

10065

Sample 10065 is an irregular, medium dark grey, microbreccia. This sample originally weighed 347gm and measured 8.2x7.8x5.8cm. Sample was originally returned in ALSRC #1004 (Documented Sample Container).

BINOCULAR DESCRIPTION BY: Twedell DATE: 2/23/76

ROCKTYPE: Microbreccia SAMPLE: 10065,7 WEIGHT: 147 gm

COLOR: Medium dark grey DIMENSIONS: 6 x 6.5 x 5 cm

SHAPE: Irregular; rounded on upper side, flat on bottom (PET).

COHERENCE: Intergranular - coherent
Fracturing - few, non-penetrative

FABRIC/TEXTURE: Anisotropic/Microbreccia

VARIABILITY: Homogeneous

SURFACE: Smooth on exposed to rough on fresh surfaces. S₁ is a sawed surface.

ZAP PITS: Many on T₁, N₁ and E₁. None on W₁ or B₁. Pits are glass lined, ranging from <1-2mm.

CAVITIES: Absent

<u>COMPONENT</u>	<u>COLOR</u>	<u>%OF ROCK</u>	<u>SHAPE</u>	<u>SIZE(MM) DOM. RANGE</u>	
Matrix	Med.Dk.Grey	98	----	----	----
Grey&White Clast ₁		1	Angular	.2-.5	1.5-.2
White Clast ₂	White	<1	Angular-subrounded	.2-.3	<.1-.3
Grey Clast ₃	Dk.Grey	<1	Angular-subrounded	.3-.7	1-.2
Salt & Pepper Clast	Blk/White	<1	Subangular- subrounded	.1-.3	.1-.5
Basalt Clast	Brown, Blk/White	<1	Angular-subangular	.2	.1-.3

- 1) 50/50 distribution of dark and light component. Clast has ophitic texture.
- 2) Crushed plagioclase.
- 3) Fine grained equigranular, submetallic lustre.

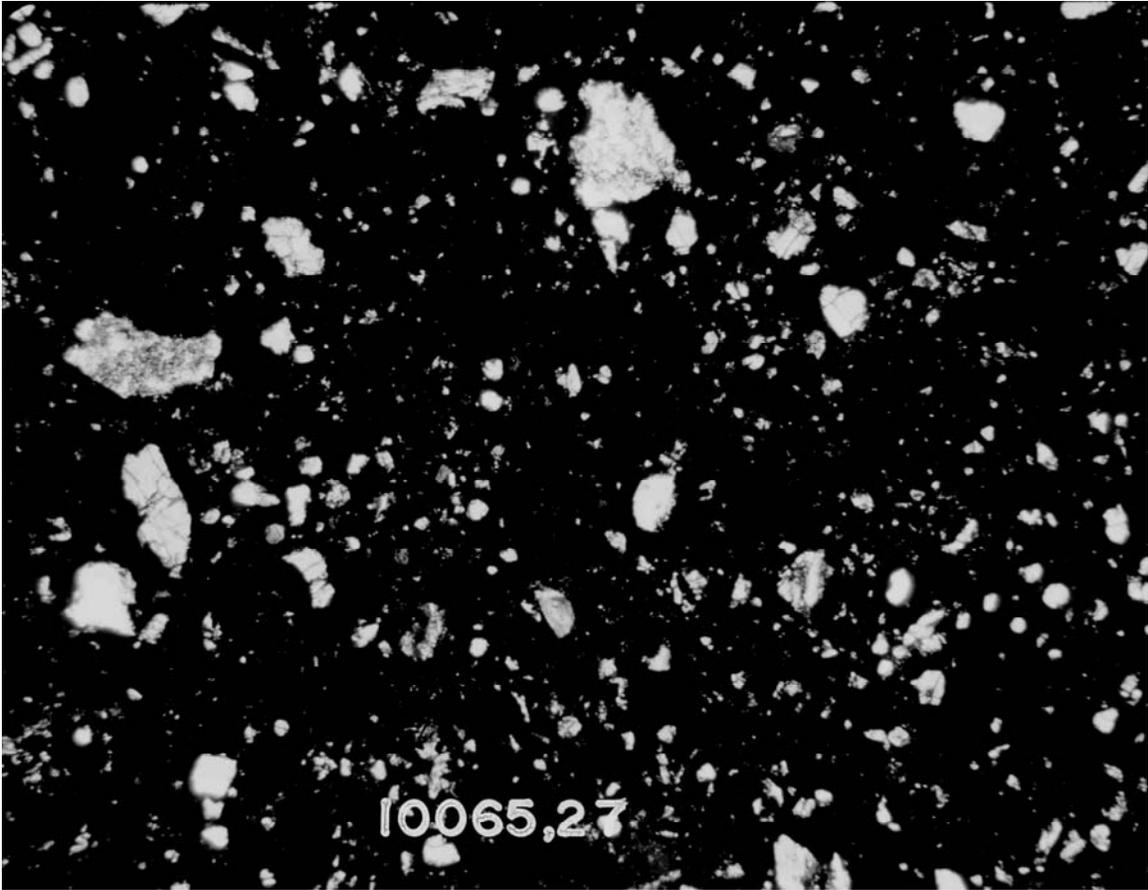


10065,0 Original PET Photo S-69-46623



10065,7

10065,7 S-76-22546



S-76-25834

SECTION: 10065,27

Width of field 2.72mm plane light

THIN SECTION DESCRIPTION

BY: Walton

DATE: 6/24/76

SECTION: 10065,21

SUMMARY: Relatively highly devitrified typical breccia with a high mineral clast content. Much of the matrix has undergone some degree of devitrification.

