78507

High-Ti Mare Basalt
23.35 g, 3.8 x 3.4 x 1.5 cm

INTRODUCTION

Sample 78507 was collected as part of a soil sample at Station 8. It is a typical ilmenite-rich mare basalt from Apollo 17 (Fig. 1).

PETROGRAPHY

Sample 78507 is a very vuggy, coarse-grained mare basalt. The large pyroxenes surround ilmenite. Plagioclase is intergrown with pyroxene (Fig. 2).

WHOLE-ROCK CHEMISTRY

Ma et al. (1979) have reported the chemical composition of 78507 (Table 1 and Fig. 3).

Based on its trace element content, sample 78507 would be classified as a Type B Apollo 17 basalt (see appendix).

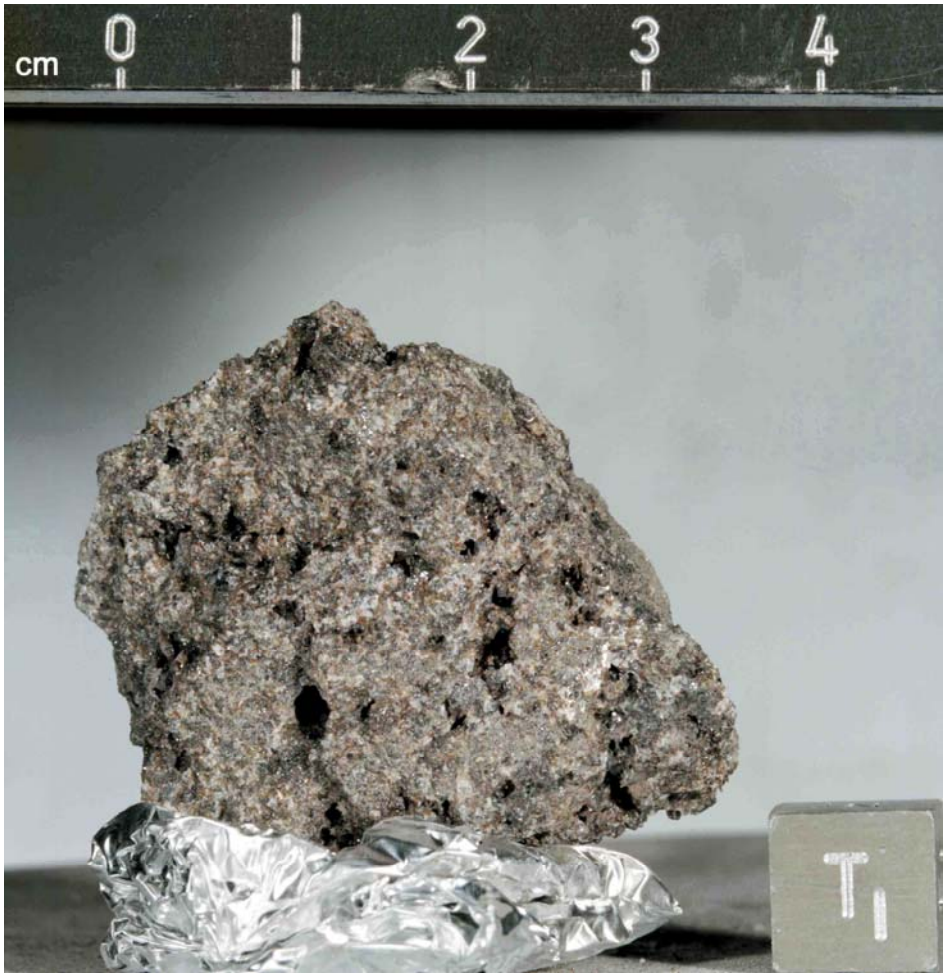

Figure 1: Photograph of 78507. Scale is 1 cm. S73-16144.

