



A PROTO-SINAITIC INSCRIPTION IN TIMNA/ISRAEL: NEW EVIDENCE ON THE EMERGENCE OF THE ALPHABET

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ABSTRACT

A rock inscription, discovered in summer 2009 in Timna (Wadi el-Man'iyeh), Israel, is presented and interpreted herein. The context of Egyptian copper mining activities in the New Kingdom at Timna, involving workforce recruited from the local Semitic population, accommodates placing the graffito in the tradition of the so-called Proto-Sinaitic (PS) inscriptions. The engraving can be read as a West Semitic personal name and an introductory title or qualification. It supplies meaningful variant traits not attested hitherto in PS texts, and contributes to the controversial dating of the earliest attestations of alphabetic writing. Doubts as to the authenticity and/or antiquity of the engraving are also addressed.

PROTO-SINAITIC AND THE FORMATION OF THE ALPHABET

The process, or rather the multifold processes, of the formation and development of the early alphabet at some time in the course of the second millennium BCE have been a widely debated issue. Some advocate the oldest examples of the Northwest Semitic alphabet as occurring—in its earliest attestations as what has been termed Proto-Canaanite writing—around the middle of the second millennium at a few sites in Palestine (such as Lachish, Gezer, and Shechem).¹ Others give precedence to the inscriptions from Serabit el-Khadem in Sinai. The unresolved dating of the latter—and thus their assignment to the presence of pharaonic mining expeditions at Serabit during either the Middle Kingdom (Twelfth Dynasty, 2000–1800 BCE) or the New Kingdom (Eighteenth through Twentieth Dynasties, 1600–1100 BCE)—precludes the determination of a definite sequence for the earliest groups of inscriptions. Benjamin Sass's comprehensive and profound 1988 study of both the Proto-Sinaitic (PS) and the Proto-Canaanite (PC) inscriptions cautiously concluded that the PS inscriptions were best accommodated in the time of the Twelfth Dynasty. But Sass revised his own assessment twenty years later; he now argues against a lack of paleographic development throughout much of the second millennium, and in favor of a ca. 1300 BCE birth date for the alphabet. This in turn invalidates the putative date of the earliest PC inscriptions.²

Only Goldwasser upholds a Twelfth Dynasty emergence of the Sinai inscriptions, having demonstrated that at least a substantial portion of the PS sign shapes can be directly derived from the numerous hieroglyphic inscriptions on stelae at Serabit el-Khadem.³ These display a wide spectrum of forms, ranging

from a more or less standard ductus to various less formal shapes and sign variations. The remote desert location, far from the norms and standards of the civilized Nile Valley, may well account for the prominence of such deviations at this site. Those stelae that date to the Middle Kingdom were of course still present at the site in the New Kingdom, so that the supposed prototype character of signs from such texts for the PS graphemes does not necessarily preclude a later date for the latter.

At another desert site, in the Wadi el-Hôl, where a desert road cuts short the bend of the Nile between Farshut and Luxor, two short alphabetic inscriptions were noticed in the 1990s that have sign shapes very similar—if not identical—to PS forms. Their discoverer, John Coleman Darnell, deduces a date around 1800 BCE based on the context of surrounding Middle Kingdom graffiti, and, from comparison with presumed hieroglyphic and hieratic sign models, suggests the early Middle Kingdom for the invention of the alphabet.⁴ Sass invalidates the suppositions for such a very early date that would leave roughly five centuries to be bridged until the next attestations of the early alphabet, which in his view cannot indisputably be dated before the fourteenth century.⁵ Irrespective of their variance over the chronological issue, Sass readily adopts Darnell's scenario that the prototypes of the early alphabetic signs were modeled by Semites in Egypt after the somewhat awkward shapes of rock inscriptions. This would again explain their informal character. The ductus of Egyptian rock graffiti is at all times influenced to a substantial degree by hieratic forms, so that hieroglyphic graffiti are in many cases actually hybrid, with a routine intrusion of hieratic sign shapes. While all attempts have failed to derive the early alphabet as a whole from hieratic rather than hieroglyphic shapes,⁶ such hybridity

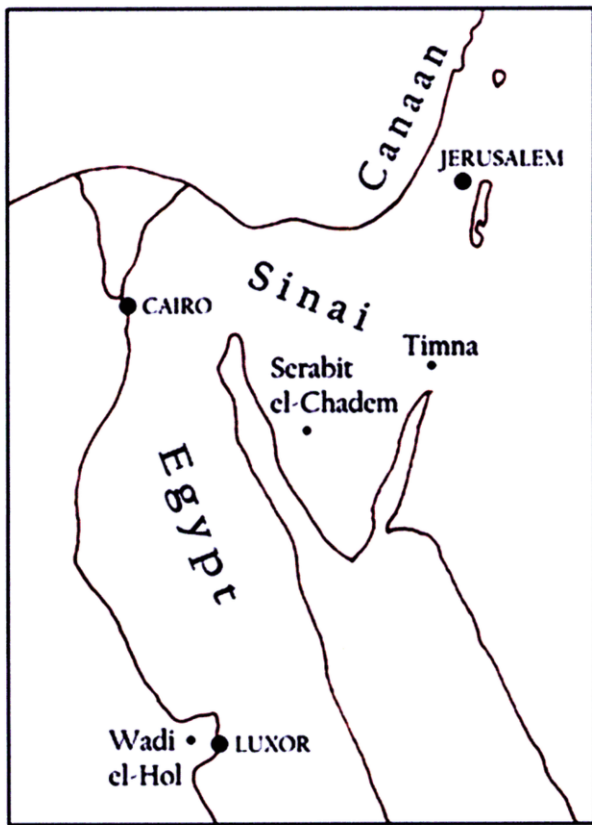


Figure 1. Map of sites with Proto-Sinaitic inscriptions.

may explain why some signs, or variations of signs, could indeed be better explained through hieratic influences.

While both time and place⁷ of the alphabet's invention remain disputed, a consensus in mainstream debate can be narrowed down on the derivation of the sign shapes of the individual characters of the early alphabet, PS and PC, from Egyptian hieroglyphs with a blend of cursive and hieratic patterns.

