14316

Sample 14316 is a breccia collected at station H during EVA 2. It has not been identified in lunar surface photographs, so its exact lunar location and orientation are unknown. It was returned in weigh bag 1038.

PHYSICAL CHARACTERISTICS

Mass	Dimensions
38.2 g	4.5 x 3.0 x 1.5 cm

This rock is a medium gray, inhomogeneous, fragmental breccia with one flat face. There is a predominance of leucocratic clasts.

SURFACE FEATURES

The rock has an irregular surface with less than 2% glass cover. Three surfaces of the rock are pitted, and the rounded surface is covered with glass-lined zap pits with a density of 15-20 pits per square centimeter. The pits range from 0.25 - 1 mm in size. There is glass but no zap pits on the flat surface (see also Twedell et al., 1978).

Two sets of planar fractures cut the rock. The two members of the first set are spaced 6 mm apart. One of these cuts across both matrix and clasts. Both fracture surfaces are glass splattered. The second fracture set appears fresh and irregular.

PETROGRAPHIC DESCRIPTION

The grain size ranges from 0.1 mm to 0.2 mm, and is inhomogeneous. The rock is polymict with 20% fragments greater than 1 mm and 80% matrix. The clasts are leucocratic, and consist of two types:

1. Fine grained microbreccia with leucocratic clasts and angular feldspar in a fine grained recrystallized matrix.
2. Clasts with pyroxene and plagioclase in varying proportions. These measure up to 1.0 cm in size and have subrounded, very irregular scalloped shapes with sharp outlines. These are the dominant clasts in 14316.

The matrix consists of ~30% very small leucocratic fragments, < 1% brown pyroxene, yellow green olivine (?), and ~70% light gray material. There are numerous small spherical to irregular glass masses, many of which are partly devitrified, scattered through the matrix. Only about 5% of the matrix is the fine-grained dark gray material. The matrix appears to be at least partly recrystallized.

Thin section 14316,5 is somewhat reminiscent of 14315,7 in that the rock consists of an interlocking mixture of mineral and lithic fragments cemented together by a brownish "glassy" material. The fragments are much less resolved than in 14315,7 and there are fewer chondrule-like bodies and devitrified glass masses. There is one large reddish-pink spinel crystal surrounded by opaque grains and a "halo" of finely crystallized material. Smaller masses of spinel are scattered throughout the section.

DISCUSSION

Sample 14316 was placed in their F_2 category by Wilshire and Jackson (1972)

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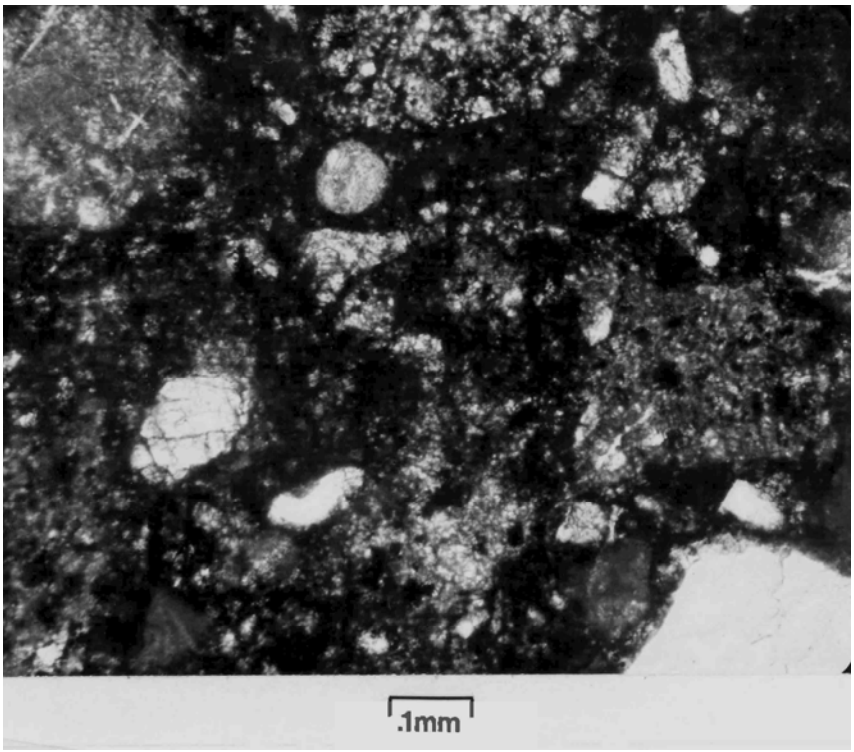

14316,5