

INTRODUCTION: 61558 is a coherent, medium gray, impact melt with abundant clasts and vesicles (Fig. 1). It is a rake sample collected about 45 m northeast of Plum Crater.

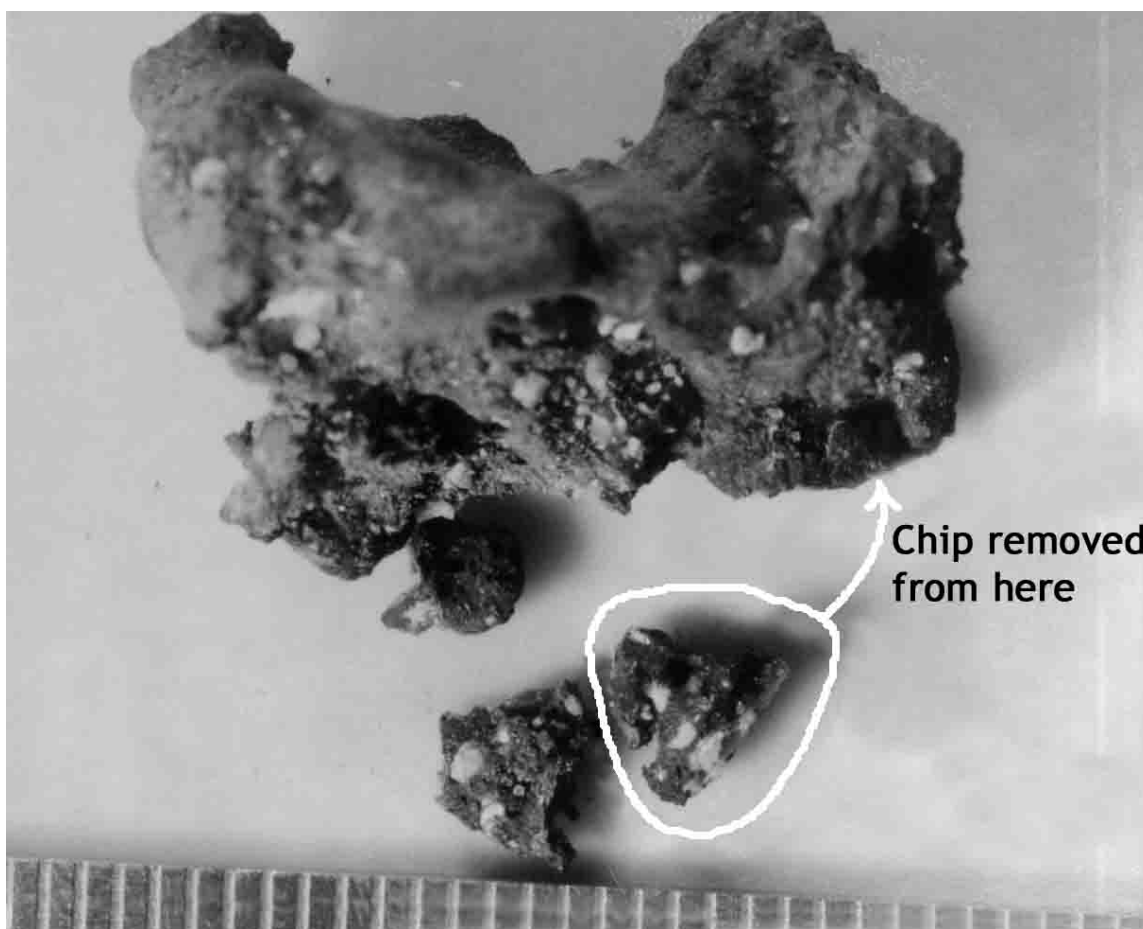


FIGURE 1. Smallest scale division in mm.

PETROLOGY: Warner et al. (1973) include this rock in a general petrographic discussion of Apollo 16 rake samples. Although 61558 may have been very glassy at one time, it is now almost completely crystalline. “Quench” crystals surround clasts, but the texture away from the clasts is dominated by a series of interlocking spherulites (Fig. 2, and photomicrograph in Warner et al., 1973). Fragments of plagioclase and cataclastic anorthosite and spherules of Fe-metal, often intergrown with troilite and schreibersite, are scattered through the rock. Compositions of coexisting metal and metal/phosphide intergrowths are given by Gooley et al. (1973) and are reproduced here as Table 1.

