15287 REGOLITH BRECCIA ST. 6 44.9 g

INTRODUCTION: 15287 is a coherent regolith breccia which is generally fine-grained. It has a typical complement of regolith breccia constituents. Its composition is more KREEP-rich than local soils. It is olive gray, blocky, subrounded, and smooth (Fig. 1). It had many zap pits on one side but few on others. The sample was collected (along with 15259, 15256 to 15269, 15285, 15286, 15288, and 15289) from the crest of an inner bench on the northeast rim of the 12 m crater, downslope 15 m from the LRV. Like several other samples, it was lying very close to 15265-15267 and may have spalled from it. However, it has not been identified in site photographs.

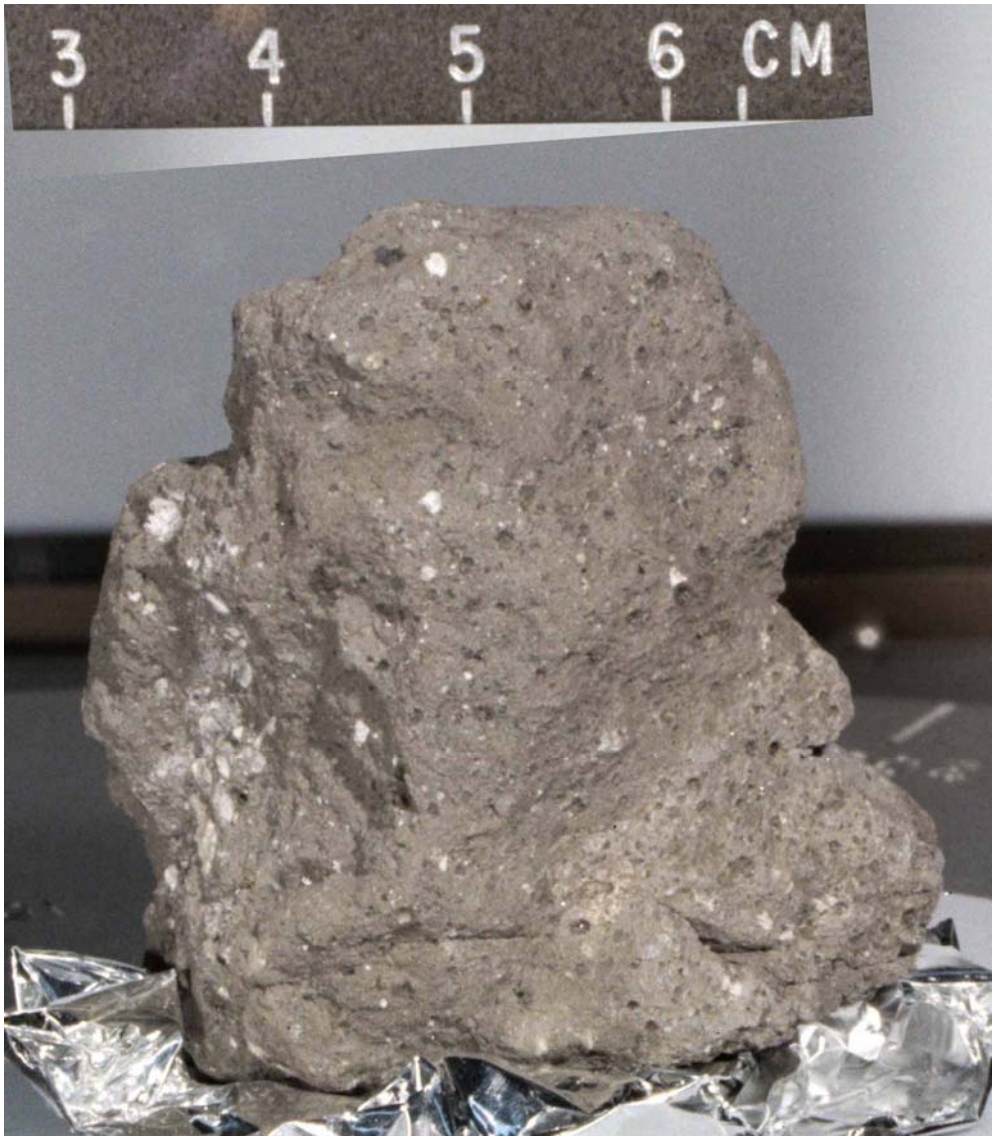

Figure 1. Pre-split view of 15287. S-71-44537

PETROLOGY: 15287 is a fine-grained regolith breccia (Fig. 2). It is very porous, and generally it constituents are unshocked. Its glass fragments are mainly colorless or devitrified brown. Varied glassy or glassy breccia clasts are present. A few partly crystalline green glass spheres are present. Lithic clasts include mare basalts and possibly small KREEP basalt fragments. McKay et al. (1984) reported an I_s/FeO of 19 to 29, which Korotev (1984 unpublished) reported as 28.

