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SUMMARY REPORT
ON THE
O.K. COPPER-MOLYBDENUM PROPERTY
POWELL RIVER, BRITISH COLUMBIA

BY

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Prepared for
RHYOLITE RESOURCES INC.

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SUMMARY

Rhyolite Resources Inc. owns the O.K. copper-molybdenum property situated north of Powell River, in southwest British Columbia. The property consists of eight mineral claims in the Vancouver Mining Division.

Access is by road and the property is bordered by navigable ocean inlets on the west and north.

Since its discovery in 1965, the O.K. property has been explored by a variety of geological, geochemical and geophysical surveys and by more than 15,000 metres of drilling.

The central part of the property is situated on an upland plateau-like surface some 800 metres above sea level. Country rocks are granitic rocks of the Coast Plutonic Complex which are of mid-Cretaceous age. These have been intruded by a probable mid-Tertiary multiple phase complex which hosts copper and molybdenum mineralization. Principal phases include a peripheral granodiorite, the main mineralized host, and a central, essentially barren quartz-feldspar-porphyry dyke-like body. Several mineralized porphyry phases are evident, and an intrusive breccia occurs in the southern part of the property. Post-mineral basic dyke swarms are numerous and present a potential dilution problem.

Seven copper-molybdenum zones have been identified over a northerly trend some 5 km in length. Geostatistical treatment of drill results to date suggest geological reserves of 240 million tons grading 0.24% Cu and 0.015% MoS₂ at a cut-off grade of 0.2% copper equivalent. An additional reserve of 210 million tons of similar grade is inferred.

A recently discovered intrusive breccia zone in the southern part of the property has yielded much higher copper grades. The extent of

this zone is not known and a thorough exploration program is required to assess its potential.

The writer recommends a two-stage program, consisting of detailed geology, trenching and percussion and diamond drilling to adequately test the potential for higher grade copper mineralization on the O.K. property. Other possible mineralized zones, identified by previous surveys, also merit further work.

Estimated expenditures for the two-stage program are in the order of \$1 million dollars.

INTRODUCTION

Rhyolite Resources Inc. owns the O.K. copper-molybdenum property, comprised of eight mineral claims, situated north of Powell River in the Vancouver Mining Division of southwestern British Columbia.

This report, prepared at the request of Rhyolite Resources Inc., is based on an examination of the property in the company of Mr. Jon A. Stewart, President, on June 3, 1984, and on substantial records of earlier work made available to the writer. These comprehensive records will assist greatly in planning future work on the property.

