THE LATE BRONZE AGE AT JERICHO

VOL II

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CHAPTER 8

ANALYSIS OF RESULTS

8.1 Occurrence of Wares

The following table shows how many pots of each ware occur in which tombs. The list does not include the 'General Ware', 'Uncategorised' or 'Unlocated' categories. The totals for the tombs are also given without including these categories (which can be checked by reference to Chapter 7).

MB Wares

Tomb No:	21 (total 22)	30 (total 21)	5 (total 232)	4 (total 53)	13 (total 73)
IA1	8	8	68	19	18
IA2	1	1	12	6	7
IA2a			6		4
IA3				1	
IA3a			2	1	
IA4			3	2	
IA5			3		
IB1	4	6	31	3	5
IB1a	1				
IB2	3			5	3
IB2a		1	9	4	4
IB3			2		
IB3a			1	5	1
IB4			2		
IB4a	2		6		
IB5	2		4	1	
IB5a			2		
IB5b	1		21	3	2
IB5c				1	
IC1			3	1	2
IC2			1	1	
ID1			2		1
ID2					1
ID3					2
IE1					1
IE2			1	1	
IF1					1
IG1			1		
IH1			1		1
IIA1			2		
IIA2				1	1
IIA2a			2		
IIA3		1			
IIB1			7		1
IIB2			8		3
IIB2a			5	1	4
IIB3			1		2

IIB4		1		1
IIB5		1		1
IIB5a	1	2		3
IIB5b		1		
IIC1				1
IID1				1
IID2				1
IIIA1		3	2	
IIIA2		1		
IIIA3		1		
IIIA3a	1			
IIIB1	1	3		
IIIB2		1		
IIIB2a		3		
IIIB3		1		
IIIB4		1	1	
IIIC1		1		
IIID1		1		
IIIE1		1		

LB Wares

Tomb No:	5 (total 113)	4 (total 61)	13 (total 20)
IVA1	15	3	4
IVA2		1	
IVA3			1
IVB1	27	15	3
IVB2	1	2	
IVB3	3		
IVC1	1	1	1
IVD1		8	2
IVE1		1	
IVF1		1	
IVG1		1	
VA1	11	5	
VA2	1		
VB1	35	12	4
VB2	2	1	
VC1	1		
VD1	2	1	
VE1	1		
VF1	1		
VG1			1
VIA1	1	1	1
VIA2	2		
VIB1	1	6	
VIB2			2
VIC1	1	1	1
VID1		1	
VIE1	5		
VIIA1	1		
VIIA2	1		

8.1.1 Middle Bronze Age

It is clear that the same sorts of wares occur in both Middle and Late Bronze Ages. It seems that the potters of M and LBA Jericho used the same clays and much the same tempering materials. This is not altogether surprising, since they were limited to the materials available on or around the site.

The most common MBA wares are IA1, IB1 and IB5b, which together account for 49% of all the MBA pottery (although statistics can be misleading and unreliable if we take into account the accidents of discovery - if Tomb 5, the largest tomb, had not been found, then Ware IB2 would be more common than IB5b; we must not regard these figures as absolute). Furthermore, it seems that, contrary to expectations, different wares were usually not used for different types of pottery. Wares IA1 and IB1 in particular cover the whole range of MBA pottery.

Wares IB5a-c and the other grey wares (cf Chapter 5.5.1) are different in this respect. They were used almost entirely for piriform and cylindrical juglets. Since the fabric of these is the same as the other wares, and the difference lies only in the firing (in a reduced atmosphere, cf Chapter 5.3), it would appear that these pots were usually fired separately. This is the only indication of a specific choice of fabric for a particular type of pot in MB Jericho. It is also interesting to note that of the 57 grey ware pots in the MBA tombs, only five contained any flint temper. It seems that a conscious choice was being made by the potters making these juglets - they tended to prefer making them in a fabric without flint temper and firing them in a reduced atmosphere. The reasons for this are obscure. This may be the only indication of the hands of different workshops making different types of pots in their own particular ways.

Pottery-making at MB Jericho was probably a fairly organised activity. It is only very occasionally that a pot other than a piriform or cylindrical juglet is found in a grey fabric. It is possible, of course, that these few instances are the result of a badly controlled firing atmosphere, with not enough oxygen. Conversely, many piriform and cylindrical juglets which have not been categorised as grey fabrics do have traces of grey, and were undoubtedly failed attempts at reduced firing. This would have been due to oxygen seeping into the kiln during firing. Furthermore, it would seem that the colour of the fired pot is no guide to the fabric or ware. Pots of very different colours seem to have been made of the same ware - indeed, the whole range of fired colours occasionally appears on a single pot. This indicates that firing conditions in the kilns were not under the complete control of the potters.

Many of the other wares, as the table shows, are very rare indeed. One is tempted to suggest that in many cases they were not conscious attempts at different wares, but simply a product of chance. The different fabric groups, for instance with or without silty limestone and natural gypsum, do not appear to have been chosen specifically. The pottery produced in these fabrics does not differ typologically. It seems to have been a matter of whichever clay vein was being used at the time for extracting potting clay. Tempering materials, especially limestone, flint and grog, occur in all sorts of different combinations, apparently unsystematically. Often, it seems that the potter was adding as temper whatever happened to be available and ready to hand, in no particular proportions.

Franken, in his study of the Iron Age pottery from Jericho, noted that quartz and basalt do not occur in the local carbonate rocks at Jericho (Franken 1974, 44-5; cf Chapter 4.8). It seems reasonable, therefore, to assume as a working hypothesis that any quartz or basalt-tempered pots found at Jericho were imports. Among the MBA pottery, two quartz-tempered pots were found (Tomb 5

no.185, a cylindrical juglet, and Tomb 13 no.54, a lamp), and one basalt-tempered pot (Tomb 5 no.233, the 'Chocolate-on-White' pedestal vase). The latter type was not common at Jericho (one other 'Chocolate-on-White' pot is known, from Tomb 9, cf Amiran 1970, pl.49), and therefore may well have been an import from another site in Palestine. The two quartz-tempered pots, however, do not otherwise betray a non-Jericho origin. Nevertheless, these types, cylindrical juglets and lamps, are typical of MBII Palestine and are found on probably every site of that period. It is, in fact, practically impossible to detect any characteristic local difference in the shapes of these types within Palestine. They may well have been imports. On the other hand, it is not impossible that they were made at Jericho from imported material (such as grog from broken-up imported pots?). These details are largely irrelevant. More important is the fact that there was no way of telling from the shape and outward appearance of these pots that they were not made of the same fabric as the other MBA Jericho pots. So, as Franken noted, similarity of appearance indeed cannot be taken as proof of real identity (Franken 1974, 15).

8.1.2 Late Bronze Age

The most common LBA wares are IVA1, IVB1 and VB1, which together account for 61% of all the LBA pottery. As in the MBA, different wares were generally not used for different types of pottery. The only exception is Ware VIE, the grey ware used for Base-Ring juglets. This is very fine and difficult to examine without a microscope. The one example analysed seemed to be no different from the other local wares, except that it was fired in a reducing atmosphere. In hand specimen, however, the BR juglet appeared to be a real Cypriot import, handmade and with the handle stuck through the body. Known local copies were generally wheel-made and had the handle stuck on the outside. A tentative conclusion may be that such jugs could have been made at Jericho by Cypriot potters working in their own tradition but using local raw materials. This

goes against previous conclusions, based on analytical results, that BR wares, no matter where found, were all made from a particular type of clay. This clay was used for other Cypriot styles and so suggests a Cypriot provenance for BR wares (Artzy, Perlman and Asaro 1981, 40-1). The methodological drawbacks of that study are that the BR wares were compared only with each other, not with other pottery from the same sites. It is therefore impossible to say if any differences or similarities in the elemental composition of the clay are meaningful. In the present study, the clay used for the BR wares appears to be the same as that used for the local pottery. However, the number of BR jugs investigated in this study was far too small to justify a firm conclusion, but this question would certainly justify further research on a wider basis and with a larger sample.

An interesting development in the LBA pottery is the re-introduction of straw temper, apparently on a systematic basis (Wares IVD, IVE, IVF, IVG, VE, VID). Although one MBA pot contained straw, in general it had not been used as a temper since the Neolithic. 15 LBA pots were found to be straw-tempered. Only one of these was in Tomb 5, which dates to the earlier part of the LBA. The rest were in Tombs 4 and 13, which are later in date, thus indicating some kind of conscious development.

8.2 Tempering

The most common inclusions in both Middle and Late Bronze Ages are limestone, flint and grog. The rate of occurrence of limestone and grog-tempered pots in the M and LBA seems to be much the same. This is not the case, however, with flint. The following table shows the number of flint-tempered pots compared to the total amount of categorised pottery from each tomb for both M and LBA. The wares which contain flint are: (MB) IA, IC, IE, IG, IH, IIA, IIC, IIIA, IIIC. (LB) IVA, IVC, IVD, IVF, IVG, VA, VC, VE, VIA.

Tomb	MB			LB		
	Total	No of flint pots	% of total	Total	No of flint pots	% of total
21	22	9	41	-	-	-
30	21	11	52	-	-	-
5	232	111	48	113	33	29
4	53	34	63	61	21	34
13	73	36	49	20	9	45

For each tomb, therefore, the relative amount of flint-tempered pots in the LBA is less than in the MBA. Taking all the tombs together, the percentage amount of flint-tempered pots in the two periods is:

MBA - 51%

LBA - 36%

8.3 Temper Quantities

This section investigates the relative quantities of the three main tempers in the pottery of the M and LBA. The following tables show the percentage relative quantities of each of the three main types of inclusions in the pottery of each tomb. For instance, Limestone - Abundant: 76% means that 76% of the pots with limestone temper contained abundant quantities.

Middle Bronze Age

	Limestone %	Flint %	Grog %
Tomb 21			
Abundant	76	-	-
Common	24	44	-
Moderate	-	44	24
Sparse	-	12	76
Tomb 30			
Abundant	62	-	-
Common	33	46	-
Moderate	5	27	33
Sparse	-	27	67
Tomb 5			
Abundant	62	6	-
Common	35	41	5
Moderate	2	23	33

Sparse	1	30	62
Tomb 4			
Abundant	72	-	-
Common	26	61	2
Moderate	2	10	13
Sparse	-	29	85
Tomb 13			
Abundant	49	3	3
Common	30	22	8
Moderate	17	25	33
Sparse	4	50	56
		Late Bronze Age	
Tomb 5			
Abundant	88	3	-
Common	9	15	4
Moderate	3	39	27
Sparse	-	43	69
Tomb 4			
Abundant	69	-	-
Common	24	15	2
Moderate	7	45	20
Sparse	-	40	78
Tomb 13			
Abundant	70	*22	-
Common	25	11	6
Moderate	5	11	33
Sparse	-	56	61

* This high figure for flint, 22%, is slightly misleading. In fact, only nine pots in LBA Tomb 13 were flint-tempered, and of those two had abundant quantities of flint. Both of these were cooking pots, which one generally expects to have many large inclusions.

If we average out the figures for all the tombs together, we get the following:

	Middle Bronze Age		
	Limestone %	Flint %	Grog %
Abundant	64	2	0.5
Common	30	43	3
Moderate	5	26	27
Sparse	1	29	69.5
		Late Bronze Age	
Abundant	75	8	-
Common	20	14	4
Moderate	5	32	27
Sparse	-	46	69

In general, therefore, the quantities of limestone and grog temper tended to be similar in both M and LBA. Flint temper, however, seems to have been less common in the LBA. The relatively high figure of 8% for abundant flint in the LBA (as compared with 2% in the MBA) reflects the two cooking pots in Tomb 13 (see above). In general, though, flint tends to occur in sparser quantities in the LBA. This trend reinforces the picture presented in section 8.2 - not only were fewer pots flint-tempered in the LBA, but less flint was actually put into them as well.

8.4 Temper Size

The size of inclusions in the pottery of the Middle and Late Bronze Ages varies considerably. Certain types, such as lamps and cooking pots, tended to have lots of large inclusions, while finer bowls had smaller ones. It is clear, therefore, that the potters sometimes did try to control the temper size depending on the type of pot they were making. However, it is not unusual to find apparently finer pots, for instance MBA pedestal vases, with fairly large inclusions. Temper size does not appear to vary according to fabric or ware. It is controlled more by the type of pot, but this control seems to be neither systematic nor regular. There is, however, a difference in average temper size between the M and LBA.

Temper Size

	Limestone		Flint		Grog	
	Range	Avg size	Range	Avg size	Range	Avg size
MBA	up to 5mm	1.4mm	up to 12mm	2.5mm	up to 7mm	2.2mm
LBA	up to 8mm	2.0mm	up to 15mm	2.7mm	up to 11mm	2.8mm

In general, the size of inclusions tended to be larger in the LBA than in the MBA. This may partly explain why the LBA pottery has a much rougher feel to it.

8.5 Pottery Manufacture

Most of the pottery in both the Middle and Late Bronze Ages was made on a fast wheel. However, there are occasional exceptions. Two MBA pots (Tomb 5 nos.38 and 100) seem to have been made in two parts, top and bottom separately. A few pots seem to have been handmade (some coilmade) and finished on a wheel. Only one of these was MB, the others LB. The necks of some jugs were added separately. There seems to have been no recognised way of manufacturing bases - they could be made either separately and smoothed on, or cut out of the excess clay on the pot. In the LBA, bases occasionally cracked because they were too thick in relation to the body and therefore contracted at a different rate on firing.

Most MB pots are fairly soapy in feel, while LB pots tend to be rough. Slipping and burnishing were mostly confined to the MBA - very few LB pots were either slipped or burnished. Some MB pots seem to have been burnished on a wheel, because the marks are horizontal and very regular. However, burnishing could also be vertical.

In general, less care seems to have been taken with LBA pots. They were not so well-smoothed, possibly because the larger inclusions would make it more difficult. It has been suggested above that the rougher feel of LB pottery may be due partly to the larger inclusions. Less concern with smoothing was no doubt also a factor. Similarly, the 'soapy' feel of most MB pottery may be explained by the smaller inclusions and greater concern with careful smoothing. There may also have been a difference in the length and temperature of the firing. Many LBA pots are misshapen. This may be due to careless

handling while the pots were in the 'leather-hard' stage, or to overfiring. Several of the LBA pots have a greenish tinge which betrays overfiring. The firing atmosphere in general seems not to have been under the complete control of the potters. The colours of the fired pots vary enormously, even though they appear to be of much the same fabric. This suggests that the temperature and atmosphere in different parts of the kiln varied considerably. Indeed, there are examples where the whole range of fired colours is present on one pot.

8.6 Conclusion

This study has demonstrated and quantified a noticeable decline in the standards of pottery manufacture in the LBA as compared with the high standards of the MBA. In general, less care was taken with shaping, smoothing and firing. There are no LBA equivalents of the elegant slipped and burnished pots of the MBA. Non-plastic inclusions were on average larger in the LBA. This suggests that less effort was being taken to crush limestone, flint and grog in order to use them as temper. There was certainly a decline in the amount of flint temper in the LBA. Flint, to be of any use as a temper, must be only a few millimetres in size. This was certainly time-consuming and labour-intensive to prepare. If less time and care was being spent on pottery in general, flint-tempering would have been an obvious choice for savings.

There are other indications of a decline in standards during the LBA. Several of the pots were handmade and merely finished on a wheel. Straw was re-introduced as a temper. Straw is an easily available and quick to prepare form of temper and may have been re-introduced for reasons of time and economy. Although it appeared in one pot in Tomb 5 (late LBI/early LBIIa) it was more common in Tombs 4 and 13 (late LBIIa/early LBIIb). There is therefore evidence for a progressive decline in pottery manufacturing standards throughout the LBA.

Pottery should not be considered in isolation, as it often is. This method of analysis has demonstrated that the detailed study of pottery can provide a great deal of otherwise unobtainable information. Traditionally, pottery has been used primarily for chronological purposes. The present study of pottery from Jericho provides unique glimpses of economic and social trends in the Middle and Late Bronze Ages. Such information does not yet exist for other sites in Palestine, so direct comparability is impossible. However, information concerning economic and social trends can help interpret, and in its turn be interpreted by, other archaeological and written historical sources. The following chapter assesses the LBA evidence from the Jericho tell. In Chapter 10, the trends documented here from the study of the pottery will be considered against the wider background of the political and economic situation in Palestine.

CHAPTER 9

LATE BRONZE AGE OCCUPATION AT JERICHO

9.1 The Middle Building

9.1.1 The 'Palace', the Middle Building and the 'Streak'

The 'Palace' and the Middle Building (so called because it stood in apparent isolation between the Middle Bronze Age and Iron Age levels) are the only major constructions excavated which could conceivably date to the Late Bronze Age. Little can be said with certainty about the 'Palace'. Kenyon thought that there was no published dating evidence, and suggested that it could even be Iron Age (Kenyon in Avi-Yonah 1976, 563-4). Only the substantial foundations of it remained in situ (Garstang 1934, 105) and only a small part of it was excavated (ibid.127 and pl.XV, Rooms 80 and 81). Garstang dated its origin to MBII, and one of his excavation notebooks mentions that it contained 'good MB material'. A drain (d1) ran through the foundations of the 'Palace' wall and seems to have been connected with Garstang's MB 'storerooms' (ibid.105-6 and pl.XV), suggesting at least an MB date for the 'Palace' foundations. However, the four sherds which Garstang illustrated from the 'Palace' all look LBA in date (ibid. pl.XXVIII:15-18). Garstang thought that the 'Palace' was reconstructed on old foundations (ibid.105-6), but this does not necessarily follow, nor is there any real evidence for it. There are many sites in the Near East where present-day life continues among the remains of ancient structures which nevertheless remain virtually untouched and unaltered. The remains of the Jericho 'Palace', if indeed it was MBA, were obviously still standing in the LBA. If the adjacent Middle Building was in use during the LBA (see below), then we would expect to find at least some LB debris within the 'Palace' area. This does not necessarily infer systematic occupation or

rebuilding. Unfortunately, there is too little excavated and recorded information from the 'Palace' to make any firm judgements.

The Middle Building consisted of a courtyard and five rooms (two of which were larger than the others), apparently enclosed by a thick stone wall built in three stages (ibid.105-16, pls.XIII and XIV, reproduced here in figs.41-2; Garstang and Garstang 1948, 123ff). The sections through the building show that only the stone foundations and a little mud-brick superstructure survived (Garstang 1934, pl.XIV; cf fig.42). Little stratification was identified within the Middle Building (ibid.111-3), and in fact the area had been disturbed by the previous German excavations (Garstang and Garstang 1948, 178). The floors were described as 'mostly barren' (Garstang 1934, 111), although a surveyor's notebook from the excavations mentions 'wooden beams' in the floor of Middle Building Room II. This may suggest collapsed ceiling timbers. However, it is very odd that this point was not noted elsewhere.

The Middle Building overlay a deep layer of black burnt debris, called by Garstang the 'Streak' (ibid.105). He identified this as the destruction layer of the Palace wall (ibid.); it is certainly burnt material washed down the hill (Kenyon 1951, 120). Sketches in one of the excavation notebooks show the 'Streak' both underlying and overlying the Middle Building. There is also a note that the 'Streak' was cut by the foundations of the Middle Building (cf Garstang 1934, 105).

The pottery which was found in association with the Middle Building was illustrated (Garstang 1934, pls.XXXI-XXXIX), and is clearly LBIIa/early LBIIb (see section 9.2 below). Nevertheless, because of the lack of stratification and stratified excavation, and also because of the disturbed nature of the

deposit, a certain dating of this building has proved impossible. It is an interesting study in archaeological theory to follow Garstang's and Kenyon's changing ideas concerning the date of the Middle Building.

9.1.2 Garstang's Original Theory (1934)

The pottery which Garstang described as coming from or 'closely associated with' the 'Streak' was wrongly dated by him to LBI (ibid.107 and pl.XXVII). The pottery which was described as coming from both under and in the Middle Building was also wrongly dated to LBI (ibid.113), and suggested to Garstang that the area was in occupation before the construction of the Middle Building. A cuneiform tablet found within the Middle Building was tentatively dated to about the time of the Amarna letters (ibid.116-7). Garstang concluded that the pottery found within the Middle Building, together with the tablet, was contemporary with its use, and he dated the building to c.1450/1400 B.C. (ibid.113).

9.1.3 Garstang's Revised Dating (1941)

In an article published in 1941 Garstang revised the date of the Middle Building on the basis of the revision in the dating of Late Bronze Age pottery from Bethshan (Garstang 1941, reprinted in Garstang and Garstang 1948). He redated the painted pottery from the Middle Building to LBII, although he still believed that the underlying 'Palace storerooms' were LBI. He therefore left the date of the occupation of the city and Palace unchanged, and simply disassociated the Middle Building from that period of occupation. Dating the fall of the city to c.1400 B.C., he associated the Middle Building and its contents with a later partial and intermittent occupation of the site. Carrying on this line of reasoning, he attributed the Middle Building to Eglon, the king of Moab mentioned in Judges III.12-14. He dated both to the reign of Seti I and was delighted to find a complete parallel between archaeology and the Bible.

9.1.4 Kenyon's Preliminary Theory (1951)

In 1951, prior to starting her own excavations at Jericho, Kathleen Kenyon made a preliminary study of the archaeology and history of the site based on Garstang's records (Kenyon 1951). She isolated the pottery which had been found within the upper debris of the storerooms and the 'Streak', and dated it c.1400-1300 B.C. (ibid.120-2). She noted that the stratification made it clear that this pottery "had nothing to do with the Middle Building" but represented the pre-existing accumulation (ibid.120). The material overlying the Middle Building seemed to be the same as the 'Streak' (ibid.121). Kenyon concluded that the 'Streak' alone was evidence of Late Bronze Age occupation and agreed with Garstang that the Middle Building was a later intrusive structure lacking datable evidence (ibid.). The 'Streak' would have continued to erode above the building during subsequent abandonment, which would explain the presence of Late Bronze Age pottery apparently within the structure.

9.1.5 Kenyon's Later Theory (1957-78)

Having argued in 1951 that the Middle Building was intrusive, probably post-Late Bronze Age but actually undatable, in later publications Kenyon without explanation dated it to LBII:

> "...the tombs were then re-used between about 1400 B.C. and c.1350-1325 B.C. On the tell, Professor Garstang found a small quantity of pottery of the same period, and a single building, his Middle Building, which might belong to it" (Kenyon 1957, 261).

> "Above the denudation level covering the Middle Bronze Age only fragments of buildings survive. The 'Middle Building' excavated by Professor Garstang...can be ascribed to this period...From the Middle Building itself no actual dating evidence is published, but some Late Bronze Age pottery, probably of mid-14th century date, came from beneath it" (Kenyon

1970, 210).

"Only very scanty remains survive of the town that overlies the layers of rain-washed debris. These include the building described by Garstang as the Middle Building...The small amount of pottery recovered suggests a fourteenth century date" (Kenyon in Avi-Yonah 1976, 564).

In the final edition of Archaeology in the Holy Land (published after her death in 1978) she was even more uncritical. Having mentioned the small patch of Late Bronze Age occupation she had found, she noted that:

"the Middle Building excavated in 1930-36 probably belongs to the same period...The pottery shows that these buildings are Late Bronze Age, and date to c.1400 B.C." (Kenyon 1979, 208).

Nowhere did Kenyon explain why she had changed her mind concerning the date of the Middle Building. One can only assume that the evidence of her own excavations led her to believe that it in fact probably dated to LBII.

9.1.6 Kenyon's Own Excavations

A layer of burnt material corresponding to Garstang's 'Streak', Phase H XIII.liii, was found by Kenyon overlying a large part of the Middle Bronze Age buildings in Squares HII, III and VI. It was described as "a wash down the side of the mound of the gradual erosion of the top of the burnt buildings" and dated to between the Middle and Late Bronze Ages (Kenyon 1981, 370). Both MB and LB pottery were found in Phase H XIII.liii (Kenyon and Holland 1983, xxxix, 460-64, 471 and fig.206). However, there are only six definite examples of LB pottery (ibid.463).

Above this burnt wash layer, in Square H III, Kenyon excavated a tiny area of Late Bronze Age occupation. This consisted of the foundations of three walls,

a bit of floor, and one 14th century B.C. juglet next to a small oven, as well as some LB sherds (Kenyon 1981, 371; Kenyon and Holland 1983, 464-7 and figs.207-8). Two unstratified LB sherds were also found in this area (Kenyon and Holland 1983, fig.211:5-6).

In 1951 Kenyon had concluded that the 'Streak' dated to the Late Bronze Age. Her Phase H XIII.liii, which corresponds to the 'Streak', does not appear to be a Late Bronze Age layer, although some LB pottery was found in it. On the contrary, the vast majority of the published pottery from that phase is Middle Bronze Age, which presumably explains why the phase was dated to between the Middle and Late Bronze Ages.

It is significant that whereas Garstang recorded quite a lot of LB pottery from the 'Streak' (cf section 9.2), Kenyon found mostly MB pottery, and very little from the LBA. The presence of LB pottery in such vast quantities in Garstang's 'Streak', and to a much lesser extent in Kenyon's corresponding Phase H XIII.liii can be accounted for by two possibilities:

a) Disturbance during excavation.

b) Disturbance during actual building of the foundations for the Middle Building.

Garstang noted that the earlier German excavations had disturbed these strata, reaching in places below the Middle Building to the 'Palace storerooms', and so presumably through the 'Streak' (Garstang and Garstang 1948, 178). [A pedestal bowl (Garstang 1934, pl.XX:22) was recorded as coming from the MBII Palace Store-room 47, which was under Wall A of the Middle Building (ibid. pls.XIII and XV). The pot is clearly paralleled by the LBII pedestal bowls from Tomb 4, and so is likely to be a later intrusive piece, possibly from the Middle Building above. The few pieces of LB pottery excavated by Sellin and Watzinger come from this area and can be accounted for by this disturbance (eg

Sellin and Watzinger 1913, 123 Abb.123).]

Garstang himself penetrated through the floor of a room in Kenyon's Phase H XII, stratigraphically below the 'Streak' (Phase H XIII; Kenyon 1981, 368). His method of excavation probably did not help: by excavating in strips rather than following levels, pottery could easily seem to have been "found in or closely associated with the 'Streak'" (Garstang 1934, 107), whereas in fact it may have been deposited during foundation cutting, the evidence of which was missed. Garstang does mention that the 'Streak' had been "sharply interrupted" by the foundations of the Middle Building (ibid.105; cf section 9.1.1). This could well account for all of the LB pottery recorded from Kenyon's Phase H XIII.liii.

If the 'Streak' dates to the end of the Middle Bronze Age, the only sensible way to account for the LB pottery found within the Middle Building is to date the construction and use of the building to the Late Bronze Age. This would resolve the problem of Kenyon's unexplained later preference for a Late Bronze Age date for the Middle Building, which seemed to be the result of her own excavations. This date is now accepted by other scholars (see Weippert and Weippert 1976, 141-5, and Bartlett 1982, 98).

9.1.7 Correlating Garstang and Kenyon

Garstang's Middle Building was situated in his Squares H6 and I6 (Garstang 1931b, pl.1; 1934, pl.XIII; cf fig.41 here). Kenyon's Square HIII, which contained her only bit of Late Bronze Age walls and occupation, was in her Grid Square H6 (Kenyon 1981, fig.1, reproduced here in fig.43, where the area of Garstang's excavation to the south is also marked out with dotted lines). The two areas, Garstang's and Kenyon's, are adjacent to each other, and it is possible to correlate the stratigraphy to try to learn some more about the date of the Middle Building.

In Kenyon's Square HIII Phase H XIV, portions of three Late Bronze Age walls survive - Walls HGM, HGN and HGO (ibid.371 and pl.336, reproduced here in fig.44). To the south of Wall HGM a very small area of floor was found. On the floor was a small oven, and beside it a dipper juglet dated to the 14th century B.C., LBIIa (ibid.371).

The North Section drawing for Squares HII-III-VI (ibid.pl.339, reproduced here in fig.45) shows the foundations of Wall HGN lying on 'Streaky Burnt Wash', Phase H XIII.liii, corresponding to Garstang's 'Streak'. Wall HGN is therefore in the same stratigraphic position as Garstang's Middle Building, overlying the 'Streak'. The same section drawing shows the LB Phases H XIV.liv (new building) and liv a (occupation on floor and in bin, marked 'bin' on the section, between levels 11 and 12) also overlying the 'Streaky Burnt Wash'. Phase H XIV.liv a is the level in which the LBIIa juglet was found. Since Wall HGN and the rest of Square HIII Phase XIV are firmly dated to the second half of the Late Bronze Age both stratigraphically and by association with LBIIa pottery, it seems reasonable, in the absence of any other evidence, to date the Middle Building by analogy also to the second half of the Late Bronze Age, c.14th century B.C.

A C-14 date of c.1410 B.C. for the MBA building level Site H Stage XII.li (BM-1790) implies a LBA occupation which does not occur in Site H until Stage XIV on the evidence of the Phase liv building and its material remains (Kenyon and Holland 1983, xi and 762-3). However, this might be explained by contamination of Stage XII from later LB levels by the destruction of a floor in a Stage XII room by a sounding from Garstang's excavations (Kenyon 1981, 368; cf section 9.1.6).

9.1.8 Conclusion: The Date of the Middle Building

The 'Streak' has been shown to date probably to the end of the Middle Bronze Age. The Middle Building, which overlies the 'Streak', was associated with LBIIa/early LBIIb pottery. Correlation with Kenyon's excavations shows that the Middle Building is in the same stratigraphic position as an adjacent structure firmly dated to the second half of the Late Bronze Age, which was also associated with LBIIa pottery. There seems to be no alternative but to date the Middle Building to LBIIa/early LBIIb, c.14th/early 13th centuries B.C.

What was the Middle Building? We know that it was not isolated, because of the adjacent domestic remains excavated by Kenyon. Garstang also excavated the contents of one adjacent room below Iron Age debris just north of the 'Palace' area, mostly in his Square H6 (Garstang 1936a, 74-5; 1934, pl.XIII; cf fig.41). It was described as "completely burnt out" (and therefore probably covered by the continually eroding 'Streak'), and contained what sounds like typical late LBI/LBIIa pottery (ibid.). It therefore seems to be in the same stratigraphic position and of the same date as the Middle Building.

The thick enclosure wall of the Middle Building might suggest that it was a small fort of some kind. However, there is no evidence that it was used for military purposes. Similarly, there is nothing to suggest that it might have been used as a temple, or for anything but ordinary domestic occupation. The people who lived in these buildings probably made their living by agriculture. They may well have felt exposed on the edge of the tell and so built, among the outbuildings, a thick-walled house which could be defended if necessary.

The eventual fate of the Middle Building is uncertain, though abandonment is likely. The burnt layer above it is not evidence of its destruction, but is a result of the continuing erosion of the 'Streak' from higher up the slope.

9.2 The Pottery from the Middle Building

9.2.1 Introduction

Garstang illustrated whole pots and sherds of typical LBII painted ware from the Middle Building (Garstang 1934, pls.XXXI-XXXIX), many of them being biconical jugs or kraters (cf Amiran 1970, pl.47). There were also some decorated two-handled jugs (Garstang 1934, pl.XXII:11, pl.XXIV:6). Much of this pottery was dated by Kenyon to the 14th century B.C., LBIIa (Kenyon 1951, 122 and figs.9 and 10).

9.2.2 Base-Ring II Ware

Although no true Cypriot BRII ware was found in the tombs, Gittlen identified some of his Type B1b jugs among the pottery from the Middle Building. These jugs are described as having a strap handle from neck to shoulder; a round, funnel mouth; ovoid, globular, piriform or almost biconical body; high, narrow, tapering neck; everted ring base; and two horizontal ridges at junction of handle, usually with painted decoration (Gittlen 1977, 202-4). The Jericho jugs were published in Garstang 1934, pl.XXXI:1, 19; pl.XXXVII:1 (Gittlen 1977, 209:100-102). Other miscellaneous BRII jugs and juglets, also from the Middle Building, were published in Garstang 1934, pl.XXXI:5, 14; pl.XXXIII:8; pl.XXXV:4, 6; and pl.XXXIX:2, 6 (Gittlen 1977, 227:18-22; p.231:72, 73).

The Type B1b jugs, although incipient in LBI, appeared in Palestine mainly in LBIIa, and primarily in funerary deposits (Jericho therefore being an interesting exception). The number had declined markedly by LBIIb (ibid.132).

9.2.3 White Slip II Ware

Gittlen also identified Cypriot White Slip (WS) II pottery in the Middle Building deposit. This consisted mostly of his Type 1Aγ1· bowls, described as

deep, hemispherical; round base; wish bone handle below rim varying from rounded and rather wide to triangular; usually with dots along the external portion of the rim; and with a 'hooked chain' frieze (ibid.456-8). These were published in Garstang 1934,pl.XXIV:1 (found "in the floor of the LBA house", ibid.110); pl.XXIX:5; pl.XXXI:20; pl.XXXIII:4; pl.XXXIV:23; and pl.XXXIX:1 (Gittlen 1977, 461:63-8). There was one Type 1Aδ1 bowl, which is the same as Type 1Aγ1 but with a 'dotted row' frieze instead (ibid.462). This was published in Garstang 1934, pl.XXXIV:22 (Gittlen 1977, 464:30). There was also a single example of a Type 1C1 bowl, which is similar to Type 1A but shallower, usually decorated with a plain ladder pattern frieze, and vertical rows of dots pendant from the lattice frieze (ibid.466-9). This was published in Garstang 1934, pl.XXIX:15 (Gittlen 1977, 471:26). In addition there were some miscellaneous WSII sherds, published in Garstang 1934, pl.XXXII:10 and pl.XXXIV:7 (Gittlen 1977, 481:48; 483:29).

The Type 1A bowls appeared towards the end of LBIA in Palestine, although Type 1Aγ1 was infrequent in LBI, and "none were found in contexts demonstrably earlier than the Lachish Temple I horizon" (ibid.420), ie Kenyon's Group C (see Chapter 2.2). Great quantities of this type were imported into Palestine during LBIIa, but the frequency declined in LBIIb - possibly importation stopped at the transition of LBIIa to LBIIb (ibid.). Type 1Aδ1 arrived in Palestine during LBIIa, but not demonstrably early in that phase (ibid.421). Half of the Palestinian examples come from LBIIb contexts, but it is also possible that importation of this type ceased at the LBIIa/b transition (ibid.). Type 1C1 appeared in Palestine prior to the end of LBI, but was rare in that phase (ibid.424). It was more frequent in LBIIa, but the vast majority is found in LBIIb. It seems that Type 1C1 vessels were most characteristic of LBIIb, while Type 1A were more frequent in LBIIa (ibid.425). The Middle Building deposit consists mainly of Type 1A bowls, with only one Type 1C1, which suggests a LBIIa/early LBIIb date.

9.2.4 Date

Both the local and the imported pottery from the Middle Building seem to point to a date similar to Tombs 5, 4 and 13. LBIIa and early LBIIb are clearly represented in the Cypriot vessels. There is a noticeable lack of Cypriot BRI jugs, which were found in Tomb 5. However, BR jugs generally are found primarily in funerary rather than habitation contexts (ibid.91). Conversely, WSII pottery was not found in the Jericho tombs, only on the tell. Again this is not surprising, as a vast majority of WSII bowls in Palestine were found in habitation rather than funerary contexts (ibid.394). The late LBI horizon, if present at all, may well be represented by the decorated two-handled jugs (which otherwise were found only in Tomb 5 - Tombs 4 and 13 contained one undecorated example each).

It must be remembered that only a small proportion of the pottery from the tell was published, so all the information is not available. During the course of this study several boxes of sherds from the tell (some unmarked) were inspected in various museums, but owing to the vast amount of material detailed examination was not feasible (nor would it have been comprehensive, as it is likely that much of the excavated unpainted pottery was not kept). However, all the relevant pottery seen fits into the (late LBI)-LBIIa-early LBIIb timescale proposed above. Bearing in mind the incomplete data, we can tentatively date the pottery from the Middle Building to c.1425/1400-1275 B.C.

9.3 The Extent of Late Bronze Age Jericho

9.3.1 The Middle Building and Erosion

It has been suggested that LBA Jericho was limited in area to the region of the Middle Building (Weippert and Weippert 1976, 146; also Riesner 1983). There was evidence of LBII occupation (the Middle Building) beneath the Iron Age 'Hilani' but not underneath a neighbouring Iron Age building which

immediately overlay MBA levels (ibid., and cf sections 9.1 and 9.2 above). Kenyon similarly noted that while there was evidence for a LBII house in Square HIII (cf section 9.1.7), in a neighbouring square the Iron Age filling went right down into the deep gullies cutting into the MBA levels (Kenyon 1981, 371; Bartlett 1982, 98). However, she concluded that this lack of LBA levels was evidence not necessarily of their absence, but of the eroded state of the tell at the time the Iron Age settlement was established (Kenyon 1957, 261; also 1981, 371).

As support for this conclusion, Kenyon pointed out that the major part of the large MBA town had also been eroded (Kenyon 1957, 261). Traces of this erosion have been found in the 'Streak', which is one metre thick in places, extending down the sides of the tell, especially on the east side (cf Kenyon 1981, pl.339; see fig.45). On the west side of the tell, Phase XLIV Tr.I lxiv represents the erosion of the MBII rampart and is four metres thick at its deepest (ibid.pl.236; see fig.47). Trenches II and III, on the north and south sides of the tell, did not extend beyond the MBII revetment, so there is no record of any wash at the foot of the tell. However, the East Section of Trench II reveals that a large part of the second and third ramparts has disappeared through erosion (ibid.pl.259) and the West Section of Trench III indicates severe erosion of the MB, IA and Roman levels - only a small area of the plaster of the MBII glacis has survived (ibid.pl.273). If the LBA levels had been eroded, traces of this erosion would also have existed as a wash layer down the sides or at the foot of the tell (Franken 1965, 192). No such traces have been found (ibid.; also Bimson 1978, 120; Bartlett 1982, 97). The wash layers on the east and west sides of the tell have no LB material (apart from two or three possible LB sherds in Trench I Stage XLIX.lxvi, which in any case is probably an Iron Age level, cf section 9.3.2). One Cypriot 'milk bowl' sherd was found in Trench I Stage XLVII.lxxia, but this was a thickish layer of water-laid silt and slight occupation levels on the side of an Iron Age

building (Kenyon 1981, 113 and 525; Kenyon and Holland 1983, xxxix). A few LB examples from Trench I Stages XLVIII, L and LII consist of small body sherds and some bases which are not very diagnostic, from silt or tip lines overlying the final Iron Age levels (Kenyon 1981, 113; Kenyon and Holland 1983, xxxix). In Trench II on the north side the remains of the MB levels and the top of the MB revetment are immediately overlain by fairly thin Iron Age levels (Kenyon 1981, pl.259). The three LB sherds from Trench II come from an accumulation of material on the slope after the end of the Iron Age, in Stage XXIII-XXIV.lxxv-lxxvi (Kenyon 1981, 173; Kenyon and Holland 1983, xxxix and 181). In Trench III on the south side the eroded MB layers are immediately overlain by sparse Iron Age-Roman material (Kenyon 1981, pl.273).

Garstang mentioned a "late and rather dull sub-Mycenaean pot" which he found at the foot of the mound in the ruins of houses standing outside the ramparts (Garstang and Garstang 1948, 147 and fig.23:6). This pot could conceivably have been used as evidence for traces of a LBA wash layer, but it has since been dated to the Iron Age on the basis of secure parallels including Megiddo Stratum VI and Hazor Stratum XII (Weippert and Weippert 1976, 127, Abb.4 and p.129). In one of Garstang's excavation notebooks are drawings of three possible LBA pots among MBA pottery found in his Square C7, which is on the north-east of the tell (cf Garstang 1930, pl.I). He described this deposit as "a great tip-heap" and removed it to uncover the MBA rampart (ibid.126). Although the precise nature of this deposit is uncertain, it contained pottery of mixed date and almost certainly does not represent an occupation level. Garstang's description of it as a 'tip-heap', implying an accumulation of rubbish over time, may be as accurate as any.

There is apparently a thick deposit of erosion levels north-east of the spring outside the tell (Franken 1965, 192, 197), but this cannot be investigated because of the water system and cultivation. Nevertheless, as Franken pointed

out, several levels of this kind have been excavated and there is no evidence at all of any eroded LBA material (ibid.192). All that one might confidently expect to find near the spring is debris from the severe erosion in the Middle Building area above - beyond the edges of the small piece of intact LBA floor which Kenyon found, erosion has been so extensive that in places the modern surface is below the level of the floor (Kenyon 1981, 371 and pl.199a). Near the spring is indeed the only place where LBA erosion debris in any quantity can be expected, if LBA occupation was confined to the Middle Building area.

Kenyon also suggested that the occupants of LBA Jericho re-used the MBA defences which were still partially standing (Kenyon 1957, 262). LB re-use of MB walls is attested at Tell Dan (Biran 1968, 379) and Tell el-Far'ah (de Vaux 1955, 574). However, there are no signs of LB occupation against the MB walls at Jericho (cf Bartlett 1982, 97). It is true that the LBA strata would lie against the upper part of the defences and soon be eroded away by wind and rain, as seems to have been the case at Tell el-Far'ah where LB sherds were found just below the surface (de Vaux op.cit.), but in the total absence of any LB erosion debris, it seems extremely unlikely that LB occupation at Jericho extended much further than the Middle Building area.

9.3.2 A Late Bronze Age Town Wall?

The town wall which Garstang originally dated to the LBA was redated by Kenyon to the EBA (cf Chapter 1.2.3.2). No other town walls dated to the LBA were found. However, Helms has attempted to date a mudbrick wall on top of the MBA rampart to the LBA (Helms 1981, Section V). This wall was found in the north section of Kenyon's Trench I on the west side of the mound (for location see Kenyon 1981, fig.1, reproduced here in fig.43) and was overlain by a layer described originally as 'compact pinkish [Iron Age]' (Kenyon 1956, 70/71, reproduced here in fig.46). Helms argued that the wall made little sense in terms of MBA military architecture, unless a double trace was proposed, since

it would nullify the effect of the carefully prepared slope above it. He tentatively concluded that a town wall existed sometime during the LBA, and was destroyed before the Iron Age (Helms op.cit.).

The final publication of the north section of Trench I is slightly different from the earlier version used by Helms (Kenyon 1981, pl.236, reproduced here in fig.47). The lettering 'Brick Wall' has been omitted, but the line of what looks like one course of brickwork is included in the same position as in the earlier section. (Dr.T.A.Holland, who edited the Kenyon Jericho excavations, informs me that what is shown in the final published section is exactly what appears on the original field section.) The 'pinkish' level that seals this 'wall', Phase XLIV Tr.I lxvi, is described as MBA (ibid.pl.235) rather than Iron Age as in the earlier section. In fact, Phase lxvi is a silt level which contained 42 mixed sherds: 23 MB, 3 possible LB and 16 IA or later (T.A. Holland, personal communication, 4th March 1982; cf Kenyon and Holland 1983, xxxix and figs.22 and 23:1). It is described as a prolonged period of wash and silt, an entirely natural accumulation produced by gentle erosion from rain wash of the surface of the mound (Kenyon 1981, 111 and 524). Kenyon may have altered the dating to MBA as the following phase, lxvii, which contained 141 sherds, was uncontaminated except for one possible MB bowl sherd (B.367, cf Kenyon and Holland 1982), and she thus began the stratified IA deposits with Phase lxvii (Holland op.cit.).

The dating to the Iron Age of the level which seals the wall under discussion is therefore uncertain, although it did contain Iron Age pottery. A silt level by its very nature accumulates over a period of time, and the mixed pottery found in this level, Phase lxvi, suggests that it was an accumulation during a break in occupation following the end of the Middle Bronze Age (Kenyon 1981, 17). In any case there is no reason to suppose that the wall must be LBA in date - more likely it is MBA, especially as the stone revetment of the third

MBII rampart is positioned directly against its footing (cf Kenyon 1981, pl.236; see fig.47). One line of brickwork in one section does not seem to be a great deal to go on, but Helms suggested that a wall in one of Garstang's sections, although about 200 metres further to the north, was the same one (Helms op.cit.; cf Garstang 1930, pl.VI, reproduced here in fig.48). Garstang's section shows thick lines of occupation or destruction coming from the top of the wall. However, there is no evidence of any LB material in these wash or destruction layers (cf section 9.3.1.1). Helms quotes the sub-Mycenaean pot as evidence for a possible LB date, but as noted above this has now been dated to the Iron Age. Moreover, the wall stands directly on top of the MB revetment and appears to have MBII constructions built up against it, suggesting that it too dates to the MBA.

Helms also identified his wall in Sellin and Watzinger's excavations (Sellin and Watzinger 1913, Abb.34, reproduced here in fig.49; cf also Blatt 13 and Abb.35), referring to it as a medium-sized defensive wall "with some signs of occupation behind it" (Helms op.cit.). Sellin and Watzinger's drawings show 'destruction levels' sloping off the stone revetment below the wall, which suggests that a substantial amount of material, including pottery, was probably recovered. However, as mentioned above (section 9.1.7), very little LBA pottery was found by the Germans, and what was recovered came from the area of the Middle Building and not from the defences. There appears to have been no Iron Age town wall (Weippert and Weippert 1976; Bartlett 1982, 100), so it is far more likely that the lines of occupation and destruction, and therefore the wall, in Sellin and Watzinger's drawings are MBA rather than LBA.

A critical examination of Helms' arguments therefore suggests that the wall he proposes to date to the LBA should in fact probably be dated to the MBA. It is possible to trace this wall in the reports of all three major excavations at

Jericho and at none of them is it associated with LBA pottery - the evidence in each case points rather to the MBA. The wall was probably a parapet, and Parr has suggested that there were two or even three vertical obstacles for the enemy to overcome, separated from each other by the plastered scarp (Parr 1968, 21). What is clear is that no town walls have been found at Jericho which could date to the LBA.

CHAPTER 10

JERICHO IN ITS PALESTINIAN CONTEXT

10.1 Middle Bronze Age Jericho - Description and Extent of the MBII Settlement (cf Kenyon in Avi-Yonah 1976, 561-3; Kenyon 1979, 158-64, 169-72):

Very little remains of the MBA town, a large part of the top of the tell having suffered severe erosion. Only in the centre of the east side, where there was a slope down to the source of the spring, have MBA levels survived. Only a limited area of the late MBI/early MBII levels was excavated, associated with a succession of brick-built town walls. For the later MBII town a vague plan has been established. The buildings excavated by Garstang (his 'Palace storerooms') and Kenyon were small houses with rather irregular rooms, flanking two partly cobbled streets with well-built drains beneath, climbing the slope in steps. It is likely that in these houses the living rooms were on the first floor, and the storerooms and shops on the ground floor. Some of the houses have yielded vast quantities of loom weights and saddle querns, perhaps indicating weaving and corn-milling establishments.

Associated with the final MBII town was a huge three-stage rampart faced with plaster, revetted by a stone wall at its foot, and surmounted by another wall at its summit. Only in one place at the north-west corner of the town (in fact the highest surviving point on the tell) did this glacis survive to its full height together with the foundations of the town wall. Everywhere else erosion had removed almost half of it. Nevertheless, the wall can be traced around nearly two-thirds of the circumference of the tell, to the north, west and south. To the south it extended as far as the line of the modern road, and at the north end it swung out well to the east of this road. The latest MBII occupation levels ran over the top of the earlier MBI/early MBII town wall to the east (in Area H; for location see Kenyon 1981, fig.1, reproduced here in

fig.43) but were truncated by the modern road and the water installations beyond. There was thus an appreciable extension of the town to the east in MBII, and the MBII levels probably ran up to a town wall further out. Here, the glacis had left the crest of the pre-existing slope of the mound and would have formed a free-standing rampart on level ground. This extension of the defences to the east was presumably intended to enclose the source of the spring (see Helms 1981, section IV and fig.12, who describes the rampart as "less of a fortification than a hydrodynamic structure"; also Franken 1965, 195ff., who thinks that the MB defences were doomed by the enclosure of the spring which, if obstructed, could rise and sweep away the bank).

A large number of multiple-burial tombs dating to MBII were excavated by Garstang and Kenyon in the cemetery areas outside the town. The tombs contained on average about twenty burials, although sometimes as many as forty. The total 'ascertainable number' of burials has been estimated at 1150 by Bartlett, who suggests that the excavated tombs belonged to wealthier families, poorer people being buried elsewhere (Bartlett 1982, 89). As a result of some peculiar preservative property within the tombs, organic material survived often in recognisable forms. This has provided us with substantial knowledge of furniture, clothes, personal accessories and ornaments, as well as a good range of complete pottery.

The standard of living in MB Jericho was not very high. Gold and other valuable items - gold-mounted scarabs and a gold band which was used possibly to decorate a box - were found in only five tombs. In the tombs, beds and stools (which resemble ones in Egyptian tombs) were not common, mats being ubiquitous (as now in the Near East). Some pieces of furniture were inlaid with decorated bone. Small personal items included bronze toggle pins,

alabaster vessels, carved wooden bowls, beads and scarabs (cf Bartlett 1982, 91), the latter likely to be mostly crude local copies of standard Egyptian types (cf Kenyon 1957b, 253).