THE DISCOVERY⁸

In July 2009, in the Timna Archaeological Park roughly 25 km north of Eilat in southern Israel, members of the organization "Stonewatch" came across an engraving that reminded them of Egyptian hieroglyphs in a double cartouche. It is located amongst the numerous mining shafts of site 25, and is in the vicinity (at about 30 m distance) of well-known pictorial rock engravings of chariot and hunting scenes that have long been interpreted as documenting interaction between the Egyptian military and the local population (Figure 2).⁹ The inscription was engraved on the horizontal upper surface of a small sandstone formation that rises approximately 2 m above the surrounding ground (Figure 3). It cannot be seen unless one climbs the rock, which is easily possible from one of its sides, where natural layers form comfortable steps (Figure 4). Observers standing on one of the surrounding higher

ridges can look down at the flat top of the rock protrusion from a distance, but will not perceive the engraving due to its small dimensions; the two ovals together measure 15 × 12 cm (Figures 5 and 6). Near the inscription are several markedly distinct modern scratches and a series of four depressions 3–9 cm in diameter. These look as if patches of the rock surface were intentionally removed, but are so small that it seems unlikely they had contained any letters or signs or were related to the ensemble of the two ovals.




At first sight, some of the characters in the two ovals generally resemble Egyptian hieroglyphs, especially in the right oval, while the oval frames themselves are reminiscent of cartouches (Figure 7). Both ovals, however, lack the horizontal bottom lines never omitted from actual cartouches; instead, they have a short yet clearly intentional connecting line in the upper portion, which is definitely incompatible with canonical cartouches. Any attempts to identify the signs themselves with known royal names—even remotely and considering a dilettantish or misconstrued reproduction—do not lead to plausible solutions. One would have to concede as an option that a non-royal name could be written in a very unconventional and for us largely unintelligible manner in a problematic imitation of a double cartouche.¹⁰

THE INTERPRETATION

The notion that the early alphabet was invented on the basis of adopting Egyptian characters can, in my view, provide the key to a plausible interpretation and even a possible reading of this inscription. Most of the signs are indeed hieroglyphs, or based on hieroglyphs, but they are to be read in *interpretatio Semitica*, not Egyptian; this is the principle that underlies the Proto-Sinaitic script, and indeed the majority of the signs of the Timna graffiti can be directly identified as PS characters.

Our analysis will show that the direction of reading the two ovals is from left to right. Nevertheless we begin with discussing the right oval, where all signs are immediately readable, whereas the left oval is more challenging. The signs are specified with the letter R for "right oval" and L for "left oval," plus a numeral indicating their order from top to bottom. Egyptian hieroglyphs are indicated with their number in the conventional Gardiner notation.¹¹

Right Oval

R1: The eye sign is the most obvious in the inscription. In PS (and PC) it stands for the consonant ' (*ayn*). Below the eye there are several small depressions, some of which, depending on the light, seem to form a stroke with a curved bottom vaguely similar to the vertical element D16  of the udjat-eye D10 . Close examination reveals that these depressions are not coherent and are unintentional, suggesting the model was instead hieroglyph D4 . The pictorial character of the sign reflects most of the PS examples more closely¹² than the typical PC forms of *ayn*, which tend to be shaped like a circle.¹³

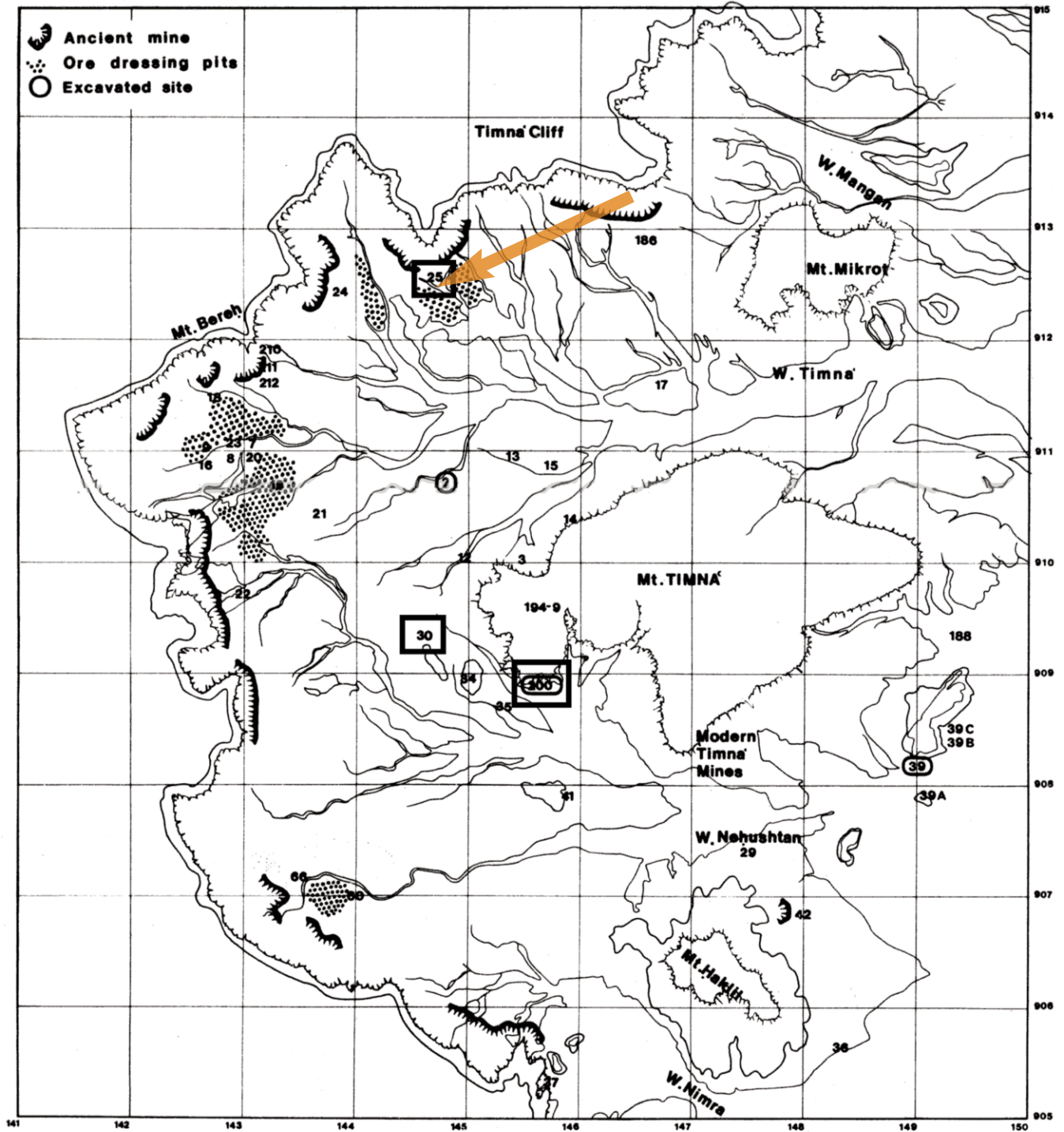


Figure 2. Map of Timna. The inscription is located at site 25 (see arrow). Site 200 is the Hathor sanctuary; site 30 is an early mining site of the fourteenth century (Eighteenth Dynasty). After Rothenberg 1972: 26, Figure 5.





