

## Northwest Africa 4483 Specifications

Algeria

Find: July 2006

Achondrite (lunar, granulitic breccia)

**History:** Purchased by Stefan Ralew in July 2006 from a dealer in Erfoud, Morocco.

**Physical characteristics:** Twelve broken fragments of very fine-grained, pale grey rock with a combined weight of 208 g.

**Petrography:** (A. Irving and S. Kuehner, *UWS*) Fine grained recrystallized breccia composed of larger plagioclase grains (converted mainly to maskelynite) poikilitically enclosing very small grains (mostly 30–80  $\mu\text{m}$ ) of low-Ca pyroxene (some with very fine augite exsolution lamellae), olivine, Ti-chromite, ilmenite, troilite, and metal.

**Geochemistry:** Olivine ( $\text{Fa}_{30.9-60.8}$ ,  $\text{FeO/MnO} = 88.1-106$ ), plagioclase ( $\text{An}_{96.2-98}\text{Or}_{<0.1}$ ), orthopyroxene ( $\text{Fs}_{14.3}\text{Wo}_{2.0}$ ,  $\text{FeO/MnO} = 52.6$ ), pigeonite ( $\text{Fs}_{36.4-75.1}\text{Wo}_{6.3-13.5}$ ,  $\text{FeO/MnO} = 62.9-66.5$ ).

**Classification:** Achondrite (lunar, granulitic breccia). Possibly paired with [Northwest Africa 3163](#) (Irving et al. 2006).

**Specimens:** A total of 20 g and one polished mount are on deposit at *UWS*. *Ralew* holds the main mass.

**State/Prov/County:**Algeria

**Date:**2006

**Mass (g):**208

**Pieces:**12 fragments

**Class:**Lunar granulitic breccia

**Fayalite (mol%):**30.9-60.8

**Ferrosilite (mol%):**14.3, 36.4-75.1

**Wollastonite (mol%):**2,6.3-13.5

**Classifier:**A. Irving and S. Kuehner, *UWS*

**Type spec mass (g):**20

**Type spec location:***UWS*

**Main mass:***Ralew*