

64546 DILITHOLOGIC (CATACLASTIC ANORTHOSITE 12.80 g
AND POIKILITIC IMPACT MELT) BRECCIA

INTRODUCTION: 64546 is a coherent breccia composed of two lithologies: white cataclastic anorthosite and dark gray poikilitic impact melt (Fig. 1). It was collected as a rake sample. Zap pits are absent.

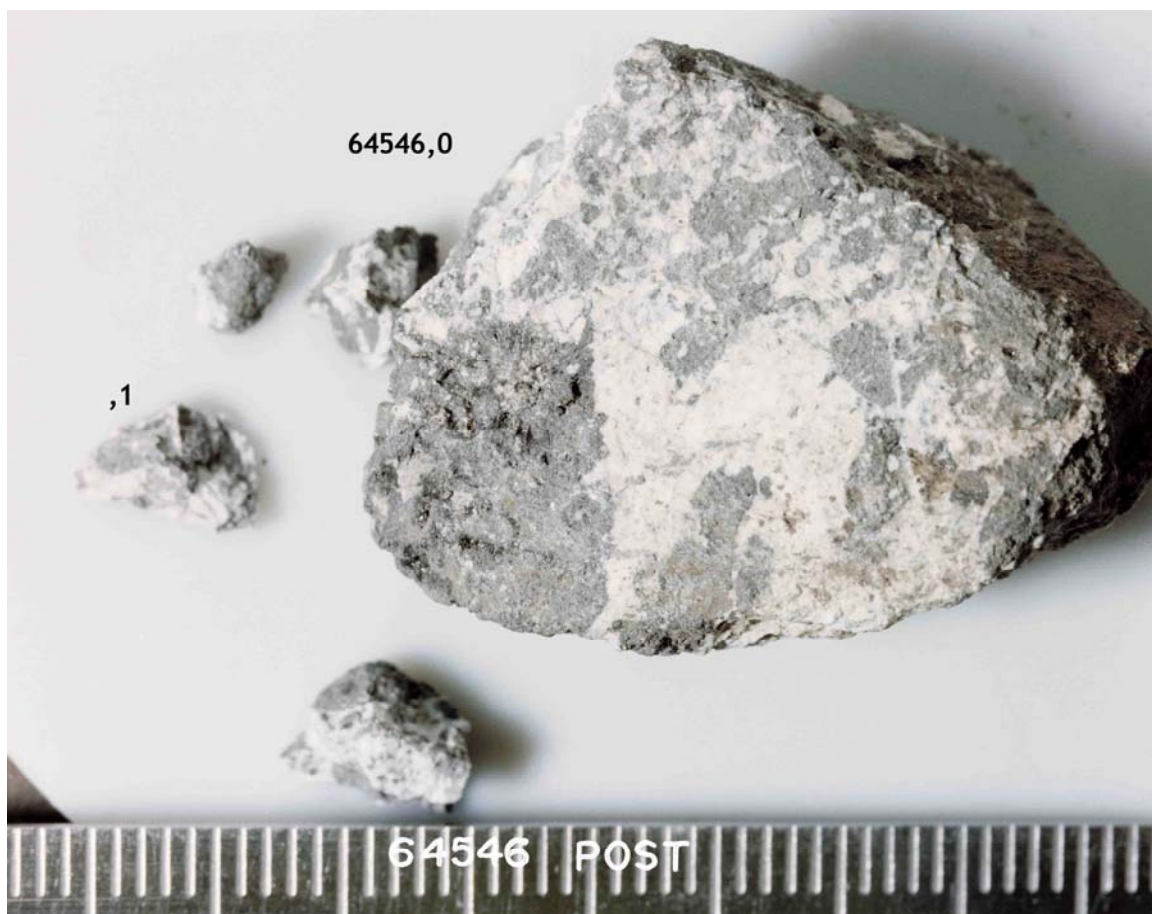


FIGURE 1. Smallest scale division in mm. S-72-55355.