Figure 3. Timna. The arrow points to the location of the newly discovered inscription.


Figure 4. Reverse angle. The seated person’s hand indicates the location of the inscription.

Figures 5 and 6 (detail). The newly discovered inscription as viewed from above (scale: 17 cm).


All photographs by the author.

R2: Two horizontal, parallel lines indicate the consonant *z* (*zayn*, or per Hamilton, *dal*) in PS,¹⁴ while in PC it acquires a different shape.¹⁵ On the Timna inscription, the *z*-strokes appear longer than in most PS examples, but see, e.g., Sinai 346, Sinai 360¹⁶ for elongated strokes.

R3: The third sign is a very pronounced, roughly circular depression with an inner line structure and a small protrusion from the straight bottom. It quite clearly resembles the hieroglyph D1  or  for *r* (*rēsh*) in PS (and more simplified in PC).¹⁷ Other circular signs in PS/PC would be *t* (*tet*) and perhaps *q* (*qof*), but the similarity of R3 with *r* is evident.

R4/5: In the lower third of the right oval are a total of three signs. The two zigzag lines at the left are practically identical. A zigzag line, modeled after the hieroglyph N35 , indicated the

consonant *m* (*mēm*) in PS/PC. As opposed to the Egyptian hieroglyph, which as a rule is horizontal since its pictorial value denotes a water line, in PS and PC the signs rotate freely; the earliest vertical examples come from Wadi el-Hôl 1.¹⁸ The ninety-degree turn here indicates that this inscription is not to be read as Egyptian.

R6: The last sign in the right oval is a seated person oriented towards the preceding double *m* at the left. In PS and PC inscriptions, only one sign depicting a person is known, for the consonant *h* (*heb*), derived from the hieroglyph A28 ; its main characteristics are the two raised arms.¹⁹ Two of the three examples from Wadi el-Hôl have a single arm raised, and Goldwasser has suggested that (one of) these examples might actually be understood as a “classifier” (a better word for the conventional “determinative”).²⁰ The same had been considered as one possibility by

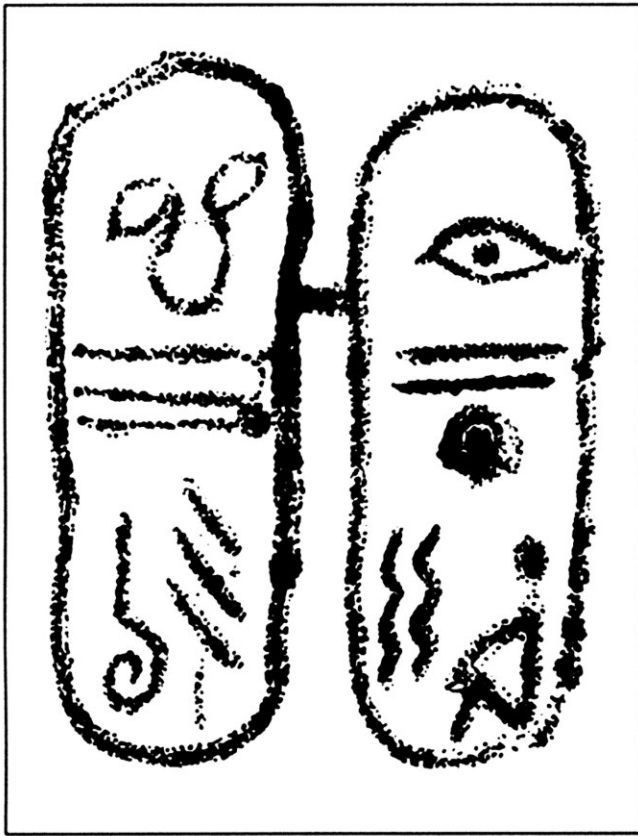



Figure 7. Facsimile drawing by the author.

Darnel/Dobbs-Allsopp, et al.²¹ Others have unanimously read the signs—which both hold internal, not final, positions in the Wadi el-Hól inscriptions—as *h*.²² In our case, R6 quite obviously fulfills the requirements for a classifier: the shape is distinctly that of a seated person, as in the common determinative A1  for the name or designation of a male person. Aside from the doubtful cases from Wadi el-Hól, this is the first obvious instance of the use of a classifier in early alphabetic inscriptions.











As the classifier suggests, the most probable interpretation of at least the right oval would be a personal name. This is obviously in line with the observation that rock graffiti in most cases comprise the (self-)identification of their author, the most common pattern consisting of title plus name.²³ In the right oval, then, we can read the sequence ‘*z-r-m-m*’.





A personal name in an early alphabetic inscription should with a very high degree of probability be West Semitic, if not Egyptian (as possibly in Wadi el-Hól 1[A]).²⁴ The latter option can here be eliminated, as the sign sequence does not lead to a plausible Egyptian reading, whether for a name or otherwise. On the search for a West Semitic personal name, one might be inclined to immediately identify the element *zr*, “help,” but the remaining *mm* could not then be convincingly accommodated. More promising would be to divide the sequence into the elements ‘*z* and *mmm*’; ‘*z*,’ “strength, power; mighty, strong,” is well


attested in personal names (e.g., the biblical ‘*Uzziya[hu]*, ‘*Uzza*, 2 Kings 21:18 *et mult.*) and refers as a theophoric element to YHWH in the Hebrew Bible, as well as to the Early Arab deity (Al-)‘*Uzza*.²⁵ Equally well attested is the stem *rm(m)*, “high, elevated, august”;²⁶ it is again used to refer, in both active and passive meaning, to YHWH in the Hebrew Bible. Possible interpretations of ‘*z-rmm*’ as a personal name include ‘*Az-romem*, “The Mighty One elevates (him),” ‘*Az-romam*, “The Mighty One is high,” ‘*Oz-romam*, “Elevated of power,” etc.


Left Oval


Given the orientation of the seated-person-classifier and the preceding double *m*, the right oval provides a positive indication of the writing direction from left to right. In consequence, the left oval must precede the right oval. Here, we discern a total of four signs.



L1: The first sign in the left oval is not attested, in its present shape, in other early alphabetic inscriptions. Its pictorial value is reminiscent of two snakes or uraei protruding from or forming a partially closed circle. This is not far removed from the sign N6b  and its many variants. The sun disc with double uraei is not commonly used as a hieroglyph, but it is a very prominent Egyptian image, countless times attested, for example on the top of stelae.²⁷ Brian Colless offered a proposal that the early alphabetic sign for *s* (*šin*) should be derived from the rarely used hieroglyph N6 , based on the Semitic *šmš*, “sun.”²⁸ This suggestion has not attained much attention, since the PS *šin* (or earlier *θann*²⁹) usually has a shape  that is believed to be derived from the hieroglyph of a bow (T10  or T9 , T9a , Aa32 ).³¹ In PC, the *šin* has become angular and pointed: .³² Our sign L1 seems to fit with the suggestion by Colless, except that the model for the shape should evidently be the far more prevalent  instead of .

