MERRITT AREA

(921/2)

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Several days were spent north of Merritt to get a preliminary impression of the nature of the Triassic Nicola Group in this area. Volcanic flows and fragmental units predominate but volcanic argillites and limestone pods occur locally. The succession is cut by small hornblende diorite bodies and west to northwest-striking porphyritic dykes; most of the dykes appear to have been feeders for the nearby flows. Two quartz plagioclase porphyry dykes are associated with copper-iron mineralization.

Contacts between flows and clastic rocks, elongated fragments in the clastics, and bedding almost invariably strike between 350 degrees and 010 degrees. Dips are steeply east or west. 'Way up' was determined at only one locality where grading and scour zones suggest younging toward the west.

Apparently, the section can be divided into three units (Fig. 9). Unit A is a volcanic assemblage with both massive and porphyritic phases; it has intercalations of volcaniclastic rock, limestone, and argillite. Unit B is a volcanic assemblage dominated by massive and porphyritic lavas with local breccia zones. Characteristically rocks in it are a purplish colour either on the weathered or fresh face or both. Unit C consists largely of very dark grey massive to porphyritic lavas with occasional thin lenses of volcanic breccia. Throughout the section, especially in units A and B, porphyritic rocks predominate. Plagioclase with lesser amounts of augite comprise the phenocrysts.

Magnetite is common as fracture coatings and veins, particularly in Unit C. Pyrite is an accessory mineral in some of the flows and occurs in the volcanic sediments. Pods of magnetite-specularite-chalcopyrite with minor amounts of sphalerite formed in epidote-calcite skarns adjacent to layers of clean white marble. Adjacent to the quartz plagioclase porphyry dykes, minor magnetite-chalcopyrite mineralization occurs in fractures with quartz, epidote, and some tourmaline.

Epidote with associated quartz is ubiquitous as fracture and vein fillings and less common as replacements of phenocrysts, matrices, or volcanic clasts. Chlorite and actinolite were noted coating fractures in several outcrops.

Some time was also devoted to examining drill core west of Craigmont mine. An attempt is being made to define Nicola stratigraphy there. Toward this end, detailed mapping was employed to determine the structural geometry of the area. Results of the study require further office analysis and will be presented in *Geology in British Columbia, 1976.*

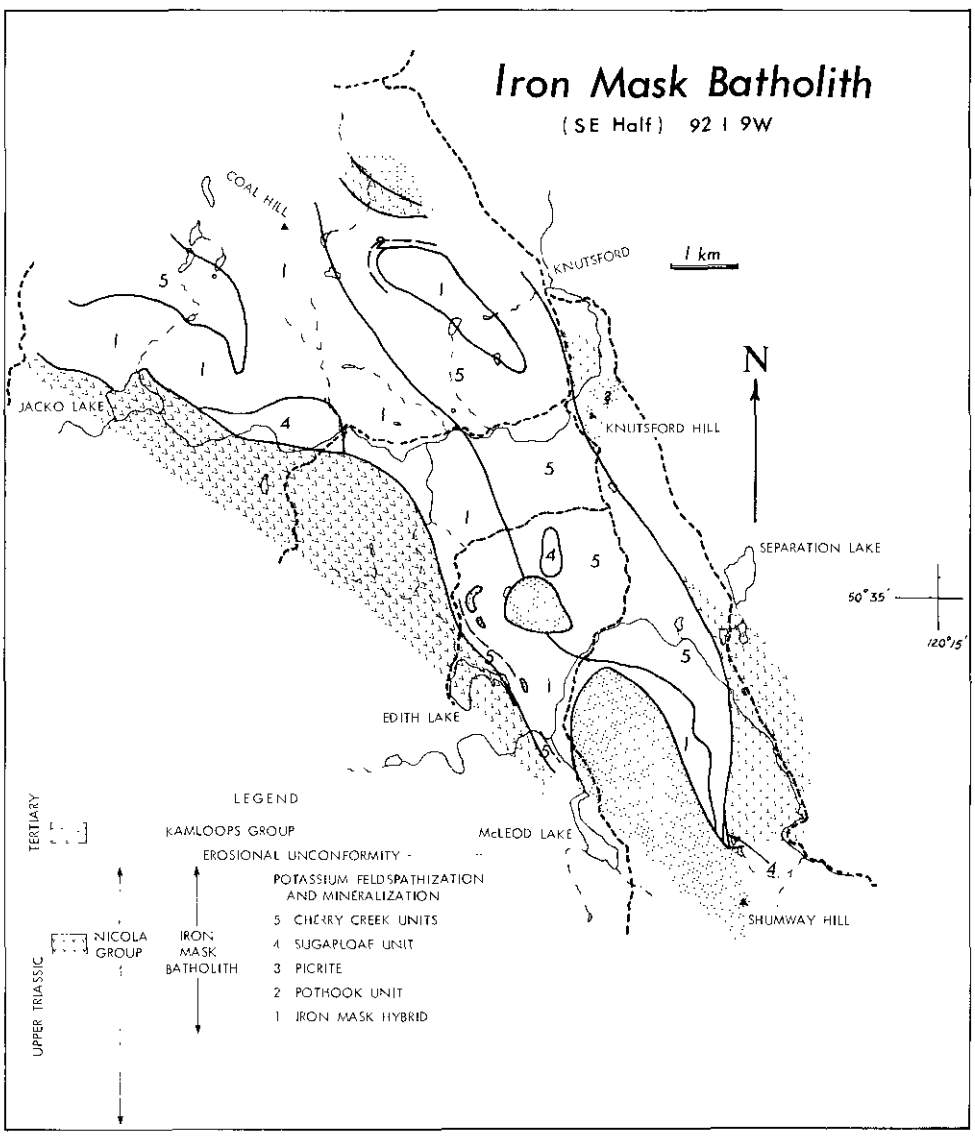

Figure 10. Sketch of southeast part of the Iron Mask Batholith.