

**INTRODUCTION:** 67635 is a coherent, fine-grained, cataclastic ferroan anorthosite (Fig. 1) which is chemically pristine. It is a rake sample collected 30 m east of the White Breccia boulders and has some zap pits.



FIGURE 1. Smallest scale division in mm. S-72-49561.

**PETROLOGY:** Steele and Smith (1973) refer to 67635 as “plagioclase (100%) breccia; heavily shocked.” A brief petrographic description with microprobe analyses is given by Warren and Wasson (1980). Hansen et al. (1979b and unpublished) also report microprobe analyses.

67635 is a monomict, cataclastic anorthosite (Fig. 2) with ~99% plagioclase, mafic mineral grains less than 50  $\mu\text{m}$  in diameter, and traces of ilmenite. Mineral compositions from Warren and Wasson (1980) are shown in Figure 3; pyroxene and plagioclase analyses by Hansen et al. (1979b and unpublished) are very similar. The latter also report micro element data for plagioclases:  $\text{K}_2\text{O}$  0.028%,  $\text{FeO}$  0.078%,  $\text{MgO}$  0.049%, (average

of 12 points; little variation). Warren and Wasson (1980) note that the plagioclases are up to 3 mm in diameter.

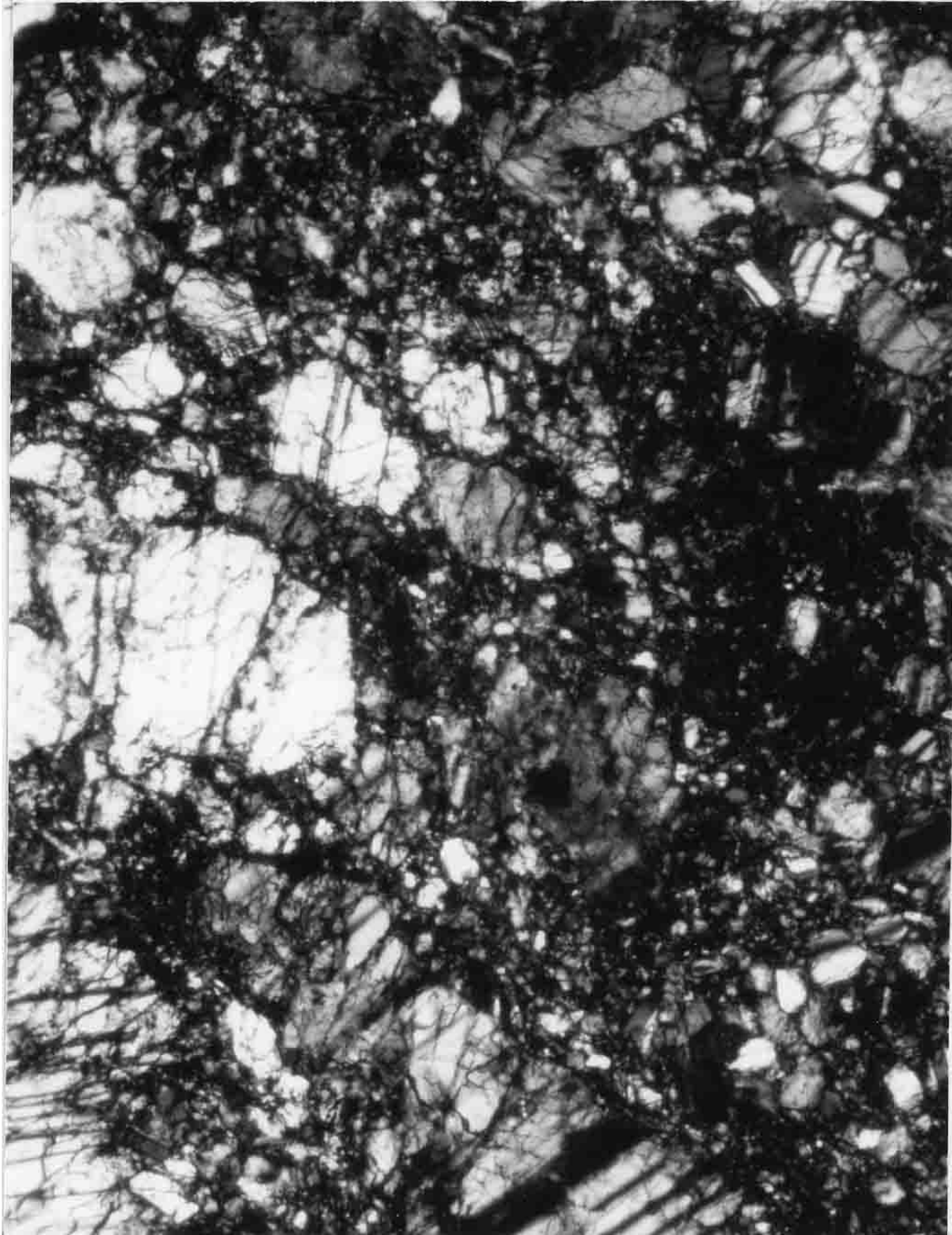


FIGURE 2. 67635,2. General view, xpl. Width 2 mm.