Confirmation for this hypothesis comes from a sign attested twice in Wadi el-Hól 2, , that can be read *s* (or *θ*).³³ Darnell/Dobbs-Allsopp, et al. suggested V13  ($\underline{t} > \theta$) as a possible model.³⁴ Because of the graphic problems with this derivation, this was rejected by Hamilton,³⁵ who, followed by Goldwasser,³⁶ proposed D28  as the origin of this sign, to be read *k* (*kaf*). Both concede that this would conflict with the ordinary PS (and PC) *kaf*, “palm.” We suggest that the next sign, L2, is a *k* (*kaf*); therefore the option of reading *k* for L1 must be discarded. Irrespective of the plausibility of such a reading for the Wadi el-Hól sign, this is a convincing argument for reading L1 here as *šin* (or *šin*) on the basis of .

L2: Immediately visible are three horizontal, parallel signs, which as such would not resemble any early alphabetic letter or hieroglyph (except the hieratic version of  for the word *mw*, “water”). On close examination of the original inscription at the site, it turns out that the lines are connected at their right ends. Between the upper and the middle line, a very faint curved connecting line is preserved. It is badly eroded and visible only with adequate lighting from the side. At the right ends

of the middle and lower lines, a profound depression marks what is probably damage caused by some kind of mechanical impact; it obliterates what we assume to be a connecting line equivalent to the upper half of the sign. The sign should thus be identified as a PS/PC *k* (*kaf*), which is derived from the palm of a hand³⁸ (the closest model is found in *cursive* hieroglyphs, where the fingers are frequently indicated: ).³⁹ The sign has usually three or four lines;⁴⁰ the closest comparison is the example from the Shechem stele fragment.

L3: As in the right oval, multiple signs are arranged side by side at the bottom. The left sign displays in its lower half a curl, which makes its identification as PS/PC *l* (*lamed*) quite obvious.⁴¹ The straight upper portion is unusual, however, and supports the possibility that the PS *lamed* originally derived from the hieroglyph S38 . It is rotated here by 180 degrees; the free rotation of signs is, as stated above, a characteristic feature of PS and PC inscriptions.

L4: The last sign is, like L2, partially affected by strong erosion, but three oblique parallel strokes are clearly visible. They are placed in such a way that some space is left below them; there, a faint, straight vertical line can be made out, which must be part of the complex sign, even though none of the strokes appear to be connected. Such a sign is not attested in either PS or PC. It is, however, very similar to the hieratic version of the hieroglyph V28 , which in turn is used in PS for the consonant *h* (*het*).⁴² The PC *het* developed from another model.⁴³ The hieratic form can reduce the loops of the hieroglyph to three or four oblique strokes with a vertical line below; the following are examples from Egyptian rock graffiti: .⁴⁴ The hieratic shape of L4 is an innovation for PS, but the possibility that some PS/PC letters can be influenced by hieratic more than hieroglyphic models is clearly evident.⁴⁵

So while not as immediately identifiable as the signs in the right oval, all four signs in the left oval can also easily be explained as PS letters: L3 as a variant shape, L4 as derived from hieratic, L1 as a more elaborate version closer to the model (or one of multiple models) than the attested shapes, and L2 as plainly as the signs in the right oval. In the left oval, we thus read *š-k-l-h*.

In order to extract from this sequence a plausible meaning, most probably a title or name, we have to recall that in PS inscriptions, identical consecutive consonants are sometimes written only once, even across two words. The sequence *m-b-b-l-t* on the famous bilingual sphinx Sinai 345, and repeatedly in other PS inscriptions with the variation *m-b-b-l-t*, stands for *m'bb B'lt*, "beloved of Baalat" (= Egyptian *m'j Hwt-hr*).⁴⁶ The letter *b* is written once but has to be read twice: as the final *b* of *m'bb* and the initial *b* of *B'lt*. The fact that in the Timna inscription, R4/5 are doubled, when the *m* is geminating in the same word, is not an obstacle to this possibility in the same inscription. We suggest reading the words *škl* and *lh* with the *lamed* written only once but read twice. The first element, *škl* (pronounced in Biblical Hebrew with *šin* rather than *šin*), can designate a "learned, wise, literate, knowledgeable" person (*šokhel* > *maskil*).⁴⁷ The second element,

lh (*luah*), designates an inscribed tablet or plaque, and may extend to freestanding stelae and rock inscriptions.⁴⁸ The expression *škl-lh* is to our knowledge not attested, but provides a fitting description of one who would leave an inscription: "knowledgeable/skillful with inscriptions" or "expert in writing"—in other words, a literate person or scribe.

The Timna inscription can now consistently be identified as Proto-Sinaitic:

transliterated:	<i>š-k-l-h / 'z-r-m-m</i>
transcribed:	<i>škl-lh 'zrmm</i>
translated:	"(the) scribe (lit. expert in inscription[s]) 'Az-romam"

The interpretation of the two ovals themselves remains unresolved. As pointed out above, they cannot be called cartouches. Perhaps the loose use of cartouches and variant ovals in Syro-Palestinian glyptic may provide a basis for this phenomenon.⁴⁹ Yet it would have been quite hazardous for a foreigner affiliated with the Egyptian expeditions to inscribe his own name in rings inspired by *royal* cartouches. A quite different explanation that may come to mind would be schematic and out-of-scale footprints as frames for the graffiti, since they are placed on horizontal ground. As such, the inherent meaning could easily be understood in the sense of "NN stood/was here." It may or may not be meaningful that the two ovals are oriented almost precisely west, toward the sunset and—for what it is worth—the aforementioned chariot scenes. In the region, Nabatean graffiti of footprints are common (such as at Bir Nasb in Sinai) and are in many cases out of scale. None of them, to our knowledge, are inscribed, and we cannot recall examples from more proximate periods. Moreover, the interconnecting line between the two ovals is inconsistent with the footprint option no less than it is with cartouches. We can only speculate that our scribe may have framed his two columns of writing to give them the appearance of "tablets" (*lh*), connecting them to indicate graphically that the two parts belong together and must be read in sequence. But he may just as well have done this simply for aesthetic reasons.

