

Supplementary Table 8
Thin section descriptions

SM-31

Porphyritic rhyolite vitrophyre from less evolved group; approximately 80% tannish glassy matrix, 7% quartz, 7% sanidine, 3% biotite, and 3% plagioclase as phenocrysts. Quartz grains are generally euhedral to subhedral and up to 1.5 mm across; few appear to contain melt inclusions. Sanidine crystals are mostly subhedral, with larger grains being more euhedral and is up to 2 mm across; often displays simple twinning and is commonly found in contact with other sanidine or plagioclase grains. Biotite grains are mostly euhedral, up to 0.5 mm across; most grains have some at least one accessory phase inclusion (zircon, euxenite, fergusonite, thorite, columbite, or monazite) and display radiation halos. Plagioclase crystals are typically euhedral to subhedral, up to 0.5 mm across; often found in contact with other plagioclase or sanidine.

SM-35

Porphyritic rhyolite vitrophyre from less evolved group; approximately 80% tannish glassy matrix, 7% quartz, 7% sanidine, 3% biotite, and 3% plagioclase as phenocrysts. Quartz grains are generally euhedral to subhedral and up to 1.5 mm across; none appear to contain melt inclusions. Sanidine grains are mostly subhedral, with larger grains being more euhedral and is up to 2 mm across; display simple twinning and is commonly found in contact with other sanidine or plagioclase. Biotite crystals are mostly euhedral, up to 0.5 mm across; most grains have some at least one accessory phase inclusion (zircon, euxenite, fergusonite, thorite, columbite, or monazite) and display radiation halos. Plagioclase grains are often euhedral to subhedral, up to 0.5 mm across; often found in contact with other plagioclase or sanidine.

SM-37

Devitrified rhyolite from less evolved group; approximately 80% devitrified groundmass with at least plagioclase, sanidine, quartz, and Fe-Ti oxides, 7% quartz, 7% sanidine, 3% Fe-Ti oxides, and 3% plagioclase as phenocrysts. Quartz grains are generally subhedral to anhedral and up to 1 mm across; none appear to contain melt inclusions. Sanidine crystals are subhedral to anhedral and up to 1 mm across. Biotite grains have been completely altered to Fe-Ti oxides. Plagioclase phenocrysts are anhedral and up to 0.5 mm in size.

SM-14

Porphyritic rhyolite vitrophyre from evolved group; approximately 60% glassy matrix with very fine inclusions of unknown minerals (likely quartz, plagioclase, sanidine), 15% quartz, 15% sanidine, 5% biotite, and 5% plagioclase as phenocrysts. Quartz crystals are generally euhedral to subhedral and up to 3 mm across; about 30% appear to contain melt inclusions. Sanidine grains are mostly subhedral, with larger grains being more euhedral and is up to 2 mm across; often displays simple twinning and is commonly found in contact with other sanidine or plagioclase. Biotite grains are mostly euhedral, up to 1.5 mm across; most grains have some at least one accessory phase inclusion (zircon, euxenite, fergusonite, thorite, columbite, or monazite) and display radiation halos. Plagioclase crystals are often euhedral to subhedral, up to 1 mm across; often found in contact with other sanidine or plagioclase.

SM-831

Porphyritic rhyolite vitrophyre from evolved group; approximately 60% glassy matrix with very fine inclusions of some unknown minerals (likely quartz, plagioclase, sanidine), 15% quartz, 15% sanidine, 5% biotite, and 5% plagioclase as phenocrysts. Quartz grains are generally euhedral to subhedral and up to 2.5 mm across; about 30% appear to contain melt inclusions. Sanidine grains are mostly subhedral, with larger grains being more euhedral and is up to 2.5 mm across; often displays simple twinning and is commonly found in contact with other sanidine or plagioclase. Biotite crystals are mostly euhedral, up to 0.5 mm across; most grains have some at least one accessory phase inclusion (zircon, euxenite, fergusonite, thorite, columbite, or monazite) and display radiation halos. Plagioclase grains are often euhedral to subhedral, up to 0.5 mm across; often found in contact with other sanidine or plagioclase.

SM-86

Porphyritic rhyolite vitrophyre from evolved group; approximately 60% glassy matrix with very fine inclusions of some unknown minerals (likely quartz, plagioclase, sanidine), 15% quartz, 15% sanidine, 5% biotite, and 5% plagioclase as phenocrysts. Matrix appears to be a mix of glassy areas and areas with higher concentration of groundmass minerals. Quartz crystals are generally euhedral to subhedral and up to 3 mm across; about 30% appear to contain melt inclusions. Sanidine grains are mostly subhedral, with larger grains being more euhedral and is up to 3 mm across; often displays simple twinning and is commonly found in contact with other sanidine or plagioclase. Biotite grains are mostly euhedral, up to 0.5 mm across; most grains have some at least one accessory phase inclusion (zircon, euxenite, fergusonite, thorite, columbite, or monazite) and display radiation halos. Plagioclase crystals are often euhedral to subhedral, up to 0.5 mm across; often found in contact with other sanidine or plagioclase.