

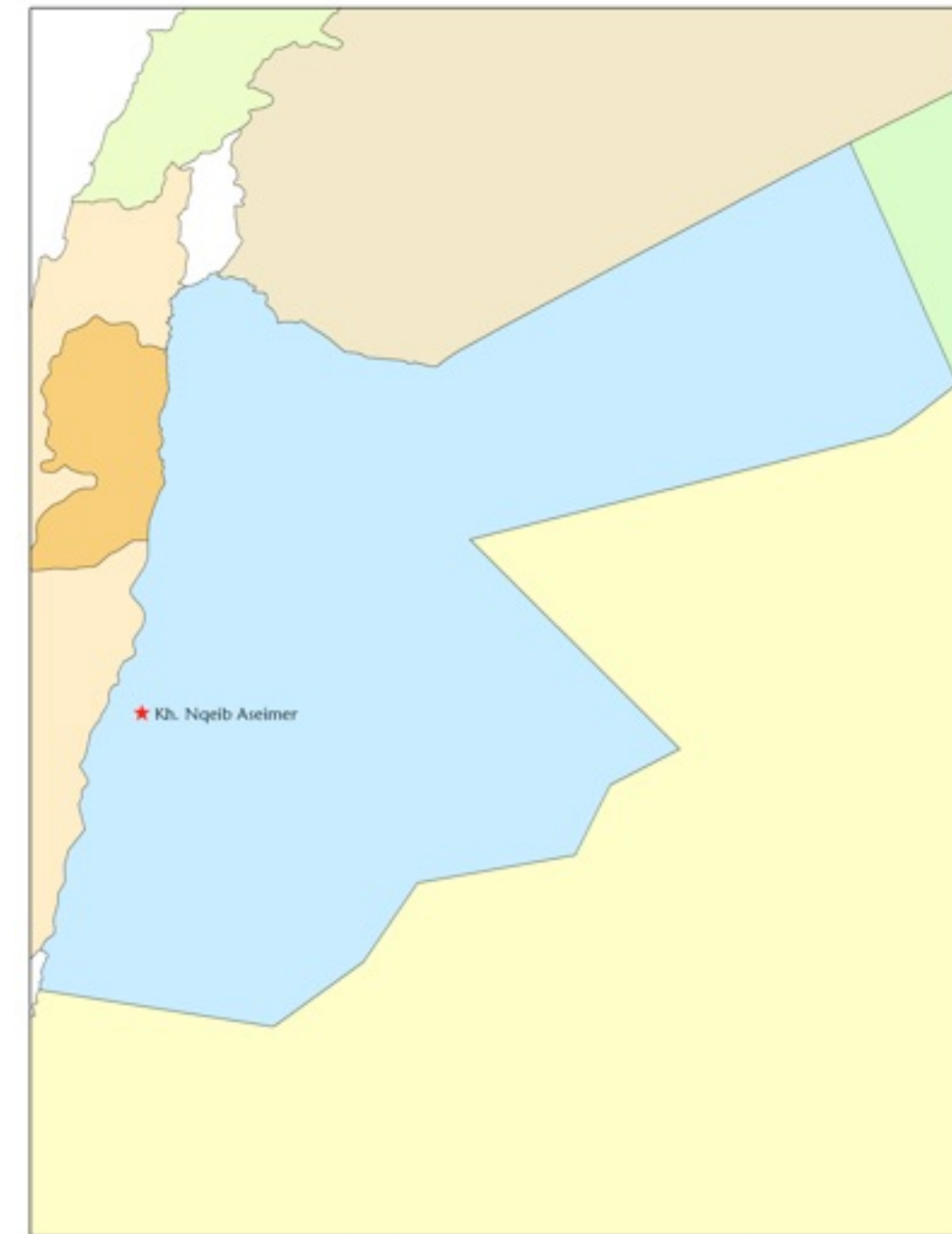
The Organization of Middle Islamic Copper Exploitation at Khirbat Nqeib Aseimer, Faynan, Jordan

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Introduction

In 2002, the UCSD–Department of Antiquities of Jordan Jebel Hamrat Fidan Project began surveys of the Wadi al-Ghuwayb and Wadi al-Jariya in the Faynan region of southern Jordan. These surveys were completed in 2007, as part of the fieldwork conducted by JHF's successor, the Edom Lowlands Regional Archaeology Project (ELRAP). Although primarily Iron Age in focus (Levy et al. 2003), in 2002 special attention was also given to mapping sites from all periods, including the Middle Islamic copper production site of Khirbat Nqeib Aseimer (KNA), first reported on by N. Glueck (1935).



