10066

Sample 10066 is a rounded, dark grey, fine breccia. This sample originally weighed 40gm and measured 5.5x4.2x3.0cm. It was originally returned in ALSRC #1004 (Documented Sample Container).

BINOCULAR DESCRIPTION BY: Twedell DATE: 9/3/75

ROCK TYPE: Fine breccia SAMPLE: 10066,1 WEIGHT: 37.34 gm

COLOR: Dark grey DIMENSIONS: 4.2 x 4 x 2.9 cm (measured at maximum)

SHAPE: Rounded

COHERENCE: Intergranular - moderately friable
Fracturing - absent; some small fractures nearly parallel to surface - spalling (PET)

FABRIC/TEXTURE: Anisotropic/Fine breccia

VARIABILITY: Homogeneous

SURFACE: Smooth

ZAP PITS: T_1-few. None apparent on any other surfaces. Pits could easily have been eroded due to moderate friability of sample.

CAVITIES: Absent

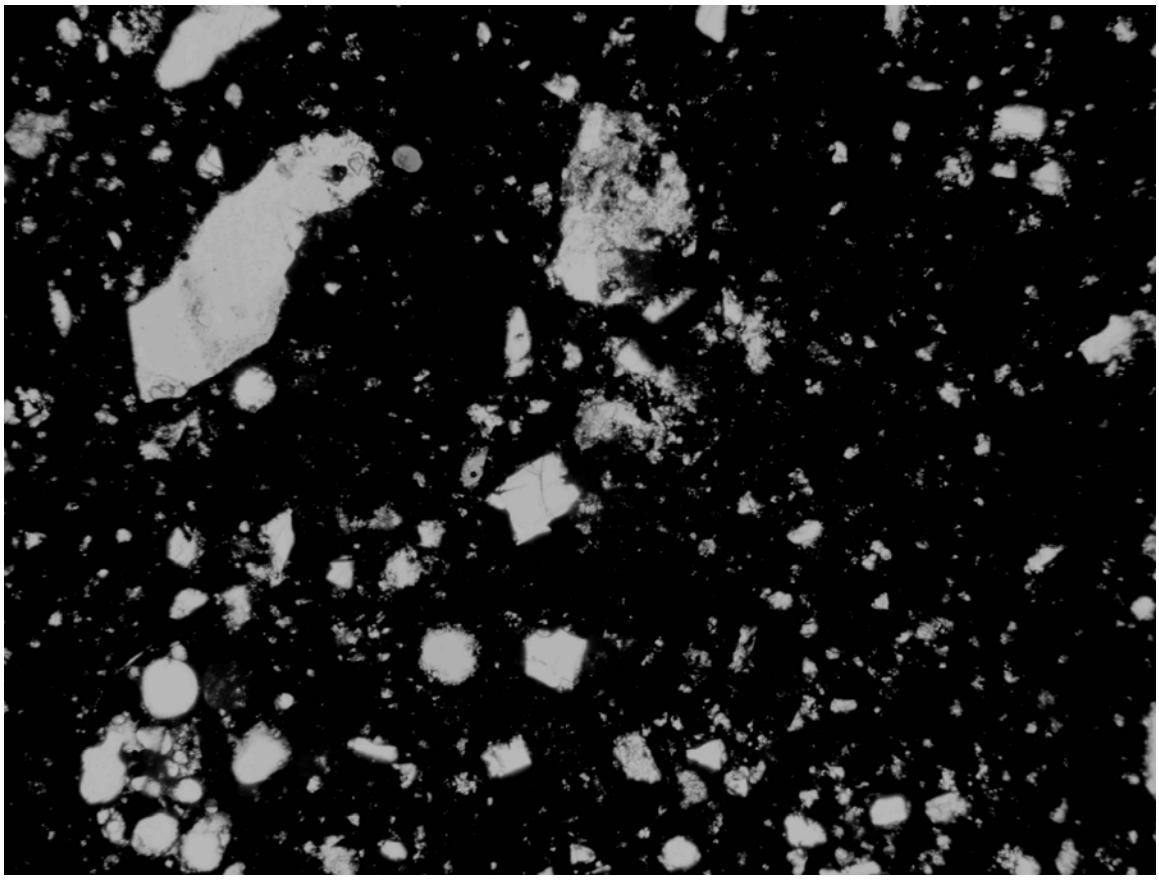
COMPONENT	COLOR	%OF ROCK	SHAPE	SIZE(MM) DOM.	RANGE
Matrix	Dark Grey	97	----	----	----
Basalt Clast	Hon.Brown Black/White	1	Rounded	1	.1-1
Grey Clast$_1$	Light Grey	1	Rounded to sub-angular	1	<3
White Clast$_2$	White	1	Rounded	.8	<1

1) Plagioclase is shocked.
2) Crushed anorthositic clast.

