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#### ABSTRACT

### Geology of the Railway Dike Pegmatite, Stevens County, Washington

by

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Geologic details of the Railway Dike pegmatite on the southwest slope of Calispel Peak, Stevens County, Washington, are being studied while work is in progress on a Defense Minerals Exploration Administration project for beryl. This is one of several beryl-bearing pegmatites that intrude metasediments near the contact with the Colville batholith in that part of Stevens County.

The dike in surface outline is at least 1050 feet long, 50 feet wide, and of unknown depth. Details of its shape and attitude have not been determined but general concordance with foliation of the enclosing tourmaline granite gneiss and mica rich schist is apparent on the surface.

Six zones of characteristic mineral assemblages are recognized in trenches cut across the dike. These are from west to east: (1) muscovite-quartz border zone, (2) gray quartz-muscovite wall zone (contains greatest concentration of beryl and a few pods of rare earths), (3) gray quartz (core), (4) perthite intermediate zone, (5) perthite-gray quartz-muscovite wall zone, and (6) feldspar-quartz-muscovite border zone. Replacement by quartz of the normal contact and wall zones on the west side of the pegmatite is a possibility.

Underground work 90 feet below the surface has not intersected all the mineral zones observed on the surface but has disclosed albite and/or oligoclase which have partly or wholly replaced the pre-existing perthite, gray quartz, mica, and possibly beryl. No beryl has been noted in the replacement mass.