63529 – 23.5 grams
63557 – 7.5 grams
Impact Melt Breccia

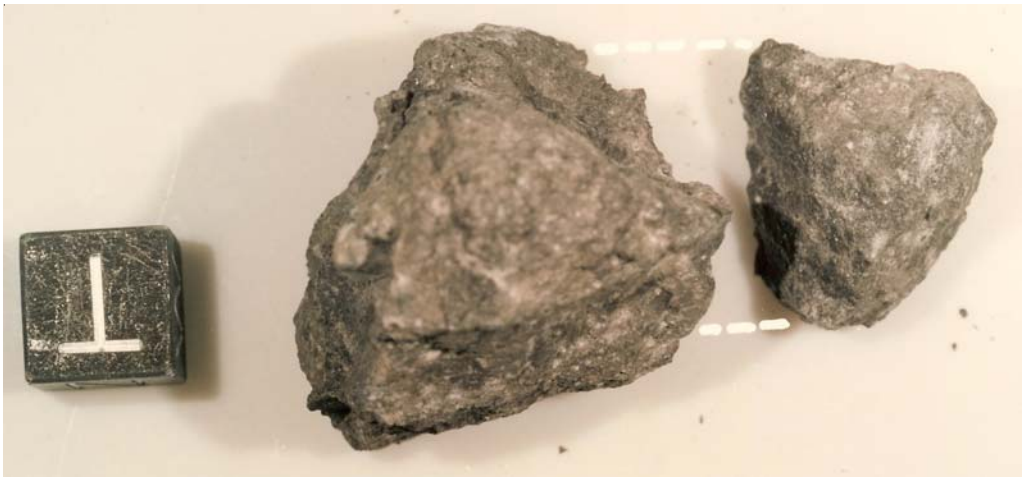


Figure 1: Photo of 63529. Cube is 1 cm. S92-44046

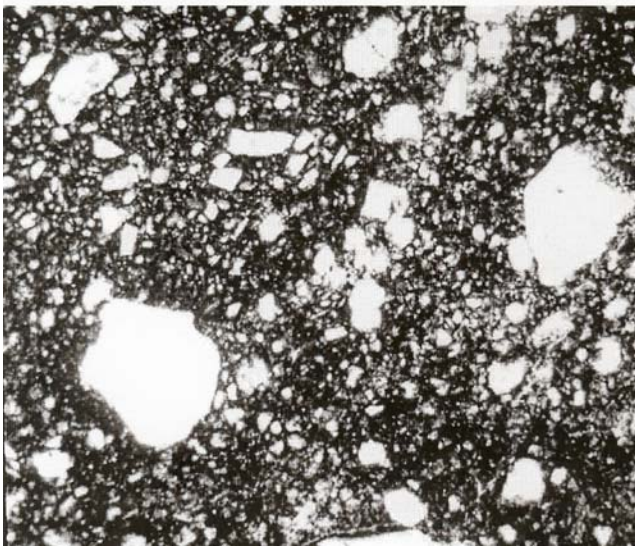


Figure 2: Thin section photomicrograph of 63529 (from Ryder and Norman 1980).

Introduction

The rake sample from station 13 was collected near Shadow Rock; the material may be from North Ray Crater – see section on 63501. 63529 and 63557, along with 63525 etc. are dark, homogeneous, coherent fine-grained impact melt breccias.

Petrography

Phinney and Lofgren (1972) and Norman and Ryder (1980) describe these fragments as medium dark grey, fine-grained impact melt. Warner et al. (1973) called them "meta-norite". In thin section they look a lot like 63525. They have a similar clastic texture with a dense microcrystalline matrix (figure 2).

