

NORTHHAIR 886195  
FAME '87  
AR # 16709

SUMMARY AND CONCLUSIONS

The Northair property was optioned in 1987. The objective of the 1987 program was to outline areas of geology that are favourable for the occurrence of Zn-PB-Cu-Ag-Au volcanogenic massive sulphide deposits. This was accomplished through a program of geological mapping, whole rock geochemistry, and ground follow-up of airborne geophysical anomalies.

The property is underlain by volcanic and sedimentary rocks of the Lower Cretaceous Gambier Group which are intruded by Cretaceous to Tertiary intermediate plutons of the Coast Intrusive Complex. These older rocks are cut by and unconformably overlain by basaltic and felsic dykes and flows of the Tertiary to Quaternary Garibaldi Group.

The Gambier Group rocks can be divided into two 2500 metre thick stratigraphic units, a Lower Volcanic Unit and an Upper Volcanic Unit. The volcanic rocks in both units are calc-alkaline. The Lower Volcanic Unit is composed of equal proportions of epiclastic sediments and dacitic to andesitic pyroclastics. The sediments are predominantly wacke and greywacke with lesser interbedded siltstone and argillite. The volcanic component is made up of breccia, lapilli tuff, crystal tuff and tuff. The large volume of sedimentary material throughout the lower unit indicates that it formed in a distal volcanic environment. In contrast, the Upper Volcanic Unit is composed of andesitic to dacitic pyroclastics with only minor intercalated wacke, siltstone and argillite. The presence of angular volcanic breccia and lapilli tuff, especially in the lower half of the Upper Volcanic Unit and the small volume of sediments indicates that it formed in a more proximal volcanic environment.

The Northair Mine is a former gold producer and from 1976 to 1982 it produced 492,770 tonnes of ore containing 1.77% Zn, 1.22% Pb, 11.6 g/tonne Au and 63.0 g/tonne Ag. It is believed to be at least in part a stratiform volcanogenic deposit. A volcanic breccia and lapilli tuff horizon near the base of the Upper Volcanic Unit is host to the Northair Mine. The sulphide mineralization occurs as disseminations and layers in a siliceous carbonate horizon (Miller, 1979). This horizon has been faulted into four zones that form a relatively continuous, near vertical, northwesterly trending mineralized sheet that has been traced for 1200 metres along strike, at least 300 metres down dip, and is 1 to 7 metres wide. Drilling and mining has defined the zones along strike but they are still open at depth. The northern half of the mineralized horizon is wider and contains more lead-zinc sulphides that are locally massive. The best potential for massive sulphide mineralization appears to be at depth on the northern half of the horizon beneath the Discovery and C zones. These zones have been previously drill tested to an elevation of 825 metres which is 150 metres below the surface.

cf. QUES

Airborne geophysics outlined several areas of weak anomalous conductivity. Eight small grids were placed over these areas. Subsequent geological mapping revealed that only one of the grids is underlain by volcanic breccia and lapilli tuff of the Upper Volcanic Unit. For this reason, the massive sulphide potential of seven of these areas is considered poor. The mapping also indicates that most of the weak conductors are caused by argillite, shear zones or faults.

Soil sampling did not reveal any significant new anomalies, nor was any important new mineralization located in 1987.

An extensive program of rock geochemistry (546 whole rock samples) revealed that the pyroclastic dacite, andesite, and basalt of the Upper Volcanic Unit, within 100 metres of the Northair mineralization, is characterized by depletion in sodium, calcium and strontium and enrichment in potassium, rubidium, manganese, barium, copper and zinc. Four other areas were outlined within the Upper Volcanic Unit that have a similar depletion and enrichment signature. These four areas have excellent massive sulphide potential.