CHEMISTRY: An analysis, mainly for trace elements, was made by Korotev (1984 unpublished) (Table 1, Fig. 3). 15287 appears to be more KREEP-rich than local soils, is like 15265 and its other possible spalls, and is possibly exotic and spalled off 15265-15267.

PROCESSING AND SUBDIVISIONS: ,1 was knocked cleanly off the top (Fig. 4) and was made into a potted butt. Thin sections ,5; ,7; and ,8 have been cut from it. ,0 was later chipped to obtain interior matrix chips ,10 and ,11.

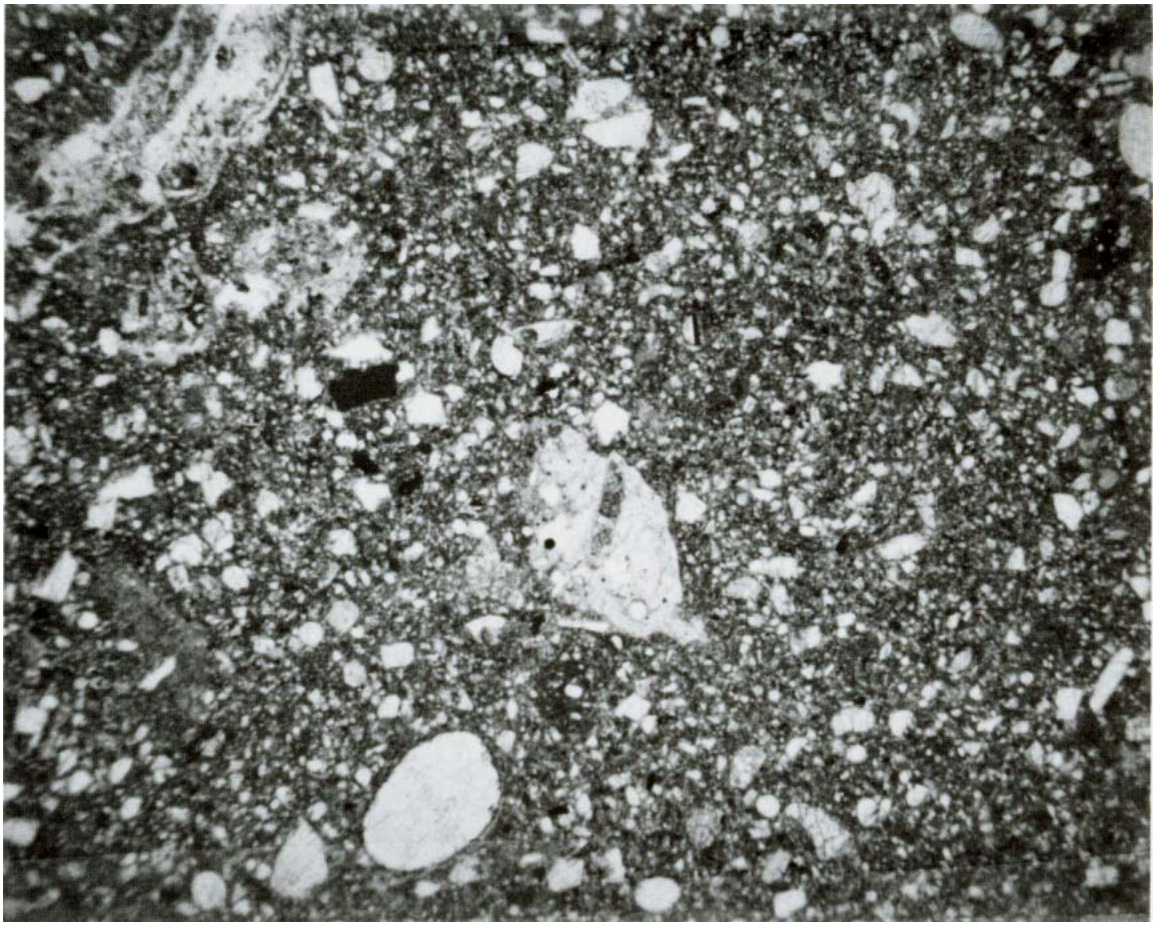

Figure 2. Photomicrograph of 15287,7.
Width about 2 ram. Transmitted light.

