29	36	1	1	1	25.8	38	3	1	5	140	155
20778 (CORE)	3.7	3530	71	3	19	.6	2	11250	1.8	10	106	19620	1500	6	2960	274	29	60	10	170	303	19	1	1	1	16.6	292	2	1	22	560	281
20779 (CORE)	1.3	6430	21	7	44	.9	3	17800	.9	15	27	25440	2320	22	6300	406	12	80	10	450	88	2	4	1	1	31.4	42	2	1	4	126	62
20780 (CORE)	1.2	16110	1	7	203	1.2	4	30350	.7	16	19	36460	2320	11	15560	761	3	470	4	610	33	1	14	1	1	92.8	44	5	1	3	74	12
20781 (CORE)	1.7	9580	18	8	121	.8	2	12000	.1	16	35	24940	2680	35	4040	389	7	110	5	390	86	6	6	1	1	39.2	35	2	1	6	169	81

20776-20781 - Drill Hole 5

**DIAMOND DRILL CORE LOGGING REPORT
for
Drill Holes 87-1, 87-3 and 87-8**

**on the
MACKTUSH PROPERTY**

Alberni Mining Division

**Latitude: 49° 08' North
Longitude: 124° 52' West**

NTS: 92F/2W

**for
SYMC Resources Ltd.**

By John Wilson, F.G.A.C.

May 21, 1991

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Split Core	2
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Certificate	3

APPENDIX I

Diamond Drill Logs for Holes 87-1, 87-3 and 87-8

APPENDIX II

Letter to Frank Loring, P.Eng. from J. Wilson, April, 1991.

Letter to Herb McMaster from Frank Loring, P.Eng., May, 1991.

Table of footage measurements and metric equivalents.

APPENDIX III

Previously reported core sample intervals.

APPENDIX IV

Table of "true width" sampling information.

**John R. Wilson, F.G.A.C.
Consulting Geologist**

Introduction

The Macktush property, south of Port Alberni, B.C. is owned by SYMC Resources Ltd. It consists of ten Modified Grid mineral claims in the Alberni Mining Division. Exploration and other studies have taken place on the property since 1982, largely on the COPPER 102 claim (record number 1911) which has an expiry date of October 31, 1991. This report presents recent diamond drill logs for holes numbered 1,3 and 8, which were drilled and split in 1987.

History of Diamond Drilling Reports

In April of 1990 the writer, at the request of SYMC Resources Ltd., compiled results from diamond drilling, trenching and chip sampling that had been undertaken during the previous few years (Wilson, 1990). The compilation included a field survey of positions of drill hole collars, trenches and portals. No exploration reports were available for the compilation and some of the data provided by SYMC Resources Ltd. was verbal. For example, some drill hole collars and trenches were located and surveyed in the field; other sites, under snow at the time, were identified by the president of SYMC Resources Ltd. and then surveyed. Assays were provided by certified commercial laboratory reports dated 1988. A table of sample information (Appendix IV), provided by SYMC Resources Ltd., listed chip sample and drill core assays across true widths. The true width measurements were used in the compilation for chip sampling information but could not be used to plot intersections on drill hole cross-sections. Instead, the sampling interval for drill core from holes 87-1, 87-3 and 87-8 was provided verbally by the president of SYMC Resources Ltd (Appendix III).

In June of 1990, core from drill hole 88-5 was logged and sampled by N.C. Carter, Ph.D, P.Eng. for part of a geological report on the property (Carter, 1990).

In December, 1990, at the request of SYMC Resources Ltd, the writer logged core from drill holes 87-1, 87-3 and 87-8. This report describes the drill core geology and the probable intervals of split core.

Core Logging Background

Following drilling in 1987, most of the core boxes were stored on the mineral claims. Boxes containing split sections from holes 87-1 and 87-3 were stored at the Port Alberni premises of SYMC Resources Ltd. In the ensuing years some of the contents of boxes stored on the claims had been lost when they tipped over while unattended. On December 12, 1990 Herb McMaster of SYMC Resources Ltd. and the writer moved the remaining boxes of core to the Port Alberni premises of SYMC Resources Ltd. for the purpose of geological logging. All boxes were weather beaten from being stored outside.

