ANACONDA CANADA EXPLORATION LTD

PRELIMINARY REPORT 826111

EXPLORATION ACTIVITIES: INDIAN RIVER CLAIMS, BRITISH COLUMBIA

by

L. Riccio and C.M. Rebagliati

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(NTS 92 - G/10)

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October, 1980

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SUMMARY AND CONCLUSIONS

The Indian River area is underlain by a roof pendant of predominantly pyroclastic rocks surrounded by stocks and plutons of the Coast Plutonic Complex. Similar roof pendants further to the west (Britannia, Callaghan Creek) and east (Harrison Lake) contain polymetallic sulphide deposits while adjacent plutonic rocks are host to numerous occurrences and prospects of porphyry-type mineralization.

Exploration work carried out by Anaconda in the Indian River area between 1963 and 1966 led to the discovery and/or rediscovery of several high-grade chalcopyrite "veins" and of a large quartz flooded area containing disseminated pyrite, minor chalcopyrite, pyrite, and sporadic molybdenite. Both types of mineralization were tested by drilling and intervals of up to 40 m averaging 0.3% Cu were intersected in drill holes beneath the quartz flooded zone. Geological mapping and chip sampling carried out by Lindberg in 1975 led that author to stress the potential of the Indian River area for Britannia-type volcanogenic massive sulphides and to point out that the quartz flooded area could contain significant tonnages of low-grade gold mineralization. He indicated specific drill targets to test both massive sulphide and gold mineralization.

In view of Lindberg's recommendations and of the overall favourable geological setting of the Indian River area an exploration program was initiated in 1980 with the intent of assessing the gold potential of the quartz flooded zone, investigating the massive sulphide potential within the Indian River volcano-sedimentary sequence and delineating further areas of interest. Exploration activities consisted of detailed (1:2000) and reconnaissance (1:5000) mapping, geochemical soil sampling, diamond drilling and rock chip sampling.

Detailed mapping indicates that the Indian River volcanosedimentary sequence consists of a lower succession of interfingering coarse grained acid to intermediate pyroclastic rocks, rhyolite domes and flows and minor andesite flows (proximal sequence) overlain by volcanoclastic sediments and bedded andesitic tuffs (distal sequence). The upper part of the proximal sequence contains

previously known (Roy Prospect) and newly discovered chalcopyrite-rich segregations which are interpreted as proximal volcanogenic sulphides. Epigenetic chalcopyrite-pyrite-quartz-chlorite $\pm$ jasper veins underlying the massive sulphides are considered to represent stringer-type mineralization. The basal volcaniclastic sediments contain pyrite rich clasts and some disseminated copper mineralization and are potential targets for distal polymetallic massive sulphide deposits.

The volcanic sequence is truncated by quartz-porphyry/quartz-diorite intrusive system (London Porphyry) which contains porphyry-type mineralization with phyllic and propylitic altered portions. Further to the east porphyry mineralization occurs in propylitic altered quartz diorites of the Coast Plutonic Complex (Caladonian Perphyry).

Drill core and chip sample results from altered portions of the intrusives have outlined areas containing approximately 0.3% Cu, 0.02% Mo, and about 2.7 ppm Ag. None of these assay results returned anomalous gold. Best targets for copper-molybdenum mineralization appear to be propylitic-altered quartz diorites rather than phyllic altored quartz-porphyries.

Recommendations are made to explore for volcanogenic massive sulphides and porphyry deposits.

INTRODUCTION

The purpose of this report is to review exploration activities conducted in 1980 on the Indian River portion of a large block of company claims located near the former Britannia Mine.

LOCATION AND ACCESS

The Indian River claims are situated 17km east of Britannia Beach and 20km from the head of Indian Arm north of Vancouver, British Columbia at 49° 35' N latitude and 122° 57' W. longitude, NTS sheet 92 - G/10 (see Figure 1, page 4). The elevation of the claims range from 170m to 450m along the course of the Indian River drainage, and up to 1245m on the northeast and 1460m on the southwest side. The ridge on the southwest side marks the boundary of the Vancouver City Watershed.

The claims can be reached by dirt road from Squamish, a distance of approximately 16km. The road is rough and very steep where it crosses the watershed from the Indian River drainage into the Stawamus River drainage. Heavy equipment can be transported by 10 tonne capacity truck from Squamish to the pass, but loads must be transferred to four-wheel drive vehicles or skidded down into the Indian River valley. As an alternative, large pieces of equipment loaded on heavy trucks can be transported by barge from Vancouver to the head of Indian Arm. Due to the temporary, makeshift nature of the off-loading ramp at Weldwoods log sorting site, the barge can only dock during high tide. The road from the head of the Indian Arm to the camp site located at the confluence of Meslillooet and Indian Rivers is in good condition and can be used by large vehicles.

PROPERTY

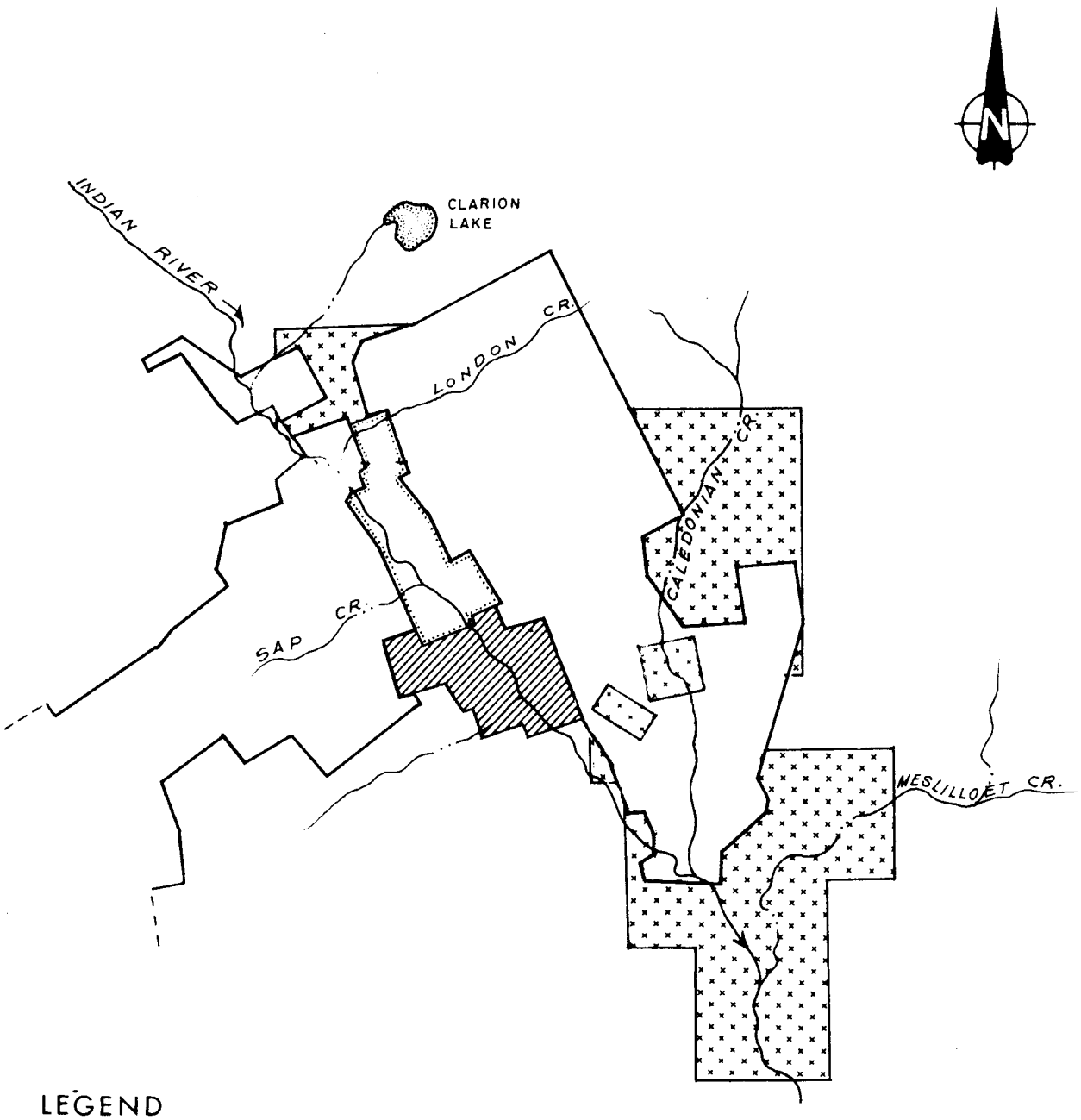
The Indian River - Furry Creek property consists of 310 Crown Granted claims, 6 reverted Crown Granted claims and 7 staked claims, and comprises approximately 6,510 hectares (16,145 acres).