10.2 End of the Middle Bronze Age at Jericho (cf Kenyon in Avi-Yonah 1976 and Kenyon 1979, op.cit.):

The final MBII buildings at Jericho were destroyed violently by fire. The walls were covered by a thick layer of burnt debris washed down from higher up the slope during the subsequent period of abandonment and erosion (Garstang's 'Streak', cf Chapter 9.1). There is no material on the tell or in the tombs which can be dated between the early 16th and the late 15th centuries B.C.

The reason for the destruction of Jericho is unknown. The usual explanation for this and other more or less contemporary destructions in Palestine is that they were connected with the disturbances caused by the expulsion of the Hyksos from Egypt (cf Kenyon 1973c, 92-3). Either the Egyptians pursuing the Hyksos into Palestine or the Asiatics themselves could have been responsible. However, there is no evidence that the Egyptians followed the Hyksos any further than Sharuhen (once identified with Tell Fara (S), cf Albright 1929, 7 and Kenyon 1973a, 526; now suggested as Tell el-'Ajjul, Kempinski 1974).

Kenyon suggested that disease of some sort was responsible for the simultaneous death of entire families in her 'multiple simultaneous tombs' shortly before the final destruction of the MBII town (Kenyon 1960b, 267). Bartlett has amplified this:

> "The state of the tombs and the strange phenomenon noted above of the arrested decay of organic objects points to earthquake activity, and the tell shows traces of fire. Plague, earthquake and fire might of themselves have been major factors in bringing about the end of MB Jericho" (Bartlett 1982, 94).

Given the contemporary destructions at Tell Beit Mirsim, Hazor, Shechem and elsewhere (Kenyon 1979, 177), however, an explanation which takes into account the wider situation in Palestine, as discussed above, might be more plausible. A period of fighting and mutual destruction between the MB Palestinian towns, perhaps influenced by an influx of Asiatics from Egypt causing tension, population pressure and tribal rivalries, is as likely an explanation as any.

10.3 Bimson's Theory - Bichrome Ware and the End of MBII

Bimson has attempted to demonstrate that MB Jericho was destroyed not in the 16th but in the 15th century B.C. by invading Israelites. The pertinent part of his argument can be summarised as follows (Bimson 1978, 117):

The destruction of the MBII cities of Palestine has been incorrectly dated, because of its association with a hypothetical Egyptian offensive against the Hyksos throughout Palestine. Their destruction should be dated not to the 16th but to the 15th century B.C. (c.1450 B.C.). Consequently, the appearance of Bichrome ware and the beginning of the Late Bronze Age must also be redated.

Bimson's theory relies entirely on showing that there is no real evidence to date Bichrome ware to the 16th century B.C. On the sites which were destroyed at the end of MBII and re-occupied immediately, Bichrome ware appeared in the post-destruction levels (although it is just possible that it appeared at Tell el-'Ajjul and Megiddo before the end of the MBA, cf Parr 1973, 120-1). On the sites which were destroyed and not re-occupied immediately, like Jericho, Tell Beit Mirsim and possibly Hazor and Shechem (Kenyon 1979, 177), there is an absence of Bichrome ware, which is therefore generally seen as the major characteristic of LBI (ibid.182; but see Parr 1973). Thus, if Bichrome ware cannot be dated firmly to the 16th century B.C., but can be dated plausibly a century later, the end of the Middle Bronze Age must necessarily be extended by a whole century.

The evidence from Alalakh and Tell el-'Ajjul can be cited against Bimson's argument. Most if not all of the Bichrome ware from Alalakh comes from Level V (Moorey 1980, 112, although Carre Gates 1981, 19 notes some in Level VI). The date of Level V, however, is debatable. At the root of the problem is the Level IV palace, the identity of its builder and the date of Idrimi. Idrimi was a contemporary of Barattarna of Mitanni, who reigned before the campaigns of Tuthmosis III (1504-1450/1479-1425 B.C., Alden 1981, 45; cf Moorey 1980, 112). The Level IV palace could be ascribed to Niqmepa, who was probably Idrimi's son and successor (Drower 1973, 435-6). This would place Idrimi within Level VB (Carre Gates 1981, 33-4). Level V would then have lasted into the 15th century B.C. (Carre Gates 1981, 37 ends Level V at 1460 B.C.). Even if these dates were accepted, they still refute Bimson's theory. He dates the first appearance of Bichrome ware to c.1450 B.C., while Alalakh Level V, which contained Bichrome ware, at the very latest would have ended c.1460 B.C.

However, Strommenger, followed by Moorey and Klengel, suggests that the Level IV palace was built by Idrimi and later enlarged by Niqmepa (Strommenger 1964, 38; Moorey 1980, 112; Klengel 1981, 269). The beginning of Level IV would thus date to the end of the 16th century B.C., and Level V would fall within the 16th century B.C., implying the same date for the appearance of Bichrome ware and LBI in Palestine. The same chronological conclusions follow from Amiet's position that, although Niqmepa built the Level IV palace, Idrimi nevertheless can also be placed within Level IV (Amiet 1980, 478; cf also Wiseman 1953, 5). A treaty of Idrimi's was found among the Level IV tablets (Wiseman 1953, 31-2).

There is unfortunately no certain way of knowing who built the Level IV palace, as no foundation inscriptions were found. Also, Woolley wrote that

"the transition from 'Level V' to 'Level IV' was peaceful and gradual, so that both socially and culturally the actual dividing line between them is difficult to determine and, so far as the archaeological strata are concerned, is here drawn arbitrarily" (Woolley 1955, 110).

This should serve as a warning against attempting to draw precise chronological conclusions from so many uncertainties. The evidence from Alalakh does show, however, that Bichrome ware was in use in the 16th-15th centuries B.C., even though the exact time of its appearance cannot be isolated.

At 'Ajjul, Bichrome ware was found in contexts which Epstein independently dated to between 1560 and 1475 B.C. by cross-referencing with firmly dated Egyptian objects (Epstein 1966, 174-85). It seems relatively clear that Bichrome ware was first found associated with Palace I, a building which was destroyed violently (ibid.176). Although the date of this destruction is uncertain (it is dated either to Amosis or Tuthmosis III, cf Parr 1973, 120), Palace I was associated with Cypriot pottery (other than Bichrome ware, cf Artzy, Asaro and Perlman 1973) typical of the 16th century B.C. (Epstein 1966, 181). The following Palace II was also associated with 16th century B.C. Cypriot pottery and a faience plaque tentatively dated to the period of Amenophis I (dated by Epstein 1545-25 B.C., ibid.180-1). The later Palace III was associated with a sherd stamped with the cartouches of Tuthmosis III and Hatshepsut, so the vessel can only have been in use during the period of the co-regency, which Epstein dated 1503-1482 B.C. (ibid.183). Bimson discussed the dating of Tell el-'Ajjul (Bimson 1978, 176-80), but chiefly in relation to Tell Beit Mirsim Stratum D, and he failed to mention or take into account this Egyptian evidence. Bichrome ware therefore can be dated securely to the 16th-15th centuries B.C., thus rejecting Bimson's argument. No-one now seriously argues that the Israelites were involved in the destruction of the 16th century B.C. MBII cities (though see Rowe 1936, xxii).

Bimson further argued that the lack of Bichrome ware at Jericho may simply mean that Bichrome ware did not spread that far, rather than being a chronological factor (Bimson 1978, 142). However, Bichrome ware is not found in isolation - together with its contextual wares it comprises a distinct phase characteristic of LBI Palestine. The absence of all this pottery from Jericho clearly indicates that the site was unoccupied at that time.

The corpus of Bichrome ware vessels (though not wholly complete and in need of updating) shows that, apart from Megiddo and 'Ajjul, the amount of this ware found at individual sites is fairly small (Epstein 1966, 6-19). With only five examples recorded from Beth-Shemesh and six from Tell el-Hesy (ibid.), it may be worth considering if a supposed lack of Bichrome ware at some sites otherwise securely dated to LBI is not a chronological or even regional factor, but an accident of discovery.

10.4 Relations between MB Palestine and Egypt

There has been much disagreement concerning relations between Palestine and Egypt in the Middle Kingdom (1991-1786, cf Weinstein 1975, 1, corresponding to MBI and early MBII in Palestine), primarily about whether or not there was an Egyptian empire at that time (eg Posener 1971, 537-50; Weinstein 1975).

A fairly small number of Egyptian imports and Palestinian copies of Egyptian objects, consisting mostly of scarabs and stone vessels, has been found in MBI/early MBII burials and occupational deposits (Weinstein 1975, 1). There are none from Jericho before MBII (ibid.7; impressions of a 12th Dynasty seal of a 'scribe of the vizier' were found at Jericho by Garstang in his MBII 'Palace storerooms', cf Garstang 1934, 124; also Rowe 1936, 235). However, Egyptian finds are absent at many MBI and early MBII sites where the deposits are quite extensive and where one might expect to find imports if there was

any real degree of contact (Weinstein 1975, 7). The Egyptian material in MBI/early MBII contexts therefore can be accounted for by limited Egyptian trade moving inland from the coastal area (ibid.9). The presence of a considerable number of Middle Kingdom objects in post-Middle Kingdom MBII Palestine can be explained by their being "part of the loot from the Hyksos plundering of Middle Kingdom cemeteries in Egypt" (ibid.9-10) or simply by the expansion of trade in the later MBII period, after the Egyptian decline.

The evidence of the Execration Texts (cf Chapter 2.1), thought by some to reflect a Palestine potentially or actually hostile to Egypt, is of uncertain importance. Since Palestinian MBI sites were relatively small and clearly did not have the military capacity to threaten Egypt, it is likely that the Execration Texts were designed to "harm those who might impede Egyptian trade with Western Asia" (ibid.13; see also Helck 1962, 49-68). The later group of Brussels texts, showing a major increase in the number of Palestinian place-names, might reflect the major increase in Egyptian trade with late MBI/early MBII Palestine, but may also indicate "a new apprehensiveness on the part of the Egyptians toward the rising political and military power" of the early MBII Palestinian towns (Weinstein 1975, 13). However, it is hazardous to use these documents as a source for political history, as the practice may have been a routine matter rather than an exceptional measure imposed by circumstances (Posener 1971, 548). Perhaps all that they can definitely tell us is that certain places were occupied at these times.

A stela of Khusobk, found at Abydos, tells of a military expedition by Sesostris III

> "to overthrow the Asiatics. His majesty reached a foreign country of which the name was Sekmem...Then Sekmem fell, together with the wretched Retenu" (Pritchard 1969, 230).

Sekmem, which also appears in the Execration Texts, is generally identified with Shechem (ibid.329; Posener 1940, 68, E6), although in the Khusobk stela it is the 'country' of Sekmem which is identified, not the town: it is interesting that the MBI deposits at Shechem are devoid of any Egyptian material (Weinstein 1975, 7). It is quite likely that Khusobk recorded an expedition against some bands raiding Egyptian caravans along the coast, rather than an assault on a fortified city (Yadin 1972, 206; Weinstein 1975, 11). The distinction achieved by Khusobk for killing a single Asiatic suggests that the operation was small in scale and relatively unimportant (Pritchard 1969, 230; Hayes 1971, 508).

A recently published royal inscription of the 12th Dynasty tells of foreign products being brought to Egypt and of expeditions sent abroad to Sinai and Lebanon, perhaps by boat (Posener 1982, 8). One expedition was "sent to destroy or devastate" two Asian countries and returned with 1546 prisoners (ibid.). However, it is noteworthy that apart from Sinai, traditionally an Egyptian interest, only Lebanon can be identified specifically from the list of Asian countries: there is no evidence here of a direct Egyptian involvement in Palestine.

Egypt's major trading interest was with Syria, which could be reached directly by sea, bypassing Palestine altogether, although there was probably some Egyptian interest in the coastal areas. Palestine in the early MBA may simply have been unable to produce the great surpluses required for extensive trading with a wealthy country like Egypt (Weinstein 1975, 13). It seems that the idea of an Egyptian empire in Palestine in the Middle Kingdom can be dismissed as a "complete fiction" (ibid.9; cf also Frandsen 1979, 168): the relationship between Palestine and Egypt was "more commercial than political" (Weinstein 1975, 9), and even the commerce appears to have been limited.

The great expansion in relations between Palestine and Egypt occurred in MBII, in the late 12th/early 13th Dynasties, when Egypt was beginning to go into a military and political decline (ibid.14). This development of contacts reached its zenith with the Hyksos. There was considerable Palestinian cultural influence in the Egyptian Delta, and Egyptian goods reached Palestine not only by way of trade but also as a result of raids and plunder, which no doubt helped to impoverish Egypt while economically reinforcing the Palestinian towns (Mazar 1970, 183).

10.5 The Hyksos Question

10.5.1 Palestine

There has been much recent reappraisal of the validity of the use of the term 'Hyksos' as applied to Middle Bronze Age Palestine, and yet the name continues to be used (eg Aharoni 1979, 147ff.). Kenyon described the Hyksos as a military aristocracy, with Hurrian elements (cf Helck 1962, 92-108), which ruled a number of towns in Syria and Palestine by the 18th century B.C., and which was responsible for the rampart defensive systems of MBII, as found at Jericho, Hazor, Carchemish and elsewhere (Kenyon 1957b, 223). The same people penetrated Egypt and were at least partially responsible for the overthrow of the Middle Kingdom (ibid.224).

Van Seters, among others, has shown that in Egypt "not a single name of this period can be identified with certainty as Hurrian" (Van Seters 1966, 183). Even in Palestine and Syria the Hurrian presence dates only from the 16th or 15th century B.C., so they could have had nothing to do with the Hyksos or the Middle Bronze Age (Bimson 1978, 136). Likewise, there is no evidence for linking the rampart fortifications with either the Hurrians or the Hyksos (Parr 1968; Bimson 1978, 137-8). The ramparts do not appear simultaneously, as one might expect if they were introduced by a particular group. The earliest known attempt at this kind of fortification seems to be at Mersin in Anatolia

at about the beginning of the 4th millennium B.C. (Parr 1968, 44). In Palestine, the earliest excavated rampart fortifications appeared at Tell Poleg, Tell Burga, Tell Zeror and probably Megiddo in MBI, at the end of the 19th century B.C. (ibid.27; Kochavi, Beck and Gophna 1979, 143, 155). The earliest examples at other sites, for instance Jericho and Shechem, were not found till c.1700 B.C. (Parr 1968, 44). At Taanach, 'Ajjul and Fara (S) they appeared at the end of the 17th century B.C., almost a century later (ibid.24). In Syria, this type of fortification is no earlier than some of the Palestinian examples, mostly dating to the end of the 18th century B.C. (ibid.30, 36), so there is no evidence of a movement into Palestine from the north.

> "The more likely explanation has been advanced that these ramparts originated in the earlier custom of consolidating and regularising and augmenting in the interests of security the natural slopes of the tells. These ramparts are a natural development which evolved as the tells grew in height. The ramparts may also have served...to support the weight of the huge town wall on top of them and to prevent their being undermined by erosion of the slopes by the winter rains" (Bartlett 1982, 88).

The distinction between the 'fortified camps' such as Carchemish, Qatna and Hazor, and the fortifications of existing mounds, as at Jericho and Lachish, is only a formal one (Parr 1968, 19). These enclosures were in fact integral parts of the towns, and nothing but an extension when the existing settlement on the mound became too inadequate for its growing population (ibid.).

Kenyon wrote that the only material evidence of the Hyksos in Palestine was the appearance of this new type of fortification (Kenyon 1970, 193). Since it now appears to be indigenous, it seems that nothing can be linked specifically to the Hyksos within Palestine. The thousands of 'Hyksos' scarabs found in Palestine are not to be attributed to the Hyksos in particular, who do not

seem to have had a distinctive culture of their own in Egypt, but to the period in general (cf Hayes 1973a, 55-6). Many of these scarabs were in any case local copies of standard Egyptian types (cf Rowe 1936, xx).

10.5.2 Egypt

The name 'Hyksos' is the Hellenised form of the Egyptian ḥk3 ḫ3swt - 'rulers of foreign lands'. Manetho, as quoted by Josephus, tells the story of how Egypt had been siezed by "invaders of obscure race/ignoble birth" who "burned our cities ruthlessly, razed to the ground the temples of the gods and treated all the natives with a cruel hostility" (Kemp 1982, 741). However, large numbers of Asiatics seem to have been assimilated into Egyptian society already in the later Middle Kingdom (ibid.742), although Kemp warns that it may be

> "misleading to place too much emphasis on this process of immigration as an antecedent to Hyksos rule...They appear to have represented something more than assimilated Asiatics who had gained the throne through the normal processes of internal politics of this period" (ibid.743).

However, one should note the possibility that the apparent traditional Egyptian depth of feeling against the Hyksos, expressed for example by Hatshepsut (Pritchard 1969, 231) and in Manetho, may well have been merely the result of a successful propaganda campaign whipped up against them by Kamose and Amosis, who eventually expelled them from Egypt, in a bid for legitimacy. Although later Egyptian attitudes could be true reflections of how the Hyksos acquired the throne in the first place, equally there is no reason why they must have any relevance.

Archaeological evidence from the Egyptian Delta at this time shows that the culture is heavily influenced by that of the contemporary MBII period in Palestine (Kemp op.cit. and Bietak 1981).

"Although the absence of written records from Palestine inevitably tends to an undervaluation of its historical role and leaves us ignorant of the doubtlessly complex political background to the striking urban achievement of the Middle Bronze Age II period, it is possible to see in the situation a temporary reversal of the roles between Egypt and Palestine, with north-eastern Egypt falling under the aegis of an emergent Palestinian civilisation, receiving increased immigration and accelerated cultural contact, as well as a royal house" (Kemp 1982, 745).

10.5.3 Conclusion

The conclusion is clear: the Hyksos were not a specific ethnic group - they were Asiatics, possibly Palestinians, who came eventually, by assimilation or by invasion, to rule the Egyptian Delta. The term 'Hyksos' has relevance only in Egypt. Outside Egypt, in Palestine and Syria, we are dealing simply with the indigenous Middle Bronze Age culture, and not with any hypothetical 'ruling aristocracy' (cf Parr 1968, 45). With reference to Palestine and Syria the term 'Hyksos' is utterly and completely invalid and should be unequivocally rejected.

10.5.4 The Expulsion of the Hyksos

According to Manetho, 240,000 Hyksos left Egypt peacefully as a result of a treaty after Amosis failed to take their capital of Avaris. This scenario is unsupported by contemporary records and is certainly exaggerated. It can be explained by the misrepresentation of the Hyksos in Egyptian historical tradition of the New Kingdom and later (James 1973, 295-6). The only contemporary account of the final campaigns against the Hyksos is in the tomb inscription of Ahmose son of Ibana, a naval captain (ibid.293; Gunn and Gardiner 1918, 49-52). The impression one gets is of fairly small-scale battles. Ahmose received the 'gold of valour' four times under Amosis while

fighting the Hyksos. His acts of bravery apparently consisted of capturing two or three people each time. This was deemed to be such an important event that the king was informed (ibid.). In the final defeat of the Hyksos on Egyptian soil at Avaris, Ahmose notes that he captured one man and three women. This is not really a great or impressive total for what was supposed to be "that great moment of fulfilled ambition" for the Egyptian king (James 1973, 294; Gunn and Gardiner 1918, 49). The whole campaign against the Hyksos begins to look like a relatively minor, though perhaps drawn-out, operation. On the basis of these observations one can tentatively conclude that, in contrast to the vast hordes sometimes inferred (eg Kenyon 1979, 177-81), the number of Hyksos expelled from Egypt was not all that high.

10.6 Trade in MBII Palestine

The Palestinian MBII culture has been described as "simple and lacking either luxuries or anything of importance in the development of civilisation" (Kenyon 1973c, 116). Foreign trade seems to have been at a minimum. The closest contact was apparently with Egypt (see sections 10.4 and 10.5). Egyptian imports into Palestine included thousands of scarabs, ornaments of gold and other precious metals, vessels and other articles of alabaster (Mazar 1970, 184). There were a few vessels from Cyprus (Kenyon op.cit., Dothan 1976, 9), which may have supplied copper to Palestine, as she did for Mari and Babylonia (Millard 1973, 40). Copper ores seem to have been imported to Jericho and worked there, although their provenance is uncertain (Khalil and Bachmann 1981, 106). Middle Minoan II pottery from Crete was found at Hazor (Malamat 1970, 168). A few cylinder seals of North Syrian or Mesopotamian origin were found (Kenyon op.cit.), and Babylonian influence is also seen in the use of the cuneiform script at MBII Hazor, which may be evidence of a school (Millard 1973, 40-1).

The distinctive MBA Tell el-Yahudieh ware (cf Amiran 1970, pl.36) was once thought to have been made in the Jordan valley and adjacent regions and distributed by land and sea to Ugarit, Cyprus, Upper Egypt and Nubia (Mazar 1968, 77-8). However, recent analysis of examples from the Levant and Egypt shows that this type of pottery was manufactured in both areas, rather than originating only in the Levant (Kaplan, Harbottle and Sayre 1982, 141). This is further proof that the Hyksos period in Egypt, still considered a 'dark age', was in fact marked by a trade network which spread from there to Nubia, the Levant and Cyprus (ibid.).

The Akkadian documents from the royal archives at Mari on the Middle Euphrates, which date from the 18th century B.C., and the documents from Alalakh in northern Syria, show the strong political and economic connections between kingdoms in Mesopotamia, Syria and Palestine (Mazar 1970, 173-4). Hazor appears as an important centre from which emissaries were sent to Babylon via Mari (Malamat 1960, 1982; Aharoni 1979, 149; Kupper 1973, 13). The Mari letters also contain references to emissaries from various cities in Mesopotamia who were on their way to Yamhad (Aleppo), Qatna and Hazor (ibid.). Tin imported by Babylonia from Elam passed through Mari on its way to these same cities (Malamat 1971a, Kupper op.cit.). Hazor in its turn exported silver, gold and precious stones to Mari (Malamat 1982) and unidentified cargoes to Crete (Malamat 1970, 168; Millard 1973, 40).

The evidence for trade, therefore, is not particularly extensive. Nevertheless, the sort of things that the written records tell us were being traded, for instance tin, simply do not show up in the archaeological record. Whereas we may conclude that trade in the Middle Bronze Age was not very extensive, in fact we have no means of knowing how extensive it really was.

10.7 MBA Jericho in its Palestinian Context

The evidence of the MBII pottery from Jericho (see Chapter 8) shows that, as in the rest of Palestine, this was a thriving period for the craft. Especially when compared with the Late Bronze Age, the MBII pottery was very well made. The quality of the shapes, the temper, the finish and the firing are all indicative of a reasonably prosperous and flourishing community. The evidence from the tell is similar. The walled town of MBI/early MBII was succeeded by the later MBII town which extended over the old walls and was fortified with a vast rampart. For Jericho and Palestine as a whole this was a period of vigorous development, with contacts between coastal and interior regions re-established, rebuilding of abandoned sites along the coastal plain and ambitious building operations at interior cities (Cole 1965, 256). Both archaeological and written evidence show contacts in most directions, although trade was perhaps not extensive.

Bartlett has written that

> "the success and prosperity of the MBII period was due in part to the failure of the pharaohs of Dynasties XIII and XIV in Egypt in the 18th century B.C. to maintain the standards and power of the Middle Kingdom Dynasties XI and XII" (Bartlett 1982, 84).

This is not, however, an entirely accurate picture. The Middle Kingdom seems to have had little direct involvement in Palestine, although its presence must have exercised considerable, even if indirect, pressure. With Egypt thriving and trading with the areas to the north, Palestinian towns could not expand or effectively develop their own trade, and still in the earlier part of MBII there was not a great deal of inter-regional contact within Palestine. This is reflected in the disparities between pottery vessel-types from northern, central and coastal Palestine (Cole op.cit.). However, there were advantages in this state of affairs. Egypt's main trading interest was with Syria, which it could reach by sea without even using Palestine as a trade route, although

there was probably some direct contact with the coastal areas. A Palestine which was not yet very strong was no threat to Egypt. It is possible that the Egyptians in effect simply ignored it, leaving it to slowly develop its urban ways in a reasonably peaceful international political climate, without exploiting its resources as they were to do in the Late Bronze Age. This may well be the key to Palestine's prosperity in MBII. Had Egypt established an empire in the Middle Kingdom, Palestine's resources would have been bled away and its renewed urban effort would have been jeopardised. It is doubtful if Palestine would then have flourished following Egypt's departure.

With the decline of Egypt at the end of the Middle Kingdom, Palestinian towns were sufficiently developed to take over some of the trade, perhaps even as 'middlemen' for Egypt. This assumes that the Egyptian demand for the goods traded was sustained, which may be implied by the expansion in relations between Palestine and Egypt in MBII (Weinstein 1975, 14; cf section 10.4). This was the period of the major growth of towns like Jericho. The concentration of population in the high proportion of large fortified tells presumably resulted in the intensification of agricultural exploitation (Thompson 1979, 63-5). The consequent growth in agriculture and the creation of surpluses may have led to trade in goods such as wine and oil. The resultant prosperity, and the opportunity of the gap left by Egypt, gave Palestinian towns the chance to expand and eventually spread their influence into Egypt itself. Smaller towns such as Jericho, though not major trading centres themselves, would nonetheless have been involved in the trading network, perhaps as caravanserais along the trade routes.

Economically and politically this was a relatively stable period, despite the construction of elaborate defences which probably testifies to inter-city rivalry connected with economic expansion. It was perhaps not a particularly prosperous or wealthy time. Palestinian towns were in effect isolated states

and none individually had the resources to exploit or control the trade, limited as it probably was, to the extent where it could produce surplus wealth. Nevertheless, crafts such as pottery undeniably flourished and throughout MBII the expanding towns were able to cope with an undoubtedly rising population. The influx of Asiatics thrown out of Egypt in the mid-16th century B.C. was probably not as great as has sometimes been envisaged (see section 10.5.4), but it is conceivable that population pressure became a serious problem which eventually erupted in bids for expansion and control of greater territory, resulting in the wholesale destructions of towns at the end of the Middle Bronze Age.

Jericho mirrors all of these developments. The economic and political factors governing the way of life in the Middle Bronze Age are reflected in the archaeological evidence, in the development of both the town and the pottery. The finds from larger towns such as Megiddo and Tell ed-Duweir do not really suggest any qualitative difference, and "it may be that the deductions that can be made from the Jericho evidence concerning the way of life of the Middle Bronze Age townspeople are valid for Palestine as a whole" (Kenyon 1973c, 96).

10.8 Late Bronze Age Jericho

The evidence considered in this study suggests that LB Jericho was a small unwalled settlement limited in area to the region of the Middle Building, dating to between c.1425 and c.1275 B.C. The only house remains excavated were the Middle Building itself and the foundations of some neighbouring walls with a bit of associated floor. The fact that no proper LBA tombs are attested, only the re-use of three MBA tombs, reinforces this conclusion (David Stacey informs me that a few LB sherds have recently been found in otherwise pure MB tombs in the cemetery south of the Jericho tell). Bimson has suggested that LB Jericho was a temporary settlement with only sporadic habitation (Bimson 1978, 145). However, the analysis of the pottery fabrics (Chapter 5.3) showed that

the pottery was locally made, which testifies to the presence of workshops in the area. The single cuneiform tablet may indicate some interest in administrative matters. All of these things point to fairly continuous habitation. The tombs show an overlap rather than a break in the mid-14th century B.C., so there is nothing to suggest that occupation within the LBA was sporadic or discontinuous.

LB Jericho seems then to have been a small and fairly simple place, with no signs of wealth or vigorous activity. The only foreign articles were a few Cypriot pots and Egyptian scarabs. The local pottery was cheaply produced and relatively unattractive. No true Mycenaean imports were found at Jericho at all, only a few local copies. Similarly, only a few true Cypriot pieces were found. As we have seen (Chapter 8.1.2), these may even have been made by Cypriot potters working at Jericho. In Palestine generally imitations of Cypriot and Mycenaean pottery were being made while the originals were still available. This suggests that the local imitations of Cypriot and Mycenaean pottery were cheaper than the originals which were out of the range of the ordinary Palestinian's pocket. They may well have been made specifically for that reason, as cheap substitutes. Some Cypriot BRI pottery was found in Jericho Tomb 5, but no true BRII pottery was found in the tombs at all. A few pieces only were found on the tell, in contrast to the usual situation in Palestine where BR ware tends to be found more in funerary rather than habitation contexts. This may suggest that by the time of Tombs 4 and 13 in the Late Bronze Age true BR ware seemed too expensive to bury in tombs. Indeed, analysis of the LB pottery has inferred that Jericho suffered progressive decline during the LBA (cf Chapter 8.6).

A picture emerges of Jericho as a fairly small community, without many outside contacts, gradually becoming poorer as the Late Bronze Age dragged on. The reasons behind this poverty are examined below against the wider Palestinian

background. The effects, though, were clear, and worsening conditions probably explain why Jericho was apparently abandoned around 1275 B.C. It was not re-occupied until the 11th century B.C.

10.9 Relations between LB Palestine and Egypt

10.9.1 Direct Egyptian intervention in Palestine in the LBA

Following Amosis' siege of Sharuhen (cf section 10.2) and a brief later campaign in Syria (James 1973, 295; Amer 1983, 103) there is no more direct information concerning Egypt's relations with Palestine until the time of Tuthmosis I. It would seem that during the reign of Amosis, the kingdom of Mitanni was not yet a threat in Syria or Palestine. Either it did not exist at all, or else it was newly founded (Amer op.cit.). Amenophis I, Amosis' successor, was mainly pre-occupied with Nubia (Gardiner 1961, 169), although it has been suggested that he made considerable territorial gains in western Asia which were claimed by his successor Tuthmosis I (James 1973, 309). Direct evidence of his activities in Asia, however, is minimal, and possibly does not pertain to him at all (ibid.309-10).

Tuthmosis I led an expedition to western Asia which penetrated across the Euphrates into Naharin ('the River country' in the region of the Khabur and the northern Euphrates), the territory of the Hurrian kingdom of Mitanni. A commemorative stela was set up there after a battle in which many prisoners were taken (Gardiner 1961, 178; Drower 1973, 432; Aharoni 1979, 152).

Little is known of Tuthmosis II, Tuthmosis I's son. However, the biography of Ahmose Pen-Nekhbet, an officer, records that he accompanied the king on an expedition against the Shasu-beduin, probably in Palestine (though Görg 1979 suggests southern Syria or northern Palestine), and took many prisoners (Breasted 1906, 50; Gardiner 1961, 180). Tuthmosis II also claimed on a stela that he was receiving tribute from Asiatics (Amer 1983, 107).

Hatshepsut appears to have taken no interest in western Asia, although Redford claims two campaigns in Syro-Palestine during her reign, in one of which Gaza was taken (Redford 1967, 60-4). Her successor Tuthmosis III carried out at least sixteen military expeditions to Palestine and Syria, even going as far as the Euphrates (Gardiner 1961, 189ff; Drower 1973, 444ff; Aharoni 1979, 153). Tuthmosis claimed that following Hatshepsut's reign everything from Yurza (near Gaza) northwards had been lost (Amer 1983, 111). The most detailed texts concern his first campaign against an alliance of Canaanite kings, culminating in the seven-month siege and eventual surrender of Megiddo (Gardiner, Drower and Aharoni op.cit.). The list of Palestinian and Syrian towns conquered as a result of this campaign contains 119 names (Drower 1973, 451; Aharoni 1979, 159-63). It seems that Tuthmosis III's authority in Palestine was firmly established after this decisive victory. The rest of his campaigns were directed against Syria and Mitanni (Aharoni 1979, 154), except for a campaign against the beduin, perhaps in south Palestine (Drower 1973, 458). However, for the last twelve years of his reign no expedition to Syria is recorded (Gardiner 1961, 197), although the kings of Palestine and Syria regularly brought tribute to the Egyptian king. This indicates that he had effective control over all this area (Drower 1973, 452-9).

From the reign of Amenophis II, son of Tuthmosis III, there is information concerning two military campaigns in Syria (the first possibly as co-regent, cf Amer 1983, 115-21) and a third campaign restricted to a comparatively small area of Palestine, probably around the Plain of Esdraelon and the hills to the west of Galilee (Drower 1973, 460-1; for detailed geographical discussion see Na'aman 1984). It seems that there may have been a serious rebellion here, as he was still fighting in the same area five months later. However, he

undertook no further campaigns (Drower 1973, 462). Towards the end of his reign Mitanni was weakening and making overtures for peace, probably because of the rising power of the Hittites (ibid.; Aharoni 1979, 169-70).

Tuthmosis IV, Amenophis II's successor, led one campaign against Mitanni before a peace treaty was signed between the two powers (ibid.). An inscription from his reign, however, refers to captured residents, possibly from Gezer (Aharoni 1979, 170 n.97; Mohammad 1959, 133).

His successor Amenophis III's entire military career seems to have consisted of one relatively unimportant expedition to Nubia and possibly the sending of a few troops into Syria (Hayes 1973b, 340; Aldred 1968, 49). There is a scarab which gives him the epithet 'captor of Syria', but this is probably rhetorical (Amer 1983, 126). Amenophis IV (Akhenaten) and Smenkhkare do not appear to have interfered directly in Palestine or Syria at all (Gardiner 1961, 230), although the Amarna letters suggest that Akhenaten had made plans for an Asiatic campaign which never came to fruition (Schulman 1964, 58, 63 n.99).

During the reign of Tutankhamun the Egyptians may have captured Qadesh on the Orontes in northern Syria from the Hittites for a short time (Aldred 1975, 84), although Rainey suggests that the king concerned may have been Horemheb (Rainey 1973, 82). The future king Horemheb, in his Memphis tomb, refers to having accompanied his lord (probably Tutankhamun) on the battlefield in Asia, perhaps a parade of force in Palestine (Aldred 1975, 72). The tomb of Huy, the viceroy of Nubia under Tutankhamun, depicts Asiatics bringing tribute to Egypt (Amer 1983, 130). This may of course be a standard scene, less to do with history than part of the aura of Egyptian kingship. The Plague Prayers of Mursilis record a defeat of Egyptian forces in northern Syria by his father Suppiluliumas, probably during the reign of Ay, Tutankhamun's successor (Pritchard 1969, 395; Gardiner 1961, 241; Aldred 1975, 84).

Little mention is made of the Asiatic wars of Horemheb, the army commander who succeeded Ay, probably because the Egyptians were not very successful (Schulman 1964, 69). The presence in the palace at Ugarit of alabaster vases inscribed with the cartouches of Horemheb suggests that Egyptian policy was confined to trying to exert claims over Amurru and Ugarit (Aldred 1975, 85; Drower 1975, 139-40).

Ramesses I, the first king of the 19th Dynasty, was probably too old for campaigning (Faulkner 1975, 217), but his son and successor Seti I fought three campaigns in western Asia (ibid.218-21). The first campaign was directed primarily against the Phoenician coast and Lebanon, where Seti enforced a levy of timber. An insurrection was also put down in the Bethshan area and a battle was fought with a force of Shasu-beduin possibly near the Egyptian border (ibid.; Aharoni 1979, 177-8). Seti's second and third Asiatic campaigns were in Syria, in the region of Qadesh (where he set up a stela), the last being against a Hittite army (Faulkner 1975, 221).

The conflict with the Hittites reached its climax during the reign of Ramesses II. The inconclusive battle of Qadesh was followed by sixteen years of intermittent hostilities culminating in a peace treaty between Egypt and Hatti (ibid.226-9; Aharoni 1979, 181-2). During this period Ramesses put down a rebellion in Askelon (Pritchard 1969, 256), captured a number of places in the Galilee region (Faulkner and Aharoni op.cit.) and campaigned in the vicinity of Bethshan (Pritchard 1969, 255). He was also active in Moab, Edom and the Negev (Kitchen 1964, 63-70), although these undated expeditions may well have been no more than punitive raids (Faulkner 1975, 229).

The so-called 'Israel Stela' records that Ramesses' successor Merneptah captured and/or destroyed several towns in Palestine, including Askelon, Yenoam and Gezer (Aharoni 1979, 184). A group of school texts record the traffic between Egypt and Palestine during his reign (ibid.; Pritchard 1969, 258-9). One passage describes the arrival of an officer from the 'Wells of Merneptah', apparently an Egyptian fort in the hill country of Canaan (ibid.).

The remainder of the 19th Dynasty is obscure and even the order of succession of its kings is not certain (Faulkner 1975, 235). Similarly, there is little information for the first years of the 20th Dynasty and the beginning of Ramesses III's reign (ibid.241). Palestine and Syria were probably ignored at this time as Egypt's rulers were more concerned with internal problems and dynastic intrigue.

10.9.2 Nature of the Egyptian Presence in Palestine

10.9.2.1 The Early 18th Dynasty

Prior to Tuthmosis III, it seems that the Egyptians were not interested in actually controlling Palestine or Syria. The Asiatic campaigns of the early 18th Dynasty, especially that of Tuthmosis I, appear to have been extended raids which resulted in booty and some captives, but no permanent occupation (Redford 1979, 274). Palestine and Syria were possibly regarded as a sphere of influence (Aharoni 1979, 152) and the campaigns, which were not mounted on a regular basis, were merely a way of keeping them in check (Redford 1979, 273). Weinstein argues that the underlying cause behind the campaigns of Amosis was a desire to destroy the hated Hyksos cities (Weinstein 1981, 7ff.), but there is little to suggest that Amosis or his immediate successors campaigned extensively. Aharoni has suggested that, because Tuthmosis I had been able to surprise his enemy in Naharin, the Egyptians had the co-operation of the states in Palestine and perhaps Syria (Aharoni op.cit.). Tuthmosis' motivation

was probably to prevent Mitanni from extending its power (de Vaux 1978, 90), although he claimed that wars of conquest were an outlet for his military proclivities (Redford 1979, 274).

Tuthmosis III and his successors justified their constant offensives by claiming they were retaliating or striking pre-emptively (eg "smiting the foreign rulers who had attacked him", cf Redford 1979, 273). Amenophis II and other 18th Dynasty kings record that their campaigns were "to extend the boundaries of Egypt" (Helck 1961, 31; Drower 1973, 468). Tuthmosis III from the start installed rulers of his own choosing (though usually a member of the former ruling family) in the towns he captured and carried off to Egypt their brothers or children as hostages (Pritchard 1969, 239; Gardiner 1961, 193). In other cases, for instance after the capture of Megiddo, defeated rulers were sent back to their own cities on donkeys and an oath of allegiance was imposed on them (Pritchard 1969, 238). Amenophis II pursued a similar policy of control by killing or dismissing rebel kings (Mohammad 1959, 132-3).

Three of the towns captured in Tuthmosis III's first campaign, with their revenues, were dedicated in perpetuity to the temple of Amun in Karnak - Yenoam, Halkuru and Nuges, all probably in the Galilee area (Drower 1973, 451; cf section 10.9.2.3). Tuthmosis III claimed that his vassals came to Egypt every year with their tribute and kissed the ground before him, even after he stopped campaigning (ibid.459). Tuthmosis seems to have kept a close watch on the flow of tribute from the Palestinian towns. The annals of his first campaign record Egyptian inspectors estimating the yield of the harvest which was brought to him from the fields of Megiddo (Breasted 1906, 188-9; Kitchen 1969, 80), although this may have applied only to 'Egyptian domains' (Frandsen 1979, 188 n.63). Particularly fruitful districts contributed to the rations of the Egyptian troops (Gardiner 1961, 193) and garrisons set up in

coastal towns were continually supplied with provisions, indicating perhaps that a primary means of transport was by sea (ibid.; Mohammad 1959, 127; de Vaux 1978, 92).

Tuthmosis III seems to have introduced a system of Egyptian governors placed in general control of the vassals and the administration. The title 'Overseer of All Northern Countries' is first known from his reign (Mohammad 1959, 114; Helck 1962, 260; Drower 1973, 471-2). Gaza may already have been the major centre of the Egyptian administration in Palestine, as it was to be in the Amarna period (Hachmann 1982, 46). There were Egyptian garrisons at Ullaza and Sharuhen in his reign (Drower 1973, 474) and Taanach Letter No.5 suggests that Megiddo was occupied by the Egyptians in the 15th century B.C. (Albright 1944, 24).

It is likely that the situation in Palestine at the time of Tuthmosis III was much the same as in the Amarna period, from which there is a much greater wealth of more detailed information. It is often thought that the lack of military activity during the Amarna period reflected a weakening of Egyptian power since the Egyptians were more concerned with internal affairs (eg Aharoni 1979, 170). However, by the time of the Amarna period, Egypt and Mitanni were more or less at peace, so military expeditions were no longer needed. It was only with the rise of the Hittites that campaigning once more became necessary. Tuthmosis III's main pre-occupation was with Syria, where he had to fight year after year to quell various rebellions, often Mitanni-inspired. After his first campaign he does not seem to have had much trouble with Palestine, yet despite the lack of constant campaigning there it is clear that the Palestinian towns were under Egyptian control. However, both in the time of Tuthmosis III and later, Egyptian authority was mainly imposed on the densely populated areas. Examination of the names of captured towns and

districts indicates that Egyptian influence was weaker in most of the hill regions and Transjordan (Drower 1973, 474; Aharoni 1979, 151; Weinstein 1981, 14).

10.9.2.2 The Amarna Period

The archive discovered at Amarna, the capital of Amenophis IV (Akhenaten), contained more than 350 Akkadian cuneiform letters dating to the reigns of Amenophis III and Amenophis IV. About half of these came from the kings of towns in Palestine and the rest from other kingdoms of the Near East - Hatti, Mitanni, Babylon, Alashiya - with a few letters from the Egyptian king (Aharoni 1979, 170). These letters provide us with a fairly detailed picture of Egyptian power in Palestine and Syria and record the intrigues between the Canaanite kings. Egyptian hieroglyphic sources say remarkably little about the imperial organisation (Kemp 1978, 45).

As in the time of Tuthmosis III, the existing native regime in Palestinian towns was allowed to continue wherever possible (see Helck 1968/69). Oaths of allegiance were imposed and renewed at regular intervals and hostages were carried off to Egypt, often to be returned as rulers later (Drower 1973, 469). An inscription of Amenophis III states that Karnak was filled with male and female slaves, the children of the princes of every foreign land, and that the city was surrounded with Syrian towns settled with the children of princes. This policy was still implemented in the time of Ramesses III (Mohammad 1959, 131). The local princes acknowledged that they owed their position not to inheritance but to their appointment by the pharaoh (ibid.129).

A vassal ruler was obliged to carry out the commands of the king and his representatives; to ensure that the annual tribute imposed on his town was collected and delivered; to keep Egyptian troops in his territory supplied with food and clothes (see Pintore 1973); to summon his subjects for forced

labour if required; to inform the pharaoh of local events; and to defend his town and territory (Drower 1973, 469). Vassals were also forbidden to have diplomatic contact with other powers (Frandsen 1979, 176). However, in contrast to the conditions of Hittite vassalage, the towns were apparently not required to assist the Egyptians militarily (Kemp 1978, 47). There are only a few instances in the Amarna letters of princes refusing to follow the orders of the Egyptian king or his agents (Several 1972, 125; Liverani 1979, 9); in such cases a prince could be summoned to the Egyptian court to give an account of himself (de Vaux 1978, 96).

Egyptian garrisons were installed in places of strategic importance, for instance Jerusalem, Megiddo and Bethshan (Mohammad 1959, 128; de Vaux 1978, 98; Hachmann 1982, 46). These garrisons were small, containing perhaps a few hundred troops (Drower 1973, 474), mostly Egyptian and Nubian archers (Albright 1975, 106). Local princes, when making requests for military assistance, tended to ask for only fifty or a hundred troops or fifty chariots (Several 1972, 128).

In the Amarna period Syria and Palestine were divided into three administrative districts, each under an Egyptian governor (Helck 1962, 257ff; Drower 1973, 472). The third and southernmost province, Canaan, comprised the whole of Palestine from the Egyptian frontier to Tyre and later Byblos, and was governed from Gaza (ibid.). The lands of Megiddo and Sharon were all considered as crown property and their harvest was stored in royal granaries (Albright 1975, 106). Some towns and districts, for instance Gaza and Kumidi, were made into Egyptian royal domains (Kemp 1978, 49).

Most of the governors had Egyptian names but some were Semitic (Albright 1975, 101-2; Drower 1973, 472). They were directly responsible to the pharaoh for ensuring that the vassals did what was required of them, to act as liaisons

with the pharaoh, and to protect the local princes from their own people and quell disturbances in the towns (Drower op.cit.; Kemp 1978, 47). In addition, the three governors formed a body of arbitration which was authorised to settle disputes between the princes (Frandsen 1979, 176). A conflict between Shechem and Megiddo was resolved to a certain extent after a peace oath had been made in the presence of an Egyptian official (Several 1972, 123). Other Egyptian officials included subordinate governors, military officers, for instance commanders of chariotry and archers (Albright 1975, 102), and royal messengers, who transported the correspondence between the pharaoh and his agents and vassals (Several 1972, 130). Even during periods of fighting, for example the conflict between Shechem and Megiddo, these royal envoys were able to transport their messages because of the deference paid to them and their position. This attitude perhaps indicates that, in the eyes of the Palestinian vassals, the Egyptian administration had a certain degree of legitimacy, or at least credibility (ibid.130-1).

The Egyptian end of the organisation concerned with the administration of Palestine and Syria was dealt with by the 'Bureau for the Correspondence of the Pharaoh', located in the capital (Mohammad 1959, 123). The head of this department was responsible for all the diplomatic correspondence and routine work and was an adviser of the pharaoh (ibid.125).

The Amarna letters do not document the breakdown of the Egyptian administration in Palestine. They were written by local rulers to draw attention to particular problems and to ask for assistance. Aid would probably not have been requested unless it was expected or at least hoped for (Several 1972, 132). The apparent absence of attested replies from the Egyptian king to the letters of his vassals (only about ten outgoing documents are known, cf Liverani 1979, 3, but there are other references to Pharaoh's letters) cannot be regarded as a lack of interest. It is clear that the pharaoh normally did

not respond. He received the letters, heard and used the information contained in them, but did not deem it necessary to respond (ibid.5). When a letter asked for help or supplies, the lack of response was equivalent to a "no", and is not to be interpreted as a breakdown of the administrative mechanism (ibid.). The pharaoh wrote standardised official messages when he needed something (movement of troops, furnishing of goods), while the Syro-Palestinian princes personalised the relationship and wrote on their own initiative concerning their problems and needs. The pharaoh, who did not conceptualise an exchange of letters with correspondents, naturally did not reply (ibid.12).

The picture provided by the total body of letters is that the period was not marked solely by continuous warfare or rebellion. Most of the letters contain routine and standardised responses and expressions of loyalty and indicate that the Egyptian presence in Palestine was stable and that the situation was normal (Several 1972, 132; Liverani 1979, 6-7). The pharaoh was looked upon as the source of power and the belief that he could exercise that power shows that the Egyptian administration was still effective (Several op.cit.). Although the Palestinian princes tried to take advantage of Egypt for their own political ends by requesting military aid to pursue petty rivalries, the Egyptian policy of non-intervention was based on an administration which knew the local situation, could realistically assess it in relation to Egyptian interests, and took action only when necessary (Liverani 1979, 13; Schulman 1964, 66).

10.9.2.3 <u>The 19th Dynasty</u>

Little is known of the years immediately following the Amarna era, although some expeditions against the Hittites are attested. The period of the 19th Dynasty has often been described as a revival of the Egyptian empire in Palestine because of the major campaigning by Seti I and Ramesses II (de Vaux

1978, 112; Aharoni 1979, 176). Certainly there was much pre-occupation with Syria where the Hittites were now seriously competing for control. However, Seti, Ramesses and Merneptah all seem to have had problems with rebellions in Palestine and it appears very likely that this points to a certain weakening of Egyptian power. It used to be thought that the lack of active campaigning during the Amarna period reflected Egyptian weakness and insularity, whereas in fact it probably means that the situation was completely under control. Conversely, the constant military expeditions of the 19th Dynasty indicate that the situation was not under control and the Palestinian vassals were often in a state of insurrection. This does not mean that the Egyptian empire was totally undermined. It seems that the administration carried on much the same as it had done in the Amarna period and probably before, although more active intervention was necessary to retain control. Weinstein in fact notes a far larger Egyptian presence in the 13th century B.C. than before (Weinstein 1981, 14-18), probably necessary to crack down on more frequent unrest.

Gaza still appears to have been the administrative centre in the time of Seti I and Ramesses II (Helck 1962, 259). Also from the reign of Ramesses II are attested the titles 'Governor of Foreign Countries' and 'Overseer of the Northern Countries' (Kuentz 1928, 347; Nims 1957, 147-8; Helck 1962, 260-1). In the reign of Ramesses III parts of Palestine were still regarded as belonging to the temple of Amun in Karnak (Helck 1962, 262; cf section 10.9.2.1).

