

INTRODUCTION: 67637 is a coherent, cataclastic, pristine ferroan anorthosite (Fig. 1). It is a rake sample collected 30 m east of the White Breccia boulders and has many zap pits.



FIGURE 1. Smallest scale division in mm. S-72-51053.

PETROLOGY: Steele and Smith (1973) refer to 67637 as a “plagioclase (95%) breccia; minor olivine and pyroxene; heavily shocked.” Microprobe analyses are reported by Warren and Wasson (1980) and Hansen et al. (1979a,b).

The sample is fairly porous and consists of angular fragments of plagioclase, up to 1.5 mm in diameter (Fig. 2). Mafic mineral grains are up to 300 μm ; most have high birefringence and are olivines. Microprobe data (Fig. 3) demonstrate the ferroan character. Analyses by Hansen et al. (1979a,b) are similar to those of Warren and Wasson (1980) except that the former show a clearer distinction between low-Ca and high-Ca pyroxenes.

CHEMISTRY: Warren and Wasson (1980) report major and trace element data, summarized in Table 1 and Figure 4. The sample is a ferroan anorthosite, uncontaminated with meteoritic material.

PROCESSING AND SUBDIVISIONS: A chip was removed, from which thin sections ,1 and ,7 were made. A second chip was allocated for chemical analysis.

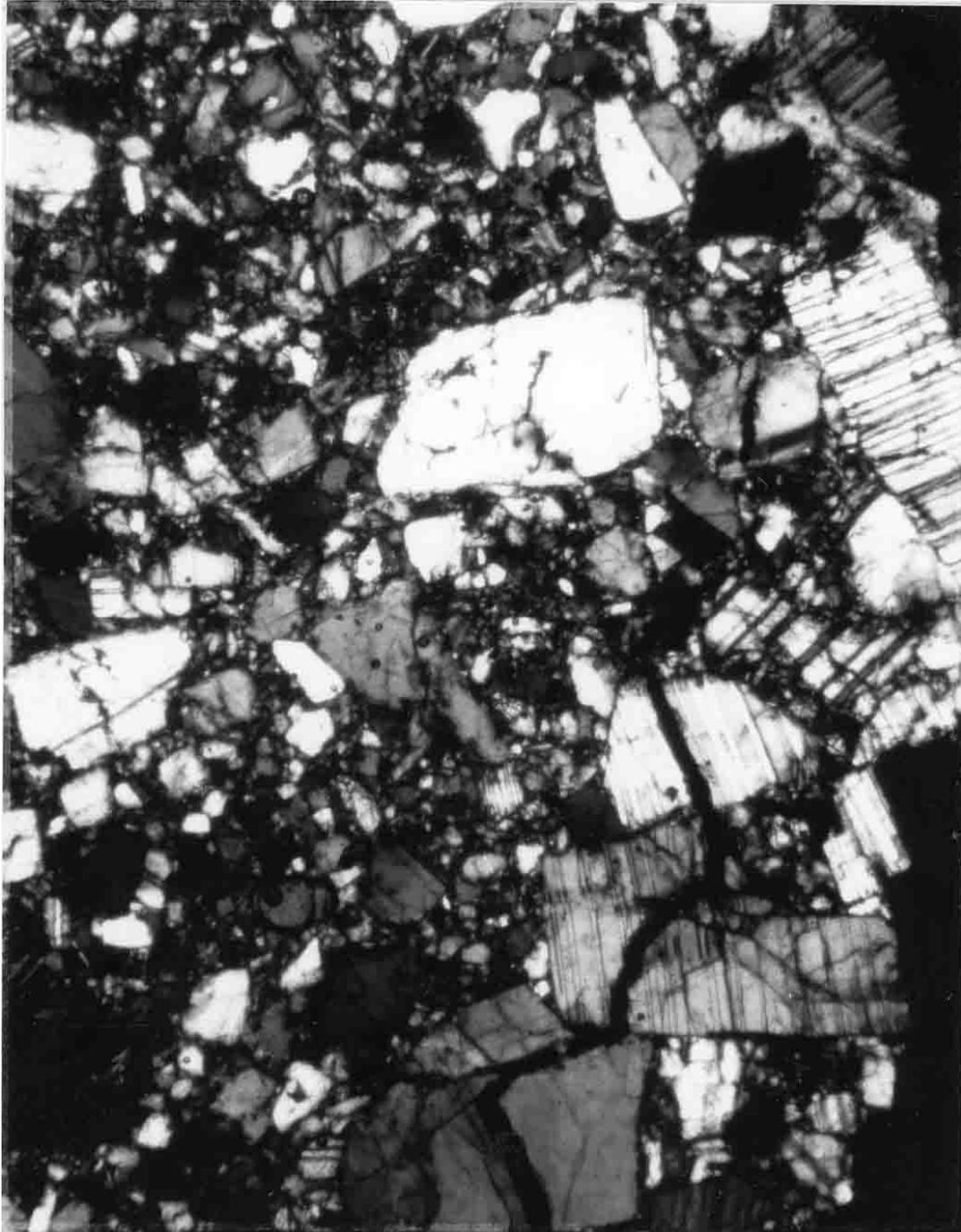


FIGURE 2. 67637,1. General view, xpl. Width 2 mm.

