

## 10092

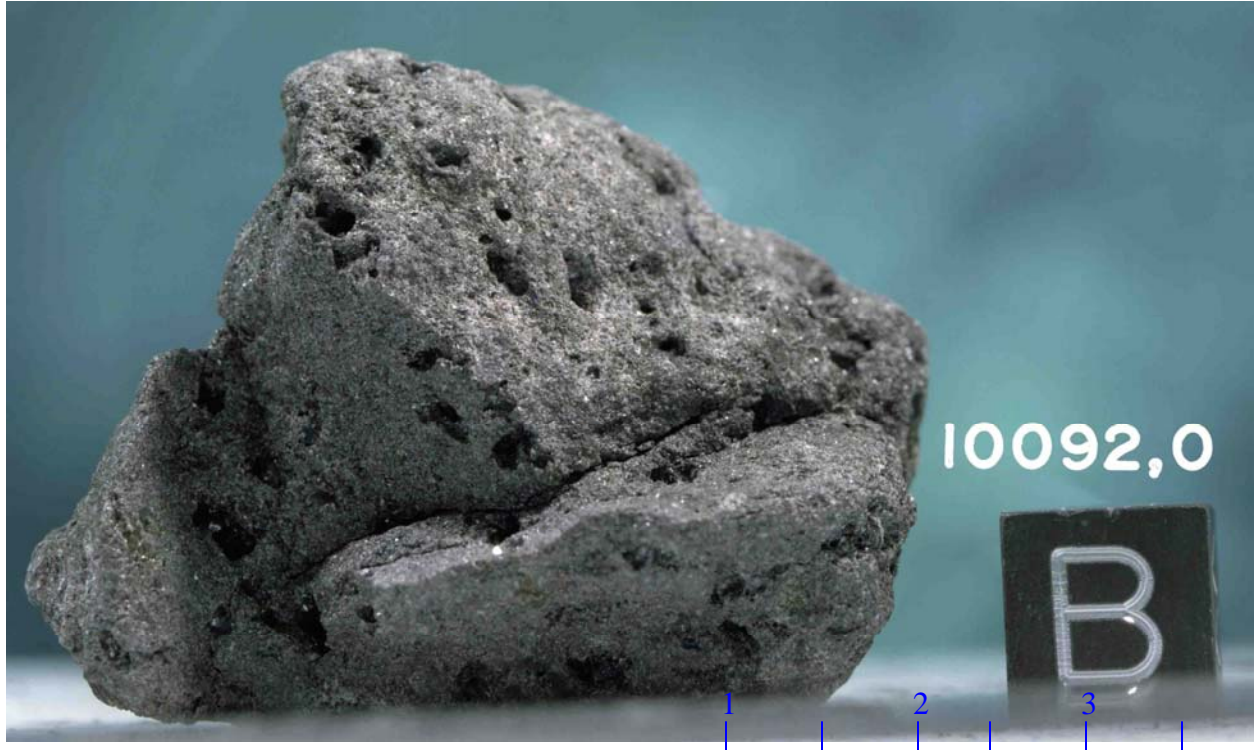
Sample 10092 is an angular, medium light grey, olivine basalt. This sample originally was numbered 10002,22, but due to its size was given a new generic number during re-examination in SSPL. The sample was returned in ALSRC #1003 (Bulk Sample container).

BINOCULAR DESCRIPTION BY: Twedell DATE: 6/2/76  
ROCK TYPE: Olivine Basalt SAMPLE: 10092,0 WEIGHT: 46 gm  
COLOR: Medium light grey DIMENSIONS: 3 x 4.2 x 2.6 cm  
SHAPE: Angular  
COHERENCE: Intergranular - Tough  
Fracturing - Few, non-penetrative, one penetrative  
FABRIC/TEXTURE: Isotropic/Equigranular  
VARIABILITY: Homogeneous  
SURFACE: Surface is irregular and well coated with patina. One fresh surface on B<sub>1</sub> face.

