NEW LIGHT ON THE AMARNA PERIOD
FROM NORTH SINAI*

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Since 1999 investigations at Tell el-Borg in North Sinai have uncovered significant material from the Amarna period. In addition to pottery from this period, several wine jar seals and other small objects mention the names of members of the royal family of Akhetaten. Particularly interesting is a seal impression with the cartouche of Neferneferuaten followed by the epithet Akhenaten, adding a further occurrence to the dossier of this enigmatic royal figure.

The Amarna chapter of Egyptian history, the approximately thirty-year period from the accession of Akhenaten to the death of Ay (c.1352–1323 BC), remains one of the most investigated and yet elusive periods of Egyptian history. Those who specialise in the era of Akhenaten and his successors naturally value new information, as it invariably helps to clarify the somewhat impressionistic picture we have of the second half of the fourteenth century BC in Egypt. New pertinent evidence, which has unexpectedly turned up in excavations at the remote site of Tell el-Borg in western Sinai, is therefore very welcome. This paper offers a summary of the new Tell el-Borg material as well as some preliminary conclusions.

Our investigation at Tell el-Borg began with an initial reconnoitring of the site in May 1999, followed by the start of a topographic map survey in January 2000. Excavations began in March 2001 and continued for seven seasons, concluding in the spring of 2007. In several publications since 2002 we have reported that Tell el-Borg housed a New Kingdom military outpost, located 5 kilometres southeast of Hebuia (II) and 10 kilometres east of the Suez Canal at Qantara Sharq.1 The several sites that make up Hebuia are now known to be Egypt’s east frontier capital and home to the strategic

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Fortress of Tjaru (*htm n ḫr.t*). Tell el-Borg, we have proposed, is the next fortified establishment in the sequence, most likely ‘The Dwelling of the Lion’ of the Seti I Karnak Reliefs and the ‘Dwelling of Sesy’ of Ramesses II (fig. 1).  

The scant remains of two forts have been discovered at Tell el-Borg. The Eighteenth Dynasty stronghold is represented by an impressive moat constructed with a fired (red) brick foundation (fig. 2), but the inner defensive walls have not survived. The evidence suggests that the fort was constructed during the reign of Thutmose III or possibly Amenhotep II, and continued into the Amarna period. The reason for dating the terminus of the first fort is that the eastern or front section of the moat was intentionally filled when the second fort was constructed. In Field IV the moat was filled with a mix of sand and thousands of fragments of crushed and broken limestone blocks (fig. 3). The source of the limestone blocks and why the structure—apparently a temple—was demolished and the blocks pulverised is not known. However, it is tempting to consider the possibility that they came from a ravaged temple of the Aten built by Akhenaten himself.

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**Fig. 1. Relief of Seti I at Karnak.**
Fig. 2. Fosse G, Field VIII — fired red brick foundations of Eighteenth Dynasty moat.

Fig. 3. Fosse D, Field IV — limestone chip fill.
A second indication for establishing the date of the termination of the earlier fort and the dating of the filling of the fosse is provided by a stamped jar seal found in the very top fill, in Square D-12, Locus 2. The cartouche-shaped impression reads ‘nh-hprw-r’ (TBO 0077; fig. 4).\(^5\) We will return to this object below. However the archaeological context of the moat shows that it was still in use in the Amarna period, and the inclusion of the ‘nh-hprw-r’ jar handle among the sherds at the top of the moat indicates that it was probably filled at a date late in, or just after the Amarna period. Another Amarna period stamped amphora handle (TBO 0309 = TBP 588), which will be discussed below, was found at a lower level of the same moat. These two seal impressions suggest that this fort remained in use throughout the Amarna period, although conceivably it was intentionally filled for the construction of the second fort towards the end of the Eighteenth Dynasty.

Fig. 4. Seal impression of Ankhkheperure—TBO 0077.

**Architectural evidence**

In the course of our excavations, we found reused and stray *talatat* blocks in three different fields. In Field II a stone-lined pit, likely a water installation, was uncovered (fig. 5). One could descend into the pit by a series of steps, the first four of which were made of a pair of *talatat* blocks, while the fifth has three *talatat* laid side by side.\(^6\) Further *talatat* blocks were found within the pit, apparently fallen from the walls of the

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\(^5\) Hoffmeier, *BASOR* 337, 13 and fig. 11.

