

INTRODUCTION: 67515 is a polymict, friable, and fine-grained breccia (Fig. 1). It contains abundant cataclastic anorthosite, and smaller amounts of aphanitic and glassy impact melts and feldspathic granulitic impactite. It is a rake sample collected near the White Breccia boulders. It is rounded; a few zap pits occur on one surface.



FIGURE 1. Smallest scale division in mm. S-72-51238.

PETROLOGY: Thin sections of loose fragments are mainly cataclastic anorthosites, aphanitic and glassy impact melts, and a single fragment of feldspathic granulitic impactite.

The anorthosites appear to be pure and monomict. The textures differ from fragment to fragment, but all contain shocked and fractured plagioclases (Fig. 2). Mafic minerals are rare. Exsolution or shock lamellae are present in several of the mafic minerals, which appear to be mainly low-Ca pyroxenes. The aphanitic and glassy impact melts are all brown or nearly opaque, containing plagioclase and tiny ($\sim 10 \mu\text{m}$) mafic grains. Plagioclase clasts ($\sim 100 \mu\text{m}$ diameter) are common. The feldspathic granulitic impactites consists of 65-70% plagioclase as stubby, $\sim 150 \mu\text{m}$ grains with $\sim 50 \mu\text{m}$ mafic grains (Fig. 2). Most of the latter are low-Ca pyroxene, but both olivine and high-Ca pyroxene are present, as well as ilmenite, sulfide, Fe-metal, and chromite (?). Some of the plagioclase grains have mafic mineral “necklaces.”

PROCESSING AND SUBDIVISIONS: Several small loose chips were taken for a potted butt, resulting in thin sections ,1 and ,4.

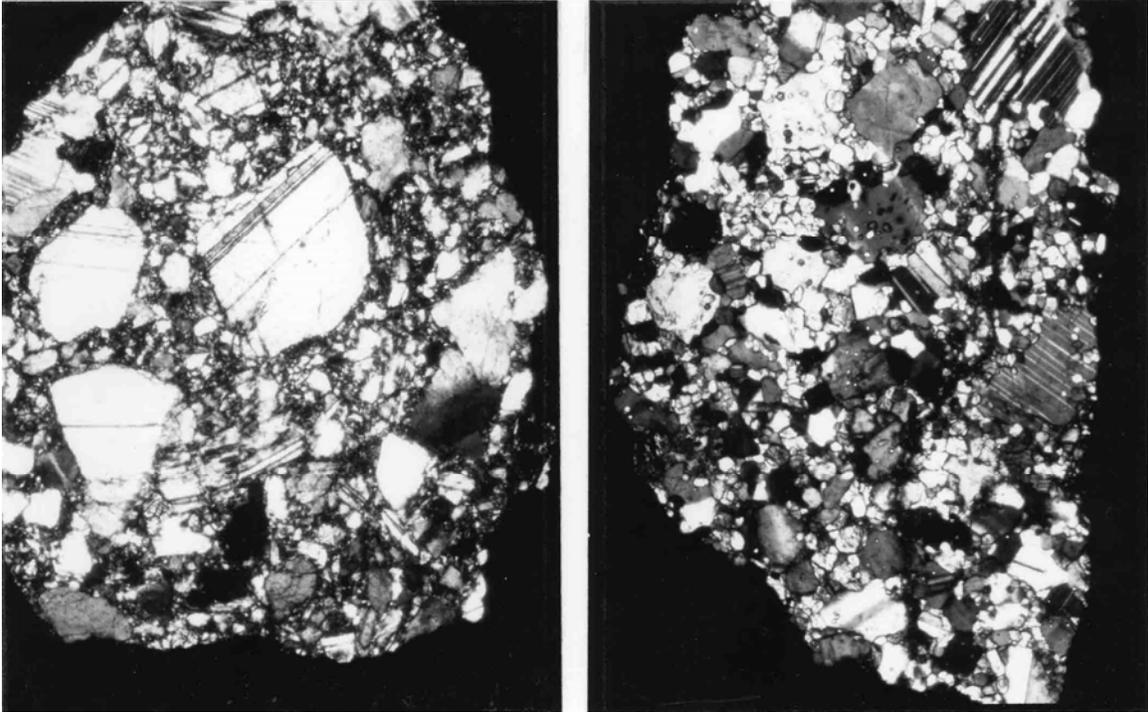


FIGURE 2. 67515,1

- a) Cataclastic anorthosite fragment, xpl. Width 2 mm.
- b) Feldspathic granulite fragment, xpl. Width 2 mm.