

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of \$ 1600.00

A.B. Craig  
Resident Geologist or  
Resident Mining Engineer

Considered as representation work under  
Section 6 of the Quartz Mining Act.

Report on the  
CVO #1 to #16

Phillip  
Commissioner of Yukon Territory  
ADMINISTRATOR OF THE YUKON TERRITORY

Record Numbers Y85318 to Y85333

Bonnet Plume Area  
Mayo Mining Division  
Yukon Territory  
N.T.S. 106-C-6

Latitude: 64°27'N  
Longitude: 133°00'W

on behalf of



CORVAL RESOURCES LTD. (N.P.L.)

by:

V. Cukor, P.Eng.

ATLED EXPLORATION MANAGEMENT LTD.

September, 1974



Remarks: The property was acquired by Corval in 1973, following Barrier Reef's lead-zinc discovery on Gog Creek, thirteen miles to the east.

Detailed geological mapping was carried out on the claims in ~~at~~ July, 1974.

The CVO claims are underlain by lower Paleozoic to upper Proterozoic sediments. Missive grey dolomite of the Ordo-Silurian Mt. Kindle formation outcrops along the north edge of the property. This is underlain by brown shales of Hadrynian age, which are assigned to the the Sheepbed<sup>B</sup> formation. Below the Sheepbed formation is a thick dolomite formation which contains a porous section about 200 feet below the upper contact. The porous dolomite ~~is~~ varies in thickness from 150 to 300 feet. The sediments strike northwesterly and dip 50° to 65° to the northeast.

Secondary zinc mineralization (smithsonite and hydrozincite) occurs in the porous dolomite at both the east end and the west end of the property.

It was recommended that the claims be retained pending further evaluation and publication of exploration results on adjoining properties.

TABLE OF CONTENTS

INTRODUCTION.....	1
SUMMARY.....	2
CONCLUSION AND RECOMMENDATIONS.....	4
GEOGRAPHY.....	5
Location.....	5
Access.....	5
Topography.....	5
Climate.....	6
Vegetation.....	6
Water.....	6
CLAIMS.....	6
HISTORY.....	7
GEOLOGY.....	8
General.....	8
Property.....	8
Mineralization.....	10
ENGINEER'S CERTIFICATE.....	12
ILLUSTRATIONS	
Location Map.....	After Page 5
Geology Map.....	In Map Pocket

### INTRODUCTION

The outcrop geology on the CVO group was mapped between July 26 and July 31, 1974, under contract by Atled Exploration Management Ltd. for Corval Resources Ltd. (N.P.L.).

The geological mapping was carried out by G.C. Gutrath, P. Eng. under the overall supervision of V. Cukor, P. Eng. Drafting and data compilation was by P. Henry of Atled Exploration Management Ltd. The assaying was done by Chemex Labs Ltd. of Vancouver.

The outcrop geology was mapped on scale of 1 inch equals 400 feet using a topochain and aneroid barometer for control. The data was plotted on aerial photographs and a topographic map with contour at 100 foot intervals and a scale of 1 inch equals 400 feet.

SUMMARY

The CVO claim group is located in the northeast Yukon on the north side of the Bonnet Plume River Valley 110 miles to the northeast of the community of Mayo. Access to the property from Mayo is by helicopter.

The CVO claims adjoin Cypress Resources Ltd. FXE Group to the west and Yukon Revenue Mines Ltd., Cot Group to the east.

The claim group is underlain by a sedimentary sequence of lower Paleozoic and upper Proterozoic age. The Mt. Kindle formation of massive grey dolomite is ordovician-silurian in age and is the youngest formation of the property. This formation outcrops as massive cliffs along the north edge of the property.

The Mt. Kindle formation is underlain by the Sheepbed formation of Hadrynian age. It is composed of brown shales interbedded, and on the eastern portion of the property, with a massive coral reef that is approximately 300 feet wide and can be traced for 5,000 feet.

Underlying the Sheepbed formation is a thick dolomite formation that covers the southern half of the CVO claim group. This formation is divided into 2 dolomite units. The first is a massive thick bedded green dolomite and within this unit and approximately 200 feet from the upper contact is a second thin bed of porous dolomite that varies from 150 to 300 feet thick. A dark brown impure sandstone unit is separated

from the porous dolomite by approximately 200 to 400 feet of massive grey dolomite. The Grit unit can be traced for over 6,000 feet at the eastern end of the property.