Approximately 700 Crown Granted claims were staked in the early 1900's following the discovery of the Britannia Mine. At one time the Britannia claims extended from tidewater at Britannia Beach to 2km east of Indian River. At some time prior to Anaconda's acquisition of the Britannia property in 1962 some of the claims in the Indian River Valley changed hands. As a result until this year the Anaconda claims were not contiguous, but were separated along the course of the Indian River. (See Figure 2, page 6). In late 1979 approximately 400 Crown Granted claims, lying to the north of the Furry Creek valley and encompassing the former Britannia Mine were sold. The Vancouver watershed divides the Anaconda claims into two groups: a) the Bank of Vancouver - Furry Creek area, b) the Indian River area.

In 1980 seven claims were staked in the Indian River area, and six reverted Crown Granted claims were acquired from the Crown. Four claims, totalling 15 units, were staked along the Indian and Meslillooet River Valleys to cover the only available land near Anaconda's claims suitable for potential mill and tailings disposal sites. Two claims, on the north and east sides of the Crown Granted claims, comprising four and twelve units respectively, were staked to protect the possible extension of the London and Caledonian Porphyry systems. A seventh claim, comprising four units, was staked to cover two fractions within the eastern half of the claim block. The six reverted Crown Granted claims join the east and west halves of the claim groups to the south, provide a second access corridor across the valley, cover ground with moderate porphyry potential, and extend the area suitable for plant construction or waste disposal. The staking of the northern-most claim and the acquisition of the reverted Crown Granted claims completely encloses the five Falconbridge claims lying along the valley.

REGIONAL GEOLOGY

The Indian River area is underlain by rocks of the Indian River Pendant (Roddick, 1965) and surrounding Coast Plutonic Complex. This pendant is one of a series of northwest trending volcanosedimentary belts which also include the Britannia Pendant and a pendant exposed on and around Gambier Island further to the



LEGEND

- Anaconda Claims Staked 1980
- Crown Granted Claims
- Reverted Crown Granted Claims Aquired
- Falconbridge Crown Granted Claims

0 0.5 1 km

Fig. 2

ANACONDA Canada Exploration Ltd.

ANACONDA CLAIMS

INDIAN RIVER REGION

PROPERTY LOCATION PLAN

Compilation by: J.M.	Drawn by: C.D.	Date: August 1980
Scale: 1:50,000	N.T.S. 92-G/10	Drawing No.

southwest (see Figure 3, page 8). These pendants are tentatively ascribed to the Jurassic-Cretaceous Gambier Group (Armstrong 1953) which has recently been correlated (Payne et al, 1980) to the Britannia Group of James (1929). Although regional geological descriptions of the Gambier Group pendants are scarce, available information (Roddick, 1965; Miller and Sinclair 1978; Payne et al, 1980) indicates that they are made up of intermediate to acid predominantly volcaniclastic rocks and subordinate metasediments. Such volcanic terrains are generally developed in mature island arcs or along active continental margins.

The Coast Range Complex comprises a variety of pre, sin and post tectonic plutons and stocks ranging in composition from granite to gabbro. Quartz diorite appears to be the most common plutonic rock in the Indian River and surrounding areas (Roddick, 1965). Contact aureoles are generally developed around the periphery of sin and post tectonic plutons.

The structure within the pendants is complex and difficult to define due to lack of good stratigraphic markers. Late shear zones which cut across lithologic units are developed on a regional scale both at Indian River and in the Britannia mine area (see Figure 3, page 8).

INDIAN RIVER AREA

PREVIOUS GEOLOGICAL AND EXPLORATION WORK

Geological work carried out in the Indian River region prior to 1974 has been summarized by Lindberg (1975) and will not be reviewed here. The results of drilling done before the 1980 field season and the main points and conclusions of Lindberg's 1975 report are outlined.

In the early part of the century, exploration and development work took place in the Roy and Don Fraction claims and in 1918-19 two shallow holes were drilled beneath the Roy Showings from a common collaring point located south of the main Roy Showing. One of the holes is reported to have intersected "pyritized