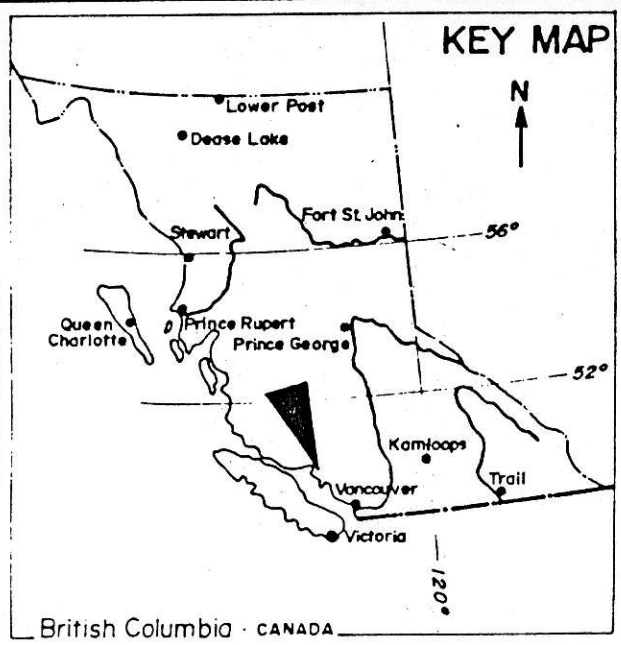
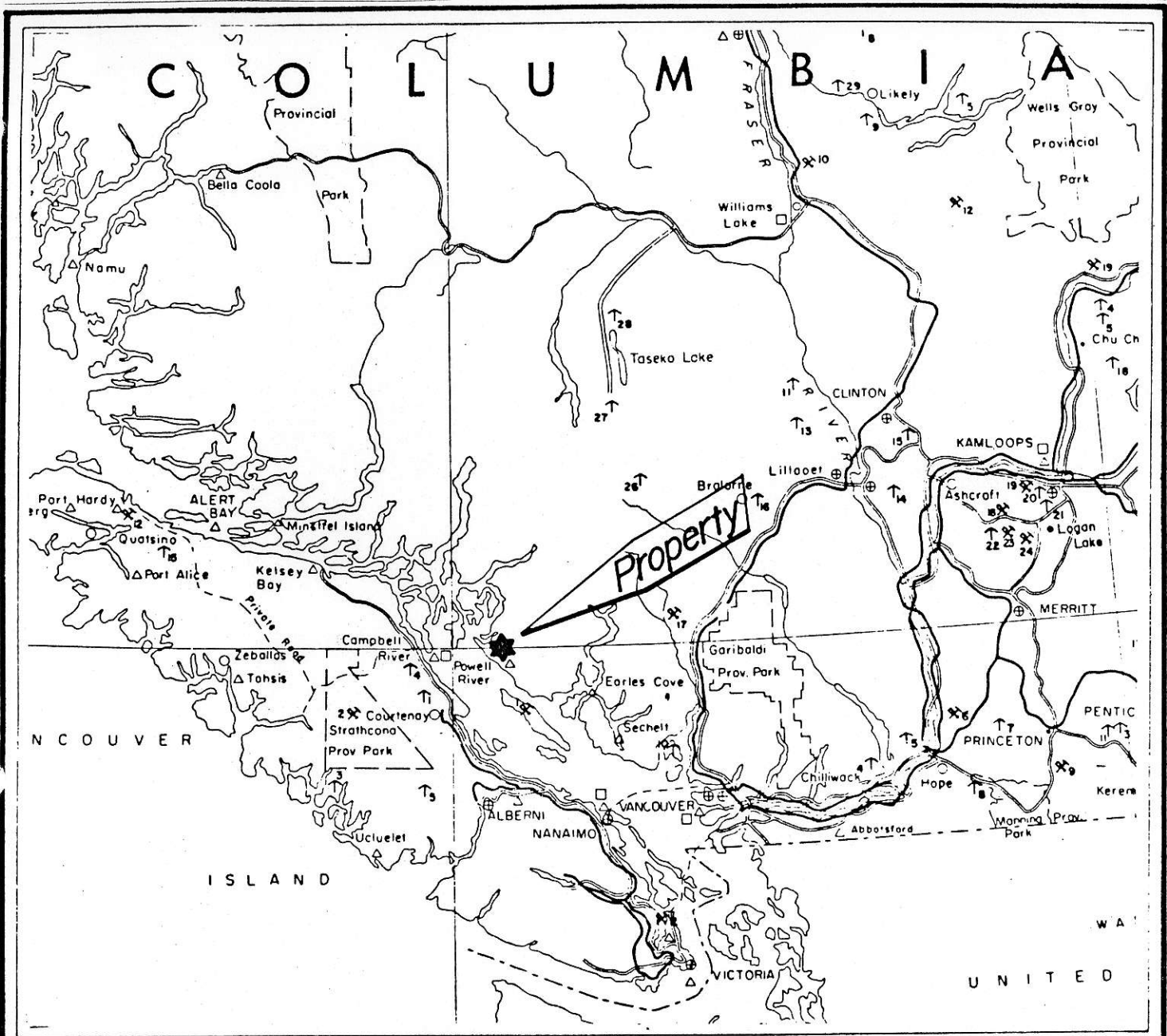
Several useful discussions were held with Mr. Stewart and Mr. Arthur Ashton.