The sediments strike in a northwesterly direction and dip at 50 degrees to 65 degrees to the northeast. Thick bedding can be seen in the lower dolomite but it is often obscured near the creek by internal steep fracturing in a predominantly north direction. A number of the cracks represent north trending fault zones with only a minor horizontal upset of the formation.

The Sheepbed formation is finely bedded although the bedding is often obscured by a strong cleavage and weak shearing sub-parallel to the bedding.

Secondary zinc minerals consisting of smithsonite and minor hydrozincite occur in the porous dolomite at the west end of the property and to a minor extent at the east end of the property.

The zinc mineralization is associated with barite and irregular quartz veining at the east end of the property. The best mineralized zone can be traced along a cliff face for approximately 5,000 feet and over a width of 150 feet. It occurs just to the south of a prominent dolomite knob on the CVO #2 claim. Two representative samples of the better mineralized zone averaged 4.18% zinc.

CONCLUSION AND RECOMMENDATIONS

The favourable porous dolomite unit that is the host for the zinc and minor lead mineralization on the Cypress Resources property to the east extends throughout the Corval claim group for a strike length of approximately 10,500 feet. However, the geological mapping has located only one zone, on the CVO #1 claim, of exploration interest although other potential zones may be marked by overburden along the strike length of the porous dolomite.

It is concluded that the zinc mineralization found to date and the overall exploration possibilities of the CVO claim group have limited economic potential. However, it is recommended that the claim group be kept in good standing until exploration results on adjoining properties are released to assist in the final evaluation of the property and to determine if additional exploration is warranted.

## GEOGRAPHY

### Location

The claims are located in the Yukon Territory on the north side of the Bonnet Plume valley 6 miles to the west of the confluence of Goz Creek and the Bonnet Plume River. The community of Mayo is located 110 miles to the southwest.

Co-ordinates of the property are approximately 64 degrees, 27 minutes north latitude and 133 degrees 00 minutes west longitude.

