

Egyptian chariots, Midianites from Hijaz/Midian (Northwest Arabia) and Amalekites from the Negev in the Timna Mines

Rock drawings in the Ancient Copper Mines of the Arabah – new aspects of the region's history II

Beno Rothenberg

Introduction

Two panels of rock engravings were discovered on the walls of Mine 25 (Fig. 1) by our Arabah Expedition in 1966. Mine 25 is situated along the upper reaches of Wadi Timna, where the Timna Cliffs retreat and form a side valley, flanked on both sides by huge formations of cupriferous Nubian Sandstone and slopes with numerous mining relics, sand-filled shafts ("plates") and gallery openings. First published many years ago (Rothenberg 1972: 119-124, cf. also Anati 1981: 49-61), the rock engravings were recently re-investigated in the light of our new, much revised, concepts of the history of the Timna copper industries and related archaeological finds (Rothenberg 1988; 1999), resulting in a better understanding of this rock art. This has also substantially contributed to the understanding of the ethnic aspects of the history of Timna, the collaboration of Amalekite workers from the Negev and the 'Midianites' from North-

west Arabia, with the Egyptians of the 19th and 20th Dynasties of the New Kingdom, from the end of the 14th to the middle of the 12th centuries BC.¹

Besides these two large rock engravings, there are surprisingly only very few other rock drawings inside the Timna Valley. Several small iconic images, accompanied by memorial inscriptions, were found near tombs of Roman date and were intrusive in style. This is in contrast to the Negev, where there are many thousands of rock drawings related to the indigenous population settlements and camping sites, dating from the Chalcolithic Period to Islamic times. The same is the case in the Sinai, as well as along major pathways and campsites on the way to the mining regions, where many thousands of rock drawings were reported, most of which of intrusive character related to turquoise mines and to copper mining and smelting (Rothenberg 1987; Petrie 1906; Anati 1981). The two rock engravings in the Timna mines are of special significance since they are witnesses for major activities in the Timna mines by groups of workers from afar of different ethnic origin and culture.

Amalekite rock art - Engraving 1

About 50 m in front of the southern tip of Mine 25, a circa 10 m high pile of rubble and large boulders lies against the hillside. Some 5 m above this pile, a large panel of 'drawings' - Engraving 1 - 5 m wide and 2 m high, was engraved on a particularly smooth area of the rock wall (Fig. 2). The rather unusual location of this rock engraving, high up on this steep and flat rock face where there is nothing to stand on for the drawing 'artist', can only be explained by the fact that we are dealing with a hillside which collapsed sometime after intensive underground mine workings were carried out inside this part of the hill. Adjacent to the left of the rubble pile, a mine shaft, now



Fig. 1. Northern half of the Arabah Survey map of the Timna Valley. Site 25 is the location of the rock engravings.



Fig. 2. Engraving 1.



Fig. 3. Mine shaft with typical New Kingdom footholds next to the rubble pile. Engraving 1 is located to its right on the flat rock surface.

partly damaged, was dug into the rock wall (Fig. 3), datable by its technology, shape, and footholds to the Egyptian New Kingdom, contemporary with the major mining activities in the Arabah and especially in the Timna Valley (Conrad & Rothenberg 1980). We assume that gallery workings branching out from this shaft, and from a second shaft further to the left, contributed to the collapse of the hillside. This collapse was perhaps caused by one of the many minor earthquakes of the region, the latter witnessed by collapsed installations in the excavated smelting camps, like at Site 2 and the Timna Temple (Rothenberg 1972: 149), and deformed mine workings, like that of the shaft at Site 7.