Boxes from Hole 87-1 were all found to be labelled with hole number and footage. Of the 24 boxes that comprise the hole, core was found in boxes numbered 2 and 13 to 24. A brief examination of the pile of jumbled, loose core at the field storage site revealed only quartz diorite with occasional inclusions of andesitic volcanic; no significant veining, alteration or mineralization was apparent.

All seven boxes comprising Hole 87-3 were found to be labelled with hole number and footage. Very minor core was missing.

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Consulting Geologist**

All 19 boxes comprising Hole 87-8 were found to be labelled with hole number and footage except box 13 which had no readable markings. Minor core was missing from the boxes. The designation of an unlabelled box as the thirteenth of Hole 87-8 was based on:

1. the geological continuity of drill core between the unmarked box and adjacent boxes
2. the position of a split section in the unmarked box which approximates the interval reported by Frank Loring, P.Eng. (Appendix II)
3. a statement from the president of SYMC Resources Ltd., identifying it as the thirteenth box

Drill Core Geology

Holes 87-1, 87-3 and 87-8 were drilled to depths of approximately 133, 41 and 106 metres respectively. Drill logs for the three holes are in Appendix I. Figures showing locations of the drill holes are in a report by Carter (1990) after a compilation map by Wilson (1990).

Split sections of core containing quartz veining, usually with fragments of silicified andesitic volcanic and minor quartz diorite, are from each hole. Veining is grey and white, multistaged, banded and brecciated with some open spaces. Split sections normally have 2% disseminated pyrite but sometimes have 5%. Minor disseminated chalcopyrite and malachite occur in some split sections. Thinner quartz veining to several centimetres, unassociated with brecciated country rock, occurs unsplit in Holes 87-1 and 87-8.

Core in the three holes consists of mainly quartz diorite with lesser andesitic volcanic inclusions in places.

Quartz diorite is medium grained and usually has a fresh appearance with white feldspar, pale grey quartz and black mafics. Sections of quartz diorite that carry andesitic volcanic inclusions have a mottled, chloritic green-grey character. Occasional thin clay-carbonate altered zones occur close to the sampled quartz veining. Sheared core with gouge is found in Holes 87-1 and 87-8.

Split Core

Split intervals measured during core logging (Appendix I) were found to differ from the intervals that had been reported earlier (Appendix III). They were closer to the "true width" intervals of Appendix IV. In April of 1991 a written request was made to Frank Loring, P.Eng., the supervisor of sampling in 1987, to provide a statement describing the split intervals and any other relevant information. This letter and the response is included in Appendix II.

Using the writer's core logging measurements described in Appendix I and the statement by Frank Loring, P.Eng. (Appendix II) a new series of sample intervals is proposed. Each of the three drill logs in Appendix I contains the reasoning which led the writer to believe the following sample intervals are more accurate than previous tabulations.

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Hole number	Split interval (metres)
87-1	109.58-110.72
87-3	33.50-34.29 36.58-40.39
87-8	71.63-72.88

Conclusions

Core from Holes 87-1, 87-3 and 87-8 contain the same rock type: quartz diorite with inclusions of andesitic volcanic in variable proportions. Split sections in the three holes consist of quartz veining in a silicified country rock mixture of quartz diorite and andesite. Pyrite and occasional chalcopyrite or malachite are disseminated in the split sections of veined, silicified country rock.

Based on core logging by the writer and documentation provided by Frank Loring, P.Eng., the supervisor of sampling in 1987, the intervals of split core have been revised. It is believed that the intervals listed above and in Appendix I are more accurate than those reported earlier and listed in Appendices II, III and IV.

References

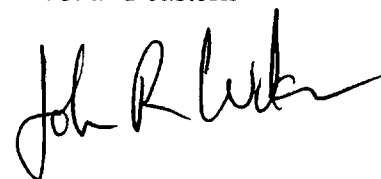
Carter, N.C. (1990): Geological Report on the Macktush Property. Private report for SYMC Resources Ltd.

Wilson, J. (1990): Compilation of Sampling and Diamond Drilling on the Macktush Property, private compilation for SYMC Resources Ltd. consisting of map, sections and tables.

Certificate

I, John Wilson, of Merville, British Columbia hereby certify that:

1. I am a graduate of the University of British Columbia with a BSc. (honours geology), 1972.
2. I am a Fellow of the Geological Association of Canada.
3. I have worked as a professional mineral exploration geologist in B.C. and eastern North America every year since 1972.



