

76575**Feldspathic Impact Melt Breccia****16.25 g, 3 x 2 x 2 cm****INTRODUCTION**

Sample 76575 was collected as a rake sample from the soil at Station 6 (Phinney et al., 1974). The surface of this rounded fragment is covered with glass splashes, patina, and micrometeorite pits (Fig. 1).

PETROGRAPHY

This unique fragment has clasts of aphanitic breccia included within a fragmental matrix of mostly feldspar (Fig. 2).

WHOLE-ROCK CHEMISTRY

This sample has been analyzed by XRF and isotopic dilution mass spectroscopy (Table 1). It has a high Al_2O_3 content (~26%) and low trace element content (Fig. 3).

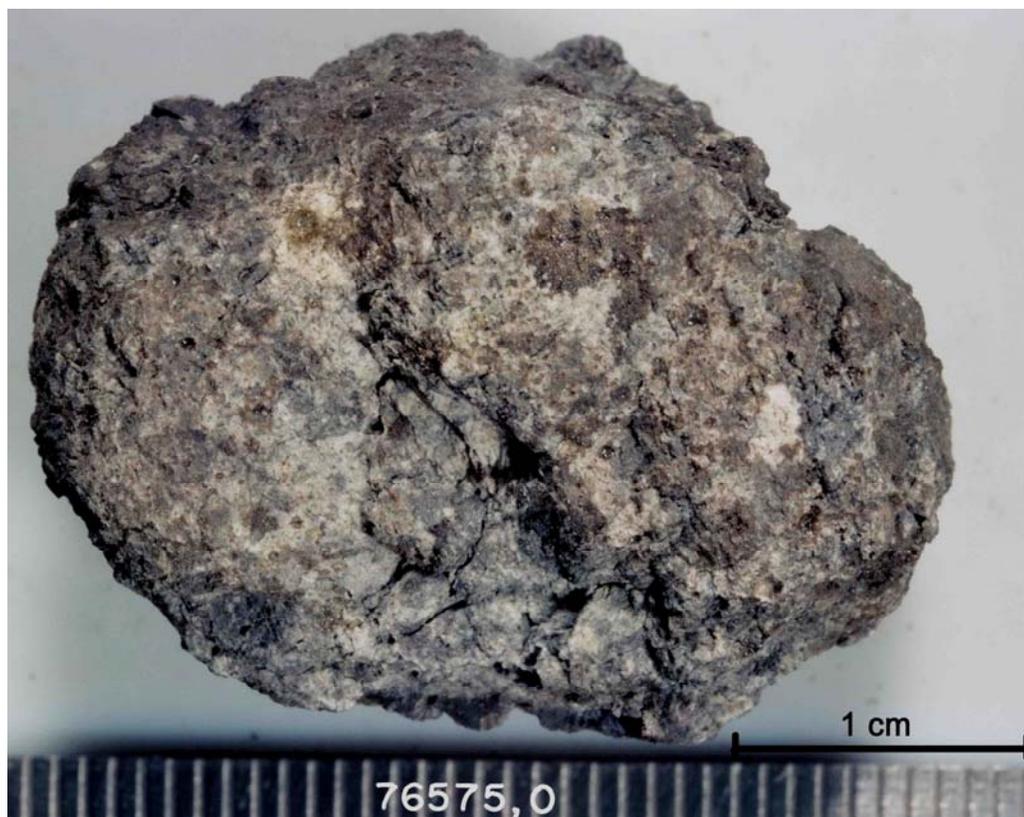


Figure 1: Photograph of 76575. Scale bar is marked in mm. S73-19633.

