

14309

Sample 14309 was collected sometime during the second EVA. No lunar-surface photographs were made, nor are the location and orientation known. The sample was returned in weigh bag 1031 with other grab samples from EVA 2.

PHYSICAL CHARACTERISTICS

Mass	Dimensions
42.4 g	4.30 x 5.10 x 3.05 cm

Sample 14309 is a moderately friable, vitric matrix breccia.

SURFACE FEATURES

Some small patches of glassy spatter are present, but tend to spall off the surface. The T₁ surface is moderately covered with zap pits (10) as large as 1 mm in size. Spall zones are lacking around zap pits.

One corner is cut by a penetrative fracture; there are very few non-penetrative fractures on the surface.

The N₁ surface is subrounded, and contains a black glassy splash. The B₁ surface is broken and contains no zap pits (Twedell et al., 1978).

PETROGRAPHIC DESCRIPTION

The matrix is 50% off-white and 50% light gray in hand specimen. The white portions are surrounded by the gray, in general. Numerous small irregularly shaped vugs are in the white areas. No clasts of mare basalt are visible in hand specimen. Clast outlines are vague. Clasts include four 1 x 2 mm vitreous black grains, one 1 x 1 mm light yellow-green olivine, and one 3 x 3 mm cloudy white plagioclase grain.

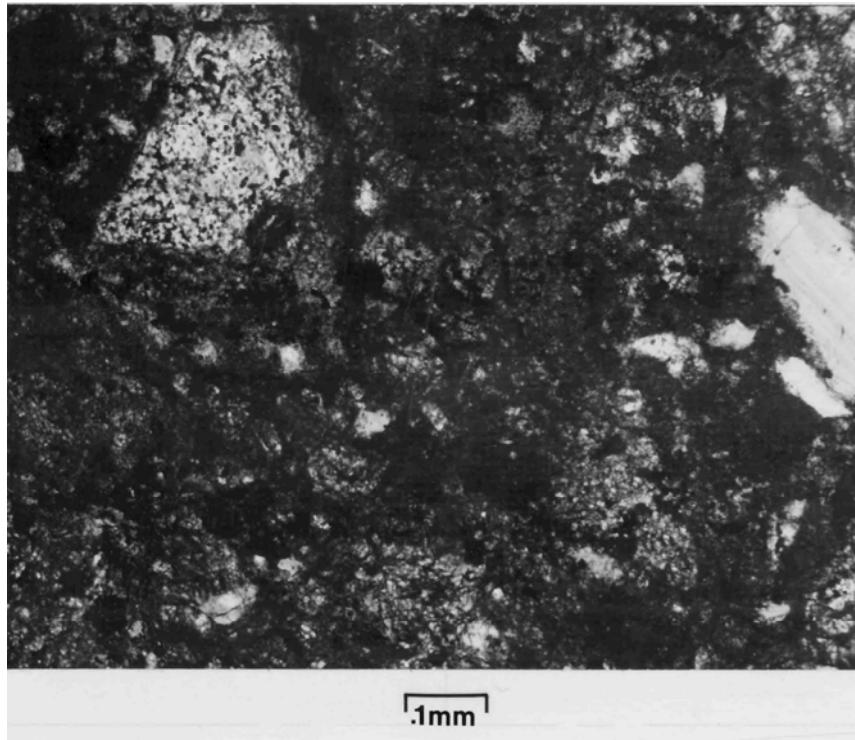
Thin section 14309,4 reveals the rock to be a vesicular glassy matrix breccia with approximately 10% "glass" in the matrix. The vesicles range from as large as 1 mm x 0.6 mm to smaller than 0.5 mm. There are no crystals extending into any of the voids. In addition, the matrix contains abundant mineral fragments and several portions of yellowish glassy spheres, many with reaction rims. There are some ill-defined lithic clasts (> 1 mm) of a "glassy" (5 - 10%) matrix breccia containing very fine crystallites. A few large plagioclase shards are also included in these clasts.

The matrix is composed of approximately 30% lithic fragments and 70% mineral fragments. The lithic fragments, like the clasts, are of fine-grained breccia with occasional plagioclase shards. There are a few fragments of a crystalline nature, but distinct crystals could not be resolved. Most of the mineral fragments are pyroxene which are slightly shocked and some have shock-induced twinning. Several of the crystals show some reaction with the surrounding matrix. The plagioclase is fresh and shows little shock effects.

There are scattered masses of yellowish brown glass with bubbles, swirls and flow lines. There is also a small amount of clear glass in the matrix.



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