There is more Egyptian pottery in Palestine at this time, LBIIb and the beginning of the Iron Age, than in any other phase of either the Bronze or Iron Age (Weinstein 1981, 21). Most Egyptian pottery was produced not for commercial but for ordinary daily use. It occurs primarily at those sites where Egyptians actually lived, for instance Bethshan, Megiddo, Lachish, Tell Fara (S) and other sites in southern Palestine, along the coast, the Shephelah

and the Plain of Esdraelon (ibid.22; note that Gould 1983 makes a distinction between Egyptian pottery, which refers to vessels of probable Egyptian import, of fine ware and often decorated, and Egyptianising pottery, which consists of vessels of possible local manufacture but of Egyptian influence - the latter vessels are generally coarsely-made and usually not decorated). These same regions produced all of the examples of Egyptian architecture, stelae, statuary and other remains of Egyptian occupation. On the other hand, there is hardly any Egyptian pottery so far from Hazor or the sites in the hill country (Weinstein op.cit.). This material therefore reflects quite well the nature and extent of the Egyptian presence in Palestine at this time, which was concentrated in the densely populated areas.

The decline of the Egyptian empire was not a sudden event. Seti I was already having problems with the Libyans (Gardiner 1961, 254) and by the time of Merneptah Egypt was under serious threat from the Sea-Peoples (Helck 1962, 240). It seems that Egypt soon reached a state of anarchy, and these domestic problems probably had a negative impact on the empire in Palestine (Weinstein op.cit.). Although Ramesses III still continued some sort of presence in Palestine, the hold was rapidly lost after his reign (Malamat 1971b, 36; Weinstein 1981, 22-3).

10.9.3 Reasons for the Egyptian Presence in Palestine

This section examines whether Egypt was motivated to establish a permanent presence in Palestine more by economic or political considerations. Weinstein, who has attributed the mid-16th century B.C. destructions in Palestine to the pre-Tuthmosis III conquests (Weinstein 1981, 7), although there is no direct evidence of this, suggests that any booty acquired from captured towns would have been a one-off affair, and no permanent economic benefits would accrue to the Egyptians. He argues that therefore the creation of a commercial empire could not have been a significant factor behind the pre-Tuthmosis III Egyptian

campaigns (ibid.). This is an acceptable conclusion given the lack of recorded systematic campaigning and any real effort to control Palestine and Syria by the early 18th Dynasty kings. Their motivation was probably both political and psychological, to prevent further expansion by Mitanni and to increase their own and Egypt's prestige.

Carrying off booty and looting also took place under Tuthmosis III, particularly after the capture of Megiddo. His annals mention that the amount of wheat registered at Megiddo did not include the amount cut as forage by his soldiers (Pritchard 1969, 238). However, the reign of Tuthmosis III also marks the start of payment of regular tribute by the Palestinian towns. This tribute was used to supply the Egyptian army and administration in Palestine itself and was not usually sent to Egypt. Exceptions to this are the three cities dedicated by Tuthmosis III to the temple of Amun in Karnak, which had to send grain to it annually, while in the reign of Ramesses III various Egyptian temples received grain from Palestine. The total amount of the latter has been calculated at 150kg, which is a very small and probably symbolic amount (Ahituv 1978, 96). Egypt did not need to import cereals, and the grain collected as tribute was kept in royal granaries in the Egyptian bases in Palestine (ibid.97). Besides regularly supplying the army and administrative personnel, the grain was used for Egyptian expeditionary forces on campaign (ibid.). Egyptian inscriptions on bowls from Lachish dating to the 19th or 20th Dynasty record large amounts of grain, apparently collected as tribute, compared to the symbolic quantities of endowments to Egyptian temples (ibid.; Cerny in Tufnell 1958, 133). More recently a number of similar bowls with Egyptian hieratic inscriptions were uncovered in the final LBA stratum at Tell Sera' (Tell esh-Shariya) in the north-western Negev. They probably date to the 20th Dynasty (Goldwasser 1982, 137).

Other products collected as tribute and used by the Egyptian army and administration in Palestine included oil, livestock, small numbers of chariots, weapons and luxury objects, and small quantities of products not native to Palestine which had been acquired by trade, like gold, silver, precious stones, copper, bronze, lead and tin (Ahituv 1978, 99-103). Besides the regular payment of tribute, the local rulers were asked to supply Egyptian armies which were passing through with bread, grain, beer, wine, oil, honey, goats, cattle and straw (Na'aman 1981, 181). Although the amounts of tribute requested appear small in absolute terms, comparison with the tribute paid by the north Mesopotamian and north Syrian states to the Hittites and Assyrians shows that the burden of taxation was reasonably heavy, a fact which can be explained by the greater degree of Egyptian involvement in Palestine (ibid.184).

It is clear that Egypt was not interested in the economic exploitation of Palestine. The yearly tribute was used to supply the Egyptian army and administration in Palestine and was not sent to Egypt. The original motivation to control Palestine for Tuthmosis III was to extend the boundaries of Egypt and to have direct links with Syria which was of more commercial interest than Palestine, primarily because of its wood. His feud with Mitanni was over control of Syria, but participation in military expeditions would have given him added prestige. However, it was also necessary to keep hold of Palestine which was the land bridge to Syria and Mesopotamia and was also a convenient supply depot for armies progressing northwards. By the time of the Amarna period there was relative peace in the whole area of Syro-Palestine and it seems that the Egyptian pharaohs were content to seek prestige by partaking in international diplomacy and exchange of presents with the other major powers. The 19th Dynasty once more had to fight to assert their hold on the Syrian territories against the encroaching Hittites, at least until a peace treaty

was signed. But by then the Palestinian states were in a rebellious mood and the Egyptians were forced to increase their presence to protect their land route.

Control of Palestine had not been necessary in the Middle Bronze Age, but the presence of other major powers interested in Syria in the Late Bronze Age, first Mitanni and later the Hittites, meant that occupation of Palestine was a strategic necessity. The reason for the Egyptian presence in Palestine was thus more political than economic. Palestine was simply not rich enough in raw materials to be of much economic interest to the Egyptians. Any economic exploitation that did occur, by way of annual tribute, was to pay for the workings of the Egyptian administration which appears to have been fairly stable throughout the whole period following Tuthmosis III's initial conquests.

10.10 Trade in LBA Palestine

10.10.1 Cyprus

Trade between Palestine and Cyprus had already been established in the Middle Bronze Age (cf section 10.6 and Gittlen 1981, 49). In LBI Cypriot pottery imports to Palestine increased in quantity, variety and geographic distribution (Gittlen 1977, 515-6; Oren 1969, 127; note the possibility of Cypriot potters actually working in Palestine, which has not been fully investigated yet, cf Chapter 8.1.2). LBIIa marked the zenith of Cypriot imports to Palestine. 50% of Late Cypriot pottery found in Palestine dates to this period, and it was completely dominated by the Base-Ring II pottery (Gittlen 1977, 517-8). Importation of BRI, BRII, WSII, White-Shaved and Bucchero pottery reached a peak of frequency during LBIIa and seems also to have come to an end late in that phase (ibid.; Gittlen 1981, 51). Some late survivals of Cypriot pottery continued in circulation in LBIIb (Gittlen 1977, 520; 1981, 51-2).

The Cypriot pottery found in LBA Palestine was restricted in its variety compared to what was available on Cyprus. Palestinian finds are also limited to undecorated or less ornately decorated examples (Gittlen 1977, 23-4). The Cypriot pottery was widely distributed throughout Palestine, although there are no clear geographic distribution patterns (ibid.510). However, there is a disproportionately large quantity of jugs and juglets found among the Cypriot imports to Palestine, a far greater frequency than found on Cyprus. This may indicate the desirability of the vessel itself or of the product it contained (ibid.513). The latter is more likely given the simpler decoration on the exports, although the Cypriot pots were admired enough to be copied by Palestinian potters.

The shipping of less decorated and less elaborate forms to Palestine, the export of a disproportionately large quantity of jugs and juglets to Palestine, and the apparent invention of the White-Shaved juglet for Palestinian consumption suggests that the Cypro-Palestinian trade was not random (Gittlen 1981, 53-4). It seems that it was planned, selective and based on a thorough knowledge of the Palestinian market (ibid.). The increase in Cypriot imports in LBI (possibly after the campaigns of Tuthmosis III, cf Chapter 7.2.7) was presumably because the situation in Palestine was fairly stable and peaceful under Egyptian control. The boom in trade during the Amarna period can similarly be attributed to the settled international situation following the peace treaty between Egypt and Mitanni. The termination of the bulk of Cypriot imports at the end of LBIIa reflects the unrest in Palestine in Seti I's reign and later, rather than the supposed socio-political breakdown during the Amarna age (ibid.; Gittlen 1977, 519).

10.10.2 Mycenaean Greece

Mycenaean pottery is rare in LBI contexts, although some LH (Late Helladic) II pottery has been found at Lachish, Hazor, Gezer and 'Ajjul (Hankey 1974, 136). In LBIIa there was an increase in the quantity of Mycenaean pottery in Palestine (ibid.; Gittlen 1977, 26) and this period saw the vast expansion of Mycenaean trade throughout the whole eastern Mediterranean (French 1965, 159). The majority of Mycenaean pottery found in Palestine is LHIIIB and comes from LBIIb contexts (Amiran 1970, 181; Gittlen op.cit.).

It is likely that the Mycenaean pottery represents a trade both in fine tableware and in specialty oils and unguents (Leonard 1981, 99-100). As with Cypriot pottery, Mycenaean imports were restricted to a few stock shapes (Hankey 1967, 146). The great expansion in trade was during the relatively peaceful LBIIa period. In contrast to Cypriot imports, which mostly ceased at the end of LBIIa, the majority of Mycenaean pottery seems to have been imported in LBIIb. However, at most sites in Palestine and in the south-eastern Mediterranean generally where Mycenaean pottery has been found, it is a minor accompaniment to a major trade in Cypriot pottery (Hankey 1974, 142). At Tell el-'Ajjul, for example, Cypriot imports outnumbered Mycenaean by a ratio of 20:1 (Nicolaou 1982, 123). There is also a vast quantitative difference between the relatively meagre corpus of Mycenaean pottery from Palestine and Syria and the copious collections in Cyprus (Hankey 1967, 145). At Gibeon and Jerusalem only a few Mycenaean pieces were found (ibid.142-3), although the larger sites like Hazor, 'Ajjul and Lachish had more, as would be expected (Stubbings 1951, 67-8; Tufnell 1958, 211; Hankey 1967, 123). The total amount of Mycenaean pottery found in Palestine is thus relatively small and it should not be imagined that Palestine was flooded with Mycenaean imports. This perhaps suggests that the Mycenaean pottery found in the Levant came not directly from the Aegean but via Cyprus (Astour 1981, 28; Karageorghis 1982, 79; Mee 1982, 86. I am grateful to Dr. Mee for discussing this

and the following points with me). In fact, direct trade by sea from the Aegean to the Levant would have been difficult in the Late Bronze Age because ships were not yet strong enough to withstand the strong winds and sudden storms of the Mediterranean. Sea-going ships probably tended to keep to the coast as far as possible (Drower 1973, 507, which would explain why coastal towns flourished in the LBA, cf Thompson 1979, 67-8) and a transit trade via Cyprus would have been very logical and sensible (Sasson 1966, 129; Merrillees 1974, 7-8). Indeed, it has been suggested that the Mycenaean pottery found in the Levant differs from the common types of the Peloponnese, but is similar to the types of Rhodes and Cyprus, perhaps indicating that there were Mycenaean trading centres on these islands exporting directly to the Levant (Nicolaou 1982, 125). It appears that there is little evidence at present for direct trading between the Argolid (or, in fact, even Rhodes) and the Levant, bypassing Cyprus (Vermeule and Karageorghis 1982, 168).

A tablet from Ugarit records an itinerary to be taken by a ship which included Alashiya (probably Cyprus), Lycia and Kaphtor (probably Crete), suggesting that trade in the opposite direction also came through Cyprus (Sasson 1966, 134). Ugarit may have been involved in the trade between Cyprus and Egypt (Merrillees 1968, 187; Heltzer 1978, 153). Virtually all the Cypriot pottery from Egypt can be paralleled at Ugarit, although the latter had more varied shapes (Merrillees 1968, 191). An Ugaritic letter addressed to Amenophis III by an unknown official infers close commercial and diplomatic relations between Ugarit, Alashiya and Egypt (Lipinski 1977). We also know of Cypriots living at Ugarit, one of whom had a ship at his disposal (Sasson 1966, 135; Heltzer 1978, 152; Georgiou 1979, 92-6; cf also Knapp 1983 for a possible Alashiyan merchant at Ugarit). It seems that Cyprus was the main supplier of copper, as in the Middle Bronze Age (Sasson, Heltzer op.cit.). However, there seems to have been a fall-off in Cypro-Aegean trade in the 13th century B.C.,

especially after c.1250 B.C., which makes the greater frequency of LHIIIB pottery in Palestine an anomaly (Catling 1975, 200). One can suggest three possible explanations for this:

1) It is often very difficult to tell the difference between LHIIIA2 and IIIB1 pottery even in the Aegean (cf Chapter 2.2 on the disagreements concerning the date of the Amarna Mycenaean deposit). Techniques of manufacture and decoration are identical and the evolution of shape is sometimes impossible to trace in sherds (Hankey 1974, 136). In mainland Greece the most diagnostic pots are the open shapes, while the closed shapes more common in the Levant (cf Amiran 1970, 180-1; Leonard 1981, 90ff.) are harder to date precisely, even when one is dealing with whole pots, let alone sherds. A lot of the pottery dated to either IIIA2 or IIIB1 should be dated broadly IIIA2-IIIB1.

2) There is a possibility that some at least of the pottery from the Levant identified as true Mycenaean was in fact locally produced. Mycenaean pottery from Jericho previously identified by Stubbings as imported has been shown from its fabric to be locally produced (Stubbings 1951, 65; cf Chapter 7.3.7 and 7.4.7). The experience with the Jericho pottery in the present study has shown that by meticulously examining the fabrics of all the pottery, local and non-local wares can be identified unambiguously.

3) It is possible that Mycenaeans took advantage of the Cypriot withdrawal from the Levant, moved in themselves and expanded their own direct trade. However, it may be difficult to demonstrate this, since the composition of Mycenaean pottery coming through Cyprus or directly to the Levant would of course be exactly the same. Provenance studies have indicated that exported Mycenaean pottery came from the North-East Peloponnese (Asaro and Perlman 1973; Catling, Jones and Millett 1978; but cf Nicolaou 1982, 125, who suggests Rhodes and Cyprus itself as the origins of much of the exported Mycenaean pottery).

There are no easy answers. It is possible that there were no direct trade links between Palestine and Mycenaean Greece, which may explain the almost complete lack of reciprocal trade objects in the Aegean, which has always been a problem (Muhly 1970, 36; Portugali and Knapp 1983; Yannai-James forthcoming; however, in a different context we know of the strong Assyrian trade links with Kültepe in Anatolia from textual sources - these links are not really reflected in the archaeological evidence). The Mycenaean imports to Cyprus were exchanged for copper (Muhly op.cit.) but the sort of eastern objects found in Greece - an occasional cylinder seal, statuette or axe - can be described as 'oriental bric-a-brac' (Culican 1966, 55) rather than trade goods. The 'Canaanite jars' found at sites such as Athens and Mycenae were probably used to ship wine, but there are far too few of these to indicate serious and direct trade relations. One can perhaps again suggest Cyprus as an intermediary re-exporting part of its trade goods (Muhly 1970, 43). Indeed, the LBA shipwreck found off Cape Gelidonya may well have been a Cypriot vessel, and was carrying just the sort of bric-a-brac noted above (Bass 1973, 36). Furthermore, nowhere in the entire extensive epigraphic material from Ugarit can there be found a personal name of Greek Mycenaean type, suggesting that at Ugarit too most if not all of the Mycenaean pottery may have come through the intermediacy of Cyprus (Astour 1973, 25).

10.10.3 The Organisation of Trade

An important question, often difficult to answer, is: who benefited from trade and was the profit accruing from it generally distributed or confined to certain people and places? The Amarna letters do not shed a great deal of light on this but the royal archive at Ugarit is very informative concerning the organisation of trade, and to a certain extent parallels can be drawn. However, Ugarit was one of the foremost commercial centres of the eastern

Mediterranean in the Late Bronze Age (Astour 1972, 11; Heltzer 1978, 121), so the extent of its involvement in trade is probably not typical of the smaller and poorer towns in Palestine, especially those inland.

The transactions at Ugarit show an abundance of gold, silver and wealth in general, and life seems to have been fairly prosperous (Nougayrol 1955, 32). Trade items mentioned in the tablets are silver, copper, precious metals, oil, wine, food products, wheat, livestock, horses, wood, textiles, garments, finished goods, ointments, herbs and precious stones (Heltzer 1978, 3ff; Linder 1981, 36). Many of these products are the sort of things that were taken as tribute by the Egyptians from their Palestinian vassals, inferring that many of the items would have been traded in Palestine as well. We know that Ugarit traded by sea with Akko, Ashdod, Askelon and Egypt (Heltzer 1978, 151-2), and a letter from Aphek concerning a delivery of wheat shows contacts with Ugarit (Owen 1981). Overland trade is also attested between Canaan and Mesopotamia and to some extent with Egypt (Heltzer 1978, 148).

Trade at Ugarit was controlled by the king, and there seems to have been a lack of capital and goods in the hands of individuals (ibid.157-8, although there is some disagreement on this point, cf Astour 1980, 163). The king had a large number of businessmen working for him who were responsible for purchasing, selling and marketing, by land or sea, commodities to and from Ugarit, though some small boats may have been privately owned (Sasson 1966, 134). It is possible that one merchant had the sole right to trade with Crete on behalf of the king, but the reading of the name of the country is uncertain (ibid.135). The Ugaritic tablets and the Amarna letters indicate that merchants from other kingdoms were also sent as representatives of their king, rather than being private entrepreneurs (ibid.136; Rainey 1963, 315). The Amarna letters and the Hittite royal archives show that foreign trade was protected by international treaties (Heltzer 1978, 144).

Whenever Ugaritic merchants appear in lists they are mentioned together with other professional groups of royal dependants and thus appear to have been royal servicepeople (ibid.123). They did not act in their own interests and may have received from the royal court the necessary goods (ibid.126). They seem to have formed trade partnerships rather than acted as individuals (ibid.138). Craftsmen, including potters, also seem to have been under royal control (Heltzer 1979, 488-95).

In the kingdom of Ugarit there were about 200 villages which were bound to perform collective duties, such as forced labour, and to pay taxes in kind and in silver to maintain the royal administration (ibid.459). The taxes paid in kind had to be stored in the royal granaries (ibid.). It is clear that the situation was much the same as in Palestine where the Egyptians kept grain, paid as tribute to maintain their own administration, in their own granaries and also demanded forced labour. It seems then that the sort of things that the king of Ugarit controlled were just those that the Egyptians were involved in in Palestine. The Egyptians, through the vassal rulers, in practice controlled the trade of the Palestinian towns or at least benefited from it through tribute. One might therefore expect the wealth in Palestine to be more or less confined to the centres of Egyptian administration and power. It is, indeed, precisely in the richer towns which have yielded precious objects and works of art - Tell el-'Ajjul, Tell Fara (S), Lachish, Megiddo and Bethshan - that there is evidence of Egyptian occupation (de Vaux 1978, 122). Not only did the ordinary Palestinian not benefit from the expansion of trade in the Late Bronze Age, but even the local rulers, who nominally controlled it, had to share the surpluses with the Egyptians.

10.11 Contrast between Middle and Late Bronze Ages - A Decline?

The overall situation in the LBA was very different from that in the MBA. Economically and politically the LB Palestinian towns were no longer independent but under Egyptian control. Egypt, which was more interested in Syria, did not set out to exploit Palestine economically, but nevertheless expected the Palestinian towns to pay for the upkeep of the Egyptian administration and army and so benefited from the Palestinian economy. It is interesting to contrast the different types of Egyptian imperialism in Palestine and Nubia. Nubia under the Egyptian New Kingdom actually became a part of Egypt and was directly administered by Egyptians (Kemp 1978, 21ff.). In Palestine, however, the Egyptians merely imposed themselves onto a pre-existing social and economic structure which was relatively sophisticated and had been developing at least since the MBA (ibid.56). To a large extent they continued to allow the local princes to rule, but much of what had been the prerogative of the local rulers - taxation, forced labour, controlling trade and its profits - seems in practice to have been under the control of the Egyptians who reaped the benefits. The expansion of trade seems to have benefited the Egyptians rather than the Palestinians, although it is quite probable that it was the relative peace and security achieved by the Egyptians that stimulated the trade in the first place.

As regards the material culture of Palestine, the LBA also differs from the MBA. Kenyon has written that "the second half of the Late Bronze Age in Palestine is architecturally, artistically, and sociologically undistinguished" (Kenyon 1979, 199-200). Albright similarly noted that

> "the wealth and culture of southern Canaan decreased rather steadily under foreign misrule, until it reached an extremely low ebb in the thirteenth century as compared with its high point at the end of the Middle Bronze" (Albright 1956, 101).

De Vaux wrote of "a slow but steady decline in technical skill and artistic value" during the LBA (de Vaux 1978, 120).

Leading scholars therefore seem to agree that there was a progressive decline in the material culture throughout Palestine in the LBA. Certainly the LBA pottery of Palestine in general seems to show a gradual degeneration of forms towards the end of the period (Amiran 1970, 125 and generally 124-90). The present study has revealed that there was a decline in the craft of pottery-making at Jericho in the LBA. Compared to the high standards of the MBA potters, less care was taken in the LBA with forming, smoothing and firing pottery, while slipping and burnishing were virtually unknown. The fabric of pottery was also cheaper: there was a decline in the amount of flint temper and occasionally straw was used (cf Chapter 8.6). The LB village of Jericho was a pretty meagre affair which did not compare at all to the large and relatively flourishing town of the MBA. There are some indications that things got worse as the LBA progressed, which may have resulted in the eventual abandonment of Jericho (cf section 10.8).

Gibeon, not far from Jericho, seems to have had a similar history of decline. In the MBA there was occupation on the site together with the use of an appreciable number of tombs, but the evidence for the LBA is much more scanty. LBA pottery has so far been found only in a few tombs which had originally been used in the MBA. The LBA tomb material suggests that there was occupation on the tell at this time, but if so it was outside the area excavated and was probably not extensive (Kenyon 1973a, 546; Pritchard in Avi-Yonah 1976, 449).

Both Jericho and Gibeon were small towns situated away from tha main centres. As noted above (section 10.10.3) the large towns where Egyptians lived, like Bethshan, Lachish and Tell el-'Ajjul, had more luxury, buildings of greater architectural pretension and pottery that was perhaps not so dull (Kenyon 1979, 201). LBII Lachish, according to its excavator, was

> "a large and densely populated city extending over the entire top of the mound, and possibly also some of its slopes...It was a rich and prosperous city, and strong Egyptian influence is felt everywhere" (Ussishkin 1983, 169-70).

Jonathan Tubb has described the LBA material from Lachish as a "magnificent collection" with "some of the finest pottery ever found in Palestine" (quoted in The Guardian, 31st August 1983). Concerning the manufacture of the pottery, he has written that "in terms of its technical excellence and aesthetic appeal, the Lachish pottery is virtually without parallel in Palestine" (Tubb 1983, 24). But large towns in the hill country, away from the centres of Egyptian administration, like Hazor, seem like Jericho and Gibeon to have been less prosperous, especially in the 13th century B.C. (Kenyon 1979, 209). The houses of Hazor Stratum 1A were irregular in plan, built close together and generally unimpressive, and were mostly inferior reconstructions of their 14th century B.C. predecessors of Str.1B.

It would seem that the general picture of decline presented by Kenyon, Albright, de Vaux and others should be modified to show substantial recession in the areas away from direct Egyptian authority, for instance most of the hill regions, co-existing with a certain amount of prosperity in the larger centres where the Egyptians were based. Three possible explanations for Palestine's decline in the LBA are advanced below, and examination of them further illuminates and substantiates the picture of localised decline.

10.11.1 Explanations for the Decline

10.11.1.1 Importation of Superior Foreign Products

It has been suggested that the quality of domestic Palestinian pottery deteriorated as a result of the importation of superior foreign products from Cyprus and Mycenaean Greece (Several 1972, 128). It has already been pointed out that, certainly as regards Mycenaean pottery, Palestine was not flooded with imports (cf section 10.10.2). It is also likely that real imports from Cyprus and Greece were fairly expensive and that local copies were made as cheap substitutes (section 10.8). In fact, the greatest amounts of imported pottery, as a proportion of the total excavated amount recorded, come from sites on the coast and the major centres where the Egyptians were based, like Tell el-'Ajjul, Lachish and Bethshan (cf Nicolaou 1982, 121). These are precisely the places which show general prosperity and the least decline in the quality of domestic pottery and which could afford larger quantities of imports. In contrast, sites like Jericho and Gibeon have a relatively insignificant amount of imports, and at Jericho no real Mycenaean pottery was found at all. It is these sites which show the greatest degree of decline, not only in pottery but also in architecture and extent of settlement. Even Hazor has far less Cypriot and Mycenaean pottery than major sites like Lachish or ports like Sarepta. Hazor Tomb 8144-5, described as "particularly rich in imported pieces" and certainly the richest deposit of LBIIa Hazor, contained 500 vessels of which only 30 (6%) were imports (Yadin 1960, 145 and pls.CXXXVI-CXXXVII). In contrast, Mycenaean pottery from the tomb at Sarafend (the ancient port of Sarepta) makes up 50% of the total (Nicolaou 1982, 123). At Lachish, although it is difficult to obtain precise figures because Tufnell treated M and LBA pottery together, the 248 more or less complete imported vessels probably account for about 25% of the total LB ceramic assemblage (cf Tufnell 1958, 176).

The damaging effect of foreign products is not therefore a convincing explanation for the decline. In any case, it considers only one aspect of it, the local pottery, whereas the recession affected the whole way of life.

10.11.1.2 The 'Apiru

The Amarna letters refer to a large group of stateless people in Palestine and Syria called 'apiru, who seem to have been part of the population of the Near East throughout the 2nd millennium B.C. (Greenberg 1955, 85; Bottero 1975). The term 'apiru seems to mean 'refugee' or 'outlaw' and it is likely that they consisted of insolvent debtors, fugitive slaves, common criminals and political refugees (Liverani 1979, 16-17; Weippert 1971, 58). The 'apiru were regarded as enemies of Egypt who raided and destroyed settled areas (Albright 1975, 111) and often they were hired as mercenaries by local princes (Liverani op.cit.). Amenophis II claims to have brought 3600 'prw as prisoners to Egypt (Säve-Söderbergh 1952, 8).

The 'apiru seem to have had little effect on the areas under Egyptian control. There was apparently little disruption of trade and communication, vital for any effective imperial control (Several 1972, 131). LBII Lachish was not defended by a city wall. Its excavator has commented that

> "effective Egyptian political and military hegemony over that part of the country may also explain how such a large city could have existed and flourished without a ring of fortifications surrounding it" (Ussishkin 1983, 170).

The existence at Lachish of a sequence of three undamaged temples outside the town, with gradual growth suggesting increased prosperity, also indicates that there conditions were peaceful (Kenyon 1979, 197-8).

It is significant that the presence of the 'apiru is alluded to mainly with reference to the hill country, away from the areas of direct Egyptian influence (Aharoni 1979, 176). The king of Hazor, among others, is said to have given them assistance (ibid.): it is possible that the writers of the Amarna letters, who were faithful to Egypt, meant by the term 'apiru simply rebels against Egyptian sovereignty (Weippert 1971, 72). So when the king of Tyre reported to the Pharaoh that the king of Hazor had left his city and joined the 'apiru, it was conceivably intended to mean that he had joined the movement of rebellion against Egyptian supremacy (ibid.73). The disruption caused by the 'apiru seems indeed to have been limited to the hill country, and Thompson has noted that the contraction of LB settlement in the hill country suggests that there was far less stability in those areas than in the MBA (Thompson 1979, 66). It would appear that the 'apiru were a factor in the instability and decline of certain regions of Palestine in the LBA. However, it is unlikely that they alone were responsible, as they were probably more an effect than a major cause of the decline. One must also take into account the reasons for the growing rate of refugeeism.

10.11.1.3 Diversion of Resources to the Egyptian Empire

It has already been noted that the tribute paid by the Palestinian towns to the Egyptians was used to supply the Egyptian army and administration (section 10.9.3). The Egyptian presence and exaction of tribute, starting with Tuthmosis III, lasted a total of c.250 years. If tribute was required to be paid each year, it is reasonable to suppose that eventually the Palestinian towns would feel the effect. The benefits from exploitation of natural resources and trade were being siphoned off by the Egyptians and little or no profit was being fed back into the Palestinian economy. The effects seem to have been felt hardest in the areas not under direct Egyptian occupation. The unrest in LBIIb which Seti I and Ramesses II had to deal with may have been caused by economic hardship, but in fact it made things even worse. The

resulting increase in the Egyptian presence no doubt meant a corresponding increase in tribute to meet the needs of an expanded colonial army. The Palestinian towns would have had to bear the extra cost, and their economies, already weak, would have found the burden crippling. The decrease in trade presumably led to less prosperity generally, which would have made it even harder for the Palestinian towns to afford the tribute.

The increase in the numbers of 'apiru can be explained by these economic difficulties. The means of sustenance of the Palestinian population were derived from agriculture, the products of which were being absorbed by the Egyptian administration and by raids from 'apiru and neighbouring towns (Liverani 1979, 17):

> "The economic difficulties acted therefore on the peasants either by driving them to emigrate, or by compelling them to assume debts which could not then be paid on account of the poor harvest so that their children and they themselves were turned into slaves. Thus it is that the particular economic pressure could not but emphasise the causes that produced the phenomenon of refugeeism: the ranks of the habiru swelled continually..." (ibid.17-18).

It was, then, the diversion of resources to pay for the upkeep of the Egyptian colonial administration that was the main cause of the decline of certain areas of Palestine in the LBA. One aspect of this decline was the rise in the rate of refugeeism, which further contributed to the degenerating situation by producing more marauding bands which raided and destroyed settlements. The overall decline of the economy, not surprisingly, was felt particularly in those places where Egyptians were not living and which therefore were not receiving any substantial benefit from agricultural surpluses and trade profits. These were essentially the less densely populated areas of Palestine and Transjordan, especially the hill regions.

Though not under direct Egyptian control many towns in these areas are mentioned in the lists of Tuthmosis III and the 19th Dynasty kings and were apparently theoretically under Egyptian administration and within reach of an Egyptian army. The localised economic decline was reflected in the gradual degeneration of the material culture and also in the generally low quantity, quality and extent of settlements.

10.12 Conclusion: The Decline of LB Jericho

The increased poverty of Jericho and its eventual abandonment can be understood against this background of economic difficulties. The LB village, never very prosperous, would have found it hard to survive in an atmosphere of recession. The potters (who may have been under the control of a local ruler or chieftain as at Ugarit) were probably forced to make cheaper products for two reasons:

1) People no longer had the resources to pay for more expensive well-made pottery of good quality.

2) The potters needed to get a reasonable return on their product so as to make a satisfactory living.

The result was that not only did the quality of workmanship suffer as potters spent less time and care on their products, but the fabric also became cheaper. The decline in flint-tempering at LB Jericho suggests that the potters cut down on it because it was too labour-intensive a process with not enough economic return. The re-introduction of straw inclusions in pottery, a very cheap, easily available and quick to prepare form of temper, can be similarly explained.

It has been argued in this study that there is some evidence of worsening conditions at Jericho during LBIIa. It may not be a coincidence that at the start of LBIIb, as unrest rippled through Palestine and the Egyptians increased their presence with probably repressive effects, the small settlement of Jericho seems to have been abandoned.

APPENDIX

LISTING BY MUSEUM NUMBERS

Rockefeller Museum, Jerusalem (R)

Museum Number	Garstang's Tomb Number	Present Number
32.1058	4 a 3	T.4 no.73
32.1059	4 a 7	T.4 no.96
32.1060	4 a 10	T.4 no.95
32.1061	4 a 14	T.4 no.118
32.1062	4 b 1	T.4 no.41
32.1063	4 b 4	T.4 no.80
32.1064	4 b 9	T.4 no.97
32.1065	4 b 23	T.4 no.134
32.1067	4 b 34	T.4 no.19
32.1068	4 b 29	T.4 no.83
32.1069	4 c 3	T.4 no.23
32.1070	4 c 7	T.4 no.16
32.1071	4 c 9	T.4 no.54
32.1072	4 c 17	T.4 no.129
32.1073	4 c 24	T.4 no.21
32.1074	4 c 30	T.4 no.49
32.1075	4 c 39	T.4 no.52
32.1076	4 c 44	T.4 no.124
32.1077	4 c 47	T.4 no.55
32.1078	4 c 48	T.4 no.143
32.1079	4 c 54	T.4 no.48
32.1080	4 c 56	T.4 no.74
32.1081	4 c 61	T.4 no.27
32.1082	4 c 62	T.4 no.53
32.1083	4 c 65	T.4 no.107
32.1084	4 c 83	T.4 no.14
32.1085	4 c 86	T.4 no.125
32.1086	4 c 87	T.4 no.126
32.1087	4 c 88	T.4 no.110
32.1088	4 d 16bis	T.4 no.51
32.1089	4 d 27	T.4 no.47
32.1090	4 d 28	T.4 no.43
32.1092	4 e 20	T.4 no.72
32.1093	4 e 23	T.4 no.71
32.1105	5 a 1	T.5 no.327
32.1106	5 a 4	T.5 no.298
32.1107	5 a 5	T.5 no.357
32.1108	5 a 7	T.5 no.329
32.1109	5 a 10	T.5 no.323
32.1110	5 a 12	T.5 no.339
32.1111	5 a 16	T.5 no.330
32.1112	5 b 1	T.5 no.46
32.1113	5 b 4	T.5 no.358
32.1114	5 b 6	T.5 no.51
32.1115	5 b 7	T.5 no.274
32.1116	5 b 8bis	T.5 no.364
32.1117	5 b 16	T.5 no.84
32.1118	5 b 19	T.5 no.263
32.1120	5 b 22	T.5 no.188

32.1121	5 b 24	T.5 no.187
32.1122	5 b 27	T.5 no.348
32.1123	5 b 15	T.5 no.322
32.1124	5 b 28	T.5 no.352
32.1125	5 b 30	T.5 no.355
32.1126	5 b 31	T.5 no.261
32.1127	5 b 35	T.5 no.321
32.1128	5 c 4	T.5 no.316
32.1129	5 c 6	T.5 no.268
32.1130	5 c 7	T.5 no.318
32.1131	5 b 40	T.5 no.356
32.1133	5 c 12	T.5 no.361
32.1134	5 c 16	T.5 no.33
32.1135	5 c 17	T.5 no.25
32.1136	5 c 18	T.5 no.365
32.1137	5 c 19	T.5 no.36
32.1138	5 c 21	T.5 no.40
32.1139	5 c 24	T.5 no.326
32.1140	5 c 30	T.5 no.306
32.1142	5 c 32	T.5 no.334
32.1143	5 c 34	T.5 no.341
32.1144	5 c 35	T.5 no.85 & 88
32.1145	5 c 5	T.5 no.308
32.1146	5 d 1	T.5 no.362
32.1147	5 d 2	T.5 no.276
32.1148	5 e 69	T.5 no.267
32.1149	5 d 8	T.5 no.66
32.1150	5 d 11	T.5 no.312
32.1151	5 d 12	T.5 no.345
32.1152	5 d 17	T.5 no.304
32,1153	5 d 20	T.5 no.344
32.1154	5 d 22	T.5 no.133
32.1155	5 d 24	T.5 no.295
32.1156	5 d 25	T.5 no.281
32.1157	5 d 28	T.5 no.107
32.1158	5 d 29	T.5 no.28
32.1159	5 c 8	T.5 no.300
32.1160	5 d 33	T.5 no.99
32.1161	5 d 34	T.5 no.290
32.1162	5 d 46	T.5 no.266
32.1163	5 d 47	T.5 no.194
32.1164	5 d 49	T.5 no.277
32.1165	5 d 50	T.5 no.150
32.1166	5 d 51	T.5 no.102
32.1167	5 d 57	T.5 no.79
32.1168	5 d 59	T.5 no.197
32.1169	5 d 61	T.5 no.271
32.1170	5 d 62	T.5 no.63
32.1171	5 d 64	T.5 no.262
32.1172	5 d 67	T.5 no.58
32.1174	5 e 2	T.5 no.191
32.1175	5 e 3	T.5 no.302
32.1176	5 e 4	T.5 no.264
32.1178	5 e 6	T.5 no.328
32.1179	5 e 7	T.5 no.244
32.1181	5 e 14	T.5 no.108
32.1182	5 e 16	T.5 no.196
32.1183	5 e 17	T.5 no.243
32.1184	5 e 18	T.5 no.153
32.1185	5 e 20	T.5 no.78

32.1186	5 e 23	T.5 no.72
32.1187	5 e 24	T.5 no.185
32.1188	5 e 27	T.5 no.265
32.1189	5 e 28	T.5 no.346
32.1190	5 e 29	T.5 no.292
32.1191	5 e 30	T.5 no.340
32.1192	5 e 31	T.5 no.311
32.1193	5 e 33	T.5 no.15
32.1194	5 e 34	T.5 no.151
32.1195	5 e 35	T.5 no.282
32.1196	5 e 38	T.5 no.20
32.1197	5 e 42	T.5 no.31
32.1199	5 e 49	T.5 no.301
32.1200	5 e 52	T.5 no.100
32.1201	5 e 44	T.5 no.289
32.1202	5 e 59	T.5 no.307
32.1203	5 e 60	T.5 no.57
32.1204	5 e 61	T.5 no.62
32.1205	5 e 63	T.5 no.258
32.1206	5 e 64	T.5 no.303
32.1207	5 e 67	T.5 no.73
32.1208	5 e 68	T.5 no.242
32.1209	5 e 69	T.5 no.267
32.1210	5 e 70	T.5 no.205
32.1211	5 e 71	T.5 no.123
32.1212	5 f 73 (sic)	T.5 no.170
32.1213	5 e 74	T.5 no.140
32.1214	5 e 76	T.5 no.177
32.1215	5 e 79	T.5 no.209
32.1216	5 e 81	T.5 no.241
32.1217	5 e 86	T.5 no.30
32.1218	5 e 87	T.5 no.349
32.1219	5 e 94	T.5 no.201
32.1220	5 e 95	T.5 no.202
32.1221	5 e 96	T.5 no.44
32.1222	5 f 0	T.5 no.208
32.1223	5 f 1bis - bronze pieces	
32.1225	5 f 4	T.5 no.174
32.1227	5 f 14	T.5 no.4
32.1228	5 f 25	T.5 no.93
32.1229	5 f 26	T.5 no.181
32.1230	5 f 28	T.5 no.65
32.1231	5 f 30	T.5 no.190
32.1232	5 f 22	T.5 no.250
32.1233	5 f 36	T.5 no.231
32.1234	5 f 44	T.5 no.74
32.1235	5 f 45	T.5 no.49
32.1236	5 f 49	T.5 no.189
32.1237	5 f 53	T.5 no.164
32.1238	5 f 62	T.5 no.10
32.1239	5 f 63	T.5 no.182
32.1240	5 f 65	T.5 no.240
32.1241	5 f 67	T.5 no.75
32.1242	5 f 70	T.5 no.171
32.1243	5 f 79	T.5 no.200
32.1244	5 f 80	T.5 no.127
32.1245	5 f 82	T.5 no.104
32.1246	5 f 88	T.5 no.214
32.1247	5 f 88 (sic)	T.5 no.211
32.1248	Tomb 5	T.5 no.114

32.1249	5 g 3	T.5 no.135
32.1250	5 g 5	T.5 no.82
32.1252	5 g 11	T.5 no.215
32.1253	5 g 12	T.5 no.19
32.1254	5 g 13	T.5 no.115
32.1255	5 g 14bis	T.5 no.149
32.1256	5 g 18	T.5 no.157
32.1257	5 g 19	T.5 no.199
32.1258	5 g 22	T.5 no.144
32.1259	5 g 23	T.5 no.236
32.1260	5 g 25 - toggle pins	T.5 no.213
32.1261	5 g 25 - toggle pins	
32.1262	5 g 27	T.5 no.21
32.1263	5 g 32	T.5 no.173
32.1264	5 g 41	T.5 no.87
32.1265	5 g 44	T.5 no.96
32.1266	5 g 45	T.5 no.138
32.1267	5 g 47	T.5 no.206
32.1268	5 g 48	T.5 no.8
32.1269	5 g 49	T.5 no.141
32.1270	5 g 56	T.5 no.203
32.1271	5 g 59	T.5 no.137
32.1272	5 g 61	T.5 no.230
32.1273	5 g 63	T.5 no.237
32.1274	5 g 73	T.5 no.296
32.1275	5 g 77	T.5 no.106
32.1276	5 g 81	T.5 no.234
32.1277	5 g 83	T.5 no.147
32.1278	5 g 90	T.5 no.198
32.1279	5 g 91	T.5 no.146
32.1280	5 g 92	T.5 no.128
32.1281	5 g 94	T.5 no.95
32.1282	5 g 101	T.5 no.64
32.1283	5 g 103	T.5 no.32
32.1285	5 g 122	T.5 no.132
32.1286	5 g 124	T.5 no.166
32.1287	5 g 130	T.5 no.43
32.1288	5 g 136	T.5 no.50
32.1289	5 g 139	T.5 no.134
32.1290	5 g 108	T.5 no.9
32.1291	5 g 159	T.5 no.212
32.1292	5 g 160	T.5 no.162
32.1293	5 g 162	T.5 no.204
32.1294	5 g 163	T.5 no.207
32.1295	5 g 175	T.5 no.210
32.1296	5 g 178	T.5 no.172
32.1297	5 g 185	T.5 no.42
32.1298	5 g 187	T.5 no.5
32.1299	5 g 95 - bronze pins	
32.1309	5 d 6 - toggle pins	
32.1310	5 g 137	T.5 no.195
32.1313	5 f 59	T.5 no.216
32.1591	13 a 1	T.13 no.91
32.1592	13 a 2	T.13 no.90
32.1593	13 a 3	T.13 no.85
32.1594	13 a 4	T.13 no.96
32.1595	13 a 5	T.13 no.83
32.1596	13 a 6	T.13 no.25
32.1597	13 a 7	T.13 no.59

32.1598	13 a 9	T.13 no.89
32.1599	13 a 10	T.13 no.97
32.1602	13 a 13	T.13 no.95
32.1603	13 a 14	T.13 no.32
32.1604	13 a 15	T.13 no.45
32.1605	13 a 16	T.13 no.19
32.1606	13 a 17	T.13 no.84
32.1607	13 a 18	T.13 no.88
32.1608	13 a 19	T.13 no.86
32.1609	13 a 20	T.13 no.100
32.1610	13 a 21	T.13 no.92
32.1611	13 a 22	T.13 no.82
32.1612	13 b 2	T.13 no.58
32.1613	13 b 3	T.13 no.67
32.1614	13 b 4	T.13 no.76
32.1615	13 b 5	T.13 no.72
32.1616	13 b 8	T.13 no.21
32.1617	13 b 9	T.13 no.64
32.1618	13 b 12	T.13 no.8
32.1619	13 b 13	T.13 no.37
32.1620	13 b 14	T.13 no.9
32.1621	13 b 15	T.13 no.11
32.1622	13 b 17	T.13 no.93
32.1623	13 b 18	T.13 no.94
32.1624	13 b 19	T.13 no.101
32.1625	13 b 20	T.13 no.34
32.1626	13 b 21	T.13 no.53
32.1627	13 b 21bis	T.13 no.54
32.1628	13 b 22	T.13 no.99
32.1629	13 b 23	T.13 no.22
32.1630	13 b 24	T.13 no.68
32.1631	13 b 25	T.13 no.20
32.1632	13 b 26	T.13 no.23
32.1633	13 b 27	T.13 no.78
32.1634	13 b 28	T.13 no.38
32.1635	13 b 29	T.13 no.66
32.1636	13 b 30	T.13 no.29
32.1638	13 b 32	T.13 no.24
32.1639	13 b 33	T.13 no.42
32.1640	13 b 34	T.13 no.87
32.1641	13 b 35	T.13 no.41
32.1642	13 b 36	T.13 no.13
32.1643	13 b 37	T.13 no.63
32.1644	13 b 11	T.13 no.35
32.1645	13 a 24	T.13 no.98
32.1646	13 c 1	T.13 no.49
32.1647	13 c 2	T.13 no.46
32.1648	13 c 3	T.13 no.6
32.1649	13 c 4	T.13 no.3
32.1650	13 c 5	T.13 no.4
32.1651	13 c 6	T.13 no.27
32.1652	13 c 7	T.13 no.14
32.1653	13 c 8	T.13 no.47
32.1654	13 c 9	T.13 no.26
32.1655	13 c 11	T.13 no.17
32.1656	13 c 12	T.13 no.51
32.1657	13 c 13	T.13 no.60
32.1658	13 c 14	T.13 no.79
32.1659	13 c 15	T.13 no.33
32.1660	13 c 16	T.13 no.70

32.1661	13 c 17	T.13 no.77
32.1662	13 c 20	T.13 no.57
32.1663	13 c 21	T.13 no.62
32.1664	13 c 22	T.13 no.10
32.1665	13 c 23	T.13 no.50
32.1666	13 c 24	T.13 no.31
32.1667	13 c 24bis	T.13 no.1
32.1668	13 c 24c	T.13 no.18
32.1669	13 c 19	T.13 no.30
32.1670	13 c 24d - alabaster jug fragment	
32.1671	13 c 25	T.13 no.36
32.1672	13 c 26	T.13 no.40
32.1673	13 c 27	T.13 no.52
32.1674	13 c 28	T.13 no.43
32.1675	13 c 29	T.13 no.5
32.1676	13 c 30	T.13 no.69
32.1677	13 c 31	T.13 no.56
32.1678	13 c 33	T.13 no.73
32.1679	13 c 35	T.13 no.74
32.1680	13 c 36	T.13 no.75
32.1681	13 c 37	T.13 no.71
32.1682	13 c 38	T.13 no.39
32.1683	13 c 39	T.13 no.61
32.1684	13 c 40	T.13 no.15
32.1685	13 c 41	T.13 no.12
32.1686	13 c 42	T.13 no.16
32.1687	13 c 43	T.13 no.7
32.1688	13 c 44	T.13 no.2
32.1690	13 c 46	T.13 no.28
32.1691	13 c 47	T.13 no.55
32.1692	13 c 47 - toggle pins	
32.1693	13 c 34	T.13 no.65
32.1694	13 c 10	T.13 no.48
32.1698	Tomb 13	T.13 no.44
33.1076	30 a 1	T.30 no.4
33.1077	30 a 2	T.30 no.6
33.1078	30 a 3	T.30 no.13
33.1079	30 a 4	T.30 no.12
33.1080	30 a 5	T.30 no.3
33.1081	30 a 5bis	T.30 no.22
33.1082	30 a 6	T.30 no.1
33.1083	30 a 7	T.30 no.10
33.1085	30 a 9	T.30 no.2
33.1088	30 a 12	T.30 no.19
33.1089	30 a 13	T.30 no.11
33.1090	30 a 15	T.30 no.14
33.1092	30 b 2	T.30 no.18
33.1093	30 b 3	T.30 no.17
33.1094	30 b 4	T.30 no.15
33.1097	30 b 8	T.30 no.16
33.1098	30 b 9	T.30 no.20
33.1099	30 b 10	T.30 no.5
33.1100	30 b 11	T.30 no.34a
33.1101	"	" b
33.1102	"	" c
33.1103	"	" d
33.1104	"	" e
33.1105	"	" f
33.1106	30 b 12	T.30 no.9

33.1107	30 b 14	T.30 no.21
33.1108	30 b 15	T.30 no.35
33.1109	"	"
33.1110	"	"
33.1111	"	"
33.1112	30 c 1	T.30 no.7
33.1113	30 c 2	T.30 no.36
33.1114	30 c 3	T.30 no.8
33.1115	30 b 15	T.30 no.35
33.1255	T.30 scarabs	T.30 f
33.1256	"	T.30 a
33.1257	"	T.30 h
33.1258	"	T.30 i
33.1259	"	T.30 e
33.1260	"	T.30 d
33.1261	"	T.30 j
33.1262	"	T.30 g
33.1263	"	T.30 b
33.1264	"	T.30 c

Louvre, Paris (L)