The second shaft began at the same height as the shaft close to Engraving 1, and was dug into a narrow ridge still partly preserved directly in front of a small cave, where we found habitation remains and some pottery sherds (Fig. 4). By the lighter patina we could tell that this ridge originally continued all along the hillside and the 'artist' must have stood on it whilst working



Fig. 4. At the left, the cave and mine shaft belong to the same mine as the shaft next to Engraving 1 (at the left of the figure).

on Engraving 1 - right next to the collar of the mine shaft. Since the collapse of the hillside also caused much damage to the shaft next to the cave, and bearing in mind the typical tool-marks and footholds still preserved on the walls of the shafts, we may assume that both shafts belonged to one and the same Egyptian New Kingdom mine. From these shafts underground galleries branched out, leaving behind a hollow hillside, which collapsed at some later stage as part of the widespread destructive erosional geomorphologic processes in the Timna Valley (Conrad & Rothenberg 1980: 57-68).

The figures of this 'picture' are deeply incised with a sharp-pointed implement in a purely linear style, typical for the indigenous inhabitants of the Negev mountains and common, in fact, all over the Middle East from the 2nd millennium BC to almost recent times (Anati 1981: 49). There is one horizontal line for the animal body, short lines for its legs and one vertical line for the human body, with bent lines for arms and legs, in contrast to the much more realistic figures of Engraving 2, which show full bodies and even details of clothing (see Fig. 5 below).

It seems that this panel was purposely made as one pictorial unit consisting of three long rows of juxtaposed figures of ostriches, ibexes, and gazelles, with several hunters and their hunting gear, perhaps an afterthought, fitted into the picture. There are two exceptions to this assembly. On the right side of the panel appears a crude representation of a chariot with two four-spoke wheels, drawn by what seems to be two ibexes with long, drawn-back horns. These are harnessed together at their heads by a heavy looking cross-beam.² It seems obvious that the 'artist' had never seen a horse-drawn chariot and copied its image by memory from Engraving 2, completely missing the horses on the original.

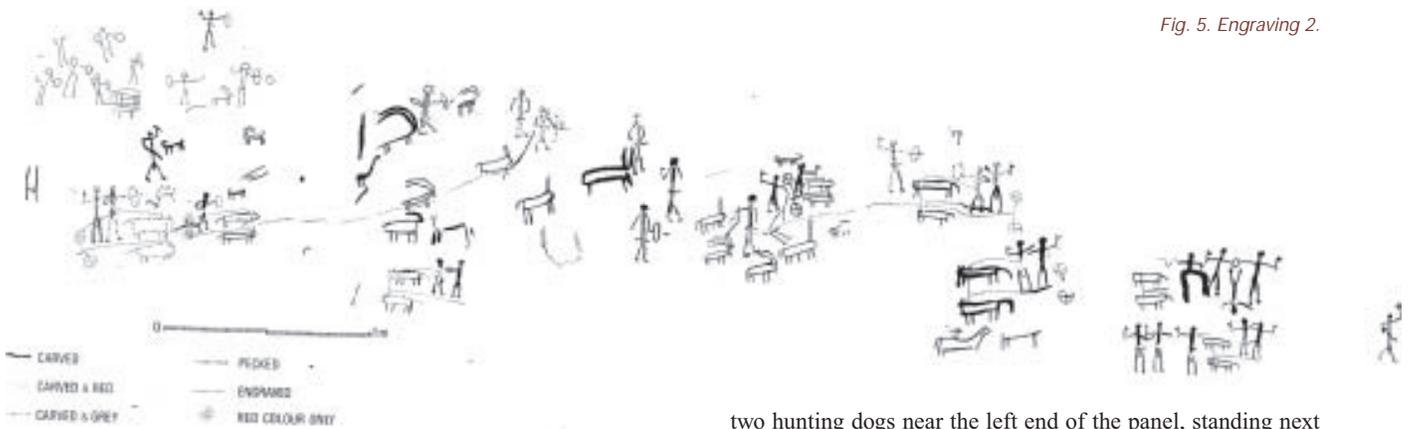
The second exception on the panel is the solitary iconic image of a 'human' figure, its raised large hands showing widely spread four fingers, standing above the left end of the upper row of animals. A strange object, drawn as a straight line ending in an oval sling or handle, projects from the hip of the figure and could represent some kind of weapon. This seems to be a 'magic' icon or the image of a 'higher spirit' of 'Midianite' origin and was added onto the panel by a different 'artist', perhaps the same one who created the 'Midianite' centrepiece of nearby Engraving 2 (see below).