Chemistry

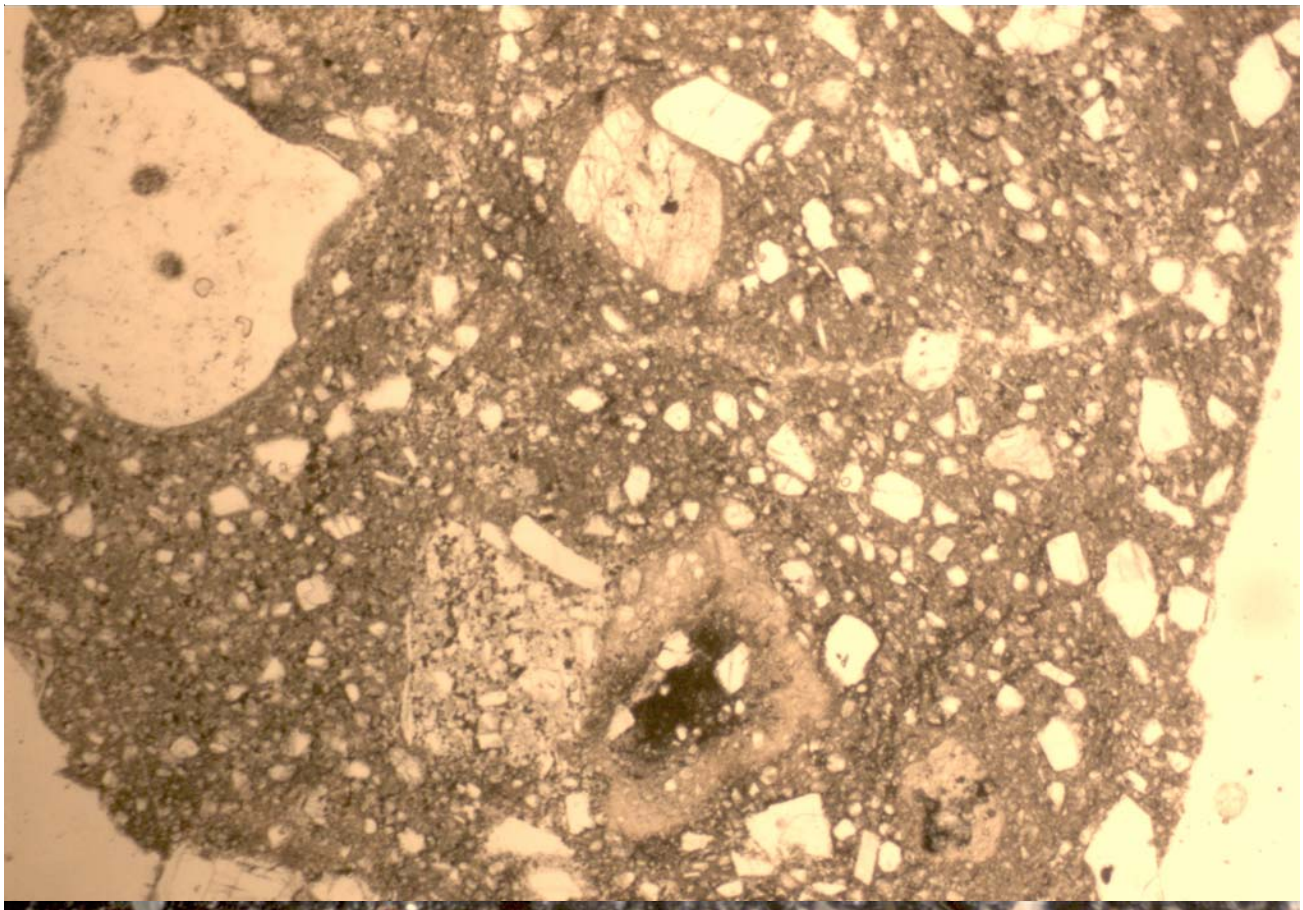
Stoffler et al. (1985) reported the composition of 63529. Floran et al. (1976) and Blanchard (unpublished) provide preliminary analyses of 63557 (figure 3).

Radiogenic age dating

none

Processing

There are two thin sections of 63529 and one for 63557.