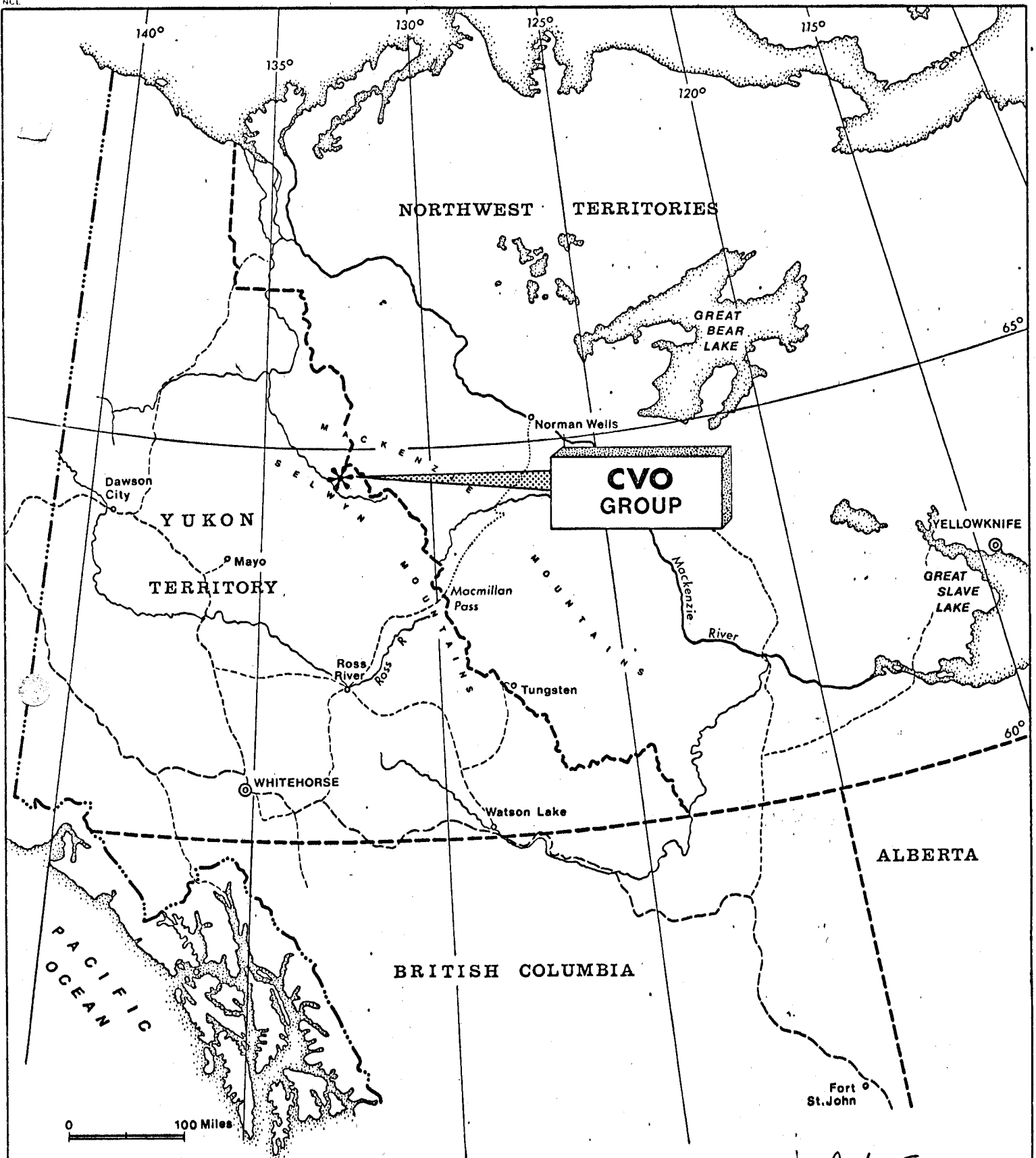
### Access

Access to the property is by helicopter from Mayo.

The nearest all-weather road, the Mayo-Elsa highway terminates at Keno City 80 miles to the southwest of the CVO group.

### Topography

The claim group covers the southwesterly facing side of the Bonnet Plume Valley from an elevation of 3,500 feet to 5,000 feet. The claim group is cut by a number of south flowing creeks. The north side of the property is rimmed by near vertical dolomite cliffs that rise to over 6,500 feet.



**Location Map**

**CORVAL RESOURCES LTD. N.P.L.  
CVO CLAIMS**

Climate

The summer day time temperature would average in the 50 to 60 degree range, and night time temperature can drop below freezing at any time during the summer. Winter temperatures are severe with long periods of below 0 degrees F.

The average rainfall would be in the range of 20 to 25 inches. Winter compacted snowfall from 4 to 6 feet. The claim group would be free of snow from June to October.

Vegetation

The entire property is above the timber line except for scattered clumps of stunted balsam. The majority of the claim group is covered by grass and willows where there is more water.

Water

There is ample water on the property for drilling purposes, although to drill the zinc showing on the CVO claim group there would be a vertical lift of over 500 feet from the nearest creek.

CLAIMS

<u>Claim Name</u>	<u>Record Number</u>	<u>Expiry Date</u>
CVO #1 to #16 inc.	Y85318-Y85333	September 10, 1974

The claims are located in the Mayo Mining Division on N.T.S. map 106-C-6.

### HISTORY

The geology of the Bonnet Plume area was preliminarily mapped by Dr. J.O. Wheeler of the Geological Survey of Canada in 1952. In June of 1974 a more detailed geological map on a scale of 1: 50,000 by Dr. S. Blossom, Open File 206 of the Geological Survey of Canada. *Blossom.*

The Bonnet Plume area has been prospected but there are no *early* reports of lead-zinc mineralization being found in the Goz Creek area. During the 1973 summer exploration season, Barrier Reef Resources Ltd. discovered good strata bound zinc mineralization near the confluence of Duo and Goz Creek. This discovery precipitated the staking of over 3,000 claims in a belt 35 miles long and 5 miles wide. The CVO claim group is located approximately 13 miles to the west of the Barrier Reef property and adjoins the Cypress Resources claim block.