Although the indigenous style of Engraving 1 was common in the region for several thousand years, its location next to the typical Egyptian New Kingdom mine shaft of Mine 25 seems convincing evidence for its New Kingdom date. Engraving 1 must have been made by workers from the Negev working with the Egyptians and 'Midianites' in the Timna mines (Rothenberg 1998).³ Furthermore, the image of the chariot on Engraving 1 was evidently a copy of the Egyptian New Kingdom chariots of Engraving 2, and the 'Midianite' icon of the 'human' figure with large, widely spread hands, is well-dated to this period (see below). The inhabitants of the Negev in the Late Bronze - Early Iron Age have been identified with the indigenous semi-nomadic tribe mentioned in the Bible as "Amalekites dwell in the Negev region" (Numbers 13:29), and Engraving 1 is an impressive example of indigenous Amalekite rock art.

Egyptian and 'Midianite' Petroglyphs - Engraving 2

About 100 m along the cliffs, a narrow canyon opens into the mountainside. It is about 40 m deep, 20 m high, and about 5 m

Fig. 5. Engraving 2.



wide. On its right side, a 9 m long and 1.5 m high panel of rock engravings, Engraving 2 (Fig. 5) was cut into a smooth stone frieze sheltered from the occasional torrential rain of the area by overhanging rocks. On the floor, below the engravings, we found a group of large bowls made of very soft sandstone (Fig. 6), the like of which we have only found in the Hathor Temple of Timna, used in a ritual context. Some sherds of the Egyptian New Kingdom were found next to the stone bowls. This setup suggests that the canyon of Engraving 2, and perhaps also



Fig. 6. Stone bowls on the floor of the canyon of Engraving 2.

Engraving 1, had a ritual function in the very heart of the New Kingdom mining region of Timna, one of the many cult sites related to the mining as well as smelting sites of the Timna Valley (Rothenberg 1972).

Contrary to the style of Engraving 1, which was purely linear, the figures of Engraving 2 have 'volume' and also show details of clothes, the latter presumably in order to emphasize ethnic characteristics of the different groups of people represented here. It seems that Engraving 2 was begun in the centre of the panel with the group of tall hunters with emphasized large heads, carrying long hilted straight-bladed swords and, of especial significance, all wearing tasselled kilts (Fig. 7). Some of the hunters brandish a battleaxe, others carry bow and arrow ready for action. We propose to identify these hunters with the 'Midianites' from Northwest Arabia, the third partner of the Egyptian New Kingdom copper industry of Timna (see below).

All around the hunters appear different animals, representing the game animals common at the time in the region: ibexes, oryxes, one ostrich, two leopards and one cheetah. There are also

two hunting dogs near the left end of the panel, standing next to a hunter which does not belong to the two main groups of engravings on the panel. This appears to be a somewhat later addition.

The dominant theme of Engraving 2 is the arrangement of four-spoked manned chariots. The chariots have rear-positioned wheels, but no sidescreen. In the first publication of Engraving 2 (Rothenberg 1972: 122), we assumed that the plump bodies of the draught animals represented oxen, but we now accept the identification of these engravings as horses² harnessed to the front of the pole. One or two armed men are standing on each chariot. Some carry a shield or a bow and all hold a typical Egyptian New Kingdom battleaxe in a raised hand. To free the hands of the charioteer, the reins are tied around his waist. This is a feature well known from New Kingdom wall-paintings. All occupants of the chariots wear loincloths folded into a pointed apron in front; this is a common garment of the Egyptians of this period, as can be seen, for example, on the reliefs of Queen Hatshepsut's temple at Deir el-Bahri (Breasted 1906/7, IV: 204).

Many of the lines of the chariot engravings are filled with red ochre-like colour, and here and there also a grey-white fill can be seen. Some of the chariot wheels were actually painted with red colour straight onto the rock without a previously engraved image. This technique has not been seen on any of the petroglyphs of the region, but is well known from Egyptian wall-painting techniques.