\(^6\) Hoffmeier and Abd el-Maksoud, *JEA* 89, pl. ix.2; Hoffmeier, *BASOR* 343, 180–2 and fig. 6.
pit. None of the blocks we retrieved were inscribed.\textsuperscript{7} The pottery found in association with this pit suggests a Ramesside date for the pit’s construction.\textsuperscript{8}

\textit{Talatat} blocks were also found in the remains of the second fort. In Field IV, A1 we discovered the partial remains of a V-shaped moat, whose method of construction

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{Fig5.jpg}
\caption{Reused \textit{talatat} Steps—Field II, Area 1.}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{Fig6.jpg}
\caption{Section of Fosse A showing reused \textit{talatat}, Field IV A1.}
\end{figure}

\textsuperscript{7} The blocks in the steps were not removed or turned over for examination.

\textsuperscript{8} This according to Rexine Hummel our ceramics expert and Gregory Mumford who worked in Field II and is writing the chapter on this field for J. K. Hoffmeier (ed.), \textit{Tell el-Borg} II (forthcoming).
was different to that of the moat associated with the Eighteenth Dynasty fort (fig. 6).\(^9\)
Some *talatat* were among the foundation materials in this moat. More significantly, three *talatat* blocks reused *in situ* were discovered in the foundation of the Ramesside gate in Field V (Square P, Locus 4),\(^10\) and several others were found scattered about in the demolished gate area (fig. 7). All of the *talatat* recovered thus far are uninscribed, but they invariably fit the standard size of \(c. 52 \times 26 \times 26\) cm.

While no decorated *talatat* have been found, some carved and painted fragments have turned up which may have originated from such blocks. One shard discovered in 2007 in the Ramesside gateway (Field V, Area 1) may contain the partially preserved head of a royal figure.\(^11\) The *khat*-wig this figure is wearing might indicate that it depicts a successor of Akhenaten, but seemingly lacks characteristics one would expect for Tutankhamun. This figure appears to be one the rulers of Akhet-Aten, possibly Ankhkheperure, and may have flaked off a *talatat* block.

Determining the original source of the *talatat* blocks distributed around the site remains a challenge. After seven seasons of excavations we have not found the foundations of a demolished temple of the Aten at Tell el-Borg. It is possible that the blocks were shipped from a dismantled Aten temple somewhere else in the Delta. Memphis and Heliopolis are also possible candidates, since *talatat* from a temple of Akhenaten have been found there.\(^12\)

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*Fig. 7. Talatat blocks *in situ*, Field V, Unit P, L. 5.*

\(^9\) Hoffmeier and Abd el-Maksoud, *JEA* 89, pl. xiii.3–4.

\(^{10}\) Hoffmeier, *ASAE* 80 (2006), 258 and figs 5 and 6.


Another theory presents itself, and that is that nearby Tjaru (Tell Hebua) was the source of these temple blocks. While no Amarna period temple has yet been discovered, there is textual evidence to suggest that there may have been a temple estate in Tjaru.

One of the wine jars from the cache in the tomb of Tutankhamun (KV 62) contains vintage information which reads: ‘Year 5: Sweet wine of the house of Aten [from] Tjaru’. In the recent discovery of KV 63 an amphora included a hieratic inscription that also mentions wine from Tjaru, and like the one cited here from Tutankhamun’s time, is dated to year 5. Consequently, Otto Schaden believes that the two year 5 vintage inscriptions suggest a date in Tutankhamun’s reign for both. These two texts demonstrate that there was at least a temple estate of pr-ittn in the Tjaru region, and possibly that an Aten temple built by Akhenaten flourished in the most north-easterly nome. Perhaps this pr-ittn was the source of Akhenaten’s talatat blocks from Tell el-Borg. It is, however, equally possible, and perhaps more likely that the vineyards of Tjaru simply belonged to the estate of an Aten temple elsewhere in the country, be it Amarna, Memphis, Heliopolis, or otherwise.

