15528 REGOLITH BRECCIA ST. 9A 4.7 g

INTRODUCTION: 15528 is a friable regolith breccia with a composition apparently quite different from local regolith. It is brownish gray and subrounded (Fig. 1) and has a smooth surface with few to no zap pits. 15528 was collected approximately 60 m northeast of the rim of Hadley Rille, near 15529, but it has not been identified on photographs.

Figure 1. Macroscopic, pre-chip view of 15528. S-71-43647

PETROLOGY: 15528 is a friable regolith breccia containing a few prominent basalt clasts (Figs. 1, 2). The large basaltic fragment in Figure 2 appears to be a KREEP basalt. Diverse glass and mineral fragments are common. McKay et al. (1984) measured an I_s/FeO of 16-25 (21 in Korotev, 1984, unpublished), an immature index.

Figure 2. Photomicrograph of 15528,4.
Width about 3 mm. Transmitted light.

CHEMISTRY: A bulk analysis of a small 145 mg) sample was made by Korotev (1984, unpublished) (Table l, Fig. 3). The composition is unlike local regolith or any other regolith at the Apollo 15 site, being very high in incompatible elements. It appears to be rich in an Apollo 15 KREEP basalt component. Either the analyzed sample was unrepresentative or the sample is exotic, at least to Station 9A.

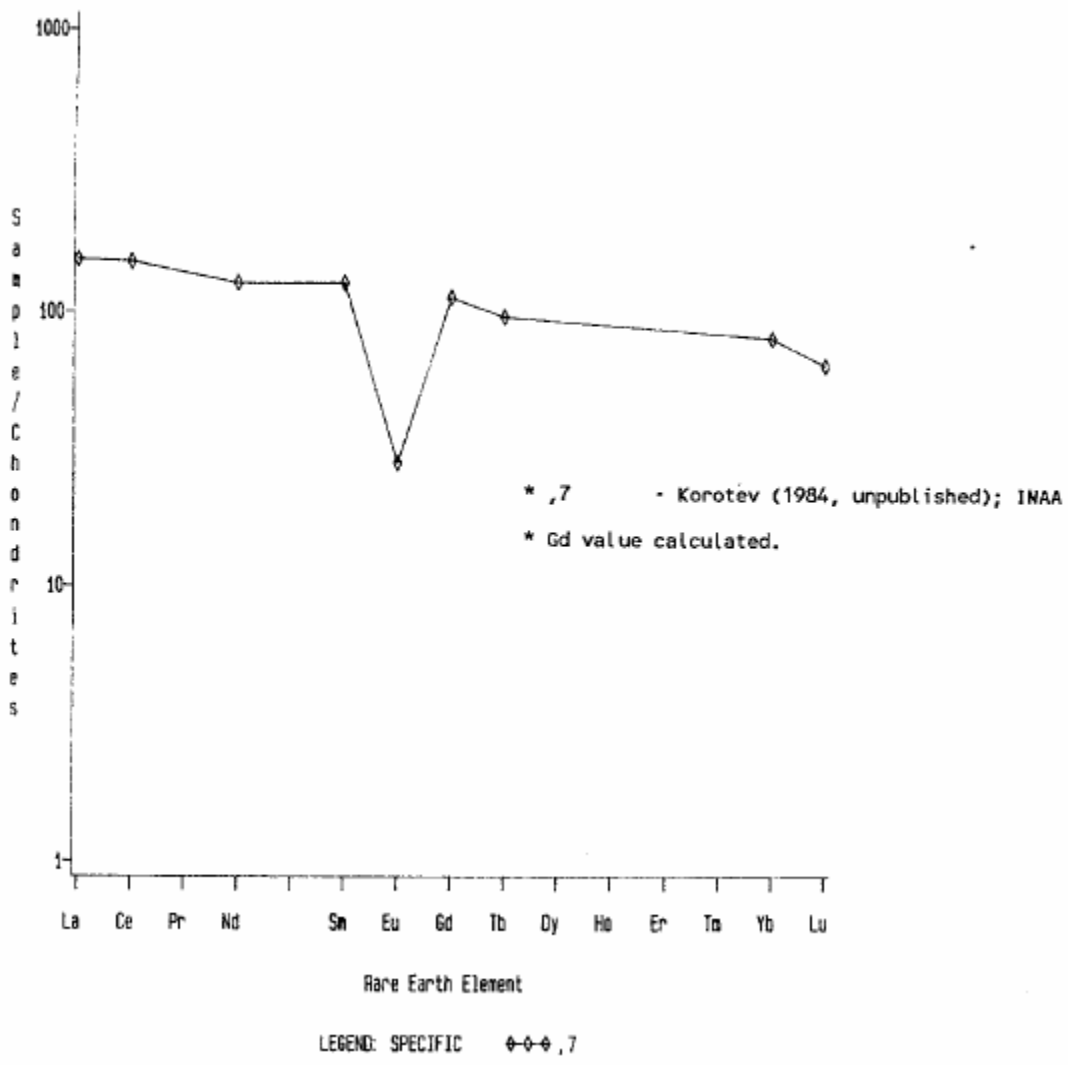

Figure 3. Rare earths in 15528,7 (bulk rock).

PROCESSING AND SUBDIVISIONS: Chipping Produced ,1, from which thin sections ,5 and ,6 were made. During this chipping, several other chips were produced. These appear to have partly disintegrated in storage. ,7 was picked from one of these small fragments in 1984 for petrographic and chemical study.

TABLE 15528-1. Bulk rock chemical analysis ,7

		,7
Wt%	SiO2	
	TiO2	2.03
	Al2O3	13.8
	FeO	13.0
	MgO	9.3
	CaO	10.1
	Na2O	0.62
	K2O	
	P2O5	
(ppm)	Sc	26.4
	V	78
	Cr	2410
	Mn	1375
	Co	29.0
	Ni	75
	Rb	
	Sr	130
	Y	
	Zr	740
	Nb	
	Hf	19.3
	Ba	521
	Th	8.7
	U	2.3
	Pb	
	La	51.2
	Ce	134
	Pr	
	Nd	76
	Sm	23.0
	Eu	1.95
	Gd	
	Tb	4.52
	Dy	
	Ho	
	Er	
	Tm	
	Yb	16.1
	Lu	2.20
	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	480
	Ta	2170
	W	
	Re	
	Os	
	Ir	<3
	Pt	
	Au	<5
	Hg	
	Tl	
	Bi	
		(1)

References and methods:

(1) Korotev (1984, unpublished); INAA