It is somewhat difficult to explain the beautifully-engraved horse on the low edge of the panel, close to the manned chariots on its right side.⁴ According to the patina, this horse is an ancient drawing though probably later than the chariots next to it. Perhaps a later visitor to the site had the same problem identifying the plump draught animals and expressed his interpretation by this almost perfect, well-proportioned image of a horse - with a rider - next to the 'problematic' images of the Egyptian draught animals.

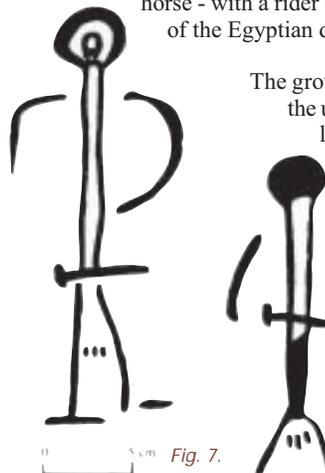


Fig. 7. Detail of Engraving 2.

The group of barely discernible images in the upper left corner of the panel, badly copying some of the figures of the original engraving, is certainly a much later addition made by rubbing with a blunt implement. The scene on the right end of Engraving 2 is rather enigmatic. The whole group, including the draught animals harnessed to a centre pole with no chariot wheels behind them, and the two groups of three figures, drawn exactly like the cha-

rioteers with battleaxes in raised hands, apparently represent some kind of ceremonies. This is particularly true for the group with one figure standing on its head and the two figures behind holding together a strange round object - it seems to express an iconic idea - enigmatic for us⁵ - in contrast to the narrative character of both of the main groups of Engraving 2.

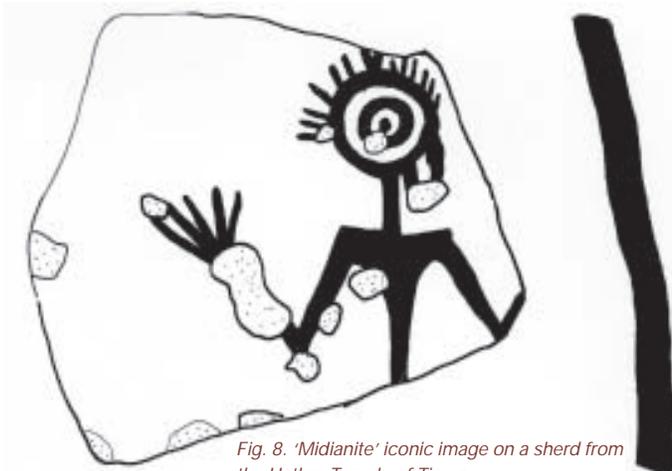


Fig. 8. 'Midianite' iconic image on a sherd from the Hathor Temple of Timna.

A solitary figure with a raised hand, widely spread fingers and wearing a long sword is engraved on a separate plane of the rock at the extreme right of Engraving 2. This is obviously an iconic image. Besides the widely spread fingers of its raised hand, however, it does not show any of the characteristics of the solitary figure on top of Engraving 1 which we consider to be a 'Midianite' icon; it seems to represent a similar iconic image. In connection, we should mention that among the characteristic motifs of the decorations on 'Midianite' pottery found in the mining and smelting camps and the Hathor Temple of Timna (Rothenberg & Glass 1983: 92), as well as at Barqa el-Hetiye (Fritz 1994: Abb. 12:13) in the mining region of Feinan (Jordan), there appears a human figure with emphasized large headgear and widely spread raised hands - no doubt a characteristic 'Midianite' iconic motif (Fig. 8).