**John R. Wilson, F.G.A.C.
Consulting Geologist**

APPENDIX I

Diamond Drill Logs for Holes 87-1, 87-3 and 87-8

**John R. Wilson, F.G.A.C.
Consulting Geologist**

SYMC Resources

Diamond Drill Record

Property Macktush Claim Copper 102 Hole no. 87-1 Page no. 1
 North 2679.5 Bearing N 030° W Purpose Testing Fred vein
 East 1165.5 Dip -045° Date logged Dec 14, 1990
 Elev. 683 metres Length 132.58 metres Logged by J. Wilson
 Core size NO

John R. Wilson

from (metres)	to	description	sample from	to	sample no.	Au	Ag	Cu
0-8.23		CASING and missing core.						
8.23-14.03		QUARTZ DIORITE. Medium grained; white with black mafics. Fairly fresh appearance.						
14.03-69.19		Core missing.						
69.19-73.46		QUARTZ DIORITE. As above.						
73.46-96.62		QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS. Dark greenish- grey. Minor quartz veining to 1 cm at 20°-40° to core axis (CA). Occasional epidote and hematite in veinlets.						
96.62-98.15		QUARTZ DIORITE. As above. Fairly broken core; sheared in places; weakly chloritic. Quartz stockworks common. Minor disseminated and veinlet pyrite.						
98.15- 99.21		QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS. As above. White and grey veinlets throughout. Some chloritic slip surfaces and alteration. Minor disseminated fine grained pyrite. Very broken core.						
		98.75-99.21 m: strongest quartz veining in interval; mainly white quartz cut by chloritic veinlets. Up to 1% disseminated pyrite.						
99.21-100.58		ANDESITIC VOLCANIC. Chloritic; sheared with some gouge. Minor quartz veins to 1 cm at 15° to CA.						

from (metres)	to	description	sample from	to	sample no.	Au	Ag	Cu
100.58-104.85		<p>QUARTZ DIORITE. Crumbly core. Chloritic alteration of mafics. Intense quartz-carbonate stockworks. Up to 3% disseminated pyrite in places. Occasional 1 cm quartz veins at 15°-25° to CA.</p> <p>103.33-104.85 m: sheared, broken and crumbly with quartz veinlets and veins. Disseminated and veinlet pyrite to 1%.</p>						
104.85-106.22		<p>ANDESITIC VOLCANIC.</p> <p>104.85-105.46 m: very sheared, with quartz veinlets and minor pyrite.</p> <p>105.46-106.22 m: solid core, chloritic with strong quartz stockworks.</p>						
106.22-109.58		<p>QUARTZ DIORITE with minor ANDESITIC VOLCANIC INCLUSIONS. As above. Mainly solid and fresh-looking. Occasional quartz-calcite veinlets.</p>						
109.58-110.72		<p><i>Split section.</i> Silicified ANDESITIC VOLCANIC and possible minor QUARTZ DIORITE. Many grey and white pyritic quartz veins to several cm. Quartz veins exhibit banding, brecciation, multiple stages. Veins are cut by minor chloritic veinlets. Quartz-carbonate veinlets occur throughout. Disseminated pyrite to 5% in patches but average is 2%. Veining angle is 35°-50° to CA.</p> <p><u>Note:</u> Approximately 35% of the split core remains in the tray. It occupies 1.6 metres of space and is bounded above and below by solid core.</p> <p>The split section was logged by the writer as 109.48-111.25 metres but these measurements were rough because no footage marker blocks were in the tray; the measurements were based on footage marker blocks in adjacent boxes and on the footage summary inscribed at the end of the tray. Further errors may have been induced by lost core.</p>						

from (metres)	to description	sample from to	sample no.	Au	Ag	Cu
110.72-132.58 End of Hole	<p>The true interval of the split section is believed to be 109.58-110.72 metres as indicated by Frank Loring, P. Eng. (Appendix II). The variance is likely due to missing markers, shifting core within the tray and minor lost core.</p> <p>QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS. Fairly fresh appearance. Minor quartz-calcite veinlets.</p> <p><u>Note</u> : Core boxes were weather beaten from being stored in the field. Some boxes had been tipped over while in storage and the contents jumbled. A brief examination of the pile of loose core revealed only quartz diorite with occasional inclusions of andesitic volcanic; no significant veining, alteration or mineralization was apparant. All boxes were found to be labelled with hole number and footages. Of the 24 boxes that comprise hole #87-1, core was found and logged in boxes numbered 2 and 13 to 24. Logging indicated core recovery to be 100%.</p>					

