

68035 POLYMICT BRECCIA WITH CATACLASTIC 21.0 g
ANORTHOSITE, PARTLY GLASS-COATED

INTRODUCTION: 68035 is a coherent polymict breccia, consisting of aphanitic gray impact melt and cataclastic anorthosite in a plagioclase-rich matrix (Fig. 1). Glass both coats one side and intrudes the breccia (Figs. 1 and 2); its color ranges from blues to turquoises to yellow browns.

68035 was collected on the north rim of a 10-15 m crater. Its orientation is known, and zap pits occur on most sides.



FIGURE 1. S-72-40518.

PETROLOGY: Two unlocated chips, one white and one gray, were thin sectioned. The white fragment is a cataclastic anorthosite (Fig. 3) consisting mainly of deformed plagioclase grains, with continuous relics up to 3 mm across preserved. The anorthosite contains a few percent of mafic minerals, at least most of which are pyroxene, and some are exsolved. The mafic minerals range up to 500 μm long. The gray chip is a coherent fine-grained, plagioclase-rich impact melt (Fig. 3) containing mineral and lithic (aphanitic melt) fragments. Its matrix is micropoikilitic in places, and its plagioclase clasts are ragged.

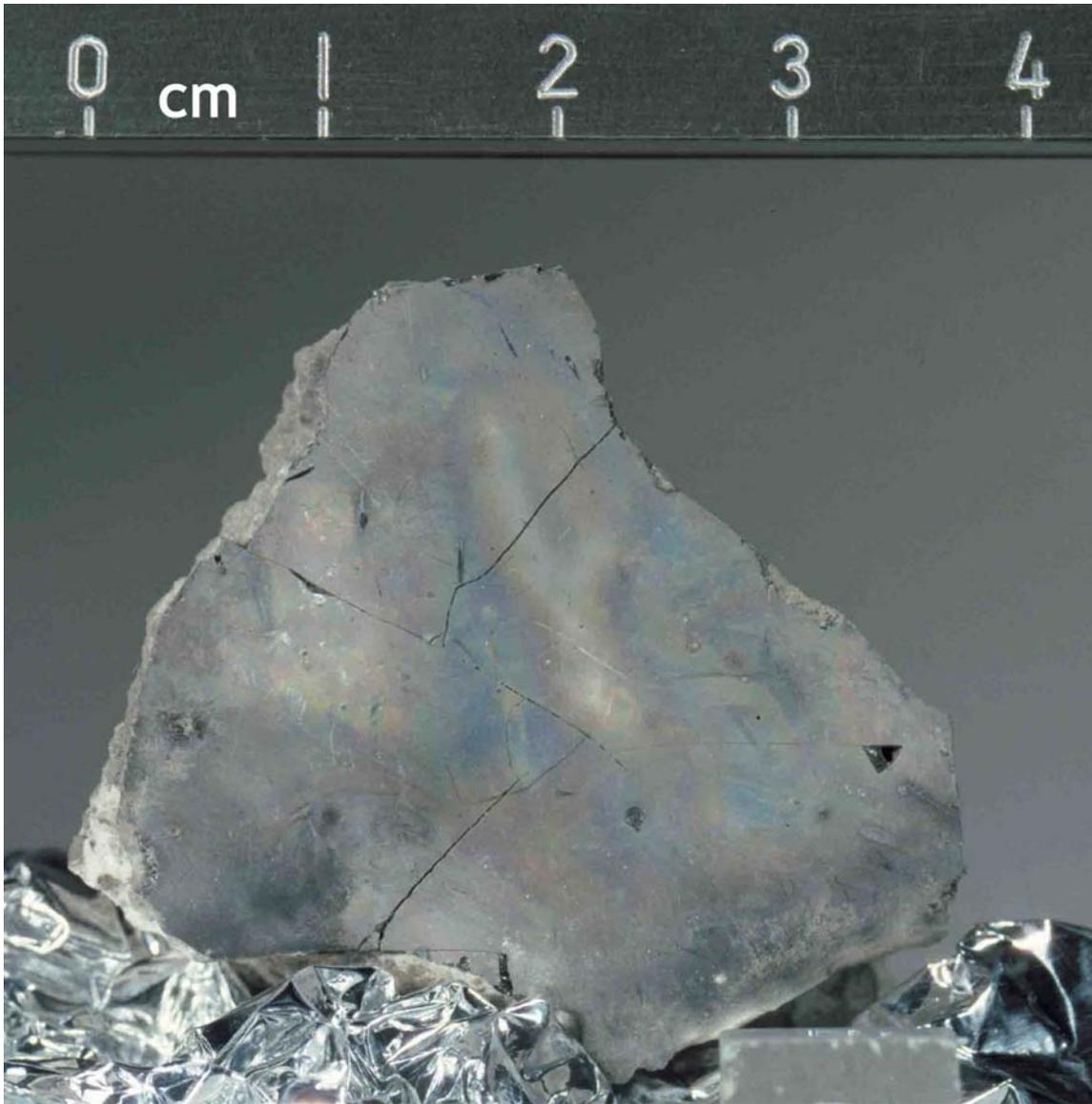


FIGURE 2. S-72-40516.

CHEMISTRY: Rancitelli et al. (1973b) provide whole rock K (K_2O 0.073%), U (0.23 ppm) and Th (0.91 ppm) abundances, measured by γ -ray spectroscopy.

EXPOSURE AGE: Rancitelli et al. (1973a) provide cosmogenic radionuclide data, measured by γ -ray spectroscopy. Yokoyama et al. (1974) tabulate the sample as undecided in terms of saturation or non-saturation in ^{26}Al activity.

PROCESSING AND SUBDIVISIONS: 68035 remains essentially intact as ,0. Small chips and fines have been numbered ,1 (0.020g). Two small unlocated chips (,2) were potted together to make thin sections ,6 and ,7.

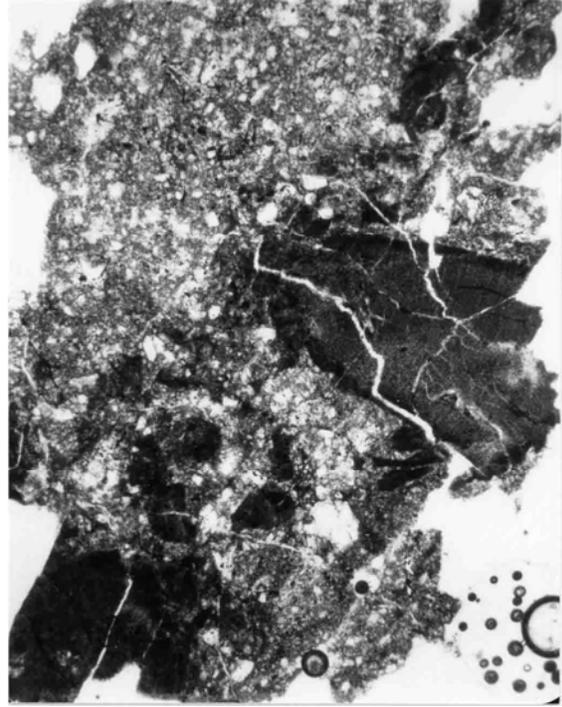
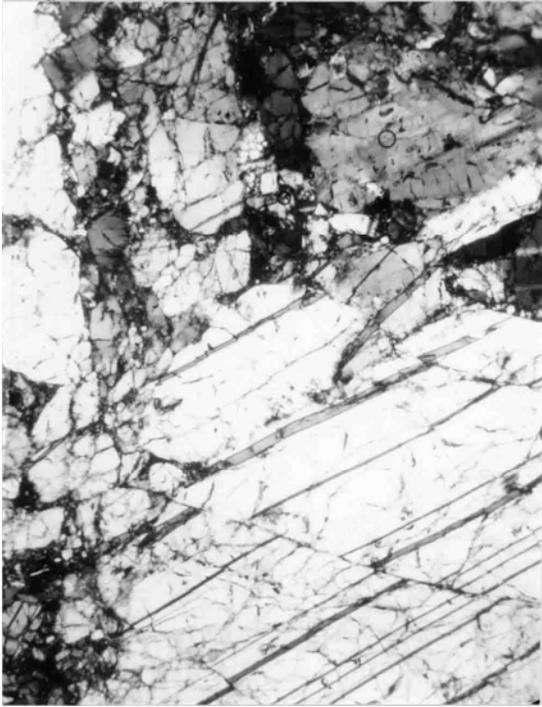


FIGURE 3. 68035,6.
a) Anorthosite, xpl. Width 2 mm.
b) Breccia matrix, ppl. Width 2 mm.