



British Columbia Geological Survey Geological Fieldwork 1980

VILLALTA PROPERTY (92F/1W)

By E. W. Grove

The Villalta property (MI 92F-384), owned by Canamin Resources Ltd., is located 40 kilometres west of Nanaimo and 4 kilometres southwest of Labour Day Lake. Access is from Nanaimo over mostly paved logging road.

The presence of mineralization was discovered by Efrem and Lucia Specogna while engaged in a prospectors' assistance project during 1976. Reconnaissance stream silt sampling followed by float examination led to the discovery of three new and significant mineral deposits in this one area.

Work in 1980 included trenching, extensive sampling, geological mapping, and drilling. Six core holes totalling approximately 399 metres were drilled on the mineralized zone shown on Figure 36.

Because of the Specognas' work in the Nanaimo Lakes area, the geology of the area has been reviewed and revised. Only preliminary results will be given here.

Good exposures of crinoidal limestone and marble with thinly banded grey chert can be easily traced along the length of the east side of the valley. These members of probable Sicker Group are variable in thickness and the chert is particularly lenticular. They overlie deformed basaltic volcanic and sedimentary rocks of undetermined age and are in turn gradational to or unconformably overlain by remnants of a formerly more extensive rhyolite tuff unit. The limestones have well-developed karst topography characterized by crater-like sinkholes, dolines, and small caverns. The Sicker sedimentary units dip gently eastward and are unconformably overlain by undulating or gently dipping Nanaimo Group sandstone, siltstone, and conglomerate. It is very obvious from studies of the conglomerates that the area was extensively eroded in pre-Nanaimo times, resulting in deep major and subsidiary valleys. Many of major valleys have now been exhumed so that old hanging valleys filled with thick sedimentary rocks are exposed along the present-day walls.

The first mineralization discovered was hematite forming bouldery soil and extending down along the walls of the sinkholes into the dolines. Further prospecting showed that the massive to powdery hematite is extensive and is related to the unconformity. Rock cuts made during the recent logging operation confirmed the relationship of the hematite to the top of the Sicker sedimentary rocks.

Core drilling by Canamin during 1980 showed that the hematite mineralization extends into the hillside at a low angle for at least 110 metres and is over 30 metres wide. Drilled thickness of the mineralized horizon varies to 14 metres. Studies of the core suggest that the hematite represents the weathered product of an irregular thick, massive sulphide unit comprising primary magnetite, marcasite, and minor arsenopyrite. Silicate and other secondary minerals include siderite, calcite, quartz, serpentine, goethite, and some ilvaite. The ilvaite appears to be related to a contact skarn developed along the contacts of narrow pre-Nanaimo hornblende diorite dykes that cut the sulphide lens.

Granitic plutons adjacent to this mineralized zone were at first thought to be the normal steep-sided intrusive rocks as suggested by older mapping. A detailed look at this feldspar porphyry showed that it is in

fact a shallow-dipping 50-metre-thick sill that cuts acutely across parts of the Nanaimo Group at a very low angle and overlies the mineral deposit. Extensive talus shed by the sill line the valley walls must have given the impression that there was a relatively extensive, typical Tertiary pluton. Other work by the writer on Vancouver Island has shown that these sills are more extensive than is generally known.

The potential of this new type of deposit lies in its gold and silver content. Other similar deposits at the same stratigraphic horizon has been identified on Vancouver Island but their potential has not been recognized.

REFERENCE

B.C. Ministry of Energy, Mines & Pet. Res., Exploration in B.C., 1977, p. E 109.