MATRIX 48% 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 numerous crystallites.

MINERAL CLASTS 36% OF 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	0.001-0.1
Opaques ₃	Few	Angular to irregular	0.001-0.3

- 1) Highly strained; highly fractured.
- 2) Poor twin planes; uneven extinctions.
- 3) Few in matrix, most in clasts.

LITHIC CLASTS 12% 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	Five present	Rounded to irregular	>1.0

- 4) a. Glass-rich matrix with small crystals of plagioclase and pyroxene.
b. Fine-grained glass-rich matrix with mineral fragments and rock fragments.
c. Coarse-grained basalt consisting of pyroxene, plagioclase and ilmenite.
d. Coarse-grained basalt consisting of pyroxene, plagioclase and ilmenite.
e. Random array of plagioclase crystals with small euhedral crystals of pyroxene/olivine.

GLASS CLASTS 4% OF ROCK

<u>TYPE</u>	<u>RELATIVE ABUNDANCE</u>	<u>SHAPE</u>	<u>SIZE (MM)</u>
Yellow-Orange ₅	Very abundant	Angular to spherical	0.001-0.8
Colorless ₆	Few	Angular to spherical	0.001-0.1

- 5) Mostly shards and broken spherical masses.
- 6) A few spheres, mostly angular.

Selected References: Dence et al. (1970)

HISTORY AND PRESENT STATUS OF SAMPLES - 6/24/76

10065 was removed from the Documented Sample container (ALSRC #1004) and split in the Vac Lab. It was later sawed in SPL. Remaining pristine samples were re-examined in SSPL. A large piece was sent to RCL and returned.

PRISTINE SAMPLES: (All VAC-SPL-SSPL)

7	147.188 gm	Piece. 6.5 x 6 x 5 cm. Pitted on three surfaces. Sawed on one surface. -RCL-
49	29.38 gm	Piece. One sawed surface. Others are pitted.
119	53.10 gm	Large chips and fines. Some chips have pitted surfaces.

RETURNED SAMPLES:

18	5.79 gm	Chip. One pitted surface.
30	7.08 gm	Piece. Six sawed surfaces.
39	13.64 gm	Three chips. All have sawed surfaces. All have one pitted surface.
43	7.83 gm	Five chips. All have sawed surfaces. Three have one pitted surface.

CHEMICAL ANALYSES

Element	Number of Analyses	Mean	Units	Range
SiO ₂	1	41.29	PCT	0
Al ₂ O ₃	1	12.47	PCT	0
TiO ₂	1	7.84	PCT	0
FeO	1	16.85	PCT	0
MnO	2	.224	PCT	.050
MgO	1	8.29	PCT	0
CaO	1	13.15	PCT	0
Na ₂ O	1	.485	PCT	0
K ₂ O	2	.173	PCT	.008
Li	1	12.00	PPM	0
Rb	3	3.41	PPM	.94
Be	1	2.2	PPM	0
Sr	3	157.83	PPM	0
Ba	3	226.67	PPM	60.0
Sc	2	65.8	PPM	6.4
V	2	70.5	PPM	27.0
Cr ₂ O ₃	2	.313	PCT	.073
Co	2	30.8	PPM	1.60

Element	Number of Analyses	Mean	Units	Range
Ni	1	169.0	PPM	0
Cu	1	14.0	PPM	0
Zn	1	23.0	PPM	0
Y	1	103.0	PPM	0
Zr	1	390.0	PPM	0
Nb	1	25.00	PPM	0
Ta	1	2.1	PPM	0
Hf	1	12.1	PPM	0
La	2	16.9	PPM	1.80
Ce	1	63.0	PPM	0
Sm	1	14.60	PPM	0
Eu	1	1.73	PPM	0
Tb	1	4.0	PPM	0
Ho	1	6.7	PPM	0
Yb	1	14.5	PPM	
Lu	1	2.01	PPM	0
U	1	.54	PPM	0
Ga	1	5.0	PPM	0
C	1	262.0	PPM	0
O	1	41.6	PCT	0

Analysts: Ehmann & Morgan, (1970); Goles et al., (1970); Annel & Helz, (1970); Murthy et al., (1970); Wanless et al., (1970); Epstein & Taylor (1970).

No Age References