One last line of evidence on architectural blocks at Tell el-Borg also reveals Amarna period activity. The blocks in question were doorjambs, inscribed by Amenhotep II, that were probably associated with the first fort. They were, however, discovered reused in the foundations of the moat of the second (Ramesside) period fort. The remains of seven inscribed limestone door jambs were retrieved from the moat, five of which display the defacing of the name of Amun by Akhenaten’s iconoclasts (two examples in figs 8a–b). The name of Amun was erased in the cartouches of Amenhotep, as well as in epithets of Amun-Re, although the sun-disc was not hacked out.

Ceramic evidence

Rexine Hummel, who has directed our ceramics department since the outset of the project, has described our pottery corpus as follows: ‘The bulk of the pottery reflects the Amarna Period and the reign of Ramesses II. These dates so far happily coincide with the cartouches on the many stamped jar handles that have been excavated’.

Inscriptional evidence

The late Eighteenth Dynasty is well represented in minor inscriptions at Tell el-Borg, beginning with Queen Tiye and concluding with Horemheb. The relevant epigraphic materials is reviewed here in chronological order.

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13 J. Černý, Hieratic Inscriptions from the Tomb of Tutankhamun (TTSO 2; Oxford, 1965), 22 no. 8.
15 Wine from Tjaru is attested on jar sealings and wine docket from Malkata (Year 28 and 36 of Amenhotep III) and Amarna (Year 13 [of Akhenaten]), see W. C. Hayes, ‘Inscriptions from the Palace of Amenhotep III’, JNES 10 (1951), fig. 4 no. 5, fig. 6 nos 51–2, fig. 7 nos 74–6, fig. 25 (J, K) and possibly fig. 29 (FFFF); A. Leahy, Excavations at Malkata and the Birket Habu 1971–1974, IV: The Inscriptions (Warminster, 1978), pls 15 ([XII]) and 16 (XIII); T. E. Peet and C. L. Woolley, The City of Akhenaten, I (MEES 38; London, 1923), pl. 63 (N); H. W. Fairman and J. Černý, in J. Pendlebury, The City of Akhenaten, III: The Central City and the Official Quarters. The Excavations at Tell el-Amarna during the Seasons 1926–1927 and 1931–1936 (MEES 44; London, 1931), 165, pl. 89 no. 123.
16 Hoffmeier and Bull, RdE 36, 79–86; Hoffmeier, ASAE (Arabic edition Vol 5, 2008), 266 and figs. 17–18.
18 The epigraphic notes provided here were made in collaboration with Jacobus van Dijk. Due to circumstances beyond our control it proved impossible for him to have access to the original material, and the observations given here are based on the examination of several sets of photographs.
Figs. 8a–b. Amenhotep II doorjambs with Amon’s name erased (TBO 715).

Fig. 9. Steatite ring Bezel of Queen Tiye (TBO 252).
1. A steatite ring with the name of Tiye (TBO o252) was discovered in the cemetery Area (Field III, Area 2, Square Q, Locus 1) (fig. 9).\(^{19}\) It was uncovered beside Tomb VIII where it was likely discarded when the tomb was robbed in antiquity. This tomb had a single occupant, who was interred in a clay coffin (fig. 10).

![Clay coffin, tomb 8, Field III.](image)

2. While clearing the moat of the Eighteenth Dynasty fort (Field IV, Area 1, Square F 3, Locus 7) we found an amphora handle with what appears to be the name of Akhenaten at a depth of 1.85 m (TBO o309 = TBP 588; fig. 11). The word *itn* at the top of the stamped impression is clear enough, but the signs underneath it are very difficult to read. The traces immediately below *itn* are perhaps most likely to be identified as the \(\text{št}\)-bird in the name of Akhenaten, as found on a sealing at Amarna which reads ‘[wine of the estate of Akhen]aten’.\(^{20}\) On the other hand, if the trace on the right below the word *itn* is a vertical stroke and not an abraded \(\text{ḥ}\) of \(\text{št}\), the reading could be *pr-itn* (‘wine of the estate of Aten’), which is much more frequently attested in Amarna jar sealings and stamped jar handles.\(^{21}\)

3. TBO II 37 (fig. 12) was discovered in the same stone-lined pit mentioned above that also utilised *talatat* blocks in its construction (Field II, Area 1, Square Ca, Locus 2). The impression reads ‘\(\text{nh-hprw-r}^*\) mry \(\text{w}^*-\text{n}^*\)’, ‘Ankh-kheperu-re beloved of Wa-en-re’, the name of Akhenaten’s ephemeral successor, usually called Smenekkhare, whose identity is still the subject of debate. The signs at the bottom of the impression are less

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\(^{19}\) Hoffmeier, *JARCE* 41, 109, fig. 26.


