14066

Sample 14066 was collected at Station F on the second EVA. The sample was found in the vicinity of Weird Crater. No orientation or photographic documentation was obtained. The only picture which shows the general area is 64-9137, Pan B, which may contain the exact sample location.

The sample was returned in documented bag 17N in ALSRC 1006. It is essentially a grab sample.

PHYSICAL CHARACTERISTICS

Mass	Dimensions
509.8 g	9.8 x 6.5 x 5.7 cm

This sample is a fragmental rock composed of 25% fragments greater than 1 mm and 75% of fragment less than 1 mm. It is very light gray in color with some large, darker gray clasts. It is moderately friable and it has a blocky subrounded to subangular surface.

SURFACE FEATURES

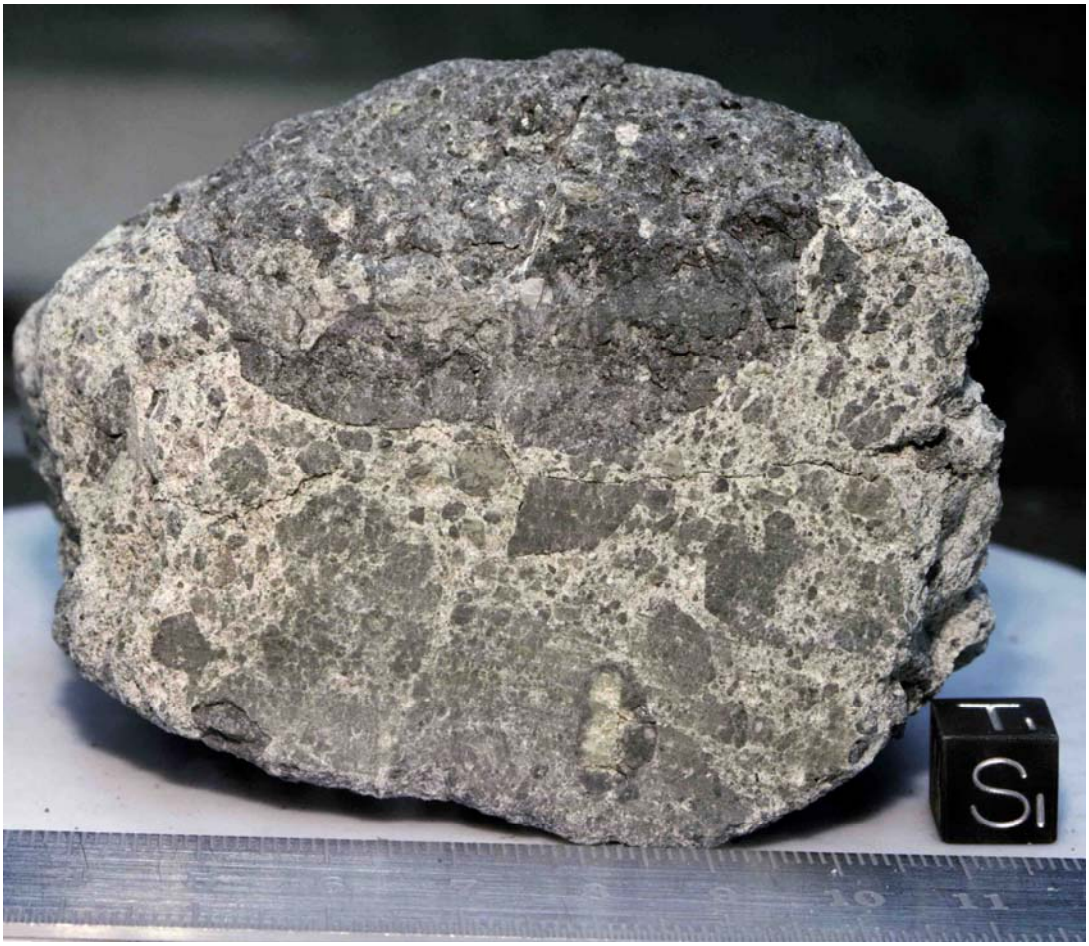
The surface of the rock has a high pit density covering approximately 15% of the area. The pits range from 0.5 to 5 mm and are lines with gray botryodial glass. The sample is more densely pitted on one side than it is on the others.

There are several clast molds, making up 5% of the total surface area. These molds are angular to irregular in shape and range from 1 to 4 mm. They occur in clusters at one end of the sample.