Museum Number	Garstang's Tomb Number	Present Number
AO 15573	4 b 8	T.4 no.104
AO 15624	4 b 21	T.4 no.81
AO 15631	5 d 19	T.5 no.259
AO 15632	5 g 141	T.5 no.76
AO 15633	5 f 61	T.5 no.227
AO 15634	5 e 77	T.5 no.226
AO 15636	5 a 9	T.5 no.354
AO 15637	5 c 20	T.5 no.293
AO 15638	5 a 8	T.5 no.294
AO 15639	5 b 12	T.5 no.333
AO 15641	5 d 14	T.5 no.337
AO 15642	5 f 9	T.5 no.48
AO 15643	5 g 80	T.5 no.90
AO 15644	5 g 121	T.5 no.91
AO 15645	5 g 20	T.5 no.163
AO 15646	5 d 9	T.5 no.155
AO 15647	5 e 13	T.5 no.175
AO 15648	5 g 85	T.5 no.232
AO 15649	5 d 45	T.5 no.363
AO 15650	5 a 3	T.5 no.347
AO 15652	5 e 36	T.5 no.222
AO 15653	5 g 66	T.5 no.113
AO 15654	5 g 1bis	T.5 no.81
AO 15655	5 b 13	T.5 no.256
AO 15656	4 b 11	T.4 no.99
AO 15657	5 e 26	T.5 no.224
AO 15658	5 d 7	T.5 no.219
AO 15659	5 d 30	T.5 no.52
AO 15660	5 d 54	T.5 no.67
AO 15661	Tomb 5	T.5 no.109
AO 15663	5 f 84	T.5 no.229
AO 15664	5 g 150	T.5 no.239
AO 15665	5 g 36	T.5 no.161
AO 15666	5 g 89	T.5 no.47
AO 15667	5 b 5	T.5 no.291
AO 15668	5 g 173	T.5 no.176

AO 15670	4 c 21	T.4 no.90
AO 15671	4 b 36	T.4 no.91
AO 15672	4 b 7	T.4 no.75
AO 15673	4 a 19	T.4 no.103
AO 15674	4 c 30bis	T.4 no.22
AO 15676	4 d 31	T.4 no.45
AO 15677	5 g 114	T.5 no.238
AO 15678	4 c 13	T.4 no.82
AO 15679	4 a 4	T.4 no.122
AO 15680	4 e 1	T.4 no.50
AO 15682	4 c 57	T.4 no.86
AO 15683	4 c 49	T.4 no.131
AO 15684	4 d 37bis	T.4 no.15
AO 15685	4 c 41	T.4 no.109
AO 15686	4 a 28	T.4 no.117
AO 15687	4 e 17	T.4 no.13
AO 15688	4 d 29	T.4 no.17
AO 15691	5 g 188	T.5 no.233
AO 21690	T.5 bronzes	
AO 21691	"	
AO 25450	4 a 24	T.4 no.100
AO 25451	4 b 3	T.4 no.88
AO 25452	4 b 37	T.4 no.77
AO 25453	4 c 52	T.4 no.128
AO 25454	4 d 5	T.4 no.33
AO 25455	4 c 16	T.4 no.112
AO 25456	4 b 22	T.4 no.92
AO 25458	4 c 46/4 c 66	T.4 no.106/93
AO 25459	4 c 7bis	T.4 no.1
AO 25460	4 c 45	T.4 no.84
AO 25461	5 d 44	T.5 no.285
AO 25462	5 f 57	T.5 no.37
AO 25463	5 g 128	T.5 no.112
AO 25464	5 d 5	T.5 no.257
AO 25465	5 f 48	T.5 no.7
AO 25466	5 d 27	T.5 no.251
AO 25467	5 g 135	T.5 no.11
AO 25506	4 c 70 - dagger	
AO 25509	5 c 27	T.5 no.38
AO 25510	5 c 29	T.5 no.343
AO 25511	4 a 18	T.4 no.76

Birmingham City Museum (BCM)

Museum Number	Garstang's Tomb Number	Present Number
464'36	4 a 25	T.4 no.105
465'36	5 e 53	T.5 no.297
466'36	5 g 167	T.5 no.142
467'36	5 g 16	T.5 no.186
468'36	5 g 134	T.5 no.117
469'36	5 d 31	T.5 no.17
470'36	5 e 66	T.5 no.2
471'36	5 f 35	T.5 no.116
472'36	4 d 18	T.4 no.46
267'72	5 c 3	T.5 no.269
268'72	5 a 13	T.5 no.310
269'72	5 c 13	T.5 no.270
270'72	5 c 25	T.5 no.317
271'72	5 d 26	T.5 no.313

272'72	Tomb 5	T.5 no.255
273'72	5 g 58	T.5 no.69
274'72	5 g 102	T.5 no.6
275'72	5 g 151	T.5 no.252
276'72	5 g 125	T.5 no.225
277'72	5 e 1	T.5 no.273
278'72	5 g 177	T.5 no.22
279'72	5 c 37	T.5 no.16
280'72	5 d 53	T.5 no.178
281'72	5 f 24	T.5 no.29
282'72	5 f 8	T.5 no.27
283'72	5 f 19	T.5 no.23
284'72	5 g 4	T.5 no.71
285'72	5 g 75	T.5 no.126
286'72	5 g 93	T.5 no.184
287'72	5 g 87	T.5 no.179
288'72	5 f 83	T.5 no.35
289'72	5 g 43	T.5 no.129
290'72	5 g 62	T.5 no.228
291'72	5 g 68	T.5 no.130
292'72	5 a 15	T.5 no.359
293'72	5 e 54	T.5 no.158
294'72	5 e 71	T.5 no.218
295'72	5 e 85	T.5 no.167
296'72	5 e 89	T.5 no.136
297'72	5 f 21	T.5 no.92
298'72	5 f 29	T.5 no.324
299'72	5 f 51	T.5 no.169
300'72	5 g 2	T.5 no.154
301'72	5 g 111	T.5 no.235
302'72	5 g 161	T.5 no.156
304'72	5 d 32	T.5 no.122
305'72	5 d 43	T.5 no.351
306'72	5 e 43	T.5 no.103
307'72	5 e 73	T.5 no.121
308'72	5 d 15	T.5 no.45
309'72	5 e 21	T.5 no.152
310'72	5 e 84	T.5 no.180
311'72	5 d 55	T.5 no.98
312'72	5 b 36	T.5 no.342
313'72	5 b 10	T.5 no.286
314'72	5 b 14	T.5 no.288
315'72	5 b 26	T.5 no.287
316'72	5 c 10	T.5 no.278
317'72	5 b 25/5 c 26	T.5 no.336/280
318'72	5 d 63	T.5 no.353
319'72	5 d 42	T.5 no.319
320'72	5 e 65	T.5 no.283
321''2	5 e 93	T.5 no.320
322'72	5 d 13	T.5 no.279
323'72	5 d 65	T.5 no.223
324'72	5 c 15	T.5 no.60
325'72	5 e 25	T.5 no.55
326'72	5 e 35bis	T.5 no.53
327'72	5 e 62	T.5 no.59
328'72	5 f 39	T.5 no.56
329'72	5 f 55	T.5 no.61
330'72	5 d 68	T.5 no.54
331'72	5 f 46	T.5 no.105
334'72	5 d 38	T.5 no.41

335'72	5 b 33	T.5 no.193
361'72	5 f 75	T.5 no.143
Unaccessioned	4 a 22	T.4 no.116
"	4 b 14	T.4 no.108
"	4 c 27	T.4 no.38
"	4 c 52	T.4 no.127
"	4 c 68	T.4 no.31
"	4 c 85	T.4 no.94
"	5 f 37	T.5 no.94
"	5 d 6 - bronze fragments	
"	5 f 46 - beads	
"	5 g 25 - bronze fragments	
"	5 g 72 - stone handmill, pestle and mortar	

Musées Royaux d'Art et d'Histoire, Brussels (B)

Museum Number	Garstang's Tomb Number	Present Number
0.1078	4 e 9	T.4 no.9
0.1092	4 a 13	T.4 no.89
0.1094	4 d 25	T.4 no.30
0.1145	5 f 86	T.5 no.97
0.1146	5 c 1	T.5 no.110
0.1147	5 e 12	T.5 no.305
0.1148	5 c 22	T.5 no.366
0.1149	5 f 18	T.5 no.260
0.1151	5 g 55	T.5 no.168
0.1152	5 g 42	T.5 no.77
0.1153	5 g 157	T.5 no.14
0.1154	5 e 37	T.5 no.332
0.1155	5 e 48	T.5 no.338
0.1156	5 f 69	T.5 no.83
0.1157	5 d 37	T.5 no.350
0.1158	5 g 149	T.5 no.148
0.1160	5 f 40	T.5 no.13
0.1161	T.5 scarabs - Garstang 1933, pl.XXVI:11	
0.1162	" " " 16	
0.1163	" " " 4	
0.1164	" " " 7	
0.1165	" " " 12	
0.1166	" " " 10	
0.1167	" " " 8	
0.1168	4 c 55	T.4 no.119
0.1169	4 c 10	T.4 no.39
0.1170	4 c 6	T.4 no.2
0.1171	4 c 28	T.4 no.111
0.1172	4 c 36	T.4 no.37
0.1173	4 d 24	T.4 no.44
0.1174	4 e 12	T.4 no.40
0.1175	4 c 25	T.4 no.42
0.1176	4 b 19	T.4 no.130
0.1177	4 d 30	T.4 no.4
0.1178	4 a 26	T.4 no.98
0.1179	4 b 20	T.4 no.79
0.1180	4 a 21	T.4 no.115
0.1181	4 b 25	T.4 no.5
0.1182	4 d 9 - rubbing stone or weight	
0.1183	4 c 50	T.4 no.132
0.1184	4 c 79	T.4 no.8
0.1185	4 d 37	T.4 no.12

Hunterian Museum, Glasgow University (HMG)

Museum Number	Garstang's Tomb Number	Present Number
D 1932.1	5 b 2	T.5 no.80
D 1932.2	5 e 22	T.5 no.26
D 1932.3	Tomb 5	T.5 no.34
D 1932.4	5 g 126	T.5 no.111
D 1932.5	5 b 3	T.5 no.24
D 1932.6	5 e 55	T.5 no.272
D 1932.7	5 f 16	T.5 no.217
D 1932.8	5 f 85	T.5 no.3
D 1932.9	5 f 76	T.5 no.12
D 1932.10	5 d 39	T.5 no.315
D 1932.11	5 f 5	T.5 no.275
D 1932.12	5 g 21	T.5 no.131
D 1932.13	5 e 39	T.5 no.119
D 1932.14	5 g 46	T.5 no.118
D 1932.15	5 b 29	T.5 no.325
D 1932.16	Tomb 5	T.5 no.39
D 1932.17	5 g 116	T.5 no.159
D 1932.18	Tomb 5	T.5 no.160
D 1932.19	5 e 80	T.5 no.124
D 1932.20	5 d 23bis	T.5 no.125
D 1932.21	5 d 23	T.5 no.68
D 1932.22	5 c 2	T.5 no.335
D 1932.24	4 e 16	T.4 no.11
D 1932.25	4 d 33	T.4 no.29
D 1932.26	4 a 8	T.4 no.102
D 1932.27	4 b 31	T.4 no.87
D 1932.28	4 c 15	T.4 no.20
D 1932.29	4 c 71	T.4 no.7
D 1932.30	4 c 51	T.4 no.113
D 1932.31	4 c 11	T.4 no.114
D 1932.32	4 c 69	T.4 no.6
D 1932.33	4 b 27	T.4 no.32
D 1932.34	4 c 18	T.4 no.35
D 1932.35	4 c 19	T.4 no.34
D 1932.36	4 b 2	T.4 no.120
D 1932.37	4 b 12	T.4 no.121
D 1932.38	4 c 5	T.4 no.28
D 1932.39	4 a 15	T.4 no.133
D 1932.40	4 c 2	T.4 no.56
D 1932.41	4 c 29	T.4 no.25

Anthropological Museum, University of Aberdeen (AMUA)

Museum Number	Garstang's Tomb Number	Present Number
48.12	21 a 1	T.21 no.13
48.14	21 a 3	T.21 no.11
48.15	21 a 4	T.21 no.32
48.16	21 b 1	T.21 no.10
48.17	21 b 2	T.21 no.14
48.18	21 b 3	T.21 no.18
48.19	21 b 4	T.21 no.1
48.20	21 b 5	T.21 no.2
48.21	21 b 6	T.21 no.9
48.22	21 b 8	T.21 no.15

48.23	21 b 10	T.21 no.6
48.24	21 b 11	T.21 no.3
48.25	21 c 1	T.21 no.31
48.26	21 c 2	T.21 no.7
48.27	21 c 3	T.21 no.12
48.28	21 c 4	T.21 no.17
48.30	21 c 6	T.21 no.4
48.31	21 c 7	T.21 no.33
48.32	21 c 8	T.21 no.8
48.33	21 c 10	T.21 no.20
48.34	21 c 11	T.21 no.16
48.36	21 c 14	T.21 no.19
48.37	21 c 15	T.21 no.21
48.38	21 c 16	T.21 no.5
48.39	21 c 17	T.21 no.23
48.39a	21 c 9	T.21 no.22
48.40	Tomb 21 scarabs	T.21 a-h

Ashmolean Museum, Oxford (AMO)

Museum Number	Garstang's Tomb Number	Present Number
1932.719	5 f 20	T.5 no.18
1932.720	5 g 31	T.5 no.183
1932.721	5 c 11	T.5 no.284
1932.722	5 g 28	T.5 no.165
1932.723	5 f 74	T.5 no.145
1932.724	5 d 21	T.5 no.309
1932.725	5 g 8	T.5 no.220
1932.726	5 b 34	T.5 no.299
1932.727	5 e 41	T.5 no.254
1932.728	4 b 5	T.4 no.123
1932.729	4 e 2	T.4 no.24
1932.730	4 a 9	T.4 no.101

Merseyside County Museum, Liverpool (MCM)

Museum Number	Garstang's Tomb Number	Present Number
35.64	4 b 6	T.4 no.78
35.64.6	4 b 30	T.4 no.26
35.64.7	5 d 55	T.5 no.360
47.48.143	5 d 41	T.5 no.314
47.48.144	5 e 83	T.5 no.221
47.48.145	5 g 86	T.5 no.70
47.48.233	Tomb 5d	T.5 no.192

École Biblique, Jerusalem (EBAF)

Museum Number	Garstang's Tomb Number	Present Number
no number	4 b 32	T.4 no.18
"	4 e 13	T.4 no.36
"	4 e 14	T.4 no.10
"	5 f 17	T.5 no.101
"	5 g 30	T.5 no.139

Liverpool University School of Archaeology (LUSA)

Number	Garstang's Tomb Number	Present Number
JG 32.4	4 c 33	T.4 no.3
JG 32.5	5 g 78	T.5 no.253
JG 32.6	5 g 84	T.5 no.86
JG 32.7	5 g 97	T.5 no.89

Leeds City Museum (LCM)

Museum Number	Garstang's Tomb Number	Present Number
D 523.1960	5 f 71	T.5 no.120
D 524.1960	5 b 21	T.5 no.331
D 535.1960	4 c 60	T.4 no.85

Manchester Museum (M)

Museum Number	Garstang's Tomb Number	Present Number
1958.6	5 g 176	T.5 no.1

Australian Institute of Archaeology, Melbourne (IA)

Museum Number	Garstang's Tomb Number
IA 10 211	5 g 112
IA 10 257	4 d 40
IA 10 258	4 c 58
IA 10 260	4 c 77
IA 10 403	5 b 20
IA 10 405	5 c 9
IA 10 406	5 c 31
IA 10 451	13 a 11
IA 10 473	13 b 31
IA 10 487	13 a 12

ABBREVIATIONS

AASOR	Annual of the Americal Schools of Oriental Research
ABSA	Annual of the British School at Athens
AfO	Archiv für Orientforschung
AJA	American Journal of Archaeology
AJSLL	American Journal of Semitic Languages and Literatures
BASOR	Bulletin of the American Schools of Oriental Research
CAH	Cambridge Ancient History[3] (Cambridge). Vols.I:2 (1971), II:1 (1973), II:2 (1975)
IEJ	Israel Exploration Journal
ILN	Illustrated London News
JAOS	Journal of the American Oriental Society
JARCE	Journal of the American Research Centre in Egypt
JBL	Journal of Biblical Literature
JEA	Journal of Egyptian Archaeology
JNES	Journal of Near Eastern Studies
JTS	Journal of Theological Studies
LAAA	Liverpool Annals of Archaeology and Anthropology
MDIK	Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo
PEFQS	Palestine Exploration Fund Quarterly Survey
PEQ	Palestine Exploration Quarterly
QDAP	Quarterly of the Department of Antiquities of Palestine
RB	Revue Biblique
RDAC	Report of the Department of Antiquities of Cyprus
SSEA	Society for the Study of Egyptian Antiquities
ZDMG	Zeitschrift der Deutschen Morgenländischen Gesellschaft
ZDPV	Zeitschrift der Deutschen Palästina-Vereins

BIBLIOGRAPHY

Aharoni, Y.

1979 The Land of the Bible [2] (London).

Ahituv, S.

1978 Economic Factors in the Egyptian Occupation of Canaan, IEJ 28, 93-105.

Albright, W.F.

1929 Progress in Palestinian Archaeology during the Year 1928, BASOR 33, 1-10.

1932 The Excavation of Tell Beit Mirsim: The Pottery of the First Three Campaigns, AASOR XII.

1933 The Excavation of Tell Beit Mirsim: The Bronze Age Pottery of the Fourth Campaign, AASOR XIII, 55-127.

1938 The Excavation of Tell Beit Mirsim: The Bronze Age, AASOR XVII.

1944 A Prince of Taanach in the Fifteenth Century B.C., BASOR 94, 12-27.

1956 The Archaeology of Palestine [3] (London).

1964 The Eighteenth-Century Princes of Byblos and the Chronology of Middle Bronze, BASOR 176, 38-46.

1975 The Amarna Letters from Palestine, CAH II:2, 98-116.

Albright, W.F. and Kelso, J.L.

1968 The Excavation of Bethel (1934-1960), AASOR XXXIX.

Alden, M.J.

1981 Bronze Age Population Fluctuations in the Argolid from the Evidence of Mycenaean Tombs (Göteborg).

Aldred, C.

1968 Akhenaten: Pharaoh of Egypt (London).

1975 Egypt: The Amarna Period and the End of the Eighteenth Dynasty, CAH II:2, 49-97.

Amer, A.A.M.A.

1983 Continuity and Change in New Kingdom Egypt: Aspects of International Relations and Internal Policies (University of Liverpool: unpublished PhD thesis).

Amiet, P.

1980 Art of the Ancient Near East (New York).

Amiran, R.

1963 Pottery from a LB Tomb at Jerusalem, Eretz-Israel VI, 25-37 (in Hebrew).

1970 Ancient Pottery of the Holy Land (Rutgers University Press).

Anati, E.

1959 Excavations at the Cemetery of Tell Abu Hawam (1952), Atiqot 2, 89-102.

Artzy, M., Asaro, F. and Perlman, I.

1973 The Origin of the 'Palestinian' Bichrome Ware, JAOS 93, 446-61.

Artzy, M., Perlman, I. and Asaro, F.

1981 Cypriote Pottery Imports at Ras Shamra, IEJ 31, 37-47.

Asaro, F. and Perlman, I.

1973 Provenience Studies of Mycenaean Pottery employing Neutron Activation Analysis, in The Mycenaeans in the Eastern Mediterranean (Acts of the International Symposium, Nicosia), 213-24.

Astour, M.C.

1972 The Merchant Class of Ugarit, in D.O.Edzard (ed.), Gesellschaftsklassen im Alten Zweistromland und in den angrenzenden Gebieten - XVIII Rencontre Assyriologique Internationale, München 29 Juni bis 3 Juli 1970 (Munich), 11-26.

1973 Ugarit and the Aegean, in H.A.Hoffner, Jr. (ed.), Orient and Occident (Neukirchen), 17-27.

1980 Review of M.Heltzer, The Rural Community in Ancient Ugarit, JNES 39, 163-7.

1981 Ugarit and the Great Powers, in G.D.Young (ed.), Ugarit in Retrospect (Indiana), 3-30.

Avi-Yonah, M.

1975 Encyclopedia of Archaeological Excavations in the Holy Land I (London).

1976 Encyclopedia of Archaeological Excavations in the Holy Land II (London).

Avi-Yonah, M. and Stern, E.

1977 Encyclopedia of Archaeological Excavations in the Holy Land III (London).

1978 Encyclopedia of Archaeological Excavations in the Holy Land IV (London).

Bartlett, J.R.

1982 Jericho (Guildford).

Bass, G.F.

1973 Cape Gelidonya and Bronze Age Maritime Trade, in H.A.Hoffner, Jr. (ed.), Orient and Occident (Neukirchen), 29-37.

Bienkowski, P.A.

1982 Some Remarks on the Practice of Cremation in the Levant, Levant XIV, 80-9.

Bietak, M.

1981 Avaris and Piramesse: Archaeological Exploration in the Eastern Nile Delta, Mortimer Wheeler Archaeological Lecture 1979 (London - reprinted from Proceedings of the British Academy LXV, 1979).

Bimson, J.J.

1978 Redating the Exodus and Conquest (Sheffield: Journal for the Study of the Old Testament - Supplement Series 5).

Biran, A.

1968 Tel Dan, RB 75, 379-81.

Bliss, F.J. and MacAlister, R.A.S.

1902 Excavations in Palestine, 1898-1900 (London).

Bottero, J.

1975 Ḫabiru, in D.O.Edzard (ed.), Reallexikon der Assyriologie Bd.4 (Berlin/New York), 14-27.

Braidwood, R.J. and Braidwood, L.S.

1960 Excavations in the Plain of Antioch I: The Earlier Assemblages, Phases A-J (Chicago).

Braidwood, R.J. and Howe, B.

1960 Prehistoric Investigations in Iraqi Kurdistan (Chicago).

Breasted, J.H.

1906 Ancient Records of Egypt: Historical Documents Vol.II - The Eighteenth Dynasty (Chicago).

Carre Gates, M-H.

1981 Alalakh Levels VI and V: A Chronological Reassessment (Malibu: Syro-Mesopotamian Studies 4:2).

Catling, H.W.

1975 Cyprus in the Late Bronze Age, CAH II:2, 188-216.

Catling, H.W., Jones, R.E. and Millett, A.

1978 Composition and Provenance Problems in LBA Pottery, RDAC, 70-90.

Chambers, A.A. (ed.)

1953 Treasury of Negro Sprituals (London).

Chandler, J.A.

1977 X-Ray Microanalysis in the Electron Microscope (Vol.5:II in series Practical Methods in Electron Microscopy, Amsterdam).

Cole, D.P.

1965 Middle Bronze IIB Pottery at Shechem (Drew University: unpublished PhD dissertation).

Conder, C.R. and Kitchener, H.H.

1883 The Survey of Western Palestine III (London).

Culican, W.

1966 The First Merchant Venturers: The Ancient Levant in History and Commerce (London).

Dever, W.G.

1977 The Beginning of the Middle Bronze Age in Syria-Palestine, in F.M.Cross (ed.), Magnalia Dei: The Mighty Acts of God (New York), 3-38.

Dever, W.G., Lance, H.D. and Wright, G.E.

1970 Gezer I (Jerusalem).

Dever, W.G., Lance, H.D., Bullard, R.G., Cole, D.P. and Seger, J.D.

1974 Gezer II (Jerusalem).

Dothan, M.

1971 Ashdod II-III (1963-65), Atiqot 9-10.

1976 Akko: Interim Excavation Report - First Season, 1973/4, BASOR 224, 1-48.

Drower, M.S.

1973 Syria c.1550-1400 B.C., CAH II:1, 417-525.

1975 Ugarit, CAH II:2, 130-60.

Duncan, J.G.

1930 Corpus of Dated Palestinian Pottery (London).

Ehrich, R.W. (ed.)

1965 Chronologies in Old World Archaeology (Chicago).

Epstein, C.

1966 Palestinian Bichrome Ware (Leiden),

Faulkner, R.O.

1975 Egypt: From the Inception of the Nineteenth Dynasty to the Death of Ramesses II, CAH II:2, 217-51.

Frandsen, P.J.

1979 Egyptian Imperialism, in M.T.Larsen (ed.), Power and Propaganda: A Symposium on Ancient Empires (Copenhagen), 167-90.

Franken, H.J.

1965 Tell es-Sultan and Old Testament Jericho, Oudtestamentische Studien 14, 189-200.,

1969 Excavations at Tell Deir 'Alla I (Leiden).

1974 In Search of the Jericho Potters (Amsterdam-Oxford).

1976 The Problem of Identification in Biblical Archaeology, PEQ, 3-11.

1978 Pottery from a Middle Bronze Age Tomb near Tell Hadidi on the Euphrates, in P.R.S.Moorey and P.J.Parr (eds.), Archaeology in the Levant: Essays for Kathleen Kenyon (Warminster), 67-75.

Freestone, I.C.

1982 Applications and Potential of Electron Probe Micro-Analysis in Technological and Provenance Investigations of Ancient Ceramics, Archaeometry 24, 99-116.

French, E.

1965 Late Helladic IIIA2 Pottery from Mycenae, ABSA 60, 159-202.

Furumark, A.

1941 The Chronology of Mycenaean Pottery (Stockholm).

Gardiner, Sir A.

1961 Egypt of the Pharaohs (Oxford).

Garstang, J.

1930 Jericho: Sir Charles Marston's Expedition of 1930, PEFQS, 123-32.

1931a The Chronology of Jericho, PEFQS, 105-7.

1931b The Walls of Jericho, PEFQS, 186-96.

1932a Jericho: City and Necropolis, LAAA XIX, 3-22.

1932b " " " LAAA XIX, 35-54.

1933 " " " LAAA XX, 3-42.

1934 " " " LAAA XXI, 99-136.

1935a " " " LAAA XXII, 143-84.

1935b The Fall of Bronze Age Jericho, PEFQS, 61-8.

1936a Jericho: City and Necropolis, LAAA XXIII, 67-76.

1936b The Ruins of Jericho, PEFQS, 170.

1941 Note on the Revised Date of the Middle Building, AJSLL LVIII:4 (reprinted in Garstang and Garstang 1948, 177-80).

Garstang, J. and Garstang, J.B.E.

1948 The Story of Jericho (London).

Georgiou, H.

1979 Relations between Cyprus and the Near East in the Middle and Late Bronze Age, Levant XI, 84-100.

Gittlen, B.M.

1977 Studies in the Late Cypriote Pottery found in Palestine (University of Pennsylvania: unpublished PhD dissertation).

1981 The Cultural and Chronological Implications of the Cypro-Palestinian Trade during the Late Bronze Age, BASOR 241, 49-59.

Goffer, Z.

1980 Archaeological Chemistry (New York).

Goldwasser, O.

1982 The Lachish Hieratic Bowl Once Again, Tel Aviv 9:2, 137-8.

Görg, M.

1979 Tuthmosis III und die Š3ś̌w-Region, JNES 38, 199-202.

Gould, B.

1983 Egyptian and Egyptianising Pottery from Late Bronze and Early Iron Age Contexts in Canaan, in A.L.Kelley (ed.), Papers of the Pottery Workshop - Third International Congress of Egyptology, Toronto, September 1982 (SSEA Monograph Series No.4), 21-4.

Grant, E.

1929 Beth Shemesh (Pennsylvania).

Greenberg, M.

1955 The Ḫab/piru (New Haven, Connecticut).

Gunn, B. and Gardiner, A.H.

1918 New Renderings of Egyptian Texts II: The Expulsion of the Hyksos, JEA 5, 36-56.

Guy, P.L.O. and Engberg, R.M.

1938 Megiddo Tombs (Chicago).

Hachmann, R.

1982 Die Ägyptische Verwaltung in Syrien während der Amarnazeit, ZDPV 98, 17-62.

Hamilton, R.W.

1935 Excavations at Tell Abu Hawam, QDAP IV, 1ff.

Hamilton, W.R., Woolley, A.R. and Bishop, A.C.

1974 Minerals, Rocks and Fossils (London).

Hankey, V.

1967 Mycenaean Pottery in the Middle East: Notes on Finds since 1951, ABSA 62, 107-47.

1972 The Aegean Deposit at El Amarna, in The Mycenaeans in the Eastern Mediterranean (Acts of the International Symposium, Nicosia).

1974 A Late Bronze Age Temple at Amman:I. The Aegean Pottery, Levant VI, 131-59.

Hankey, V. and Warren, P.

1974 The Absolute Chronology of the Aegean Late Bronze Age, Bulletin of the Institute of Classical Studies, London 21, 142-52.

Hayes, W.C.

1971 The Middle Kingdom in Egypt, CAH I:2, 464-531.

1973a Egypt: From the Death of Ammenemes III to Seqenenre II, CAH II:1, 42-76.

1973b Egypt: Internal Affairs from Tuthmosis I to the Death of Amenophis III, CAH II:1, 313-416.

Helck, W.

1961 Urkunden der 18. Dynastie: Übersetzung zu den Heften 17-22 (Berlin).

1962 Die Beziehungen Ägyptens zu Vorderasien im 3. und 2. Jahrtausend V.Chr. (Wiesbaden).

1968/69 Zur Staatlichen Organisation Syriens im Beginn der 18. Dynastie, AfO XXII, 27-9.

Helms, S.W.

1981 Urban Conservatism at Jericho (Tell es-Sultan), paper given at the First International Symposium on the Antiquity of Palestine, Aleppo University, Syria, 19-24 September 1981 (cf Shawqi Shaath, ed., The First International Symposium on Palestine Antiquities [Alesco Abstracts 1981], 9).

Heltzer, M.

1978 Goods, Prices and the Organisation of Trade in Ugarit (Wiesbaden).

1979 Royal Economy in Ancient Ugarit, in E.Lipinski (ed.), State and Temple Economy in the Ancient Near East (Leuven), 459-96.

Henschel-Simon, E.

1938 The 'Toggle Pins' in the Palestine Archaeological Museum, QDAP VI, 169-90.

Hodges, H.W.M.

1963 The Examination of Ceramic Materials in Thin Section, in E.Pyddoke (ed.), The Scientist and Archaeology (London), 101-10.

1968 Artifacts (London).

Hulthén, B.

1974 On Documentation of Pottery (Acta Archaeologica Lundensia, Series in 8o Minore: No.3. Sweden).

James, T.G.H.

1973 Egypt: From the Expulsion of the Hyksos to Amenophis I, CAH II:1, 289-312.

Kaplan, M.F., Harbottle, G. and Sayre, E.V.

1982 Multi-Disciplinary Analysis of Tell el-Yahudiyeh Ware, Archaeometry 24:2, 127-42.

Karageorghis, V.

1982 Cyprus: From the Stone Age to the Romans (London).

Kelso, J.L. and Thorley, J.P.

1943 The Potter's Technique at Tell Beit Mirsim, particularly in Stratum A, AASOR XXI-XXII, 86ff.

Kemp, B.J.

1978 Imperialism and Empire in New Kingdom Egypt (c.1575-1087 B.C.), in P.D.A.Garnsey and C.R.Whittaker (eds.), Imperialism in the Ancient World (Cambridge), 7-57.

1982 Old Kingdom, Middle Kingdom and Second Intermediate Period in Egypt, in J.Desmond Clark (ed.), The Cambridge History of Africa Vol.I: From the Earliest Times to c.500 B.C. (Cambridge), 658-769.

Kempinski, A.

1974 Tell el-'Ajjul - Beth-Aglayim or Sharuhen?, IEJ 24, 145-52.

Kenyon, K.M.

1951 Some Notes on the History of Jericho in the Second Millennium B.C., PEQ, 101-38.

1952a Excavations at Jericho, 1952: Interim Report, PEQ, 4-6.

1952b Excavations at Jericho, 1952, PEQ, 62-82.

1953 " " 1953, PEQ, 81-96.

1954 " " 1954, PEQ, 45-63.

1955 " " 1955, PEQ, 108-17.

1956 " " 1956, PEQ, 67-82.

1957a " " 1957, PEQ, 101-7.

1957b Digging Up Jericho (London).

1960a Excavations at Jericho, 1957-58, PEQ, 88-113.

1960b Excavations at Jericho Vol.I: The Tombs Excavated in 1952-4 (London).

1965 Excavations at Jericho Vol.II: The Tombs Excavated in 1955-8 (London).

1970 Archaeology in the Holy Land [3] (London).

1973a Palestine in the Time of the Eighteenth Dynasty, CAH II:1, 526-56.

1973b Review of Gezer I (Dever et al 1970), PEQ, 170-1.

1973c Palestine in the Middle Bronze Age, CAH II:1, 77-116.

1979 Archaeology in the Holy Land [4] (London).

1981 Excavations at Jericho Vol.III: The Architecture and Stratigraphy of the Tell (London).

Kenyon, K.M. and Holland, T.A.

1982 Excavations at Jericho Vol.IV: The Pottery Type Series and Other Finds (London).

1983 Excavations at Jericho Vol.V: The Pottery Phases of the Tell and Other Finds (London).

Khalil, L.A. and Bachmann, H-G.

1981 Evidence of Copper Smelting in Bronze Age Jericho, Journal of the Historical Metallurgy Society 15:2, 103-6.

Kitchen, K.A.

1964 Some New Light on the Asiatic Wars of Ramesses II, JEA 50, 47-70.

1969 Interrelations of Egypt and Syria, in M.Liverani (ed.), La Siria Nel Tardo Bronzo (Rome) 77-95.

Klengel, H.

1981 Historischer Kommentar zur Inschrift des Idrimi von Alalaḫ, Ugarit-Forschungen 13, 269-78.

Kochavi, M., Beck, P. and Gophna, R.

1979 Aphek-Antipatris, Tel Poleg, Tel Zeror and Tel Burga: Four Fortified Sites of the Middle Bronze Age IIA in the Sharon Plain, ZDPV 95, 121-65.

Knapp, A.B.

1983 An Alashiyan Merchant at Ugarit, Tel Aviv 10:1, 38-45.

Kuentz, C.

1928 La Bataille de Qadech (Cairo).

Kupper, J-R.

1973 Northern Mesopotamia and Syria, CAH II:1, 1-41.

Lapp, P.W.

1961 Review of Jericho I (Kenyon 1960b), AJA 65, 69-70.

1965 Review of The Bronze Age Cemetery at Gibeon (Pritchard 1963), AJA 69, 180-1.

Leonard, A.

1981 Considerations of Morphological Variation in the Mycenaean Pottery from the South-eastern Mediterranean, BASOR 241, 87-101.

Linder, E.

1981 Ugarit: A Canaanite Thalassocracy, in G.D.Young (ed.), Ugarit in Retrospect (Indiana), 31-42.

Lipinski, E.

1977 An Ugaritic Letter to Amenophis III Concerning Trade with Alashiya, Iraq 39, 213-17.

Liverani, M.

1979 Three Amarna Essays (Sources and Monographs: Monographs on the Ancient Near East Vol.I, fascicle 5, Malibu).

Loud, G.

1948 Megiddo II (Chicago).

MacDonald, E., Starkey, J.L. and Harding, L.

1932 Beth-Pelet II (London).

Malamat, A.

1960 Hazor, The Head of All Those Kingdoms, JBL 79, 12ff.

1970 Northern Canaan and the Mari Texts, in Sanders 1970, 164-77.

1971a Syro-Palestinian Destinations in a Mari Tin Inventory, IEJ 21, 31-8.

1971b The Egyptian Decline in Canaan and the Sea-Peoples, in B.Mazar (ed.), The World History of the Jewish People Vol.III: Judges (London), 23-38.

1982 'Silver, Gold and Precious Stones from Hazor' - Trade and Trouble in a New Mari Document, Journal of Jewish Studies XXXIII, 71-9.

Martin, G.T.

1978 The Tomb Chambers of Horemheb, ILN, January 1978.

Matson, F.R.

1960 The Quantitative Study of Ceramic Materials, in R.F.Heizer and S.F.Cook (eds.), The Application of Quantitative Methods in Archaeology (Chicago), 34-51.

Mazar, B.

1968 The Middle Bronze Age in Palestine, IEJ 18, 65-97.

1970 Canaan in the Patriarchal Age, in B.Mazar (ed.), The World History of the Jewish People Vol.II: Patriarchs (Givatayim, Israel), 169-87.

Mee, C.B.

1982 Rhodes in the Bronze Age (Warminster).

Merrillees, R.S.

1962 Bronze Age Spindle Bottles from the Levant, Opuscula Atheniensia 4, 187-96.

1968 The Cypriote Bronze Age Pottery Found in Egypt (Studies in Mediterranean Archaeology Vol.XVIII, Lund, Sweden).

1974 Trade and Transcendence in the Bronze Age Levant (Göteborg).

Millard, A.R.

1973 The Canaanites, in D.J.Wiseman (ed.), Peoples of Old Testament Times (Oxford), 29-52.

Mohammad, M.A-K.

1959 The Administration of Syro-Palestine during the New Kingdom, Annales du Service des Antiquités de l'Égypte LVI, 105-37.

Moorey, P.R.S.

1980 Review of Redating the Exodus and Conquest (Bimson 1978), JTS N.S.31, 111-13.

Muhly, J.D.

1970 Homer and the Phoenicians: The Relations between Greece and the Near East in the Late Bronze and Early Iron Ages, Berytus 19, 19-64.

Na'aman, N.

1981 Economic Aspects of the Egyptian Occupation of Canaan, IEJ 31, 172-85.

1984 Topographical and Historical Considerations of Amenhotep II's Campaigns to Canaan, Eretz-Israel 17, 257-62.

Nicolaou, K.

1982 The Mycenaeans in the East, in A.Hadidi (ed.), Studies in the History and Archaeology of Jordan I (Amman, Jordan), 121-6.

Nims, C.F.

1957 A Stele of Penre, Builder of the Ramesseum, MDIK 14, 146-9.

Nordström, H-Å.

1972 Neolithic and A-Group Sites (Scandinavian Joint Expedition to Sudanese Nubia, Vol.3:1, Sweden).

Nougayrol, J.

1955 Le Palais Royal d'Ugarit III (Paris).

Ohata, K.

1970 Tel Zeror III (Tokyo).

Oren, E.D.

1969 Cypriot Imports in LBI Context of Palestine, Opuscula Atheniensia IX, 127-50.

1973 The Northern Cemetery of Bethshan (Leiden).

Orni, E. and Efrat, E.

1964 Geography of Israel (Jerusalem).

Ory, J.

1937 Excavations at Ras el 'Ain II, QDAP 6, 99-120.

Owen, D.I.

1981 Ugarit, Canaan and Egypt: Some New Epigraphic Evidence from Tel Aphek in Israel, in G.D.Young (ed.), Ugarit in Retrospect (Indiana), 49-53.

Parr, P.J.

1968 The Origin of the Rampart Fortifications of MBA Palestine and Syria, ZDPV 84, 18-45.

1973 Review of Kenyon 1973a, PEQ, 119-21.

Peacock, D.P.S.

1970 The Scientific Analysis of Ancient Ceramics: A Review, World Archaeology I, 375-89.

1977 Pottery and Early Commerce (London).

Petrie, W.M.F.

1934 Ancient Gaza IV (London).

1937 Funeral Furniture and Stone Vases (London).

Pintore, F.

1973 La Prassi della Marcia Armata nella Siria Egiziana dell'Età di el-Amarna, Oriens Antiquus 12, 299-318.

Portugali, Y. and Knapp, A.B.

1983 Cyprus and the Aegean: A Spatial Analysis of Interaction in the 17th-15th Centuries B.C., in A.B.Knapp and T.Stech (eds.), Prehistoric Production and Exchange in the Aegean and East Mediterranean (UCLA Institute of Archaeology Monograph 29, Los Angeles).

Posener, G.

1940 Princes et Pays d'Asie et de Nubie - Textes Hiératiques sur des Figurines d'Envoûtement du Moyen Empire (Brussels).

1971 Syria and Palestine c.2160-1780 B.C. - Relations with Egypt, CAH I:2, 532-58.

1982 A New Royal Inscription of the XIIth Dynasty, SSEA Journal XII:1, 7-8.

Price Williams, D.

1975 An Examination of MBAII Typology and Sequence Dating in Palestine with Particular Reference to the Tombs of Jericho and Fara (South) (University of London: PhD thesis).

1977 The Tombs of the Middle Bronze Age II Period from the '500' Cemetery at Tell Fara (South) (Institute of Archaeology, London: Occasional Publication No.1).

Pritchard, J.B.

1963 The Bronze Age Cemetery at Gibeon (Pennsylvania).

1969 Ancient Near Eastern Texts Relating to the Old Testament [3] (Princeton).

1980 The Cemetery at Tell es-Sa'idiyeh, Jordan (University of Pennsylvania).

Rainey, A.F.

1963 Business Agents at Ugarit, IEJ 13, 313-21.

1973 Reflections on the Battle of Qedesh, Ugarit-Forschungen 5, 280-82.

Redford, D.B.

1967 History and Chronology of the Eighteenth Dynasty of Egypt (Near and Middle East Series 3, University of Toronto).

1979 A Gate Inscription from Karnak and Egyptian Involvement in Western Asia during the Early 18th Dynasty, JAOS 99, 270-87.

Ricklefs, R.E.

1980 Ecology [2] (London).

Riesner, R.

1983 Die Mauern von Jericho - Bibelwissenschaft zwischen Fundamentalismus und Kritizismus, Theologisches Beitrage 14, 79-86.

Rowe, A.

1936 A Catalogue of Egyptian Scarabs, Scaraboids, Seals and Amulets in the Palestine Archaeological Museum (Cairo).

Saller, S.J.

1964 The Excavations at Dominus Flevit (Mount Olivet, Jerusalem) Part II: The Jebusite Burial Place (Jerusalem).

Sanders, J.A. (ed.)

1970 Near Eastern Archaeology in the Twentieth Century: Essays in Honor of Nelson Glueck (New York).

Sasson, J.M.

1966 Canaanite Maritime Involvement in the Second Millennium B.C., JAOS 86, 126-38.

Sauer, J.A.

1979 Review of Gezer II (Dever et al 1974), BASOR 233, 71.

Säve-Söderbergh, T.

1952 The 'prw as Vintagers in Egypt, Orientalia Suecana I, 5-14.

Schaeffer, C.F.A.

1948 Stratigraphie Comparée et Chronologie de l'Asie Occidentale (Oxford).

1949 Ugaritica II (Paris).

Schulman, A.R.

1964 Some Observations on the Military Background of the Amarna Period, JARCE 3, 51-69.

Sellin, E. and Watzinger, C.

1913 Jericho: Die Ergebnisse der Ausgrabungen (Leipzig).

Several, M.W.

1972 Reconsidering the Egyptian Empire in Palestine during the Amarna Period, PEQ, 123-33.

Shepard, A.O.

1957 Ceramics for the Archaeologist (Washington).

Simons, J.

1937 Egyptian Topographical Lists Relating to Western Asia (Leiden).

Smith, G.A.

1896 The Historical Geography of the Holy Land (London).

Strommenger, E.

1964 The Art of Mesopotamia (London).

Stubbings, F.

1951 Mycenaean Pottery from the Levant (Cambridge).

Thompson, T.L.

1979 The Settlement of Palestine in the Bronze Age (Wiesbaden).

Tite, M.S.

1972 Methods of Physical Examination in Archaeology (London).

Tite, M.S. and Maniatis, Y.

1975 Examination of Ancient Pottery using the Scanning Electron Microscope, Nature 257, 122-3.

Tubb, J.N.

1977 Review of In Search of the Jericho Potters (Franken 1974), PEQ, 58.

1983 Lachish from Bronze Age to Bible to BM, British Museum Society Bulletin 42, 18-25.

Tufnell, O.

1940 Lachish II: The Fosse Temple (Oxford).

1958 Lachish IV: The Bronze Age (Oxford).

1969 The Pottery from Royal Tombs I-III at Byblos, Berytus 18, 5-33.

1973 The Middle Bronze Age Scarab-Seals from Burials on the Mound at Megiddo, Levant V, 69-82.

Ussishkin, D.

1983 Excavations at Tel Lachish 1978-1983: Second Preliminary Report, Tel Aviv 10:2, 97-175.

Van Beek, G.W.

1969 Hajar bin Ḥumeid - Investigations at a Pre-Islamic Site in South Arabia (Baltimore).

Van Seters, J.

1966 The Hyksos: A New Investigation (New Haven and London).

de Vaux, R.

1951 La Troisième Campagne de Fouilles a Tell el-Far'ah, près Naplouse, RB 58, 393-430, 566-90.

1955 Les Fouilles de Tell el-Far'ah, près Naplouse - Cinquième Campagne, RB 62, 541-89.

1967 Review of Palestinian Bichrome Ware (Epstein 1966), RB 74, 268-71.

1978 The Early History of Israel: To the Exodus and Covenant of Sinai (London).

de Vaux, R. and Stève, A.M.

1947 La Première Campagne de Fouilles a Tell el-Far'ah, près Naplouse, RB 54, 394-433, 573-89.

1948 La Seconde Campagne de Fouilles a Tell el-Far'ah, près Naplouse, RB 55, 544-80.

1949 La Deuxième Campagne de Fouilles a Tell el-Far'ah, près Naplouse, RB 56, 102-38.

Vermeule, E. and Karageorghis, V.

1982 Mycenaean Pictorial Vase Painting (Harvard).

Ward, W.A.

1976 Some Personal Names of the Hyksos Period Rulers and Notes on the Epigraphy of their Scarabs, Ugarit-Forschungen 8, 353-69.

Warren, C.

1869 Notes on the Valley of the Jordan and Excavations at Ain es-Sultan (PEF, London).

Watzinger, C.

1926 Zur Chronologie der Schichten von Jericho, ZDMG 80, 131-6.

Weinstein, J.

1975 Egyptian Relations with Palestine in the Middle Kingdom, BASOR 217, 1-16.

1981 The Egyptian Empire in Palestine: A Reassessment, BASOR 241, 1-28.

Weippert, M.

1971 The Settlement of the Israelite Tribes in Palestine (London).

Weippert, H. and Weippert, M.

1976 Jericho in der Eisenzeit, ZDPV 92, 105-48.

Williams, D.F.

1983 Petrology of Ceramics, in D.R.C.Kempe and A.P.Harvey (eds.), The Petrology of Archaeological Artefacts (Oxford), 301-29.

Wiseman, D.J.

1953 The Alalakh Tablets (London).

Wolf, C.V.

1966 The Location of Gilgal, Biblical Research 9, 42-51.

Woolley, Sir L.

1955 Alalakh: An Account of the Excavations at Tell Atchana in the Hatay, 1937-1949 (Oxford).

Yadin, Y.

1958 Hazor I (Jerusalem).

1960 Hazor II (Jerusalem).

1961 Hazor III-IV: Plates (Jerusalem).

1972 Hazor: The Schweich Lectures 1970 (London).

Yannai-James, A.

Forthcoming Did Mycenaeans and their Ships visit Near Eastern Ports?, in Proceedings of the 5th International Colloquium on Aegean Prehistory, Sheffield 1980.

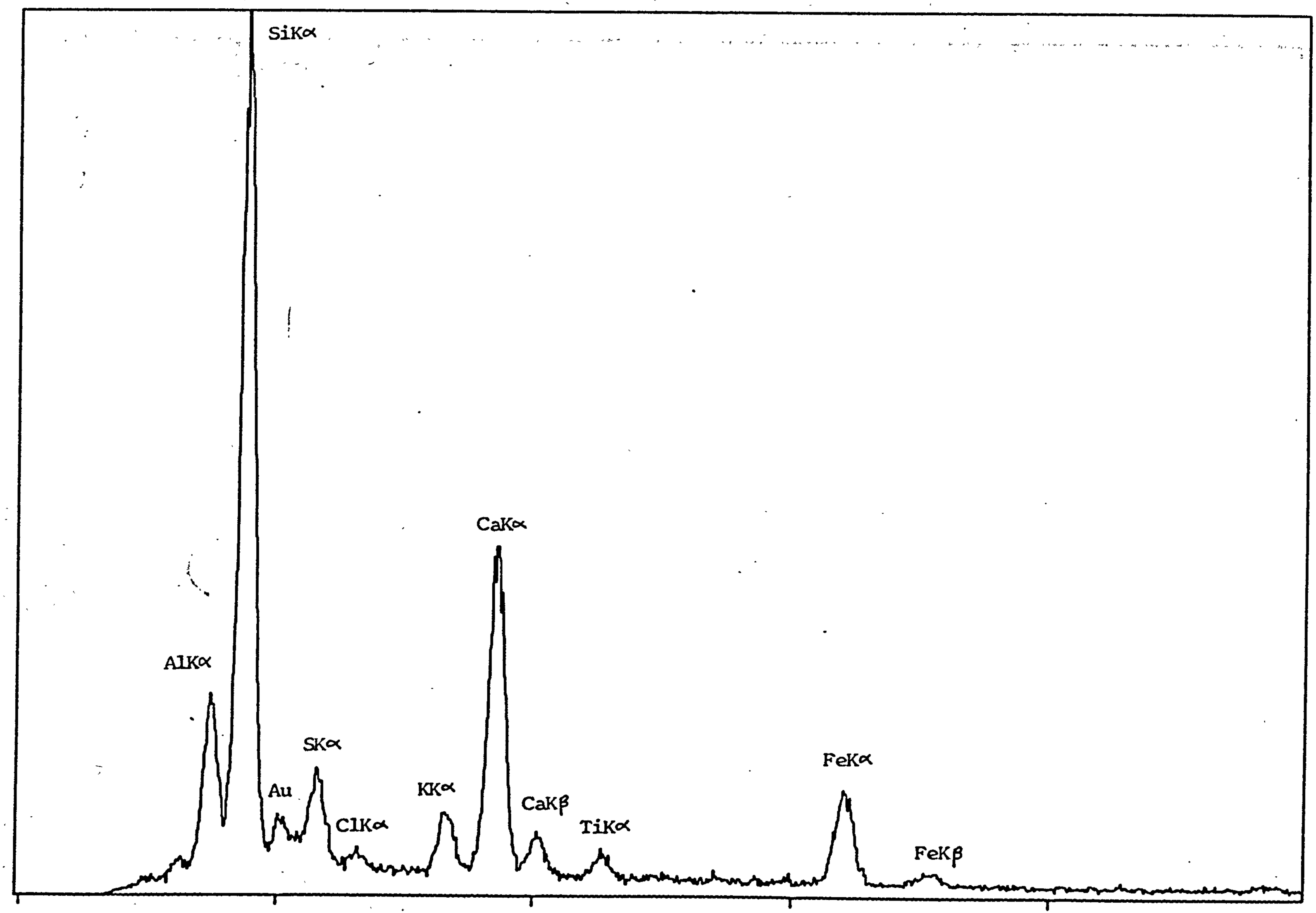


Fig.1. Tomb 5 no.184. Area scan.