Questions

The 2002 survey initially had two goals related to KNA:

- 1) Map the structures at the site
- 2) Locate potential sources of ore for KNA in the Wadis al-Ghuwayb and al-Jariya.

Our current work adds three additional goals/questions:

- 1) Refine the dating of the site.
- 2) How was copper production at KNA organized?
- 3) What were the historical factors involved in the revival of the copper industry in Faynan during the Middle Islamic period?

Wadi al-Jariya Survey
Middle Islamic Sites

Khirbat Nqeib Aseimer (WAG 53/el-Furn)

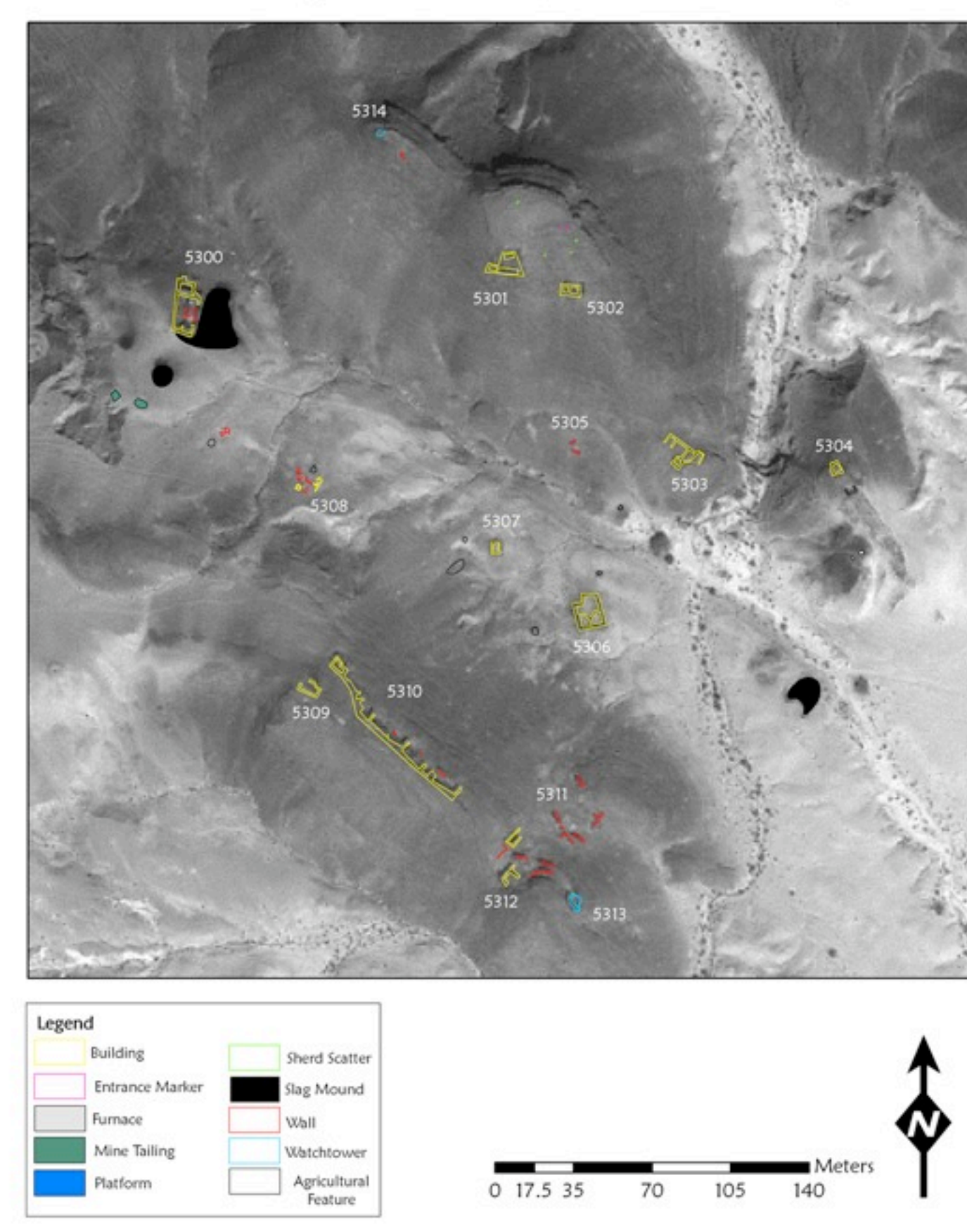
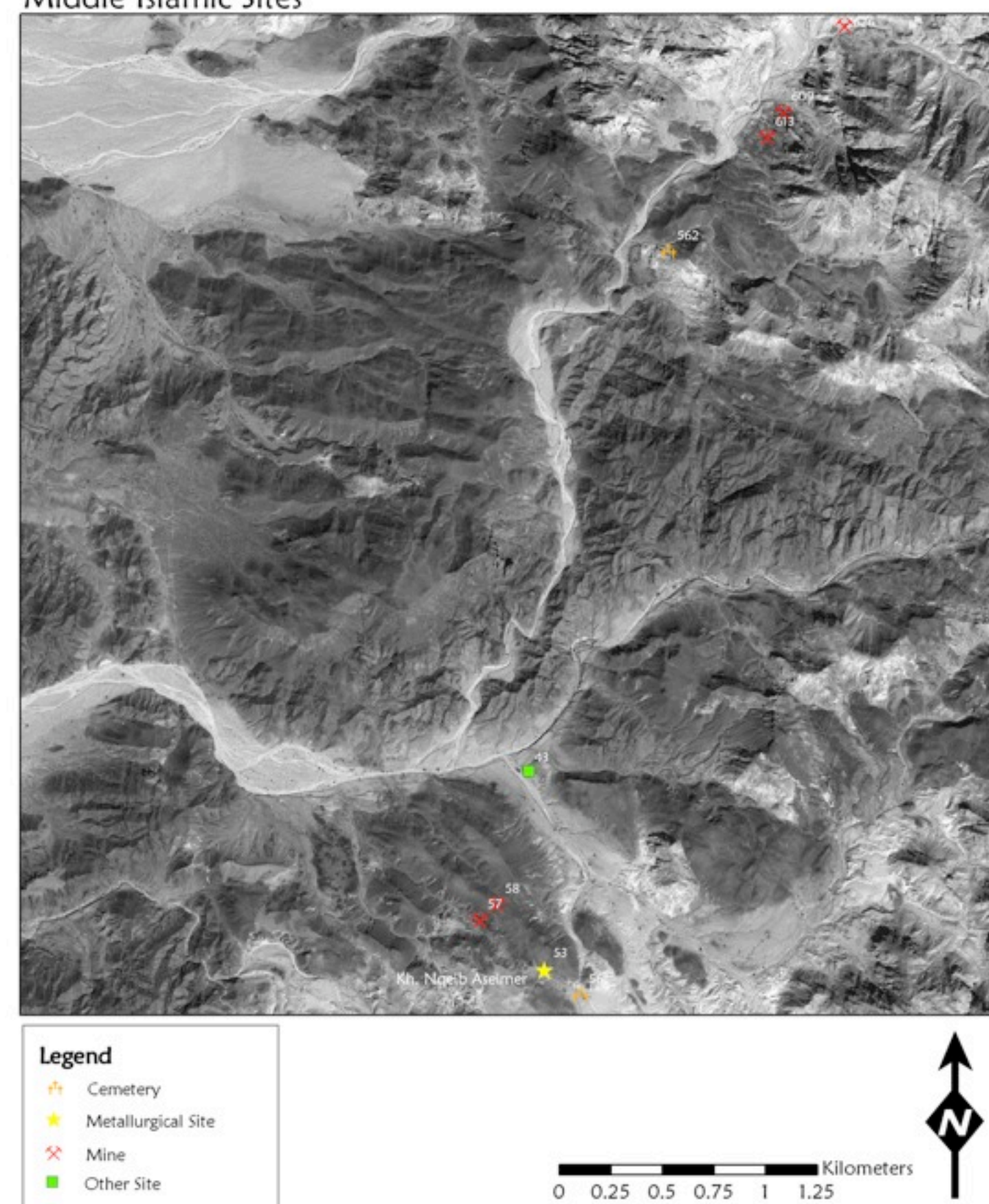


