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Corning Creek
82M

CORNING CREEK

82L/13E

General

The Corning Creek property is located on the southern slopes of the Adams Plateau, between Adams Lake and Scotch Creek. Elevations vary from 1450 to 4950 feet above sea level and the ground in the southern part of the property is snow-free from May to October.

As a result of reconnaissance stream sediment surveys in 1970 several copper and zinc anomalies were discovered in the area of the claim group (Anomalies 1-2, 1-11, 1-12, 1-13). Follow-up prospecting and base-of-slope soil sampling indicated the presence of several zones of stratabound sulphide mineralization in the canyons of Nikwikwaia, Corning and Acid Creeks. The mineralization was similar to that at the Harper Creek and EBL properties to the northwest, where large, stratabound zones of low-grade copper mineralization have been discovered in a comparable geological environment.

Regional geological mapping showed that the mineralization in the Corning Creek area was stratigraphically related to the rocks of the Lower Eagle Bay formation near their contact with the underlying Sicamous formation. Consequently a block of 172 mineral claims was staked to protect a six-mile strike length of the Lower Eagle Bay formation between Nikwikwaia Creek and Scotch Creek (Figure 8).

A program of reconnaissance magnetometer and geochemical soil surveys and geological mapping was conducted over most of the property during 1971. Several drill targets were selected at the request of the majority financing party, on the basis of this reconnaissance work, and about 2000 feet of diamond drilling was carried out.

Geology

Metasediments of the Lower Eagle Bay formation underlie the entire property with the exception of a thin band of graphitic limestone of the Sicamous formation along the southern margin (Figure 17). Lower Eagle Bay rock types comprise sericite and chlorite schist and phyllite, micaceous and chloritic quartzite, meta-greywacke, meta-arkose and tuff. They are classified as volcano-genic sediments. Numerous aplitic and granitic dykes and sills intrude the metasediments, particularly between lines L-130W and L-230W. Dykes of andesite and microdiorite are less common. A large stock, varying in composition from microdiorite to granite, has been emplaced along the west side of Scotch Creek north of Acid Creek.

Attitudes of foliation are generally uniform and parallel or sub-parallel the bedding. Foliation strikes vary from ENE to ESE, with dips generally between 25° and 50°. The original beds have probably been isoclinally folded with recumbent axes now parallel to the foliation. In many parts of the claim block the regional dip is contrary to the topographic slope.

A major fault with a right-hand displacement of at least 4000 feet occupies the valley of Scotch Creek. The fault strikes almost due north, with a near-vertical dip. The emplacement of the intrusive stock seems to have been controlled by the fault. The intense fracturing and hydrothermal alteration in the Acid Creek area may be related both to faulting and to intrusion.

Geochemistry

Reconnaissance soil sampling on a 1500 x 200 foot grid over the southern part of the claim block gave inconclusive results (Figures 18a & 18b). Anomalous copper values are distributed erratically in a 30,000 x 5,000 foot zone which generally parallels the bedding. No distinct soil anomalies could be delineated with the wide sample net employed, and the zone of high copper values is generally outlined by an arbitrary 45 ppm contour.

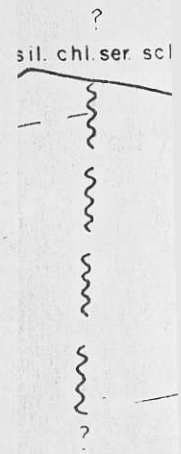
Anomalous zinc values are restricted to a narrower and more distinct zone about 25,000 feet long and up to 3,000 feet wide which corresponds to that part of the basal Eagle Bay formation in which pyrrhotite is most abundant.

In November, 1971 orientation overburden sampling was initiated in the Acid Creek area in an attempt to resolve the problem of negative copper values in soils over a large zone of weak copper mineralization discovered by drill hole 3 (Figure 19). It was apparent that the alternating horizons of till, clay, gravel, sand and caliche prevented upward mobility of cations from sub-outcrop to soil and only the basal till yielded copper values which corresponded to those in the underlying bedrock.

