CHAPTER 8

Fire-setting in Ancient Quarries; Ancient Sources, New Evidence and Experiments

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Abstract

It has been less problematic to determine the techniques of extracting soft stones such as limestone and sandstone, as archaeological evidence from tool marks found in ancient quarries suggests that bronze and copper tools were mainly used. On the other hand, in hard stone quarries evidence of extraction techniques is more difficult to assess from tool marks as these may often be

Introduction

Ancient quarries are located extensively throughout Egypt and provide rich sources of information into past technologies not only of interest to researchers, but also to the general public in terms of colossal objects that often still remain in these archaeological sites.1 Understanding how such objects were extracted from the stone deposit itself has led to researchers studying and reviewing the archaeological record in quarries, and where possible experimenting to discover how effective the use of certain techniques may have been.

It has been less problematic to determine the techniques of extracting soft stones such as limestone and sandstone, as archaeological evidence from tool marks found in ancient quarries suggests that bronze and copper tools were mainly used.2 On the other hand, in hard stone quarries evidence of extraction techniques is more difficult to assess from tool marks as these may often be

absent. Hence understanding techniques of hard stone quarrying in the past remains controversial amongst researchers.

However, recent surveys and excavation of quarries have examined hard stone extraction methods that in some instances support some old ideas while questioning others. For example the Unfinished Obelisk excavation, which suggests that wooden wedges were unlikely to have been used to quarry granite in the Aswan quarries.³

Most significantly, new research suggests a much greater use of fire-setting in ancient hard stone quarrying.⁴ This was not easily accepted by some colleagues⁵ at the beginning, but it became more clear and obvious when the large survey of QS projects and other archaeological work showed clear and undoubted evidence of using fire in ancient quarries within many ancient quarry sites in Egypt.⁶

Ancient Inscriptions for Using Fire in Quarries

It is clear that there is a lack of inscriptions and drawings from ancient sources such as tombs, temples, etc., that show how the ancient Egyptians quarried stone. However, two inscriptions give a short mention of this and it is very important to take these into consideration.

The Middle Kingdom Inscription of Wadi Hammamat

The inscription is located in the Wadi Hammamat greywacke quarries between Gift and Qusser city.⁷ The inscription concerns the vizier Amenemhet, the

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