

15608 PORPHYRITIC SPHERULITIC QUARTZ-NORMATIVE ST. 9A 1.2 g
MARE BASALT

INTRODUCTION: 15608 is a fine-grained, slightly vesicular quartz-normative mare basalt (Fig. 1). It is microporphyritic, and has a textural gradation across it which suggests it is a chilled margin sample. It is gray, angular with subrounded corners, and tough. It has a few per cent tiny vugs and many zap pits on most faces. 15608 was collected as part of the rake sample at Station 9A.

PETROLOGY: 15608 consists dominantly of skeletal pigeonite microphenocrysts in a finer-grained, variolitic groundmass (Fig. 2). The groundmass consists of pyroxene, plagioclase, and opaque minerals (chromite, ulvospinel mainly). Glass is minor. Rarely, aggregates of small olivine phenocrysts are present. The pyroxene commonly form radial structures. A unique feature of this sample is that one edge is much finer-grained and consists of parallel pyroxene blades (Fig. 2) and a groundmass arrangement of plagioclase, pyroxene, and opaque minerals perpendicular to them. This edge would appear to be a chilled margin; even so, it contains very little glass. Steele et al. (1972) reported that the skeletal pyroxenes were Mg-rich and the groundmass pyroxenes were more Fe-rich. They suggested that the textures indicated devitrification but did not mention the strong textural grade.

PROCESSING AND SUBDIVISIONS: The sample was sawn to produce two pieces. ,0 is now only 0.370 g and has a sawn face. ,1 was potted and partly used to make thin sections ,5, ,6, and ,7.

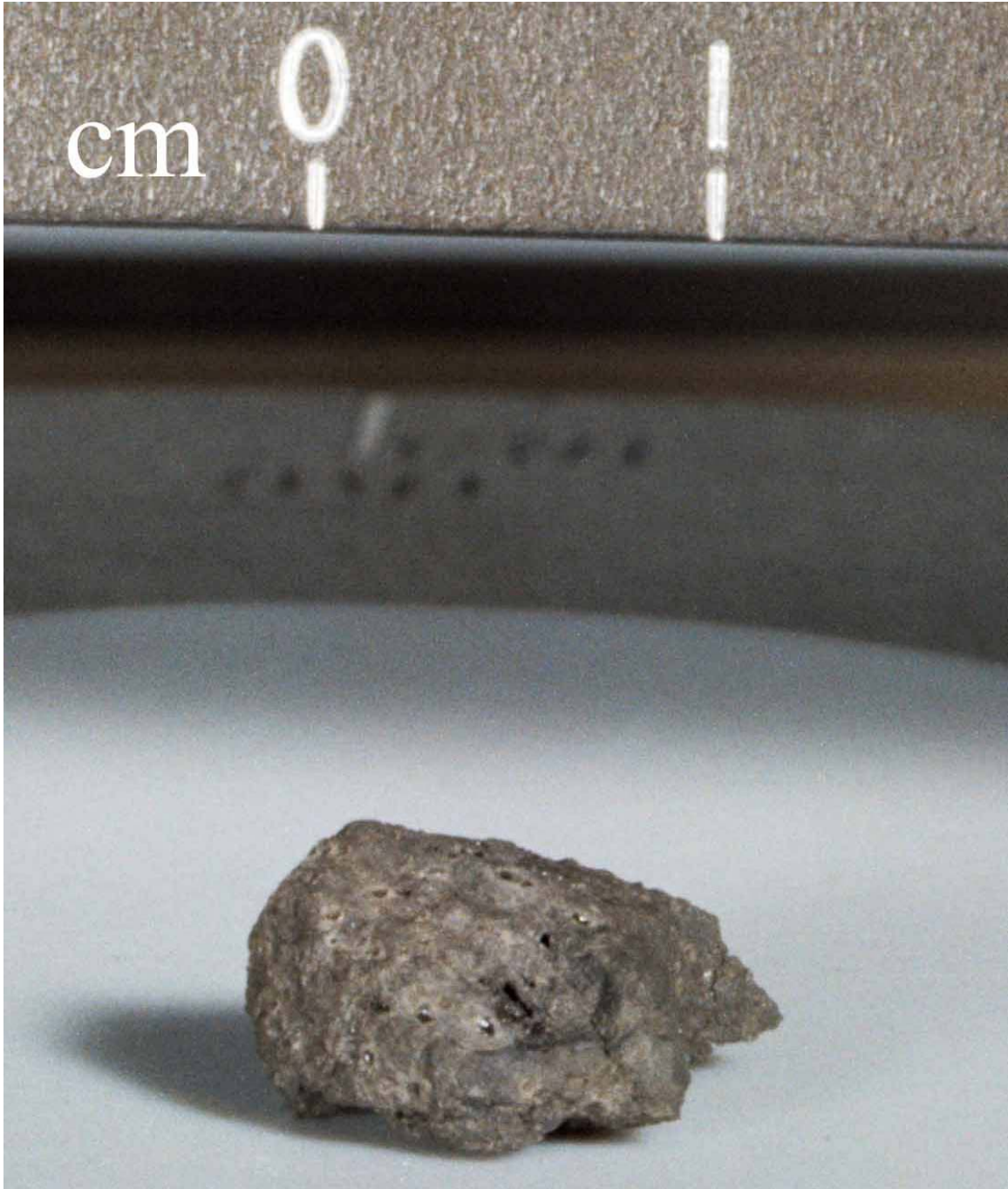


Figure 1. Pre-split view of 15608. S-71-44966



Fig. 2a



Fig. 2b

Figure 2. Photomicrographs of 15608,6. Widths about 3 mm.
a) transmitted light; b) crossed polarizers.
Top are the finer-grained parallel blades of pigeonite which probably are a chilled margin. Center is a cluster of equant olivine microphenocrysts.