

### **Geological History of Ddhaw Ghro area**

From approximately 600 to 380 million years ago, the area that now constitutes Ddhaw Ghro was part of the western North American margin, where sediments derived from the continent to the east accumulated. This area is called Selwyn Basin.

Around 380 million years ago, a major tectonic shift occurred in Selwyn Basin, which led to a thick accumulation of dark coloured sediments derived from the north and northwest, that is, not from the North American continent. Volcanic centres formed at that time. The rocks at Ddhaw Ghro record both the dark sediments and volcanism.

Around 270 million years ago, large crustal blocks collided with and deformed the western margin of North America. In Ddhaw Ghro, this deformation is recorded as folds, faults, and two foliations. As a result of the collisions, portions of the continental crust melted around 110 million years ago, and formed large granitic intrusions. McArthur Batholith is one of those intrusions – it forms the core of Ddhaw Ghro.

Approximately 50 million years ago, lateral movement along Tintina Fault juxtaposed Ddhaw Ghro in the northeast to rocks of Yukon-Tanana Terrane in the southwest.