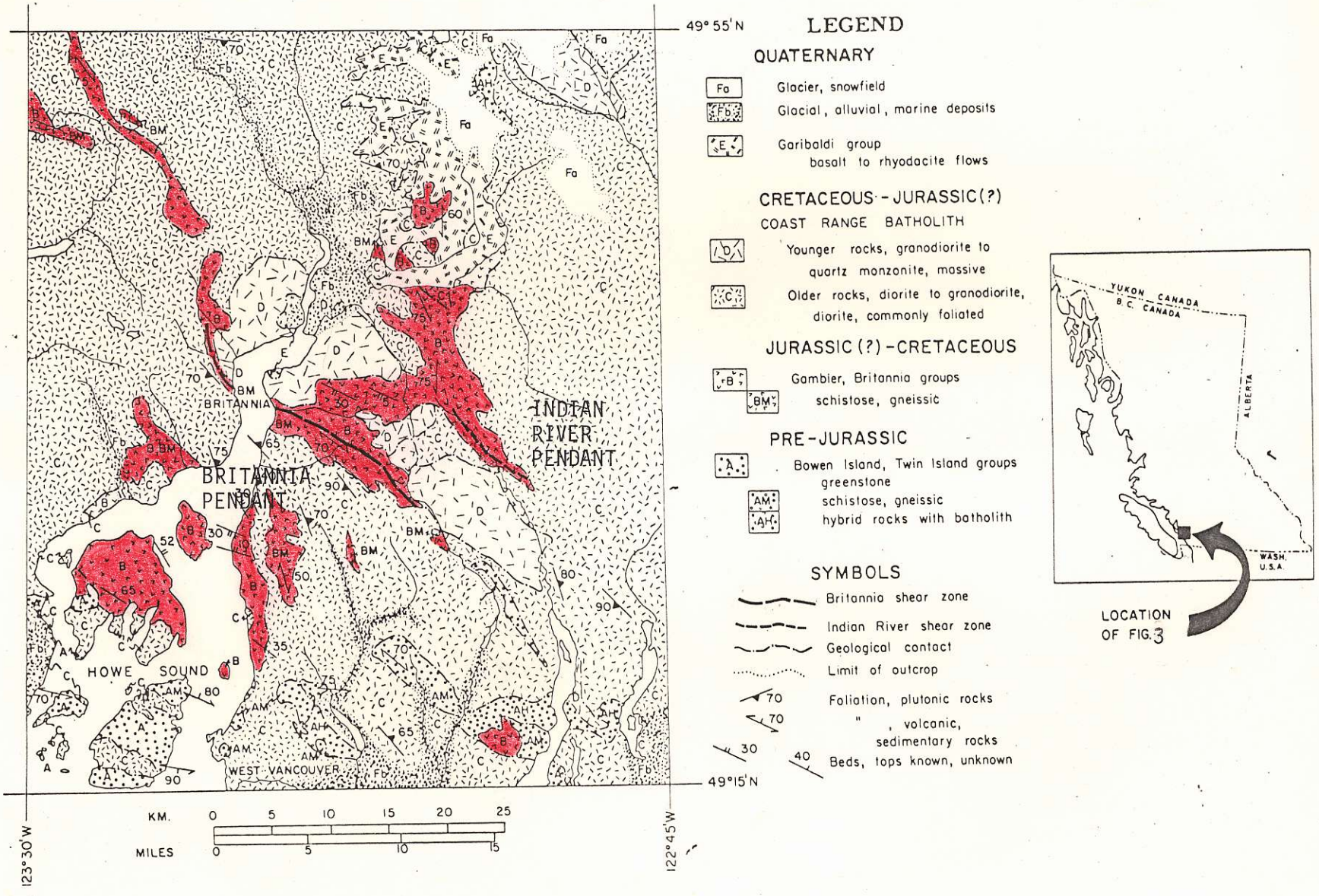


Figure 3 (after Payne, et. al., 1980)

granodiorite with 0.5% Cu" toward the end. This pyritized granodiorite probably corresponds to our propylitized quartz-diorite. In 1963 Anaconda began a regional investigation of the London Creek-Roy Creek area which culminated in a drilling program aimed at testing the siliceous pyritic zone exposed in the London Slide area and the extension of the Roy mineralization. In 1964 three holes drilled at different angles and in a NE direction from the London Tunnel portal intersected approximately 45 m grading slightly less than 0.3% copper and 0.02% molybdenum on the southern contact of the London Slide rocks (Hansen, 1965). A fourth hole collared on the west side of the Roy No. 1 claim intersected barren andesite. The downward and lateral extension of the Roy mineralization was tested in 1965 by drilling two inclined holes collared approximately 85m southwest of the main Roy showing. Both holes did not encounter any significnat mineralization (Reed, 1966). During the 1963-1966 exploration program no satisfactory geological map of the area was produced, mainly because of poor upcrop, heavy forest eover and lack of an adequate base map. In the early 70's logging operations cleared parts of the Indian River Valley and several logging roads were built on both sides of the Valley. This enabled Lindberg (1975) to remap the Indian River portion of the Anaconda Claim Group and to produce a geological map on scale of 1:4800 which clearly outlined the different volcanic lithologies of the area. Lindberg also carried out a detailed chip sampling of siliceous pyritic rocks exposed along the horizontal logging road which is truncated by the London Slide. Assay results returned 0.5 g/ton gold over a width of 239 m. These gold values led Lindberg to conclude that the siliceous pyritic rocks "could potentially host a low-grade high-tonnage gold deposit". At the same time he pointed out that the volcanic rocks in the area could contain Britannia-type massive sulphide deposits.

GEOLOGY

Introduction

The results of the geological mapping carried out during the 1980 field season are shown in two preliminary compilation maps at scales of 1:2000 and 1:5000

respectively (see Figures 9, 10, 11; in pocket). The topographic base maps were prepared by Underhill Engineering Ltd. of Vancouver from 1:15,000 and 1:20,000 scale aerial photographs. Mapping at the 1:2000 scale was done by establishing a series of stations along the logging roads and in the field (see Figure 8; in pocket) and by subsequently locating individual outcrops in relation to the stations. The stations were located using a Brunton compass, a 50 m chain, an inclinometer, and a hand pocket calculator to accurately calculate horizontal distances. Survey control for the 1:5000 mapping was provided by a topometric hip chain.

The geological map on a scale of 1:2000 was compiled on the basis of thorough outcrop mapping in the area of sheet 5 of 12 bounded by the Indian River, London and Bow Creeks. Our descriptions and interpretation of the geology of the area are primarily based on data derived from this map.

The 1:5000 geological compilation map includes the portion mapped at the 1:2000 scale and the remainder of the Indian River claim area. Only roads and some streams were mapped during regional mapping on a scale of 1:5000.

General Geology

The area is underlain by the Indian River volcanosedimentary sequence by shallow level syn and posttectonic intrusive rocks (Quartz Microporphyry, Quartz Feldspar Porphyry, Rhyolite Sills and Dykes) and by phaneritic plutonic rocks of the Coast Plutonic Complex (Quartz Diorite-Diorite; Granodiorite; Gabbro). Dykes of various ages and compositions ranging from rhyolite to lamprophyre cut volcanic and plutonic rocks and are especially prominent near the contact between the London Porphyry[1] and underlying volcanics. Siliceous intrusive rocks in the London Creek and London Slide areas are extensively altered to aphanitic, textureless assemblages of sericite-quartz-pyrite and minor chlorite

[1]The term "London Porphyry" refers to the assemblage of east-west trending, more or less altered rocks which intrude the Indian River volcanosedimentary assemblage near London Creek and extend eastward throughout the 1:2000 scale map area.

(phyllic-altered quartz microporphyry) while adjoining quartz diorites are epidotized, chloritized and contain some carbonate (prophylitic alteration). Siliceous hornfelsic rocks containing minor biotite are developed near the margins of late gabbroic and dioritic intrusions.

Indian River Volcanosedimentary Sequence

The Indian River volcanosedimentary sequence within the map area consists of interdigitating rhyolitic flows, andesitic and dacitic pyroclastic rocks, and subordinate volcaniclastic sediments.[2] Volcaniclastic sediments are well developed above the London Porphyry and rare below whereas rhyolitic flows (with the exclusion of late rhyolite dykes and sills) only occur in the lower part of the map area.

