

BOULDER 1, STATION 2**Sample 72215; 72235; 72255; 72275**

Boulder 1 at Station 2 was one of three boulders sampled on the lower slopes of the South Massif. The immediate area is a strewn boulder field about 50 m above the break in slope at the base of the massif, and has a slope of 5° to 10° to the north (Fig. 1). The boulders probably came to rest on the light deposit after rolling from the upper portions of the massif, although none had tracks leading to them. In the field the light blue-gray color of Boulder 1 appeared to match that of blue-gray materials observed near the top of the west portion of the South Massif (Schmitt, 1973). The boulder lay approximately 35 m southwest of the LRV parking spot (Fig. 1).

Boulder 1, Station 2 is a 2 m boulder with a uniquely foliated or layered structure (Fig. 2). It was embedded in the regolith, projecting 1 m above the soil line, with a well-developed fillet about 30 cm high on the uphill side (fillet material was sampled as 72220, 72240 and 72260). The surface of the boulder had five roughly parallel layers, studded with knobs ranging in diameter from 1 to 15 cm, giving the appearance of being highly eroded. The knobs were reported by the crew to be mostly fine-grained clasts eroded from a more friable fine-grained matrix. The crew also reported dark elongate clasts parallel to the layering, but these are not discernable in the photographs.

Some closely spaced shear planes and open cracks cross-cut the boulder normal to the layering. The surface of the boulder is rough and grainy and has a light, spotty patina of the type that develops on friable materials as they constantly shed small particles (Marvin, 1975).

The astronauts took four specimens from three different layers in the southeast face of the boulder (Fig. 2). All four samples are complex polymict breccias, and show that the boulder is unique in several respects other than its morphology. Each of the samples was a prominent feature on the boulder (Marvin, 1974). 72275 stood up in bold relief at the top; 72235 was a black knob from a

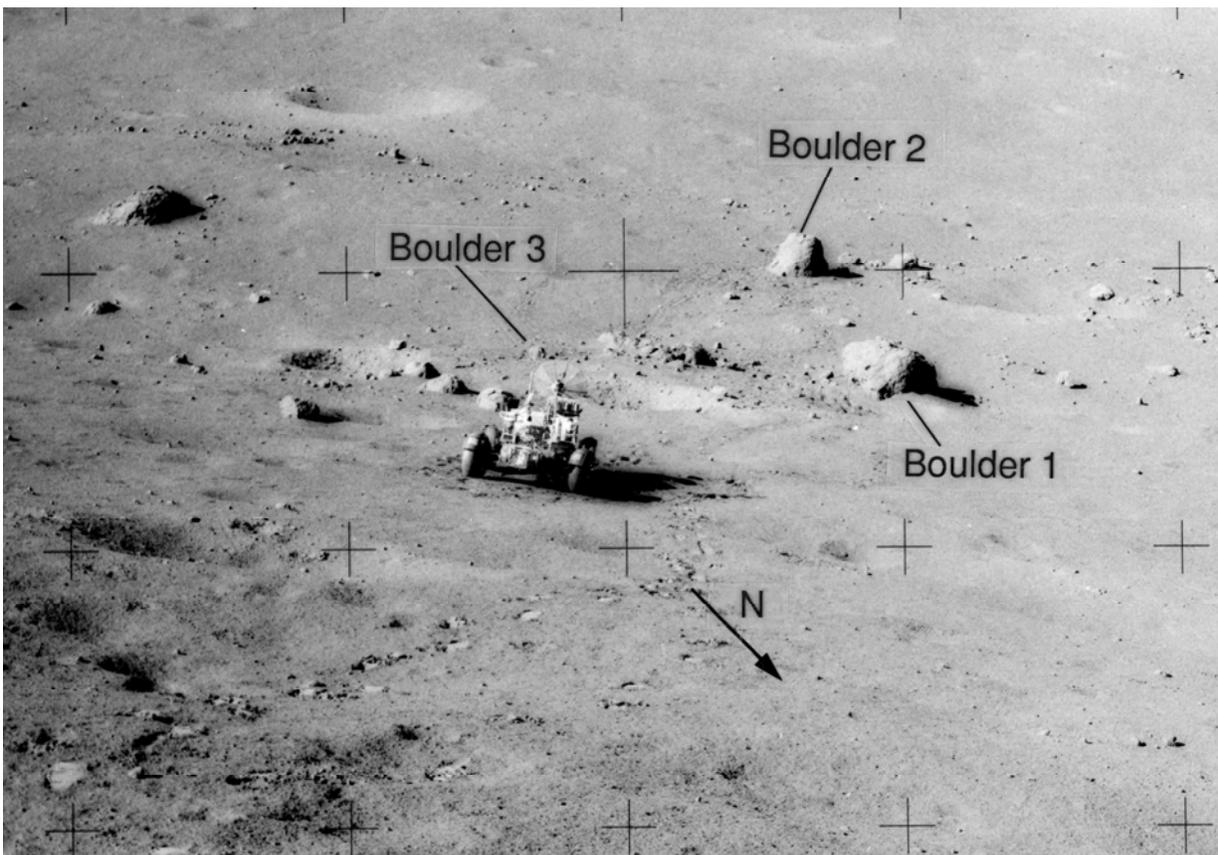


Figure 1: Location of Boulders at Station 2. The view is approximately to the south into the South Massif, showing the horizon at the top of the mountain. The distance from the LRV to the farthest boulder is about 50 m. (AS17-138-21072).

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lower portion of the same layer; and 72215 and 72255 were gently rounded bulges on two different layers. Most of the studies on all

four samples of Boulder 1 were conducted by the Consortium Indomitabile, led by J.A. Wood (see in particular the Consortium

Indomitabile reports, Vols. 1 and 2, 1974; and the special issue of The Moon, Vol. 14, #314, 1975).



Figure 2: The southeast face of Boulder 1, Station 2 prior to sampling, and showing sampling locations. The foliate/layered morphology of the boulder is clearly visible. The gnomon has a height of 62 cm. (AS17-138-21030).