THE DATE

An exciting perspective derives from the consideration that Egyptian activities at Timna, unlike Serabit el-Khadem, are limited to the New Kingdom. As was pointed out above, the controversy around the date of the emergence of the early alphabet is closely related to the inconclusiveness of the evidence from Sinai; some prefer to connect the PS inscriptions with the earlier period of Egyptian mining activity during the Middle Kingdom, while others relate them to the New Kingdom. The Wadi el-Hôl inscriptions have failed to resolve the case in favor of the earlier date, following the point made by Sass: a traveler on the much-used shortcut desert route may have left the alphabetic graffiti at

any time, even centuries after the surrounding Middle Kingdom engravings. Only new, direct dating evidence could settle the matter as Sass hoped for, with “an incontestable link to a specific century of the Sinai inscriptions, Wadi el-Hôl inscriptions, or similar yet-to-be-discovered inscriptions.”⁵⁰

The characters of the Timna inscription are closer to PS than to PC (Figure 8). The indicative shape for *š* (L1) is a strong indicator. The very pictorial character of the eye-sign (R1), the forms used for *z* (R2) and *h* (L4), and the seated-man-classifier (R6) as well, are more congruent with PS. It must be said, though, that palaeographic comparisons for PS inscriptions are still rather problematic. The number of known PS inscriptions—more than thirty—is misleading, since all but the two at Wadi el-Hôl come from one site, Serabit el-Khadem (plus surroundings).⁵¹ We hardly know anything regarding the extent of regional variants for PS. The Wadi el-Hôl graffiti prove that these were indeed significant, with the variant shapes for *h* and the cumbersome *š/k*(?). We cannot tell, therefore, if the variant traits of the Timna graffito have any chronological implications

or if they reflect a local tradition (with its origin depending on the home of their author, which need not be Timna).

What we *can* say with a good degree of confidence is that the inscription will have been produced in the realm of Egyptian-Semitic interactions attested at Timna mainly in the Ramesside Period but starting in the fourteenth century (i.e., during the late Eighteenth Dynasty) and lasting until the mid-twelfth century (until the reign of Ramesses V).⁵² A much earlier date (by several centuries) for the PS inscriptions from Sinai and Wadi el-Hôl is accordingly called into question . . . if this inscription is indeed authentic!

A HOAX?

It is the location of this inscription that first raises suspicion. The aforementioned chariot scenes, in a narrow gorge just a short distance away from the table rock with the inscription, are one of the main points of interest for visitors to the Timna Park. Dozens, sometimes hundreds, of students and tourists pass only meters from the rock daily on their way from the car and bus parking lot to the rock drawings and back. How could it remain undiscovered until now?

Next, the unusual characters and their somewhat unfamiliar ductus (evidently inspired by hieroglyphs, yet not immediately readable) may lead to the hasty conclusion that this was a careless modern attempt to produce something remotely similar to an Egyptian inscription—in other words, a hoax. The present writer must confess that this was indeed his own very first impression too, and it may well remain an opinion among colleagues even after this presentation.

Add to this the oval frames that appear to the amateur so similar to Egyptian double cartouches. In Timna itself, there is only one Egyptian rock inscription, high above the small sanctuary or chapel to the Egyptian goddess Hathor (not counting the numerous inscribed objects from the chapel; see Figure 2).⁵³ A very modestly executed relief shows a pharaoh presenting offerings to Hathor. One line of rather clumsy hieroglyphs at the bottom mentions an official, Ramesses-emper-ra, who commissioned the relief. Between the two figures, in the free spaces in front of the pharaoh’s face and his leg, there are two cartouches with the throne- and birth-names of Ramesses III. These two cartouches are not side by side, and they are certainly too distant and indistinct to have served as a model for an attempted reproduction. The nearest example of an actual Egyptian double cartouche is located at Beeroth Roded/Themilat Radadi, just across the modern border of Egypt, some 20 km away from Timna. In the vicinity of water-holes, a better-executed rock inscription again bears the two names of Ramesses III, here side by side, with both cartouches surmounted by a sun disc and a prominent double feather.⁵⁴ This inscription was discovered by a student in 1972, and was accessible until the full return of Sinai to Egypt in 1982. A replica of this inscription is today among a series of rock art



































			
R2	Sinai 360	Sinai 360	
			
L4	Sinai 365b	W. Hôl 1	(Hieratic)
			
L2	Shechem	Sinai 358	
			
L3	Sinai 363	Sinai 358	
			
R4/5	W. Hôl 1	W. Hôl 1	Gezer
			
R1	Sinai 352	W. Hôl 2	
			
R3	Sinai 357	Sinai 365b	W. Hôl 2
			
L1	W. Hôl 1	W. Hôl 2	Sinai 357
	[Unattested in PS/PC]		
R6			

Figure 8. Comparative chart of the Timna letters (left) with PS/PC signs (center) and their standard hieroglyph models (right).



Figure 9. The newly discovered inscription at Timna. The gulch in the background leads to rock drawings of chariots and hunting scenes. Photograph by the author.

samples from the region exhibited at the parking lot to the chariot scenes site. Until several years ago, the same reproductions were mounted along the visitors' path leading to the chariot rock drawings—and as a matter of fact, the copy of the double cartouches from Beeroth Roded/Themilat Radadi was then only a few meters away and well within view from atop the rock that carries the newly discovered inscription.⁵⁵

Couldn't a student or a tourist—having climbed the rock and seen the nearby replica of the double cartouches—have attempted a dilettantish reproduction of the replica? Tempting as this explanation may appear at first, it forbids itself. Two ovals are by nature somewhat similar to a double cartouche, of course, but why do they differ from their supposed model? Why were the very eye-catching feathers on top of the actual cartouches not copied? And how then can the connecting line between the ovals be explained? Moreover, there is not one sign identical in both inscriptions. Why would the sitting person be drawn in such a different way than the figures of Maat and Ra in the actual cartouches, if these had served as its models? If the letter *lamed* was copied from this *heqa* hieroglyph, why would it be turned upside down? The two horizontal lines (R2) look sim-

ilar to the double hieroglyphic *s* in *R^c-mss*, “Ramesses,” though they lack the small crossbars of the hieroglyphs. But mere lines—whether horizontal, vertical, or oblique—are so basic an element that they can hardly serve to prove a direct dependency between signs. What counts much more are all the other signs that are so different from the putative model. How could the eye and the head sign be explained, the vertical (!) water lines, the *kaf*? How could the very peculiar double uraei and the hieratic *h* be inspired by this or any other source that a modern author of a “hoax” graffito might have had in mind? And ultimately, how conclusive is it that four-plus-six “accidentally” reproduced and/or invented signs produce a plausible meaning?