LOCATION AND ACCESS

The O.K. property is situated 25 km north-northwest of the municipality of Powell River (Figure 1). Powell River, with an area population of 23,000, is 120 km northwest of Vancouver, and is reached by highway and Ferry and regularly scheduled airline service.

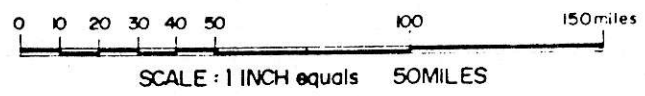
The property includes an area of 3575 hectares bounded on the north and west by Theodosia and Okeover Inlets (Figure 2). The geographic centre of the property is at latitude $50^{\circ}02'$ North and longitude $124^{\circ}39'$ West in National Topographic map-area 92K/2E.

Access to the property from Powell River is by 30 km of highway and logging roads.



AQUARIUS RESOURCES LTD.

OK Property *Okeover Inlet, B. C.*
Vancouver Mining Division *N.T.S. 92K/2E.*



LOCATION MAP

Figure 1

MINERAL PROPERTY

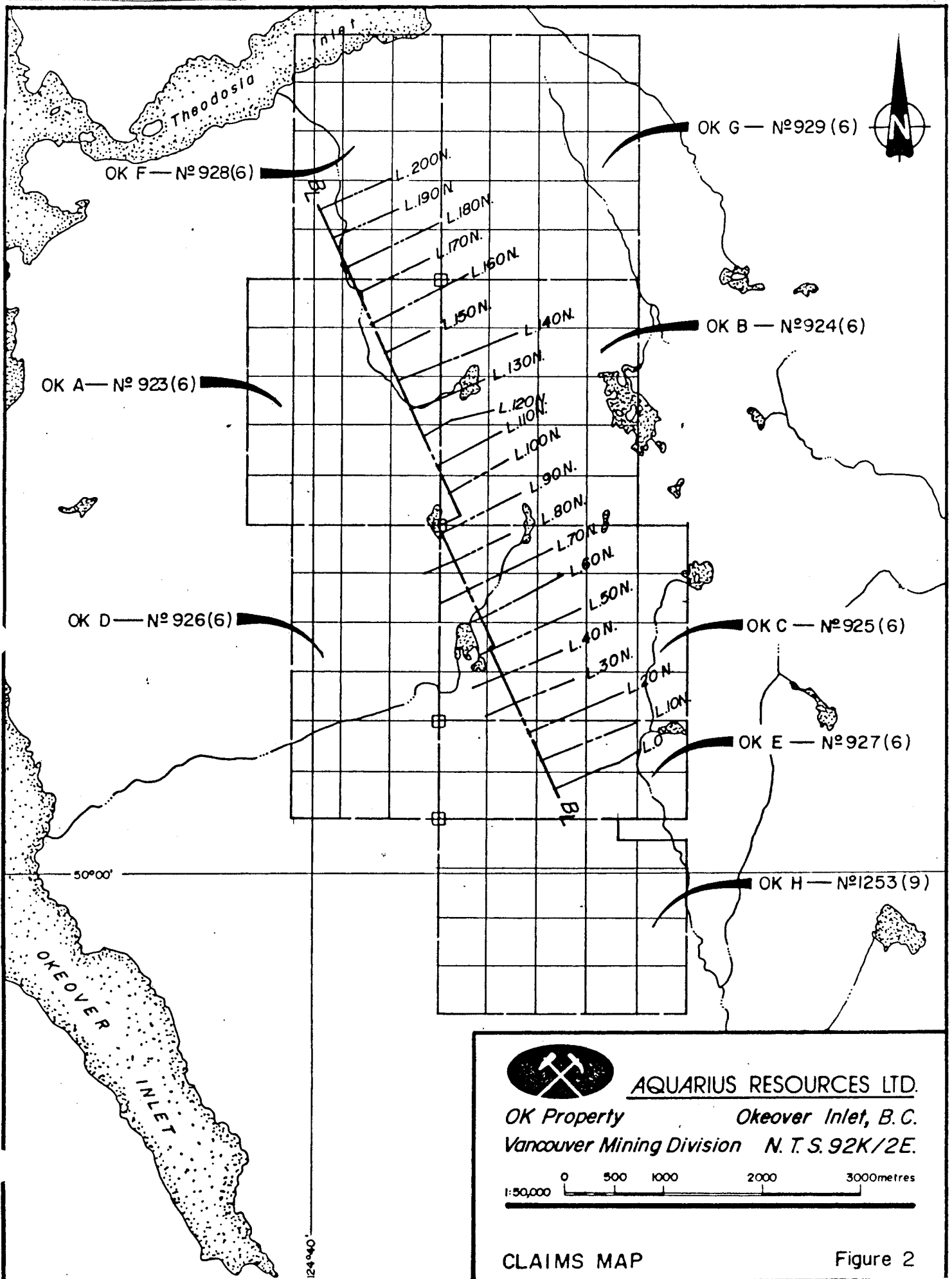
The O.K. property of Rhyolite Resources Inc. includes 8 Modified Grid System mineral claims, comprising 143 units, in the Vancouver Mining Division (Figure 2). The 8 claims are contained in two groups and details are as follows:

<u>Group</u>	<u>Mineral Claim</u>	<u>Record No.</u>	<u>Expiry Date</u>
OK 1	OK A (20 units)	923	June 17, 1999
	OK B (20 units)	924	June 17, 1997
	OK C (20 units)	925	June 17, 2001
	OK F (15 units)	928	June 17, 1993
	OK G (20 units)	929	June 17, 1993
OK 2	OK D (18 units)	926	June 17, 1993
	OK E (10 units)	927	June 17, 1993
	OK H (20 units)	1253	Sep. 15, 1993

The writer understands that boundaries of all claims have been surveyed.

HISTORY

Copper-molybdenum mineralization on what is now the O.K. property was discovered by local prospectors in 1965. Since that time, numerous companies have conducted geological, geochemical and geophysical surveys and diamond and percussion drilling of the property. In chronological order, these companies include: Noranda, Asarco, Falconbridge, Duval Corporation, Granite Mountain Mines, Sierra Empire, Western Mines and Aquarius Resources.



Available records indicate close to 100 diamond and percussion drill holes have been completed for a total of more than 15,000 metres. Expenditures to date on the property, in 1984 dollars, are estimated to be more than \$3 million.

Most recent work on the O.K. property (1979, 1981, 1982) has been conducted by Aquarius Resources Ltd. This has consisted of limited diamond drilling, revised geological mapping, IP and soil geochemical surveys in selected areas of the property, road-building and additional trenching.

Rhyolite Resources Inc. acquired all rights to the property in 1984.

PHYSICAL SETTING

The central part of the property occupies an upland plateau-like area 750 to 850 metres above sea level. This area is bordered by low hills to the east and west which rise 300 to 400 metres above the plateau surface. Moderate slopes prevail between the upland surface and Okeover Inlet while the north part of the property features steep slopes to Theodosia Inlet. *Fig. 3.*

Numerous small lakes and swampy areas are present in the central part of the property. Recent logging activity has removed much of the original forest and a thin veneer of glacial overburden obscures bedrock. Best exposures are in road-cuts and trenches.

REGIONAL GEOLOGICAL SETTING

The O.K. property is situated near the western margin of the Coast Plutonic Complex of southwestern British Columbia. In this context, the setting of the property is somewhat unique, inasmuch as most porphyry copper-molybdenum deposits of the Canadian Cordillera are situated in the Intermontane and Insular tectonic belts. Notable exceptions are some porphyry molybdenum deposits in British Columbia and adjacent Alaska panhandle in which mineralization is related to younger granitic intrusions within the Coast Plutonic Complex. Examples of these include the significant Quartz Hill molybdenum deposit of U.S. Borax, situated near Ketchikan in southeast Alaska, and the Salal Creek and Gem molybdenum prospects in southwestern British Columbia.

