60625 POIKILITIC IMPACT MELT 117.0 g

INTRODUCTION: 60625 is a light gray poikilitic rake sample with rusty patches. It is fairly friable, rounded and covered with zap pits (Fig. 1). Because it is a rake sample, its orientation is unknown. It was collected about 70 m west-southwest of the Lunar Module.

FIGURE 1. S-72-43465.

PETROLOGY: Mineral analyses and a brief petrographic description are provided by Warner et al. (1976b). 60625 was listed as a rusty rock by L.A. Taylor et al. (1973b).

60625 has a poikilitic texture (Fig. 2) with most oikocrysts (mafic minerals) about 500 μm long and slightly elongated. The oikocrysts enclose lathy plagioclase chadacrysts (Fig. 2). The overall texture is diffuse because the oikocrysts also contain abundant glassy or cryptocrystalline areas, unlike the better-studied poikilitic rocks such as 60315. The interoikocryst areas are extremely narrow and contain opaque minerals, plagioclase and glass. Analyses of pyroxenes, olivines, and plagioclases are summarized in Figure 3. Warner et al. (1976b) also present compositional data for ilmenite (~9% MgO), armalcolite (~9% MgO, ~2% ZrO_2), Fe metal (~0.45% Co, 3-10% Ni) and K-rich phases

(8-14% K_2O). A few lithic and plagioclase clasts are present, most of which are shocked; mafic mineral clasts are rare.

CHEMISTRY: Fruchter et al. (1974) present a partial major and trace element analysis without comment, and Warner et al. (1976b) present a defocussed beam analysis. These are summarized in Table 1.

PROCESSING AND SUBDIVISIONS: Only a few small pieces have fallen from or been separated from the parent ,0.

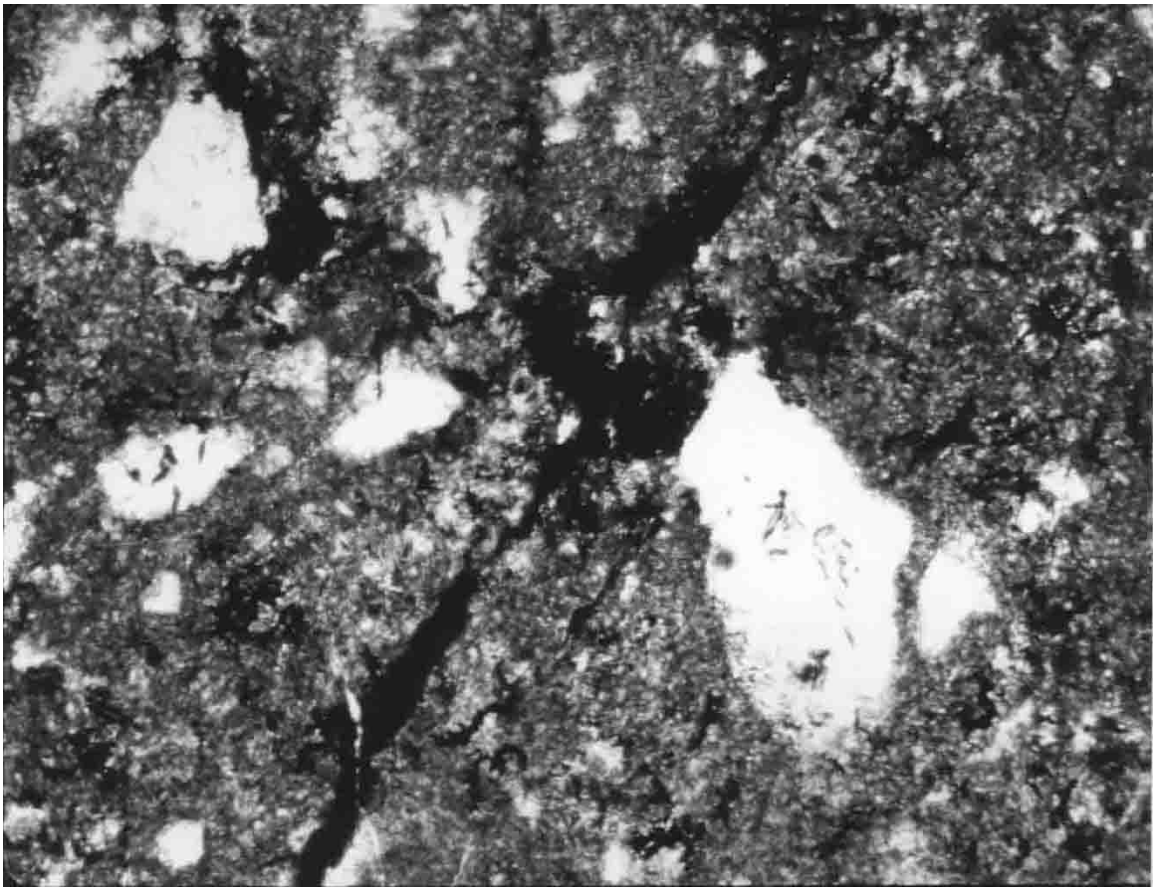

FIGURE 2. 60625,11. General view, ppl. Width 3 mm.

