

The Windy Craggy Massive Sulphide Deposit, Northwestern British Columbia

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The Windy Craggy massive sulphide deposit is located within the St. Elias Mountains in the northwestern corner of British Columbia. The deposit occurs at an altitude of 1700 metres some 28 kms north of the confluence of the Alsek and Tatsenshini Rivers.

Access is at present limited to helicopter, the closest road being the Haines cut-off road which approaches to within 60 kms east of the property. Most of the deposit is covered by glacial ice and snow fields, surface exposures are limited to steep-sided ridges and precipitous rock faces. Because of these factors exploration work is difficult, challenging and expensive.

Sulphide bearing boulders were discovered in glacial moraine by a Falconbridge prospecting party in 1958, follow-up of which led to the discovery of outcrops and staking of the deposit. As the result of an agreement between Falconbridge and Geddes Resources Ltd. an intensive exploration programme has been carried out over the past three years. Expenditures of approximately \$3 million were incurred in drilling 21 holes for a total of 7946 metres and in doing limited geological mapping and geophysical surveys.

The deposit lies near the contact of extensive pillow basalts and a dominantly sedimentary sequence composed of black argillaceous siltstones and limestones which are interbedded with minor intermediate volcanic units. The age relationships of these rocks are presently poorly understood, on regional grounds Campbell and Dodds of the G.S.C. assigned them to the Palaeozoic, but recent work by the G.S.C. on conodont faunal assemblages has established a Norian age for sediments in the vicinity of the deposit.

Drilling and mapping to date have demonstrated the presence of sulphide mineralization over an apparent strike length of at least 1800 metres. Wide spaced drilling has been carried out over 1300 metres along this zone and has demonstrated apparent true widths of up to 200 m of massive sulphides. The sulphide body is grossly conformable to the enclosing volcanic and sedimentary units. The adjacent wall rocks are characterized by chlorite alteration of volcanics and variable silicification of both sediments and volcanics. Stringer type sulphide mineralization is found within this altered assemblage on both sides of the massive sulphides. Detailed mapping at the northern end of the zone has succeeded in identifying two phases of folding deforming the sulphides and adjacent wall rocks.

The sulphide body exhibits gross mineralogical and chemical zonation. The southern third is characterized by a relatively low copper — high cobalt association, with pyrrhotite being the dominant sulphide present. The remainder of the zone drill tested to date is characterized by a predominance of pyrite over pyrrhotite with an attendant increase in copper grades and diminished cobalt content. There are indications that zinc and silver values increase within the northern section of the sulphide zone. An encouraging gold intersection was encountered in DDH 14-83 which assayed 9.2 g/t over 61.23 metres. Much work remains to be done to evaluate the significance of this intersection, the structural complexity, stratigraphy, metal zonation and tenor and the overall economic significance of this intriguing deposit.

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