SPECIAL FEATURES: There are areas on the sample which appear to have glassy spatter. The surface seems to also have approximately 1% coverage of opaques.

10066,0 Original PET Photo S-69-46632

10066,1 S-75-31112



S-76-26289

SECTION: 10066,20 Width of field 1.39mm plane light

THIN SECTION DESCRIPTION BY: Walton DATE: 6/25/76

SUMMARY: Partly devitrified typical breccia with numerous types of glass clasts. Description made on five small chips.

MATRIX 64% OF ROCK

PHASE	%SECTION	SHAPE	SIZE(MM)	COMMENTS:
Dark Brown	100	-----	<0.001	High glass content with some crystallites

MINERAL CLASTS 14% OF ROCK

PHASE	RELATIVE ABUNDANCE	SHAPE	SIZE (MM)
Pyroxene[1]	Very abundant	Angular to irregular	0.001-0.1
Plagioclase[2]	Present	Blocky to irregular	0.001-0.1
Opaques[3]	Few	Subhedral to irregular	0.001-0.2

1) Highly strained crystals; Highly fractured.
2) Poor extinctions and twinning.
3) Very small fragments in matrix; larger in clasts.

LITHIC CLASTS 16% OF ROCK

TYPE	RELATIVE ABUNDANCE	SHAPE	SIZE (MM)
Small	Very abundant	Rounded to irregular	0.001-1.0
Large[4]	One present	Irregular	>1.0

1) Pinkish pyroxene with ilmenite; high mesostasis and little to no plagioclase visible.

GLASS CLASTS 6% OF ROCK

TYPE	RELATIVE ABUNDANCE	SHAPE	SIZE (MM)
Yellow-Orange[5]	Very abundant	Irregular to spherical	0.001-0.4
Dark Brown[6]	Present	Spherical	0.3
White[7]	Present	Irregular	0.1

5) Mostly shards with some part spheres and a few spheres; many with bubbles and partly devitrified.
6) One sphere has small (0.05mm) clear glass spheres; immiscible glasses with some pyroxene inclusions.
7) One irregular mass has flow lines and bubbles with some pyroxene inclusions.

HISTORY AND PRESENT STATUS OF SAMPLES - 6/25/76

10066 was removed from the Documented Sample container (ALSRC #1004) in the Vac Lab. It was later split in SPL. Remaining pristine samples were re-examined and split in SSPL.

PRISTINE SAMPLES:

1	37.0 gm	Piece. Pits on T_1 (few).

NO RETURNED SAMPLES

CHEMICAL ANALYSES 10066

Element	Number of Analyses	Mean	Units	Range
SiO_2	1	43.21	PCT	0
Al_2O_3	2	13.51	PCT	0
TiO_2	1	8.17	PCT	0
FeO	1	16.47	PCT	0
MnO	1	.205	PCT	0
MgO	2	7.96	PCT	.663
CaO	1	12.03	PCT	0
Na_20	1	.461	PCT	0
Sc	1	60.3	PPM	0
V	1	59.0	PPM	0
Co	1	33.8	PPM	0
Ta	1	2.1	PPM	0
Hf	1	10.6	PPM	0
La	1	17.4	PPM	0
Ce	1	62.0	PPM	0
Sm	1	15.1	PPM	0
Eu	1	1.7	PPM	0
Tb	1	2.8	PPM	0
Ho	1	6.5	PPM	0
Yb	1	11.8	PPM	0
Lu	1	1.9	PPM	0
U	1	.56	PPM	0
0	1	41.0	PCT	0

Analysts: Ehmann & Morgan (1970); Goles et al., (1970).

No Age References