There are two sets of fractures with irregular surfaces. One set is subparallel to the intermediate axis of the rock. The second set cuts one end of the rock and resulted in several small chips falling off.

PETROGRAPHIC DESCRIPTION

14066 is a very light gray, medium grained rock with an average grain size of ± 1 mm. Several large, medium gray clasts are scattered throughout the sample. Clasts greater than 1 mm are 98% lithic fragments of crystalline rocks and 2% feldspar mineral fragments. The lithic fragments appear to be parts of a medium gray finely crystalline rock. These clasts are angular and very irregular and are < 1 mm to 5 mm in size. Some fragments have plagioclase phenocrysts set in the fine groundmass. The matrix consists of white, clear, and seriate feldspar and a trace of brown pyroxene, opaque minerals, and olivine. Some of the feldspar clasts have reaction rims suggesting some reaction with the matrix. In an attempt to characterize the nature of this generic, three thin sections from different parents were chosen for modal analysis of the 1 mm clasts.



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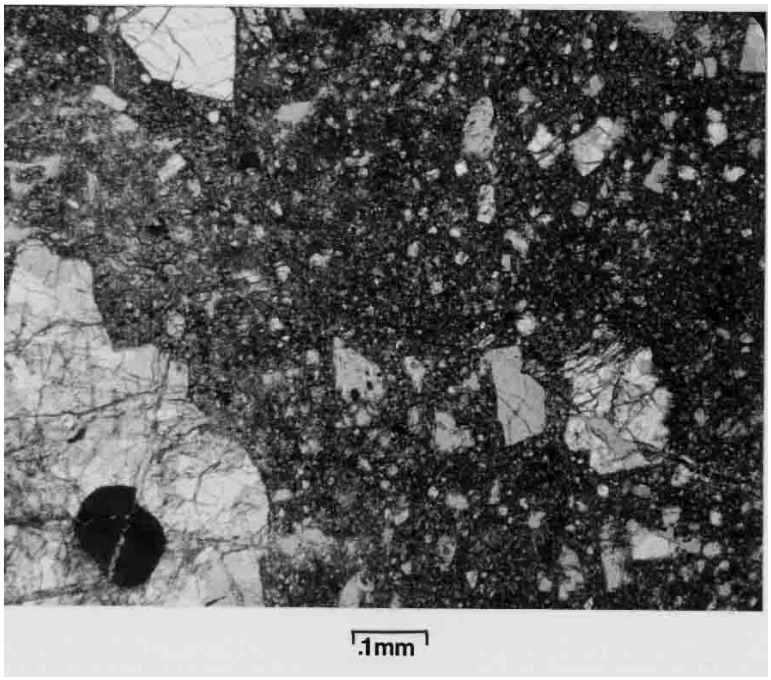

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The samples examined with their proper parents designated were:

Sample	Parent	Dominant Clast ≥1 mm
14066,34	,20	dark matrix breccia, shocked anorthosite and shocked pyroxene aggregates
14066,49	,26	dark matrix breccia, anorthositic rock, and pyroxene aggregates
14066,50	,25	dark matrix breccia, shocked pyroxene aggregates, and plagioclase vitrophyric rock

In summing the results of this survey and comparing it to the work of Wilshire and Jackson (1972), nominal agreement was found. In this survey little to no noritic type igneous rock was encountered in the ≥ l mm clasts. This is the second most common type clast in Wilshire and Jackson's paper.

DISCUSSION

14066 is noteworthy for the abundance of clasts of a single lithology (medium gray crystalline rock) and the possible reaction rims on some of the feldspar clasts.

Wilshire and Jackson (1972) classed the rock as an F_4 with a high concentration of dark meta-clastic clasts in the > 1 mm portion. Warner (1972) classified it as being high grade metamorphic (grade 7), and Chao et al. (1972) list it as a strongly annealed, shocked breccia. It is listed by Quaide and Wrigley (1972) as an annealed breccia, by von Engelhardt et al. (1972) as a glass poor breccia with a crystalline matrix, and by Simonds et al. (1977) as a crystalline matrix breccia (CMB). Phinney et al. (1976) describe 14066,9 as moderately friable with 15 - 20% of the matrix occupied by vugs and vesicles. The sample is highly fractured, with fractures cutting clasts as well as matrix. The matrix is described as being composed of subhedral to anhedral zones plagioclase 5 - 20 μm pyroxene with accessory 5 μm ilmenite arranged in interlocking grains.

This is one of the samples mapped by Twedell et al. (1978).