

10023

Sample 10023 is a sub-rounded, medium dark grey, fine breccia. This sample originally weighed 66gm, and was 6 X 4 X 2 cm. This sample was returned in the Contingency Sample Bag (Documented Sample Container).

BINOCULAR DESCRIPTION BY: Twedell DATE: 9-12-75

ROCK TYPE: Fine breccia SAMPLE: 10023,2 WEIGHT: 19gm

COLOR: Medium dark grey DIMENSIONS: Four chips

SHAPE: Rounded to sub-rounded

COHERENCE: Intergranular – coherent
Fracturing – few, non-penetrative; rock is micro-fractured (PET).

FABRIC/TEXTURE: Anisotropic/Fine breccia

VARIABILITY: Homogeneous

SURFACE: Surface is rounded on exposed surface to sub-rounded on fresh surface (see special features); one side is flat fracture surface (PET)

ZAP PITS: Many on T₁, Few on E₁, none on S₁, N₁, B₁, W₁. Pits are glass lined up to 1.5mm in diameter.

CAVITIES: None.

COMPONENT	COLOR	% OF ROCK	SHAPE	SIZE (MM)	
				DOM.	RANGE
Matrix	Med.Dk.Grey	97	Rounded	-----	-----
Basalt Clast ₁	Honey Brn Blk. & White	1	Sub-rounded – rounded	1mm	0.5-1.5mm
White ₂	White	1	Rounded to irregular	1mm	0.8-1.5mm
Salt & Pepper ₃	Blk. & White	<1	Rounded	1mm	1mm
Brown Clast ₄	Brown	<1	Irregular	Only 1	

- 1) Same type of clast as seen in 10021, 10019.
- 2) See special features
- 3) Opaque material is in elongated laths.
- 4) The only one visible on the sample has a granular appearance. It does not appear to be crushed glass. Clast has a smaller white clast contained within it.