SYMC Resources

Diamond Drill Record

Property Macktush Claim Copper 102 Hole no. 87-3 Page no. 1
 North 2787.4 Bearing N 030° W Purpose Testing Fred vein
 East 1253.4 Dip -045° Date logged Dec 14, 1990
 Elev. 598 metres Length 41.06 metres Logged by J. Wilson
 Core size NO

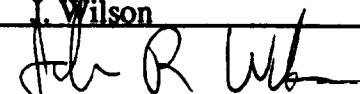
John R. Webb

from to (metres)	description	sample from to	sample no	Au	Ag	Cu
0-2.74 m	CASING					
2.74-5.49	QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS. Fractured and broken in places, but generally solid core.					
5.49-19.81	QUARTZ DIORITE. Medium grained. White with black mafics. Mostly fractured and broken above 14.32 m. 10.06-13.11 m: quartz-calcite stockworks and veinlets common.					
19.81-33.50	QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS. Occasional 5 to 10 cm rusty weathered fracture zones. Occasional soft, buff coloured clay-carbonate alteration zones cut by 1 cm buff stained quartz veins.					
33.50-34.29	<i>Split section.</i> Silicified QUARTZ DIORITE and ANDESITIC VOLCANIC cut by grey and white quartz veins to several cm. Minor malachite. Disseminated fine pyrite to 2%. Sharp contacts with enclosing core. No obvious gradation or alteration in country rock adjacent to vein zone. <u>Note:</u> Approximately 35% of the split section remains in the tray, occupying 79 cm of space. It is bounded above and below by solid core. No gaps indicative of lost core are evident in the box.					

from (metres)	to	description	sample from	to	sample no.	Au	Ag	Cu
		Loring (Appendix II) reports the sampling interval here to be from 33.53 to 34.29 metres. The variance could have been induced during conversion from feet to metres and from rounding-off discrepancies during measurement.						
34.29-36.58		QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS.						
36.58-40.39		<i>Split section.</i> 40% QUARTZ VEINS and 60% ANDESITIC VOLCANIC with minor QUARTZ DIORITE. Quartz veining occurs throughout the section but a one metre wide quartz-vein rich zone is in the middle of the interval. Quartz veining is white and grey, often banded and carries minor disseminated pyrite as 2 mm crystals. Some veins contain open spaces filled with quartz crystals. Veining cuts very rusty, iron stained, greenish andesite and some quartz diorite. The country rock contains traces of disseminated pyrite varying up to 5% across 15 cm in places. Occasional quartz stockworks cross the andesite and quartz diorite. <i>Note:</i> Approximately 25% of the split core section (quartered?) remains in the tray and occupies the first 3.81 metres of core box space. It is followed by 67 cm of solid core which marks the end of the hole. Loring (Appendix II) reports the sampling interval here to be from 37.19 to 41.00 metres, a length of 3.81 metres, which is equivalent to the sample width the writer measured.						
40.39-41.06		QUARTZ DIORITE. Medium grained; white with black mafics. Weak to strongly iron stained / weathered.						
End of Hole		<i>Note:</i> Core boxes were weather beaten from being stored in the field but all boxes had readable labels indicating hole number and footage. Minor core was missing from the boxes, apparently due to tipping over while in storage. All seven boxes that comprise hole #87-3 were logged. Core recovery appeared to be 95-100%, normally the latter.						