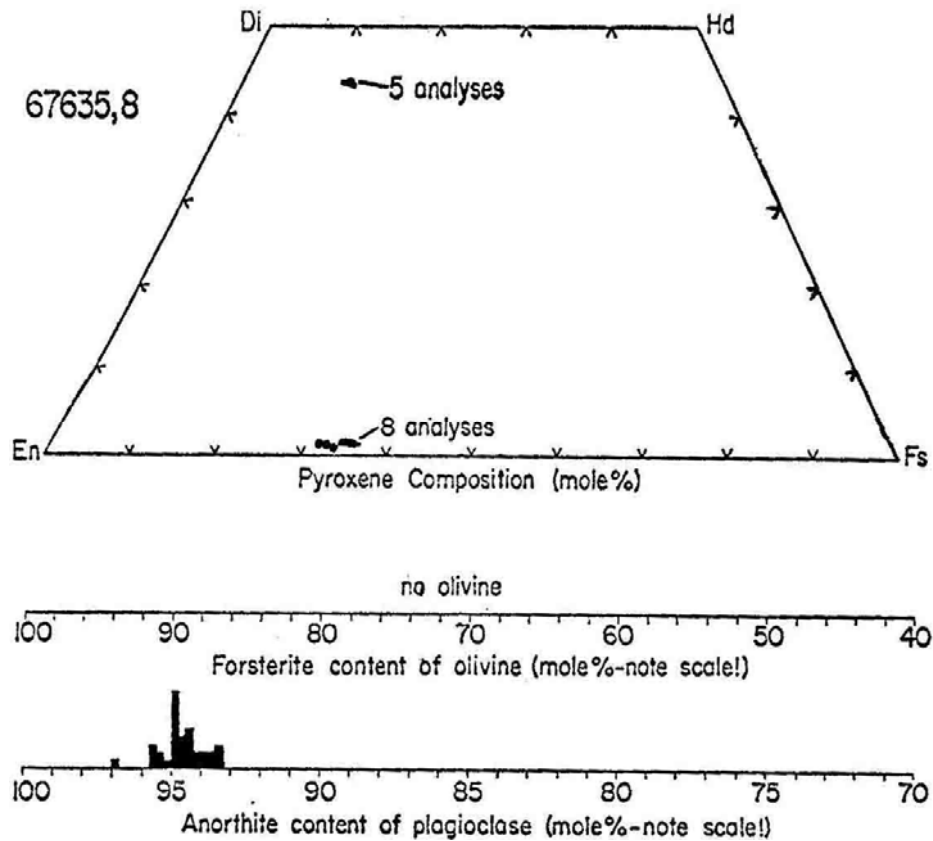


FIGURE 3. Mineral compositions, from Warren and Wasson (1980).

CHEMISTRY: A major and trace element chemical analysis is reported by Warren and Wasson (1980) (Table 1, Fig. 4). The anorthosite is ferroan, and uncontaminated by either KREEP or meteoritic material.

PROCESSING AND SUBDIVISIONS: Small chips were removed for making thin sections, 2 and 8 (same potted butt) and the chemistry allocation.

TABLE 1. Summary chemistry of 67635 anorthosite (Warren and Wasson, 1980).

SiO <sub>2</sub>	44.9	Sr	
TiO <sub>2</sub>	<0.13	La	0.33
Al <sub>2</sub> O <sub>3</sub>	34.8	Lu	0.0047
Cr <sub>2</sub> O <sub>3</sub>	0.002	Rb	
FeO	0.26	Sc	0.34
MnO	0.006	Ni	1.2
MgO	0.17	Co	1.5
CaO	18.9	Ir ppb	0.027
Na <sub>2</sub> O	0.56	Au ppb	0.024
K <sub>2</sub> O	0.018	C	
P <sub>2</sub> O <sub>5</sub>		N	
		S	
		Zn	
		Cu	

Oxides in wt%; others in ppm except as noted.

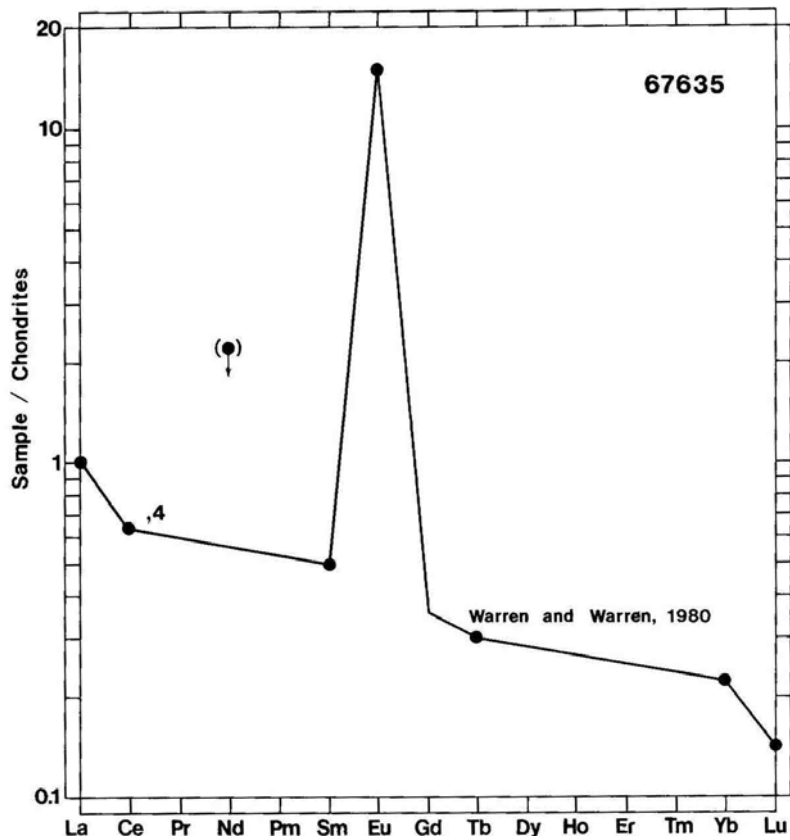


FIGURE 4. Rare earths.