

**1. Introduction and Setting**

The Sierra Nevada Batholith, the largest batholith in the western United States, is composed of Early Mesozoic volcanic and intrusive rocks. These rocks, including volcaniclastics from Agnew Meadows, provide insights into the early Mesozoic volcanic arc development of the Sierra Nevada. The volcaniclastics at Agnew Meadows are important because they sample a period of magmatism and volcanism that is not well represented in other parts of the batholith.

**2. Methods and Data**

The petrography and geochemistry of the volcaniclastics at Agnew Meadows were studied using thin sections, scanning electron microscopy, and X-ray fluorescence. The volcaniclastics were analyzed for major and trace elements, and rare earth elements (REE) were measured using inductively coupled plasma mass spectrometry (ICP-MS).

**3. Results**

The volcaniclastics from Agnew Meadows are dominated by tuff, tuff breccia, and pyroclastic rocks. The petrographic analysis revealed a wide range of volcanic rock types, including rhyolite, dacite, and andesite. The geochemical analysis showed a diversity of compositions, with some samples resembling rhyolite and others more like dacite.

**4. Discussion**

The volcaniclastics from Agnew Meadows are important for understanding the early Mesozoic volcanic arc development of the Sierra Nevada. The petrographic and geochemical data provide insights into the magmatic processes and tectonic setting of the arc.

**5. Conclusions**

The volcaniclastics from Agnew Meadows are a valuable resource for studying the early Mesozoic volcanic arc development of the Sierra Nevada. Further work is needed to understand the magmatic processes and tectonic setting of the arc.

**References**


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