ZAP PITS: Many on T<sub>1</sub>, N<sub>1</sub>. Few on B<sub>1</sub>. None on any other. Pits are glass lined, up to .8mm in diameter.

<u>COMPONENT</u>	<u>COLOR</u>	<u>%OF ROCK</u>	<u>SHAPE</u>	<u>SIZE(MM) DOM. RANGE</u>	
Olivine <sub>1</sub>	Green	3	Euhedral	.09	<.08-.2
Pyroxene <sub>2</sub>	Honey Brown to Dark	45	Euhedral	.1	<.05-.3
Plagioclase <sub>3</sub>	White	40	Euhedral to aphanitic	.1	<.01-.2
Ilmenite	Black	8	Platy	.09	<.1-.1
Mesostasis	Black	4	-----	<.08	<.1

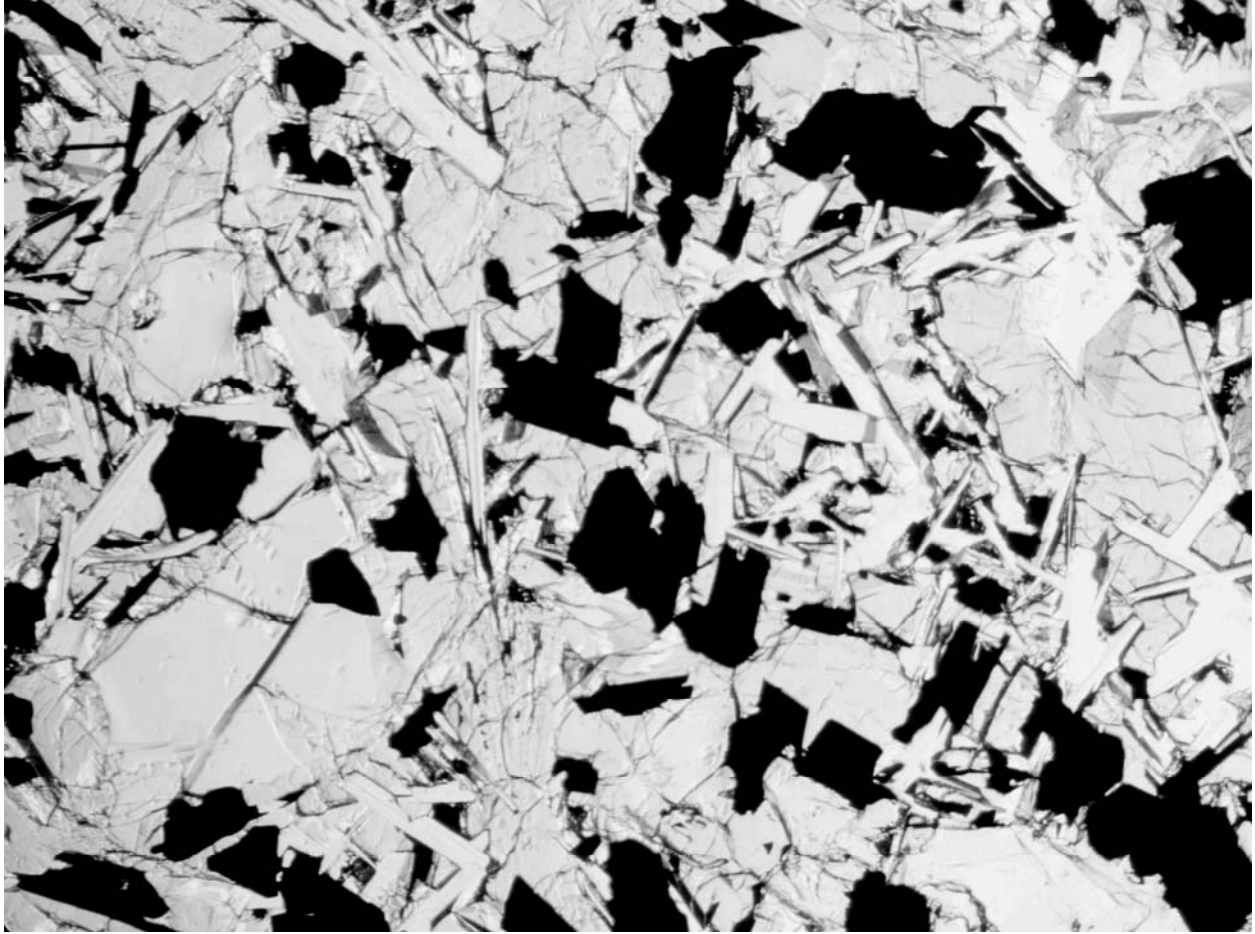
- 1) Appears in small groups throughout sample.
- 2) Well defined crystals.
- 3) Ranges in texture from crystalline to crushed.



