

14072

Sample 14072 was collected at Station C', about 1.28 km ENE of LM and 100 m SE of Cone Crater. The area is locally flat but generally slopes slightly to the south. The area is strewn with debris which ranges from the limit of resolution up to 75 cm. The debris is mainly angular to subrounded. The entire area of photo documentation is too disturbed to see any intact craters.

The sample was returned in documented bag 10N in ALSRC1006.

PHYSICAL CHARACTERISTICS

Mass	Dimensions
45.06 gm	4.1 x 3.4 x 2.1 cm

The sample is a medium light gray basalt and is somewhat smooth in appearance. The shape is blocky to subrounded and the rock is extremely coherent.

SURFACE FEATURES

No zap pits are observed on any of the surfaces. There are small (3 to 11 mm) flattened elliptical vugs that appear in zones. One planar fracture transects the rock at 30° to the long axis.

PETROGRAPHIC DESCRIPTION

14072 is a fine to medium grained, basalt that has a uniform textural. The sample is blocky to subrounded with a relatively smooth surface. The rock consists of light yellow-green olivine, light brown pyroxene, clear plagioclase and small amounts of opaques. Abundant phenocrysts (up to 1.5 mm) occur in the rock.

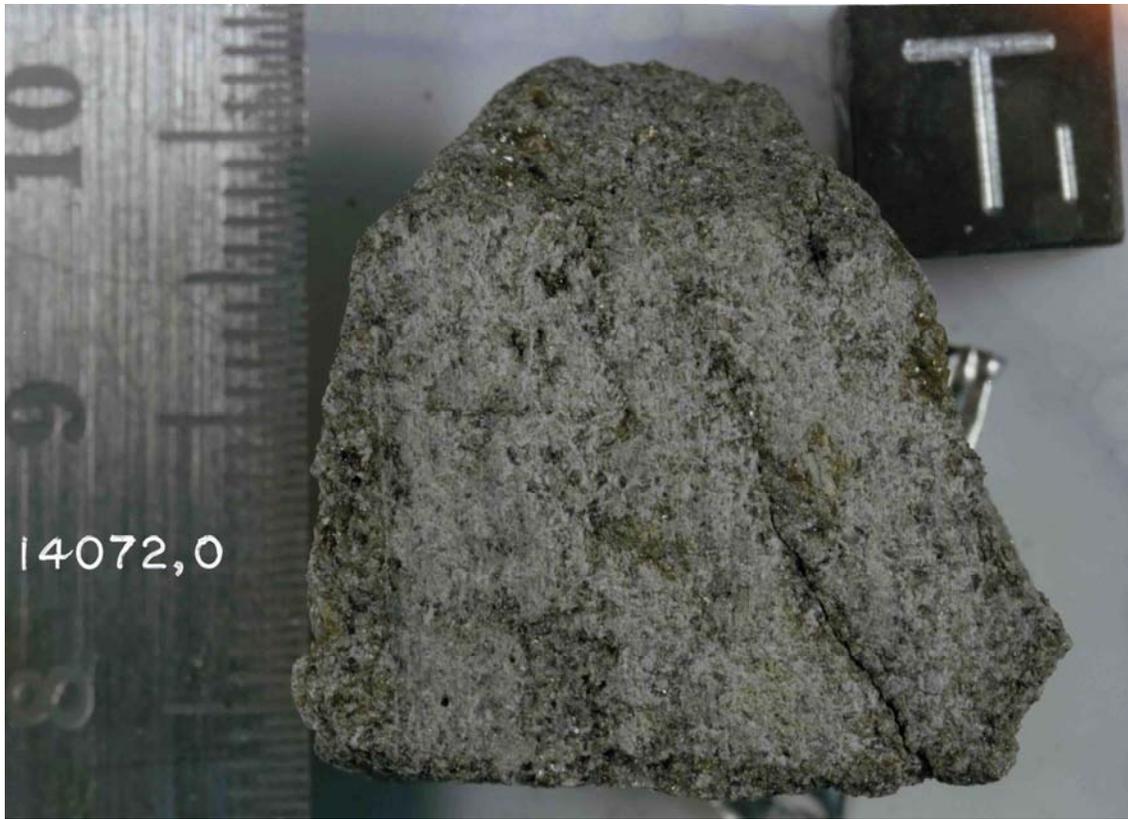
Thin section 14072,11 shows the rock to be composed of 30% plagioclase laths and masses, 1% light green olivine anhedral crystals, 3% of opaques and mesostasis, with the remainder being large anhedral to subhedral crystals of pyroxene. A few rare scattered masses of cristobalite are also present. Some twinning is present in the pyroxenes. The texture is ophitic to subophitic.