Photo: Building 5300 at KNA. Based on the large slag heaps and tailing piles surrounding this building, as well as the concentration of metallurgical artifacts found nearby, this building was one of the main copper production areas at the site, along with building 5304.



Photo: Building 5306 at KNA, one of the best-preserved structures at the site. Based on the lack of metallurgical finds associated with the building, it seems to have served as a mainly administrative or domestic area.

All structures and features at KNA were mapped using a total station in 2002. 14 main structures were identified, but many smaller features were also mapped. After recording the features, the survey team spread out in roughly 10 meter intervals and collected all pottery and portable artifacts, using the 14 structures as loci. A total of 1300 sherds were collected and analyzed here for the first time. Numerous metallurgical artifacts and a single, heavily eroded copper *fals* were recorded.

Pottery

Although any conclusions are preliminary, owing to the nature of survey assemblages, the ceramics from the site point to a late 12th or early 13th century date. This largely agrees with the early 13th century date proposed by Kind et al. (2005) based on numismatic evidence.



Photo: Painted Middle Islamic coarse wares found at KNA. Of the 1300 sherds collected during the 2002 survey, 907, or about 70% of the total raw sherd count, are of hand-made coarse wares. The vast majority of these are undecorated, while 64 are painted with geometric designs, like those pictured. A further 291 sherds, or roughly 22% of the total raw sherd count, are undecorated wheel-made cream wares. All of these wares, unfortunately, do not help in arriving at a more precise date for the site.



Photo: Middle Islamic Syrian underglaze painted stonepaste wares found at KNA. 20 sherds of glazed wares, or roughly 1.5% of the total raw sherd count, were found during the 2002 survey. The majority of these glazed sherds are from 13th century underglaze painted stonepaste wares imported from Syria, so-called "Raqqqa Wares."



Photo: Mold-made Middle Islamic oil lamp sherds found at KNA. 28 sherds of mold-made slipper lamps, roughly 2% of the total raw sherd count, do help with dating. The majority of the lamps which bear visible designs are decorated with *naskhi* inscriptions or pseudo-calligraphic designs, typical of late 12th and early 13th century lamps. These lamps may have been used both at the KNA settlement and in the nearby mines at WAG 57 and WAG 58.

Motivation and organization

Two models have previously been proposed for the proposed for the revival of the Faynan copper industry in the Middle Islamic period: 1) copper from Faynan was used in Cairo to mint *fulus*, with exploitation being organized by the state (Newson et al. 2007) and 2) the revival of copper production was short-lived, based mostly on trial-and-error with little government involvement (Weisgerber 2006). We suggest, as an alternative to these two, that perhaps the reason copper production in Faynan was revived was, in part, to satisfy the growing demand of the sugar industry in Transjordan for copper to produce boilers.

Conclusions

Currently, we can make several preliminary conclusions regarding the site. 1) The primary occupation was probably in the early 13th century, although we cannot rule out earlier or later dates. 2) The presence of imported glazed wares suggests the presence of elites at the site, who were probably responsible for organizing production activities. Of course, the models outlined above required more testing.

Future Goals

- 1) Excavation at KNA to further establish the occupation history of the site and determine how production was organized.
- 2) Lead isotope analysis of copper artifacts used in sugar production as well as Middle Islamic *fulus* to determine where Faynan copper was used.
- 3) Investigate the socioeconomic foundation of KNA.

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