SYMC**Diamond Drill Record**

Property Macktush Claim Copper 102 Hole no. 87-8 Page no. 1
 North 2725.0 Bearing N 030° W Purpose Testing Fred vein
 East 1188.5 Dip -045° Date logged Dec 14, 1990
 Elev. 644 metres Length 105.77 metres Logged by J. Wilson
 Core size NO



from to (metres)	description	sample from to	sample no.	Au	Ag	Cu
0-2.14	CASING.					
2.14-14.93	QUARTZ DIORITE. Medium grained. White with black mafics. Fairly fresh appearance, although exhibiting a reddish iron stain throughout due to weathering. Weathering is strongest in top 9 m, gradually weakening with depth. Minor chlorite on fractures. Rare quartz-calcite veining to 1 cm wide at 0° to 10° to core axis (CA).					
14.93-64.31	<p>QUARTZ DIORITE with sections of ANDESITIC VOLCANIC INCLUSIONS. The quartz diorite is as above but seldom with a pink weathered tinge. The weathering is restricted to obvious fracture zones. Volcanic inclusions are often dominant, giving core a mottled, dark character with indistinct green-gray crystals with weak chloritic alteration. Calcite-quartz stockworks are common in volcanic-rich sections. Especially strong 0.5 to 3 cm quartz veining at 20-40° to CA is at 35.7 to 64.31 m. Strong quartz stockworks with minor, patchy chloritization of mafics, some argillic alteration and minor red iron weathering at 57.0 to 61.0 m.</p> <p>31.09-34.14 m: occasional shear and gouge 35.05 m: shear at 50° to CA; poor core recovery; chloritic and possibly epidote alteration. 35.36 m: 3 cm banded quartz vein at 45° to CA; 15% pyrite crystals to 3 mm are within a grey quartz band cut by later 1 cm apparently barren white quartz veining. 40.48 m: 1 cm white quartz vein at 25° to CA.</p>					

from (metres)	to	description	sample from	to	sample no.	Au	Ag	Cu
64.31-71.63		<p>41.76 m: 5 mm white quartz vein at 20° to CA. 43.89 m: 3 cm banded quartz vein with trace pyrite in grey quartz at 40° to CA. 51.82 m: shearing and quartz-calcite veinlets at 15° to CA.</p> <p>QUARTZ DIORITE and some ANDESITIC VOLCANIC INCLUSIONS. Medium-grained quartz diorite as above, but much less veined and altered. Minor 0.5-1 cm quartz-calcite veining. Minor epidote veinlets in lower 2m.</p>						
71.63-72.88		<p><i>Split Section.</i> QUARTZ VEIN. Multi-stage, banded and brecciated. Some open spaces and quartz crystals. Some buff coloured, iron stained patches. Total sulphides (pyrite and trace chalcopyrite) is 3-5%.</p> <p><u>Notes:</u> The split section is in core box #13 which, unlike adjacent boxes, contains no footage marker blocks or inscriptions describing footage, hole number or box number.</p> <p>The designation of this box as number 13 of hole 87-8 is based on: 1. the statement of Herb McMaster, president of SYMC Resources Ltd., identifying it as such. 2. the geological continuity of drill core between box #13 and adjacent boxes 3. the position of the observed split section which approximates the interval recorded by Frank Loring, P.Eng. (Appendix II).</p> <p>Accurate measurements of core intervals in box #13 are hindered by missing footage markers, some missing core and the broken, apparently quartered nature of the split section.</p>						

from (metres)	to description	sample from to	sample no.	Au	Ag	Cu
72.88-76.66	<p>An estimated 120 cm of split core remains in the tray. Based on the nearest footage markers, core box #13 begins with solid core from 69.49 to 71.63 m. The next section, measured from 71.63 to 74.68 m, consists of split core and a probable gap of missing core. The end of the box contains solid core from 74.68 to 76.20 m.</p> <p>The true interval of the split section is believed to be 71.63 to 72.88 m. The letter by Frank Loring, P. Eng. (Appendix II) describes a zone of quartz with chalcopyrite and molybdenite starting at 71.63 metres. It is followed by quartz containing pyrite starting at 71.93 metres, which is followed by more quartz containing chalcopyrite and molybdenite from 72.72 to 72.88 metres. The latter interval corresponds with his sample number 60354. It is assumed that the split section was from 71.63 to 72.88 metres based on:</p> <ol style="list-style-type: none"> 1. the coincidence of Loring's and the writer's 71.63 metre measurement. 2. an estimated 120 centimetres of split core remaining in the tray (nearly equivalent to the assumed split interval). 3. the sample section ends at 72.88 metres, according to Loring. <p>The variance with the interval measured during logging is likely due to missing markers, shifting core within the tray and missing core.</p> <p>QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS. Mottled, mixed grey-green appearance. Minor pinkish iron stain. Many quartz veinlets, both white and grey. Up to 5% disseminated and veinlet pyrite in patches but 0.5-1% pyrite is usual.</p> <p>75.4 m: 2 cm banded white and grey quartz vein with 2% pyrite at 15° to CA. Up to 5% disseminated pyrite in adjacent 10 cm of silicified country rock.</p> <p>75.9 m: 2 cm banded white and grey quartz vein with 1% pyrite at 20° to CA. Up to 5% disseminated pyrite in 10 cm zone of adjacent country rock.</p>					

