REPORT

on the

VENT CLAIM GROUP

VANCOUVER ISLAND, B.C.

by

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# LIST OF ILLUSTRATIONS

Location h	Lap	400	¥ 21	\$200	20	miles	(approximately)	Fron	cis	piece
Geological	Ma	p	400	11	## ·	5001		Back	of	report

### INTRODUCTION

The Vent group comprises 33 full-sized and 5 fractional mineral claims, all contiguous, situated 25 miles due west of Port Alberni on Vancouver Island. Volcanic rocks of the Triassic Karmutsen Formation and intrusive rocks of dioritic composition underlie the claims. Air photos show a circular feature, surrounded by a bordering triangular shaped feature, near the centre of the claim group. These features, defined by tonal differences in vegetation, are thought possibly to represent an underlying intrusive or breccia pipe with a bordering halo of hydrothermal alteration. High copper and molybdenum concentrations in silt taken from a stream cutting this area together with high copper and molybdenum concentrations in soil samples taken across the inferred structure add plausibility to this interpretation. The interpretation is reinforced further by two ground magnetometer profiles, and by the occurrence of magnetite concentrations beyond the circular feature.

This report is based on an examination of the property by the writer during the period June 10th to 14th, 1970, together with the data presented in previous reports by Messrs. W.G. Stevenson and R.H.D. Philp.

#### LOCATION AND ACCESS

River, 25 miles due west of Port Alberni on Vancouver Island. Access
to the claims is by approximately 35 miles of partially paved highway

from Port Alberni or by 30 miles of paved highway from Ucluelet.

Scheduled aircraft fly between Vancouver and Ucluelet while Port Alberni
can be reached by ferry and highway from Vancouver.

A logging road connecting with the highway passes through the centre of the claim group in a northwesterly-southeasterly direction. While portions of it are washed out along drainage gullies, it could be made passable with very little work by a bulldozer.

## HI STORY

A report by W.G. Stevenson, P.Eng., dated August 26th, 1968, indicates that a reconnaissance silt sampling program turned up anomalous copper concentrations in the area which was subsequently staked. Stevenson examined air photos of the area and noted a circular feature some 1200° in diameter, surrounded by an outer bordering triangular shaped feature. These features are defined on the air photos by tonal differences in vegetation. The composite feature is cut by a westerly-flowing creek from which Stevenson obtained silt samples with high copper concentrations. Stevenson suggested that the photogeologic features may be the surface expression of an underlying intrusion or breccia pipe with an associated aureole of hydrothermal alteration.

The property was examined in September, 1969, by R.H.D. Philp, P.Eng., in company with Stevenson. His report based on this examination includes a sketch showing results of some soil sampling across the feature of interest. Anomalous copper concentrations were obtained in the soil.

#### GENERAL FEATURES

The claims lie on a southwesterly-facing slope on the east side of the Kennedy River valley. Elevations range from approximately 500° at the Kennedy River to over 2500° along the eastern boundary of the property. Slopes are moderate over most of the claim group but become very steep along the eastern boundary. Maximum slopes in the main area of interest are about 35 degrees. Some of the creek gullies are deeply incised at the higher elevations and are difficult to cross.

Some areas in the central part of the property have been logged off. Hemlock, Douglas fir, balsam, and red and yellow cedar are found in the forested areas. Salal is abundant but not thick. Devil's club is found along the creeks and drainage gullies. The area is generally easy to traverse.

Outcrop is abundant at the higher elevations and along the deeply incised drainage channels. Unfortunately, in the immediate area of the circular feature, bedrock is covered by volcanic rubble and soil, obscuring completely the underlying geology.

#### GEOLOGY

The Vent claims are underlain mainly by andesitic volcanic rocks of the Triassic Karmutsen Formation and by diorite of the Jurassic Island Intrusions. The contact between these two principal units runs in a general southeasterly direction across the centre of the claim group.

