

**77518****Micropoikilitic Impact Melt Breccia**  
**42.5 g, 3.5 x 3.5 x 2.5 cm****INTRODUCTION**

Sample 77518 is a rake sample from soil 77510 at Station 7 (Fig. 1). It is a vesicular impact melt breccia similar in texture to the boulder sample 77135 and to 77515.

**PETROGRAPHY**

In thin section, the texture varies from microgranular to micropoikilitic (Fig. 2). Pigeonite and ilmenite chadocrysts enclose plagioclase and olivine oikocrysts. Warner et al. (1977) give the mineral mode for 77518. The matrix is about 52% plagioclase and 44% low-Ca pyroxene and olivine. One large olivine clast contains symplectite chromite intergrowth. Lithic clasts

are rare, mostly recrystallized ANT and feldspathic breccia.

Several pink spinel grains with plagioclase reaction coronas are reported (Warner et al., 1978).

**MINERAL CHEMISTRY**

The compositions of minerals in 77518 are given in Warner et al. (1978) (Fig. 3). Engelhardt (1979) has also studied the ilmenite in 77518.

**WHOLE-ROCK CHEMISTRY**

The chemical composition of 77518 (Table 1) has been determined only by "broad beam microprobe

analyses" (Warner et al., 1977). These analyses also indicate that this sample is typical of impact melt rocks at Station 7.

**SIGNIFICANT CLASTS**

Warner et al. (1978) report that one edge of the chip that they studied had an area of Si-Al-K-rich glass (80% SiO<sub>2</sub>, 12% Al<sub>2</sub>O<sub>3</sub>, and 8% K<sub>2</sub>O) with a gradational boundary with the breccia matrix.



Figure 1: Photograph of 77518. Cube is 1 cm. S73-19143.

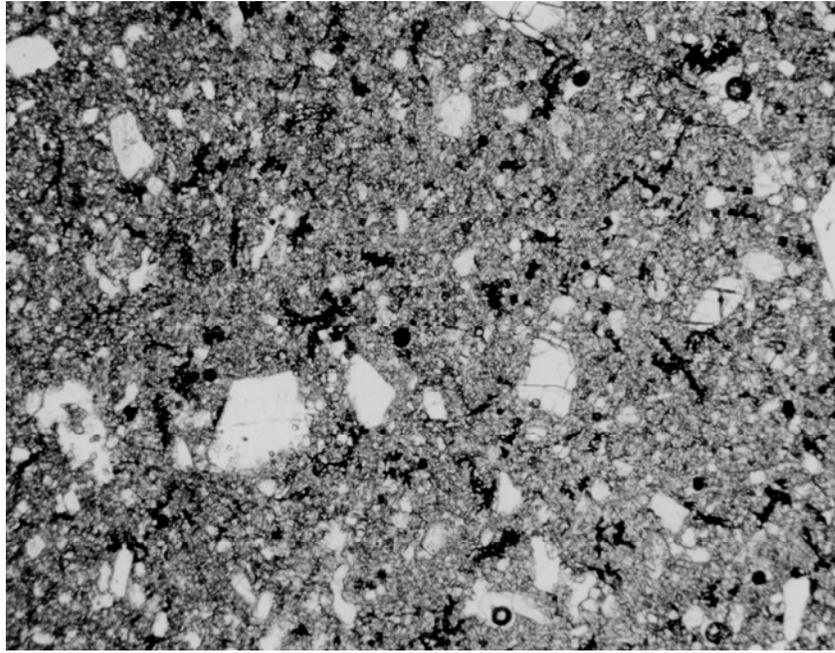


Figure 2: Photomicrograph of thin section 7751.8,12. Field of view is 3 x 4 mm.

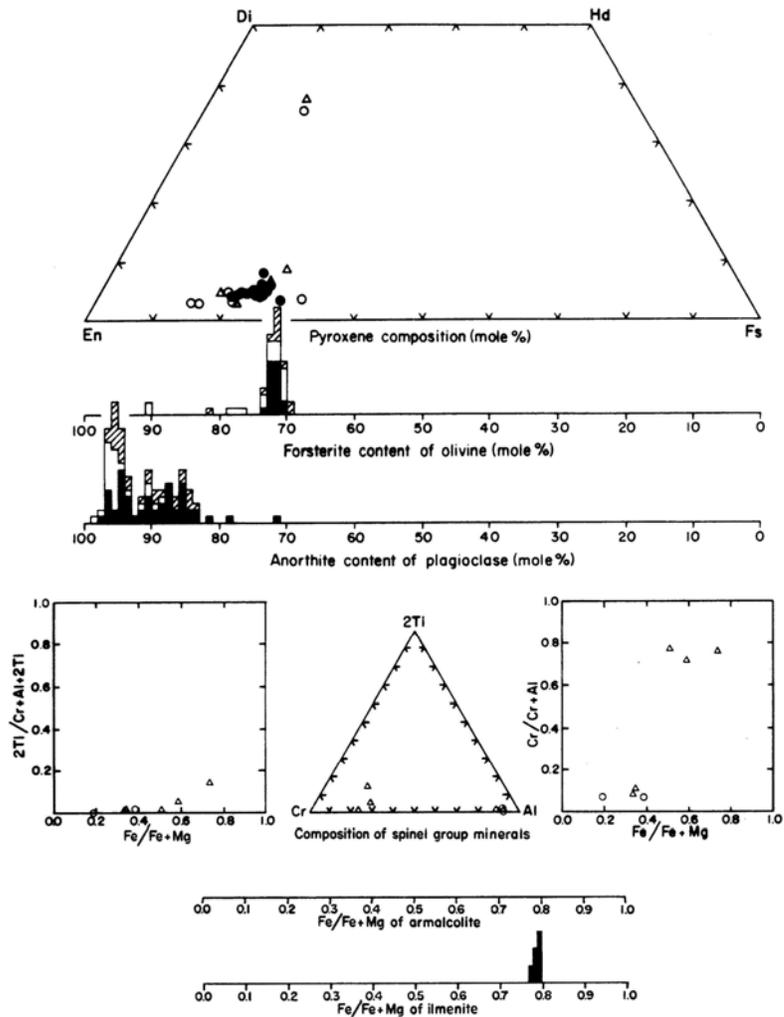


Figure 3: Mineral compositions of 77518. From Warner et al. (1978).

**Table 1: Whole-rock chemistry of 77518.**  
From Warner et al. (1977).

<b>Split Technique</b>	<b>matrix BB e-probe</b>
SiO <sub>2</sub> (wt%)	47.1
TiO <sub>2</sub>	1.25
Al <sub>2</sub> O <sub>3</sub>	19.7
Cr <sub>2</sub> O <sub>3</sub>	0.15
FeO	7.8
MnO	0.12
MgO	10.5
CaO	11.7
Na <sub>2</sub> O	0.72
K <sub>2</sub> O	0.42
P <sub>2</sub> O <sub>5</sub>	0.31