

# 10074

Sample 10074 is an angular, medium dark grey microbreccia. This sample originally weighed 56 gm. and measured 8.2 x 4.6 x 3.8cm. The sample was originally returned in ALSRC # 1004 (Documented Sample container).

BINOCULAR DESCRIPTION BY: Twedell DATE: 12/24/75

ROCK TYPE: Microbreccia SAMPLE: 10074,1 WEIGHT: 55 gm

COLOR: Mediumdark grey DIMENSIONS: 6 x 4 x 3 cm.

SHAPE: Angular

COHERENCE: Intergranular - Coherent  
Fracturing - Few penetrative, few non-penetrative

FABRIC/TEXTURE: Anisotropic/Microbreccia

VARIABILITY: Homogeneous

SURFACE: Smooth on B<sub>1</sub> to hackly on W<sub>1</sub>-N<sub>1</sub>. Some glass coating on T<sub>1</sub> face.

ZAP PITS: None apparent on any face.

CAVITIES: Absent

% OF SIZE(MM)

<u>COMPONENT</u>	<u>COLOR</u>	<u>ROCK</u>	<u>SHAPE</u>	<u>DOM.</u>	<u>RANGE</u>
Matrix	Med.Dark Grey	96	- - -	----	----
Brown Clast	Lt.Brown	2	Angular to sub angular	0.6	<0.1-1.0
White Clast	White	1	Subangular to subrounded	1.0	<0.1-2.5
Grey & White Clast	Dk. Grey & White	1	Subangular to subrounded	<1.0	<0.1-1.0

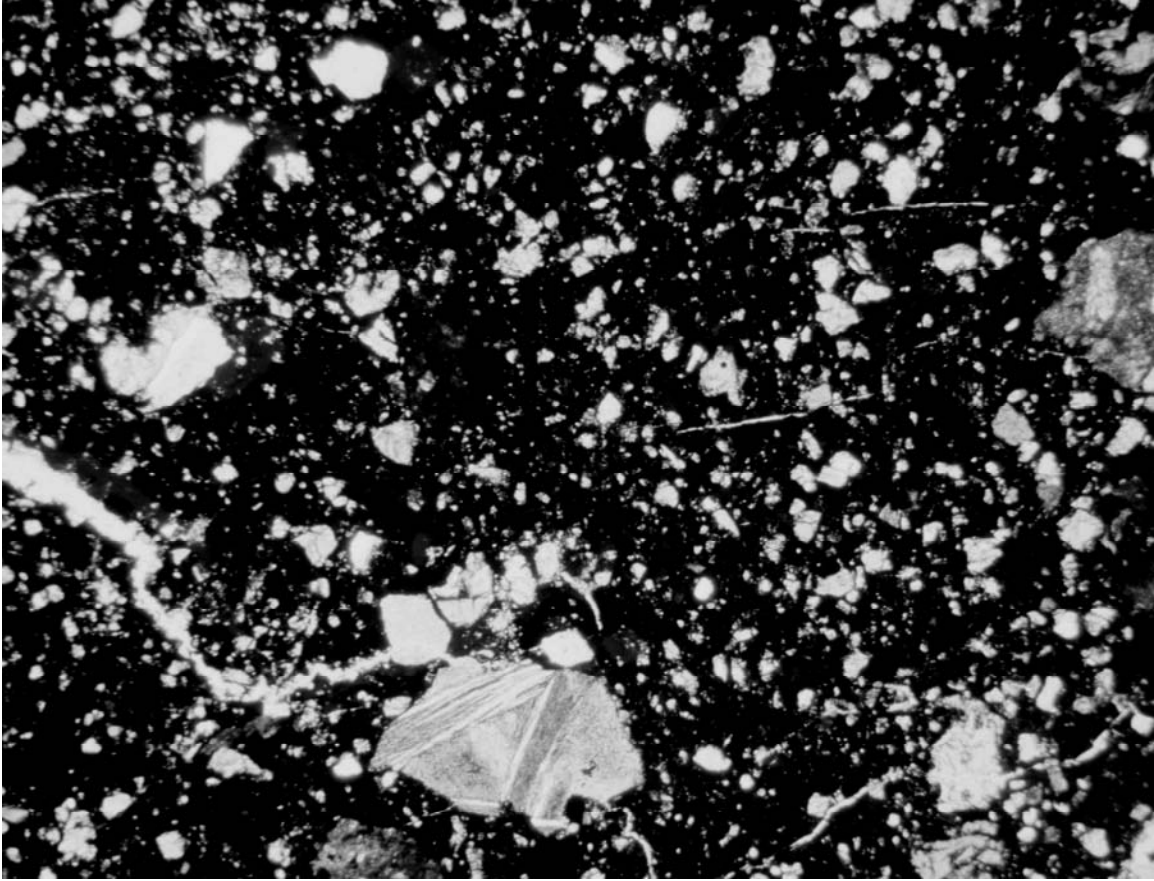
Special Features: This sample has an unusual amount of honey brown mineral clasts which are very few or non-existent in other samples; There are 4 or 5 fractures that are filled with a vesicular black glass. The glass texture is like black scoria. The filled fractures have more than one orientation. The glass filling is 3-5mm thick. (PET).