(and to Lake T)

*Don Cupolo prospect, 4x km
Cent. N. of Ferris Inlet.*

Some previous workers have referred to the location of the O.K. intrusive complex between two subcircular structures; East Redonda Island to the north and part of Powell Lake to the east. Both these geomorphic features resemble collapsed caldera structures.

Coast Plutonic complex rocks in the vicinity of the O.K. deposits include granodiorites, quartz diorites and more basic diorites and gabbros. Screens of intermediate to basic volcanic rocks have been reported. K-Ar radiometric ages of similar granitic rocks in southwestern B.C. range from early to mid-Cretaceous.

PROPERTY GEOLOGY

Coast plutonic rocks have been intruded by the O.K. intrusive complex, elongate in a northerly direction and measuring 3.6 by 2.3 km.

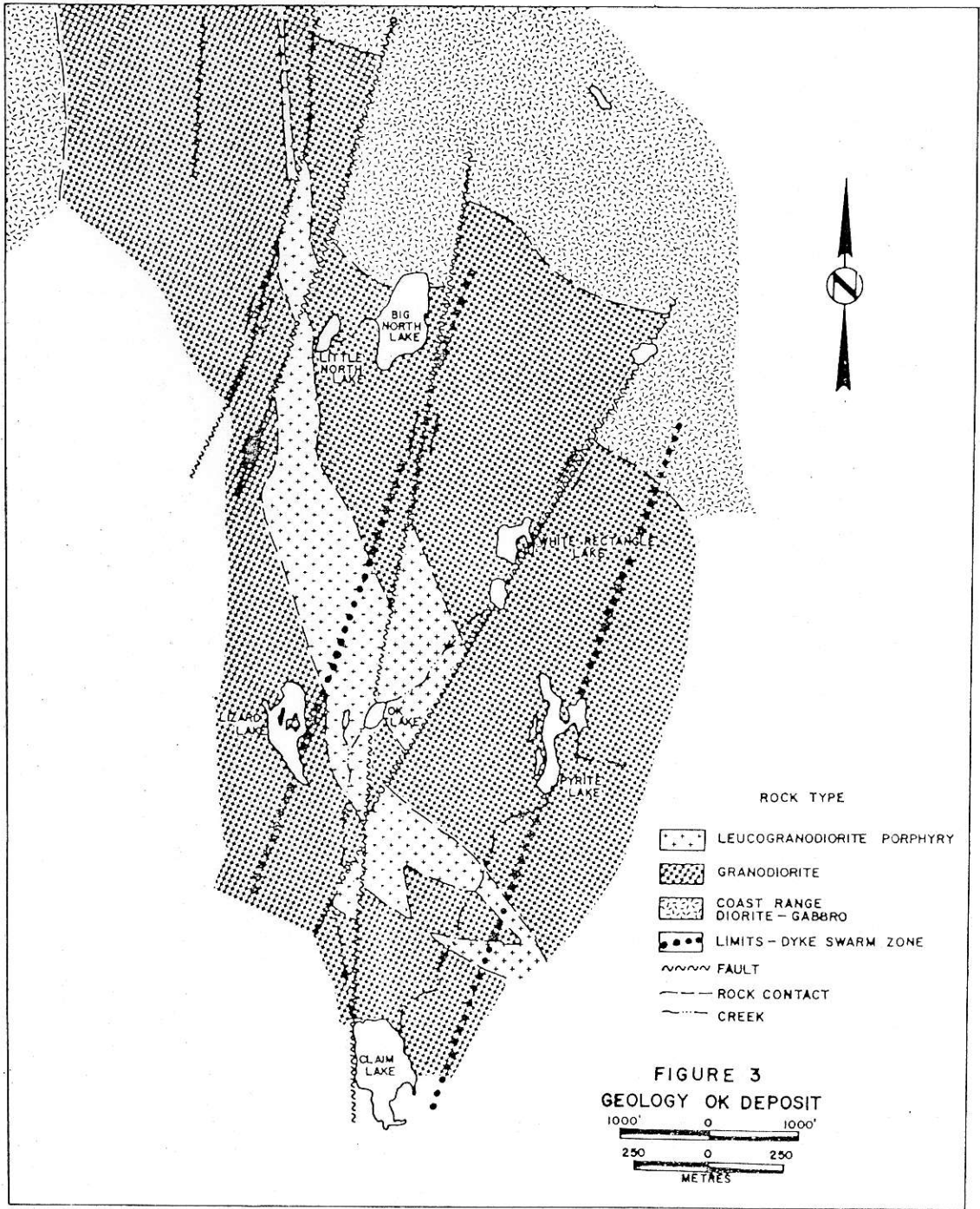
The Age of this complex is not known. However, it is reasonable to assume a mid-Tertiary age, *or younger* similar to other mineralized intrusions on Vancouver Island (Catface, Mt. Washington) and elsewhere in southwestern B.C. (Gem, Salal Creek).

