

## 10029

Sample 10029 is a subangular, medium grey, medium-grained basalt. This sample originally weighed 5gm, and measured 1.5 X 1.5 X 1 cm. Sample was originally returned in the Contingency Sample Container.

BINOCULAR DESCRIPTION BY: Geeslin/Kramer/Walton DATE: 6-10-76

ROCK TYPE: Med. Grained Basalt SAMPLE: 10029,13 WEIGHT: 3.375 gm

COLOR: Medium grey DIMENSIONS: 1.0 x 1.0 x 0.5 cm

SHAPE: Laboratory shaped into hemi-ellipsoid (one sawed face).

COHERENCE: Intergranular – coherent  
Fracturing – None

FABRIC/TEXTURE: Isotropic/Equigranular

VARIABILITY: Homogeneous

SURFACE: All surfaces fairly smooth.

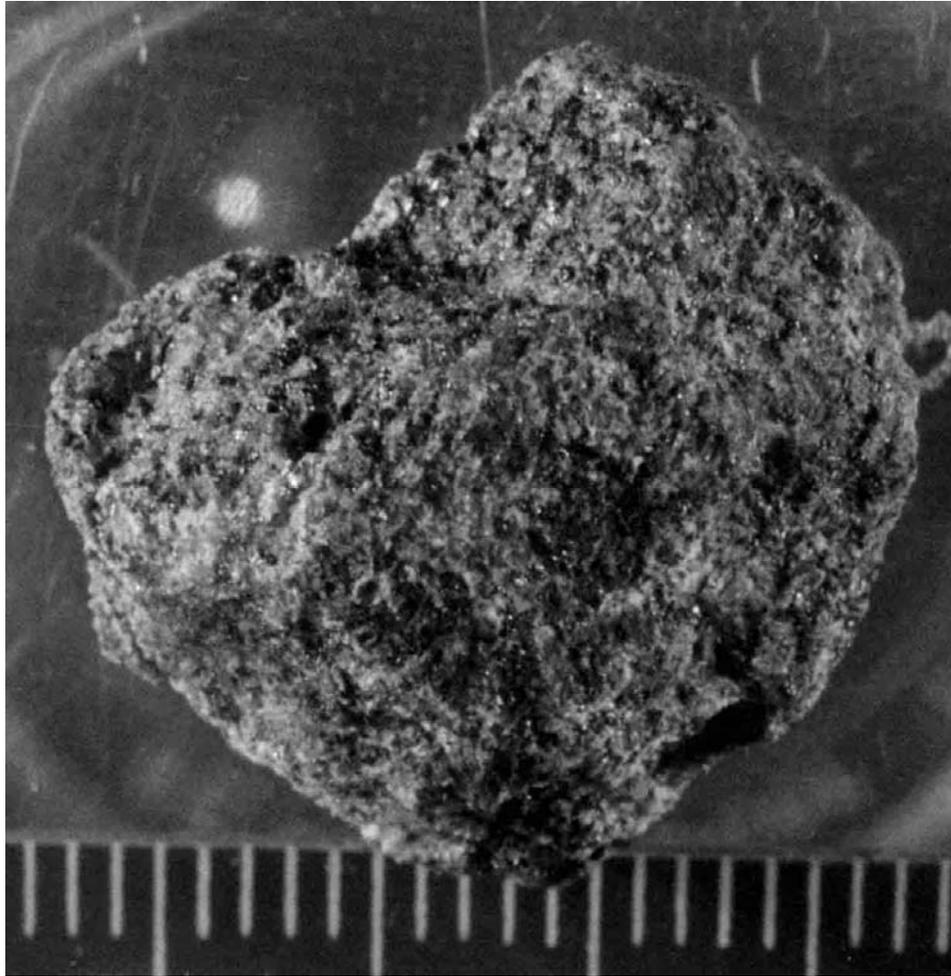
ZAP PITS: Few on N face

CAVITIES: Vugs on W<sub>1</sub> and T<sub>1</sub> face. Total surface area covered by vugs in 0.5%.  
Vugs average 1mm radius and contain euhedral white and brown crystals.