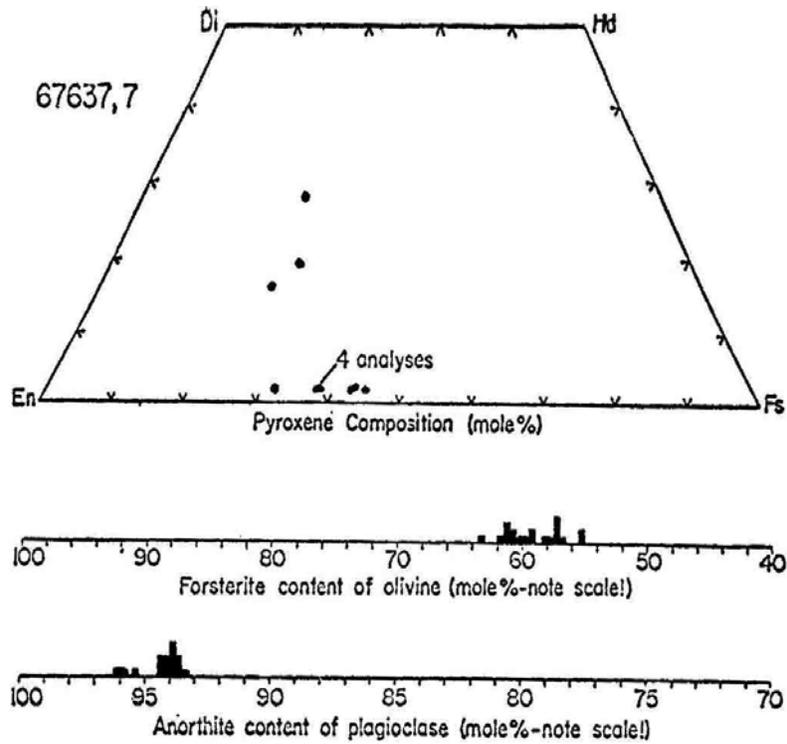


FIGURE 3. Mineral compositions, from Warren and Wasson (1980).

TABLE 1. Summary chemistry of 67637 (Warren and Wasson, 1980).

SiO ₂	44.3	Sr	
TiO ₂	0.038	La	0.40
Al ₂ O ₃	34.4	Lu	0.0134
Cr ₂ O ₃	0.005	Rb	
FeO	0.70	Sc	0.96
MnO	0.011	Ni	1.6
MgO	0.56	Co	3.8
CaO	18.8	Ir ppb	1.2
Na ₂ O	0.595	Au ppb	0.02
K ₂ O	0.019	C	
P ₂ O ₅		N	
		S	
		Zn	
		Cu	

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

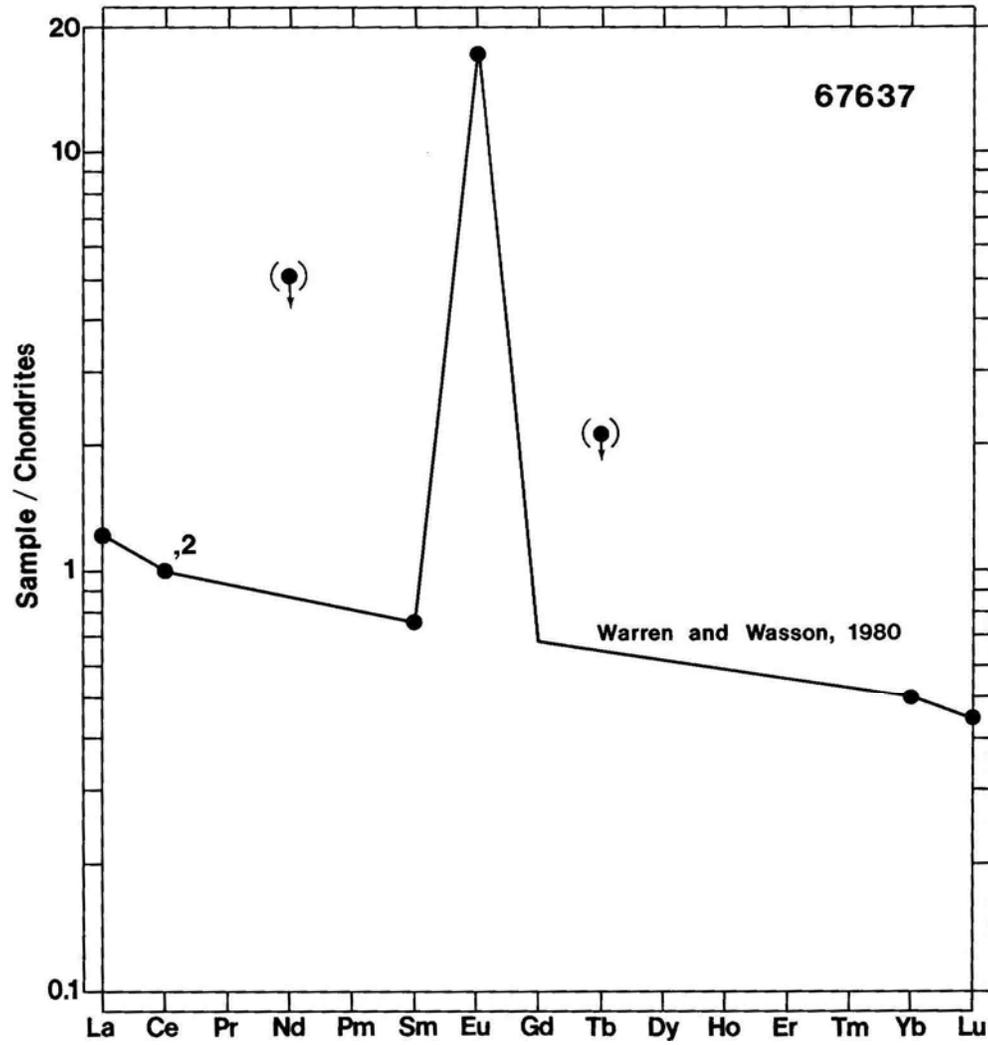


FIGURE 4. Rare earths.