Rhyolites are flow banded, generally phenocryst free and locally spherulitic. They crop out extensively both to the south and north of the Roy Showings. The flow banding in rhyolitic rocks south of the Roy Showing is very coarse (individual bands up to 2 cm in thickness). This indicates a highly viscous slow-cooling environment such as would be expected in a volcanic dome. Flow banded rhyolites are locally brecciated (ABx = autobreccia) and cemented by quartz or, at a few localities, by a mixture of sulphides, chlorite and quartz.

Dacites within the lower half of the map area are mainly pyroclastic rocks characterized by an abundance of fragments greater than lapilli size, almost total lack of bedding, and frequent variations in the proportion and nature of fragments. Many dacitic pyroclastics consist of lithic fragments of dacitic and rhyolitic composition, lapilli size feldspar grains and deformed chloritic clots in a fine-grained, generally sheared chloritized and sericitized tuffaceous matrix. Xenolithic flow breccias (XFBx) of probable average dacitic composition constitute distinct mappable lithologic units exposed both to the south and to the north of the London Porphyry. These units consist of angular fragments of

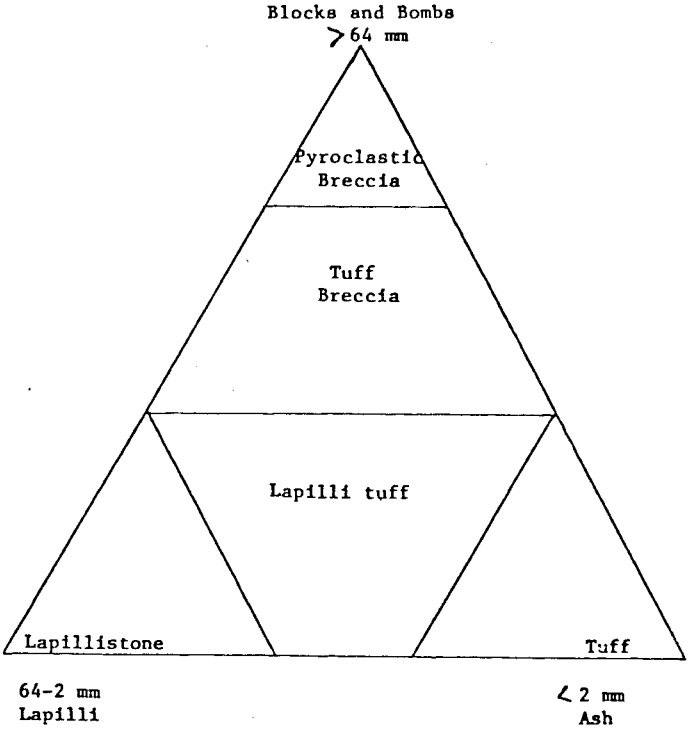
[2]Classification after Fisher 1961 and 1966 (Figure 4, page 12).

Proposed Classification Of Volcaniclastic Rocks

Predominent grain size (mm)	* Autoclastic	Pyroclastic * Primary or Reworked		* + Epiclastic	* + Equivalent nongenelic terms
	flow breccia	Pyroclastic breccia		Epiclastic volcanic breccia	Volcanic breccia
256					
	Autobreccia	Agglomerate			
69	Intrusion breccia				
		Lapillistone		Epiclastic volcanic conglomerate	Volcanic conglomerate
2					
	Tuffisite	Coarse	Tuff	Epiclastic volcanic sandstone	Volcanic sandstone
1/16					
		Fine		Epiclastic volcanic siltstone	Volcanic siltstone
1/256				Epiclastic volcanic claystone	Volcanic claystone

* May be mixed with nonvolcanic clastic material
+ Add adjective tuffaceous to rocks containing pyroclastic material < 2 mm in size

(Fisher, 1961)



Classification of rocks formed from pyroclastic material (Fisher, 1966).

Fig. 4

Classification of Volcaniclastic Rocks (Fisher; 1961, 1966)

dacitic to andesitic composition in a dacitic or slightly more felsic matrix. Both fragments and matrix appear to be extrusive rocks.

Greyish green to dark green rocks of andesitic composition occur as poorly bedded tuff breccias, lapilli tuffs and tuffs to the south of the London Porphyry and as locally well bedded tuffs and lapilli tuffs to the north of the intrusive system. Coarse grained lapilli tuffs and tuff breccias contain porphyritic fragments of andesitic composition set in a finer grained matrix. Lapilli tuffs are generally composed of plagioclase crystals, minor lithic fragments and finer grained tuffaceous material. Andesitic tuffs are non-descriptive fine grained green rocks which can be easily mistaken in the field for some of the fine grained mafic dykes. Andesitic rocks which are host to the Roy Sulphide Prospect have tentatively been mapped as flows on the basis of their rather homogeneous appearance. However, detailed mapping of the Roy occurrences carried out during the end of the field season indicates that the rocks are in part at least fragmental and possibly less mafic than typical andesites further to the southeast. Thin section and chemical analyses are being studied to determine the nature and composition of these rocks.

Well bedded sediments composed of volcanic debris of variable composition and variable grain size (see legend of Figure 9 for list of rock types) form a mappable unit, 30 to 50 m thick, which straddles the upper boundary of the London Porphyry system. This sedimentary unit branches off in two directions in proximity to the logging road leading to the drill site of IR-80-1. Minor volcaniclastic sediments also occur intercalated with pyroclastic rocks south of the porphyry system. Some of the coarser sediments contain pyritiferous clasts. Soft sediment deformation structures including cut-and-fill and loading structures, flames, and convolute bedding are commonly developed at the contact between argillaceous and sandy layers. Graded and cross bedding is locally present in sand and silty beds. The sediments above the London porphyry are conformably overlain by andesitic tuffs containing subordinate intercalations of

more felsic tuffaceous rocks and by a laterally discontinuous epiclastic breccia (EBx) composed of large rhyolite and siltstone fragments set in a matrix of massive to thinly bedded sandstone.

Intrusive Rocks

Quartz microporyphries consisting of small (less than 1-2 mm) quartz eyes set in an aphanitic matrix are probably the oldest rocks to cut the Indian River Volcanosedimentary Sequence. In the London slide and London Creek areas the quartz microporphyries are extensively altered to textureless assemblages of quartz-sericte-pyrite-chlorite. The microporphyries are probably coeval with medium to fine grained more or less propylitic-altered and sheared quart diorites and diorites of the Coast Plutonic Complex. The latter intrude the volcano-sedimentary sequence at several localities and where in contact with andesitic rocks parially assimilate and dioritize the volcanic rocks. Quartz diorites grade into medium grained granodiorites containing between 10 and 20% K-feldspar. Only at one locality the granodiorites can be seen to intrude prophylitic altered quartz diorites.