The ethnohistoric message of Engraving 2

During our first surveys and excavations in the smelting camps 1959 to 1969, we had serious problems identifying and dating the pottery finds. Everywhere, first on the surface of the sites of our survey (Rothenberg 1962; Aharoni 1962: App. 1) and later on in all the strata of our excavations in the smelting camps, we found three totally different kinds of pottery, the dating of which was at the time extremely difficult (Rothenberg 1988: 3-11):

1. Rough handmade pottery of a type to be found in the Negev settlements, called 'Negebite Ware', and generally dated Iron Age II;⁶
2. Local wheel-made 'kitchenware', which appeared to have some comparisons at sites in the Levant of an earlier, Late Bronze Age, date; and
3. Hand-made vessels with polychrome decorations, the latter reminiscent of motifs of decorations of Aegean pottery. When first found in our surveys, we related this decorated pottery to the Edomite pottery of Jordan (Aharoni 1962: 66). However, when our subsequent excavations showed that the copper industry of Timna, and the wheel-made pottery found in its layers, was apparently of a much earlier date, the unique polychrome pottery with Aegean decorations, until that time unknown to archaeologists of the region, presented a

complex problem of dating and provenance and of the ethnohistoric aspects of the Timna copper industry (Fig. 9).

The discovery in the Timna Mining Temple (Rothenberg 1988) of numerous votive gifts to the goddess Hathor, carrying the names of the Egyptian pharaohs of the New Kingdom (from Seti I to Ramesses V), found together with the same three kinds⁷ of pottery in all the layers of the Temple, provided the first solid date for the major copper industry at Timna. The date of the three kinds of pottery was those dated to the period from the end of the 14th century to the middle of the 12th century BC, a date also confirmed by ¹⁴C (Rothenberg 1990: notes 21- 23). Subsequent petrographic comparison (Glass 1988; Rothenberg & Glass 1983) of the polychrome 'Aegean' pottery of Timna with the same kind of pottery found by Peter Parr in his survey in Northwest Arabia in 1968 (Parr *et al.* 1970) established that this pottery was in fact manufactured at the ancient town of Qurayyah in Hijaz/'Midian', and probably also at other towns of Northwest Arabia. We therefore suggested to name it 'Midianite pottery' (Rothenberg 1969; 1972: 154-162).

However, we do not have any evidence for the date of the actual beginning of the appearance of 'Midianite' pottery, or the end of its use, in its 'home country' Northwest Arabia. Moreover there is no indication for the existence of a potting tradition in the region out of which the 'Midianite' pottery could have developed. On the contrary, according to the available evidence from Qurayyah and other sites in the Hijaz, the 'Midianite' pottery appeared rather suddenly - seemingly together with the very imposing 'oasis urbanism' - and, according to the evidence from Timna, remained almost unaltered for at least 150 years, after which it equally suddenly disappeared. It is important to emphasize here, that at all sites in the Levant where 'Midianite' sherds were found (Rothenberg & Glass 1983; Parr 1988; Knauf 1988: 21-23), their dating was within the range of the New Kingdom date of Timna.

The finds in the Mining Temple established the identity of the three ethnic elements working together in the mines and smelters of Timna: Egyptians of the Ramesside New Kingdom, the 'Amalekites' from the Negev, and the 'Midianites' from the



Fig. 9. A typical 'Midianite' juglet (Bible Lands Museum Jerusalem).



Fig. 10. 'Philistine' warriors with typical gear and dress on the battle scene at Medinet Habu.

Hijaz. However, the appearance in the Timna mines and smelters of 'Midianite' workers from Northwest Arabia, who according to our excavations at Timna brought with them on camel back large quantities of their pottery, evidently mass-produced in their Hijaz 'urban oases' (Parr 1988), is the core of what we called the 'Midianite enigma' (Rothenberg 1998): Who are the 'Midianite' miners/potters and how and why did they suddenly appear in this rather inhospitable and isolated region of the Near East - and what kept them going for several generations, only to 'disappear' again in the middle of the 12th century BC?

