27 VI 88 DJM

ALLAN HILLS A81014

0.22 ± 0.03

Bandwidth ~~0.1 - 0.2~~ mm. Kamacite bands surround elongated groups of carbide ~~schreibersite~~ crystals in many places. Fusion crust runs the entire curved surface. In centers of bands are Fe_3C (JTW) or Fe_2NiP (DJM) lamellae.

Roy Clarke (1984) calls this an ataxite. He observed only schreibersite, no other inclusions.

ALLAN HILLS (ALH 84165, 2) IN 1191 IIAB.

7 Aug. The polished and ethed Longth and width of surface is 23 mm and 13mm. The bandwith of kamacite is 200 ~ 800 μm. Some kamacites exhibite recrystalalization texture and with Neumann lines (Fig 1). Taenite Occurs at the rim of, or within Kamicites. (Fig 2) Plessite can be found. Schreibersite can be observed at the rim of kamicite and plessite (Fig

9 - 1.1 mm.

Mean b.w. 0.9 ± 0.1 mm

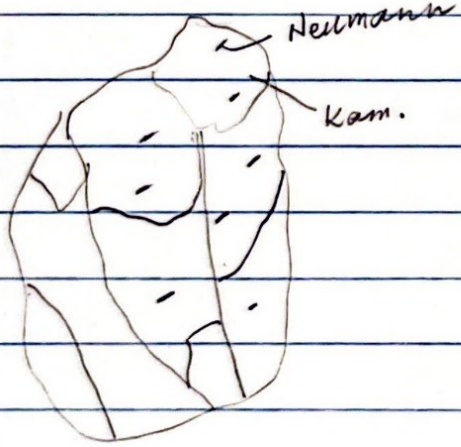


Fig 1.

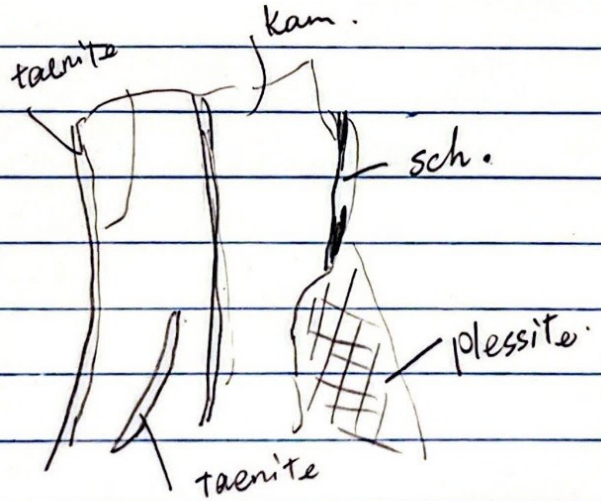


Fig 2.

ablation shaping

Clarke, Antarc Newsletter 9(1) 1986 gives "tentative" bw of 1 mm. Sample shows

Allan Hills

ALH 84233,2

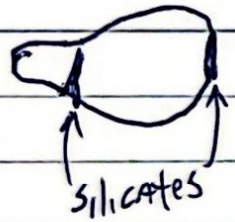
IN 1274

5 May 88

DJ Mahr

(ACTUAL SIZE)

See Antarctic meteorite Newsletter v 10, #2 Aug. 1987

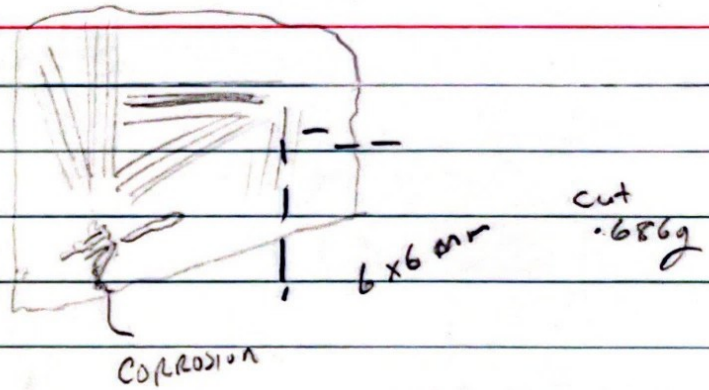


totally recrystallized & shocked metal with two areas of mixed silicate phases. Metal is all α (kamacite). No sulfides or phosphides seen.

Reasonable to infer that it was all originally γ-iron? Probably originally one γ crystal 75 mm across.

Alt Bela IN 879

Moravia, Czech



IID ? 13% Ni

(= Elbogen ?)

α' or α2

Om 0.7mm.

NEB

maybe IIIAB?

BV .5–.8 mm

Kamacite - α_2

parallel ets of ppts in kamacite.

Schreibersite. Eutectic - remelted fingers up grain boundaries,

Taenite

Ni 9 ± 0.5%

/NAA (1) 3 XI 76

(2) 21 IX 77

high Ir → IID def

>10 ppb.

Altonah (Utah, USA)

11 Nov 66. Small 1.0 x 0.5 cm sample, remnant of larger piece from USNM. Polished and etched 30 sec in nital. Sample will be compared to Duchesne, on which I just took notes. Structure is distinct, but somewhat less so than with D. The kam bands are long, and have distinct thin taenite borders. There is a large amount of plessite, perhaps 30% of whole area, at least half of which has transformed to long kam bands ~ 1/5–1/10 thickness of reg kam bands*. The latter are typically 0.15–0.3 mm wide, blues off. No oxidation, no inclusions in this small sample. * D. does not show banded plessite. I tentatively conclude that Altonah + D. are not a paired fall.

Alvord Iowa (USNM-5915) IN1172

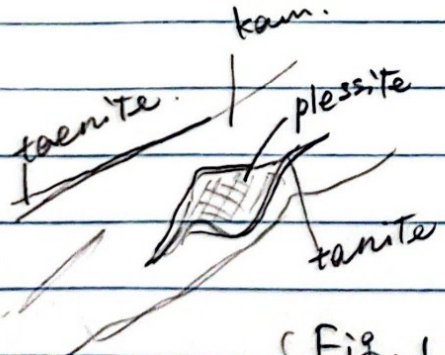
15. Apr. 86. Specimen weighs 9 grams. The polished and etched surface is triangle, with three sides being 8mm. 13mm and 19mm, respectively. The bandwith of Kamacites is about 0.24-0.60mm long, but because the polished surface and the crystal surface of kamacites is not vertical, observed the bandwidth of Kamacites is wider than real wideh. So, actual thichness of kamacites lamellae is about 0.28mm, perhaps it's close real width. Lamellaes of Kamacites form Widmanstätten. Taenites Occur both inside Kamacites and at rim of plessites. (Fig 1). plessites Can found in the Kamacites.

be

R. Clarke b.u. v0.25mm (suspect. notes)

There is an inclusion of chromite (?) within a polycrystalline troilite nodule

ogm



(Fig. 1)