The diorite is a fine- to medium-grained, grey weathering rock, porphyritic at some locations, and often composed of both
large and small, rounded, dark dioritic fragments in a lighter dioritic
matrix.

Two other intrusive types were noted, as shown on the accompanying geological map. One is a hornblende-rich monzonite while the other is a quartz-monzonite lean in mafics. Hornblende monzonite containing abundant disseminated pyrite was noted in outcrop on the southern edge of the inner circular feature.

The volcanic rocks are of andesitic composition, massive, grey-green in colour, highly pyritized and rust stained at many locations. No criteria such as pillows or amygdules were found and flow tops and attitudes could not be determined. No preferred directions of fracturing were noted; in fact, fracturing within the volcanic rocks appears to be random.

#### MINERALIZATION

The volcanic rocks are strongly pyritized. The pyrite occurs as disseminated grains and as a network of fine criss-crossing seams. Chalcopyrite was not definitely identified in the volcanics but two whole-rock analyses of 0.03% Cu indicate a high background copper content.

Minor chalcopyrite and a trace of molybdenite occur along rusty shears in the hornblende monzonite. The hornblende monzonite on line R3 contains abundant disseminated pyrite. Abundant magnetite was noted in the volcanic rocks on Vent 28. It occurs as large blebs up to 1" across, as 1/4" wide seams, and as thin seams along the centre of narrow quartz veins. The seams are up to several feet in length although usually much less, and often form a fine stockwork. The magnetite is evidently late stage and was introduced after fracturing of the volcanic rocks. Magnetite has also been noted on Vent 10, on the north side of the circular feature.

## ALTERATION

Andesitic volcanic rocks in the creek bad at location S-2 are strongly pyritized and bleached in appearance. Some silicification of the volcanic rocks was noted on Vent 18. The volcanics along the logging road are silicified near their contact with the quartz monzonite.

#### GEOCHEMI STRY

Anomalous copper and molybdenum concentrations occur in silt from the stream cutting Vent claims 32 and 33. Analyses of silt samples taken by the writer and shown on the accompanying map confirm earlier results.

Soil sampling carried out previous to the writer's examination of the property has indicated anomalous copper and molybdenum concentrations in the area of the circular feature.

## GROUND MAGNETOMETER SURVEY

Two traverses were made along lines R2 and R3 and magnetic readings taken every 100 feet with a Sintrex MF-1 vertical component fluxgate magnetometer. The profiles correlate reasonably well with the photogeologic interpretation for the circular feature. Erratic highs occur along the outer "halo" with a sharp low near the contact with the inner feature, and a broad high over the feature itself. These profiles, to some extent, resemble "typical" magnetic profiles over porphyry-type copper deposits of the southwestern United States. The outer highs would correlate with the outer magnetite zone while the broad inner high would correlate with the inferred intrusive.

### SUMMARY AND CONCLUSIONS

The Vent claims are underlain by andesitic volcanic rocks intruded by diorite, hornblende monzonite, and quartz monzonite.

Air photographic interpretation suggests the existence of an intrusive body and associated aureole of hydrothermal alteration underlying the centre of the claim group.

This interpretation is strengthened by anomalous copper and molybdenum concentrations in silt from a creek cutting the area, by anomalous copper and molybdenum concentrations in soil in the area, by magnetite concentrations around the outer edge of the photogeologic feature, by the existence of bleached volcanic rocks in the inferred aureole, and by ground magnetometer data.

#### RECOMMENDATIONS

It is recommended that an exploratory hole be drilled to prove or disprove the existence of the presumed intrusive and associated copper mineralization. The set-up should be made on the western edge of the inner circular feature and a 500° hole drilled easterly at an angle of -60° to intersect the inferred intrusive. Positive results from this drill hole would warrant further detailed exploration.