At the time, when we identified the two different types of peoples, represented in the two major 'scenes' of Engraving 2, as Egyptians on their chariots and 'Midianites' hunting the game animals of the region, the 'strange desert people from Midian' seemed rather enigmatic. I did not realize then that the solution of the 'Midianite enigma' was right there in the details of the engraving, which clearly emphasizes the typical ethnic characteristics of the people. The tall men with the large headgear, long sword and tasselled kilt represent 'Sea People', *i.e.* the 'Midianites' are 'Philistines' of ultimate Aegean origin, who had already immigrated into Northwest Arabia already as early as the time of Seti I (1318-1304 BC), the earliest date of the 'Midianite' pottery according to the Hathor Temple. Comparative documentary evidence can be found at the great Mortuary Temple of Ramesses III at Medinet Habu (Nelson 1930). Here, in the great sea and land battles of Ramesses III against various groups of invading 'Sea Peoples' (Fig. 10), the different groups of 'Philistines' are depicted in their typical wear. Amongst them are several groups, named on the hieroglyphic inscriptions as Peleset, Tjekker and Denyon, which all wear the same 'outfit': the typical large headgear, a long sword, and a kilt with three tassels - the same as the group of 'hunters' on Engraving 2 of Timna. We therefore propose now to understand the 'Midianite' hunters as representing an early wave of migrating 'Philistines', a dominant component of the 'Midianite/Philistine' community in the Northwest Arabian oasis settlements, collaborators of the Egyptians in the New Kingdom copper industry of the Arabah.

But why would 'Sea People' immigrate to the deserts of Arabia? The lack of systematic archaeological excavations in the urban oases of the Hijaz, and particularly the lack of proper archaeological explorations of the extensive mineralised zones

of Northwest Arabia, make it difficult to reach comprehensive conclusions. However, we may assume that migrating metallurgists of ultimate Aegean/Anatolian origin (Parr 1996: 216-7; Mendenhall 1984: 144; 1992: 817) were drawn to Arabia - seemingly together with Egyptians of the New Kingdom (see below) - because of its widespread gold, silver and base-metal deposits. It is important to mention that in this mineralized zones of Hijaz traces of ancient mine workings have been discerned (Roberts *et al.* 1977; Rothenberg 1998).

The Egyptian-'Midianite' partnership for about 150 years in the Timna mines strongly suggests a similar partnership - with the Egyptians perhaps even as initiators - in the mineral exploitation in Northwest Arabia. Although the mineralised zones of North Arabia have not yet been sufficiently explored by archaeologists,⁸ there is some new evidence for Egyptian activities in Northwest Arabia which is relevant for our present considerations. During recent excavations at Tayma (Abu-Duruk 1989: 17, Pl. 9; 1990: 15), a large ancient town of great importance for the history of Arabia, 'Midianite' pottery was found in several parts of the town and in burials. Inside some of the burials, Egyptian scarabs and faience amulets of the New Kingdom were found together with contemporary 'Midianite' pottery. A.H. Masry (1990: 5) summed up the significance of the Egyptian finds at Tayma: "A hieroglyphic-inscribed scarab of the New Kingdom was discovered (in the second season). This confirms the abundance of evidence for the early contacts with the Nile valley. Definite type similarities were observed, chiefly relating to Philistine (!) ware... particularly to the site of Timna in Sinai."

Whatever the relationship between the 'Midianites' and the New Kingdom Egyptians, it would not at all be surprising if systematic fieldwork in the mining regions of Northwest Arabia would ascertain that the Egyptians were also partners in mining activities in this region. The Egyptians, since prehistoric times and especially during the New Kingdom, intensively worked very similar gold and copper deposits on the opposite side of the Red Sea in the Eastern Desert (Rothenberg *et al.* 1998), further south in Nubia, and, for generations (from the late 14th to the middle of the 12th centuries BC), together with the 'Midianites' from the Hijaz/Midian, in the Timna mines. It would be actually quite difficult to understand why they did not extend the wide orbit of their mining activities to the Hijaz, especially as their 'Midianite' partners were actually 'at home' in this region at that time.

When did it all end?