from (metres)	to description	sample from to	sample no.	Au	Ag	Cu
76.66-78.03	QUARTZ DIORITE. Mostly broken with shearing and quartz-calcite veinlets throughout. Top few cm are more strongly sheared and contain some gouge.					
78.03-78.33	ANDESITIC VOLCANIC INCLUSION. No significant veining, alteration or mineralization.					
78.33-79.86	QUARTZ DIORITE. Medium grained, well fractured and broken.					
79.86-85.65	ANDESITIC VOLCANIC INCLUSIONS in QUARTZ DIORITE. Grey-green colour. Quartz-calcite veinlets are fairly common.					
85.65-87.17	QUARTZ DIORITE. Minor ANDESITIC VOLCANIC INCLUSIONS. Intense quartz-calcite veinlets. Core often broken.					
87.17-105.77	QUARTZ DIORITE. Minor ANDESITIC VOLCANIC INCLUSIONS. Fairly fresh-looking quartz diorite. Solid core. Rare quartz-calcite veinlets.					
	87.48 m: 3 mm hematite-quartz veinlet at 35° to CA.					
	95.86 m: iron stained fracture					
	97.23-97.84 m: intense, buff coloured, bleached (?), clay-					
	carbonate alteration. Minor 1 cm buff stained quartz veins.					
	104.85 m: two 1cm banded white-grey quartz veins at 0° to 35° to					
	CA. No visible mineralization.					
End of Hole						

from (metres)	to	description	sample from	to	sample no.	Au	Ag	Cu
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		<p><u>Note:</u> Core boxes were weather beaten from being stored in the field. Some had been tipped over in the past and minor core lost. All boxes were found to be labelled with sometimes barely visible markings of hole number and footage except box #13 which had no readable markings (see previous "Note"). All 19 of the boxes that comprise hole 87-8 were logged. Some minor gaps in the core are presumed due to loss while in storage. Reduced core recovery attributable to drilling is 85% at 31.09 to 34.14 m and 90% at 76.2 to 79.86 m. Core recovery elsewhere appears to be 100%.</p>						
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APPENDIX II

Letter to Frank Loring, P.Eng. from J. Wilson, April, 1991.

Letter to Herb McMaster from Frank Loring, P.Eng., May, 1991.

Table of footage measurements and metric equivalents.

**John R. Wilson, F.G.A.C.
Consulting Geologist**

If you agree with the data please forward a statement bearing the same information and other comments you consider necessary, accompanied by the usual Professional Engineer's stamped certificate/statement of qualifications to Mr. Herb McMaster, 3009 Kingsway Avenue, Port Alberni, B.C., V9Y 1X7.

Data for a Statement on Macktush Drill Core Splitting

Subject: Diamond drill core sampling, Macktush Property.

Location: Copper 102 claim, Record #1911 (October), Alberni Mining Division, NTS 92F-2W.

Details: Core from three NQ diamond drill holes, dated 1987, was split as follows:

<u>Hole</u> <u>Number</u>	<u>Split Interval (feet)</u>	
	<u>From</u>	<u>To</u>
DDH 87-1	360	365
DDH 87-3	110	113.5
DDH 87-3	122	134.5
DDH 87-8	234	236
DDH 87-8	236	239

Supervisor of Core Sampling: Frank Loring, P.Eng.

Thank you for your assistance in this matter.

Yours sincerely,

John Wilson, FGAC

**John R. Wilson, F.G.A.C.
Consulting Geologist**

Frank C. Loring, P. Eng.
Consulting Engineer
R.R.2. Qualicum Beach, B.C.
VOR 2T0
May 6, 1991

SYMC Resources Ltd.
3009 Kingsway Ave.
Port Alberni, B.C.

Attention: Mr. Herb McMaster

Re:
Request from Mr. John R. Wilson, Consulting Geologist, for
clarification of core samples from your property, taken by
myself in 1987.