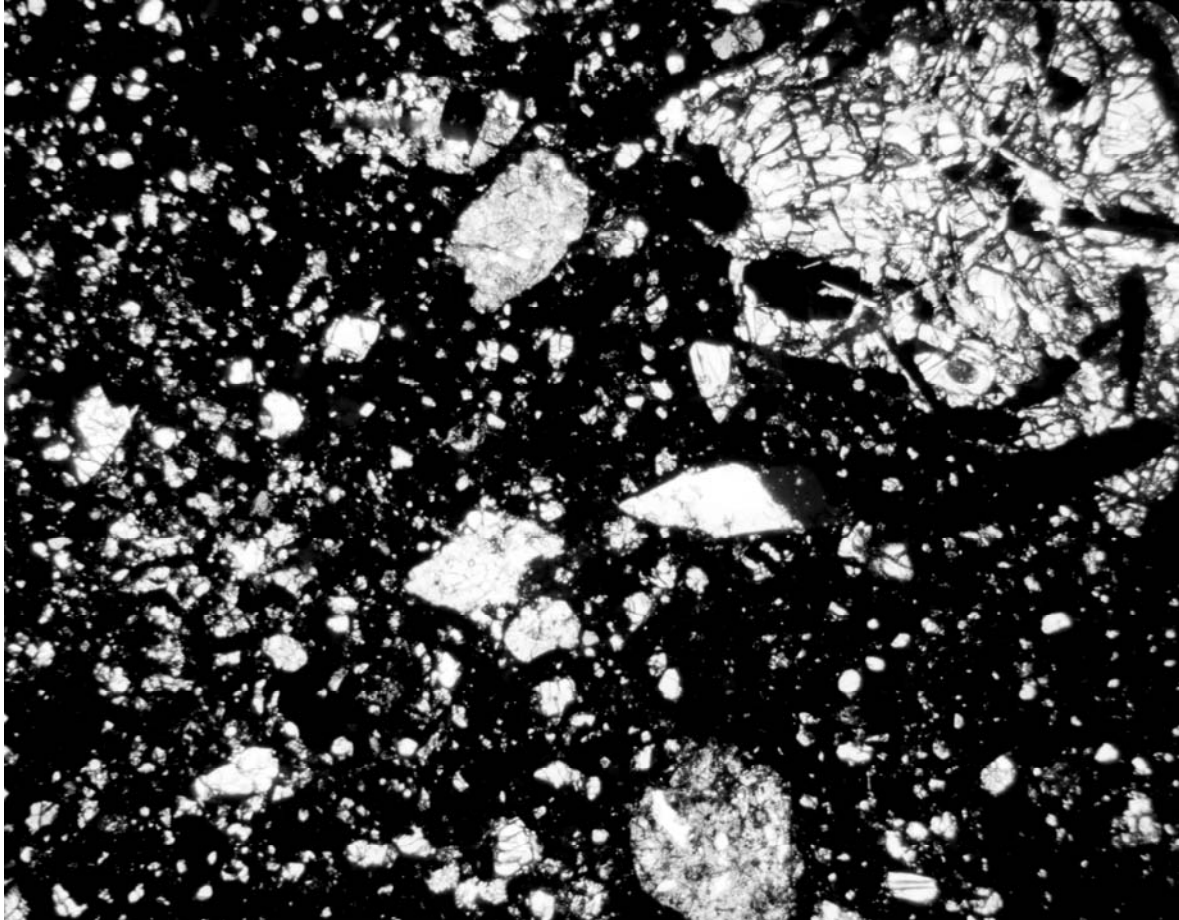


10023,0 Original PET Photo (S-69-45393)



10023,1 (S-75-31694)

SPECIAL FEATURE: Brown glassy spatter covers about 5% of surface area. Small amounts of green glass appear in isolated areas of fresh surface. Three types of white clasts occur: 1) pure white; 2) white with brown glass; and, 3) white with green glass. In all cases, the white component is granular to powdered.



SECTION: 10023,42 Width of Field: 2.72mm plane light S-76-26300

THIN SECTION DESCRIPTION BY: Walton DATE: 6/23/76

SUMMARY: Partly devitrified typical breccia with a low lithic clast content. Numeral mineral fragments are present, some of which are subhedral. Most of the lithic clasts present are large with only a few small clasts present.

Matrix 50% of Rock

<u>Phase</u>	<u>% Section</u>	<u>Shape</u>	<u>Size (mm)</u>	<u>Comments</u>
Dark Brown	100%	-----	< 0.001	High glass content with some devitrification.

Mineral Clasts 43% Rock

<u>Phase</u>	<u>Relative Abundance</u>	<u>Shape</u>	<u>Size (mm)</u>
Pyroxene ₁	Very abundant	Angular to irregular	0.001-0.3
Plagioclase ₂	Few	Blocky to irregular	0.001-0.2
Opaques ₃	Few	Skeletal to irregular	0.001-0.2

- 1) Most show poor extinction
- 2) Some good twins; mostly poor optical characteristics.
- 3) Very small crystals with a few large fragments.

Lithic Clasts 2% of Rock

<u>Type</u>	<u>Relative Abundance</u>	<u>Shape</u>	<u>Size (mm)</u>
Small	Very abundant	Rounded to irregular	0.001-1.0
Large ₄	Two present	Rounded to irregular	>1.0

- 4)
 - a. Fine-grained subophitic basalt composed of clinopyroxene, plagioclase, and ilmenite.
 - b. Coarse-grained intersertal basalt composed of clinopyroxene, plagioclase, ilmenite and mesostasis.
 - c. Fine-grained basalt composed of clinopyroxene, plagioclase, and ilmenite.
 - d. Fine-grained basalt composed of clinopyroxene, plagioclase, and ilmenite.
 - e. Fine-grained basalt composed of clinopyroxene, plagioclase, and ilmenite.
 - f. Coarse-grained basalt composed of clinopyroxene, plagioclase, and ilmenite.
 - g. Coarse-grained basalt composed of clinopyroxene, plagioclase, and ilmenite.
 - h. Coarse-grained basalt composed of clinopyroxene, plagioclase, and ilmenite.
 - i. Glass-rich matrix with small pyroxene dendrites.
 - j. Composed of small crystal fragments in a partly glassy matrix.

Glass Clasts 5% of Rock

<u>Type</u>	<u>Relative Abundance</u>	<u>Shape</u>	<u>Size(mm)</u>
Yellow-orange ₅	Very abundant	Spherical to irregular	0.001-0.5

- 5) Most fragments with only a few spherical masses.

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HISTORY AND PRESENT STATUS OF SAMPLES – 6/13/76

10023 was removed from the Contingency Sample Container and processed in the PCTL. Samples were re-examined in SSPL.

PRISTINE SAMPLES:

1	16.57 gm	Three large chips, small chips and fines. Two of the large chips are pitted. PCTL-SSPL
16	1.06 gm	Fines. PCTL-SSPL

RETURNED SAMPLES:

2	19.53 gm	Piece. Pitted on two surfaces.
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NO CHEMICAL ANALYSES OR AGE DATES