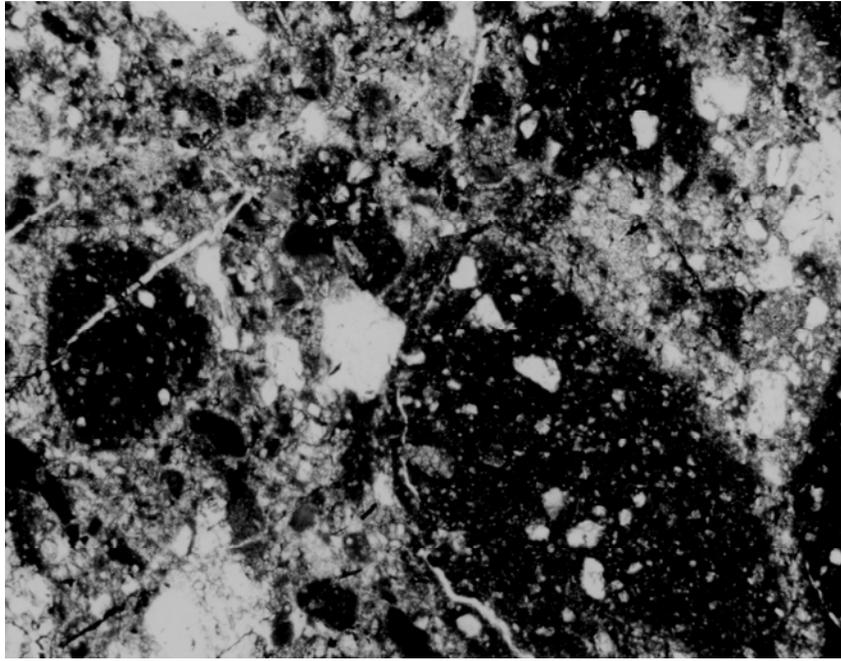


Figure 2: Photomicrograph of thin section 76575,10 showing suevite texture. Field of view is 2 x 3 mm.

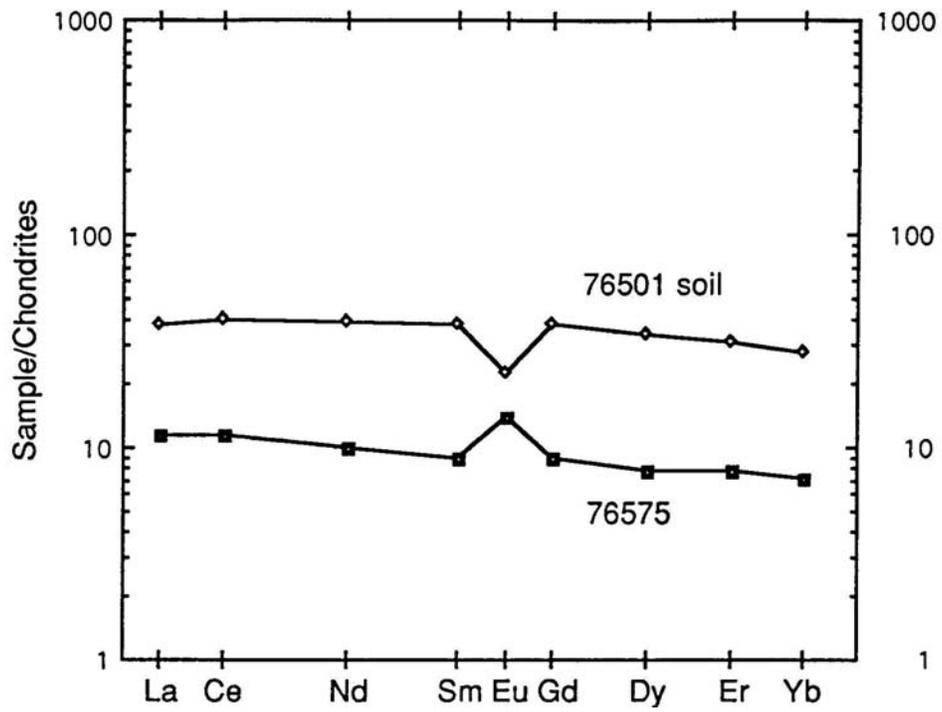


Figure 3: Normalized rare earth element diagram comparing 76575 with the Station 6 soil (76501).

Table 1: Whole-rock chemistry of 76575.
 From Simonds and Warner (1981); Wiesmann and Hubbard (1975).

| Split Technique | 3 XRF, IDMS |
|--------------------------------|------------------------|
| SiO ₂ (wt%) | 44.83 |
| TiO ₂ | 0.34 |
| Al ₂ O ₃ | 25.77 |
| Cr ₂ O ₃ | 0.11 |
| FeO | 5.61 |
| MnO | 0.08 |
| MgO | 7.45 |
| CaO | 15.23 |
| Na ₂ O | 0.35 |
| K ₂ O | 0.03 |
| P ₂ O ₅ | 0.04 |
| S | 0.04 |
| Nb (ppm) | |
| Zr | 47 |
| U | 0.13 |
| Th | 0.48 |
| Sr | – |
| Rb | 0.697 |
| Li | 3.7 |
| Ba | 36.7 |
| La | 2.67 |
| Ce | 7.02 |
| Nd | 4.49 |
| Sm | 1.31 |
| Eu | 0.775 |
| Gd | 1.75 |
| Dy | 1.90 |
| Er | 1.23 |
| Yb | 1.16 |
| Lu | 0.169 |