PETROLOGY: 64546 is a typical “black and white” rock, being composed of only two lithologies: cataclastic anorthosite and fine-grained poikilitic impact melt (Fig. 2). The anorthosite is coarse-grained (up to ~2 mm) with rare interstitial mafic minerals. The poikilitic impact melt contains clasts and laths of plagioclase and elongate oikocrysts (~0.4 mm long). It appears to occur chiefly as angular clasts within the anorthosite. Fe-metal is an accessory phase in both lithologies but is more common in the poikilitic melt. Gooley et al. (1973) provide compositional data for metal in the melt (Table 1).

PROCESSING AND SUBDIVISIONS: In 1972 a small chip (,1) was allocated to Phinney for thin sectioning and petrography.

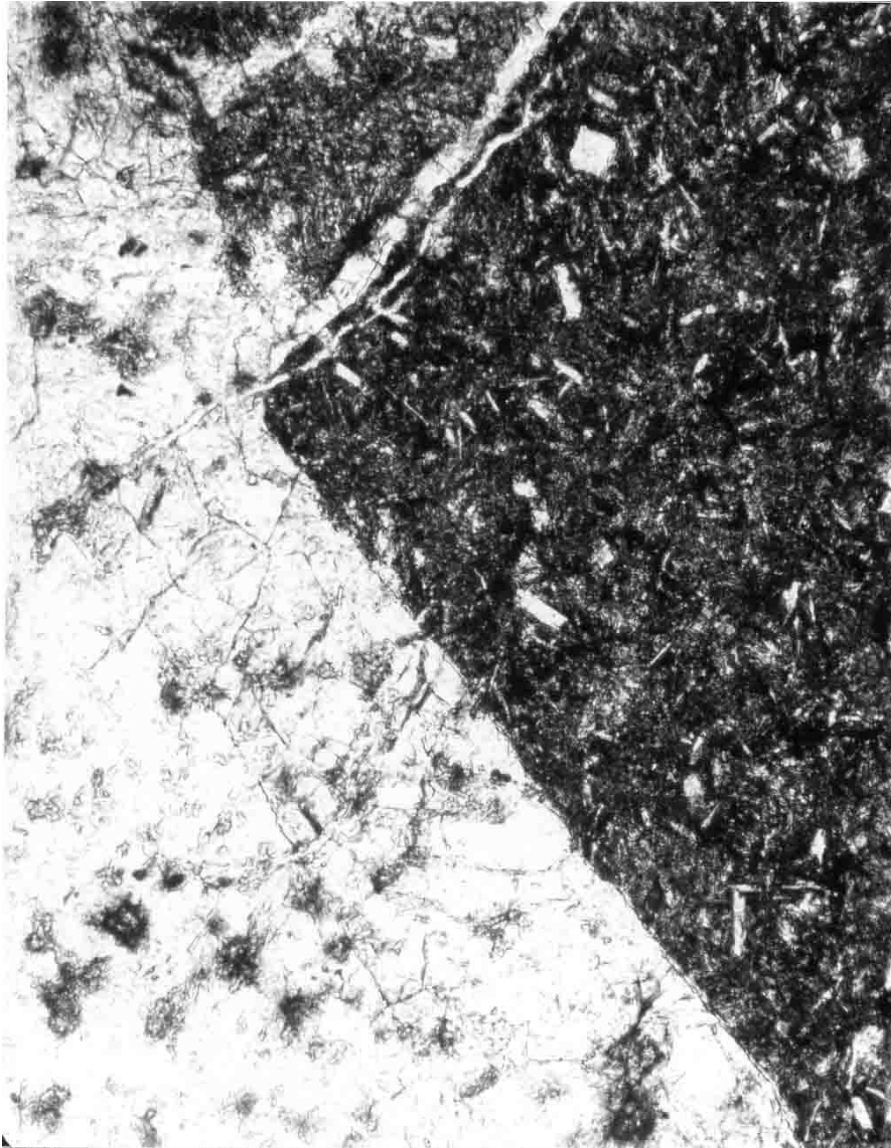


FIGURE 2. 64546,4, anorthosite, impact melt contact, ppl. Width 2 mm.

TABLE 1. Compositions of metal and coexisting schreibersite (wt%).

	Ni	Co	Fe	P	S
metal (without schreibersite)	6.6-7.4	0.6	--	0.0-0.03	0.02
metal (with schreibersite)	5.0	0.7	93.1	0.1	0.01
schreibersite	18.6	0.3	66.2	15.4	0.1