DISCUSSION

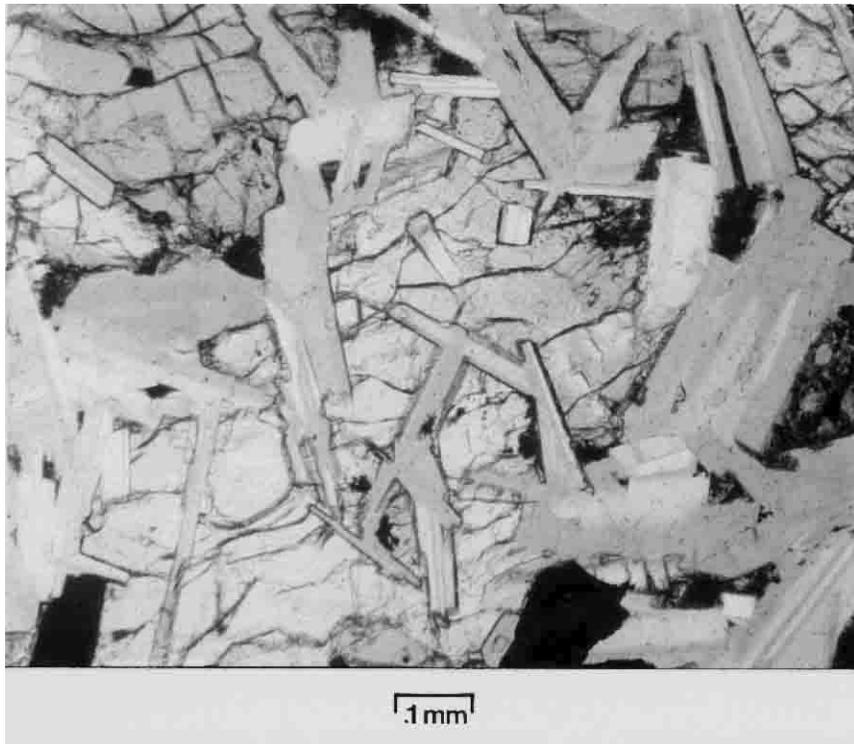
The sample is classified as a basalt by Wilshire and Jackson (1972) and is a mare basalt by Simonds et al. (1977). Longhi et al. (1972) described 14072 as a subophitic basalt with large resorbed olivine phenocrysts. There has been a strong post-crystallization reduction in the rock. This is also noted by E. Goresy et al. (1972).

El Goresy et al. (1972) note the textural and mineralogical similarity that exists between 14053 and 14072. They also note the partitioning of MgO between primary ilmenite and ulvospinel vs "exsolved" ilmenite and co-existing ulvospinel indicates that the reduction processes represented are a closer approach to equilibrium than initial crystallization. Native iron-nickel metal also occurs in their sample. The siderophile content is extremely low (Au content 0.089 ppb) Hughes et al. (1973). Taylor et al. (1972) consider 14072 to be similar to Apollo 12 basalts. Helmke et al. (1972) report REE concentrations similar to Apollo 12 basalts.

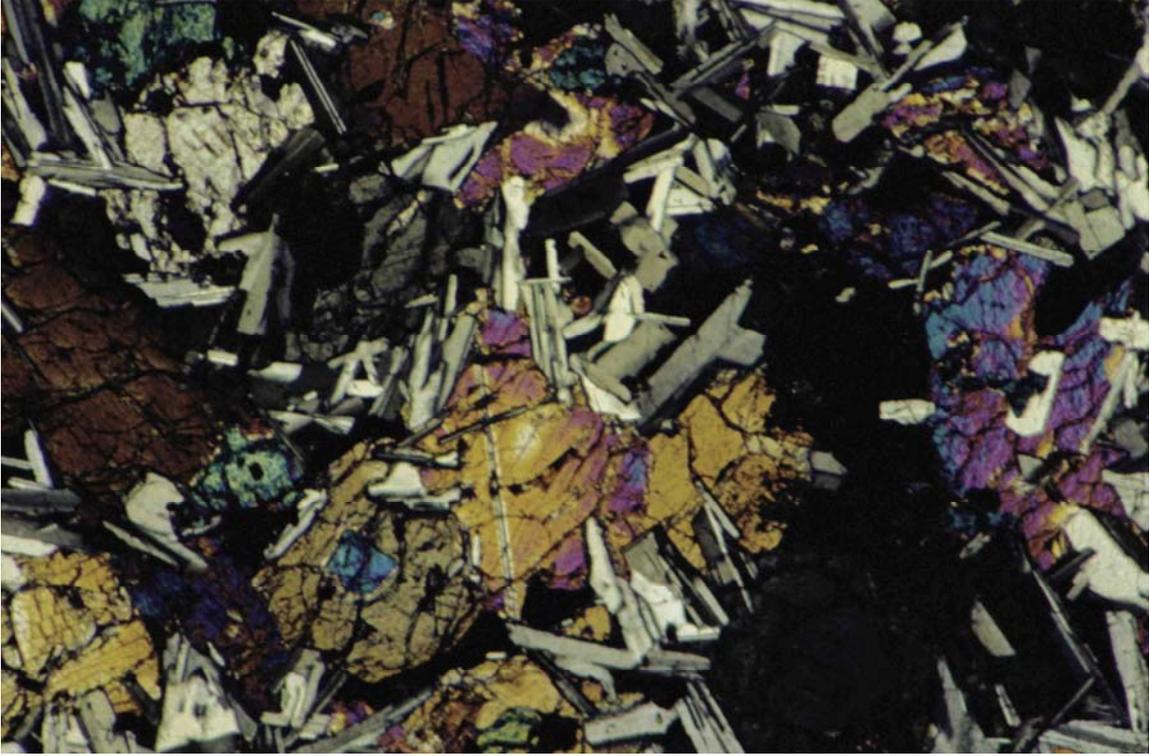
Clayton et al. (1972) have determined the oxygen isotope concentration in 14072 and Compston et al. (1972) have determined the Rb-Sr mineral isochrones for the rock and suggest the age to be approximately 4 billion years old. York et al. (1972) have found the approximate ³⁸Ar cosmic ray exposure age to be 21 m.y. for 14072.



S-75-33982



14072,11



14072,15