

NWA 3138

BASALTIC EUCRITE (Type 5) Morocco



Specimen: 7.3 grams Full Slice 45mm x 41mm x 2mm Rim has 75% fusion crust

Classification: A complete, very fresh stone (132 g; 63mm x 43mm x 40mm) with thin black fusion crust was purchased from a Moroccan dealer at the Tucson Gem and Mineral Show by Philip C. Mani in February 2004. Classification and mineralogy (A. Irving and S. Kuehner, *UWS*): Ophitic texture. Mainly inverted pigeonite and calcic plagioclase ($An_{88.7-89.6}Or_{0.3-0.4}$) with accessory ilmenite, silica polymorph, Ti-Al-bearing chromite, orthopyroxene (as inclusions within plagioclase), and sparse troilite (mainly as blebs within silica) and altered Ni-poor iron metal. Pyroxene grains consist of coarse lamellae of augite ($Fs_{30.6}Wo_{37.2}$, FeO/MnO = 28.1) within orthopyroxene ($Fs_{62.7}Wo_{1.3}$, FeO/MnO = 33.0), and coarse lamellae of orthopyroxene ($Fs_{62.1}Wo_{1.7}$, FeO/MnO = 31.1) within augite ($Fs_{23.5}Wo_{42.1}$, FeO/MnO = 30.6). Minor secondary calcite laths occur around silica along a crack. Although the pyroxene and plagioclase compositions in this specimen are almost identical to those in NWA 3137, the textures are quite different, and these two stones are not paired. Specimens: type specimens, 20.7 g, and one polished thin section, *UWS*; main mass, *Mani*.

– From the Mani Collection

NWA 3138

BASALTIC EUCRITE (Type 5) Morocco



Specimen: 6.3 grams Full Slice 40mm x 38mm x 2mm Rim has 90% fusion crust

Classification: A complete, very fresh stone (132 g; 63mm x 43mm x 40mm) with thin black fusion crust was purchased from a Moroccan dealer at the Tucson Gem and Mineral Show by Philip C. Mani in February 2004. Classification and mineralogy (A. Irving and S. Kuehner, *UWS*): Ophitic texture. Mainly inverted pigeonite and calcic plagioclase ($An_{88.7-89.6}Or_{0.3-0.4}$) with accessory ilmenite, silica polymorph, Ti-Al-bearing chromite, orthopyroxene (as inclusions within plagioclase), and sparse troilite (mainly as blebs within silica) and altered Ni-poor iron metal. Pyroxene grains consist of coarse lamellae of augite ($Fs_{30.6}Wo_{37.2}$, FeO/MnO = 28.1) within orthopyroxene ($Fs_{62.7}Wo_{1.3}$, FeO/MnO = 33.0), and coarse lamellae of orthopyroxene ($Fs_{62.1}Wo_{1.7}$, FeO/MnO = 31.1) within augite ($Fs_{23.5}Wo_{42.1}$, FeO/MnO = 30.6). Minor secondary calcite laths occur around silica along a crack. Although the pyroxene and plagioclase compositions in this specimen are almost identical to those in NWA 3137, the textures are quite different, and these two stones are not paired. Specimens: type specimens, 20.7 g, and one polished thin section, *UWS*; main mass, *Mani*.
– From the Mani Collection