

10075

Sample 10075 is a sub-angular, medium grey, fine breccia. This sample originally weighed 53 gm and measured 8 x 10 x 3.2 cm. It was originally returned in ALSRC #1004 (Documented Sample container).

BINOCULAR DESCRIPTION BY: Kramer DATE: 1/2/76
ROCK TYPE: Fine Breccia SAMPLE: 10075,3 WEIGHT:36.29gm
COLOR: Medium Grey DIMENSIONS: 5.5 x 3 x 3 cm
SHAPE: Sub-angular
COHERENCE: Intergranular - coherent
Fracturing - absent
FABRIC/TEXTURE: Anisotropic/Fine Breccia
VARIABILITY: Homogeneous

SURFACE: N₁ has two areas which are smoothed with striations. The areas look like slickensides. Other faces are hackly.

ZAP PITS: T₁, S₁ - many. N₁ - few. Others - none.

<u>COMPONENT</u>	<u>COLOR</u>	<u>%OF ROCK</u>	<u>SHAPE</u>	<u>SIZE(MM) DOM. RANGE</u>	
Matrix	Med.Grey	93	-----	----	----
Basalt Clast	Lt.Grey	2	Sub-rounded	2.0	.5-1.0
Grey Clast ₁	Med.Grey	1	Sub-rounded	1.0	.05-3.0
Salt & Pepper Clast	Blk/White	<1	Sub-rounded	1.0	.5-1.3
Mineral Clast	Dk. Brown & White	3	Angular to subrounded	0.5	<2
Lithic Clast ₂	Med.Grey	<1	Angular	2	----

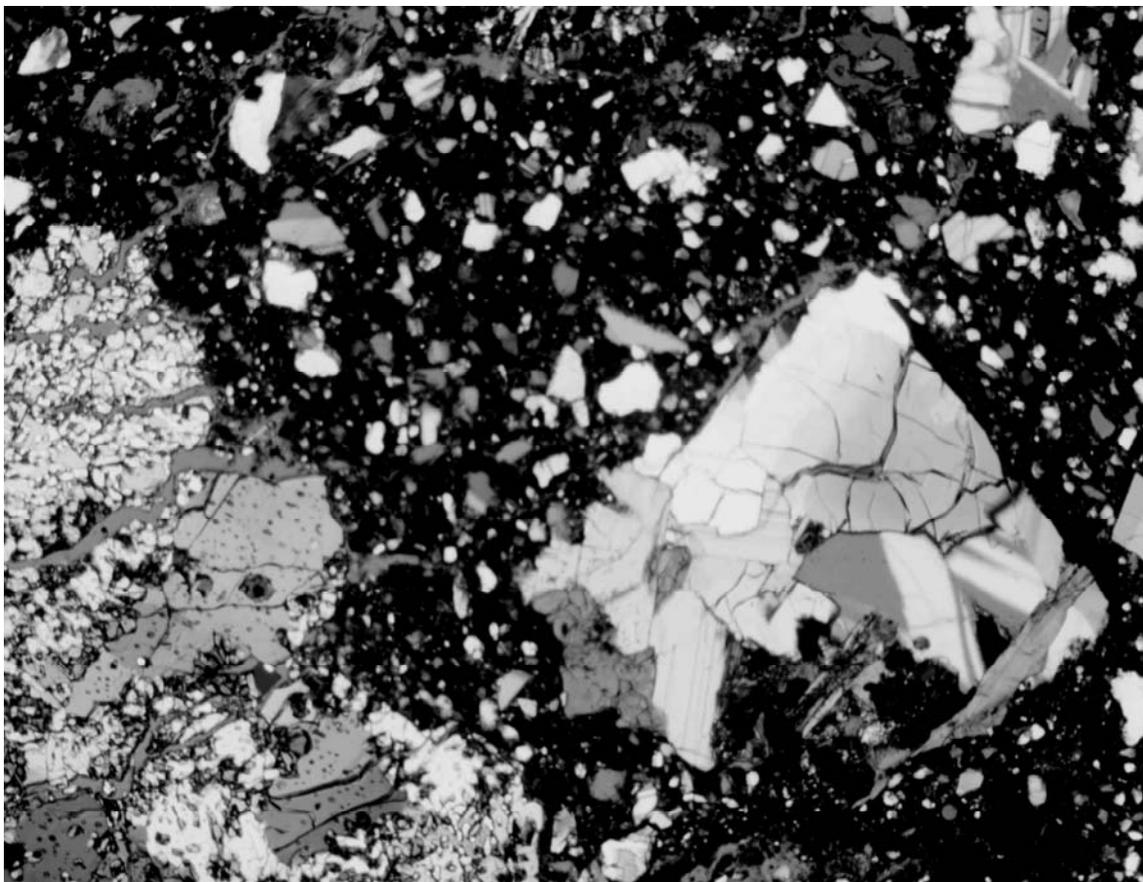
- 1) Lighter colored than matrix.
- 2) On E₁, there is a breccia clast (welded breccia).



