

78238**Shocked Norite****57.58 g, 5.9 x 4.5 x 3.5 cm****INTRODUCTION**

Sample 78238 is another piece of the same norite as 78235 (*see section on the boulder at Station 8*). It is a heavily shocked, coarse-grained, plutonic norite of cumulate origin. It also has a coating of black glass. It has a penetrating vein of black glass which includes vesicles (Fig. 1).

MINERAL CHEMISTRY

Fig. 2 shows the shocked plagioclase and crushed pyroxene. McCallum and Mathez (1975), Hewing and Goldstein (1975), and Sclar and

Bauer (1975) found that the composition of iron metal in 78238 was high in Co and low in Ni (Fig. 3). These Co-rich metal grains are found in both the shocked coarse zones and finer-grained crushed zones in the rock. These high-Co metal grains presumably crystallized slowly from intercumulus liquid. Mehta and Goldstein (1980) have studied metal in glass and found it to contain more Ni.

WHOLE-ROCK CHEMISTRY

The composition of 78238 has not been determined.

RADIOGENIC ISOTOPES

Sample 78238 has not been dated.

THE SURFACE

The original catalog (Butler, 1973) notes that the glass coating on 78238 is pitted. There are 10-15 pits/cm² on the T, N, and S surfaces.

PROCESSING

The largest piece of 78238 weighs 56 g. There are only three thin sections.

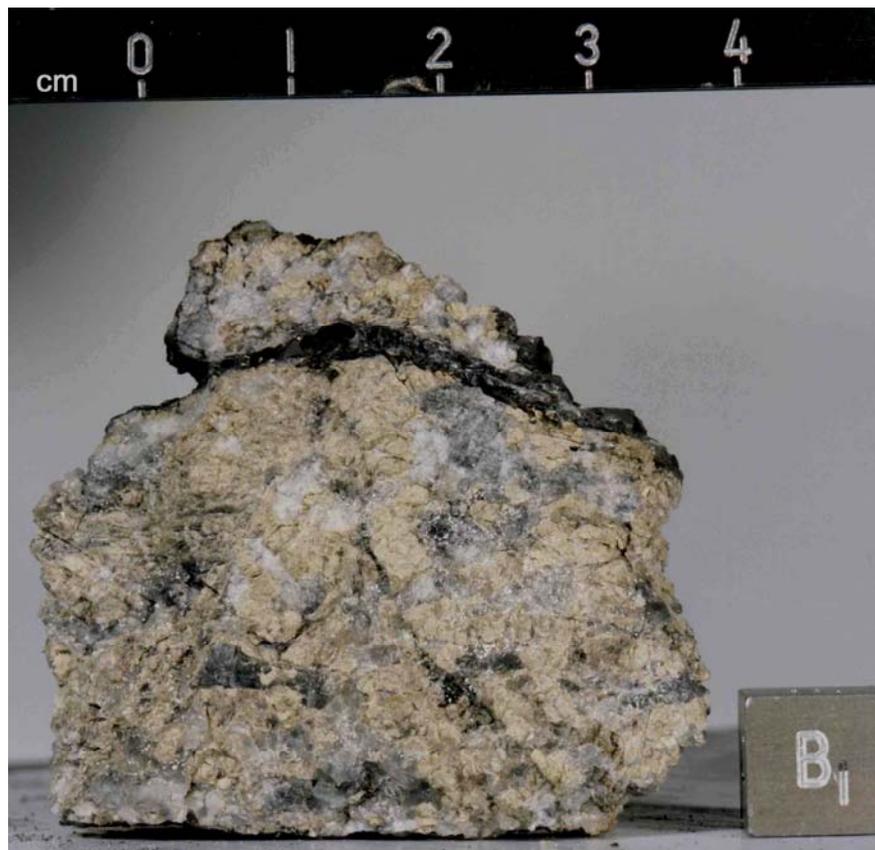


Figure 1: Photograph of 78238. Cube is 1 cm. S73-15461.

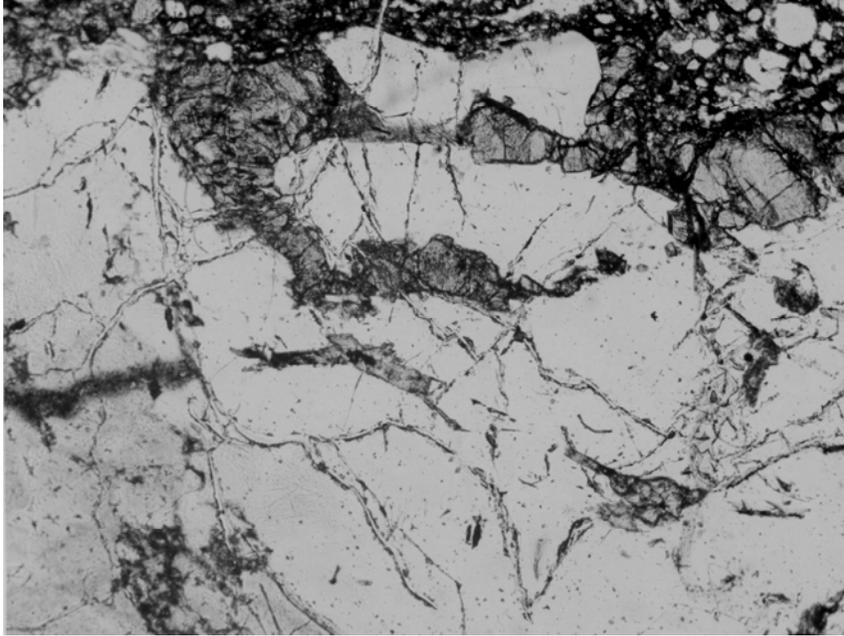


Figure 2: Photomicrograph of thin section 78238,8. Field of view is 3 x 4 mm.

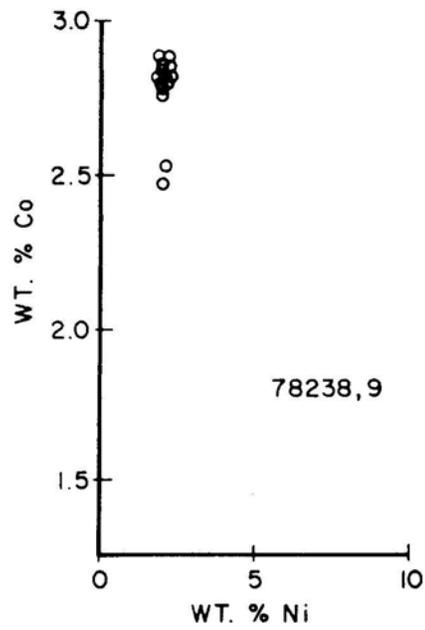


Figure 3: Composition of metal grains in 78238. From Hewins and Goldstein (1975)