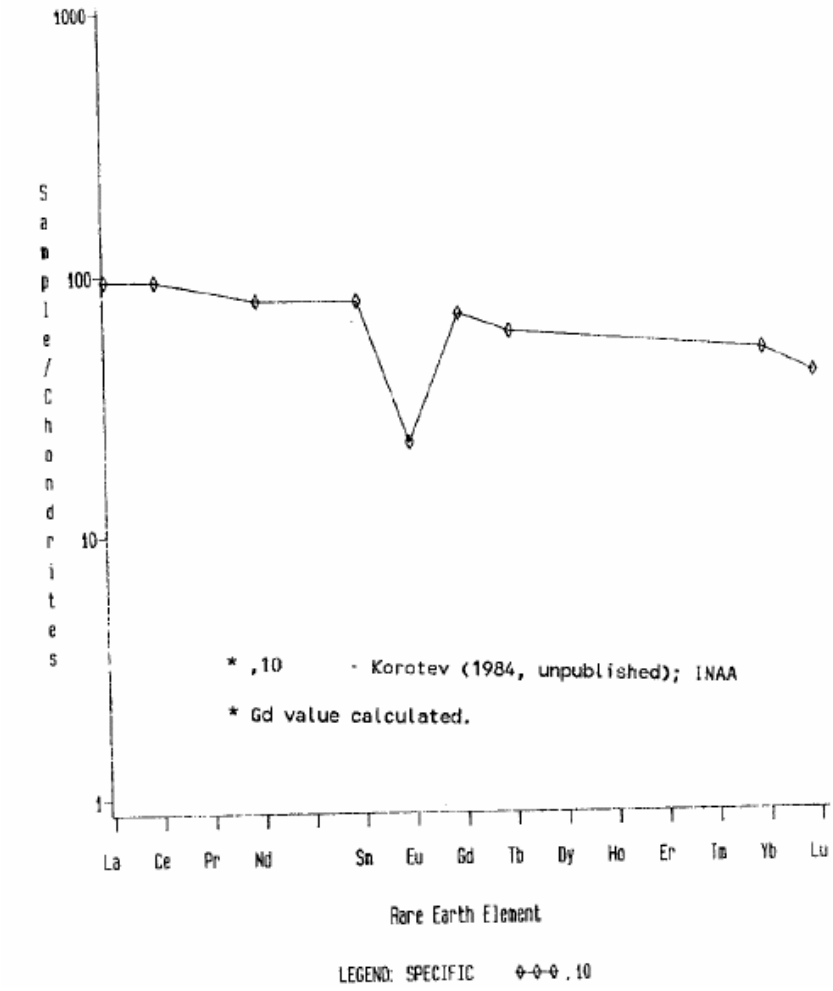

Figure 3. Rare earths in 15287 matrix.

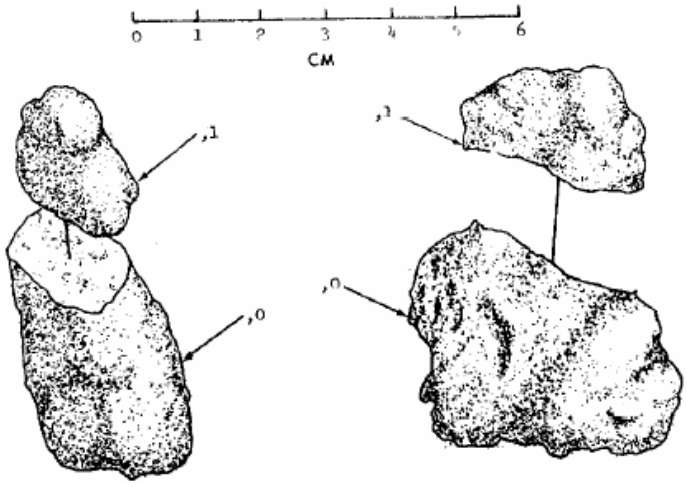

Figure 4. Original chipping of 15287.

TABLE 15278-1. Chemical analyses

		,10
Wt %	SiO2	
	TiO2	
	Al2O3	
	FeO	11.4
	MgO	
	CaO	10.3
	Na2O	0.50
	K2O	
	P2O5	
(ppm)	Sc	22.2
	V	
	Cr	2100
	Mn	
	Co	41.5
	Ni	239
	Rb	
	Sr	130
	Y	
	Zr	440
	Nb	
	Hf	12.0
	Ba	324
	Th	5.6
	U	1.3
	Pb	
	La	31.7
	Ce	84
	Pr	
	Nd	48
	Sm	14.4
	Eu	1.57
	Gd	
	Tb	2.82
	Dy	
	Ho	
	Er	
	Tm	
	Yb	10.2
	Lu	1.41
	Li	
	Be	
	B	
	C	
	N	
	S	
	F	
	Cl	
	Br	
	Cu	
	Zn	
(ppb)	I	
	At	
	Ga	
	Ge	
	As	
	Se	
	Mo	
	Tc	
	Ru	
	Rh	
	Pd	
	Ag	
	Cd	
	In	
	Sn	
	Sb	
	Te	
	Cs	360
	Ta	1400
	W	
	Re	
	Os	
	Ir	6.8
	Pt	
	Au	3.0
	Hg	
	Tl	
	Bi	
		(1)

References and methods:

(1) Korotev (1984, unpublished); INAA