10075,0 Original PET Photo S-69-47362



10075,3 S-76-20321



S-76-26280

SECTION: 10075,14

Width of field 1.39mm plane light

THIN SECTION DESCRIPTION

BY: Walton

DATE: 6/30/76

SUMMARY: Partly devitrified typical breccia with several interesting large lithic clasts. Most are poikilitic with either plagioclase or pyroxene as the host and pyroxene or olivine as the included crystals.

MATRIX 55% OF ROCK

<u>PHASE</u>	<u>%SECTION</u>	<u>SHAPE</u>	<u>SIZE(MM)</u>	<u>COMMENTS:</u>
Brown to pale brown	100	-----	<0.001	High glass content; translucent to nearly transparent

MINERAL CLASTS 21% 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	Moderate	Blocky to irregular	0.001-0.2
Opagues ₃	Few	Blocky to skeletal	0.001-0.1

- 1) Highly fractured; poor optical characteristics.
- 2) Many show no twin planes; some polygranular.
- 3) Most in matrix; few in clasts.

LITHIC CLASTS 19% 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	Four present	Rounded to irregular	>1.0

- 4) a, Very fine-grained black matrix hosting mineral and rock fragments. Matrix is opaque. Many small ilmenite crystals in matrix.
- b. Fine-grained yellow brown semi-translucent matrix hosting numerous mineral fragments.
- c. Large poikilitic pyroxene crystals hosting small olivine crystals.
- d. Crushed random array of plagioclase crystals hosting small irregular masses of pyroxene.

GLASS CLASTS 5% OF ROCK

<u>TYPE</u>	<u>RELATIVE ABUNDANCE</u>	<u>SHAPE</u>	<u>SIZE (MM)</u>
Yellow-Orange	Very abundant	Spherical to irregular	0.001-0.2
Colorless ₆	Abundant	Angular	0.001-0.3

- 5) Almost all spheres or part spheres; few shards.
- 6) All angular shards some large; no spheres present; some devitrification.

HISTORY AND PRESENT STATUS OF SAMPLES - 6/30/76

10075 was removed from the Documented Sample container (ALSRC #1004) and split in the Vac Lab. Remaining pristine samples were re-examined in SSPL.

PRISTINE SAMPLES:

3	36.29 gm	Parent breccia. For description see F-8.
11	0.12 gm	Small representative chip sent for thin section.

RETURNED SAMPLES

None

CHEMICAL ANALYSES

Element	Number of Analyses	Mean	Units	Range
SiO ₂	1	42.36	PCT	0
Al ₂ O ₃	2	14.64	PCT	1.32
TiO ₂	1	7.51	PCT	0
FeO	1	15.57	PCT	0
MnO	1	.200	PCT	0
MgO	1	7.79	PCT	0
CaO	1	11.89	PCT	0
Na ₂ O	1	.452	PCT	0
Ba	1	430.0	PPM	0
Sc	1	56.8	PPM	0
V	1	85.0	PPM	0
Co	1	28.7	PPM	0
Cu	1	10.0	PPM	0
Zr	1	390.0	PPM	0
Ta	1	1.4	PPM	0
Hf	1	8.8	PPM	0
La	1	14.9	PPM	0
Ce	2	48.25	PPM	3.50
Sm	1	11.5	PPM	0
Eu	1	1.62	PPM	0
Tb	1	3.1	PPM	0
Ho	1	5.4	PPM	0
Yb	1	11.2	PPM	0
Lu	1	1.89	PPM	0
U	1	.52	PPM	0
O	1	40.40	PCT	0

Analysts: Ehmman & Morgan, (1970); Goles et ai., (1970).

No Age References