\(^{21}\) Peet and Woolley, *The City of Akhenaten* I, pl. lcxz; Pendlebury, *The City of Akhenaten* III, pl. 81 nos 38 and 39.
well preserved, but the reading is certain. The only doubt one might have would be the sign to the left of the plural strokes of ḫprw, which somewhat resembles a t in some of the photographs, resulting in the reading ‘nḥt-ḵprw-r’ , but both the position and the size of the sign in question make it clear that it is a circular sign which is partly broken away, i.e. the r of w-n-r.

4. A second example with the name of ‘nh-ḵprw-r’ followed by the epithet [mry]-w-n-r was discovered at the top of the moat in Field IV and was mentioned above (TBO 0077; fig. 4). The lower half of the handle is broken away, but the group w-n-r is clearly preserved. A comparison of the two impressions with this name shows that they were not made from the same seal.

Fig. 11. Seal impression of Akhenaten? (TBO 309).

Fig. 12. Seal impression of Ankhkheperure mry w-n r (TBO II 37).
5. The fourth amphora handle impression is probably the most important of the series (TBO 0565; fig. 13a–b). It was discovered in Field VI (Area 2, Square A, Locus 002), within a large garbage pit, which was apparently unwittingly dug into an earlier tomb during the very end of the Eighteenth Dynasty or early Nineteenth Dynasty. Fortunately the reading is clear enough, giving the name Nfr-nfrw-itn.t-n-hy=s ‘Nefer-neferuaten who is beneficial to her husband’. This impression provides virtually the only complete, more or less undamaged and unsurpassed example of this intriguing name, the existence of which was rediscovered some years ago by Marc Gabolde.22 The identity of this female royal figure so far remains unclear: Gabolde himself proposed Akhenaten’s eldest daughter Merytaten,23 while James Allen has suggested Neferneferuaten Jr.24 Despite their arguments to the contrary, the present writers still think that Nefertiti herself cannot be dismissed as a possible candidate. Recently Aidan Dodson has agreed that Neferneferuaten was Nefertiti, but speculates that she jointly ruled with Tutankhamun.25 He points to the two impressions of Tutankhamun (see nos 7 and 8 below) from Tell el-Borg, along with that of Neferneferuaten (TBO 0565), a photograph of which appeared in an earlier preliminary report of the 2005 and 2006 seasons,26 as supporting his theory. Had these stamped amphorae handles been discovered in the same or adjacent loci, such an interpretation might have merit. The

![Image 1](https://example.com/image1.png)
![Image 2](https://example.com/image2.png)

**Fig. 13** a–b. Seal Impression of Neferneferuaten Akhetenyes (TBO 0565).

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26 Hoffmeier, *ASAE* 80 (2006), fig. 23.
two of Tutankhamun were, however, discovered within the stone lined pit in Field II, whereas that of Neferneferuaten was found in a garbage pit in Field VI, 200 metres to the north. Consequently, linking Tutankhamun and Neferneferuaten politically, based on the discovery of their names on amphorae at Tell el-Borg, is unwarranted.

Epigraphically the present impression differs from all other examples of the name in that it writes the s in hy=s with the (reversed) cloth sign (S 29) following the group $\textit{sh.t}$ rather than the bolt sign (O 34), and that the n is written below the h of hy rather than above it.

6. The same stone-lined pit in Field II (Area 1, Unit C, Locus 2) in which one of the two Ankh-kheperu-ra examples was discovered (no. 3 above) also yielded two occurrences of the prenomen of Tutankhamun. TBO II 36 (fig. 14) is a stamped jar handle with the rather clumsily written name $\textit{nb-hprw-r'}$. The scarab beetle sign is particularly awkward; it appears to have only four legs, which are very large and angular, making the creature look more like a frog then a scarab. The reading itself is not in doubt, however.

