

ALTERATION ZONE G-#9

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Alteration zone #9 was spotted during helicopter reconnaissance in late August 1969. It lies at $133^{\circ}44'W$ and $33^{\circ}46'N$, 5 miles north of Two Pete Mountain, on a southward flowing creek one mile above its junction with the Tay River. This alteration zone is two and one-half miles downstream from gossan #3. This area was examined on August 31st.

Soil samples were taken at 100 ft. intervals along 1000 ft. lines running north, south, east and west from the approximate centre of the alteration zone. When possible, samples of both the B horizon and the volcanic ash layer were taken.

The surrounding area is mapped as unconsolidated glacial and alluvial deposits but the stream has cut through these sediments into the underlying bedrock. The alteration zone consists entirely of strongly folded and highly polished black cherts. The rock here has weathered deeply and few observations other than that the rocks had folded could be made.

One mile north of the alteration zone, on a creek flowing from the west into the main creek, a bedded buff weathering fossiliferous limestone band well over several hundred ft. thick is exposed. Beds vary from several inches to more than a foot in thickness and preferential weathering has occurred along the bedding planes. The beds strike northwest-southeast and dip moderately to the south. The entire unit is fossiliferous and the fossils are quite numerous. Except for one crinoid column, only brachiopod (probably spiriferoid) shells were seen.

The limestone unit appears to be in fault contact with black slates and argillites to the south. These slates and argillites are slightly to moderately folded and are exposed on cliff faces for several hundred feet down the creek. A twenty foot thick buff weathering limestone bed overlies the slates and argillites but the bed itself could not be examined closely as it lies along the top of a 100 ft. drop.

About one-quarter of a mile north of the alteration zone is a fairly extensive outcrop of flat lying grey bedded cherts. To the north these beds are folded.

No mineralization was noted. The alteration zone has been caused by folding and shearing of black cherts.

GOSSANS G-#15 and G-#16

Introduction

The gossans on the north bank of the Tay River in N.T.S. area 105-K-13 were located during the Fall helicopter recce and have subsequently been examined on the ground and soil sampled. Parts of the surrounding area are heavily drift or swamp-covered and did not have consistently well developed soil profiles. White River volcanic ash is the most consistently sampleable material for purposes of comparison both silt and ash were collected.

General Geology

The gossan areas are underlain by a series of grey and green bedded cherts of Upper Devonian (?) age, containing small lenses of fine grained pyrite. Interbedded with the cherts are thin laminations of grey and black argillite. Gossan outcrops are coated with white encrustations of Ferrous sulphate (?) in the pyritic zones.

Folding is about northwest trending axes (approximately 120°) with plunges near horizontal. The general attitude of the sediments in the gossan areas is approximately 120° with moderate dips (40°) to the south. A conjugate shear set (035°) is well developed in the gossan areas but does not appear to be mineralized.

Economic Geology

No economic minerals were seen in the vicinity of the gossans.

Conclusions

Base-metal mineralization appears to be absent in the outcrops examined. If indeed the pyrite mineralization is associated with base-metal sulphides, it may show up in the results for soil sampling in the gossan areas. Further work, if any, will be contingent on these results.