

## Rake Samples from Station 6

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The collection of samples by raking the soil and shaking out the fine material has proven to be one of the best ways to sample the lunar surface. Fig. 1 shows the rake used on the Moon. It has wires spaced at 1 cm in the scoop so that everything less than 1 cm will shake out. The Station 6 rake sample was taken from the rim of a small (~10 m) subdued crater about 20 meters west of the large boulders (Fig. 2).

The rake samples collected at Station 6 were originally cataloged by Butler (1973) and Phinney et al.

(1975). They are also discussed in Wolfe and others (1981). A large soil sample, 76501, was also collected at the same location, and the coarse fines (4 mm-1 cm) sieved from it were cataloged by Meyer (1973). Jolliff et al. (1993) are studying the 2-4 mm coarse fines from the North Massif (Fig. 3). Sample 76505 and 76506 were sieved from soil 76501.

A surprisingly large amount of mare material from the valley floor is found included in this rake sample, considering that this site was located

on the talus of the North Massif. The Station 6 rake sample was important because it collected 76535 (a pristine troctolite), which has become our most interesting sample of the Moon.

The rake samples were returned in SCB 4/558. The residue from this bag is numbered 76530. A summary of the rock types found in this rake sample is given in Table 1.

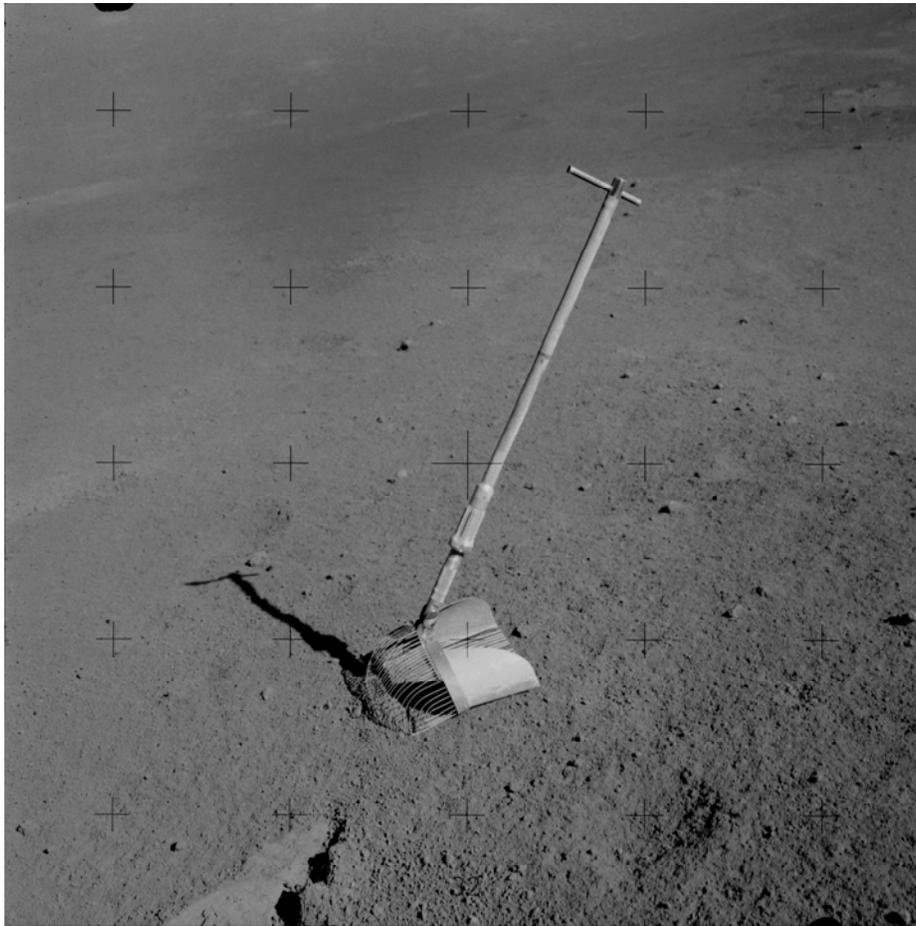


Figure 1: Rake used to collect samples. Wires spaced at 1 cm. AS17-142-21706.