DDH 87-1
Footage 359.5 to 363.25 Grey, schisted, varying mineral,
mixed qtz. Sample P0512.
Footage 363.25 to 364. Basic volcanics.
Footage 364 to 371. Granodiorite. Some mineral.

DDH 87-3
Footage 110 to 112.5 Mixed qtz. Rust. Sample 60357
Footage 112.5 to 121 Altered diorite. Qtz.
Footage 122 to 134.5 Broken qtz. Rusty. Some mineral. Sample
60358.

DDH 87-8
Footage 232 to 235 Grey qtz. Some pyrite.
Footage 235 to 236 Qtz. Some chalco and moly.
Footage 236 to 238.6 Qtz. Some pyrite.
Footage 238.6 to 239.1 Qtz. Some chalco and moly. Sample
60354.

These samples were taken in September, October, and November,
of 1987, either personally by myself or by Mr. Herb McMaster
working with me under my supervision.

I trust that this is the information that you require.

Yours truly,

Frank C. Loring



Table of footage measurements and metric equivalents

	<u>feet</u>	<u>metres</u>
Drill Hole 87-1	359.5	109.58
	363.25	110.72
	364.0	110.95
	371.0	113.08
Drill Hole 87-3	110.0	33.53
	112.5	34.29
	121.0	36.88
	122.0	37.19
	134.5	41.00
Drill Hole 87-8	232.0	70.71
	235.0	71.63
	236.0	71.93
	238.6	72.72
	239.1	72.88

**John R. Wilson, F.G.A.C.
Consulting Geologist**

APPENDIX III

Previously reported core sample intervals.

Diamond Drill Hole No.	Interval (metres)
87-1	109.73-112.70
87-3	33.53-35.36
87-3	35.36-40.64
87-8	71.32-72.50
87-8	72.50-74.29

By Carter (1990) after Wilson (1990), based on verbal information from SYMC Resources Ltd.

**John R. Wilson, F.G.A.C.
Consulting Geologist**

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: MAR 17 1988
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE (604) 253-3158 FAX (604) 253-1716 DATE REPORT MAILED: *Mar 24/88*

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp

ASSAYER: *C. Leong* D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

H. MCMASTER PROJECT-SYMC File # 87-3963R

SAMPLE#	CU %	AG OZ/T	AU OZ/T
F 0512	.03	.06	.174

Drill Hole 1

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: MAR 17 1988
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE (604) 253-3158 FAX (604) 253-1716 DATE REPORT MAILED: *Mon 21/88*

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp

ASSAYER: *C. Leung* D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

H. MCMASTER File # 87-5229R

SAMPLE#	CU	AG	AU
	%	OZ/T	OZ/T
E 60357	.80	.48	.112
E 60358	.95	5.04	1.290

Drill Hole 3 - second split (quarter core)

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: MAR 17 1988
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE (604) 253-3158 FAX (604) 253-1716 DATE REPORT MAILED: *Mar 21/88*

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp

ASSAYER: *C. Leong* D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

H. MCMASTER File # 87-5772R

SAMPLE#	CU %	AG OZ/T	AU OZ/T
- P 0565	.01	.06	.116
[E 60354	.03	.05	.290]

Drill Hole 8

COST ESTIMATE

Phase I.

Topographic mapping	\$5,500.00
Picket line grid - 38 km @ \$400/km	\$15,200.00
Geological mapping, sampling	\$12,000.00
VLF-EM, magnetometer surveys - 38 km @ \$325/km	\$12,350.00
Soil and rock geochemistry - sample collection	\$3,000.00
Excavator trenching - 50 hours @ \$115/hour	\$5,750.00
Sample analyses	\$10,000.00
Engineering, supervision, reporting	\$12,000.00
Contingencies	<u>\$11,370.00</u>
Total, Phase I	\$87,170.00

Phase II

Diamond drilling - 1500 metres @ \$90/metre	\$135,000.00
Sample analyses - 385 samples @ \$22/sample	\$8,500.00
Engineering, supervision, reporting	\$20,000.00
Contingencies	<u>\$24,500.00</u>
Total, Phase II	\$188,000.00

Total, Phases I and II **\$275,170.00**

*Please let me know if foregoing is OK.
A few minor revisions are also required
in main body of report.*

*N.C. CARTER
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