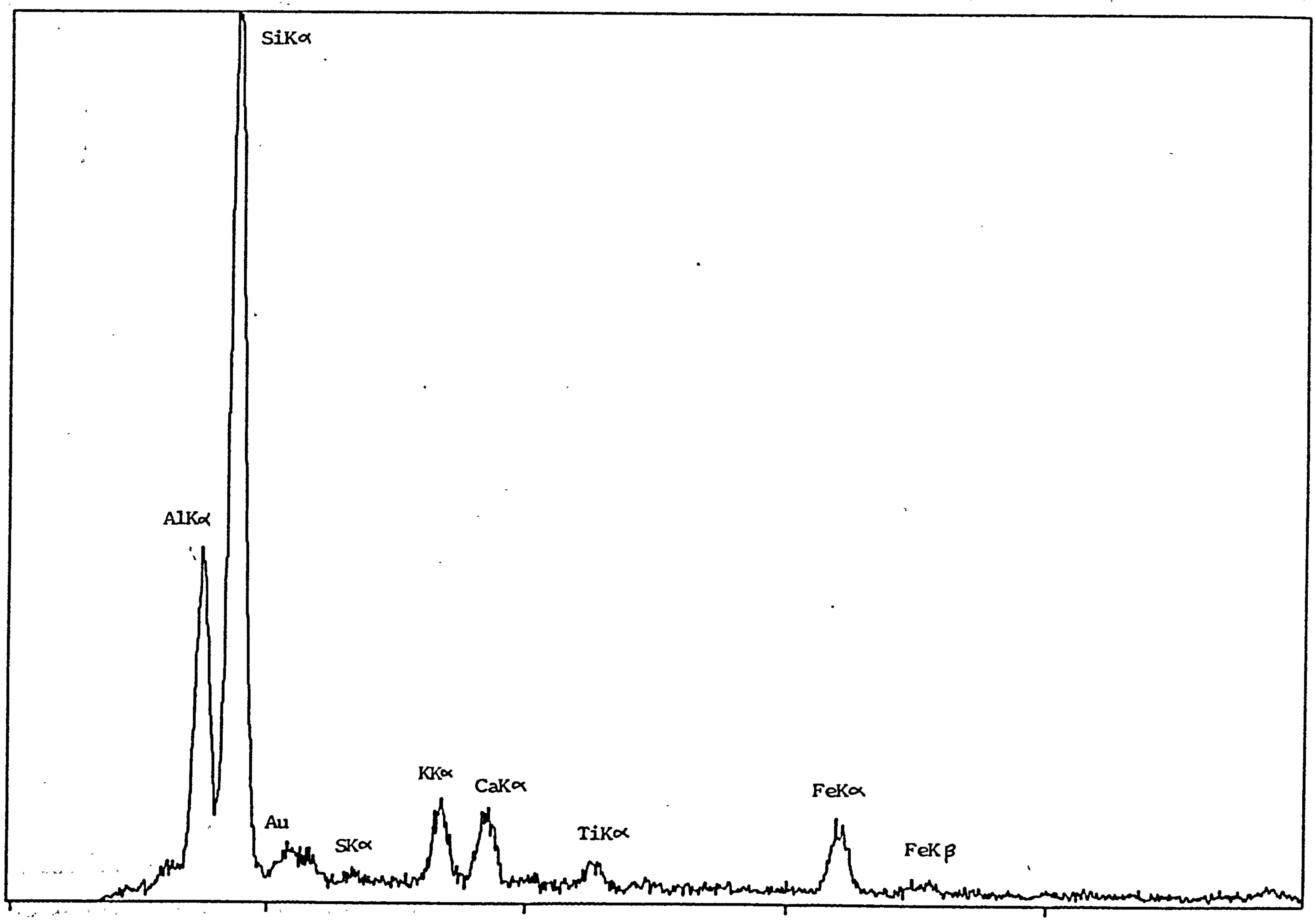


Fig.2. Tomb 5 no.183. Area scan.

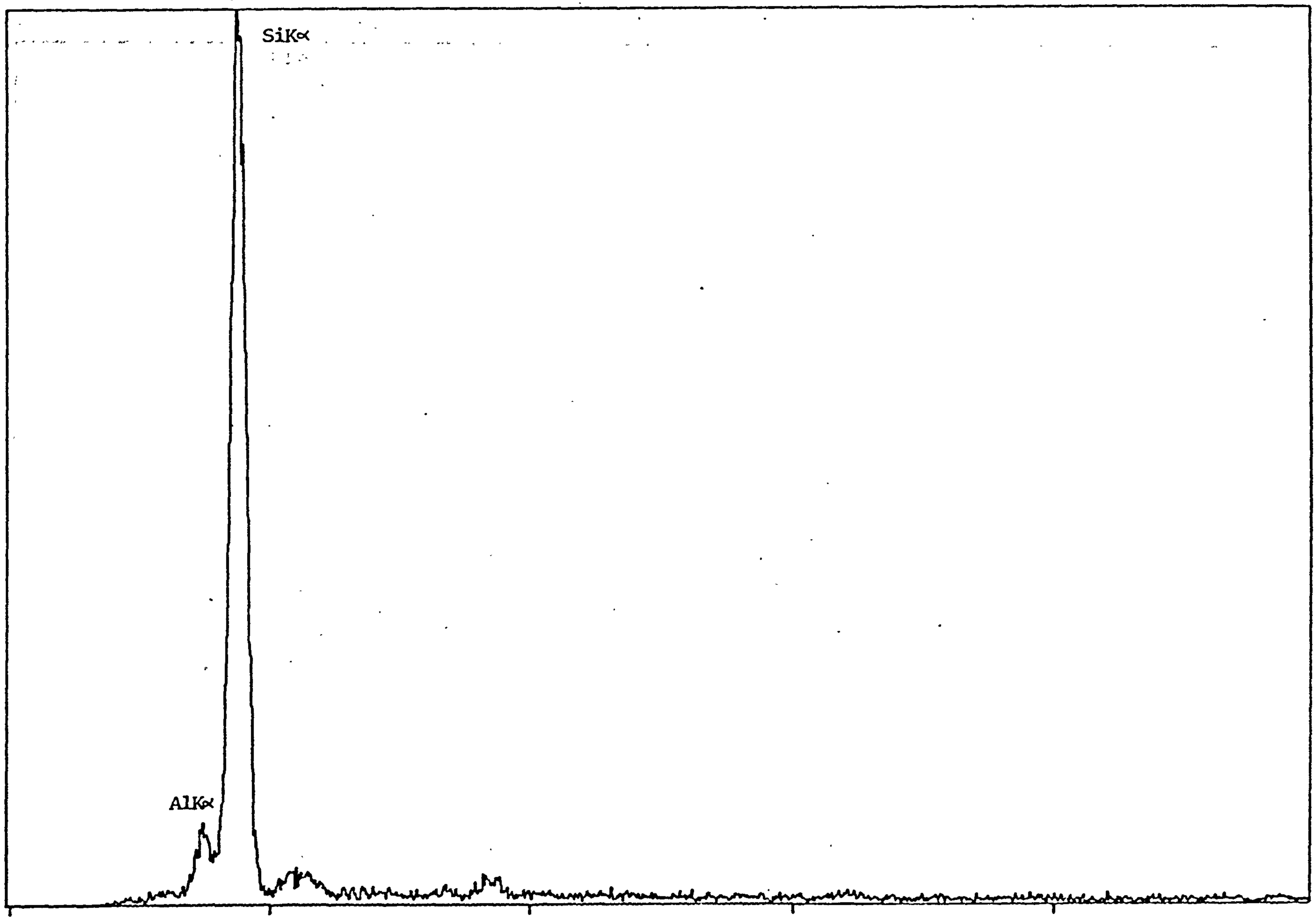


Fig.3. Tomb 5 no.183. Spot scan - flint inclusion.

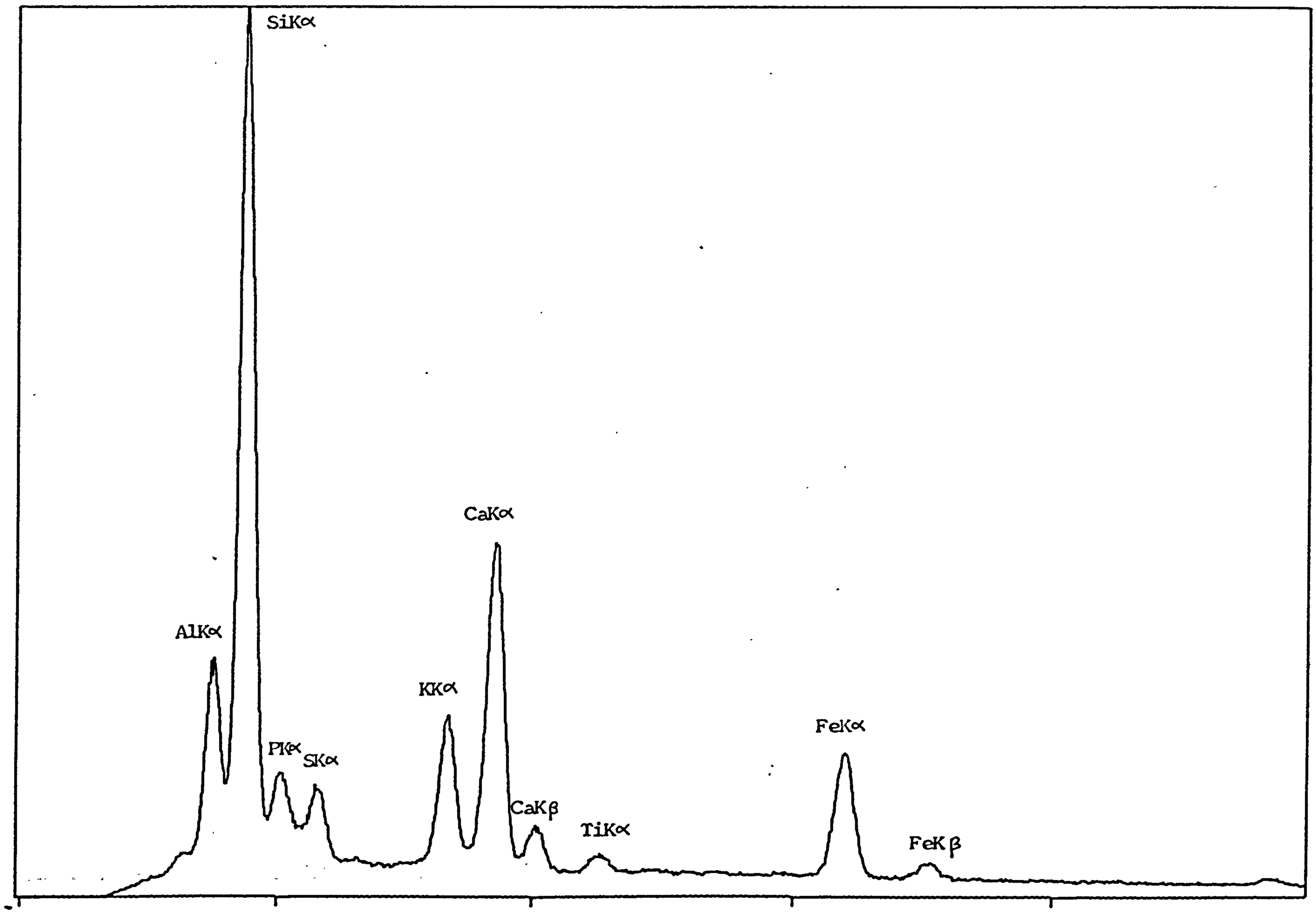


Fig.4. Tomb 5 no.152. Area scan.

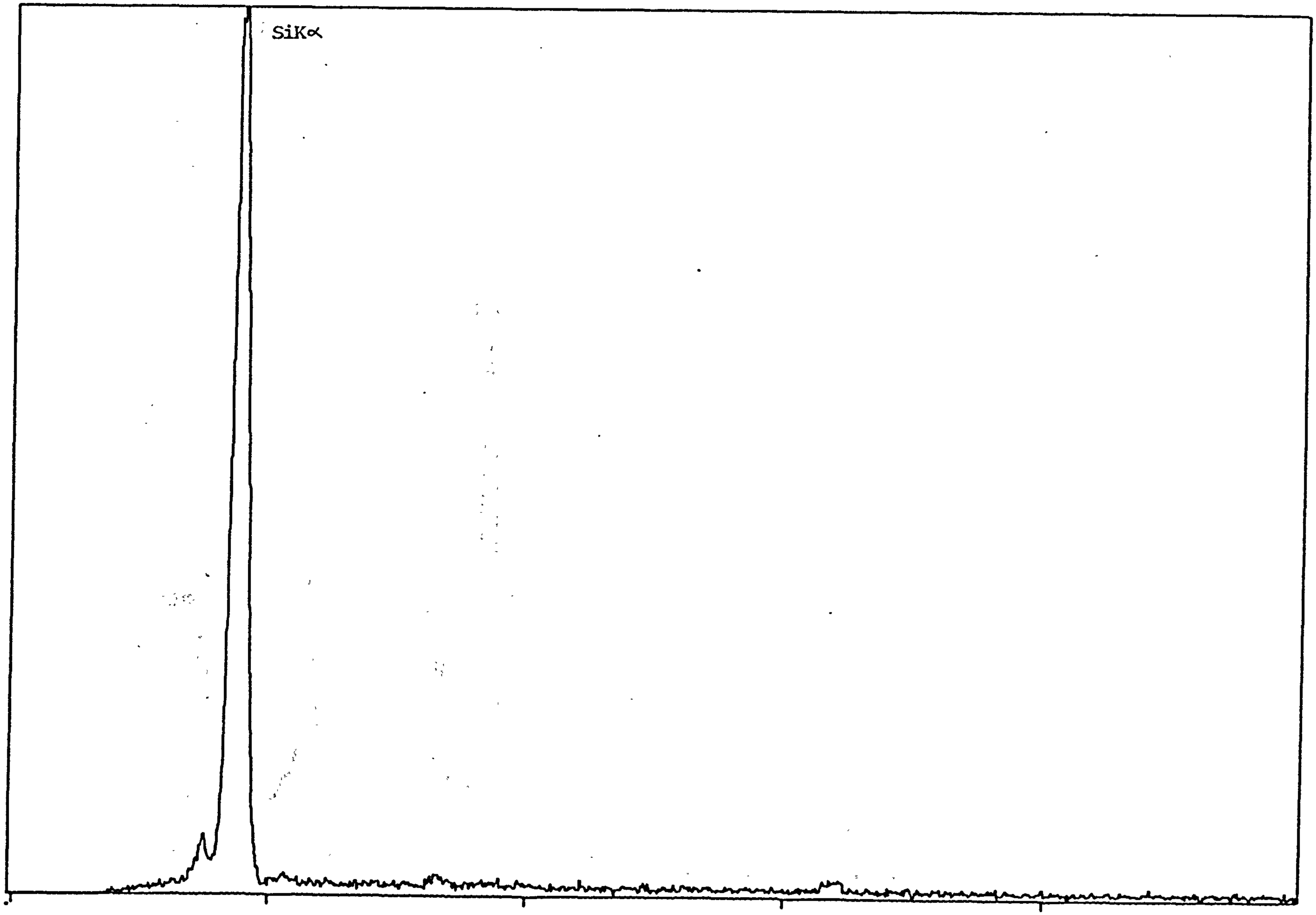


Fig.5. Tomb 5 no.152. Spot scan - natural quartz inclusion.

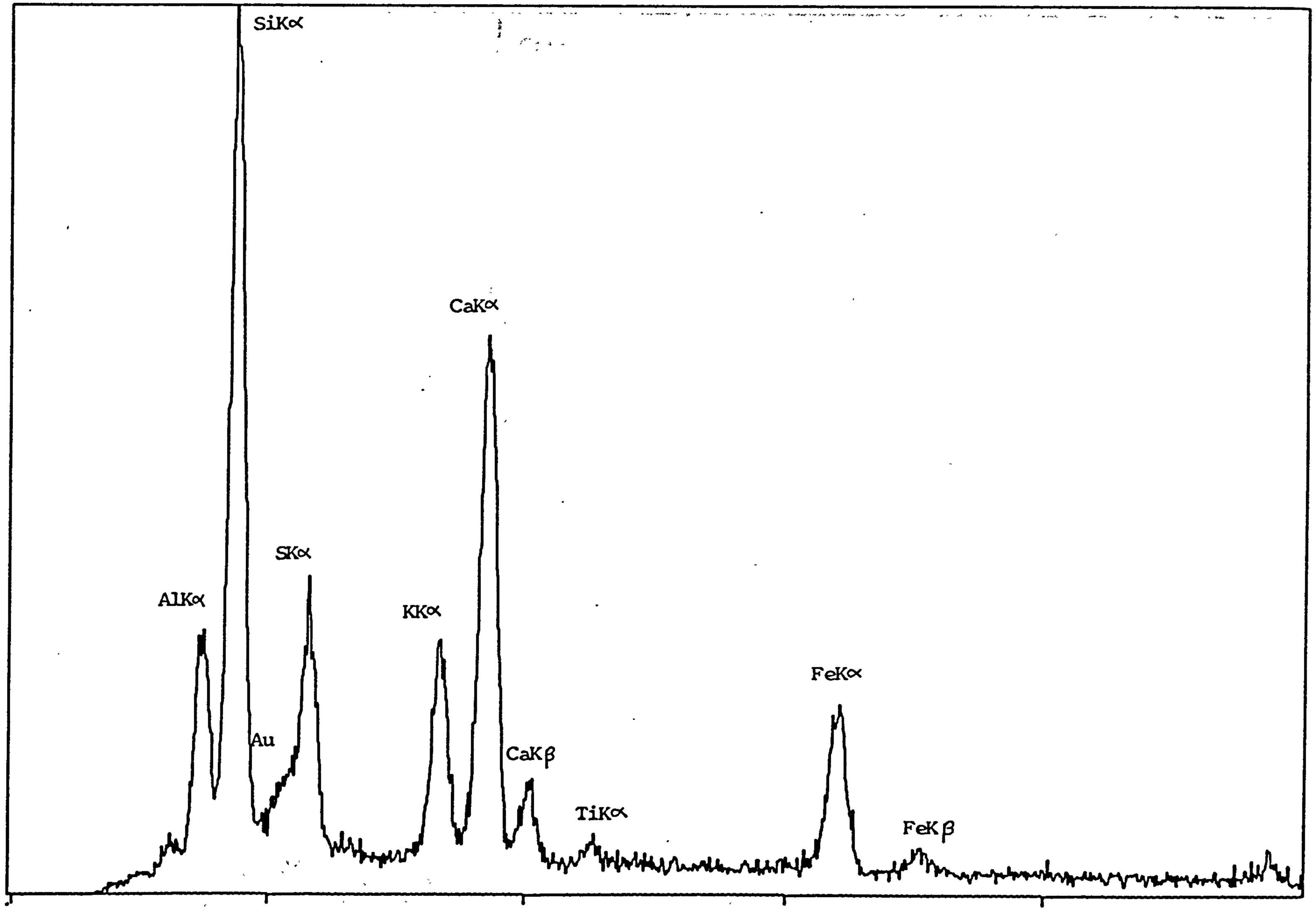


Fig.6. Tomb 5 no.192. Area scan.

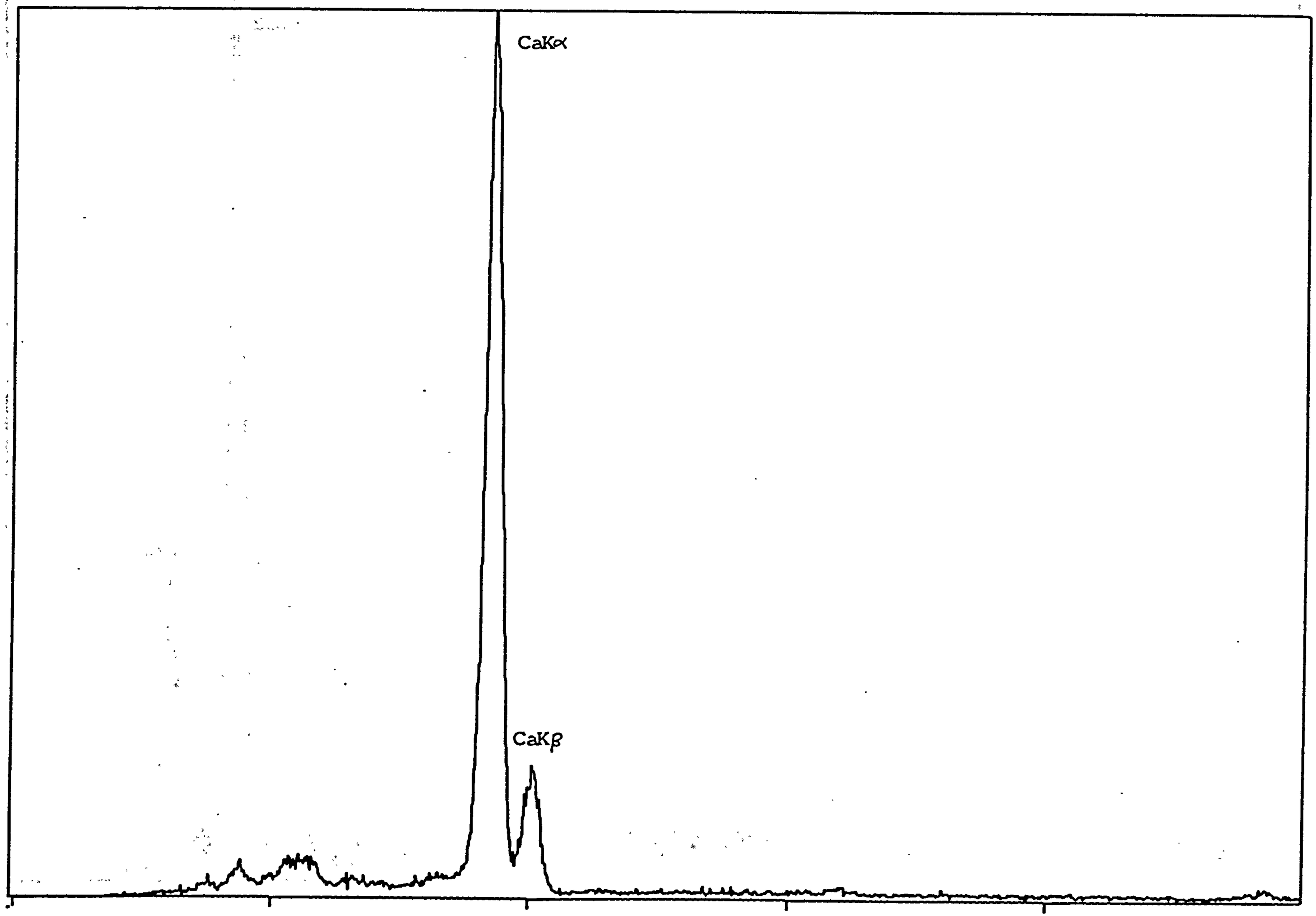


Fig.7. Tomb 5 no.192. Spot scan - limestone inclusion.

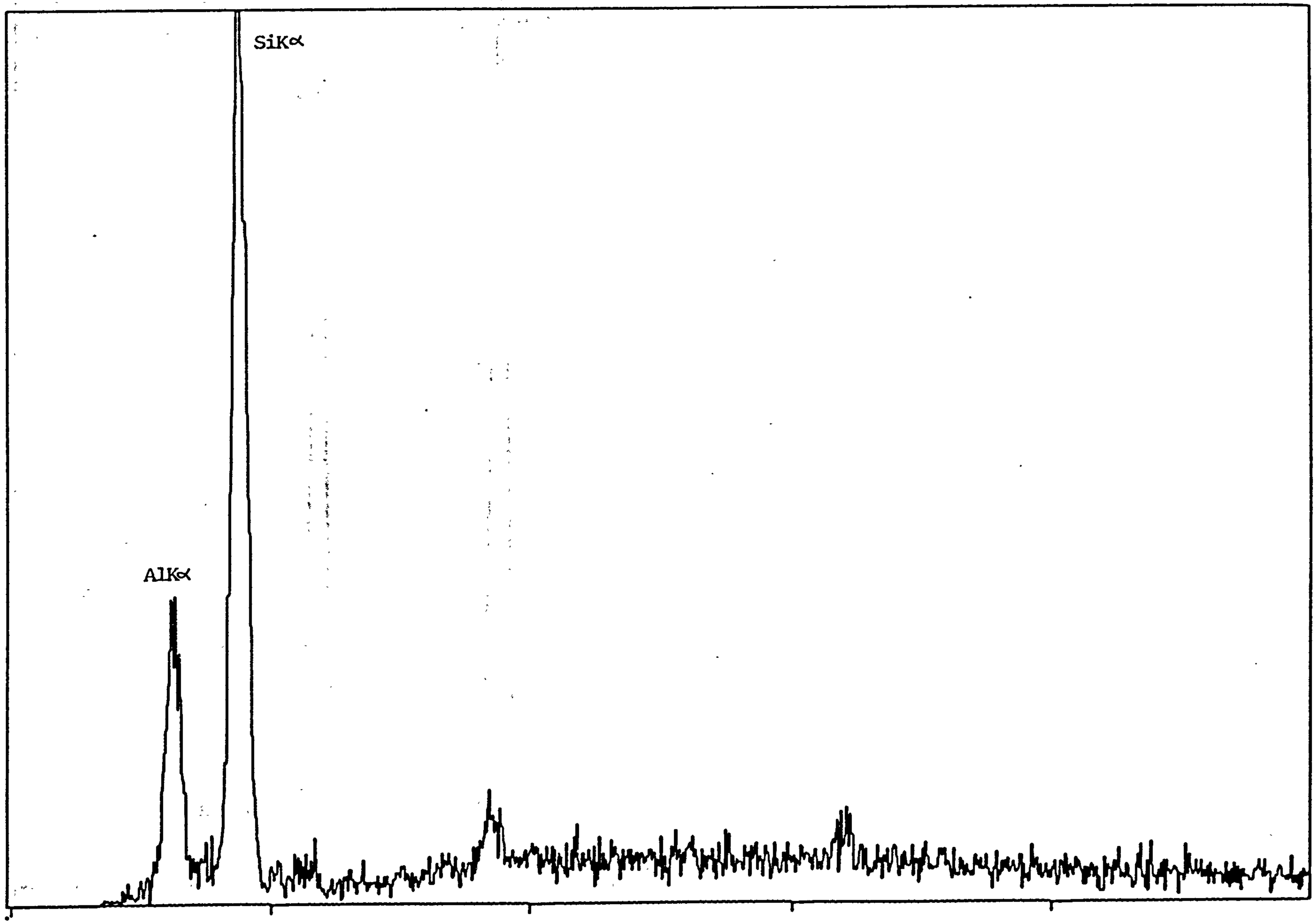


Fig.8. Tomb 5 no.192. Spot scan - quartz or flint inclusion.

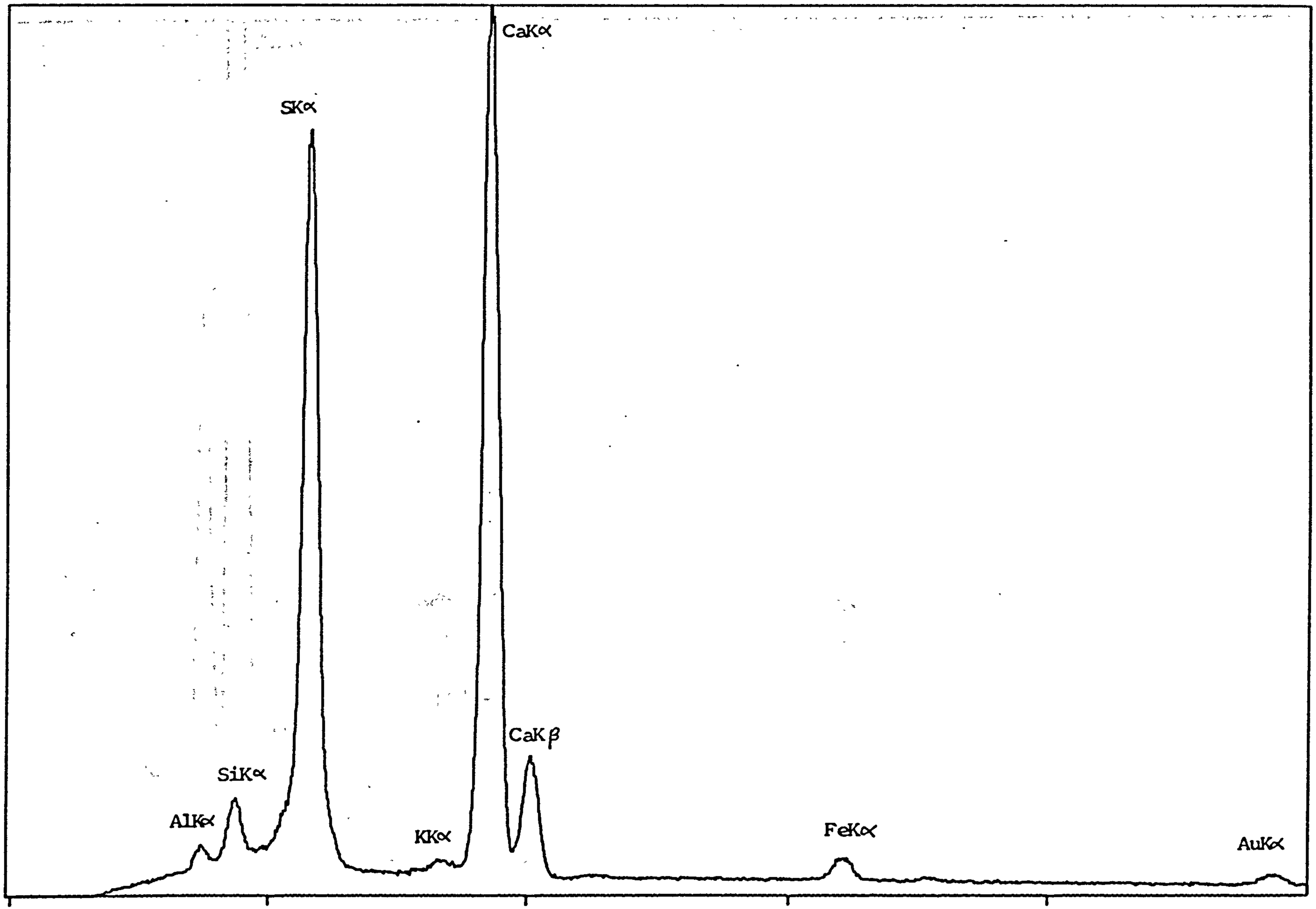


Fig.9. Tomb 5 no.221. Area scan.

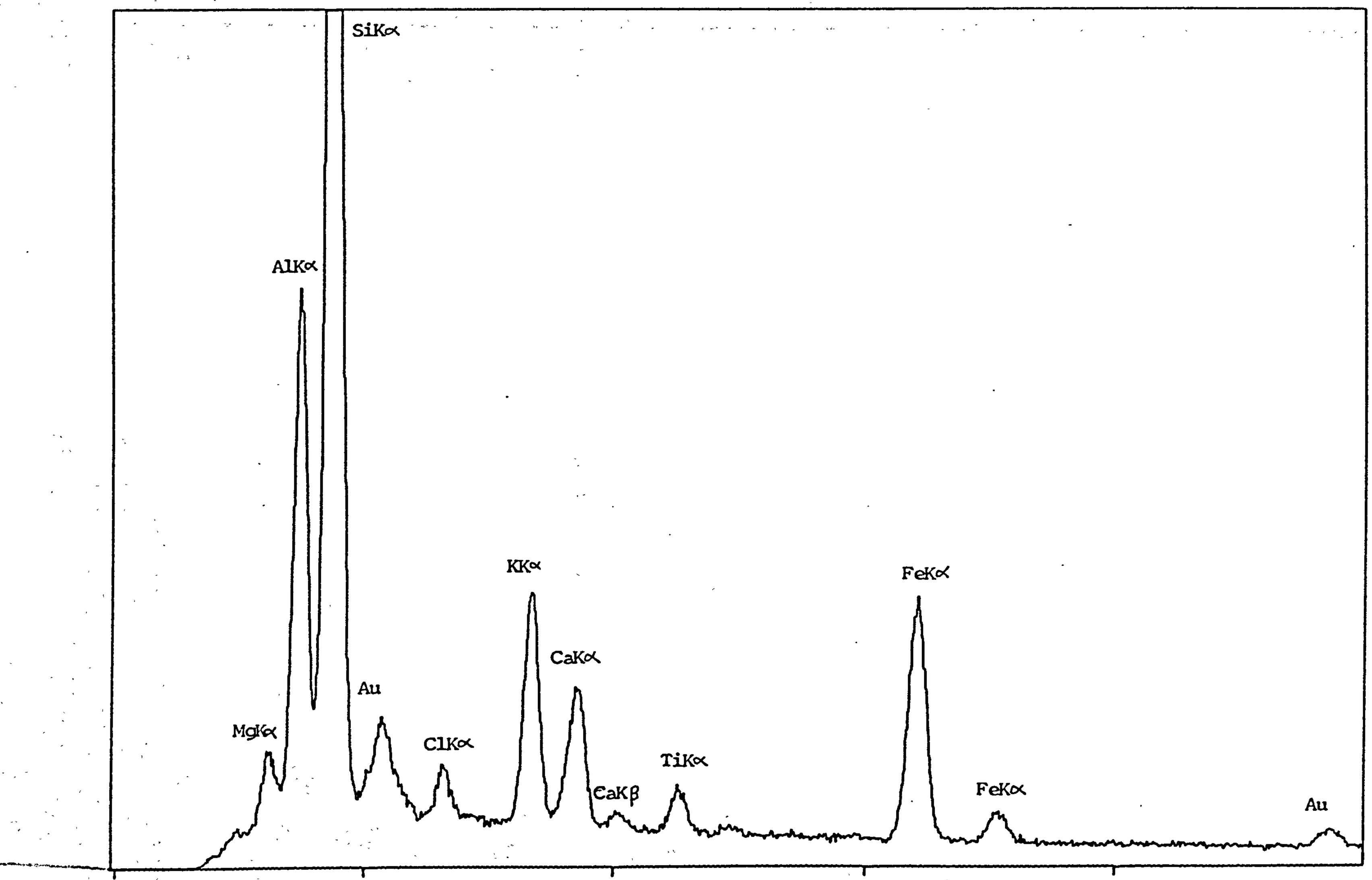


Fig.10. Tomb 5 no.221. Spot scan - grog particle.

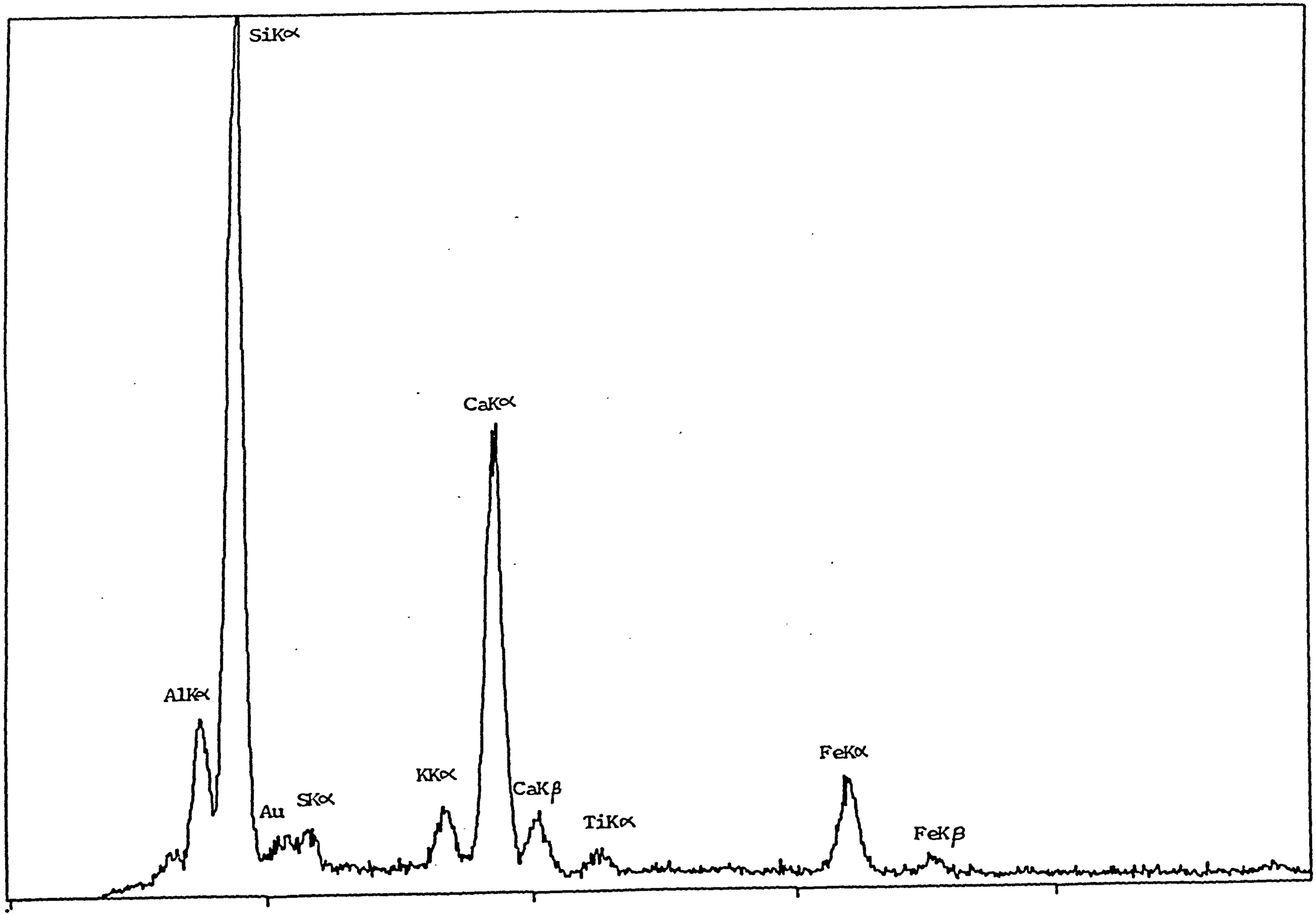


Fig.11. Tomb 4 no.105. Area scan.

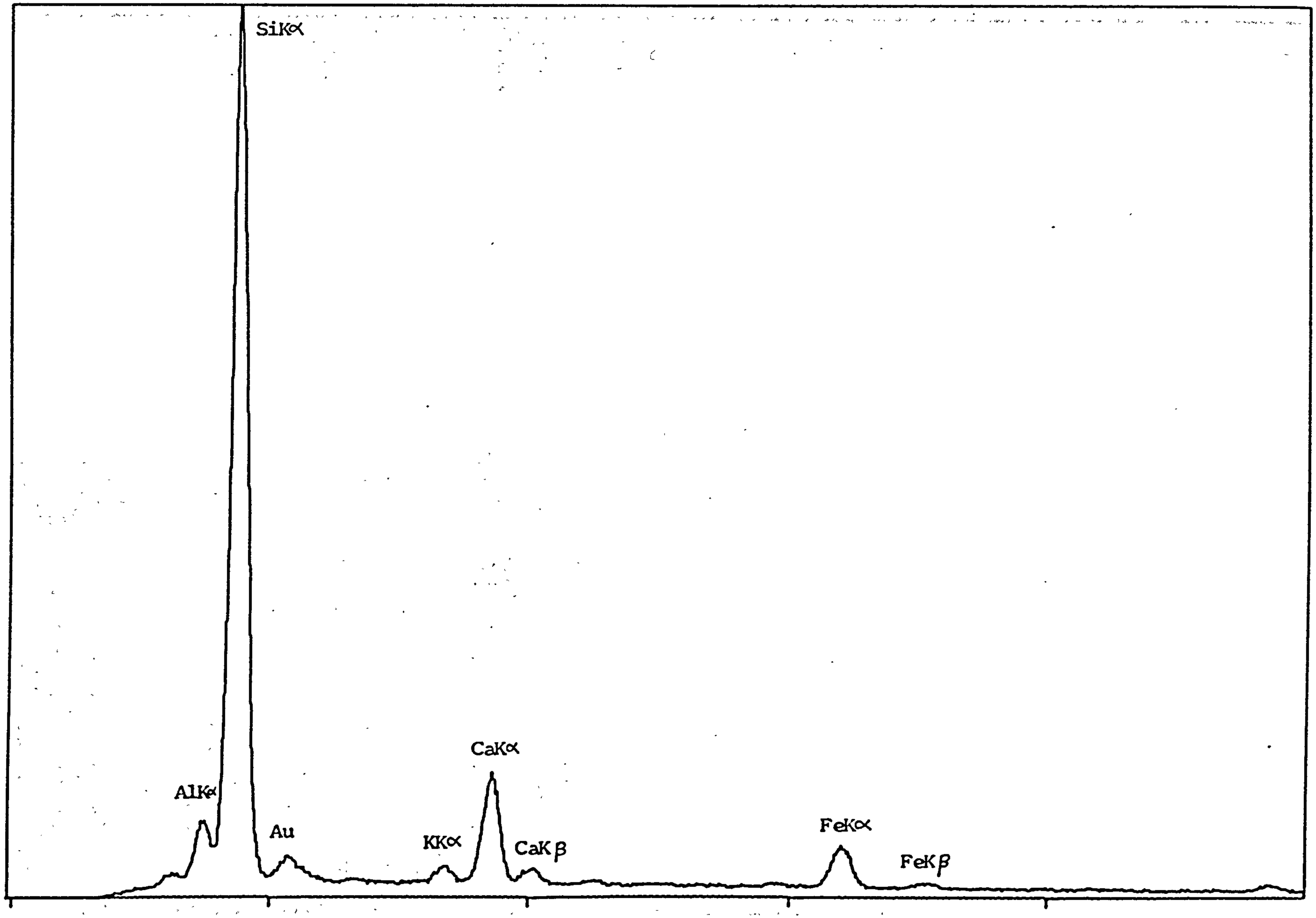


Fig.12. Tomb 4 no.105. Spot scan - straw striation.

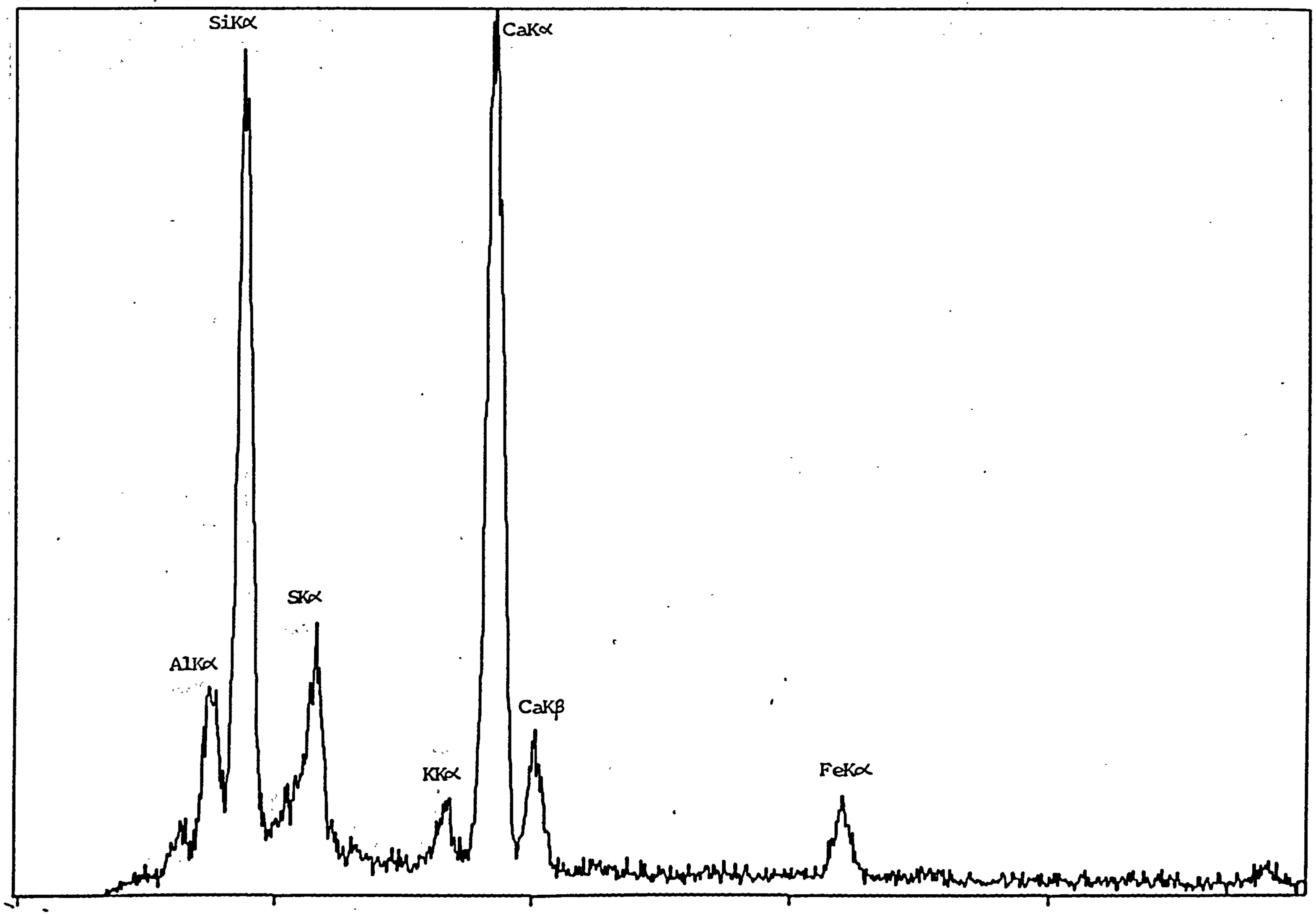


Fig.13. Tomb 4 no.105. Spot scan - straw remnants.

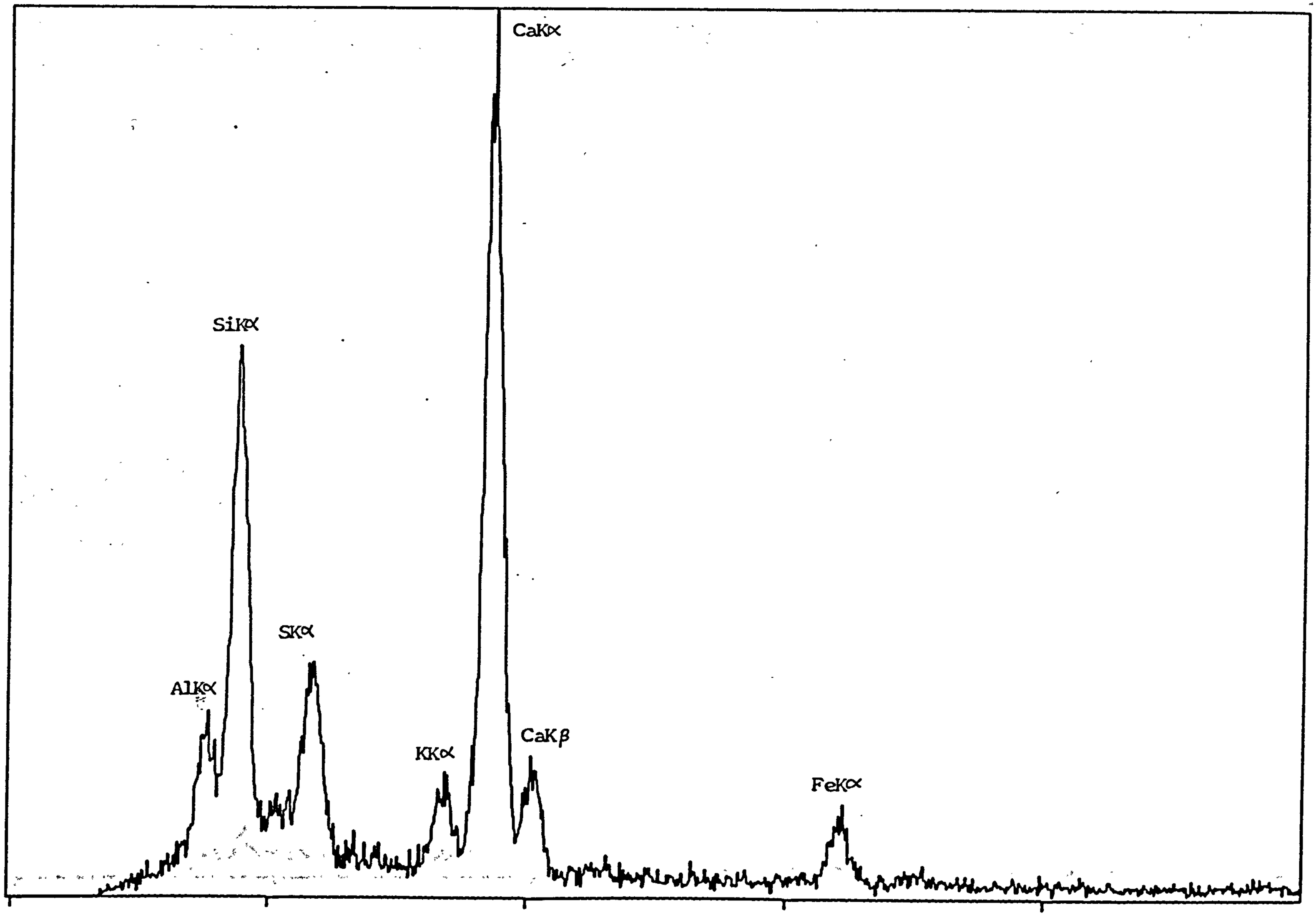


Fig.14. Tomb 5 no.336. Area scan.