Principal geological features are shown in Figure ^{4, after} 3 by Meyer, Gale and Randall (1976). *could in more detail perhaps* The complex features multiple intrusion, characteristic of significant porphyry deposits. At least six intrusive phases were noted by the writer near the south end of the property.

The two principal intrusive phases are shown on Figure ^{4, NW to} 3. An earlier granodiorite, variably altered, is intruded by a large, northerly trending dyke-like body of leucocratic quartz-feldspar porphyry, referred to as leucogranodiorite porphyry by Meyer et al (1976).

Later phases include narrow quartz-eye porphyries (dacites of earlier workers?) and post-mineral hornblende diorites which occur as north-northeasterly trending dykes up to 3 metres wide. *These elements* Discontinuous fine-grained andesite dykes of variable orientation represent the latest intrusive phase. ①

see Fig 3 for location of grid
Of particular significance are intrusive breccias, recognized near the south end of the grid in 1979. *The* Geometry of these bodies is imprecisely known. Trenching and limited diamond drilling by Aquarius Resources suggest a north-northwest trend for the breccia zone with widths of at least 10 and possibly 30 metres and an indicated strike length of 100 metres. A possibly similar breccia zone was mapped by Aquarius 250 metres northwest of the main body. Tectonically-derived breccias are also present on the property.



The main breccia zone seen by the writer has definite characteristics of an intrusive breccia, typical of most porphyry deposits. Rounded to subangular 2-5 cm clasts of varying lithologies are closely spaced and are contained in a fine-grained matrix consisting of a good percentage of sulfide minerals.

Contacts between the O.K. intrusive complex and Coast granitic rocks have been observed principally along the northern contact (Meyer et al, 1976), where some development of gneissic rocks was observed.

North-northeast striking faults cut both the Coast granitic rocks and the O.K. intrusive complex (Figure 3). These clearly post-date mineralization and provide conduits for post-mineral basic dyke swarms.

ALTERATION AND MINERALIZATION

Aquarius Resources (Cardinal, 1983) undertook an alteration mapping program in the southern half of the property. Results indicate moderate to strong sericite and kaolinite (phyllic-argillic) alteration centred on the breccia zone and south of Claim Lake. Elsewhere on the property, there is little evidence of the classic potassic-phyllic-argillic-propylitic outward alteration zoning common to porphyry deposits. This could be due to a variety of factors, including host rock lithologies and style of intrusion.

Meyer et al (1976) describe a strong quartz-sericite alteration in the quartz-felspar-porphyry or leucogranodiorite central dyke which decreases in intensity outward to predominantly chlorite-epidote alteration in the bordering granodiorite.

Economic mineralization on the O.K. property consists of pyrite, chalcopyrite and molybdenite with lesser bornite, sphalerite and magnetite. Principal sulfide minerals occur in a stockwork of quartz veinlets, which have a predominant east to northeast trend, and molybdenite commonly coats dry fractures.

The greatest degree of quartz stockwork development is within the central or late phase quartz-feldspar-porphyry although this rock type is largely devoid of sulfide mineralization. Best copper-molybdenum mineralization is hosted by granodiorite adjacent to the quartz-feldspar-porphyry dyke, suggesting that this phase is probably the mineralizer. *unit* Pyrite is usually associated with chalcopyrite and molybdenite but occurs in greater quantities in peripheral zones (pyrite halo).