The zinc-lead mineralization was discovered on the Cypress property shortly after the Barrier discovery. In 1973 Cypress drilled 3 short holes and did considerable surface sampling. In early 1974 the Cypress property was optioned by Brinex Ltd. who carried out an extensive exploration program including diamond drilling on the property in 1974.

The CVO claim group was acquired by Corval in 1973 and only a preliminary prospecting program was carried out on the property late that year.

## GEOLOGY

### General

The property is located on the southwest edge of the Bonnet Plume Range that is underlain by a thick sequence of sedimentary rocks ranging from Precambrian to Devonian in age. The CVO property is located on the northeast limb of a broad open anticline which trends approximately N 60° W. The dips within this limb vary locally but the overall dip would average approximately 50 degrees to the northeast.

### Property

The property is underlain by lower Paleozoic and upper Proterozoic and ranges from Silurian to Hadrynian in age.

Bordering the property to the north is the youngest unit, the Mt. Kindle formation. Underlying this unit is the Sheepbed formation of Hadrynian age and below this is an unnamed formation of the same age.

1. Mt. Kindle formation: In the area of the CVO group this formation forms steep massive grey cliffs. The formation is uniformly well bedded and the general attitude is a northwest strike and a dip of 50 to 60 degrees to the northeast.
2. Sheepbed formation: This formation is approximately 800 feet thick on the CVO group and is much less resistant to erosion than the Mt. Kindle formation and forms a gentle slope between the

lower and upper dolomites. The formation consists of medium to dark brown finely bedded shales and siltstone. The bedding is often marked by a strong cleavage and moderate shearing that sub-parallel the trend of the bedding.

Within the shale unit is a dark brown massive reef formation that varies from 100 feet to 300 feet in width. The unit weathers to a gossaneous orange brown colour that is easily recognized in outcrops. The reef unit can be traced for approximately 5,000 feet on the CVO #1, 3, 5 and 7 claims. The unit is more resistant than the shales and forms waterfalls where it is cut by the creeks.

3. Lower dolomite formation: This formation is over 1,500 feet thick on the CVO property. It is predominantly a grey weathered, massive, thick bedded dolomite. In the area of the creek it is strongly fractured and weakly sheared in a northerly direction obscuring the bedding. It has a general northwesterly trend and dips at 50 to 80 degrees to the northeast.

Two thin graphitic argillite beds are exposed in Lead Creek on the CVO #6 claim. The two beds are 30 to 40 feet wide and are interbedded with dolomite.

Within the lower dolomite formation is a unit of porous, fine grained dolomite that is economically important since it is a favourable host for zinc mineralization. The porous unit occurs within 150 to 200 feet of the upper contact and varies from 160 feet to 250 feet in thickness. In outcrop, it weathers to a light orange buff colour and to

a darker orange if it is zinc mineralized. The unit can be traced for 10,500 feet on the CVO group and has been traced on the Cypress property to the east for over 22,000 feet. It appears that the increased porosity in this unit is a gradational phase since there are no sharp contacts with the surrounding dolomite.

### Mineralization

The mineralization consists of secondary zinc oxides and carbonates. No primary sphalerite was recognized on the CVO group, although it is commonly found on the adjoining Cypress property to the west. Smithsonite is the predominant zinc mineral with minor hydrozincite. No galena was noted .

The zinc mineralization located on the CVO #1 claim extends over a distance of approximately 500 feet and a width of 150 feet. It is associated with strong silicious alteration consisting of irregular quartz veining. The host zinc mineralization is associated with random masses and veins of barite..

The porous dolomite is well exposed at the head of Zinc Creek but it is completely unmineralized.

Two samples were assayed from the CVO #1 claim zinc mineralized zone.

<u>No.</u>	<u>Description</u>	<u>Zinc %</u>
#14660	Secondary zinc minerals indicated by "zinc indicator" and 10 to 15% barite	4.72%
#14663	No barite and more silica	3.65%

Minor zinc mineralization was found in the porous dolomite unit at the west end of the CVO group. Minor pyrite was noted in this zone but no barite and the zinc mineralization could only be recognized with the use of the "zinc indicator" solution.

There is a third unit within the lower dolomite formation that lies 100 to 200 feet below the porous dolomite unit. It is a dark brown weathering sandstone grit that varies from 100 feet to 200 feet in thickness. It weathers very easily and is often marked by a gully and a patch of green vegetation. This unit was traced from the CVO #1 claim 500 feet east to the CVO #10 claim and was not located beyond this point.