7. The second Tutankhamun stamp was also discovered in the same stone-lined pit as no. 6. The cartouche with the pre-nomen occurs on the base of a jar or amphora (TBO II 61; fig. 15). It reads $\textit{pr} (?) \textit{nb-hprw-r'}$ 'the estate (?) of Neb-kheperu-ra', with the plural strokes of $\textit{hprw}$ written vertically to the left of the scarab sign. The elongated sign at the bottom appears to be deformed and is difficult to interpret; perhaps the most likely reading is $\textit{pr}$, but it must be admitted that the sign does not resemble this.

8. The name of Tutankhamun’s successor Ay was found on a jar handle (TBO 0778) that came from the same pit in Field VI (Area 2, Square C, Locus 2) which produced the Nefer-neferu-aten seal impression (fig. 16). Although the hieroglyphs are faint, the stamp clearly reads $\textit{Hw.t hpr-hprw-r'}$, ‘the temple of Kheper-kheperu-ra’. The $\textit{hw.t}$-sign has a rather elongated, flattened shape, but is crystal-clear.

9. Once again the refuse pit from Field VI (Areas 2, Square D, Locus 002), which measures 4.50 × 7.30 metres and had a maximum depth of 1.40 metres, yielded additional relevant data, viz. three attestations of Horemheb’s name. The first is on a partly preserved clay seal impression (TBO 0567); the fragment shows the tail and wing of the Horus falcon and part of the flat $m$ sign (fig. 17).

10. The second attestation of Horemheb is also on a clay bulla, this time better preserved (TBO 683). Most of the name $\textit{hr-m-hb mr.n-imn}$ is there, except the two bottom signs (fig. 18).

11. The third occurrence of the name of Horemheb is found on a faience seal (TBO 668), where the name $\textit{hr-m-hb mr.n-imn}$ is virtually completely preserved (fig. 19). An examination of the verso reveals where the two bands of the ring had been attached to the bezel. Although the bands are missing, the cartouche-shaped seal clearly was from a ring. It is noteworthy that this king is only attested on a seal and two bullae,

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27 We are grateful to Edwin Brock, who was able to examine this seal impression and to confirm the reading $\textit{hpr-hprw-r'}$. 

and not on stamped amphora handles like his Amarna predecessors. The presence of the two bullae suggests that royal communiqués were being dispatched to this fort by Horemheb, either from Memphis or the Delta residence at Tell el-Daba-Qantir.
Fig. 16. Seal impression of Ay (TBO 0778).

Fig. 17. Horemheb bulla (TBO 567).

Fig. 18. Horemheb bulla (TBO 683).

Fig. 19. Horemheb ring bezel (TBO 668).
Conclusions

The data reviewed here shed new light on the Amarna period. Because Tell el-Borg is located outside of Egypt proper, that is south-east of Tjaru, Egypt’s eastern border town with its forts, the new information shows that throughout the entire Amarna period and immediately thereafter, Akhenaten through Horemheb, Egypt’s military continued to guard the eastern entrance to Egypt. Furthermore the unbroken sequence of late Eighteenth Dynasty rulers demonstrates that Egypt was capable logistically of undertaking and sustaining military operations in the Levant during this somewhat obscure period of Egyptian international relations with western Asia. The line of late Eighteenth Dynasty royal names present at Tell el-Borg continues into the Nineteenth Dynasty, as evidenced by the fragmentary remains of many cartouches of Ramesses II from the gateway of the second fort. Thus it appears that there was a continuous military presence at this fort from the days of Thutmose III and Amenhotep II, through the entirety of the Amarna and Post-Amarna Periods and into the Ramesside era.


29 A limestone block discovered earlier in our work at Tell el-Borg contained a partial cartouche of Thut[mo]s[e] (TBO I 2).

IV.b. Seal Impression of Neferneferuaten Akhenenyes (TBO 365).

IV.c. Seal impression of Ankhkheperure mry w² n r² (TBO II 37).

IV.d. Seal impression of Ay (TBO 0778).

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