Seven mineralized zones have been explored over a northerly trend of 5 km length (Figure ⁴4). All of these, including the southernmost breccia zone, have been tested by some degree by diamond drilling.

Most of these zones contain apparent large tonnages of low grade copper-molybdenum mineralization (see subsequent section for *estimates of* indicated reserves and grades) with the exception of the south breccia zone which has demonstrably higher copper grades with some silver. Predominant mineralogy is chalcopyrite, bornite, pyrite and lesser molybdenite which occupy interstices between breccia fragments.

GEOCHEMISTRY

The O.K. deposits respond to geochemical techniques as demonstrated by the original discovery of the property.

Areas with anom values for Cu (+260), Mo (+27) and Ag (+1.32 ppm) have been sampled by Tracy & Associates - (Fig. 6).
in soils
10.
546

All mineralized zones shown on Figure 4 have broad anomalous copper (+500 ppm) signatures in soils with coincident but more areally restricted molybdenum anomalies (+55 ppm). *& Ag anomalies*

Soil sampling by Aquarius Resources in 1981 and 1982 provides excellent coverage of most of the grid area. A number of untested anomalies are present in both the northern and southern grid areas.

A few discrete anomalous silver areas appear to correspond with the south breccia zone.

GEOPHYSICS

Various geophysical methods have been employed on the property since the late 1960's. Magnetometer, VLF-EM and self-potential surveys were apparently of limited value. Induced Polarization was seen to reflect distribution of sulfides and consequently appears to have been the most useful tool.

Aquarius Resources (Cardinal, 1983) conducted an IP survey over the southern grid area which showed anomalous chargeability and resistivity values having a crude correlation with moderate to strong alteration zones centred on the south breccia zone.

INDICATED RESERVES AND POTENTIAL OF PROPERTY

Although considerable drilling has been done to date on the several identified zones, the lack of consistent sampling data precludes precise definition of mineable reserves and consequently all figures must be considered as geological reserves. *or probable reserves (Owens, 1991)*

Western Mines Ltd. estimated reserves in 1974 for the North Lake zone (Meyer et al, 1976) at a cut-off grade of 0.20% copper as being:

Drill indicated: 49 million tons of 0.30% copper and
0.016% molybdenite.

Inferred: 19 million tons of 0.26% copper and
0.02% molybdenite.

One of the difficulties in estimating reserves and grades is the ubiquitous post-mineral dyke swarms which appear to dilute mineralized zones by as much as 20%. The Western Mines' estimates include dykes of less than 3 metres width and assume those of greater widths can be selectively mined as waste.

A geostatistical study of all drill hole data for all zones on the property was commissioned by Aquarius Resources (Cardinal, 1983). The same assumptions were made for barren dykes as in the Western Mines estimates. Utilizing various extrapolations, the study suggests the following for the total drilled area of the O.K. property. A cut-off grade of 0.2% copper equivalent was used:

Drill indicated: 240 million tons of 0.24% copper and
0.015% molybdenite.

Inferred: 210 million tons of similar grade.

This statistical study showed a remarkable uniformity of copper grades throughout the several zones, while molybdenite was more erratic in distribution. The study also suggests that selective mining could possibly up-grade mill heads to the 0.5% copper range, although it is readily apparent that much more work is necessary to establish this potential.

The writer concurs with the study's conclusion that inclined drill holes provide better information than vertical holes in these areas of obvious vertical structures.

From the foregoing, it is apparent that the O.K. property includes a significant tonnage of uniform, if low grade, copper and molybdenum mineralization.

The problem for all operators since the late 1960's has been the search for a higher grade zone. The recently discovered south breccia zone may provide a better grade "core" and suggests the possibility of other such zones occurring on the property.

Chip sampling across a 12 metre length within the intrusive breccia by Aquarius Resources (Cardinal, 1983) yielded 2.4% copper and 0.5% molybdenite with some silver values, while limited drilling showed grades approaching 0.5% copper over similar lengths. The limited work to date on this zone precludes any estimate of reserves or grades.

