

## **Shaping the Island: Welded Tuff and Fault Activity**

This outcrop is made of welded tuff, a type of pyroclastic rock created when volcanic ash particles are melted and fused together by intense heat. It is interbedded with a lighter-colored, diagonal band of tuff about 10 centimeters thick (A). In several places, this band has broken and shifted vertically due to fractures in the surrounding rock (B).

Pyroclastic flows from explosive eruptions formed the welded tuff. These fast-moving streams of extremely hot gas and volcanic matter caused trapped rock fragments to soften and compress under layers of molten ash. As a result, flat, dark slivers are visible in the rock face.

The breaks in the white band are evidence of fault activity, which occurred after the formation of the welded tuff. The rock is fine-grained along the fault lines, where it has been crushed and ground during the fault formation process.