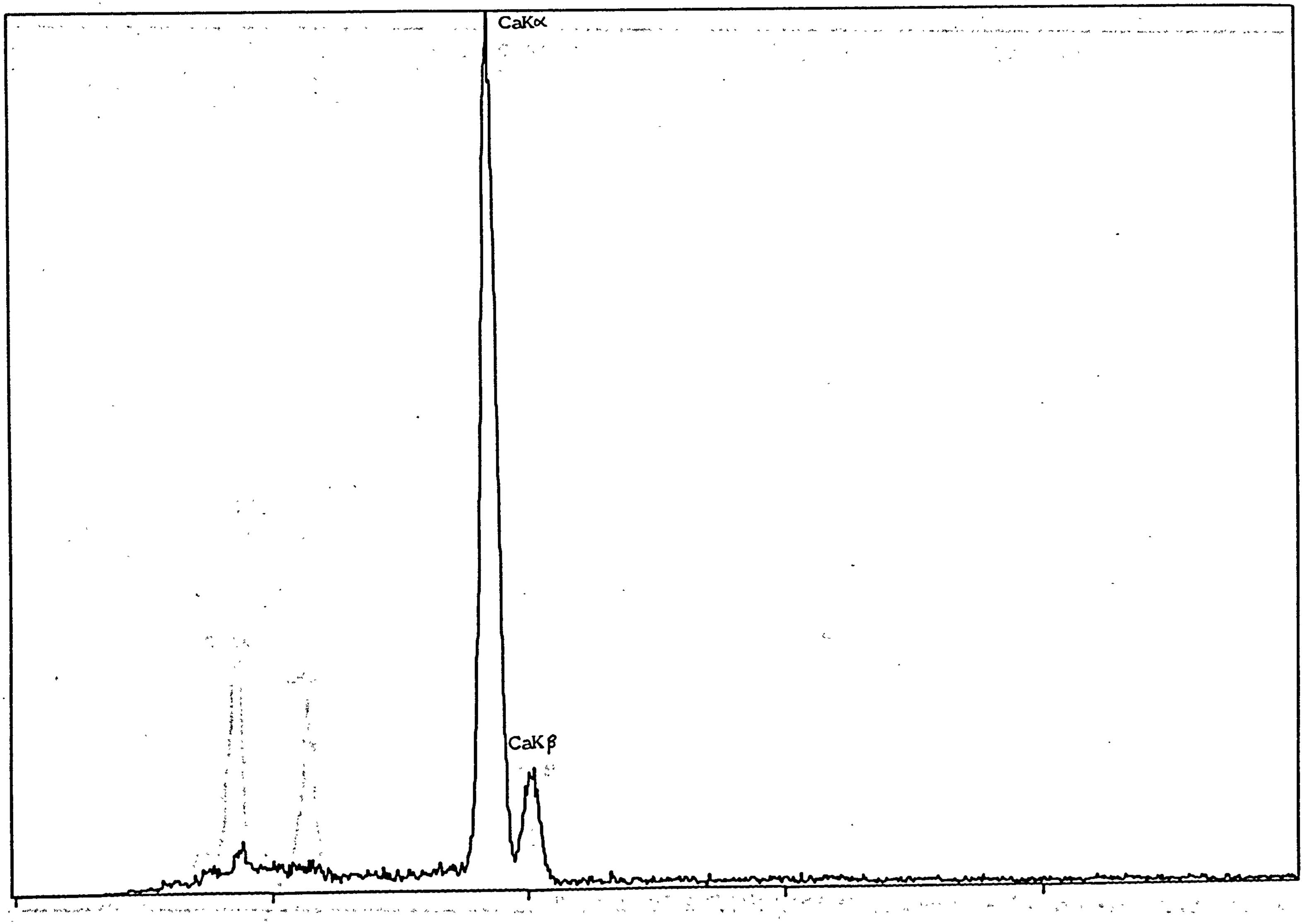


Fig.15. Tomb 5 no.336. Spot scan - limestone inclusion.

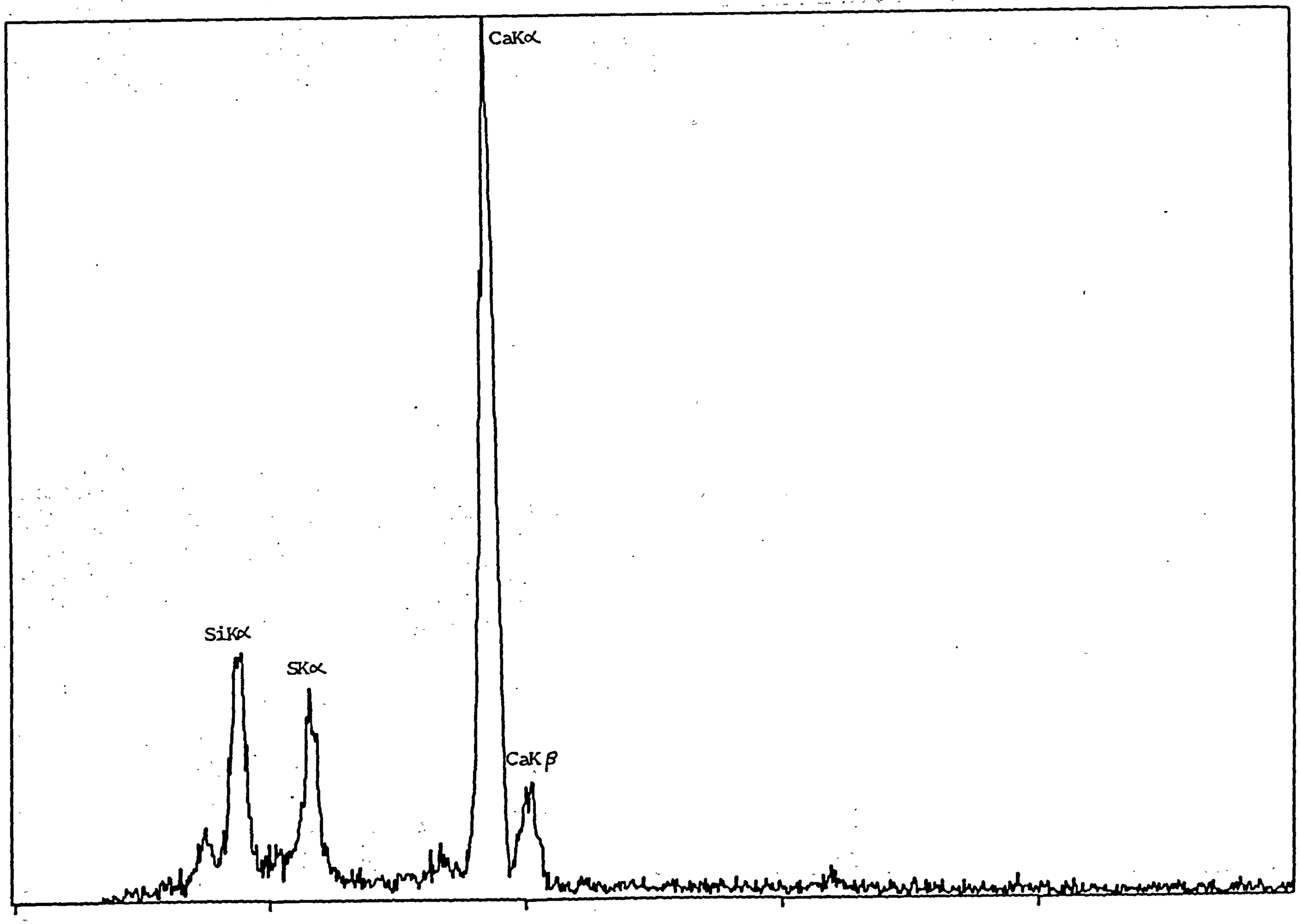


Fig.16. Tomb 5 no.336. Spot scan - gypsum.

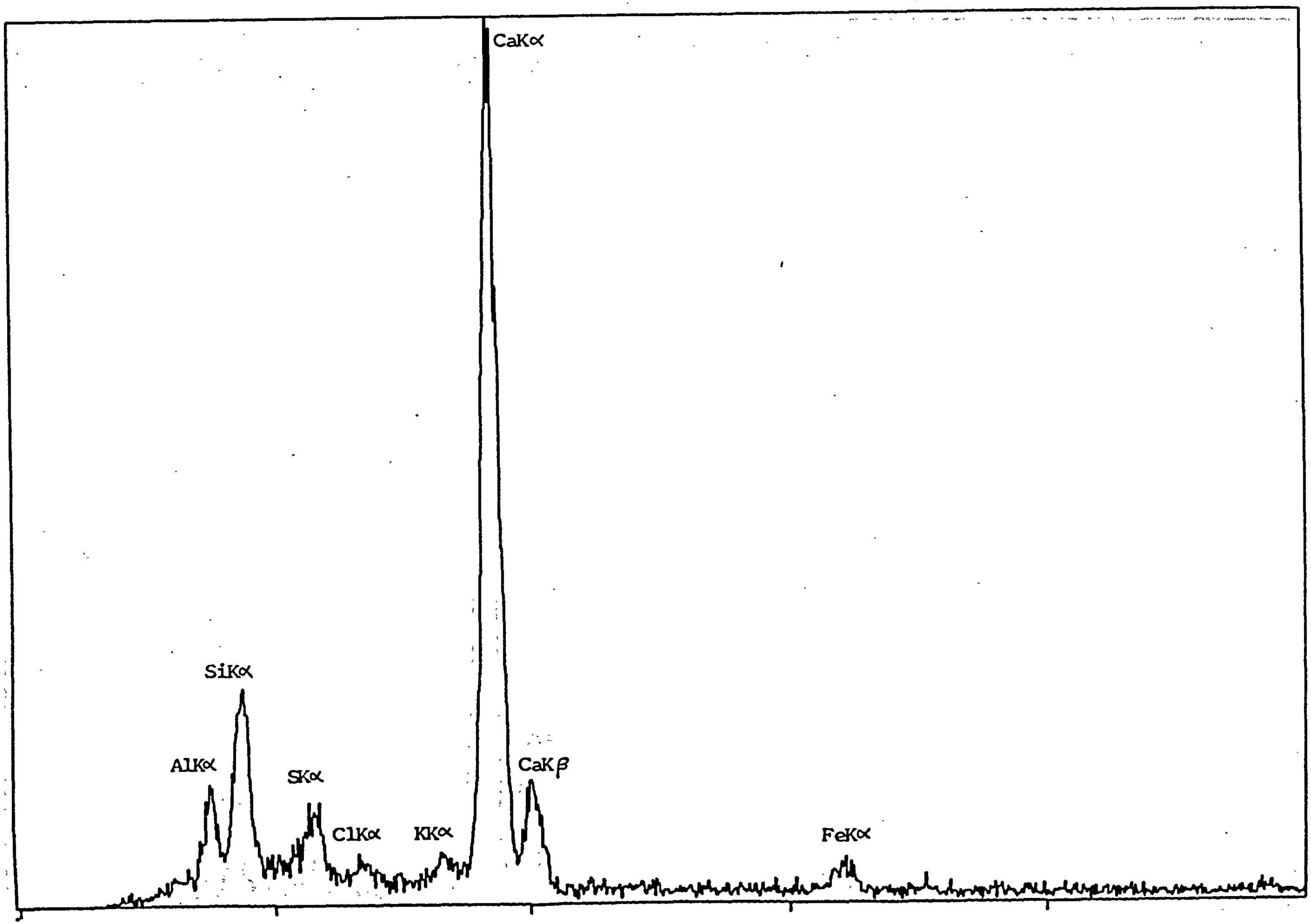


Fig.17. Tomb 5 no.351. Area scan.

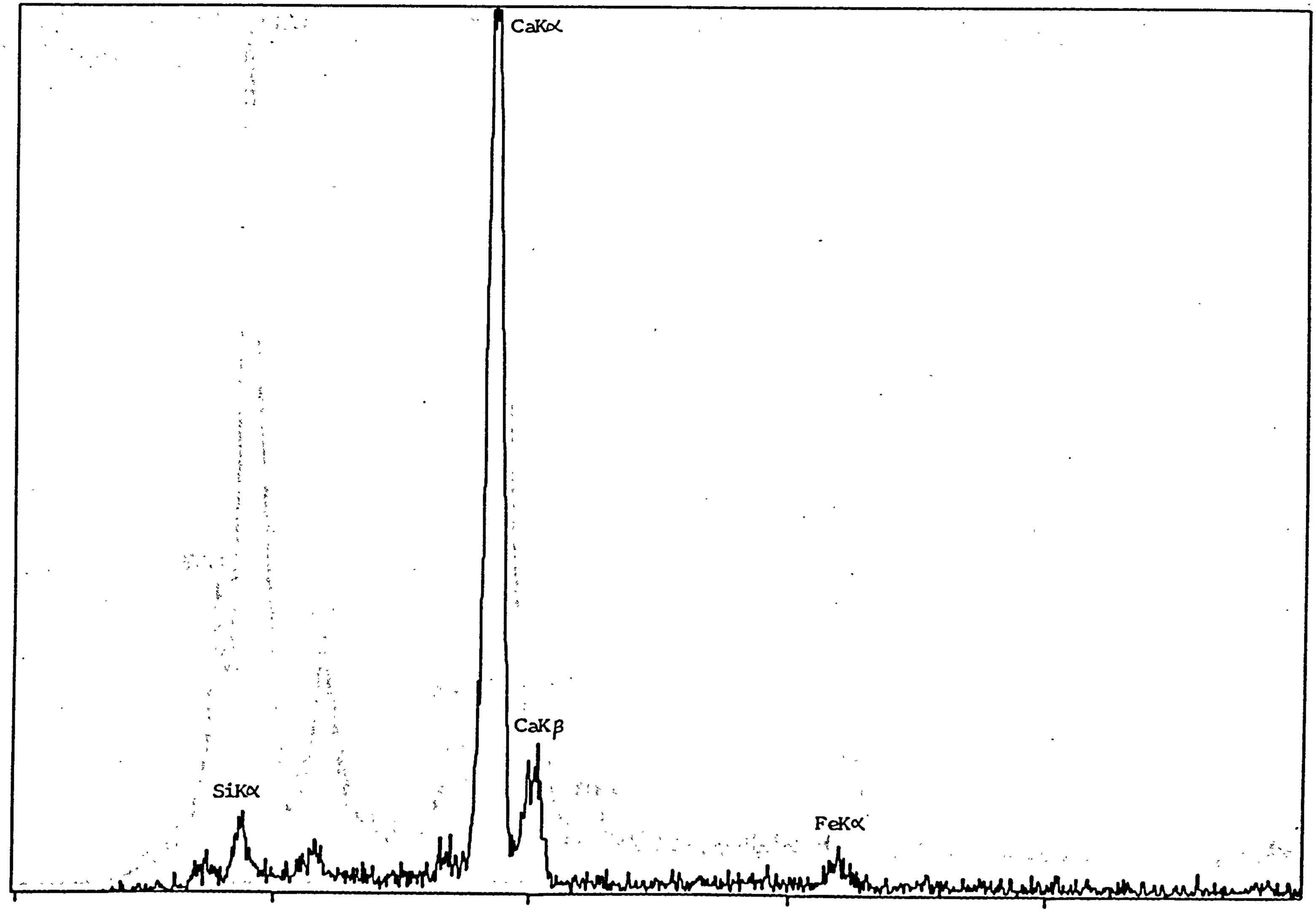


Fig.18. Tomb 5 no.351. Spot scan - desiccated limestone inclusion.

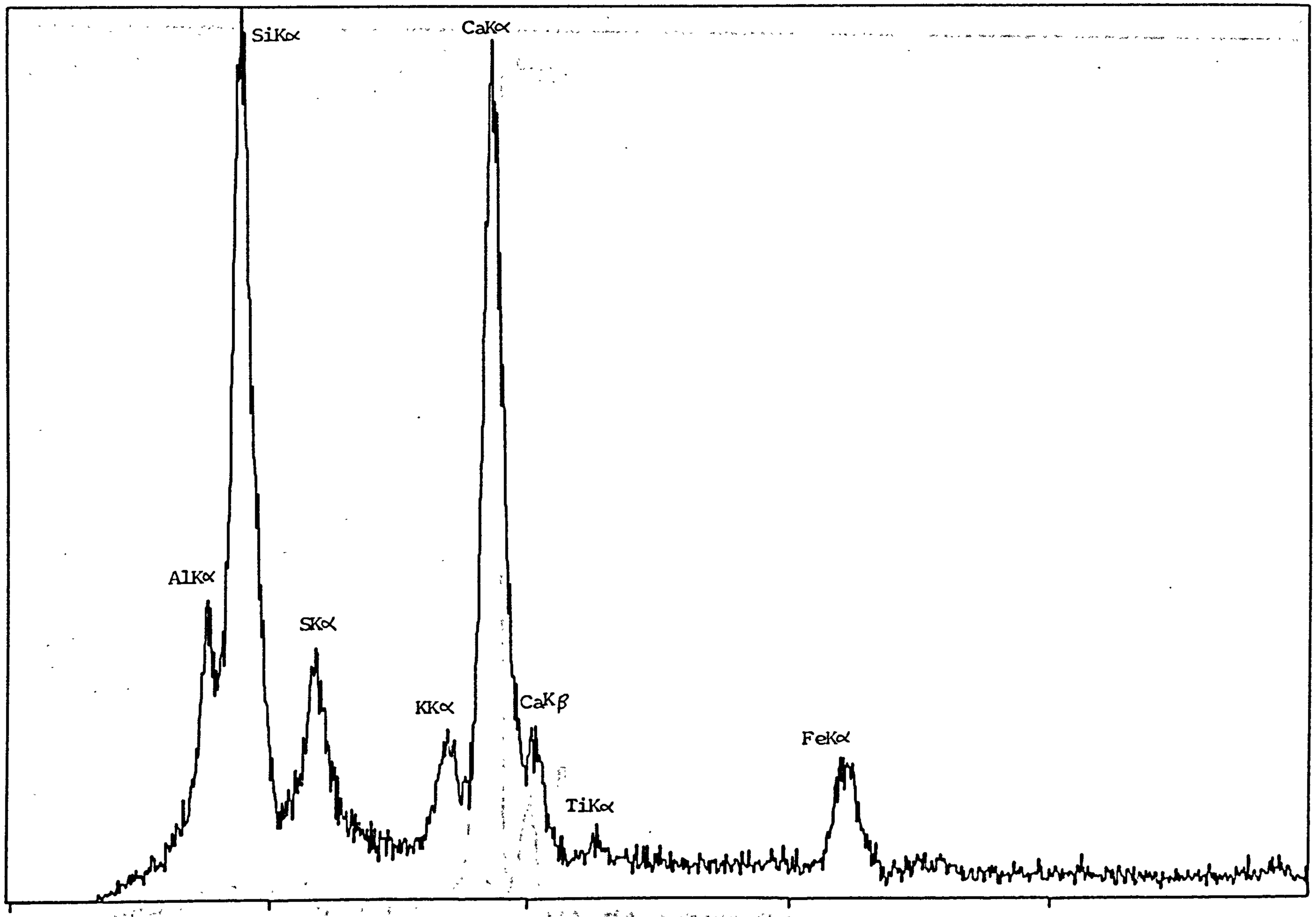


Fig.19. Tomb 5 no.353. Area scan.

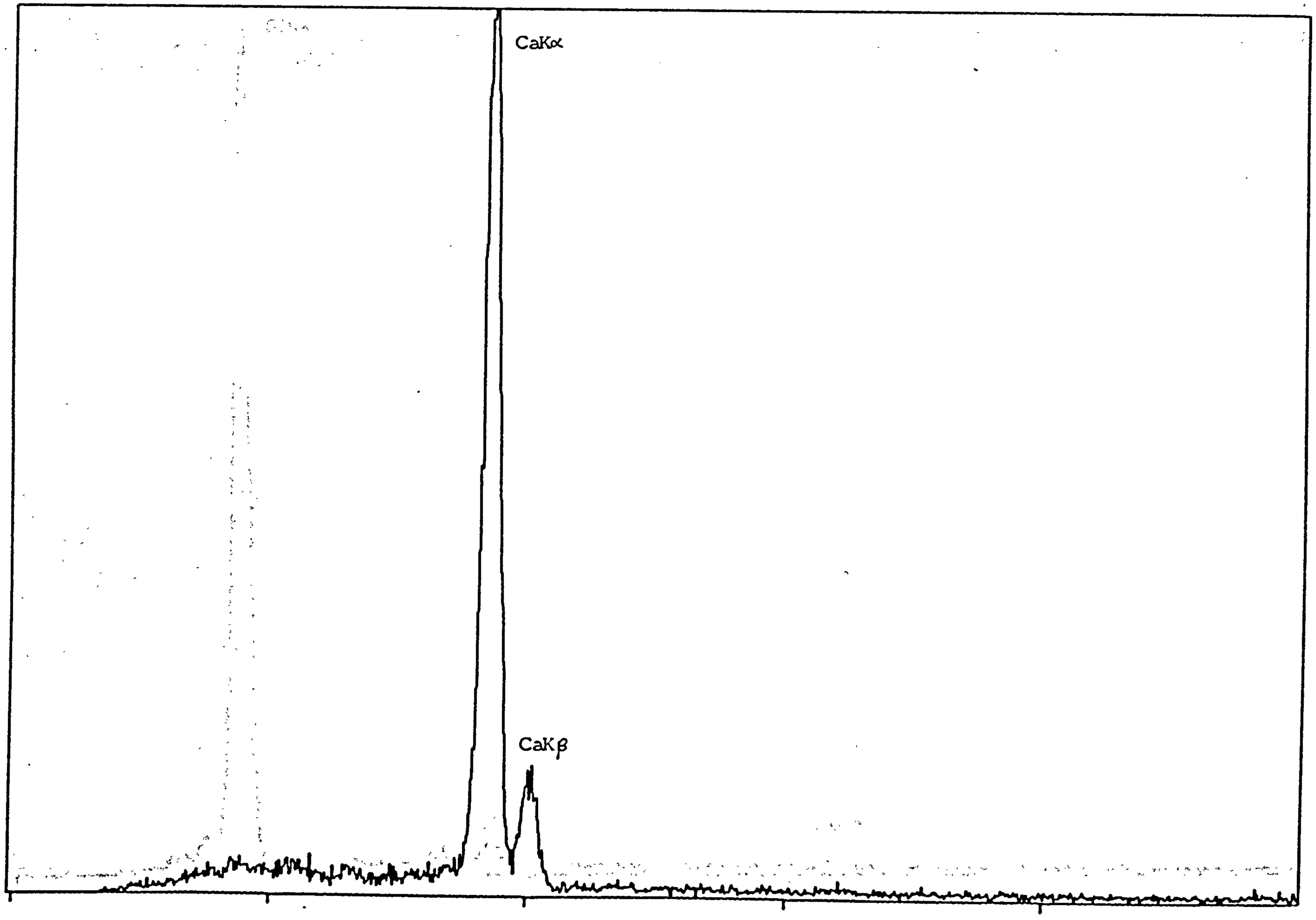


Fig.20. Tomb 5 no.353. Spot scan - limestone inclusion.

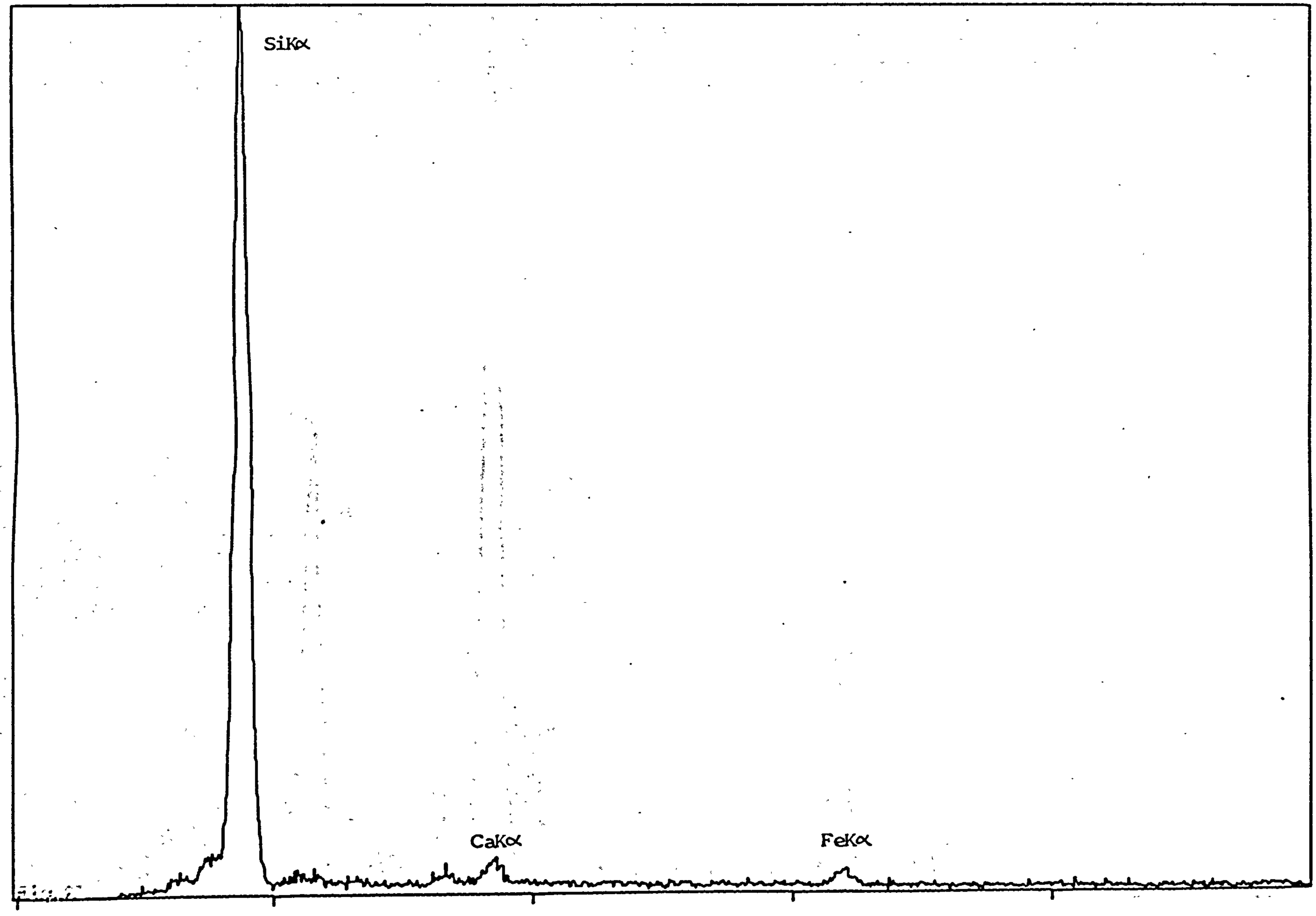


Fig.21. Tomb 5 no.353. Spot scan - flint inclusion.

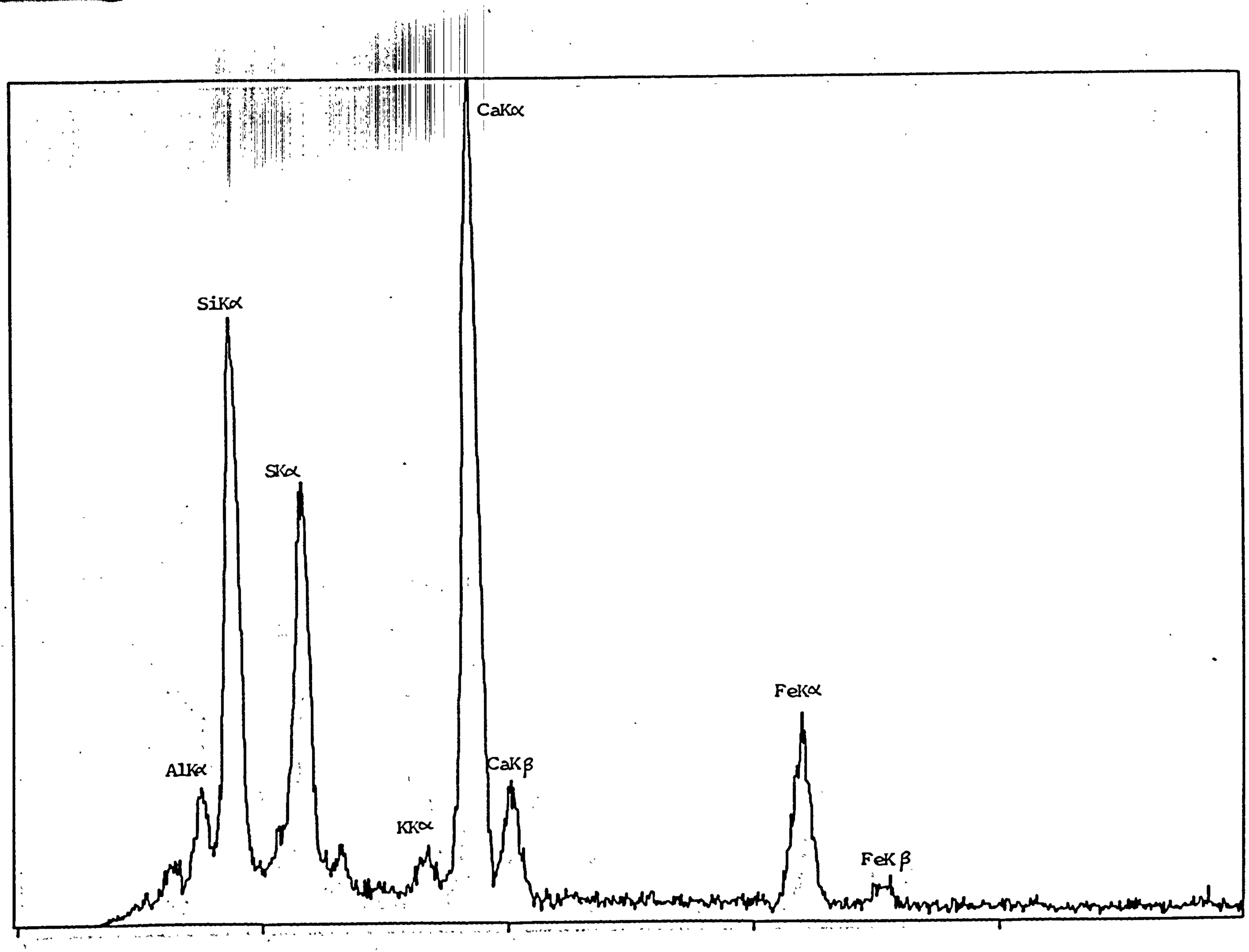


Fig.22. Tomb 5 no.353. Spot scan - gypsum or grog inclusion.

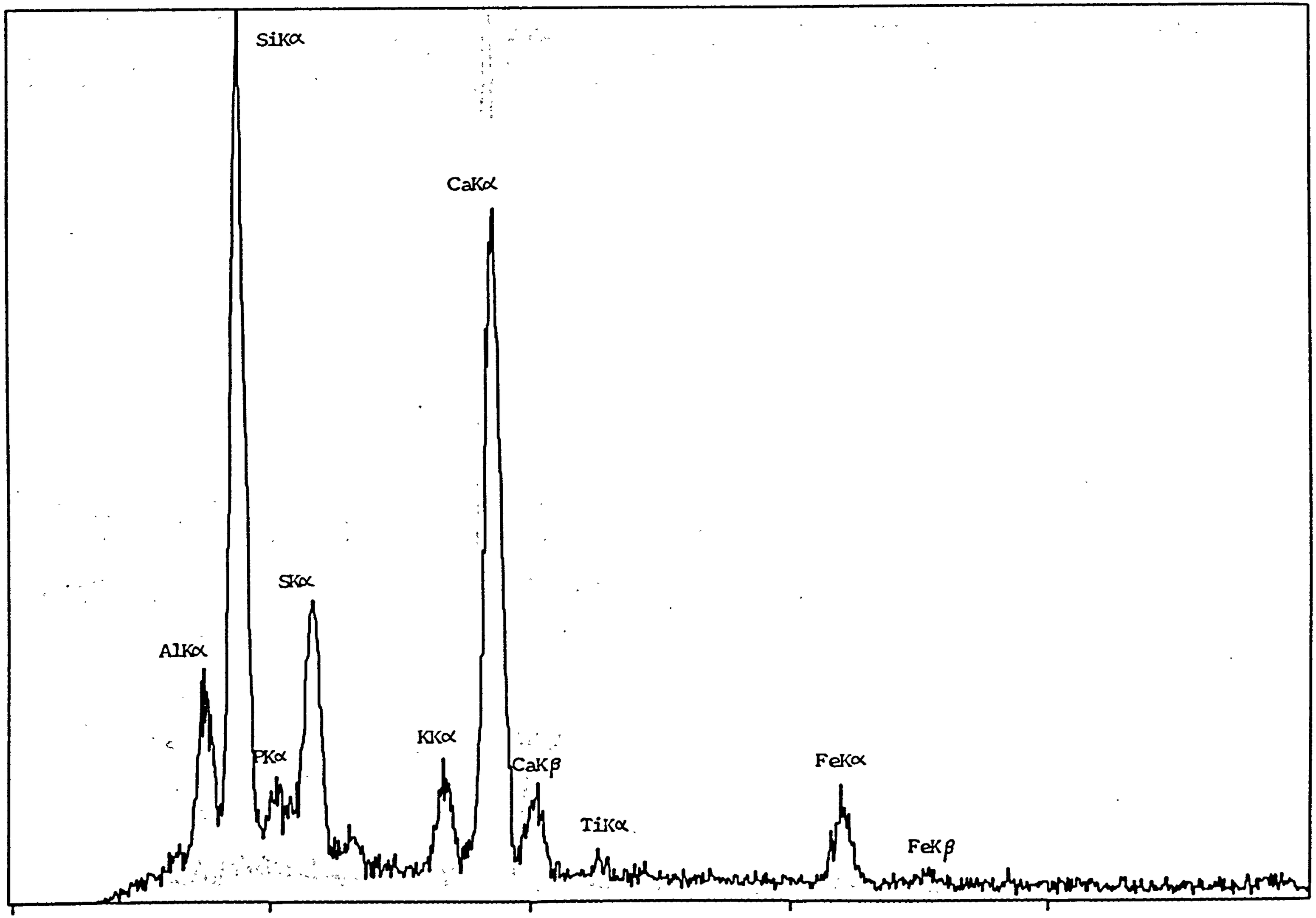


Fig.23. Tomb 5 no.359. Area scan.

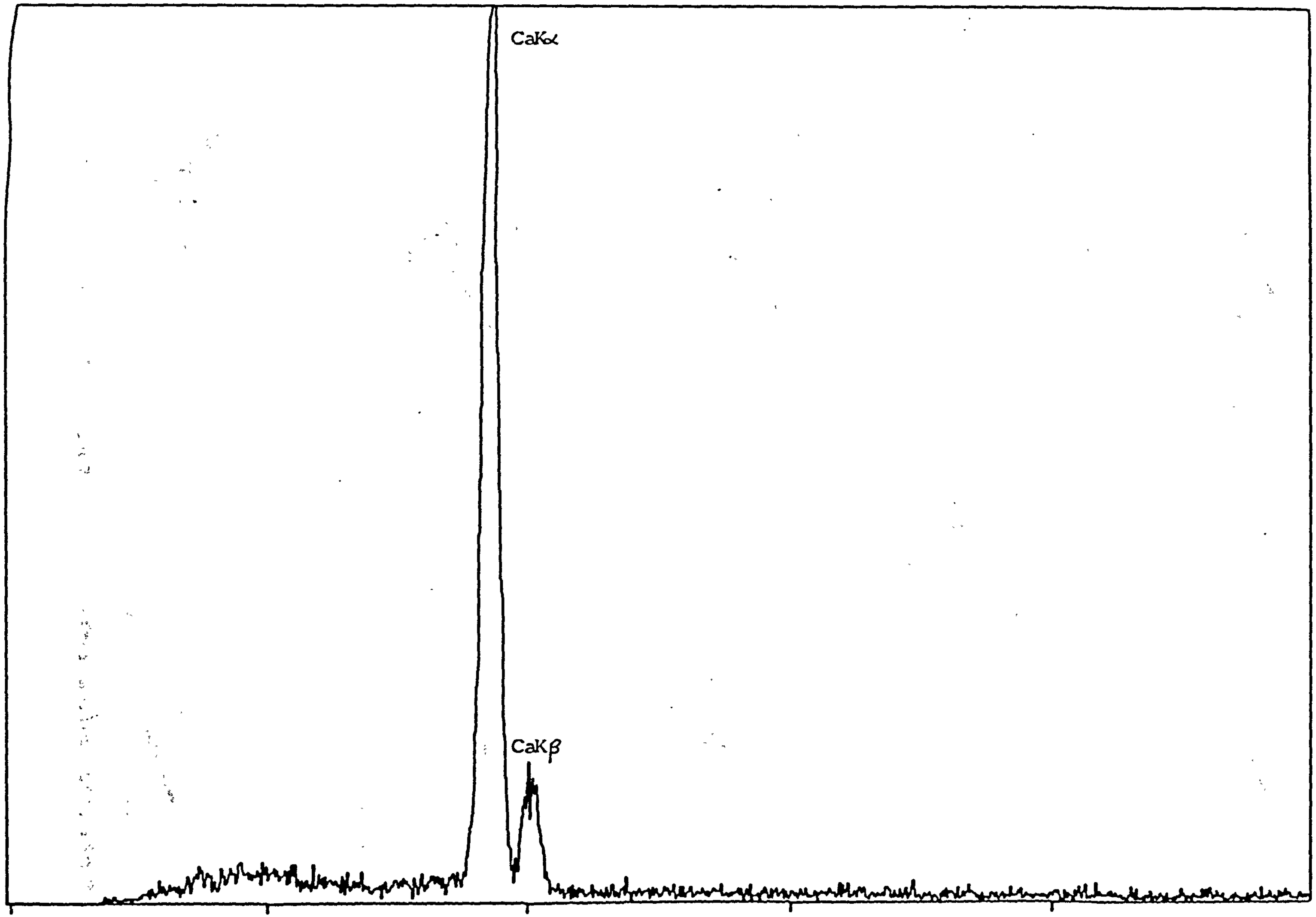
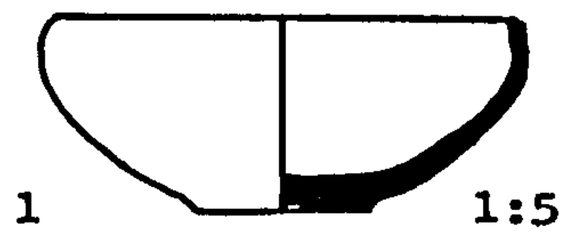
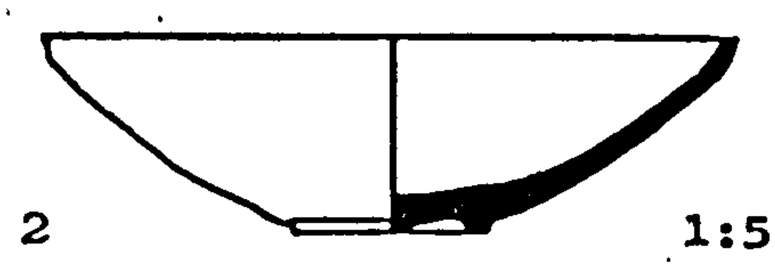


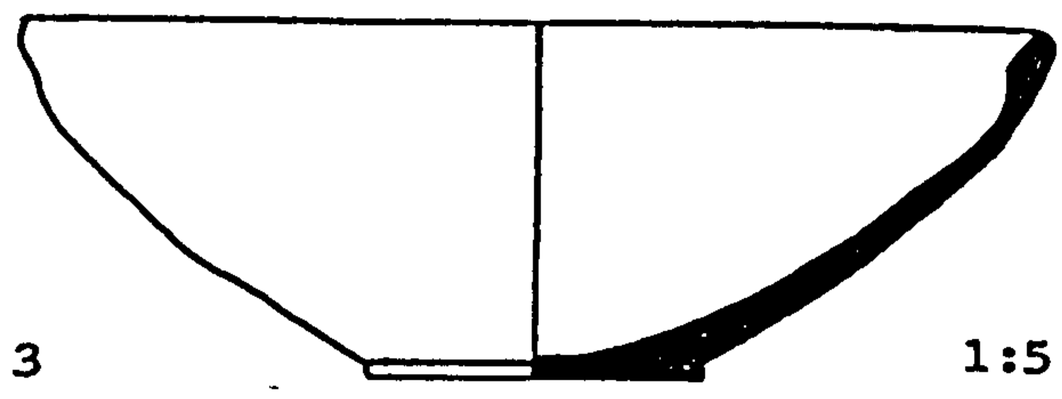
Fig.24. Tomb 5 no.359. Spot scan - limestone inclusion.



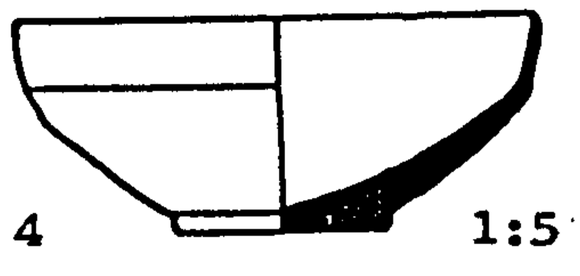
After Pritchard 1963, Fig.7:1



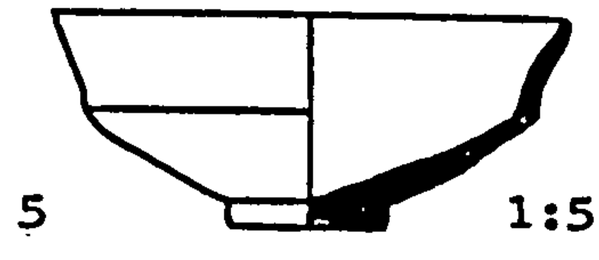
After Pritchard 1963. Fig.9:9



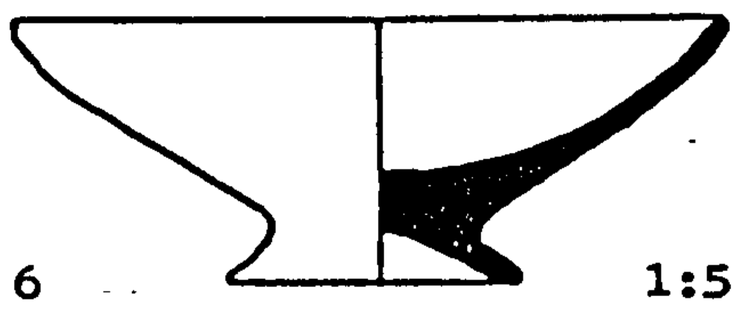
After Pritchard 1963, Fig.7:3



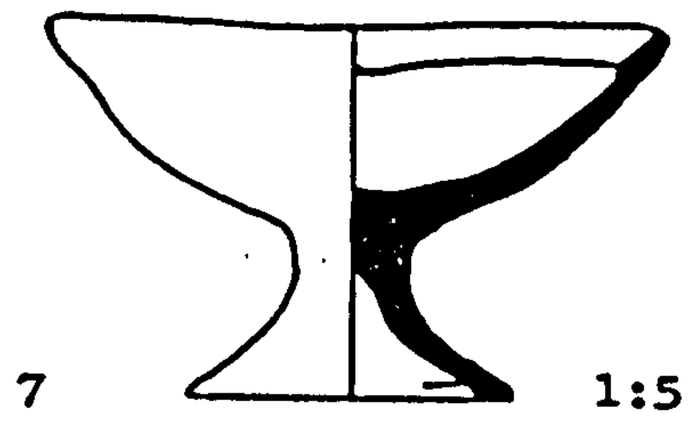
After Pritchard 1963, Fig.10:29



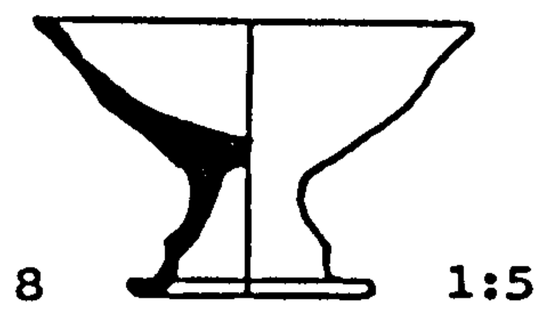
After Pritchard 1963, Fig.10:32



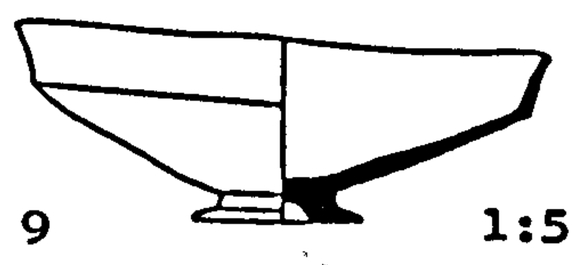
After Pritchard 1963, Fig.10:39



After Yadin 1960, pl.CXXIX:18

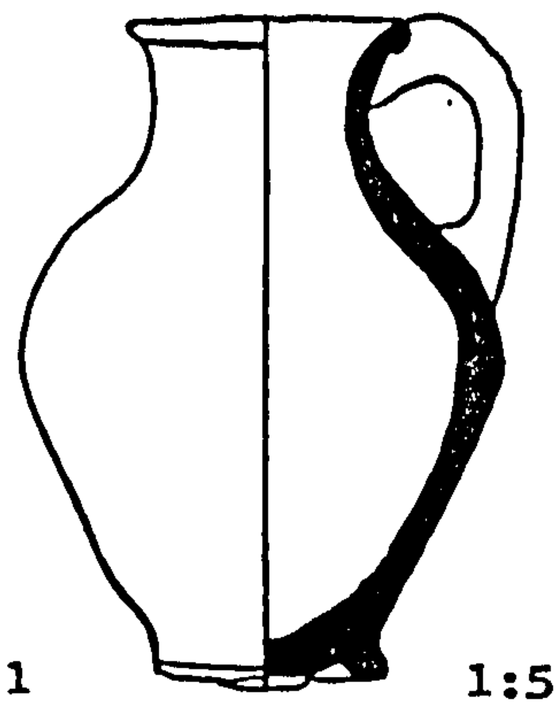


After Tufnell 1940, pl.XLVI:207



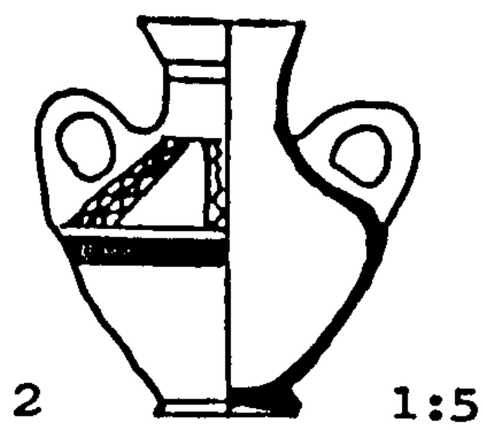
After Saller 1964, Fig.8:1

Fig. 25. Parallels for LBA bowl types (cf Chapter 5.6.2)



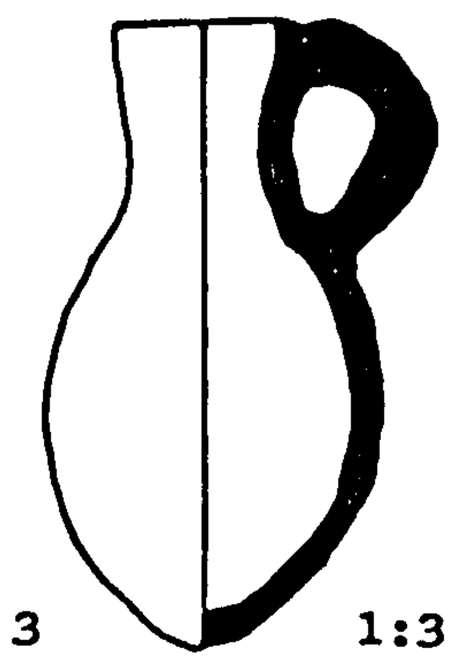
1 1:5

After Loud 1942, pl.57:9 (Str VIII)



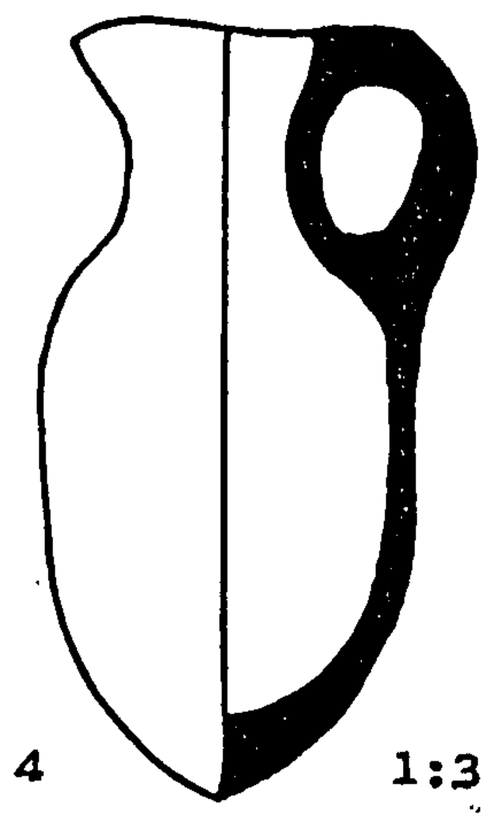
2 1:5

After de Vaux & Steve 1949, 117 Fig.5:1



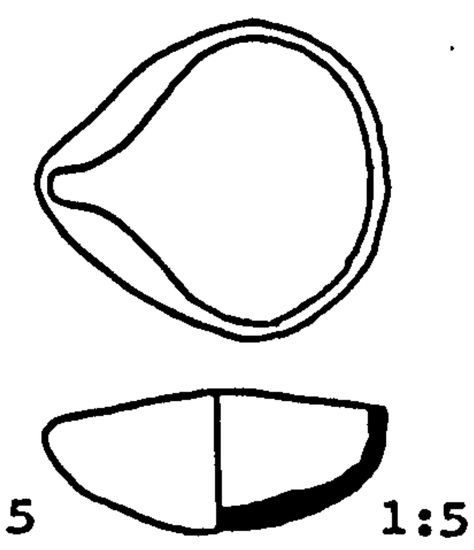
3 1:3

After Saller 1964, Fig.42:10



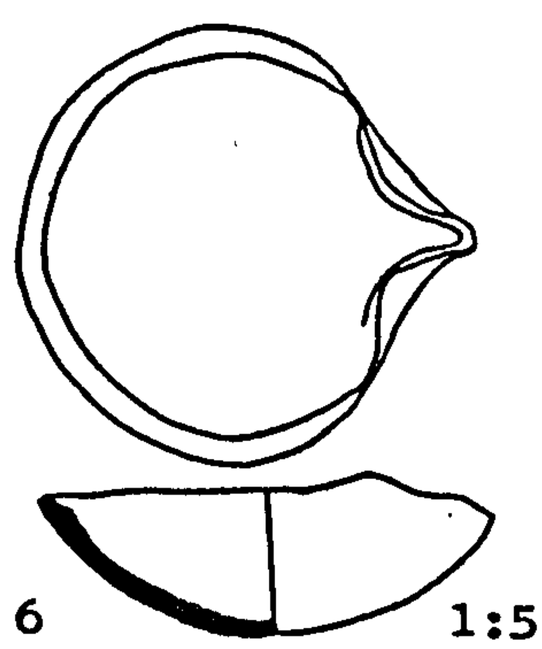
4 1:3

After Saller 1964, Fig.46:6



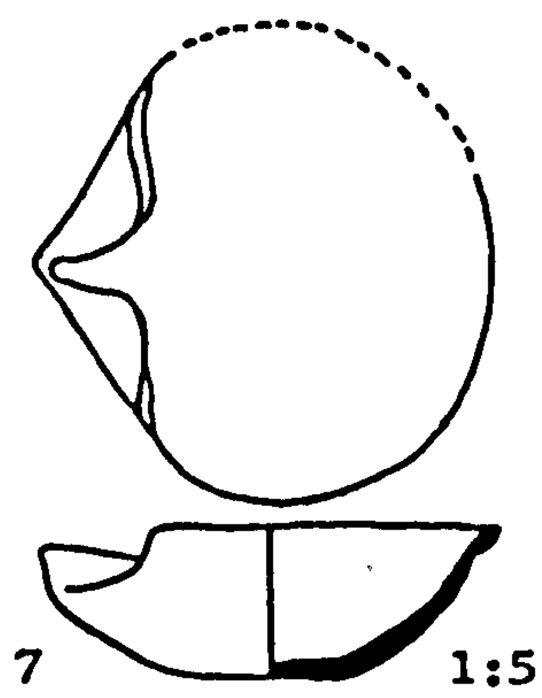
5 1:5

After Loud 1948, pl.62.5



6 1:5

After Saller 1964, Fig.54:2



7 1:5

After Pritchard 1963, Fig.11:46

Fig. 26. Parallels for LBA jug, dipper and lamp types (cf Chapter 5.6.2).

