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GEOLOGY PROGRESS REPORT

ERICKSEN-ASBHY PROPERTY

November, 1980.

By

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The Ericksen Ashby property was examined in detail in 1979, and a regional study was done in 1980. The regional study was aimed at understanding the regional setting of the Ericksen-Ashby deposit, and prospecting for other similar massive sulfide deposits in the same belt.

In 1980, regional mapping showed a belt of pre-Upper Triassic (probably Permian) volcanic and lesser sedimentary rocks trending north-northwest. This belt contains all the known volcanogenic massive sulfides in the Taku-Tulsequah region; these are, from southeast to north, as follows:

1. Ericksen-Ashby
2. Big Bull
3. Banker-Potlach
4. Tulsequah Chief
5. Ono-Oya

(See Figure 1.)

The deposits occur in and near rhyolitic centers in an island-arc volcanic sequence dominated by andesite. Only at the Ono-Oya deposit are rhyolitic rocks extensive; other deposits are related to small lenses of rhyolite or occur in sedimentary basins. Sedimentary rocks occur in basins between andesitic centers; they contain limestone, chert, and fine clastic sediments, and coarser volcanic breccias and tuffs. Basins vary rapidly in thickness, and most units are of limited lateral extent. An exception are some chert layers which form thin extensive sheets, and are very useful in determination of the regional fold patterns. The sulfide deposits occur at several stratigraphic levels over a lateral distance of a few tens of kilometers in the original pre-folded sequence, indicating that the deposits were formed by separate events during the history of the island arc.

The 1979 study showed that the Ericksen-Ashby deposit occurs in a thin basinal sequence of limestone, chert, and rhyolite between two major andesitic piles. Massive sulfides occur in and near a thin, discontinuous basal rhyolite as lenses and pods up to several meters across, with assays averaging 0.005 oz/t Au, 5.9 oz/t Ag, 2.5% Pb, and 8% Zn, and ranging up to 15.3 oz/t Ag, 8.1% Pb, and 30.5% Zn in one 15-foot section. Copper is conspicuously absent. The geological setting appears to have been one of moderate topographic relief, and exploration is aimed at testing local basins in the original surface, which could be loci of accumulation of thick deposits of massive sulfide. In the upper part of the sedimentary sequence are abundant chert and cherty limestone. Much of the chert was formed from exhalative solutions by precipitation at the seawater interface or by replacement of limestone at shallow depth. Brecciation of chert followed shortly, and during continued exhalative activity sphalerite and galena were precipitated in fractures and irregular replacement patches in the chert; abundant lensy "skarn" deposits were formed in the same settings. Skarns are dominated by rhodonite and pyrrhotite with lesser garnet, pyroxene, amphiboles, and calcite, and generally minor sphalerite and galena. A few of these contain ore-grade assays, but their potential is not considered as great as that of the massive sulfides associated with the rhyolites, because of their limited size and erratic distribution.

In 1980, it was planned to test the main massive sulfide zones at Ericksen-Ashby by a 4000 foot diamond drill program from surface and underground. In June and July elaborate snow-water collection systems were set up to store drill water in large portable swimming pools. The drill sites were excavated and levelled by hand, and timbers were brought in for drill platforms by helicopter from the Tulsequah River valley. A camp for 10 people was established on the slope of the mountain within walking distance of the drill stations to eliminate the necessity of daily helicopter support, and to allow the drilling program to continue in weather which would not permit the helicopter to land at the drill sites. A contractor was arranged, but by the time he was in position in

August, the water supply had dropped to an inadequate quantity for drilling. Trails were constructed from camp to drill sites to allow easy travel up and down and across the rugged terrain of the mountain side.

In 1980, detailed geological mapping of the massive sulfides and their surroundings was planned to be done in conjunction with the drilling program. Because the drill program was cut short, the detailed mapping was not done. The drill cores from the 1964 drill program by the Ericksen-Ashby Mining Company were relogged in detail; results of this study differed moderately from the original drill logs, and allowed a better interpretation of the geology between holes and with the surface.

Logistically everything is ready for an immediate start in the early summer of 1981 to take advantage of the high snow-water run off for drilling.

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