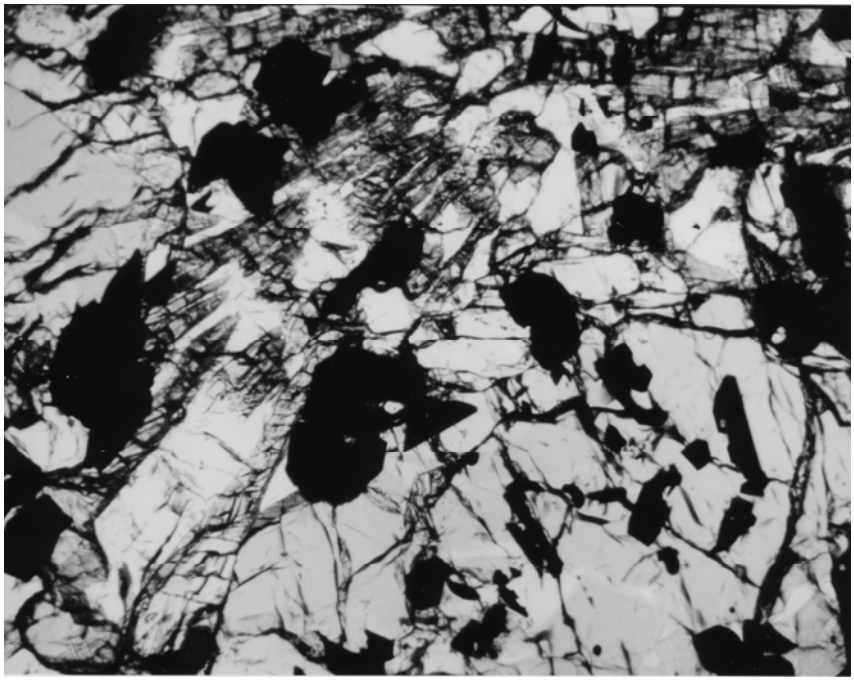

Figure 2: Photomicrograph of thin section 78507,4. Field of view is 3 x 4 mm.

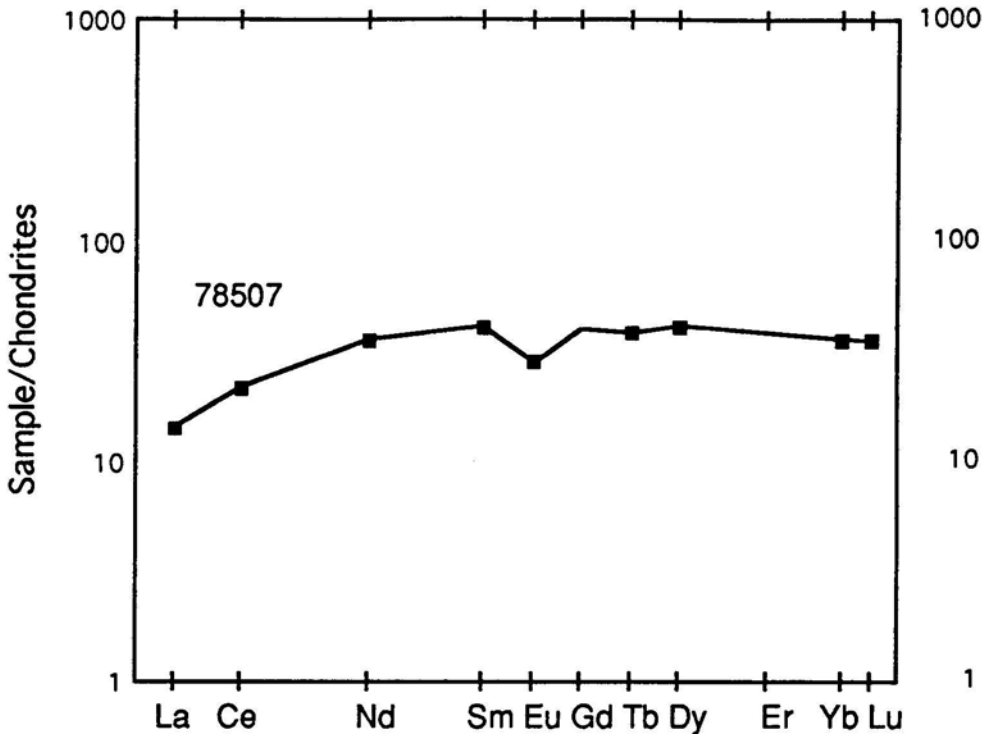

Figure 3: Normalized rare earth element diagram for 78507. Data from Ma et al. (1979).

Table 1: Whole-rock chemistry of 78507.
From Ma et al. (1979).

Split Technique	,1 INAA
SiO_2 (wt%)	–
TiO_2	11.9
Al_2O_3	8.8
Cr_2O_3	0.536
FeO	18.0
MnO	0.222
MgO	10
CaO	9.7
Na_2O	0.407
K_2O	0.037
Nb (ppm)	
Zr	
Hf	5.5
Ta	1.3
Ni	
Co	21
Sc	79
La	3.4
Ce	13
Nd	16
Sm	6
Eu	1.59
Gd	
Tb	1.4
Dy	10
Er	
Yb	5.8
Lu	0.86
Ge (ppb)	
Ir	
Au	