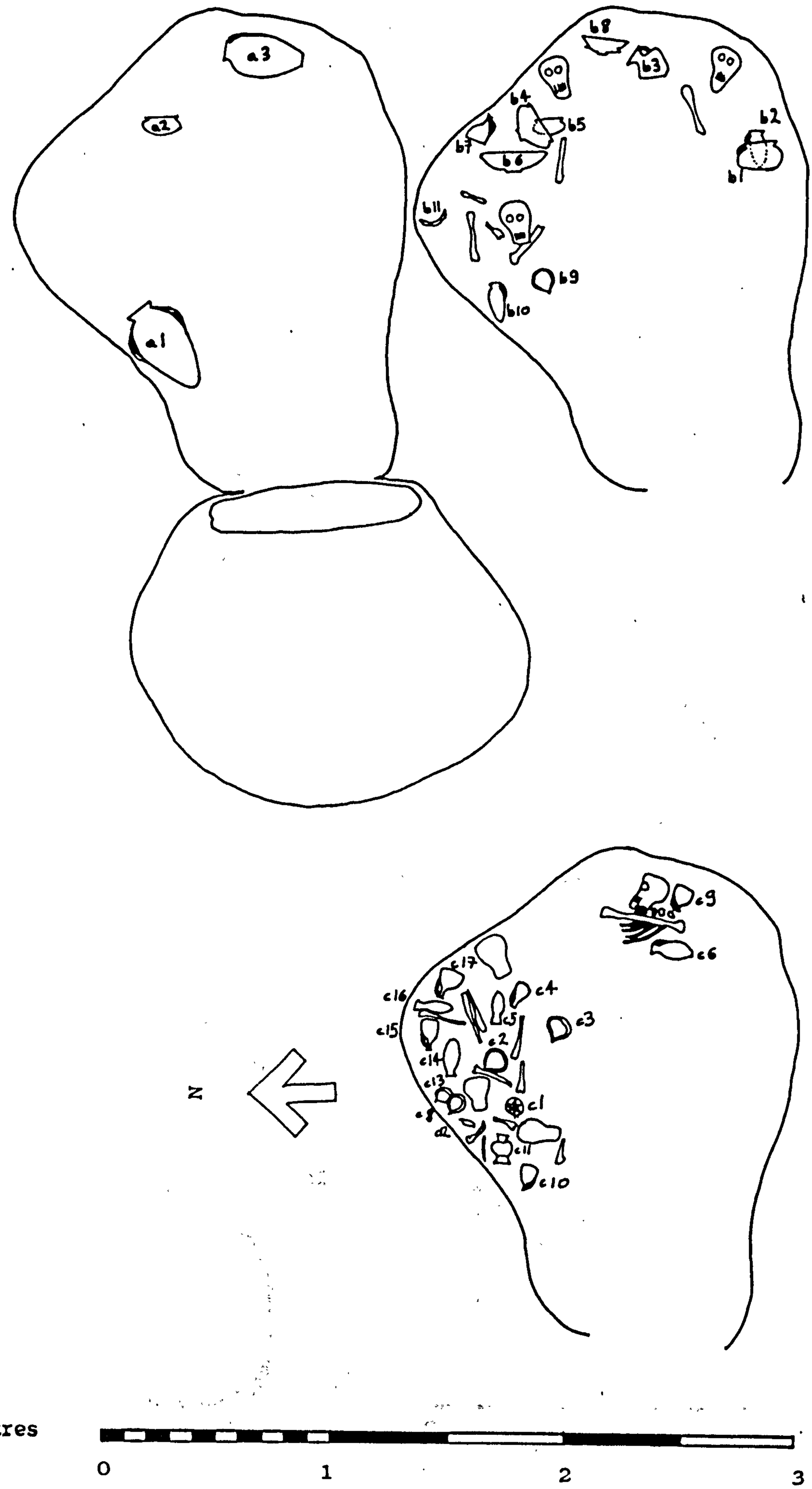
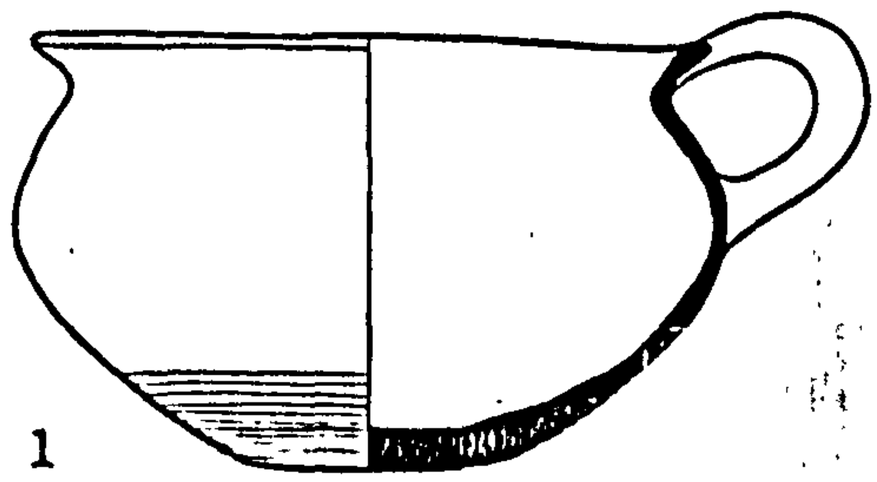
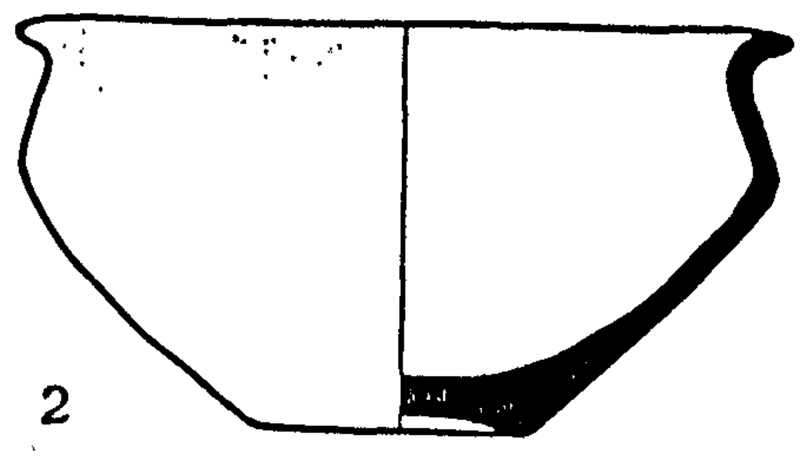


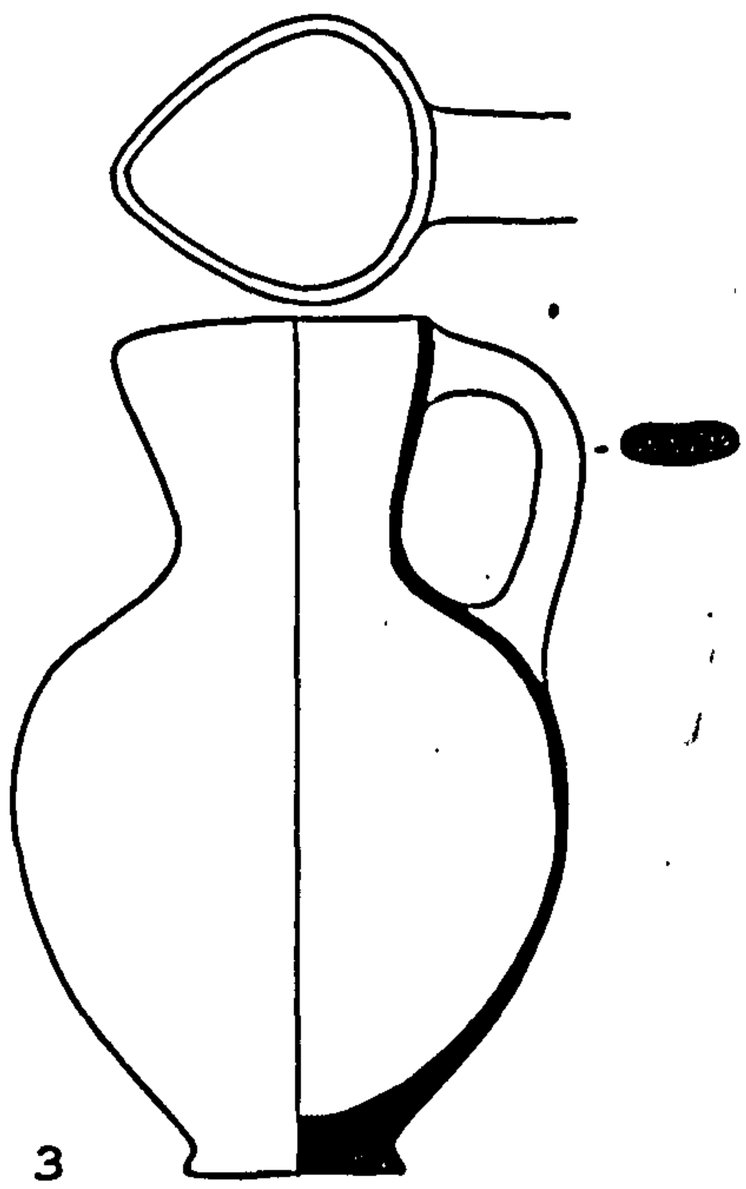
Fig. 27. Tomb 21 Plan



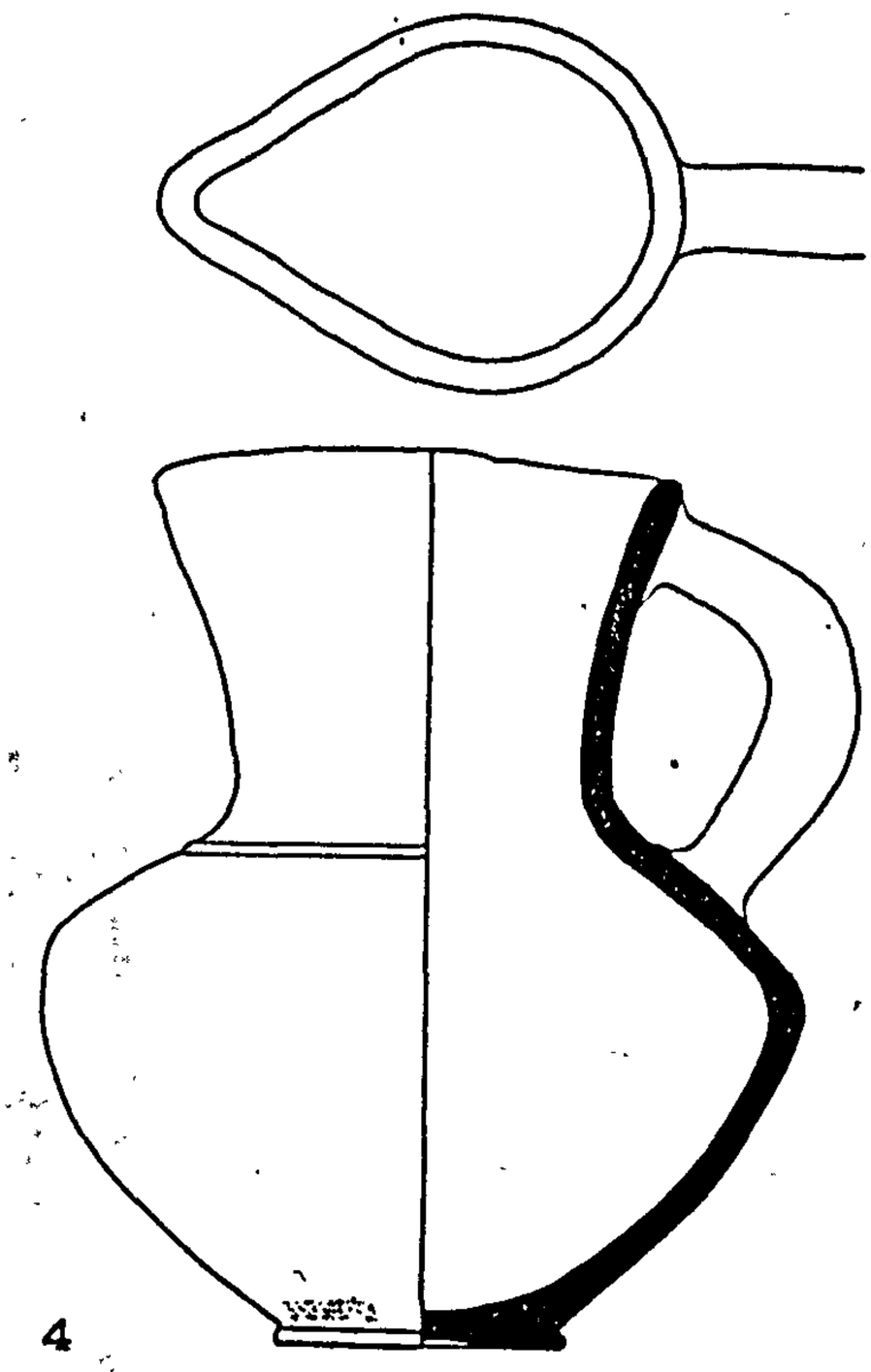
T.21 No.10



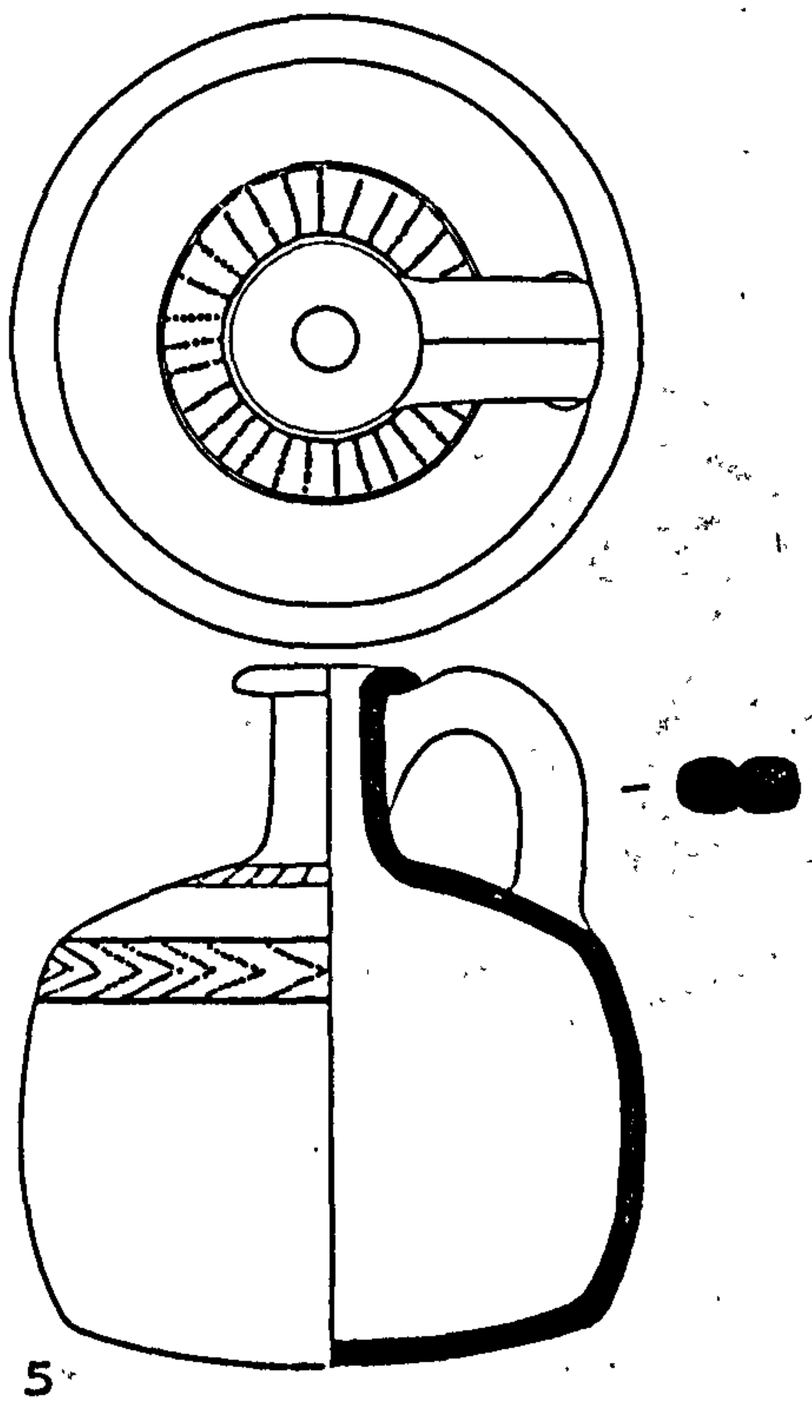
T.21 No.25



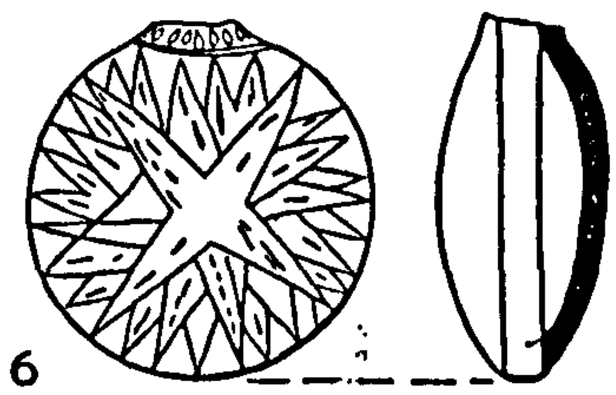
T.21 No.4



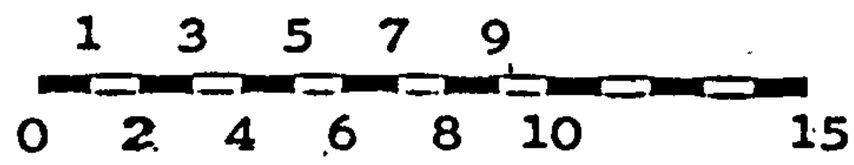
T.21 No.18



T.21 No.23



T.21 No.31



centimetres

Fig. 28. Tomb 21 Pottery

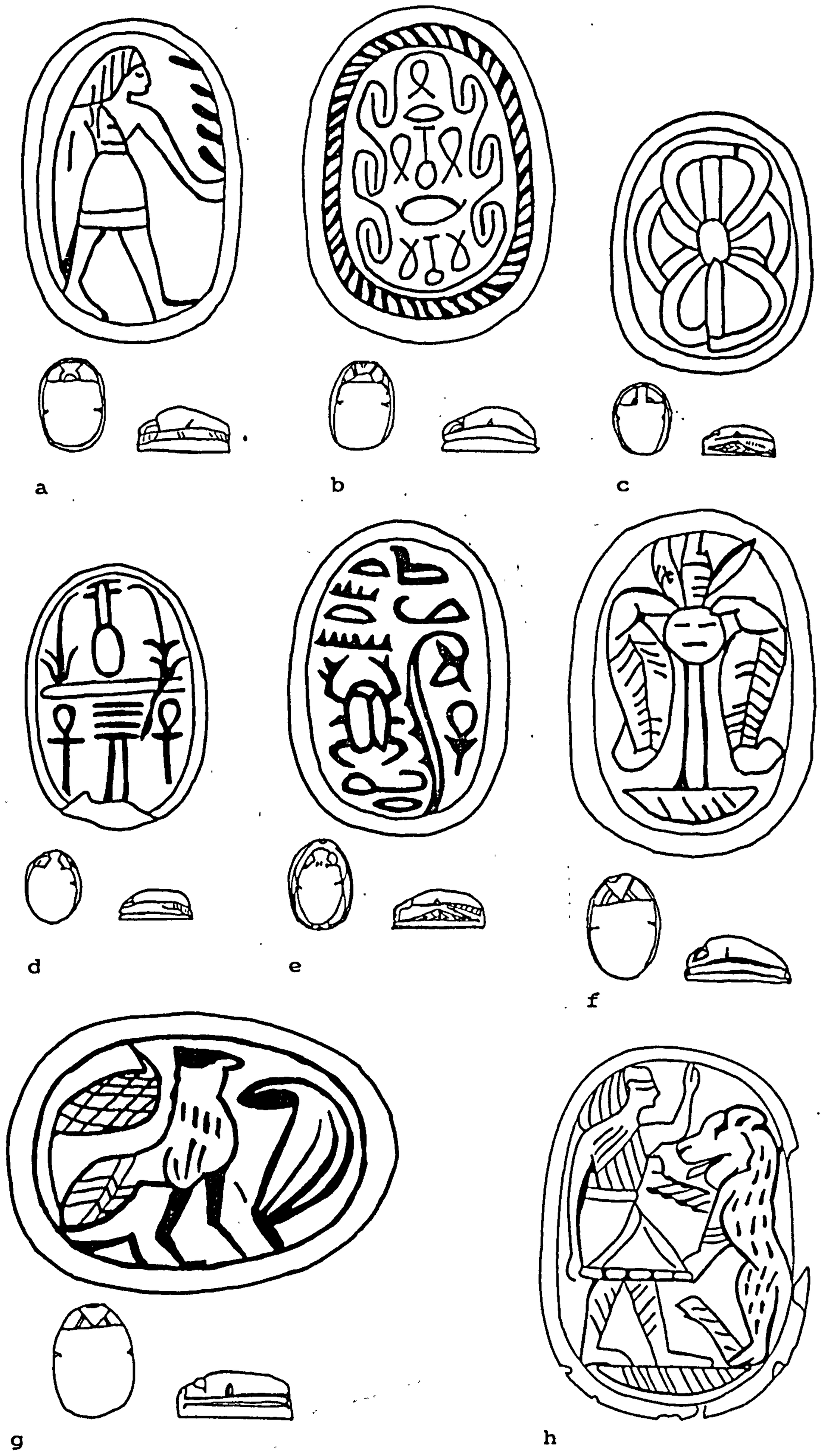


Fig. 29. Tomb 21 Scarabs. Life size and enlargements to show detail.

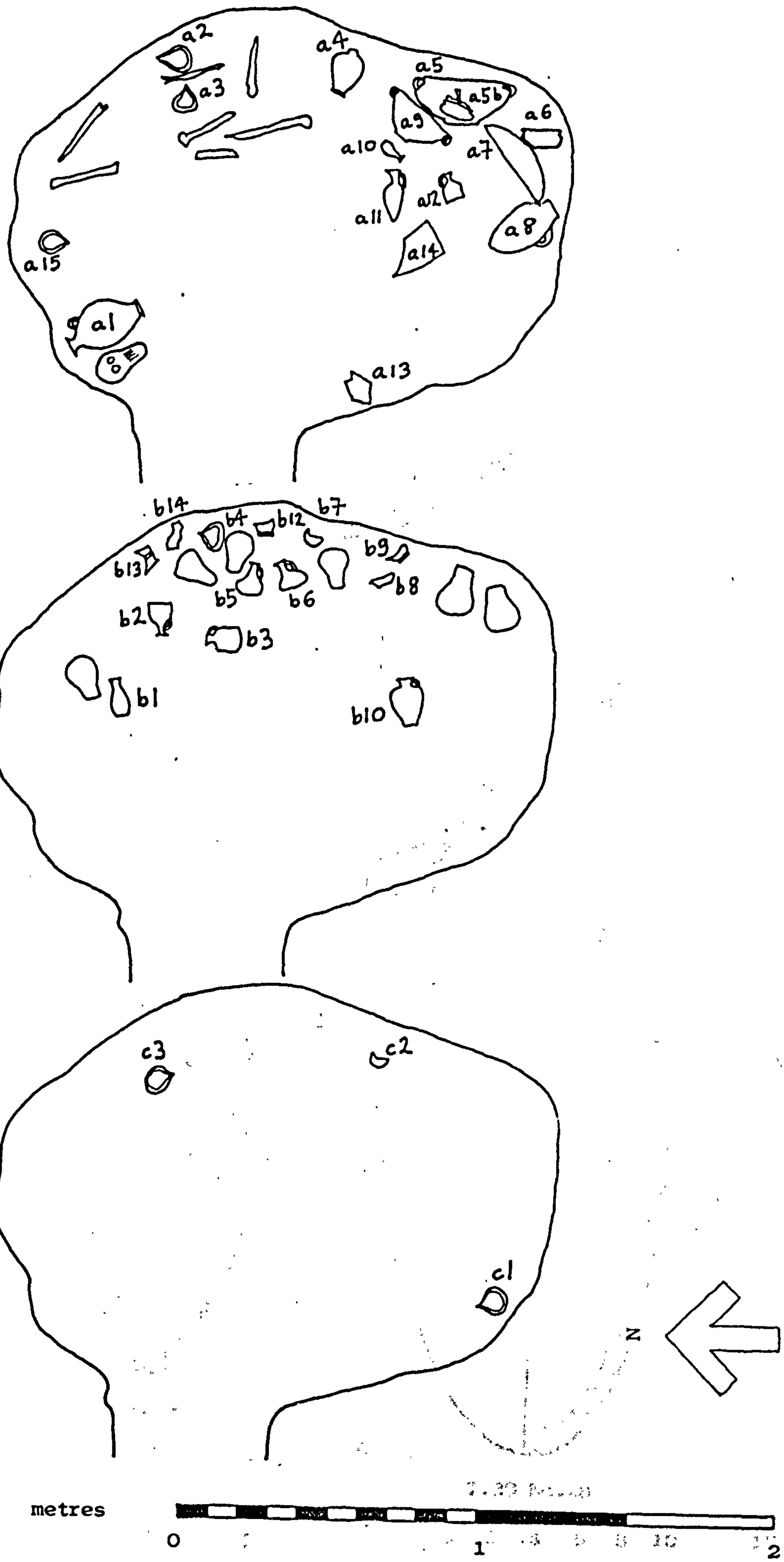
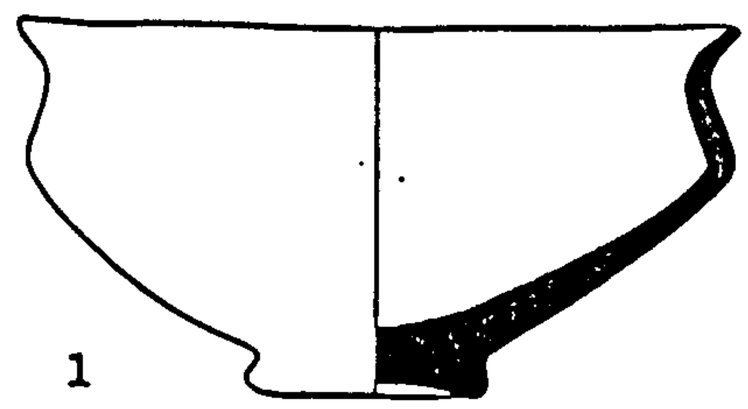


Fig. 30. Tomb 30 Plan.



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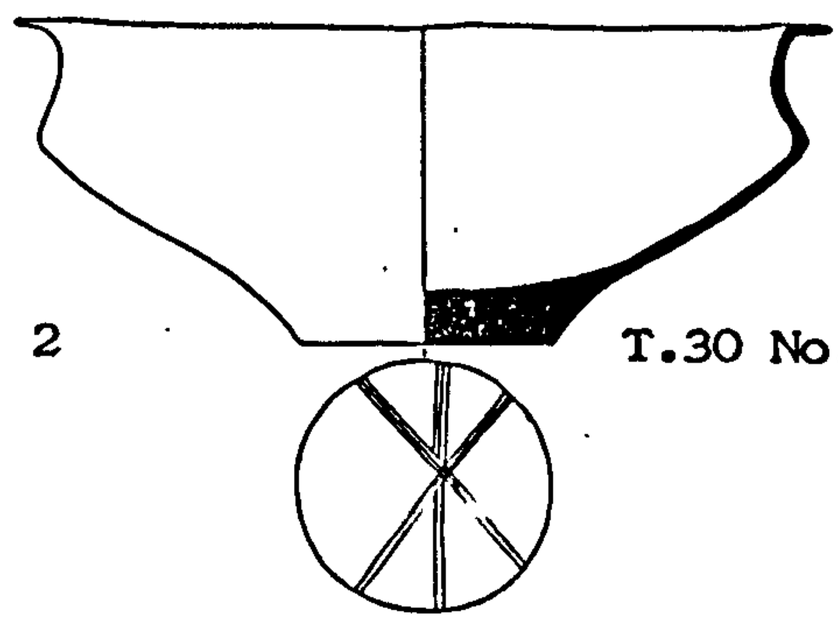

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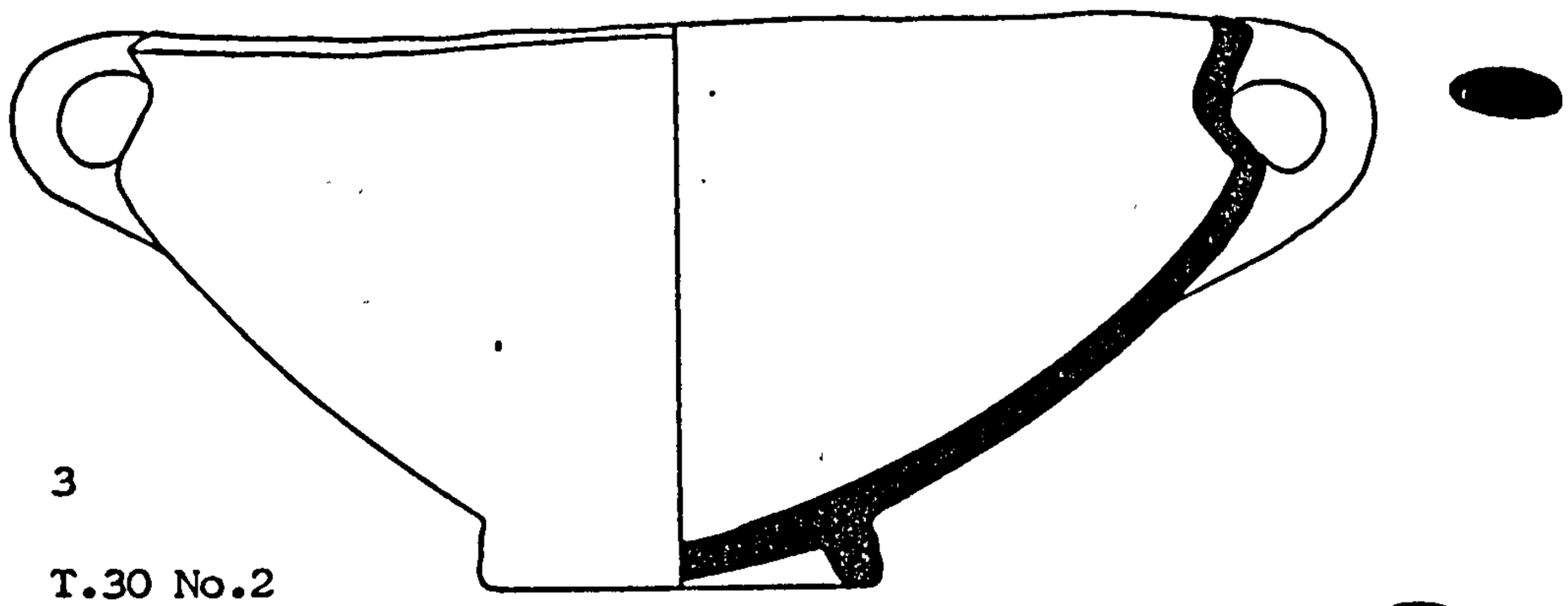

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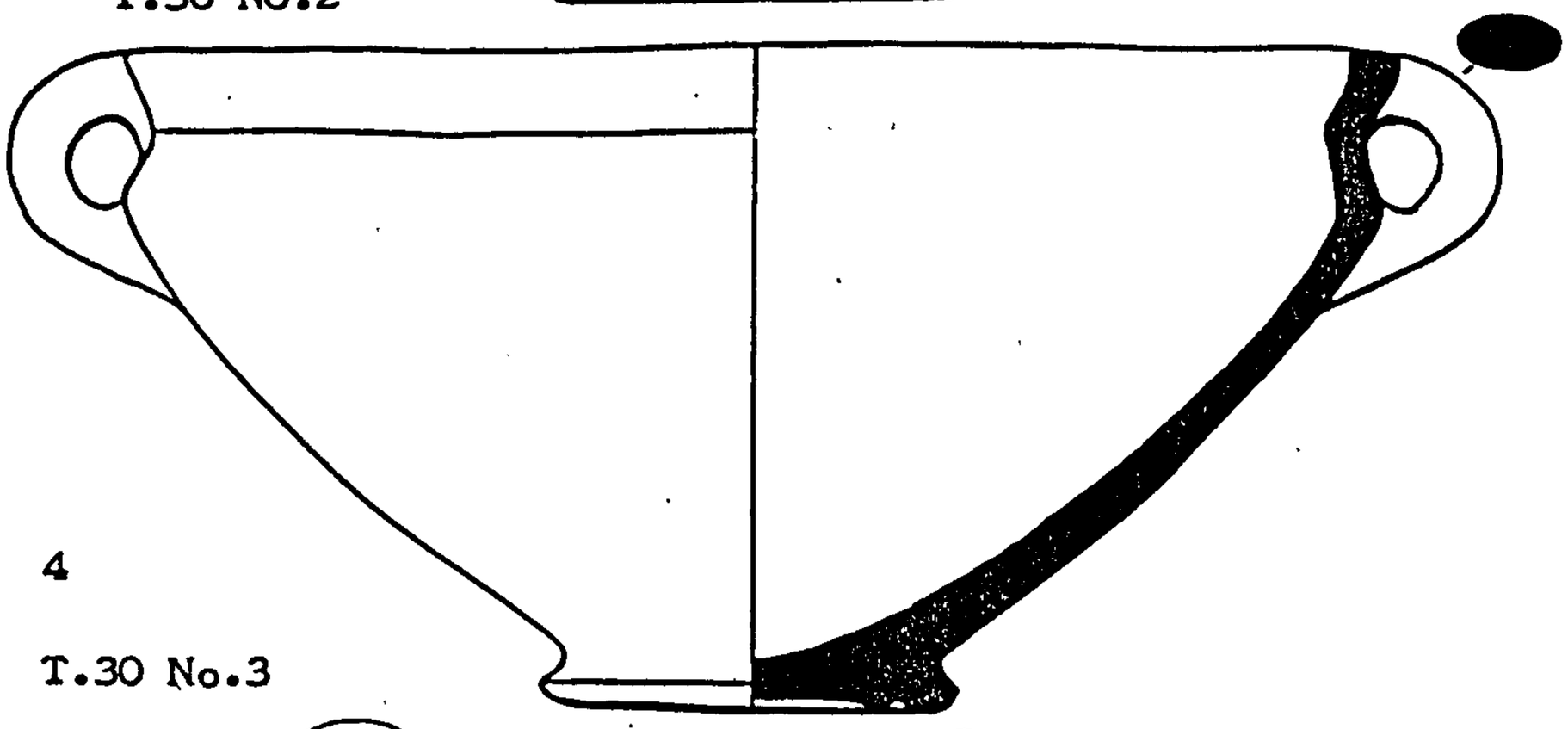

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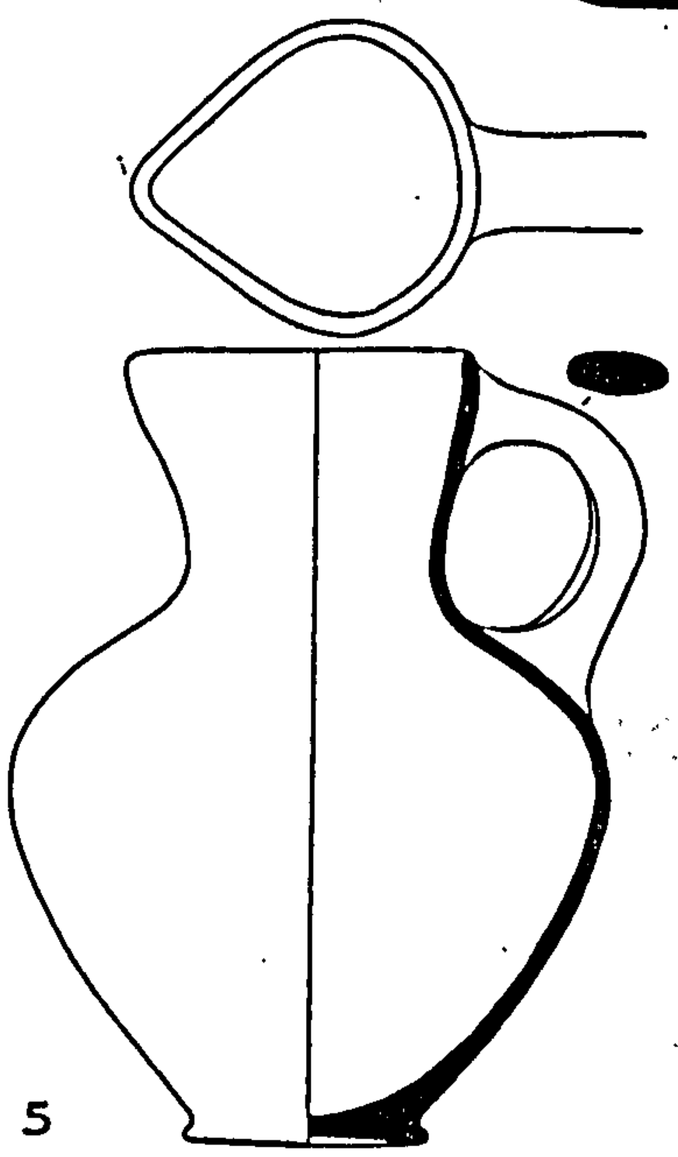

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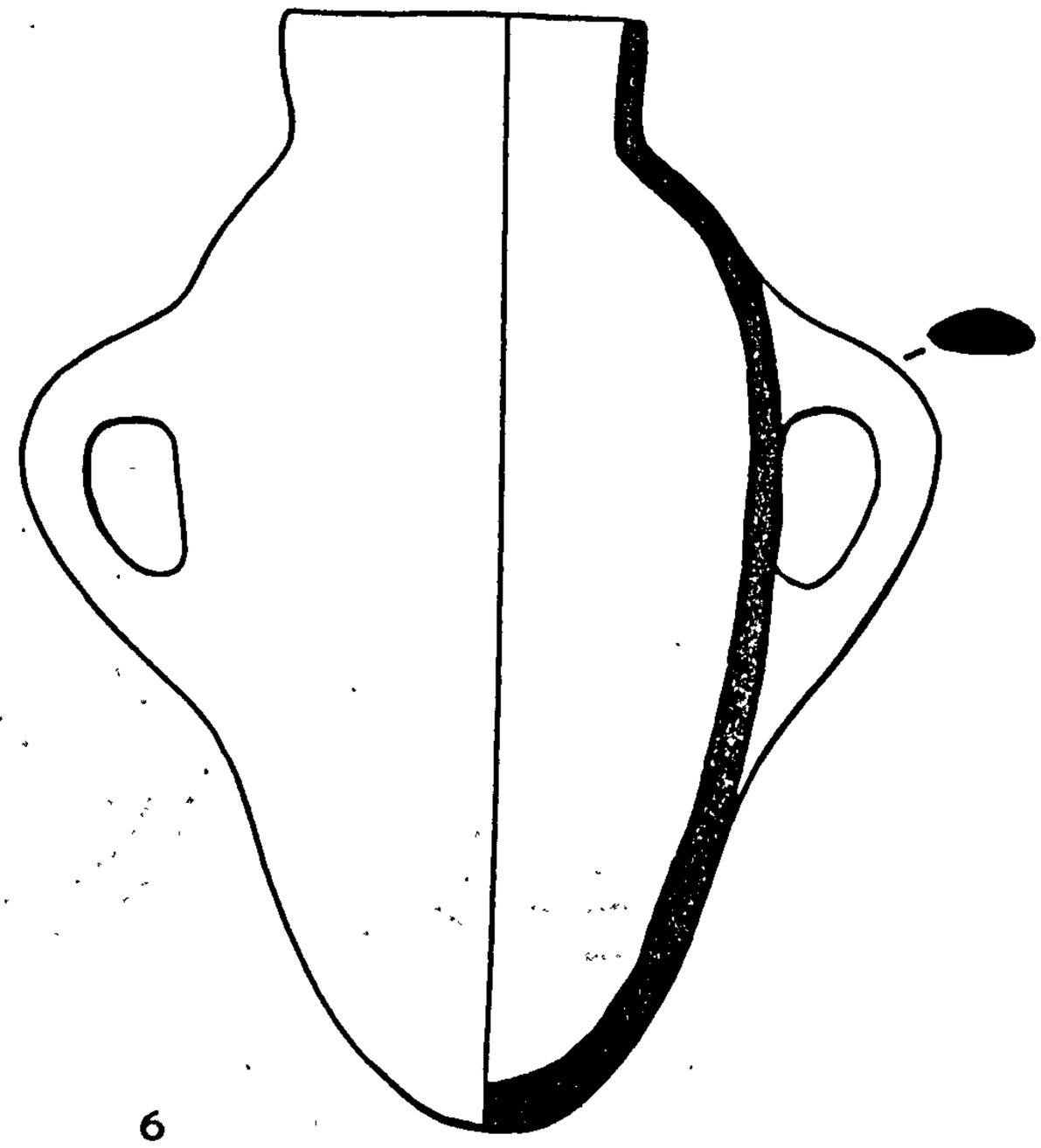
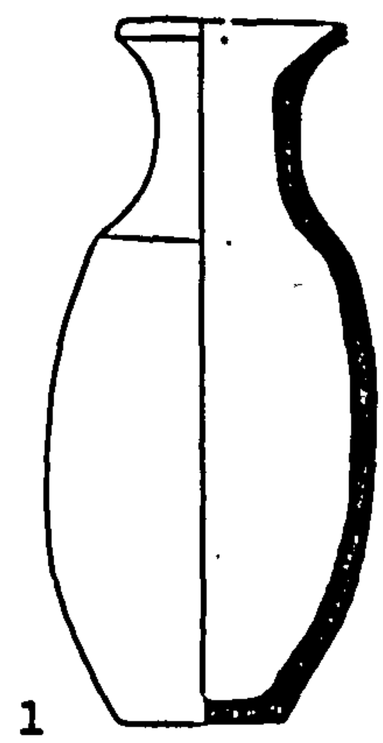


6

T.30 No.28

centimetres 0 2 4 6 8 10 15

Fig. 31. Tomb 31 Potte



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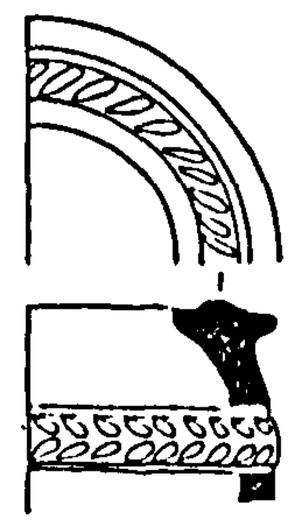
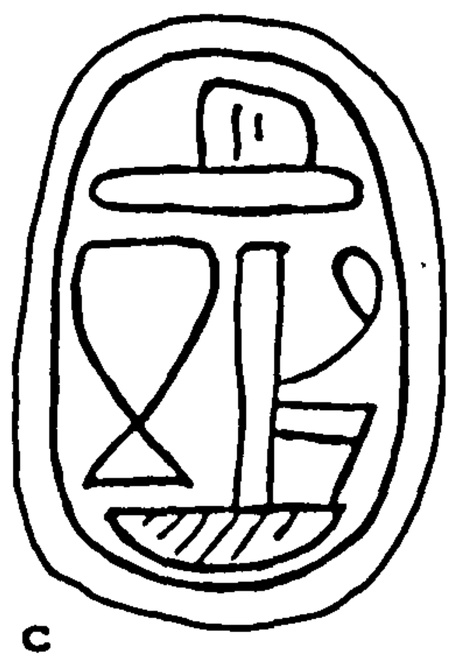


