

**SAYH AL UHAYMIR 150 - A FURTHER FRAGMENT OF THE SAU-SHERGOTTITE SHOWER.** R. Bartoschewitz<sup>1</sup>, P. Appel<sup>2</sup>, <sup>1</sup> BML, Lehmweg 53, D-38518 Gifhorn, Germany (Bartoschewitz.Meteorite-Lab@t-online.de), <sup>2</sup> Inst. für Geowiss. der Univ., Olshausenstr. 40, D-24098 Kiel, Germany

**Introduction:** On October 8th, 2002 a meteorite suspected stone of 107.7 g was found on a gravel plateau of Miocene fresh-water limestone [1] 43.3 km south of Ghaba/Oman. It was discovered by one of the authors (RB) and his son.

**Petrography and Mineralogy:** The angular stone with one small area of about 1 cm<sup>2</sup> black-brown fusion crust exhibits macroscopically dark brownish-gray crystals in an olive-gray matrix. The cut surface additionally shows vesicles up to 2 mm, some are filled with white alteration products (calcite, gypsum).

Thin sections show a micro-gabbroic texture of brownish porphyric olivine up to 3 mm embedded in a matrix of prismatic clinopyroxene crystals up to 2 mm and interstitial maskelynite, accompanied by several opaque minerals. Brown mostly feathery recrystallized melt pockets and veinlets are present. Olivine shows small dark melt inclusions and strong mosaicism. Twin lamellae of clinopyroxene are parallel to (001) and sometimes slightly curved. Point counting of two thin sections of 40 mm<sup>2</sup> each yielded:

olivine	23 vol-%	opaque minerals	1 vol-%
clinopyroxene	56 vol-%	melt and holes	3 vol-%
maskelynite	17 vol-%		

Microprobe measurements were performed with a JEOL JXA 8900 R microprobe at the University of Kiel. The minerals are in the following compositional range:

Olivine	Fo64-67	FeO/MnO 50-57
Pigeonite	En62-69	Wo7-11
Maskelynite	An53-66	Or<1

Rare pyroxene with En65-66Fs34-35 is interpreted as orthopyroxene based on Wo<5 [2].

Texture and mineralogy reflect a basaltic shergottite with relations to the lherzolitic (wehrlitic) shergottites. According to Goodrich [3] SaU 150 should be classified as olivine-phyric shergottite. O-Isotopes  $\delta O-17 +2.78$  and  $\delta O-18 +4.74$  plot in the SNC field and confirm the petrological classification.

**Pairing:** Petrological data and mineral-chemistry of SaU 150 meet those of the well described SaU 094 [4] and the further five published olivine-phyric shergottites SaU 005/008/051/060/090, discovered within an area of approximately 3.3 km<sup>2</sup> between 1998 and 2002 [5-7], thus SaU 150 is most probably paired with them.

A pairing of SaU-shergottites with the very similar Dar al Gani 476/489/670/735/876 shergottites from Libya was also under discussion [8, 9]. Nishiizumi et al. presented for DaG-shergottites a <sup>14</sup>C-<sup>10</sup>Be terrestrial age of about 60 kyr [9] while for SaU 005 about 13 kyr [10] is reported, confirming two distinct terrestrial events.

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**References:** [1] Le Metour J. et al. (1995) *Geology and Mineral Wealth of the Sultanate of Oman*. Ministry of Petroleum and Minerals, Directorate General of Minerals, Sultanate of Oman, Muscat, Oman. 285 pp. [2] Zipfel J. et al. (2000) *MAPS*, **35**, 95-106. [3] Goodrich C.A. (2002) *MAPS*, **35**, B31-B34. [4] Gnos E. et al. (2002) *MAPS*, **37**, 835-854. [5] Grossman J.N. et al. (2001) *MAPS*, **36**, A293-A322. [6] Russell S.S. et al. (2002) *MAPS*, **35**, A157-184. [7] Russell S.S. et al. (2003) *MAPS*, **36**, (in preparation). [8] Bartoschewitz R. et al. (2001) *MAPS*, **36**, A15. [9] Nishiizumi K. et al. (2001) *LPI*, **32**, CD-ROM (#2117). [10] JULL A.J.T. et al. (2002) *MAPS*, **37**, A74.