10092,0

10092,0 (S-76-25872)

CM



SECTION: 10092,5 Width of field 1.39mm plane light S-76-28123

**SUMMARY:** Fine-grained subophitic basalt composed of clinopyroxene, two generations of plagioclase, and ilmenite with subordinate olivine and mesostasis. Large anhedral crystals of clinopyroxene host the other phases present.

<u>PHASE</u>	<u>% SECTION</u>	<u>SHAPE</u>	<u>SIZE(MM)</u>
Pyrox	48	Anhedral to irregular	0.01-0.9
Plag	29	Euhedral to anhedral	0.01-0.4
O1	5	Anhedral	0.2-0.8
Opaq	15	Subhedral to skeletal	0.01-0.4
Meso	3	-----	0.001-0.1

**COMMENTS:**

**Pyroxene** - The clinopyroxene forms large anhedral pinkish tan masses which host the other phases present. The extinctions, for the most part, are uneven and zoning is present. Only a few show any cleavage traces. An unidentified brown mineral was present. It occurred as isolated grains and near ilmenite crystals. No cleavage was seen and it was nonisotropic.

**Plagioclase** - Two generations of plagioclase occur in the rock. The first type consists of euhedral tablets which appear in the sections as equant acicular crystals. The crystals show well developed twin planes and extinctions are sharp.

The second type of plagioclase crystals represented in the rock forms interstitial masses between the pyroxene-plagioclase-ilmenite network. The masses are larger than the euhedral crystals and show poor twin planes and extinctions are uneven. This later formed plagioclase is most often associated with the mesostasis that occurs in the rock. The mesostasis is light brown in color and very turbid.

**Olivine** - Large to small masses of olivine grading to pyroxene occur in the section. A well developed fracture pattern, color difference and indices easily distinguish it from the adjacent pyroxene. The masses are more or less concentrated in one part of the section and are not uniformly distributed.

**Opaques** - The most common opaque mineral present in the rock is ilmenite. The crystals form subhedral to skeletal masses scattered throughout the rock. Most of the crystals show rutile exsolution.

Small masses of troilite and troilite with iron-nickel inclusions are also present. These form only a very small percentage of the total opaques present.

**TEXTURE:** Subophitic fine-grained basalt consisting of pyroxene, two generations of plagioclase, ilmenite, olivine and mesostasis. Only moderate shock effects are evident. Contacts are all sharp and the only interaction is the olivine to pyroxene gradation.

HISTORY AND PRESENT STATUS OF SAMPLES - 7/15/76

10092 was split from 10002 (Bulk Sample generic) during re-examination in SSPL. Allocations were made for chemical analyses and thin sections.

PRISTINE SAMPLES: (VAC-SSPL)

0	28.63 gm	Rock. Three pitted surfaces. One fresh surface.
1	16.32 gm	Piece. Two pitted surfaces.

NO RETURNED SAMPLES.