Another indicator for the antiquity of the engraving is the patina it has acquired. In marked contrast to the adjacent modern scratches, the inscription is identical in color to the natural purple red of the sandstone (Figures 5, 6, and 9). The effects of weathering at a desert site can lead to a variety of differing results; the nearby rock cliffs demonstrate vividly that modern graffiti can look worn and lose their fresh color after a relatively short time—as long as they are vertically exposed to the wind. The effects on a horizontal surface are very different. In the present case, fortunately, there is an articulate piece of evidence: in 2006, a group of tourists from Latvia reported on the Internet about a trip to Timna, and among their photographs is a picture of the inscription that we report here.⁵⁶ This photograph clearly shows that over the last three years, not the slightest effect of erosion can be distinguished. In consequence, the very considerable effects of erosion that the inscription shows, where certain sections are worn to an extent that they can hardly be discerned, can only result from a very long exposure, very much longer than several years or decades.

Of course, the 2006 photograph proves something else, too: the inscription had already been seen before one of the Stonewatch team members happened to climb the rock and notice the engraving in summer 2009. In fact, it is inconceivable that this easily accessible site would not have been visited many times before. The modern graffiti there sadly document some of these visits, and it can only be credited to fortune that the engraving itself has remained undamaged until now. Visitors who may have been surprised to find the engraving on the rock must have thought, too, that it was something modern, a hoax; were it not, one might evidently infer, experts would be aware of it, and it would be properly marked and fenced off, as are all other rock drawings in Timna Park. Therefore, most visitors would conclude that this could not be something important and would not bother. If archaeologists or other scholars came across the engraving—and it is certainly plausible that some did—their immediate reaction would be, as we have just pointed out, to brush it off as a hoax unworthy of further investigation. The merit of the people from Stonewatch is not in their discovery of something that was there for many to be seen, but in the initiative they took in deciding to take seriously the possibility that this might “be something.”⁵⁷

CONCLUSIONS

If this inscription is not a hoax, it can only be identified as either Egyptian, in which case it would mix actual hieroglyphs with unknown signs and remain for the most part unintelligible, or early alphabetic, in which case it is conclusively interpretable as a West Semitic title plus name. The latter interpretation would confirm that the version of the early alphabet conventionally termed Proto-Sinaitic was in use at Timna, where a constellation of Egyptian expeditions and a local Semitic population—just as in Serabit el-Khadem—persisted. The inscription is consistent with the known repertoire of PS signs as well as the principle of derivation of the signs from Egyptian hieroglyphs with hieratic influences. In addition, it displays hitherto unknown variant traits (such as variant sign shapes and the use of a classifier/determinative) that contribute to our understanding of PS. Furthermore, it adds weight to the position that the formation of the alphabet should be dated not much earlier than the second half of the second millennium BCE.

We expect that, in spite of this argument, doubts on the authenticity of this discovery will persist into the future, and the most plausible scenario is that experts will be split on this question, just as on many aspects of this and other fields in research. The possibility that the inscription *may* indeed be authentic not only justifies presenting it to the public, but also requires its publication; only then can others form their opinions and react accordingly.

NOTES

1. I consciously apply the traditional terms “Proto-Sinaitic” and “Proto-Canaanite,” fully aware of their terminological inadequacies, along with the neutral “early alphabetic.” Others have with good reasons tried to introduce “linear alphabetic” (A. Millard, “Alphabetic Writing, Cuneiform and Linear, Reconsidered,” *Maarav* 14 [2007]: 83–93), “Canaanite alphabetic” (P. J. King and L. E. Stager, *Life in Biblical Israel* [Louisville: Westminster John Knox, 2001], 302), “Old Canaanite” (F. M. Cross, “Newly Found Inscriptions in Old Canaanite and Early Phoenician Scripts,” *Bulletin of the American Schools of Oriental Research* 238 [1980]: 1–20), or suggested to differentiate between “Proto-Canaanite” and “Old Canaanite” (G. J. Hamilton, *The Origin of the West Semitic Alphabet in Egyptian Scripts*. The Catholic Biblical Quarterly Monograph Series 40. [Washington: Catholic Biblical Association of America, 2006], 4), or between “pictographic Canaanite” and “linear Canaanite” (A. Millard, “The Ugaritic and the Canaanite Alphabets. Some Notes,” *Ugarit-Forschungen* 11 [1979]: 613–615). Regardless of the question of precedence, where the alphabet was invented, and while there is no doubt that the inscriptions from second-millennium Canaan, from Sinai, along with the few signs from Wadi el-Hól and now from Timna, represent variants of one and the same (Northwest Semitic early alphabetic) script, there is a palaeographic difference between the early inscriptions from Canaan and those from Sinai. For this reason alone, it is fitting to retain “PS” and “PC” here as conventional terms.
2. B. Sass, “The Genesis of the Alphabet and its Development in the Second Millennium B.C.: Twenty Years Later,” *De Kémi à Birît Nâri* 2 (2004/2005): 148–166.
3. O. Goldwasser, “Canaanites Reading Hieroglyphs: Horus is Hathor?—The Invention of the Alphabet in Sinai,” *Egypt & Levant* 16 (2006): 121–160.
4. J. C. Darnell, “Die frühalphabetischen Inschriften im Wadi el-Hól,” in W. Seipel (ed.), *Der Turmbau zu Babel. Ursprung und Vielfalt von Sprache und Schrift*, vol. IIIA (Vienna: Kunsthistorisches Museum; Milano: Skira, 2003), 165–171; J. C. Darnell, F. W. Dobbs-Allsopp, et al., *The Early Alphabetic Inscriptions from Wadi el-Hól: New Evidence for the Origin of the Alphabet from the Western Desert of Egypt*. Annual of the American Schools of Oriental Research 59. (Boston: American Schools of Oriental Research, 2005), 63–113.
5. B. Sass, *The Alphabet at the Turn of the Millennium: The West Semitic Alphabet ca. 1150–850 BCE. The Antiquity of the Arabian, Greek and Phrygian Alphabets*. Occasional Publications 4. (Tel Aviv: Sonia and Marco Nadler Institute of Archaeology, 2005).
6. The latest attempts were by K. T. Zauzich, “Wir alle schreiben Hieroglyphen. Neue Überlegungen zur Herkunft des Alphabets,” *Antike Welt* (2001): 167–170 and H. Goedicke, “A *Bamah* at the First Cataract,” in E. Czerny et al. (eds.), *Timelines: Studies in Honour of Manfred Bietak*, vol. II. *Orientalia Lovaniensia Analecta* 149. (Leuven, Paris, Dudley: Peeters, 2006), 119–127.
7. The favorites are Egypt, Canaan, or Sinai. The special role of Phoenicia and specifically Byblos, that the classical authors emphasize (cf. Herodotus, *Hist. V*; Ephorus of Cyme, frag. 105), is evidently founded in the transmission of an already established Phoenician alphabet to the ancient Greeks. Beyond that it has not been possible to verify any precedence of the alphabetic tradition in Phoenicia, even though the very strong Egyptian impact on Byblos would provide a fruitful ground for such a development. The so-called Byblite Pseudo-Hieroglyphs, clearly a syllabic script, do not appear to have had an impact on the origin of the alphabet, but their position in the related processes remains open to speculation as long as no consensus evolves over this enigmatic branch of Ancient Near Eastern scripts (Mendenhall’s research [*The Syllabic Inscriptions from Byblos* (Beirut: American University, 1985)] has not been unanimously accepted; cf. also J. E. Hoch, “The Byblos Syllabary: Bridging the Gap Between Egyptian Hieroglyphs and Semitic Alphabets,” *Journal of the Society for the Study of Egyptian Antiquities* 20 [1990]: 115–124). The Ugaritic cuneiform alphabet is a secondary off-branch of the linear alphabet with limited duration (M. Dietrich and O. Loretz, *Die Keilalphabeten. Die phönizisch-kanaanäischen und altarabischen Alphabete in Ugarit* [Münster: Ugarit-Verlag, 1988]). For the possible relationship of the early South Arabic branch of the alphabet, cf. B. Sass, *Studia Alphabetica: On the Origin and Early History of the Northwest Semitic, South Semitic and Greek alphabets*. *Orbis Biblicus et Orientalis* 102 (Freiburg/CH:

- Universitätsverlag: Göttingen: Vandenhoeck & Ruprecht, 1991) and Sass 2005.
8. The private organization “Stonewatch—Arad Academy e.V.,” based in Germany and directed by Josef and Elisabeth Otto, has been engaged in voluntary rock art research worldwide, with one of its focuses on Timna (www.stonewatch.de). Andreas Wahler discovered the inscription. I am obliged to Josef Otto, and to Prof. Dr. Wolfgang Zwickel (University of Mainz), who called my attention to the discovery. I am also grateful to Michael “Levko” Lavie, now retired Timna Park director, for his support and commitment during my investigation of the inscription at the site in November 2009, to David and Leah Schoneveld-Benamy of Kibbutz Lotan, and to the Friends of Abraham Society (Munich) for their help and support. I also wish to thank Dr. Yuval Yekutieli of Ben-Gurion University at Beer Sheva for sharing with me valuable information as well as his skeptical perception (see notes 55–56 below). For their (mostly also differing) opinions, I am grateful as well to Prof. Orly Goldwasser (Hebrew University Jerusalem), Prof. Ludwig Morenz (University of Bonn), Prof. Benjamin Sass (Tel Aviv University), and Dr. Brian Colless (Massey University, New Zealand).
 9. B. Rothenberg, *Timna: Valley of the Biblical Copper Mines* (London: Thames & Hudson, 1972), 119f., 26, Figure 5.
 10. Ludwig Morenz in a preliminary e-mail communication (August 27, 2009) suggested as a background an adaptation of Egyptian script as in Canaanite scarabs, a possible hieroglyphic interpretation of the right oval and imitation of cursive writing for the left oval.
 11. A. Gardiner, *Egyptian Grammar* (Oxford: Griffith Institute, Ashmolean Museum, 1957), 438–548; expanded in R. Hannig, *Grosses Handwörterbuch Ägyptisch—Deutsch (2800–950 v. Chr.). Marburger Edition* (Mainz: von Zabern, 2006), 1323–1474.
 12. Goldwasser 2006, 155; Hamilton 2006, 182f.
 13. B. Sass, *The genesis of the alphabet and its development in the second millennium B.C.* Ägypten und Altes Testament 13. (Wiesbaden: Harrassowitz, 1988), 185, Tables 4 and 5. A naturally shaped eye-sign can be read at the PC Shechem stele fragment; cf. S. Wimmer, “Sichimitica Varia I: Zur sog. Sichem-Plakette,” *Biblische Notizen* 109 (2001): 21–26.
 14. Goldwasser 2006, 154; Hamilton 2006, 147.
 15. Sass 1988, 185, Tables 4 and 5.
 16. Hamilton 2006, 147.
 17. Goldwasser 2006, 155; Hamilton 2006, 223; Sass 1988, 185, Table 5.
 18. Hamilton 2006, 140.
 19. Goldwasser 2006, 154; Hamilton 2006, 78; Sass 1988, 185, Tables 4 and 5.
 20. Goldwasser 2006, 149.
 21. J. C. Darnell, F. W. Dobbs-Allsopp, et al. 2005, 81.
 22. Hamilton 2006, 82; S. Wimmer and S. Wimmer-Dewikat, “The alphabet from Wadi el-Hól: A first try,” *Göttinger Miszellen* 180 (2001): 107–112.
 23. Cf. also Wimmer and Wimmer-Dewikat 2001, 108; Goldwasser 2006, 150.
 24. Wimmer and Wimmer-Dewikat 2001.
 25. Cf. also L. Koehler and W. Baumgartner, *Hebräisches und aramäisches Lexikon zum Alten Testament* (Leiden, Boston: Brill, 1967–1995), 761f.; J. Hofijzer K. and Jongeling, *Dictionary of the North-West Semitic Inscriptions* (Leiden, New York, Köln: Brill, 1995), 835.
 26. Koehler and Baumgartner 1967–1995, 1121–1125, 1155; Hofijzer and Jongeling 1995, 1077.
 27. Cf., e.g. Goldwasser 2006, 125, Figure 5a.
 28. B. Colless, “Recent discoveries illuminating the origin of the alphabet,” *Abr-Nahrain* 26 (1988): 51.
 29. Hamilton 2006, 231.
 30. Goldwasser 2006, 155; Hamilton 2006, 233; Sass 1988, 185, Table 4.
 31. Hamilton 2006, 233, 237.
 32. Sass 1988, 185, Table 5.
 33. Wimmer and Wimmer-Dewikat 2001.
 34. Darnell and Dobbs-Allsopp et al. 2005, 84f.
 35. Hamilton 2006, 328f.
 36. Goldwasser 2006, 150.
 37. The members of Stonewatch who discovered the inscription remarked on the similarity of the sign—when turned around by 180 degrees—with the so-called “omega” sign known mainly from the iconography of Middle Bronze Age scarabs (O. Keel, “Die Ω-Gruppe. Ein mittelbronzezeitlicher Stempelsiegel-Typ mit erhabenem Relief aus Anatolien-Nordsyrien und Palästina,” in O. Keel, H. Keel-Leu, and S. Schroer (ed.), *Studien zu den Stempelsiegeln aus Palästina/Israel II*. [Orbis Biblicus et Orientalis 88. Freiburg/CH: Universitätsverlag: Göttingen: Vandenhoeck & Ruprecht, 1989], 39–87). Since this is clearly not the orientation of the inscription, and the “omega” is not a known element in early alphabetic inscriptions (where signs could rotate), this option must be discounted.
 38. Goldwasser 2006, 154; Hamilton 2006, 118; Sass 1988, 185, Tables 4 and 5.
 39. The example is from a vase of Amenemhet III inscribed in mixed standard and cursive hieroglyphs; M. Al-Maqdissi, D. Morandi Bonacossi, and P. Pfälzner, *Schätze des Alten Syrien. Die Entdeckung des Königreichs Qatna* (Stuttgart: Landesmuseum; Theiss, 2009), 137.
 40. Hamilton 2006, 118.
 41. Goldwasser 2006, 154; Hamilton 2006, 128f.; Sass 1988, 185, Tables 4 and 5.
 42. Hamilton: *harm*; Goldwasser 2006, 154; Hamilton 2006, 58; Sass 1988, 185, Table 4.
 43. Hamilton 2006, 98; Sass 1988, 185, Table 5.
 44. M. S. Ali, *Hieratische Ritzinschriften aus Theben*. Göttinger Orientalforschungen IV. Reihe Ägypten 34. (Wiesbaden: Harrassowitz, 2002), Taf. 200.
 45. Darnell and Dobbs-Allsopp 2005.
 46. Sass 1988, 12.
 47. Koehler and Baumgartner 1967–1995, 1238f.
 48. Koehler and Baumgartner 1967–1995, 497; Hofijzer and Jongeling 1995, 569 and 570.
 49. Cf. Goldwasser 2006 for the possible influence of Canaanite scarab motifs on the development of the alphabet.

