63558 POIKILITIC IMPACT MELT 7.09

<u>INTRODUCTION</u>: 63558 is a medium gray, coherent rock (Fig. 1) which is a poikilitic impact melt. It is a rake sample and has many zap pits on all surfaces.



FIGURE 1. Smallest scale division in mm. S-72-55397.

<u>PETROLOGY</u>: Warner et al. (1973) and Simonds et al. (1973) classify 63558 as a poikilitic rock. Simonds et al. (1973) provide petrographic and microprobe data. The sample consists of oikocrysts of orthopyroxene and augite, most ~600 μ m in diameter, enclosing plagioclase crystals. Interoikocryst areas contain plagioclase, opaque minerals (armalcolite, and ilmenite with exsolved rutile) and glass. A mode by Simonds et al. (1973) has 56% plagioclase plus mesostasis, 32% orthopyroxene, no pigeonite, 12%

augite, 2% olivine, and 2% opaques. The olivine occurs as granules of uncertain (relict?) origin. Pyroxene and olivine compositions are shown in Figure 3. One lithic clast observed by Simonds et al. (1973) has lathy feldspar as well as olivine and ilmenite.



FIGURE 2. 63558,4, general view, ppl. Width 2 mm.

<u>PROCESSING AND SUBDIVISIONS</u>: The two smallest chips in Figure 1 (,1) were potted together and made into thin sections ,2 and ,4. The other two chips remain numbered with the parent as ,0.



FIGURE 3. Mafic mineral compositions, olivine plotted along base, from Warner et al. (1973).