Quartz-feldspar porphyry dykes, and rhyolite sills and dykes cut the volcano-sedimentary sequence, the microporphyries, quartz diorites and granodiorites. Quartz feldspar porphyries are distinctive rock types composed of large quartz eyes (up to 1 cm) and smaller plagioclase phenocrysts set in an aphanitic greyish-green groundmass. They are especially prominent near the margins of the London Porphyry where they can be used to approximately define the outer edge of the phyllic altered zone.

Medium to coarse grained and locally pegmatitic, green coloured, chloritized gabbro and melagabbro crops out along the Indian River near the western edge of the mapped area. Its age relative to other intrusive and volcanic rocks was not determined.

Unaltered medium grained gabbros and diorites belonging to a north-south trending intrusive system can be traced along both sides of the Indian River Valley. These rocks form outcrops with characteristic spheroidal exfoliation.

Stratigraphic Interpretation

A schematic and idealized stratigraphic column of the central portion of the Indian River volcanosedimentary sequence shows the relations between lithologic units prior to instrusion of the London Porphyry (see Figure 5, page 16).

The volcanic sequence underlying the London Porphyry (Proximal Sequence) formed at or near a volcanic center which built a thick pile of coarse andesitic and dacitic pyroclastics. This was followed by formation of a rhyolite dome flanked and overlain by fragmental dacites and of andesitic and rhyolitic flows. Probably at the same time but further from the volcanic center, pryoclastic fragments and epiclatic debris accumulated giving rise to the volcaniclastic sequence which now overlies the London Porphyry (Distal Sequence). Dacitic flows and flow breccias were extruded during deposition of the upper andesitic tuffs.

Emplacement of the London Porphyry took place at a later stage along the interface between proximal and distal sequence.

ROCK CHIP SAMPLING

In conjunction with the sampling of the diamond drill core, rock chip samples were systematically collected to accurately define the limits of the gold-bearing zone indicated by Lindberg's 1975 sampling. Samples weighing approximately 5 kg were collected by taking continuous chips across outcrop surfaces. Where conditions permitted a standard 5 m sample length was maintained. The samples are of good quality and are reasonably representative of the surface material, but they should not be considered as accurate as cut channel samples.

Sampling was concentrated within the London Porphyry but samples were also taken from other mineralized areas. The sample locations are plotted on the topographic base maps used to control the geological mapping (see Figures 12 and 13; in pocket). The analyses are compiled in Appendix II. Results for

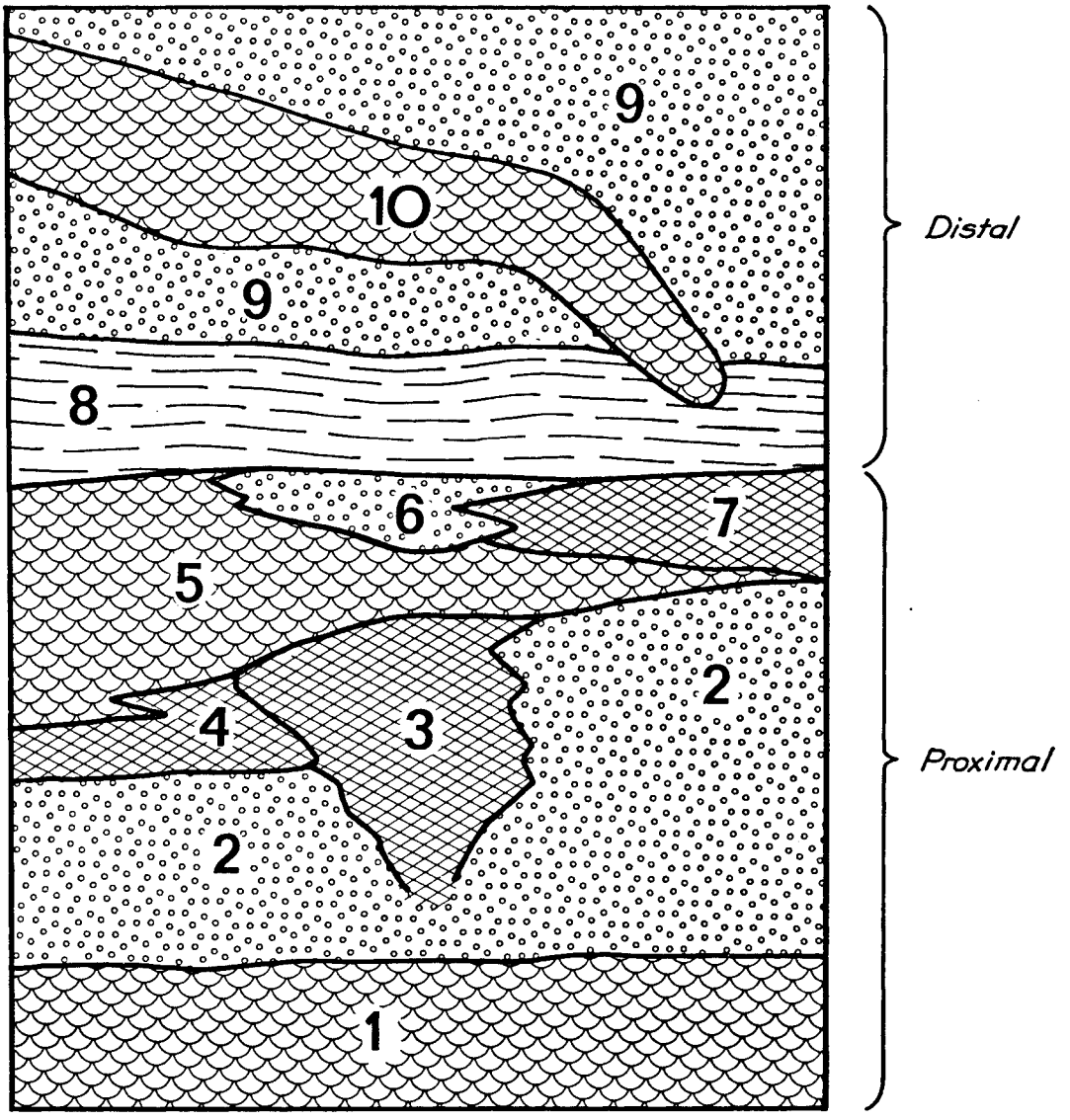


Fig. 5

Schematic stratigraphic section through the central portion of the Indian River Volcanosedimentary Sequence.

1 Dacite breccia, minor lapilli tuff
2 Andesitic lapilli tuff; tuff; tuff breccia (minor flow?)
3 Rhyolite dome
4 Rhyolite lava flow
5 Dacite lapilli tuff
6 Andesite lava? (Roy Andesite)
7 Rhyolite lava flow
8 Volcaniclastic sediments
9 Andesitic tuff and lapilli tuff (locally well bedded)
10. Xenolithic flow breccia

each zone of mineralization are discussed in the appropriate section under the heading Mineralization.