50. Sass 2004/2005, 165.
51. Apart from various inscribed objects from Egypt, such as the disputed Kahun handle (Sass 1988, 104, Figure 282), and a stamp seal from Deir Rifa (Hamilton 2009), there are some enigmatic signs, one of which is identical with the PS *aleph*, in situ at a rock west of the Island of Elephantine (Gebel Tingar; noted by Goedicke 2006). The inscription on fragments of a statue from the same site is evidently Phoenician, and, contra Goedicke, cannot be related to the Eighteenth Dynasty). Brian Colless identifies many more inscriptions as “Canaanite alphabetic/syllabic” (cryptcracker.blogspot.com).
52. The numerous inscribed finds from the Hathor sanctuary all date to the Nineteenth and Twentieth Dynasties, except one block with a damaged cartouche that appears to read *Dhwtj-ms*, “Thutmoses” (K. A. Kitchen, “A Thutmose King at Timna,” *Orientalia* 46 [1976]: 262–264). Schulman (“Catalogue of the Egyptian Finds,” in B. Rothenberg, *The Egyptian Mining Temple at Timna*. Researches in the Arabah 1959–1984, vol. I [London: Institute for Archaeo-Metallurgical Studies, Institute of Archaeology, 1988], 116f.) suggested to reinterpret the traces differently and to read a Ramesside name, because a Thutmose cartouche “would present serious chronological problems since not one of the datable Egyptian finds is earlier than the 19th Dynasty.” Even though there are indeed no other, earlier inscribed finds, Egyptian mining activity at Timna started in the fourteenth century, i.e., in the late Eighteenth Dynasty (B. Rothenberg, 1959–1984, 11, site 30; more detailed B. Rothenberg, “Die Archäologie des Verhüttungslagers Site 30,” in H. G. Conrad and B. Rothenberg (eds.), *Antikes Kupfer im Timna-Tal. 4000 Jahre Bergbau und Verhüttung in der Arabah*. Der Abschnitt Beiheft 1. Bochum: Deutsches Bergbau-Museum, 1980); for site 30, cf. Figure 2, and it should not be precluded that the sanctuary was originally founded by Thutmose III. Pinch (G. Pinch, *Votive Offerings to Hathor* [Oxford: Griffith Institute, 1993], 61–65 argues that several non-inscribed finds from the temple should be dated to the Eighteenth Dynasty. A brief period of later Egyptian mining activity at Timna during the Twenty-Second Dynasty (Rothenberg 1988, 11, 277) is not relevant for our context.
53. For the relief: R. Ventura, “An Egyptian Rock Stela in Timna,” *Tel Aviv* 1 (1974): 60–63; A. Schulman, “The Royal Butler Ramsempere,” *Journal of the American Research Centre in Egypt* 13 (1976): 117–130. For an improved reading of the inscription, cf. M. Görg. “Ein asiatisch-ägyptischer Inspektor in Timna,” in M. Görg (ed.), *Beiträge zur Zeitgeschichte der Anfänge Israels, Ägypten und Altes Testament* 2. (Wiesbaden: Harrassowitz, 1989), 175–179. For the temple: Rothenberg 1988; S. Wimmer, “Egyptian Temples in Canaan and in Sinai,” in S. Israelit-Groll, (ed.), *Studies in Egyptology Presented to Miriam Lichtheim*, (Jerusalem: Magnes, 1990), 1069f; S. Wimmer, “(No) More Egyptian Temples in Canaan and Sinai,” In I. Shirun-Grumach (ed.), *Jerusalem Studies in Egyptology*. Ägypten und Altes Testament 40. (Wiesbaden: Harrassowitz, 1998), 88f.
54. U. Avner, “Notes and News: Nahal Roded,” *Israel Exploration Journal* 22 (1972): 158; facsimile in Rothenberg 1972, 201, Figure 62; photograph in Rothenberg 1980, 211.
55. I owe the latter observation, along with informative photographs that prove the vicinity of the replica to the rock in question, to Dr. Yuval Yekutieli from Beer Sheva University (e-mail of November 15, 2009). Dr. Yekutieli remains doubtful about the authenticity of the inscription and suspects either a hoax or an intentional attempt to produce something deceiving.
56. See www.travelling.lv/ru/israel/israel2006/20070120170750, Figure 14. Again, I thank Dr. Yekutieli for this information. The only difference between the 2006 photograph and the condition of the engraving today is a damaged spot in the left oval, to the left of the letter *lamed*. It looks quite similar to the damaged spot at the right end of the letter *kaf*, and may well have been caused by a stone thrown at the rock surface from one of the surrounding, higher ridges.
57. Beno Rothenberg, the most proficient connoisseur of Timna, who has committed his scientific life to research there since the 1950s, communicated to Josef Otto of Stonewatch that he himself was convinced “a lot” remained still to be discovered in Timna. Many discoveries were made at places where research had been conducted before. The above-mentioned Egyptian relief above the Hathor sanctuary, too, was first noticed accidentally by a visitor after several excavation campaigns had been conducted at the sanctuary below.

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