## COST ESTIMATE

Cost of the exploratory hole is estimated as follows:

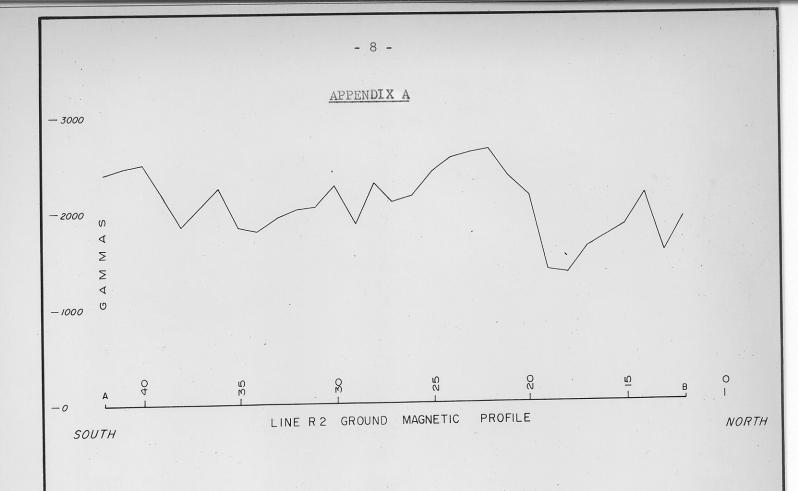
500° @ \$12.50/foot overall

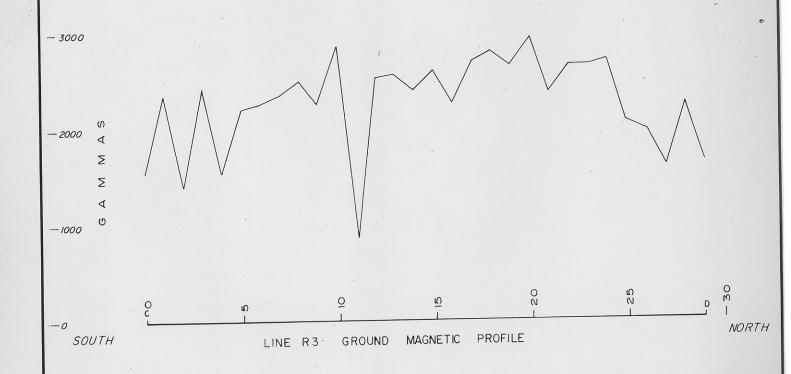
\$6,250.00

Respectfully submitted, BACON & CROWHURST LTD.

M.F. Covan. M. Sc. F. Eng

BRITISH COLUMBIA





BACON & CROWHURST LTD.

GROUND MAGNETIC PROFILES

VENT GROUP

## APPENDIX B

## LIST OF CLAIMS

Note: All claims full sized unless indicated otherwise

Claim		Record Nos.	and a second sec	Expiry Date				
Vent 10		13120	.1	fulv	22.	1970		
12		13122			11			
13		13123			**			
14		13124			11			
15		13125			**			
16		13126			8.8			
17		13127			11			
18		13128			**			
28		13135			11			
29		13136			9.8			
30		13137			11			
31		13138			11			
32		13139			**			
33		13140			5.8			
	(fractional)	13141			18			
42	is not the first of the first of the first of the	15191	â	ug.	25,	1970		
43		15192	**		11	4450		
44		15193			13			
45		15194			11			
46		15195			11			
47		15196			11			
48		15197			6.8			
49		15198			11			
50		15199			13			
52		15200			9.1			
53		15201			11			
54		15202			11			
55		15203			5.5			
56		15204			11			
57		15205			# 16			
58		15206			9.8			
59		15207			12			
60		15208			11			
61		15209			11			
	(fractional)	15210			1.0			
	(fractional)	15211			1.5			
	(fractional)	13366	0	ct.	16,	1970		
	(fractional)	13367	_	~ ~ •	11	77 H & W		
4014	THE THE WAR HE HAVE THE BEAUTH AT	THE PART WATER THAT AT						