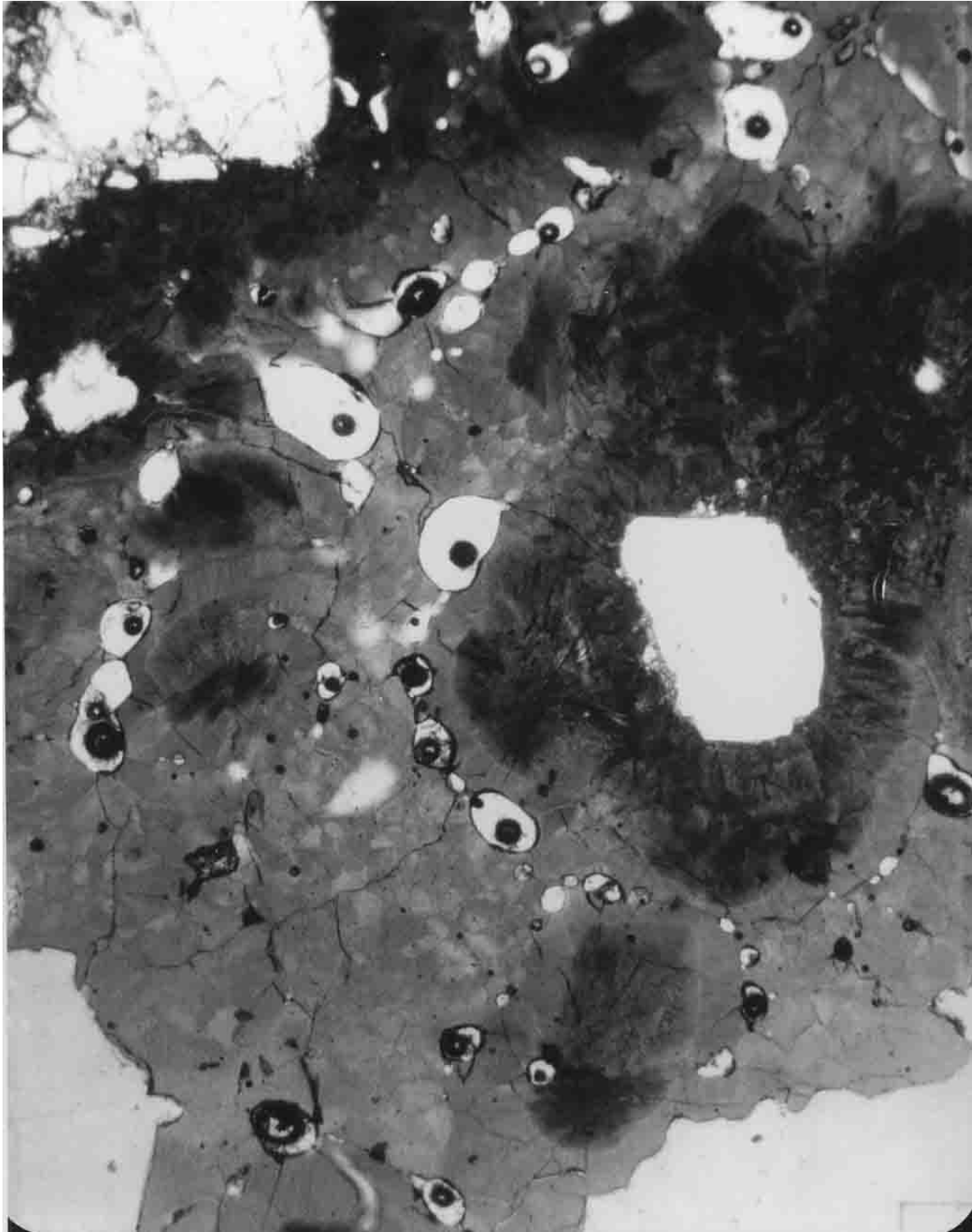


FIGURE 2. 61558,4, general view, ppl. Width 2 mm.

PHYSICAL PROPERTIES: Pearce and Simonds (1974) report the results of a room temperature hysteresis curve determination on 61558. The very small saturation remanence to saturation magnetization ratio ($J_{RS}/J_S = 0.009$) indicates that most of the ferromagnetic phases in this rock occur as relatively large ($>300 \text{ \AA}$), multidomain particles. Total Fe^0 is 0.037 wt% and $\text{Fe}^0/\text{Fe}^{2+}$ is 0.0858 (Pearce and Simonds, 1974).

PROCESSING AND SUBDIVISIONS: In 1972 three small chips were removed and one of these (,1) was allocated to Phinney for thin sectioning and petrography. The magnetic studies were done on the potted butt made from ,1.

TABLE 1. Coexisting metal and metal/phosphide intergrowth compositions (wt%).

	Ni	Co	Fe	P	S
a) Metal	18.9	1.0	77.4	1.0	0.05
Eutectic intergrowth	28.8	0.8	56.2	12.2	0.4
b) Metal	22.4	1.0	74.0	1.0	0.02
Eutectic intergrowth	29.2	0.9	56.5	12.1	0.5