The 'Midianite' sites in the Hijaz remain so far unexcavated and their detailed history is unknown. We therefore have no archaeological information to help us to understand the processes that led to the disappearance, seemingly also quite suddenly, of the 'Midianites' and their pottery from Northwest Arabia. We can only suggest that this process is connected with the overall withdrawal of New Kingdom Egypt from their 'possessions' in the Levant sometime in the middle of the 12th century BC, when the Timna copper mines were also abandoned. Parr (1988: 81-86), in his study of the "Midianite urbanism", reaches the conclusion that the apparent withdrawal of the Egyptians also from Northwest Arabia in the middle of the 12th century BC, accompanied by the interruption of the strong commercial links between Egypt and the 'Midianite'/Sea People urban oases, "led to the collapse of a precocious and precarious 'urbanism' there" (Parr 1988: 86), *i.e.* the 'Midianites/Philistines', and their pottery, vanished from the scene of Northwest Arabia.

Parr (1988: 86) discussed the appearance of "camel nomadism" as one of the results of the disappearance in the region of the 'Midianites': "It is reasonable to suppose that the two developments are related, and that camel nomadism in northern Arabia was at least partly the result of the abandonment of sites such as Qurayya." Parr is unaware of the fact (Grigson, in press), that the 'Midianite' miners at Timna already used many camels, and that supplies were actually brought over from the Hijaz on camel-back. Camels were also widely used as pack animals in the mines and smelters of Timna. Since people do not disappear in mid-air, we must assume that the 'missing' Midianites must have emigrated to another region. At several Philistine towns of Philistia, as for instance at Tel Masos (Kempinski 1993: 988), 'Midianite' sherds were found in Philistine layers of the 12th century BC and further research may show that these sherds are not evidence of trade with 'Midianite' Hijaz, but a trace, even if at present rather faint, of the integration of 'Midianites/Philistines' from the Hijaz into the Philistine society of the 12th century BC in Philistia.

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Notes

- As we shall explain below, these ethnic identifications are based on the archaeological finds from the Timna excavations and their provenance, established by petrographic and typological research.
- The revised identification of the animals as horses and not oxen is based on the expert view of Dr B. Shalmon, regional biologist, Eilat district, Nature and Parks Authority. His detailed paper will be published separately. Shalmon identified the two animals drawing the chariot on Engraving 1 as horses, the same as the animals which draw the Egyptian chariots on Engraving 2.
- During our survey in the 70s of the southernmost Negev, we located a campsite with typical Negev pottery and copper smelting remains on the route between Timna and the Negev. It appears that the workers from the Negev took some ore from the mines of Timna to produce some copper for their own use on the way home.
- The edge of the rock frieze is damaged by erosion and the legs of the horse are only partly preserved.
- Anati 1984, 58, suggested that the three man standing in front are dancing, whilst the other three, with the man upside down being dead, could be understood as a funerary procession.
- According to the petrographic study by Glass (Rothenberg 1988; Glass 1988), most of this pottery, now called 'Local, rough handmade pottery', is actually of local manufacture, believed to have been made on site by the workers from the Negev, but there is also proper Negebite Ware, originating from the Negev settlements and dated by our Timna finds to the middle of the 12th century BC at the latest. This should present a difficult problem for the archaeologists who still date the Negev settlements exclusively to Iron Age II (cf. Mazar 1990).
- Glass actually identified in his petrographic study five different groups of pottery at the Temple (Glass 1988), including local hand-made pottery (which is not 'Negebite Ware'), as well as a few sherds imported from Egypt, but this does not change the general picture of the pottery finds at Timna.
- Parr (1988) discusses this issue and comes to the conclusion that we do not have any evidence for the involvement of the 'Midianites' in the exploitation of the mineralization of the coastal zone of the Hijaz and that it may be wrong to assume that the 'Midianites' exploited the mines of the region. In my view, no proper survey of the mines as such has yet been undertaken and the issue has to be considered as still archaeologically undecided. In the light of the intensive mining activities by the 'Midianites' from the Hijaz in Timna, it would be rather odd if the local 'Midianites' would have ignored the rich mineral sources of their own neighbourhood.