14199

PHYSICAL CHARACTERISTICS

Mass	Dimensions
1.88 g	1.3 x 1.0x .8 cm

This sample is a freshly fractured, polymict breccia.

SURFACE FEATURES

No pits are visible, and all surfaces appear to be freshly fractured. A trace of dark brown glass and a small patch of brown stain which may be remnants of a glass splash covering or remnants of deep glass lined pits with a large radius of curvature. One fracture which has a smooth surface is present in the rock. Some clast molds are visible.

PETROGRAPHIC DESCRIPTION

Sample 14199 is a coherent, fine grained, polymict breccia with an average grain size of less than 0.1 mm. It is texturally homogeneous and appears to be mineralogically homogeneous, as well. It is composed of 20 - 25% clasts larger than 1 mm and 75 - 80% matrix grains. Mineral fragments make up 8 - 10% of the whole rock and include:

1. green vitreous olivine 0.1 - 0.8 mm in size comprising 3 - 4% of the rock,
2. honey-brown pyroxene 0.2 - 0.8 mm in size comprising less than 1% of the rock,
3. light gray plagioclase displaying cleavages and commonly shattered comprising more than 5% of the rock,
4. a black or dark brown mineral grains which appear reddish brown on the surface and are 0.2 mm in size. It occurs in trace amounts.

Lithic fragments are 10 - 15% of the rock composition. They range in size from less than 0.5 mm to more than 2 mm and are mostly dark gray aphanitic clasts with a vitreous luster. One large clast 8 x 8 x 3 mm is mottled dark and very light gray. It contains abundant brown pyroxene, light mineral, plagioclase, and a black metallic mineral. Some glass lined pits are present in the clast. A third clast type, 0.5 mm in size, is light to medium gray and very fine grained. A fourth type is a 3 x 1 mm medium gray lithic fragment with an olivine inclusion and some suggestion of internal lamination.

One dark gray or brownish gray glass sphere is present 0.1 - 0.2 mm in diameter.

The light brownhish gray matrix has a distinct modal compositional break at a grain size of approximately 0.1 mm. It appears porous under a binocular microscope.

Width of image is approximately 1.6 cm, S-71-26994