
Preface

In the 1960s and 1970s, the Egyptian Geological Survey and Mining Authority (EGSMA) carried out a systematic survey of the gold deposits in the Egyptian Eastern Desert in collaboration with a team from the Soviet Technoexport Company. The work led to the compilation of detailed geologic maps and implementation of extensive geochemical analyses.

The project succeeded in identifying large numbers of partly economically viable gold mineralisations as well as unmistakable traces from ancient mining and prospecting activities. This unforeseen finding revealed that former populations had over centuries mined and prospected the region's gold ores while revealing almost if not just as efficient techniques as the ones used today.

Unfortunately though, a documentation of the archaeological heritage had not been included to the project, and even after the premature end of the Soviet-Egyptian cooperation, such issues continued to be completely ignored. In addition, reports on a number of already initiated subsidiary, geologic projects were not submitted. No convincing model for the genesis of the examined gold mineralisations was forwarded that might have contributed to the explanation of the most noteworthy consistencies regarding tectonics, lithology and formation processes that are necessary for the development of adequate prospecting methods.

In a joint project with the University of Assiut, Egypt, our attention was drawn to this aborted program. We consequently worked-out an interdisciplinary research method by which the following, yet remaining, issues needed to be addressed. These consisted of:

- Documenting and dating the hitherto virtually unknown archaeological heritage of ancient gold production sites
- Identifying and mapping former mining and prospecting sites and ascribing them to the chronologies of Ancient Egypt and Nubia
- Investigating the geology of ore deposits of formerly exploited gold occurrences with the aim of developing a genetic model
- Studying the development of prospecting methods through the course of history

In order to do so, three field campaigns in the Egyptian Eastern Desert (1989, 1990 and 1992/93) were initiated in a close cooperation between the Institutes of Geology and Egyptology at the University of Munich (LMU). Field work had been programmed to take place between the 28th and 22nd parallel N. Both already known as well as unknown sites were recorded within this territory during our survey. Our work consisted of documenting the sites' archaeological features at the surface as well as the geology of their respective surroundings which, whenever possible, was mapped.

Because the distribution of the ancient gold production sites turned out to spread far beyond the southern borders of Egypt and well into the Nubian territories of NE Sudan, it was only reasonable to extend our field work to regions further to the S.

Subsequently, three field campaigns were carried out in 1996, 1997 and 1999, and were limited to a zone between the 22nd and 18th parallels N, in Sudan.

In all, we managed to record approximately 250 gold production sites in six campaigns. They were dated by means of diagnostic surface finds and described with their respective geologic environments.

The term “gold production site” denotes not only sites exploiting primary gold deposits but also a large number of ones in which gold quartz ores previously collected from wadi sediments had been processed in the same way as the mined ores. Such areas were specified as “wadiworkings” as opposed to genuinely mined areas in which auriferous quartz veins had been extracted in either underground (mines) or opencast (trenches) processes. It turned out that at least from the New Kingdom onwards, and especially in the Early Arab Period, a large but ill-estimated portion of the produced gold had been retrieved from wadiworkings.

TM-satellite images (Landsat) were our most effective cartographic means with regard to specific issues pertaining to lithology. Aerial photographs, kindly provided by the Egyptian and Sudanese authorities, were also used. Later on, during evaluation work at home, for which there had unfortunately been too little time in the field, the higher resolution images of the Egyptian and Sudanese Eastern Deserts provided by Google-Earth proved of inestimable value and were subsequently also drawn upon.

In addition to the fundamental work by W. F. Hume (1936), localisation of the mining sites had become possible above all through the internal reports by the EGSMA (Egyptian Geological Survey and Mining Authority) and GRAS (Geological Research Authority of Sudan), essentially compiled as a result of the joint ventures with the mentioned Soviet exploration firm Technoexport. Internal reports by Robertson Research Ltd. and its subsidiaries, Minex-Egypt and Minex-Sudan, became accessible through archives in the UK and proved extremely helpful too, both during preparation work as well as in the field.

Evaluation of the gathered evidence in the field and of the photographic documents turned out to be very time-consuming. With the present, richly illustrated volume, we now hope to furnish an updated assessment as to the origin of the legendary Egyptian, Nubian, and no less remarkable Early Arab gold. The present study also intends to shed some light on the sheer scale of efforts and sacrifices the much admired gold from Ancient Egypt demanded from its manufacturers.

At this point, we would like to express our serious concern about the progressive destruction of many ancient mining traces almost everywhere—especially in the Egyptian Eastern Desert—by modern prospection activities, mining operations, and all-terrain vehicles. We very much hope that this book will raise the awareness of this valuable heritage of earliest human industries.

Gold and Gold Mining in Ancient Egypt and Nubia
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Egyptian and Sudanese Eastern Deserts

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