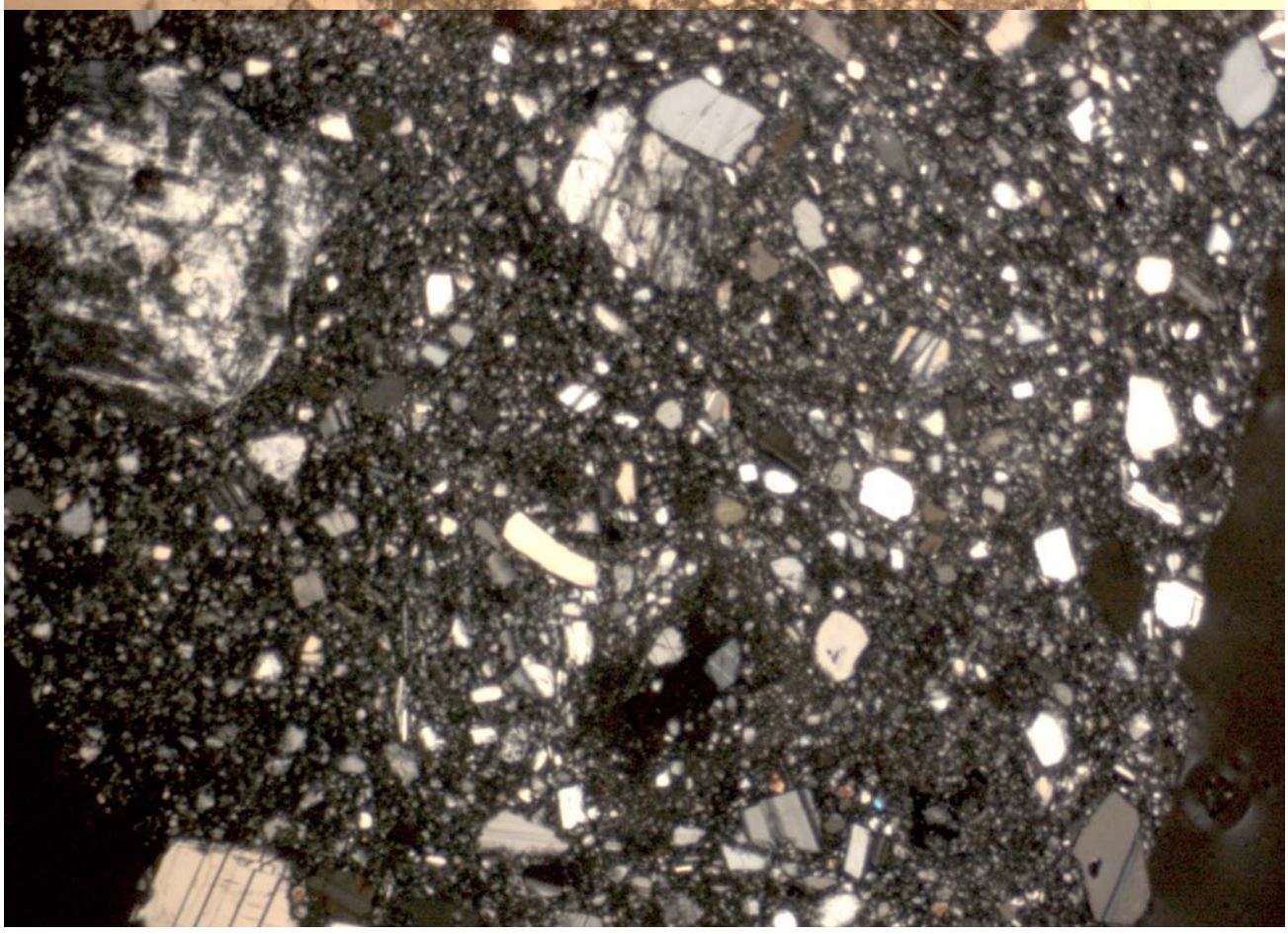
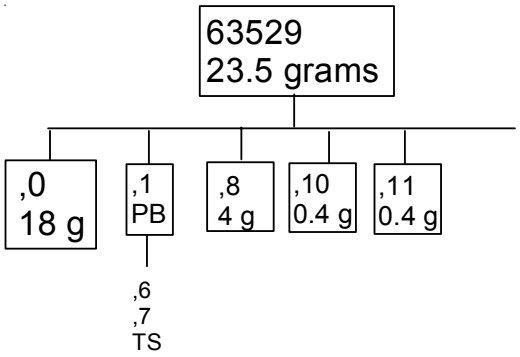


Table 1. Chemical composition of 63557

	63529		63557	
reference	Stoffler85		Floran76	
weight			Ryder80	
SiO2 %	45.6	(b)	44.74	(a)
TiO2	0.24	(b)	0.38	(a)
Al2O3	31.4	(b)	29.84	(a)
FeO	2.57	(b)	3.5	(a)
MnO	0.02	(b)		
MgO	2.38	(b)	3.2	(a)
CaO	17.2	(b)	17	(a)
Na2O	0.46	(b)	0.62	(a)
K2O	0.04	(b)	0.08	(a)
P2O5	0.05	(b)		
S %				
sum				
Sc ppm			6.2	(a)
V				
Cr				
Co			7.2	(a)
Ni			44	(a)
Cu				
Zn			9	(a)



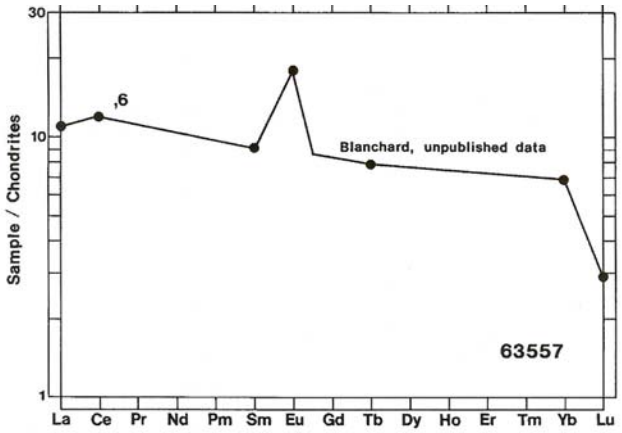
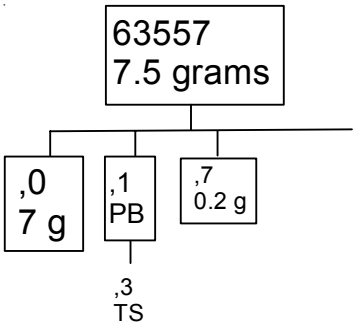


Figure 3: Normalized rare-earth-element diagram for 63537 (unpublished data by Blanchard).



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