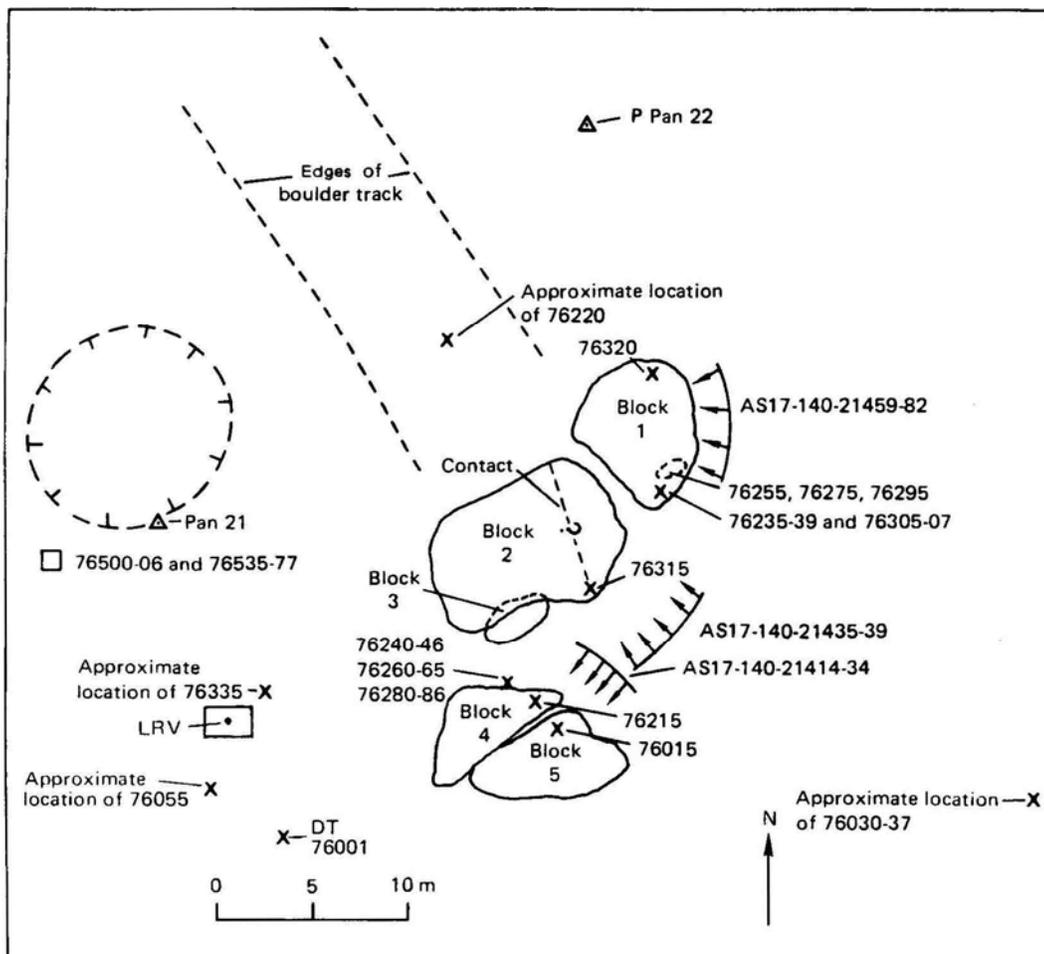


Figure 2: Sketch map of Station 6 showing the location of the area where the rake samples were collected.

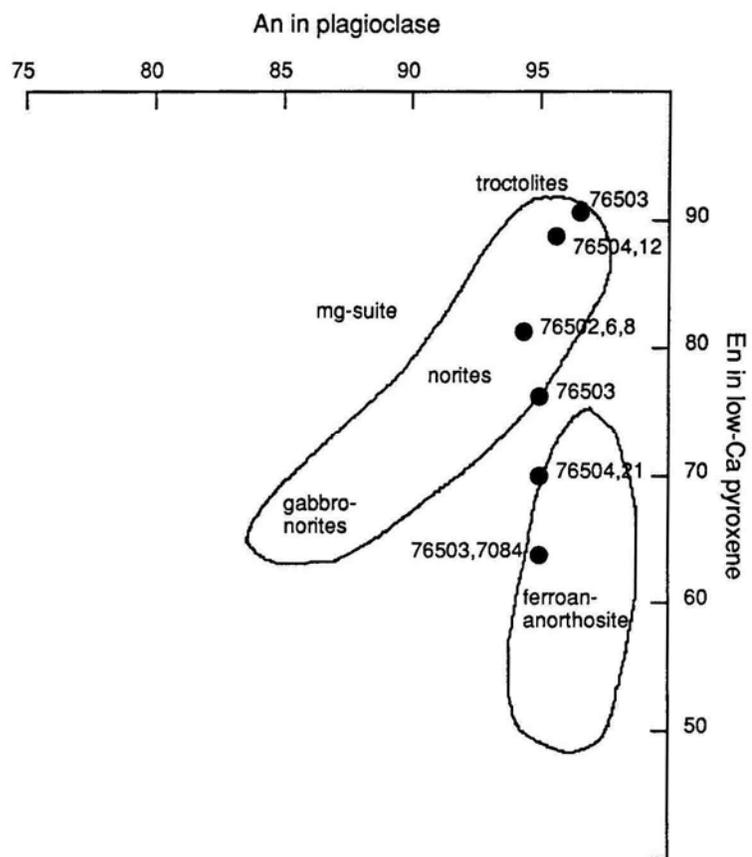


Figure 3: Plagioclase vs. pyroxene composition diagram. Fields are from James and Flohr (1983). Data are from Jolliff et al. (1993).

**Table 1: Summary of rake samples from Station 6.**

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76535	Troctolite
76536	Crushed Troctolite
76537	High-Ti Mare Basalt
76538	High-Ti Mare Basalt
76539	Aphanitic High-Ti Mare Basalt
76545	Dark Matrix Regolith Breccia
76546	Dark Matrix Regolith Breccia
76547	Dark Matrix Regolith Breccia
76548	Dark Matrix Regolith Breccia
76549	Dark Matrix Regolith Breccia
76555	Micropoikilitic Impact Melt Breccia
76556	Micropoikilitic Impact Melt Breccia
76557	Micropoikilitic Impact Melt Breccia
76558	Impact Melt Breccia
76559	Poikilitic Impact Melt Breccia
76565	Dark Matrix Regolith Breccia
76566	Dark Matrix Regolith Breccia
76567	Light Matrix Regolith Breccia
76568	Aphanitic High-Ti Mare Basalt
76569	Aphanitic Impact Melt Breccia
76575	Feldspathic Impact Melt Breccia
76576	Micropoikilitic Impact Melt Breccia
76577	Poikilitic Impact Melt Breccia

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