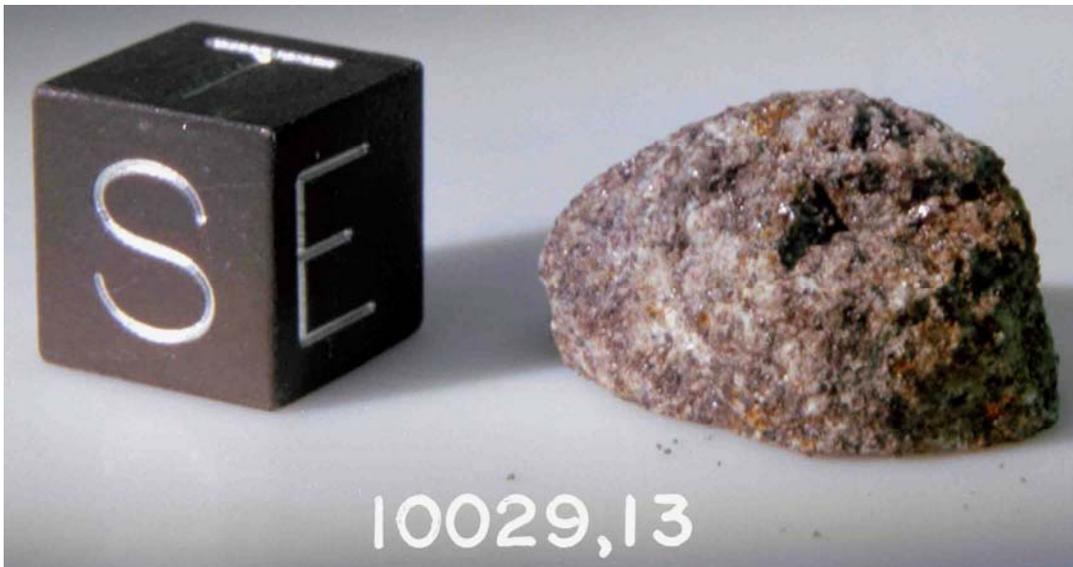
COMPONENT	COLOR	% OF ROCK	SHAPE	SIZE (MM)	
				DOM.	RANGE
Plagioclase	White to grey	30	Sugary to tabular	.33	.05-.8
Ilmenite	Sub-metallic	15	Subhedral blocky	.8	.1-2
Pyroxene	Orange- Yellow	4	Granulated	.5	.1-.1
Pyroxene	Brown	49	Subhedral blocky	.3	.05-.5
Olivine	Lt. Green	<1	Rounded	0.5	0.5
Orange	Rust	2	Non-crystalline	1	0.5-1

### SPECIAL FEATURES:

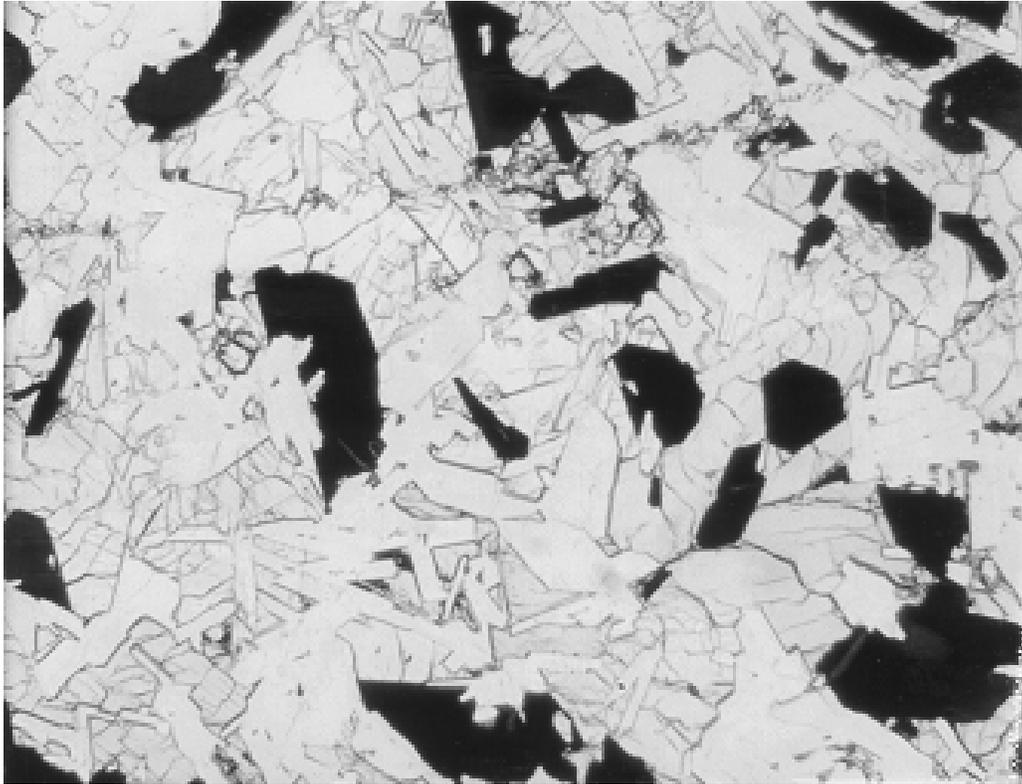
Orange blotches that look like rust. Probably oxidation degradation of the sample.