Little is known regarding precious metal values. It is likely that little or no analysis for gold and silver was done during earlier drilling of the property. As previously mentioned, the south breccia zone does contain some silver, and geochemical soil surveys by Aquarius suggest higher silver values are coincident with higher copper grades.

RECOMMENDATIONS FOR FURTHER WORK

The south breccia zone is definitely the priority area for additional work. Further trenching is needed to better assess the geometry and extent of this zone. The three drill holes put down in 1979 do not properly test the configuration of the breccia body and consequently additional diamond drilling is required.

Possible extensions of this zone, particularly to the northwest, should be checked by careful prospecting, geological mapping and trenching. Reported occurrences of breccias elsewhere on the property should be investigated.

To the writer's knowledge, no breccias were logged in previous drilling of the property. Unfortunately, most of this core has been destroyed by vandalism, which also precludes any re-analysis for precious metals.

As previously noted, post-mineral basic dykes present a serious dilution problem, and efforts should be made to establish precise location and configuration of these dyke swarms within the area of known breccia bodies.

Areas of lower grade copper-molybdenum mineralization adjacent to the known breccia zone should be thoroughly assessed by trenching and percussion drilling.

Previously acquired data suggest a number of areas elsewhere on the claims which require further investigation. These include the northern or Theodosia zone which was subjected to only limited drilling by Western Mines. It may be significant that some of the highest soil geochemical values were obtained in this area.

COST ESTIMATE

Significant expenditures are required to adequately assess the potential for higher grades of copper-molybdenum mineralization on the O.K. property.

Existing infrastructure includes good road access to most areas of the property and a centrally located large trailer camp. All necessary goods and services are available in Powell River.

The writer envisions a staged program beginning with detailed geological mapping of the southern grid area, followed by trenching, blasting, sampling and diamond drilling. Pending encouraging results, additional work would include further assessment of lower grade mineralization peripheral to the breccia body and additional work elsewhere on the property.

Anticipated costs are as follows:

Stage 1

Geological mapping, compilation	\$ 30,000	
Camp costs - 2 months	\$ 35,000	
Trenching, road building	\$ 20,000	
Diamond drilling:		
1500 metres @ \$100/metre	\$150,000	
Assaying	\$ 10,000	
Contingencies @ 15%	\$ <u>35,000</u>	
	Total	\$ 280,000

Stage 2

Percussion drilling:		
2000 metres @ \$75/metre	\$150,000	
Trenching, road construction	\$ 35,000	
Diamond drilling:		
5000 metres @ \$100/metre	\$500,000	
Supervision	\$ 35,000	
Assaying	\$ 35,000	
Camp costs	\$ 70,000	
Contingencies @ 15%	\$ <u>123,000</u>	
	Total	\$ <u>948,000</u>
Total Stages 1 and 2		\$ <u>1,228,000</u>

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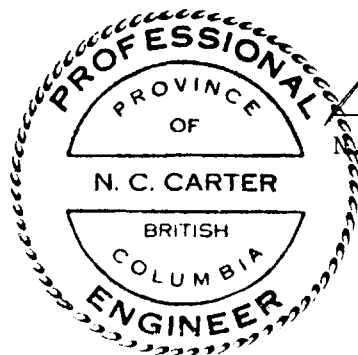
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CERTIFICATE

I, NICHOLAS C. CARTER, of Victoria, B.C., do 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 the United States over the past 24 years.
4. This report, prepared at the request of Rhyolite Resources Inc., is based on an examination of the O.K. property June 3, 1984, and on published and unpublished information provided by Rhyolite Resources Inc.
5. I hold no interest in the O.K. property or in Rhyolite Resources Inc.
6. Permission is hereby granted to Rhyolite Resources Inc. to use this report in support of any Prospectus, Statement of Material Facts or Filing Statements with the office of the Superintendent of Brokers and the Vancouver Stock Exchange.

Victoria, B.C.
July 11, 1984



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