ABSTRACT: A 19 km² 1.6-1.5 Ga mafic-ultramafic complex is located on the southern flank of the Fremont Mountains, Missouri. Mesozones identified the location of approximately 3 mesozones (1.6-1.5 Ga) and plurionic units that contain the southeastern portion of the mafic-ultramafic complex. The Fremont Mountains granite rhyolite produ-

PETROGENESIS OF IGNEOUS ROCKS IN THE EMINENCE KNOBS REGION: SOUTHWESTERN ST. FRANCIS MOUNTAINS, MISSOURI

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BG: The granitic ring complex is located on the southern flank of the Fremont Mountains, Missouri. Mesozones identified the location of approximately 3 mesozones (1.6-1.5 Ga) and plurionic units that contain the southeastern portion of the mafic-ultramafic complex. The Fremont Mountains granite rhyolite produ-

CONCLUSIONS:

1. The volcanic rocks of the region are primarily rhyolite lava flows, whereas the plutonic rocks are dominantly granite. The rhyolite lava flows are the most common rock in the region and are located along the southwestern edge. The granites are less common and are found in the central part of the region.

2. The tectonic setting of the region is interpreted as an intracontinental rift, similar to the Central Missouri Rift. The rift has a Mesoproterozoic to early Neoproterozoic age, with evidence of extensional tectonics. The rift was active during the late Mesoproterozoic and early Neoproterozoic, with multiple phases of rifting and volcanic activity.

3. The granitic ring complex is a product of Mesoproterozoic to early Neoproterozoic extensional tectonics. The ring complex is composed of multiple plutons, with evidence of intrusion at different stages of the rift's evolution. The ring complex is interpreted as a syn-rift feature, with the plutons emplaced during periods of extension.

4. The rhyolite lava flows are interpreted as products of the rift's extensional tectonics. The lava flows are interpreted as products of extensional tectonics, with evidence of dyke emplacement and lava flow emplacement. The lava flows are interpreted as products of extensional tectonics, with evidence of dyke emplacement and lava flow emplacement. The lava flows are interpreted as products of extensional tectonics, with evidence of dyke emplacement and lava flow emplacement.

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