Respectfully submitted,



V. Cukor, P.Eng.,  
ATLED EXPLORATION MANAGEMENT LTD.

ENGINEER'S CERTIFICATE

I, Vladimir Cukor, of 2841 West 18th Avenue, of the City of Vancouver, Province of British Columbia, DO HEREBY CERTIFY:-

1. That I am a graduate geological engineer.
2. That I graduated from the University of Zagred, Yugoslavia, in 1963.
3. That I am a registered professional engineer in the geological section of the Association of Professional Engineers of the Province of British Columbia.
4. That I have practiced my profession as a geological engineer for the past eleven years, both in Yugoslavia and Canada.
5. That I have personally performed and/or supervised the field work on the Corval Resources property during the summer of 1974.
6. That I have no interest, directly or indirectly in the property with which this report is concerned, nor do I expect to receive and such interest. I have no interest in the securities of Corval Resources Ltd. (N.P.L.)



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Vladimir Cukor, Dipl.Ing., P.Eng.

DATED at the City of Vancouver, Province of British Columbia, this  
28th Day of September, 1974.

DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

To Wit:

**In the Matter of** EXPENDITURES INCURRED ON  
CVO #1 to #16 MINERAL CLAIMS OF CORVAL RESOURCES  
LTD. YUKON TERRITORIES

**I**, PAT HENRY project manager for ATLED EXPLORATION MANAGEMENT LTD.

of 6865 Colborne Avenue, Burnaby 1, B.C.

in the Province of British Columbia, do solemnly declare that THE COSTS OF THE PROGRAM ON THE  
C.V.O. CLAIMS BONNET PLUME AREA YUKON TERRITORY, TOTALLED \$2,112.95 AS SHOWN  
ON THE ATTACHED PAGE.

Costs incurred on the CVO Mineral Claims

- Personnel

G. C. Gutrath, geologist, P.Eng.,  
July 26 to July 31, 1974....6 days @ \$175.00/day...\$ 1,050.00

J. P. Henry, Drafting and Data Compilation  
16 hours @ \$6.00/hour..... 96.00

V. Cukor, P.Eng., final report  
3 days @ \$175.00/~~hour~~<sup>day</sup>..... 525.00...\$ 1,671.00

- Transportation

Brinex - Invoice of July 29 & 28 plus fuel..... 204.20.. 204.20

- Food and Accommodation

Brinex - July 28 & 29/2 days @ \$25.00/day..... 50.00  
July 26, 27, 30 & 31 @ \$20.00/day..... 80.00... 130.00

- Equipment Rental

Tents, toprofil, string, camp equipment @ \$10.00/day  
6 days @ \$10.00/day..... 60.00... 60.00

- Disbursements

Chemex Labs - assays  
Invoice #12079 - August 9..... 4.73  
Invoice #12092 - August 12..... 9.00

Superior Reproductions  
Invoice #14735..... 34.02... 47.75

\$ 2,112.95

YUKON REVENUE LTD.

CYPRESS RESOURCES LTD.



LEGEND

ORDOVICIAN & SILURIAN

MT KINDLE FORMATION - grey dolomite

HADRYNIAN

1 SHEEPBED FORMATION - dark brown shale  
(a) Interbedded massive reef

1, 2 Grey, medium to thick bedded dolomite, minor graphitic argillite  
2 Light orange - grey weathering porous dolomite, quartz veining breccias cemented by quartz, calcite and/or barite. Favorable host for zinc mineralization.

Secondary zinc mineralization associated with barite and quartz in porous dolomite

"Grit Unit" - Dark brown arkosic sandstone

Jointing attitude

Shearing attitude

Bedding attitude

Fault

Outline of Outcrop

Claim Post

Sample Point  
14093

CORVAL RESOURCES LTD. (N.P.L.)

Allied Exploration Management Ltd.  
420-475 Howe St. Vancouver, B.C.

CVO CLAIMS

Mayo Mining Division 105-C-6

Scale 1" = 400'

Drawn j. p. h. GEOLOGY

Date Oct., 1974

Number FIGURE 2

*V. Cal*