10074,0 Original PET Photo S-69-47372



10074,1 S-76-20395



SECTION: 10074,7

Width of field 2.72 mm plane light S-76-26317

THIN SECTION DESCRIPTION

BY: Walton DATE: 6/30/76

SECTION: 10074,7

SUMMARY: Partly devitrified typical breccia with a relatively low lithic clast content. All the lithic clasts present are relatively small with no large clasts.

MATRIX 61% OF ROCK

<u>PHASE</u>	<u>% OF SECTION</u>	<u>SHAPE</u>	<u>SIZE (MM)</u>	<u>COMMENTS:</u>
Dark Brown	100	- -	< 0.001	High glass content; very turbid full of small crystallites.

MINERAL CLASTS 33% OF ROCK

<u>PHASE</u>	<u>RELATIVE ABUNDANCE</u>	<u>SHAPE</u>	<u>SIZE (MM)</u>
Pyroxene <sub>1</sub>	Very abundant	Angular to irregular	0.001-0.6
Plagioclase <sub>2</sub>	Few	Blocky to irregular	0.001-0.1
Opaques <sub>3</sub>	Few	Blocky to irregular	0.001-0.3

- 1) Poor optical characteristics.
- 2) Widely scattered; poor optics.
- 3) Large, blocky in matrix; dendritic in clasts.

LITHIC CLASTS 3% 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	None		<1.0

GLASS CLASTS 3% OF ROCK

<u>TYPE</u>	<u>RELATIVE ABUNDANCE</u>	<u>SHAPE</u>	<u>SIZE (MM)</u>
Yellow-Orange <sub>4</sub>	Very abundant	Angular to spherical	0.001-0.4
Colorless	Moderate	Angular to spherical	0.001-0.5

- 4) Most angular shards; many irregular masses.
- 5) Some spheres, most shards, many blocky.

HISTORY AND PRESENT STATUS OF SAMPLES 6/30/76

10074 was removed from the Documented Sample container (ALSRC # 1004) in the Vac Lab. It was used in the magnetic experiment. It was then split in SPL. Remaining pristine subsamples were re-examined in SSPL.

PRISTINE SAMPLES: (VAC-SPL-SSPL)

1	55.01 gm	Parent rock.
4	0.54 gm	One small chip. No pits.

NO RETURNED SAMPLES

CHEMICAL ANALYSES

<u>Element</u>	<u>Number of Analyses</u>	<u>Mean</u>	<u>Units</u>	<u>Range</u>
SiO <sub>2</sub>	1	41.29	PCT	0
Al <sub>2</sub> O <sub>3</sub>	2	14.36	PCT	2.26
TiO <sub>2</sub>	1	7.84	PCT	0
FeO	1	15.31	PCT	0
MnO	1	.183	PCT	0
MgO	1	6.80	PCT	0
CaO	1	13.01	PCT	0
Na <sub>2</sub> O	1	.506	PCT	0
Ba	1	280.0	PPM	0
Sc	1	53.7	PPM	0
V	1	78.0	PPM	0
Co	1	30.90	PPM	0
Cu	1	10.00	PPM	0
Zr	1	500.0	PPM	0
Ta	1	1.0	PPM	0
Hf	1	11.9	PPM	0
La	1	13.8	PPM	0
Ce	2	50.75	PPM	8.5
Sm	1	11.50	PPM	0
Eu	1	1.73	PPM	0
Tb	1	2.80	PPM	0
Ho	1	5.0	PPM	0
Yb	1	12.0	PPM	0
Lu	1	1.7	PPM	0
U	1	.49	PPM	0
0	1	42.10	PCT	0

Analysts: Ehmann & Morgan, (1970); Goles et al., (1970); Gast et al., (1970).  
No Age References