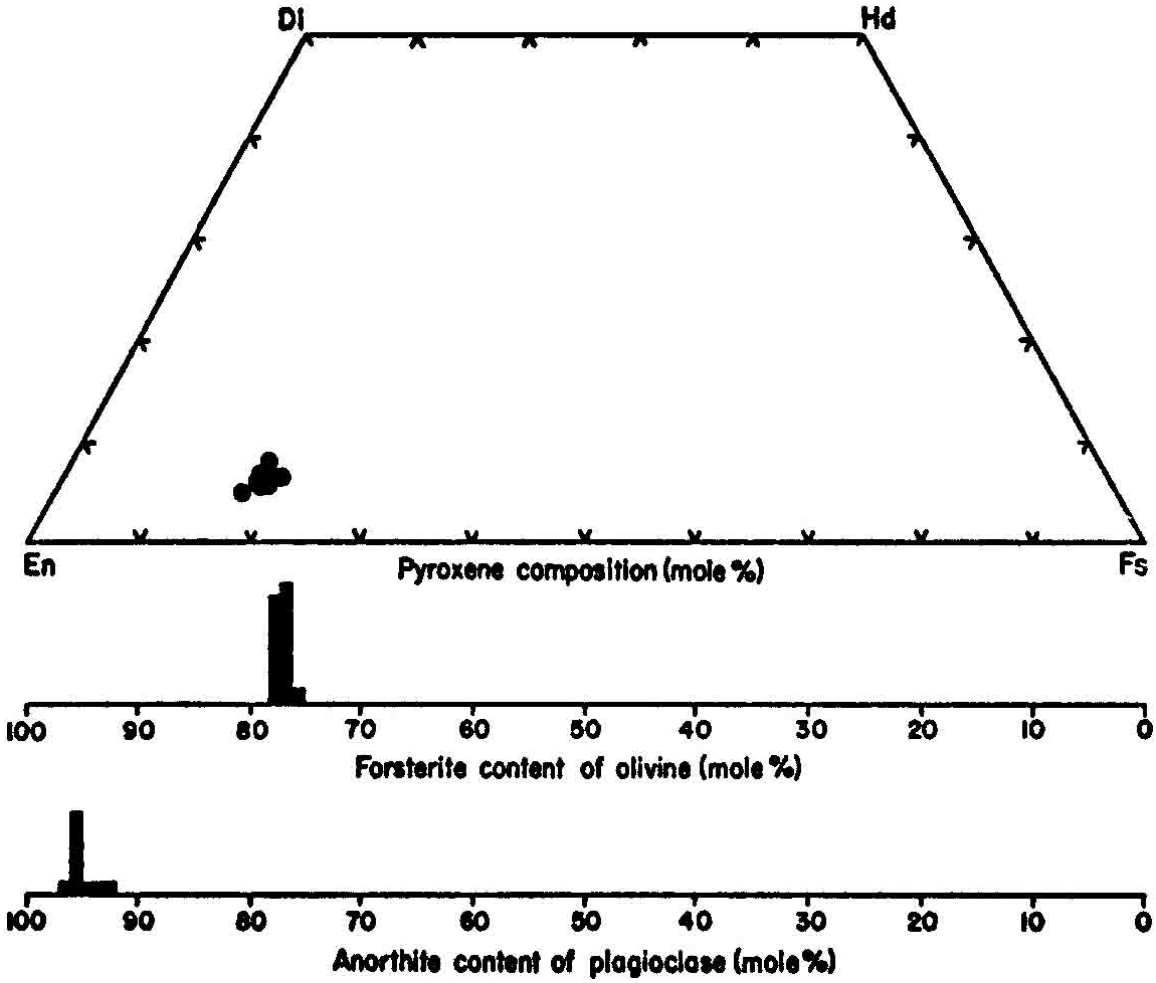

FIGURE 3. Mineral compositions;
from R. Warner et al.(1976b).

TABLE 1. Summary chemistry of 60625 poikilitic melt.

	(i)	(ii)
SiO_2		44.7
TiO_2		0.67
Al_2O_3	25.9	22.6
Cr_2O_3	0.12	0.11
FeO	5.4	7.8
MnO		0.06
MgO		9.8
CaO		13.2
Na_2O	0.49	0.54
K_2O		0.21
P_2O_5		0.25
Sr		
La	20.7	
Lu	1.0	
Rb		
Sc	9.7	
Ni		
Co	27.0	
Ir ppb		
Au ppb		

Oxides in wt%; others in ppm except as noted.
(i) from Fruchter et al. (1974). (ii) DBA from Warner et al. (1976b).