DIAMOND DRILLING

Three holes totalling 999.45 m were drilled using NQ equipment by Connors Drilling Co. The location of the drill holes are shown in Figure 9 (in pocket) and the geological sections in Figures 14 and 15 (in pocket). Drill logs are listed in Appendix I.

MINERALIZATION

Mineral occurrences in the Indian River area Include:

Type 1: Porphyry-type copper-molybdenite-precious metal mineralization
Type 2: Fracture controlled sphalerite mineralization in areas peripheral to porphyry mineralization.
Type 3: Copper-rich massive and stringer volcanogenic sulphides.
Type 4: Other copper occurrences

Type 1

Porphyry-type copper-molybdenite-precious metal mineralization occurs in phyllic-altered quartz microporphyry and propylitic altered quartz diorite of the London Porphyry, and in propylitic altered quartz diorite near Caledonian Creek (Caledonian "Porphyry").[3] Mineralization consists of disseminated and fracture filling pyrite veins and veinlets (2-20%), chalcopyrite and molybdenite. Chalcopyrite can occur as dissemination, veinlets, smears along chloritized fractures, or as coating of pyrite grains. Molybdenite forms disseminations, veinlets or seams in late stage quartz or quartz-pyrite veins, or smears along chloritized and sericitized fractures.

[3]The term Caledonian Porphyry refers to porphyry-type mineralization and does not imply the presence of porphyritic rocks.

Assay results of rock chip samples from the London Porphyry have outlined two areas of encouraging mineralization within propylitic altered quartz diorites and adjoining phyllic altered rocks along the southern margin of the London Porphyry. Assay results from these two areas average 0.26% Cu, 0.02% Mo, 2.7 ppm Ag and 0.20% Cu, 0.02% Mo, and 2.5 ppm Ag, respectively (see Figures 12 and 13, in pocket). Five chip samples of propylitic altered quartz diorite from the Caledonian porphyry average 0.28% Cu, 0.014% Mo, and 1.8 ppm Ag. The remainder of sampled phyllic altered rocks contain on average less than 0.1% Cu, less than 0.005% Mo, and less than 1 ppm Ag, except for two 5 meter long intervals along the London Slide road containing molybdenite-rich quartz pyrite veins and averaging 0.054% and 0.11% Mo, respectively (Assays #1089-1090). No significant gold concentration was found in any of the analyzed chip samples or drill core. Most gold values are in the 0.005-0.010 ppm range.

Assay results, surface geology, and drilling indicate that the best copper molybdenum mineralization occurs along the southern margin of the London Porphyry, especially in propylitic altered quartz diorites. Significant molybdenite is also present in widely spaced late quartz and quartz pyrite veins which cut phyllic altered rocks. This molybdenum mineralization could prove to be of economic significance should the density of the veins increase at depth. The 1981 exploration programmed will attempt to further investigate these targets.

Type 2

Sphalerite, locally associated with chalcopyrite and trace galena occur in micro-fractures of weakly propylitic altered quartz diorites and in felsic rocks exposed along the base and the top of the London Creek Canyon. Similar mineralization also occurs in quartz diorites of the Caledonian Porphyry. At both localities sphalerite mineralization is located at the edge of a porphyry system. Five metre chip samples collected over a total sample length of 300 m along the bottom of the London Creek Canyon and of a south-flowing tributary average

0.13% Zn, 0.05% Cu, and 1.7 ppm Ag. (see Figure 12, in pocket). Individual intervals contain up to 1.35% Zn, 0.7% Cu and 12 ppm Ag. One sample (332) is also anomalous in gold (0.6 ppm). Sphalerite mineralization in the Caledonian Porphyry was not sampled systematically. One above average character sample from that area returned 2.1% Zn, 0.3% Cu, 9 ppm Ag, and 0.92 ppm Au.

Type 3

Massive mineralization consisting of chalcopyrite, pyrite and minor amounts of chlorite and quartz occurs at the Roy Prospect and in a 0.7 m x 6 m newly discovered lens located approximately 600 m southeast of the Roy Prospect.

The geology of the Roy Prospect is shown in a detailed map on a 1:250 scale (see Figure 6, page 20). At this locality massive to crudely banded sulphides form a patchy blanket a few cm to 50 cm thick "overlying" green massive to locally fragmental "andesitic" rocks. The sulphides are conformable with the underlying volcanics except where remobilized along joints and small faults. The newly discovered lens is also stratabound and is hosted in a chloritized andesite adjacent to intrusive quartz diorites. One character sample of the newly discovered sulphide lens (sample 0393) returned 10.70% Cu and 2.24 oz/Ag. Similar grades are reported by Lindberg for samples from trenches in the Roy area.

Stringer mineralization consisting of several chalcopyrite-pyrite-chlorite-quartz-jasper veins, veinlets and segregations ranging from 1 to 20 cm in thickness are found over a triangular area of approximately 0.5 km^2 underlying the Roy Prospect.

Stringer mineralization cuts across a sequence of andesitic tuffs, volcanic breccias and flow banded rhyolites. Sulphide occurrences in rhyolites tend to occupy brecciated, chloritized and sheared portions of the host rocks.