10029,0 Original PET Photo S-69-45748



10029,13 S-75-33060



SECTION: 10029,17

Width of Field: 2.19 mm plane light

THIN SECTION DESCRIPTION

BY: Walton

DATE: 6/10/76

SUMMARY: Fine-grained subophitic basalt composed of clinopyroxene, two generations of plagioclase, ilmenite with subordinate mesostasis. Large anhedral crystals of clinopyroxene host the smaller somewhat grouped plagioclase crystals and scattered subhedral to skeletal ilmenite crystals. Many cracks exist in the section which are filled with partly devitrified glass.

<u>Phase</u>	<u>% Section</u>	<u>Shape</u>	<u>Size (mm)</u>
Pyrox	53	Anhedral, irregular	0.3-1.8
Plag	32	Euhedral to anhedral	0.01-0.9
Opaq	14	Subhedral to skeletal	0.01-0.8
Meso	1	Irregular	-----

COMMENTS:

Pyroxene – The clinopyroxene forms large anhedral interlocking crystals which host the other phases present. Many of the crystals show zoning and some exsolution. A few crystals contain small cores of olivine. Approximately one-third of the crystals in the section show only a weak cleavage of fracture pattern. A few of the crystals are twinned. Almost all of the crystals show uneven extinctions.

Plagioclase – Two generations of plagioclase occur in the rock. The first type consists of small euhedral tablets which appear in the sections as well defined rectangular crystal sections. These tablets are somewhat grouped and form distinct units within the pyroxene array. The twinning is well pronounced and the interfaces sharp. The second type consists of larger anhedral masses that form interstitial void fillings in the pyroxene array. These crystals show poor twinning and extinctions are uneven. This type of plagioclase is most often associated with the mesostasis present in the rock. The mesostasis is light brown in color. Several cracks in the rock are also filled with the glass-rich mesostasis.

Opaques – The ilmenite present in the rock forms small subhedral crystals which are somewhat skeletal grading to larger poikilitic skeletal crystals. Many of the crystals contain silicate inclusions, mostly pyroxene. The ilmenite, euhedral tablets of plagioclase and the clinopyroxene form the basic structure array of the rock. Small masses of troilite and troilite of iron-nickel are also present in the section. These masses form interstitial masses between silicate grains. Some of the troilite is associated with ilmenite, but most is isolated in the pyroxene rich ground mass.

TEXTURE: Fine-grained subophitic basalt consisting of pyroxene, two generations of plagioclase, ilmenite and minor mesostasis. The pyroxene-euhedral plagioclase-ilmenite form the host array with the anhedral plagioclase and mesostasis filling the void areas in the array. All phases are in sharp contact with all other phases.

#### HISTORY AND PRESENT STATUS OF SAMPLES – 10/25/75

10029 was removed from the Contingency Sample Container and processed in PCTL. The largest chip was later split and re-examined in RSPL.

PRISTINE SAMPLES - None

#### RETURNED SAMPLES:

13                    2.87 gm            Chip with few pits on one surface. PCTL-SSPL

NO CHEMICAL ANALYSES OR AGE DATES PUBLISHED