It is concluded that the reconnaissance soil sampling carried out to date at Corning Creek is useful only as a general guide to areas of copper mineralization, and that basal-till sampling is necessary for source definition.

Geophysics

A ground magnetic survey was conducted over most of the claim block with a Scintrex MF-1 Fluxgate magnetometer. Readings were taken at 100-foot intervals along lines spaced 1500 feet apart (Figure 20). Background responses



are found over most of the block except the southeast part. Anomalous magnetic responses here correspond to zones of heavy pyrrhotite mineralization, and fall within the general limits of the zinc soil anomaly. The strongest responses from a zone 10,000 feet long and up to 2000 feet wide extending from line L-0 on the southern margin of the claim block in a northeasterly direction to line L-90E. Values range from 600 to 4000 gammas above a background level of about 150 gammas.

Drilling

Five diamond drill holes totalling 2043 feet were drilled to test two targets. Holes 1 and 2 were drilled on line 700 feet apart to cross the strong magnetic anomaly near L-30E (Figures 21a and 21b). The source of the anomaly is abundant, disseminated to massive, pyrrhotite mineralization carrying only a few narrow sections of copper values and occurring in a 300-foot thick strata-bound sulphide zone at the base of the Eagle Bay formation.

Hole 3 tested the Acid Creek showing and cut 80.5 feet of sulphide mineralization from the collar, which assayed 0.13% Cu, excluding 20 feet of barren dyke which was not sampled (Figure 21c). This mineralization occurred about 100 feet above the Sicamous formation. It should be noted that soil copper values were only 20 ppm at the collar of Hole 3.

Hole 4, intended to test the same mineralized zone, was abandoned due to excessively deep overburden. Hole 5, collared 1700 feet northwest of Hole 4, intersected pyrite, pyrrhotite with minor copper sulphide mineralization in metasediments (Figure 21d). Unfortunately the sulphide zone was truncated by a microdiorite intrusion, and the hole was abandoned after drilling through

160 feet of intrusive rock without encountering further metasediments.

Mineralization

Numerous stratabound zones of rusty-weathering disseminated to massive sulphide mineralization have been discovered in creek canyons on the Corning property. The thicknesses of these zones vary from a few feet to over 150 feet. The predominant sulphide mineral is pyrrhotite, with lesser pyrite and variable amounts of chalcopyrite.

Pyrrhotite occurs as disseminated grains and blebs along foliation planes, as aggregates of coarse blebs and streaks and as lenses of massive sulphide up to four feet thick. Pyrite is generally present as disseminated grains or in thin bands of massive sulphide up to two inches thick.

Chalcopyrite is present as disseminated grains on foliation planes, as coarse irregular blebs, as "paint" on narrow fractures, and in lenses of massive sulphide up to 1.5 feet thick and grading up to 10% Cu. The latter higher grades appear to correspond to areas of more intensive fracturing.

Copper mineralization in the central and western parts of the property is concentrated in the stratabound zones of sulphide mineralization. The geometry and grade of these zones are such that any mining operation would be faced with a prohibitive stripping ratio. Also, the numerous barren dykes and sills in the western part of the property would likely prevent the development of any mineralized body of mineable proportions.

In the Acid Creek area, the bulk distribution of mineralization may not be stratigraphically controlled. The presence of chalcopyrite in the numerous thin fractures which cut the foliation at a high angle suggests there is a potential for a geometrically attractive zone of higher grade mineralization perhaps occurring within a lower grade zone and possibly spatially related to either the pluton or the Scotch Creek fault zone. The influence of topography on stripping ratios would not be as significant in this area.

Further detailed geological mapping, detail surface sampling and basal till sampling are required to outline the most probable source area of better grade mineralization prior to drilling.