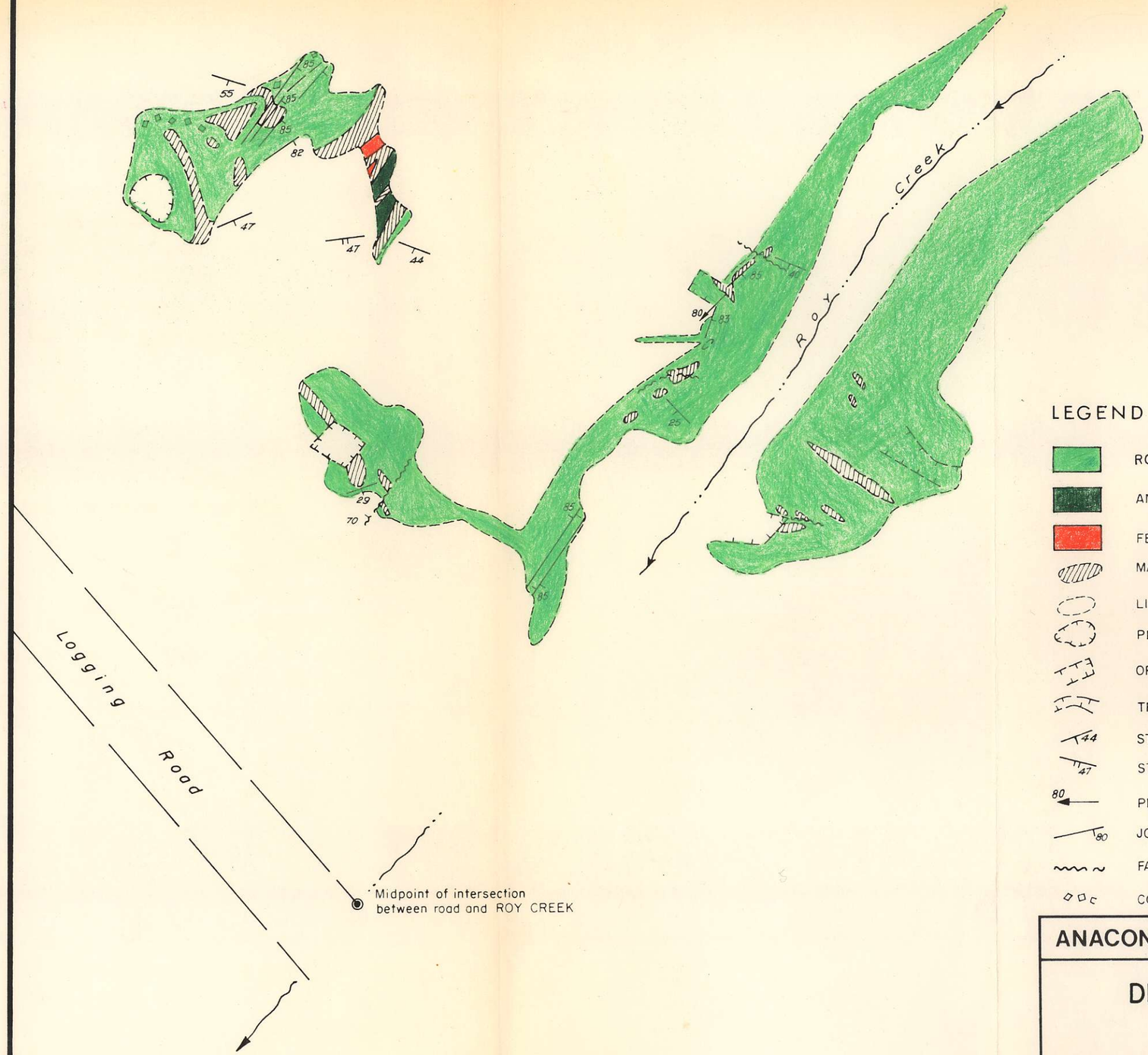


Fig. 6

LEGEND

- ROY "ANDESITE"
- ANDESITE DIKE
- FELSIC DIKE
- MASSIVE SULPHIDE (Cpy ; minor Py, Chlorite, Qtz)
- LIMIT OF OUTCROP
- PIT
- OPEN CUT
- TRENCH
- STRIKE and DIP of SULPHIDE "LAYERS "
- STRIKE and DIP of DIKE
- PLUNGE of SULPHIDE "LAYER"
- JOINT
- FAULT
- COARSE FRAGMENTS

ANACONDA Canada Exploration Ltd.

DETAILED GEOLOGY
OF THE
ROY MASSIVE SULPHIDE PROSPECT

Compilation by : L.R.	Drawn by : C.D.	Date : Sept. 1980
Scale : 1 : 250	N.T.S. 92-G/10	Drawing No. ___ of ___

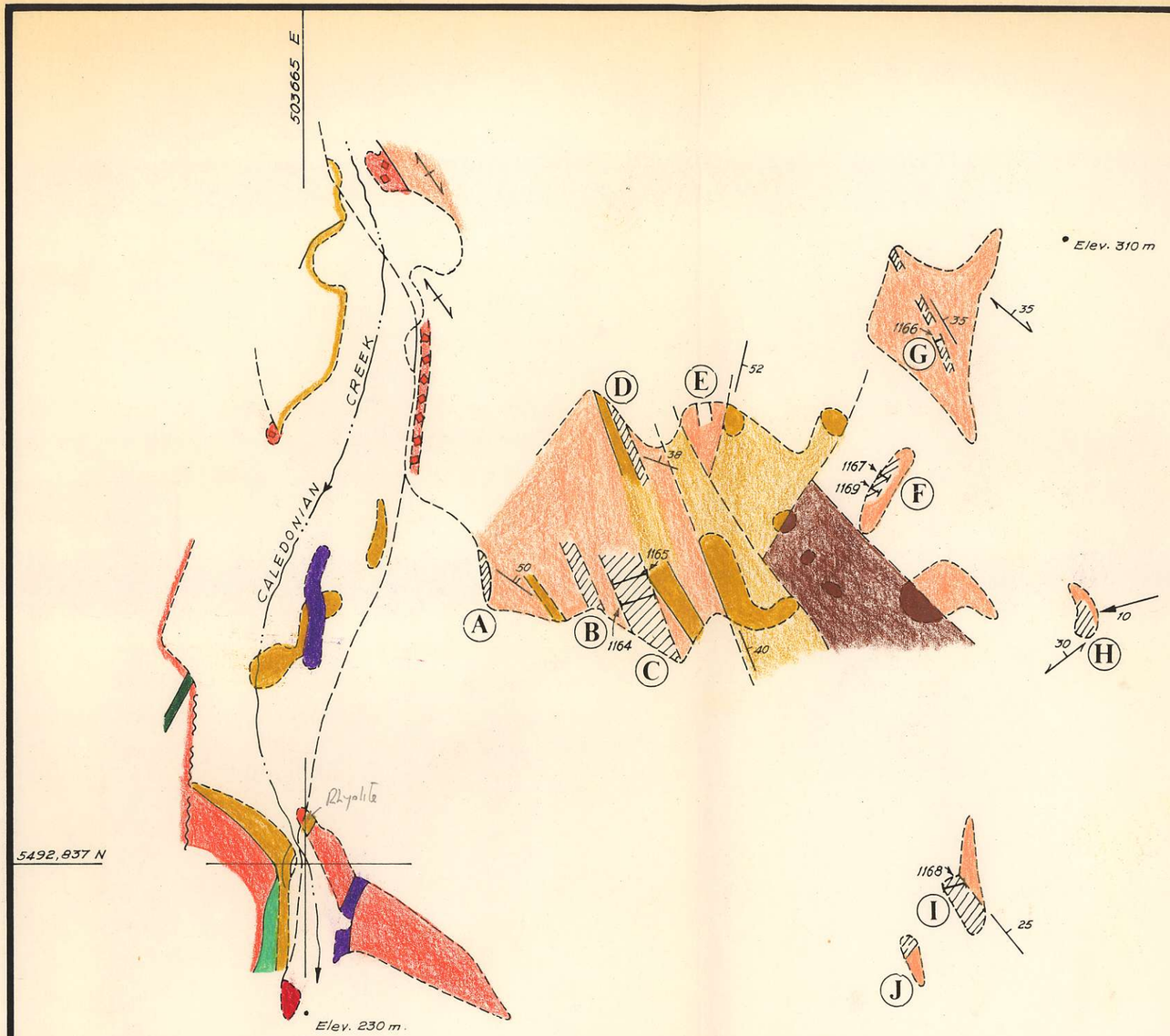
The Roy Prospect and the newly discovered sulphide lens are interpreted as proximal massive sulphide occurrences underlain by a feeder zone of stringer mineralization. These massive sulphides may represent the equivalent of massive Cu-type ore (Payne et al, 1980, Figure 5) at Britannia. More distal bedded sulphides containing both Zn and Cu could potentially occur at the base of the sedimentary unit above the London Porphyry or in areas of very poor outcrop the east of the Roy Prospect. The presence of pyrite rich clasts and short invervals of copper mineralization sediments support this suggestion.