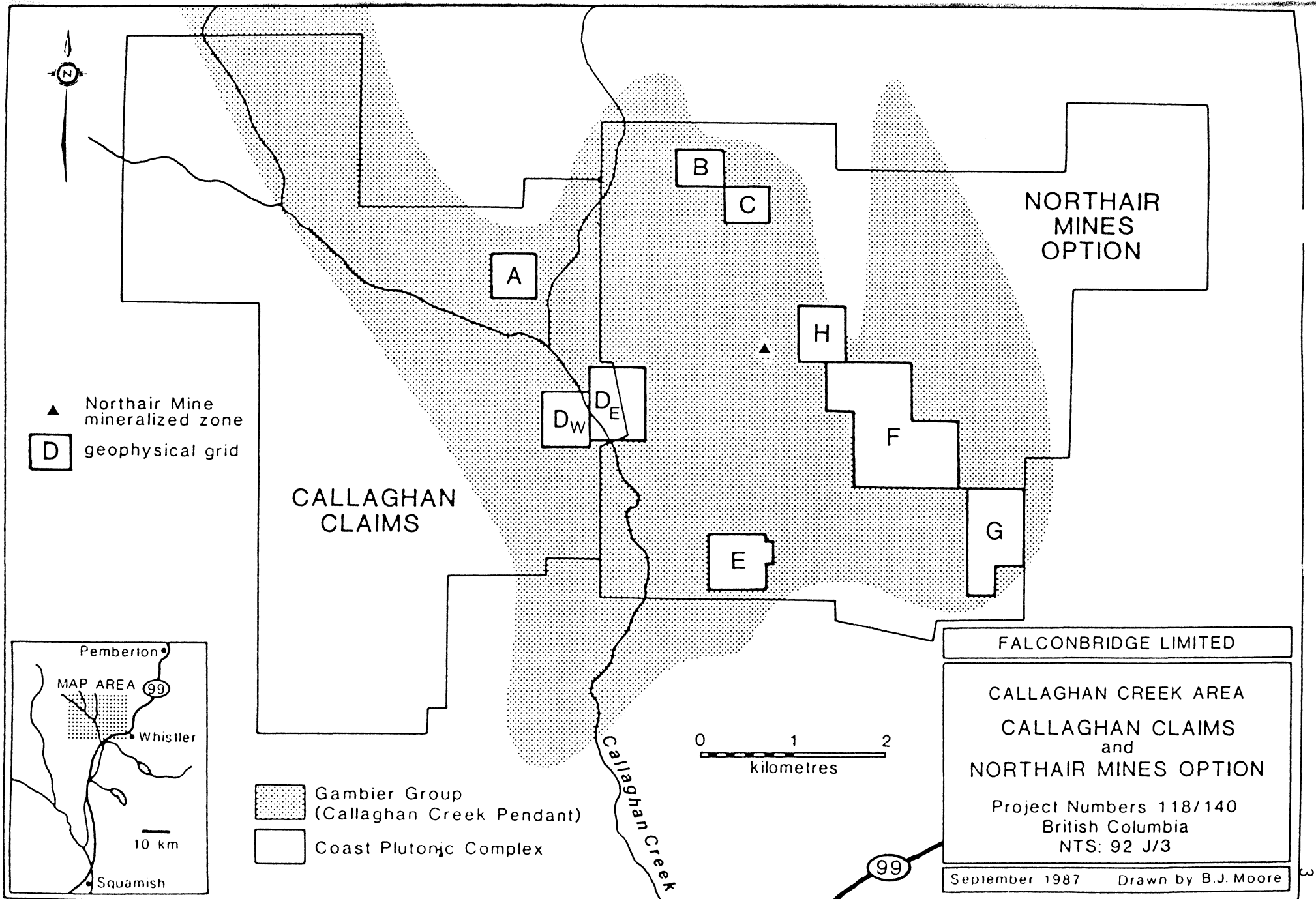
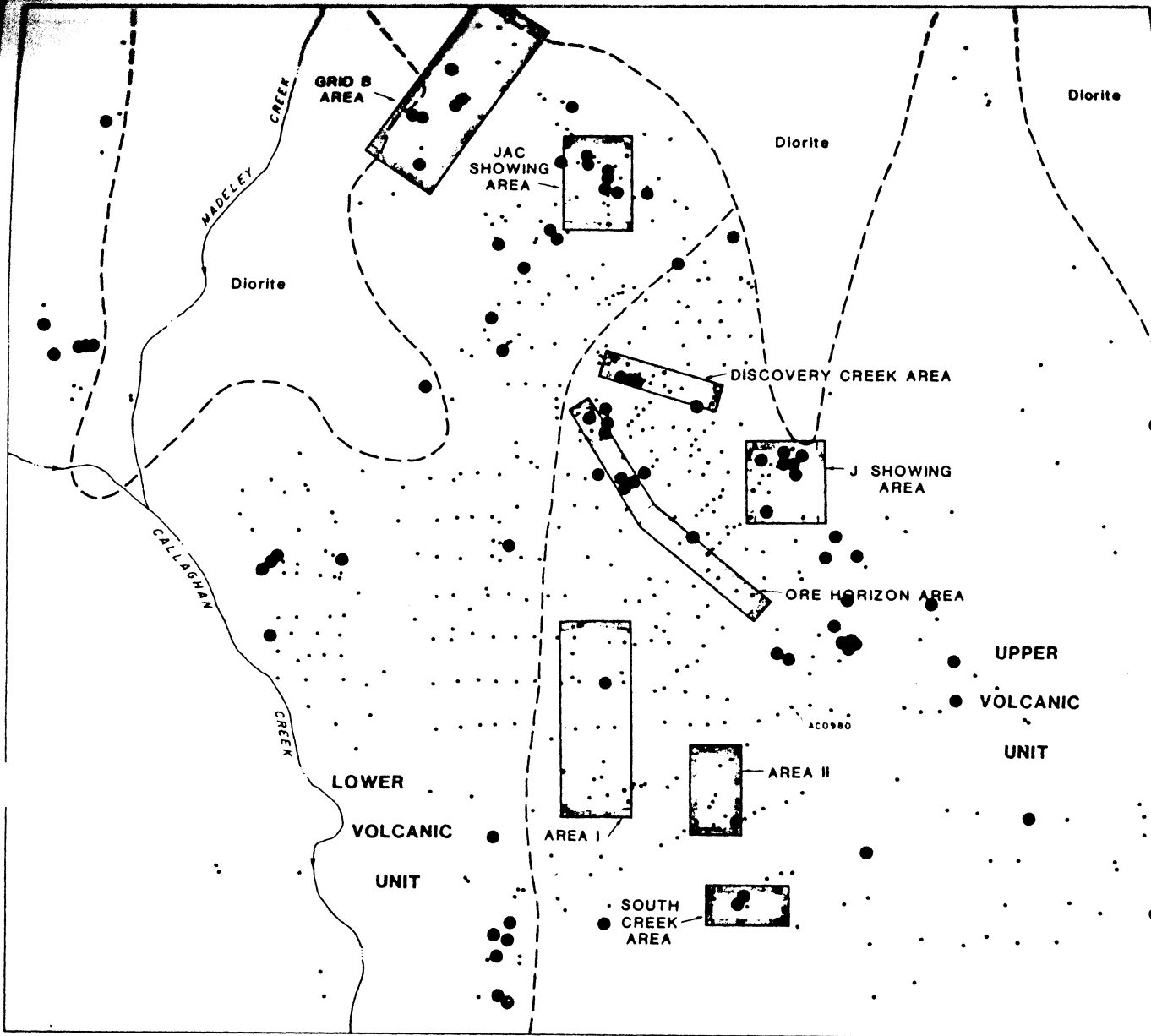


Figure 2



## LEGEND

- Whole rock sample
- - - Geological contact
- ▭ Significantly altered area
- > 60 ppm Cu

NOTE: Data displayed includes both whole rock and rock geochemical samples.

FALCONBRIDGE LIMITED

NORTH AIR OPTION

ROCK GEOCHEMISTRY  
COPPER

PROJ. 140

WORK BY SC	DRAWN BY VJG	DATE Jan 1988
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0 500 1000 m

SCALE IN METERS 1 : 20 000

Figure 40