Type 4

Stratabound sulphide disseminations and veinlets occur in rusty and intensely sheared felsic volcanic breccias on the very steep (and crumbly) side of Caledonian Creek Canyon (see Figure 7, page 22). The volcanic breccias are intercalated with lapilli tuffs and cut by granite and flow banded rhyolite dykes. Breccias containing more than 5% granite fragments occur near the bottom of the Canyon and sporadic granite fragments are found in felsic volcanic breccias. The rusty layers contain mainly pryite and chalcopyrite and may contain trace sphalerite and molybdenite. Magnetite is abundant in the uppermost occurrences (mineralized layers F, G, H of Figure 7, page 22). Best assay results from these occurrences returned 0.36% Cu and 1.9 ppm Ag (mineralized layer C of Figure 7, page 22).

Highly sheared chlorite schists exposed along the Indian River Gorge are locally rusty, pyritiferous and may contain chalcopyrite. A grab sample estimated to contain more than 5% chalcopyrite and collected about 150 m south of the inflow of Leaf Creek returned values of 3.12% Cu, 0.03% Mo, and 0.82 02/ton Ag (sample 1138).

Fine grained disseminated pyrite and chalcopyrite occurs in silicified, possibly hornfelsic, portions of propylitic altered quartz dorites exposed near the headwaters of Eagle Creek. One two (2) meter chip sample from this occurrence averaged 0.41% Cu and 8.6 ppm Ag (sample 1074).



0 5 10
Metres

SCALE : 1 : 500

Geology by : L.R.

1167 CHIP SAMPLE SAMPLE NUMBER

GEOLOGY

OF

SULPHIDE OCCURRENCES ALONG THE EASTERN SIDE OF CALEDONIAN CREEK CANYON

LEGEND

- LAMPROPHYRE DYKE – 901
- ANDESITE DYKE 909
- GRANITE 924
- RHYOLITE, FLOW BANDED AND PORPHYRITIC 942
- GRANITE BRECCIA 924
- DIORITE 902
- ANDESITE 910
- QUARTZ–RICH CRYSTAL LAPILLI TUFF 937
- FELSIC VOLCANIC BRECCIA 939

MINERALIZED LAYERS

A	=	Py	
B	=	Py – Cpy	
C	=	Py – Cpy – Sph	1164 : 0.36 % Cu – 1.9 ppm Ag 1165 : 0.27 % Cu – 1.5 " Ag
D	=	Py	
E	=	Py	
F	=	Py – Cpy – Mag	1167 : 0.07 % Cu – 0.7 ppm Ag 1169 : 0.06 % Cu – 0.3 " Ag
G	=	Py – Cpy – Mag	1166 : 0.12 % Cu – 1.8 " Ag
H	=	Mag – Py	
I	=	Py – Cpy – Mo	1168 : 0.32 % Cu – 1.9 ppm Ag
J	=	Py	

- OUTCROP
- CONTACT BETWEEN UNITS (52)
- FLOW BANDING (30)
- FOLD AXIS (10)
- SCHISTOSITY
- CONTACT, DEFINED, ASSUMED
- FAULT

Fig. 7

GEOCHEMISTRY

Both sides of the Indian River Valley in the area between London Creek and Meslillooet Creek were soil sampled on a 100 m x 100 m grid. Approximately 100 gm of B horizon soil was collected at each site and analyzed for copper, molybdenum, zinc and gold. Good geochemical response was obtained from the soils overlying porphyry-type mineralization, but no definitive results were obtained from known massive sulphide occurrences. Four geochemical soil anomalies were outlined (see Figures 16 and 17; in pocket).

Anomaly 1 (Figure 16):

In the Roy Creek area spotty gold values accompany high concentrations in copper, molybdenum and zinc. This multielement anomaly is related to the London Porphyry. The Roy massive sulphide occurrence lies down slope from the porphyry mineralization and its geochemical response is masked by the larger porphyry system.

Anomaly 2 (Figure 16):

On the west side of the Indian River, across from the London Porphyry, a discontinuous anomaly with good copper-molybdenum correlation and minor zinc-gold values is associated with propylitized quartz diorite.

Anomaly 3 (Figure 16):

On the ridge above Caledonian Creek an anomaly with strong copper-molybdenum-zinc and gold correlation is associated with a large area of porphyry mineralization in a quartz diorite pluton and enclosing volcanic rocks (Caledonian Porphyry).

Anomaly 4 (Figure 17):

This anomaly, located between Caledonian Creek and Indian River near their confluence, occurs in an area of no outcrop. Exposures to the west in the canyon of Indian River indicate that the soil anomaly overlies a favourable intrusive-volcanic contact. The moderately anomalous molybdenum and zinc concentrations are accompanied by scattered above average copper and gold values.

RECOMMENDATIONS

On the basis of the 1980 exploration results, the following recommendations are made:

1) Option the Falconbridge Crown-Granted claims which contain the westerly extension of the London Porphyry System;

2) Continue exploration of the London Porphyry by diamond drilling;

3) Carry out a percussion drilling program over the Caledonian Porphyry to determine the extent of the copper-molybdenum mineralization and diamond drill to determine grades if warranted.

4) Percussion drill geochemical anomaly 4 (p. 24).

5) Explore the Roy Prospect stratigraphic horizon for proximal volcanogenic massive sulphides by diamond drilling.

6) Explore the lower portion of the volcaniclastic sediment unit for distal polymetallic massive sulphides.

7) Expand the 1:2000 scale mapping in areas of defined interest and continue the 1:5000 mapping toward the Furry Creek - Bank of Vancouver areas, and elsewhere in the Indian River pendant.

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PROPERTY SUMMARY

INDIAN RIVER - FURRY CREEK

BRITISH COLUMBIA, CANADA

Location:	17 km east of Britannia Beach, British Columbia
Description:	There is believed to be major exploration potential related to Cu-Mo-Ag porphyry mineralization in quartz diorite plutons and breccia pipes, and Cu-bearing massive sulphide in volcanosedimentary strata.
Property Status:	310 Crown Granted claims, 6 reverted Crown Granted claims and 7 staked claims, totalling approximately 16,145 acres 100% owned by Anaconda.
Maintenance Cost:	Annual taxes on 310 Crown Granted claims $3,697.58 (Canadian). Annual assessment requirements for reverted Crown Granted claims and staked claims to 1983 are $4,400 and $8,800 thereafter.
Investment:	1962 to 1978 estimated expenditures (Canadian) $133,000 1979 - 80 estimated expenditures 330,000 Total (Canadian) $463,000
Remarks:	The divide on the south edges of the property marks the upper reaches of the Vanoouver City watershed. The know mineralization zones lie to the west and northeast of the divide.

APPENDIX I

DIAMOND DRILL LOGS

(Under Separate Cover)

APPENDIX II

ROCK SAMPLE ANALYSIS

(Under Separate Cover)