2

T.30 Shaft VI

0 2 4 6 8 10 15
centimetres



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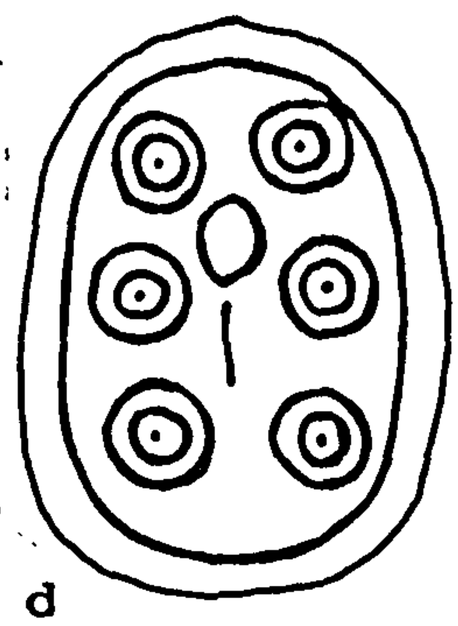

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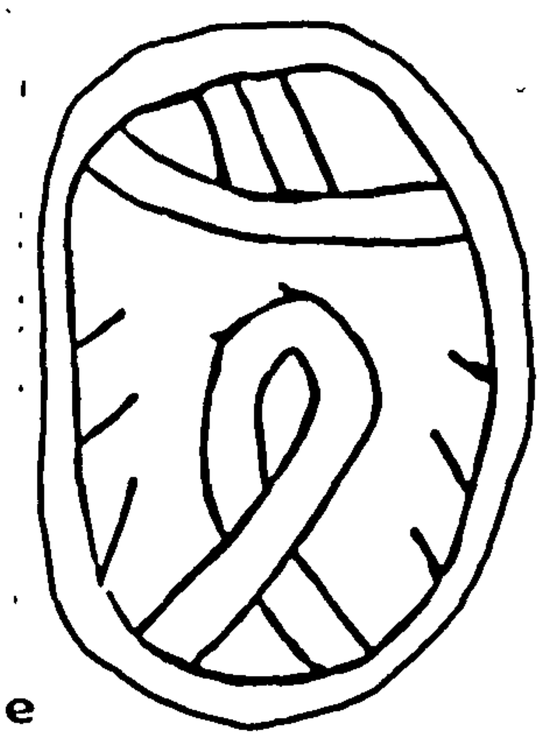

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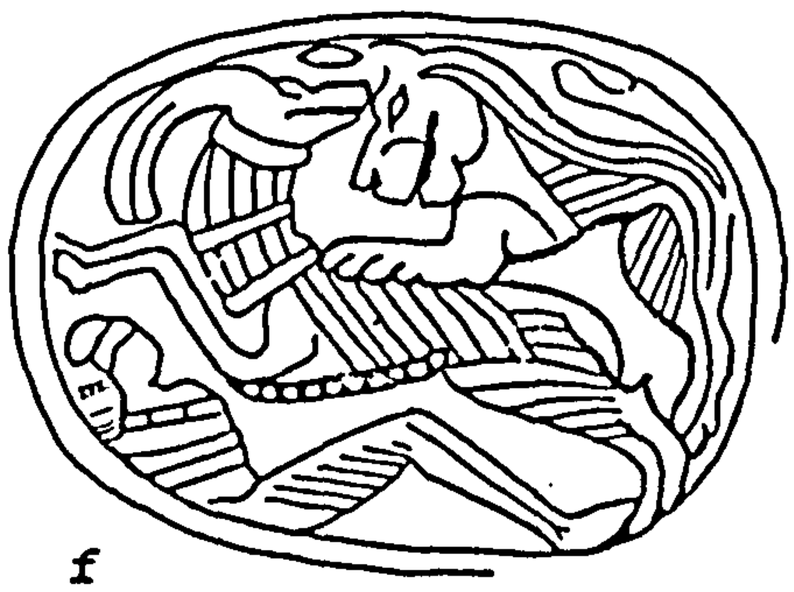

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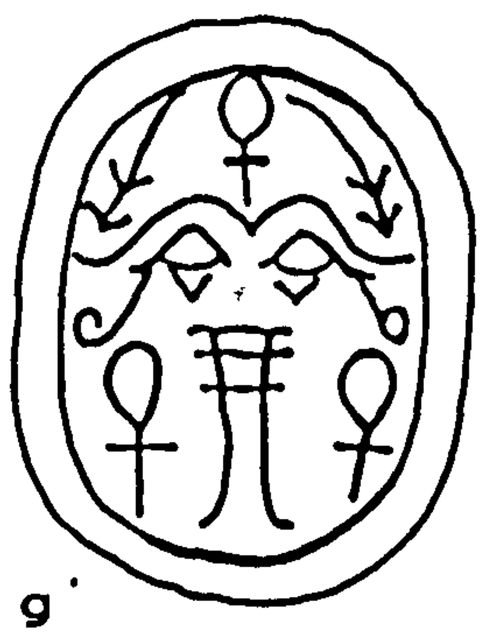

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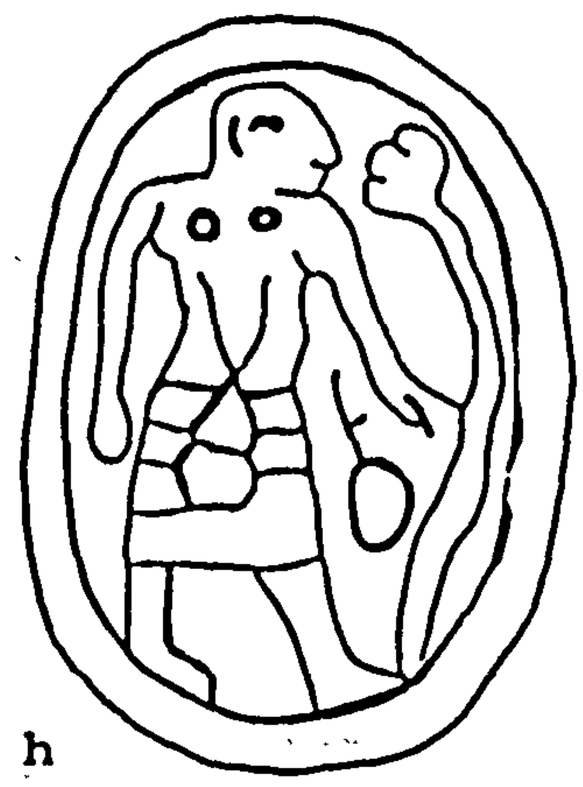
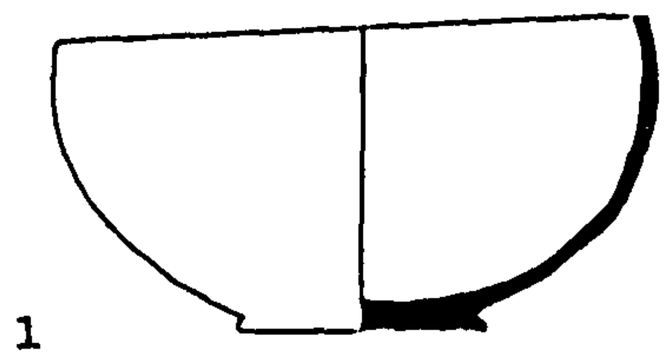


h

Fig. 32. Tomb 30 Pottery and Scarabs (enlarged to show detail)



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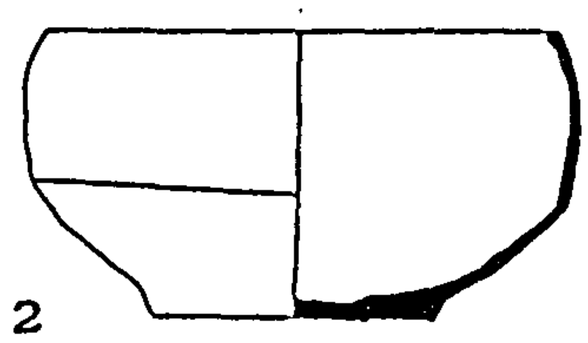
T.5 No.32



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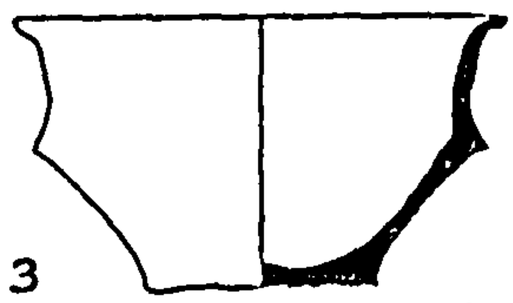

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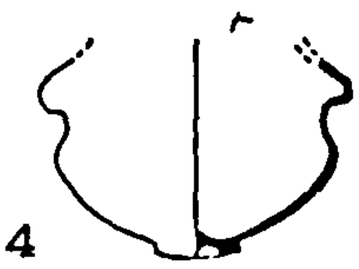

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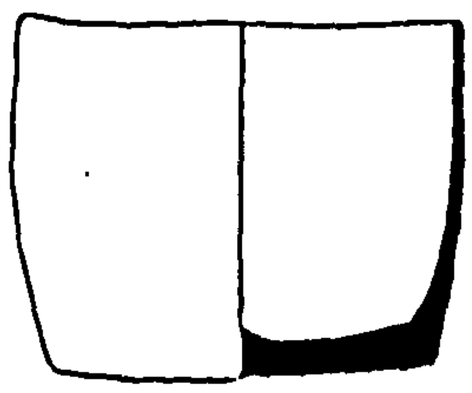

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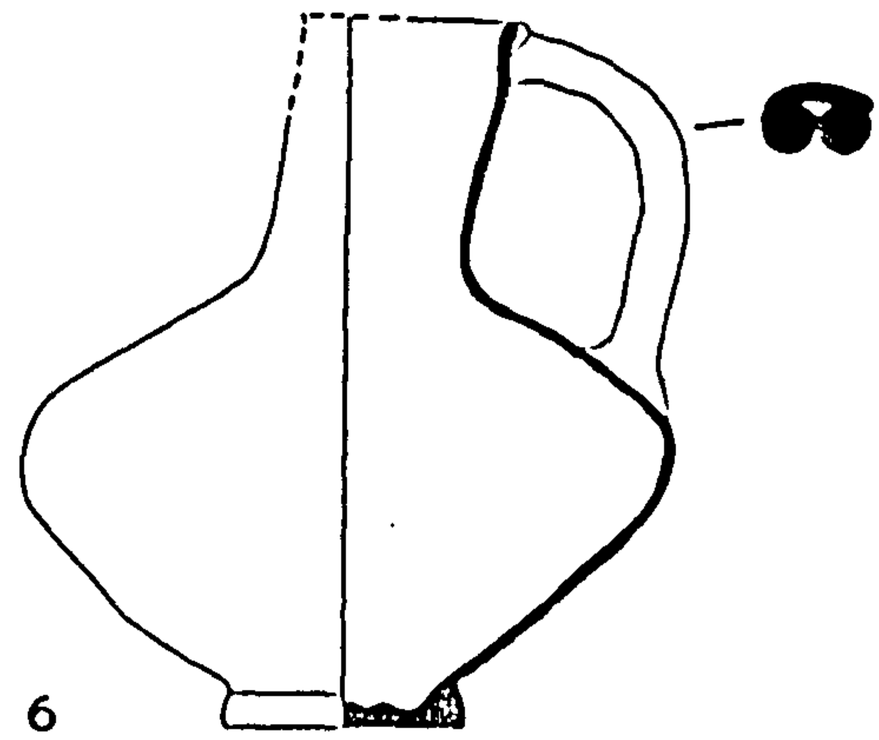

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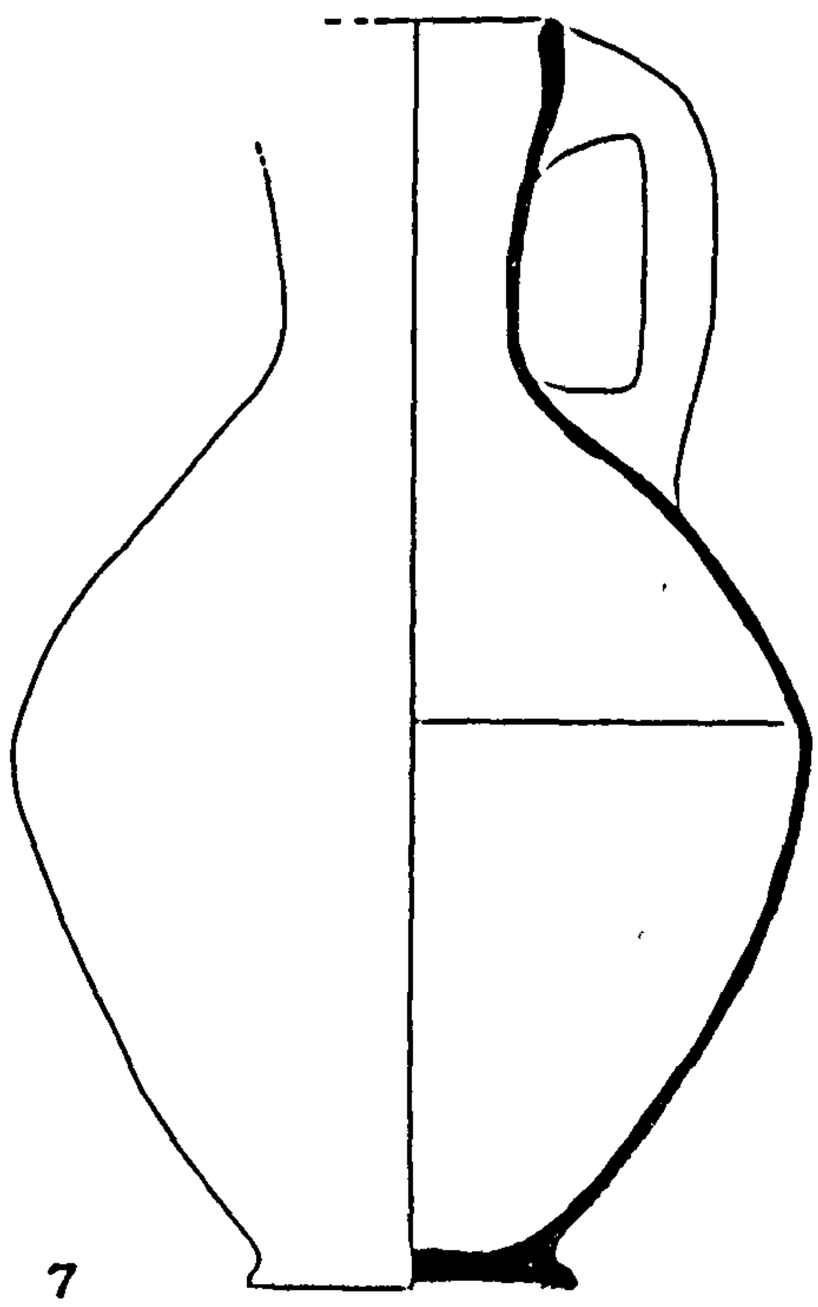
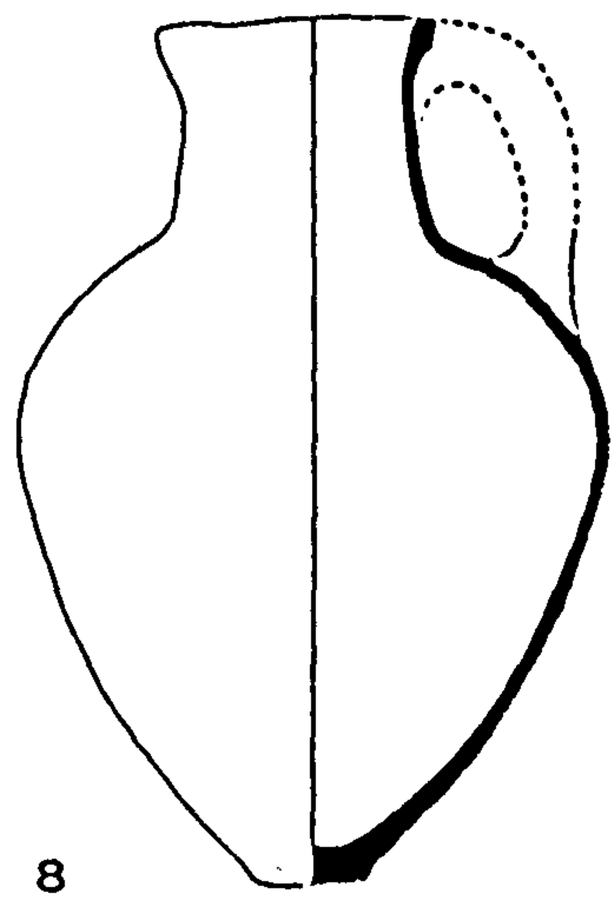


7

T.5 No.100

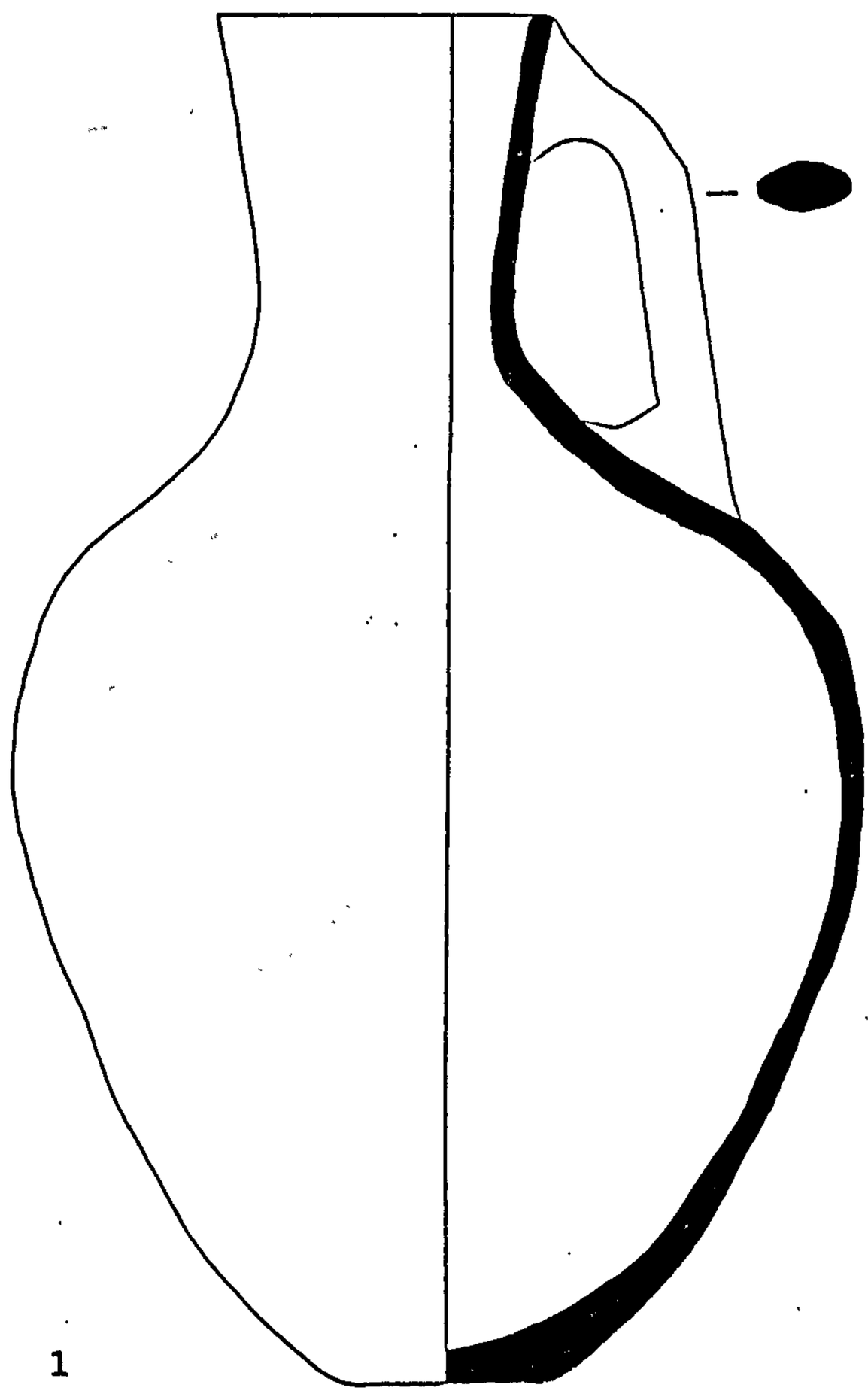


8

T.5 No.248

centimetres 0 2 4 6 8 10 15

Fig. 33. Tomb 5 MBA Pottery



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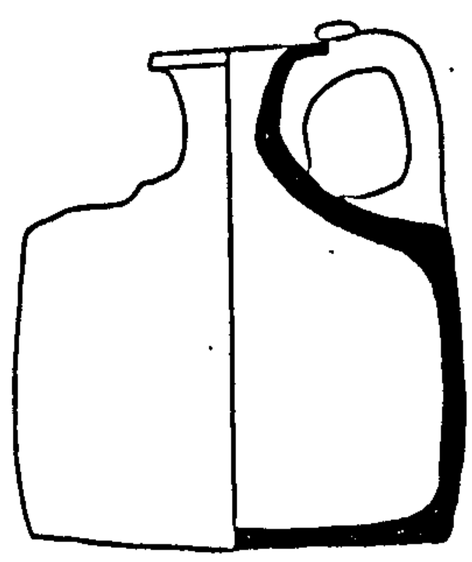
T.5 No.97



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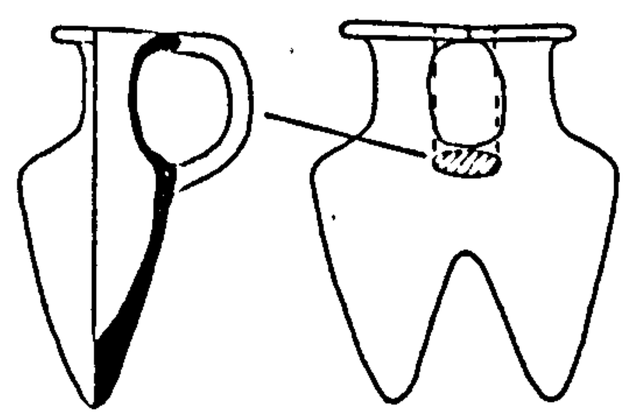
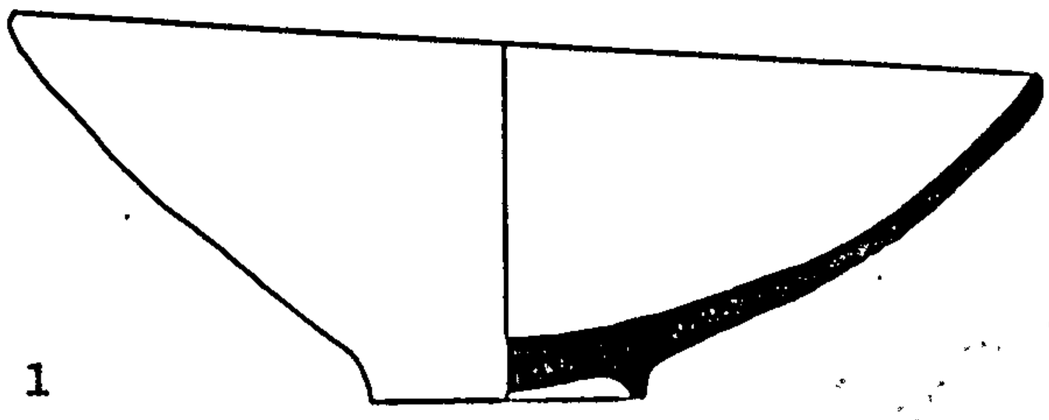


3

T.5 No.176

centimetres 0 2 4 6 8 10 15

Fig. 34. Tomb 5 MBA Pottery



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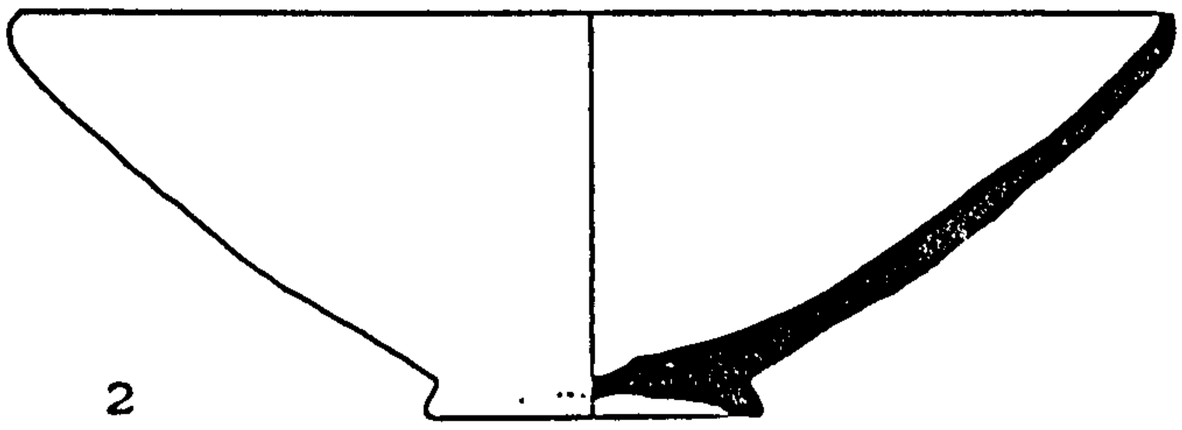

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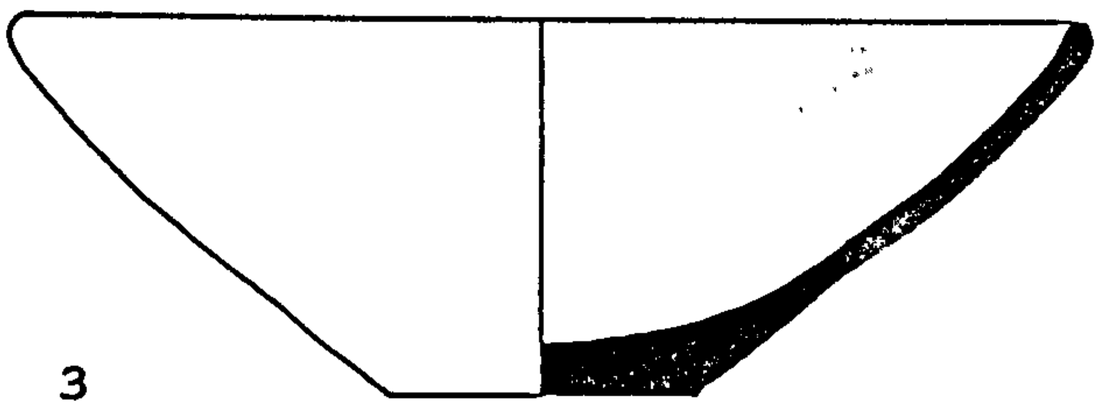

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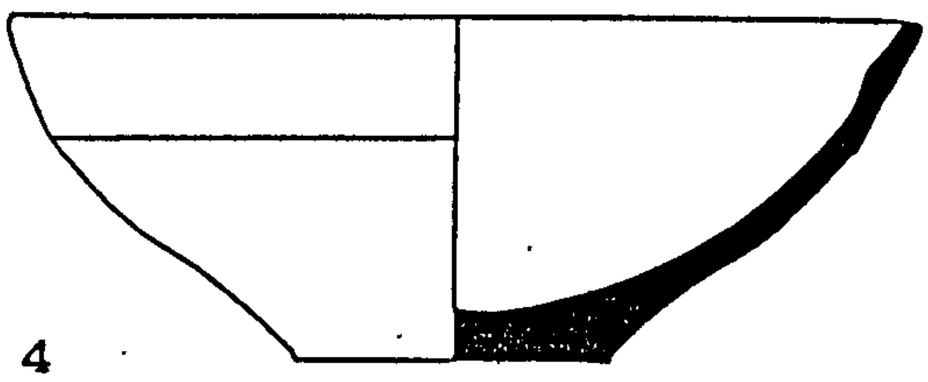

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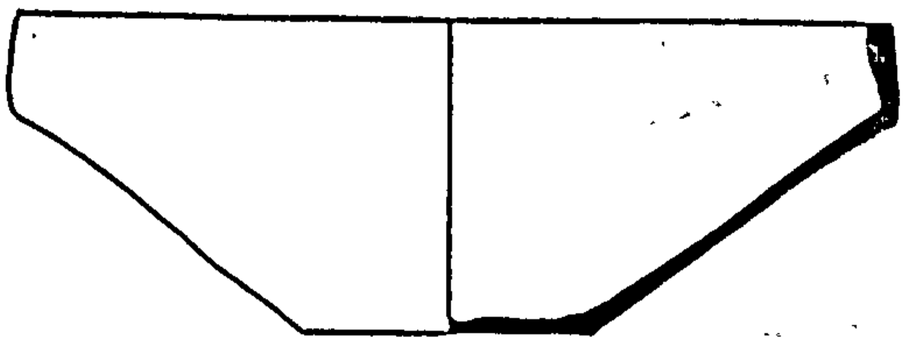

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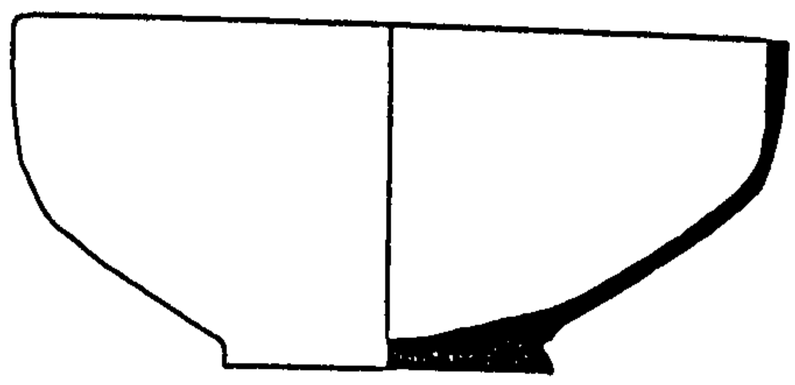

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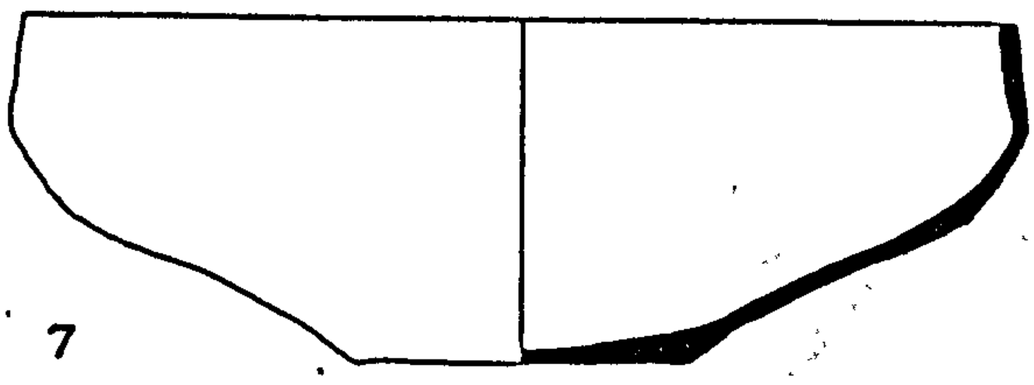

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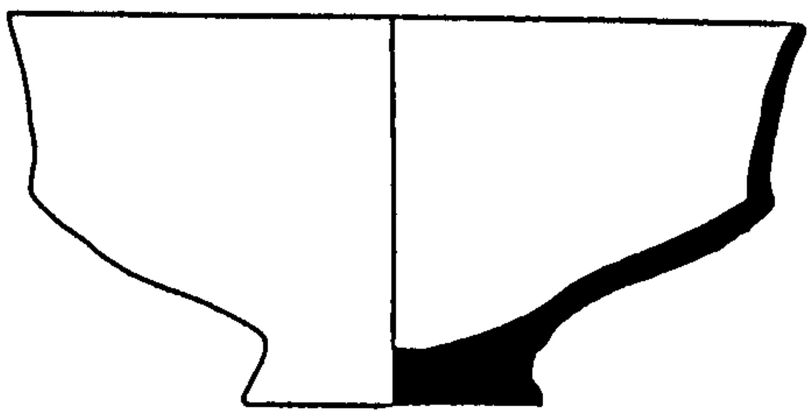

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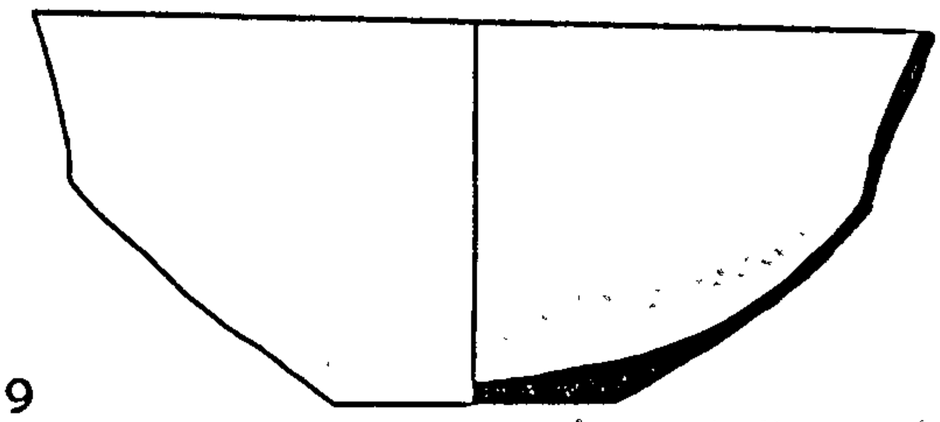

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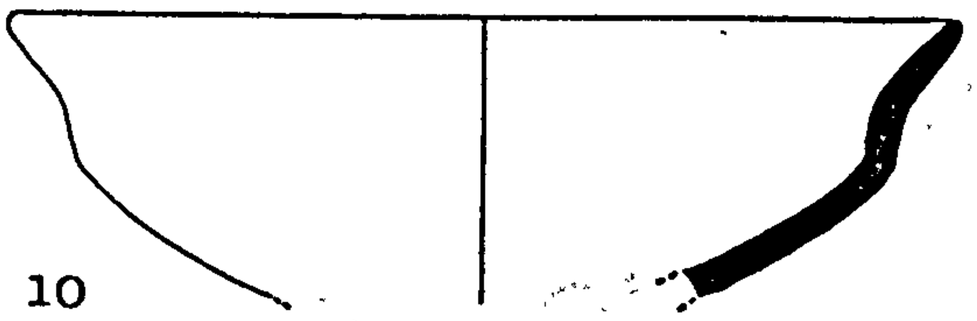


T.5 No.368

0 2 4 6 8 10 15

centimetres

Fig. 35. Tomb 5 LBA Platters and carinated bowls

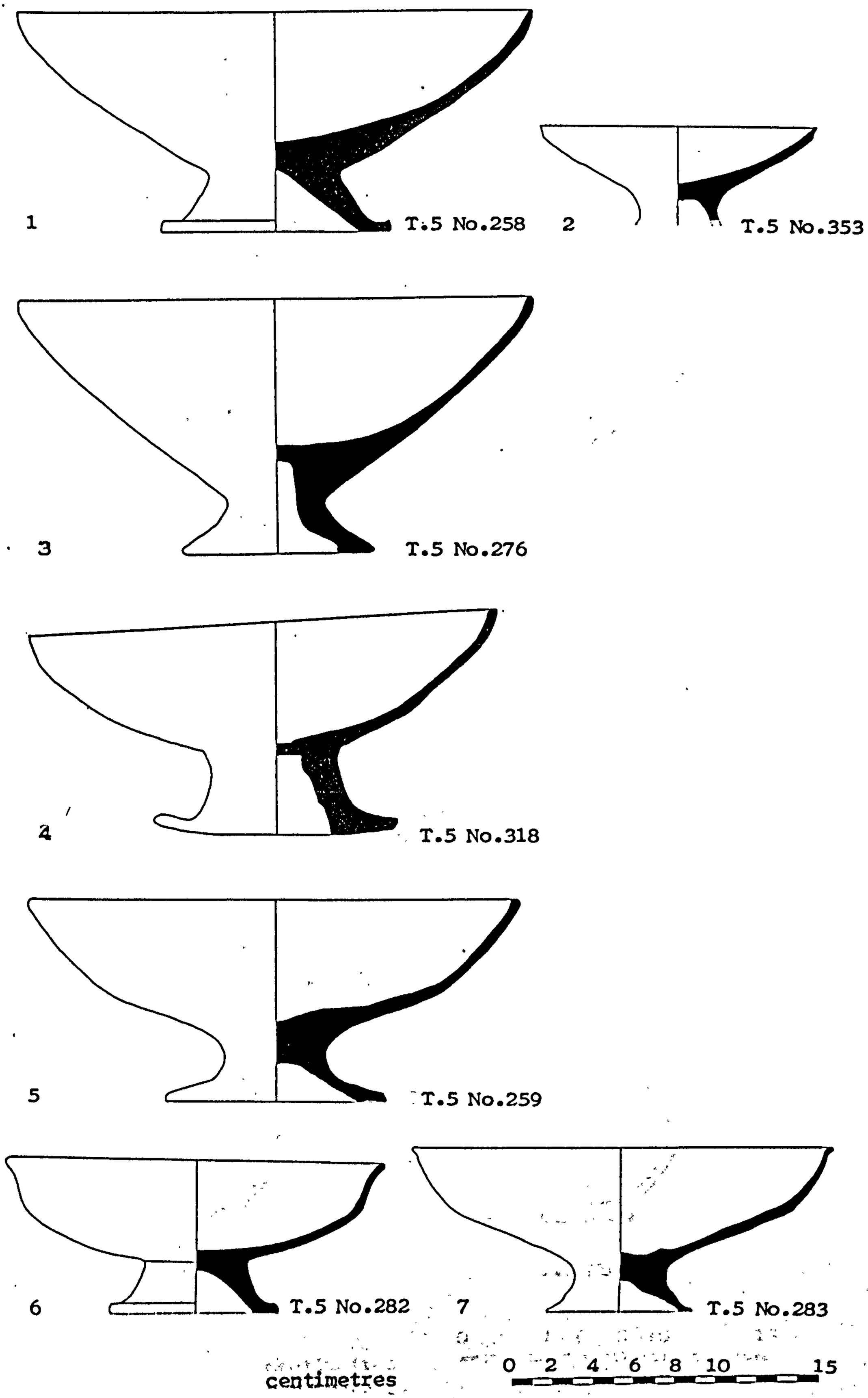
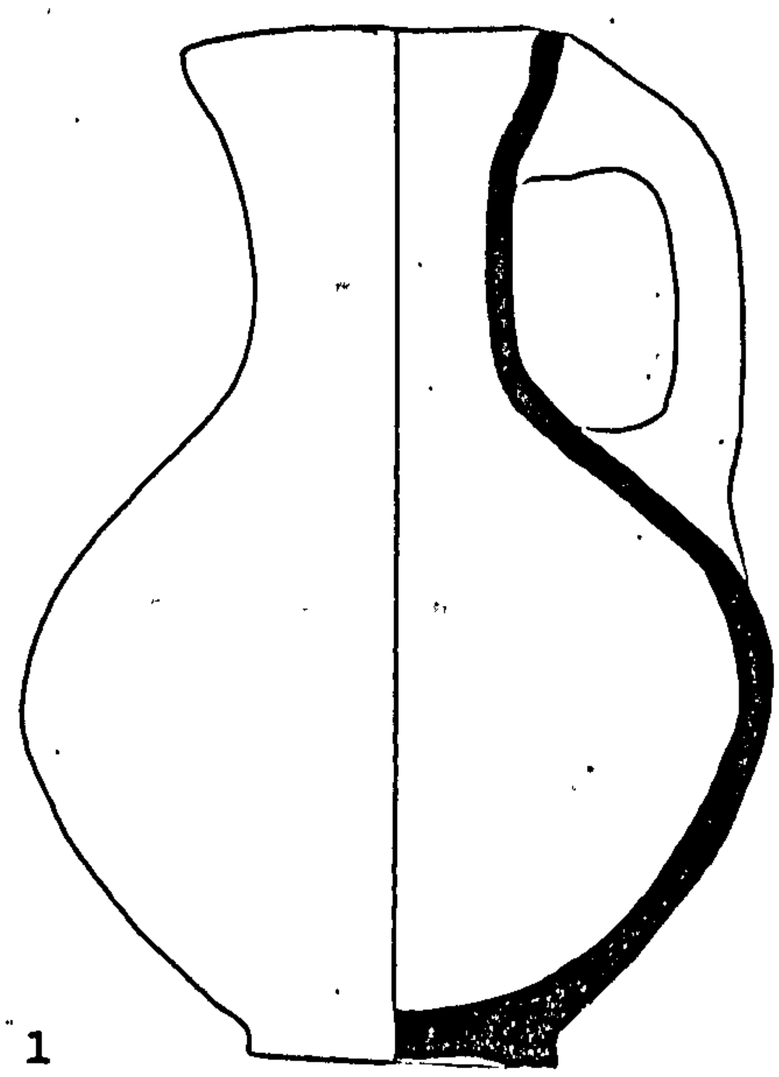


Fig. 36. Tomb 5 LBA pedestal Bowls



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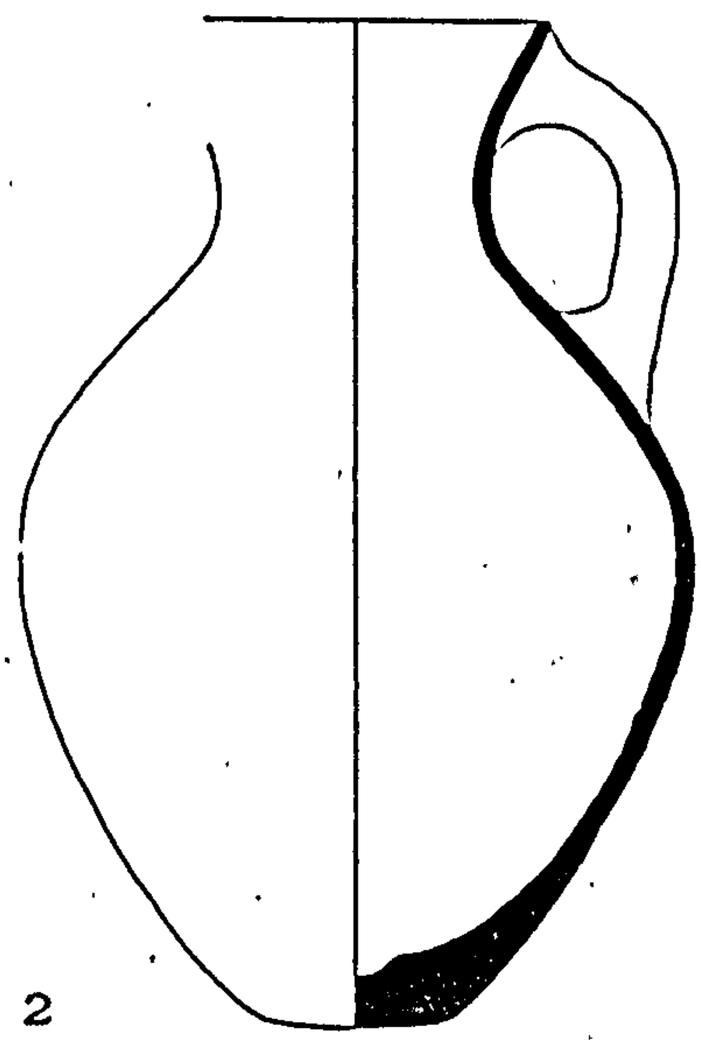
T.5 No.321



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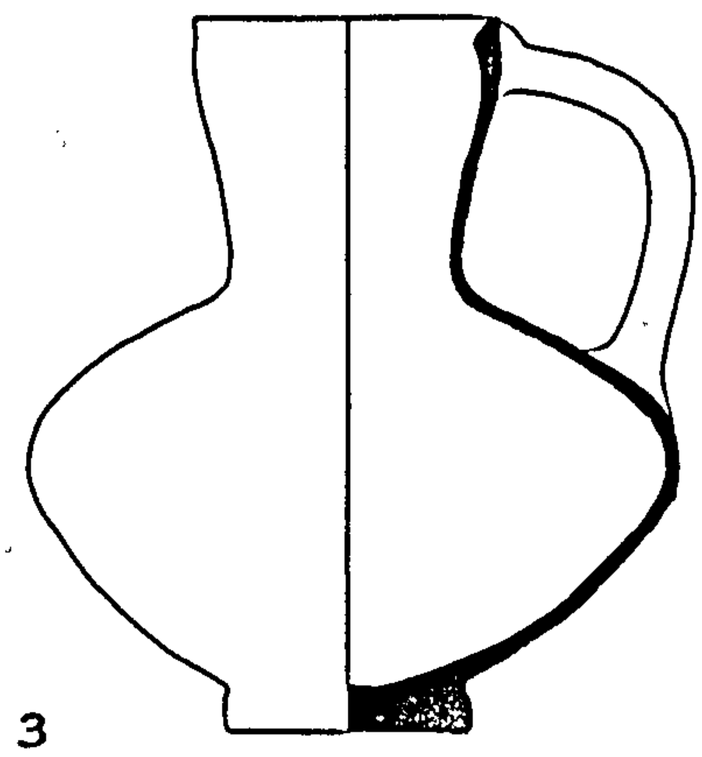
T.5 No.369



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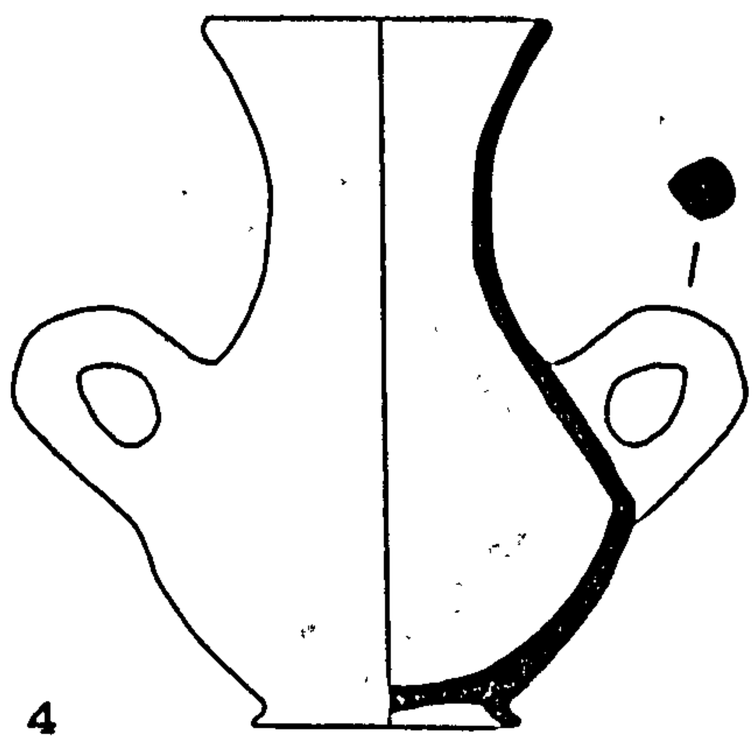
T.5 No.370



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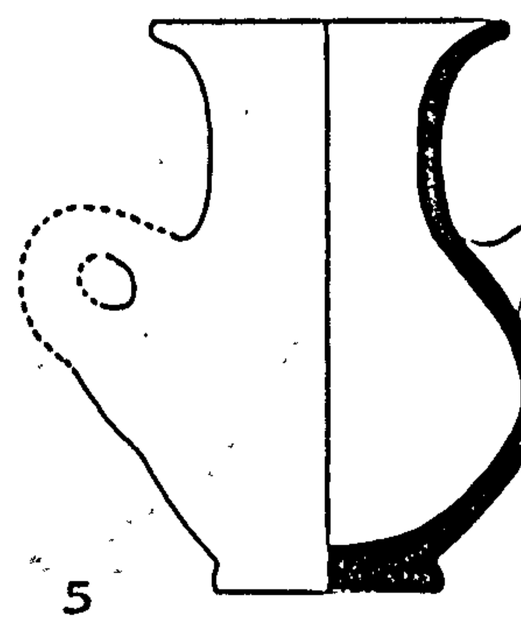
T.5 No.332



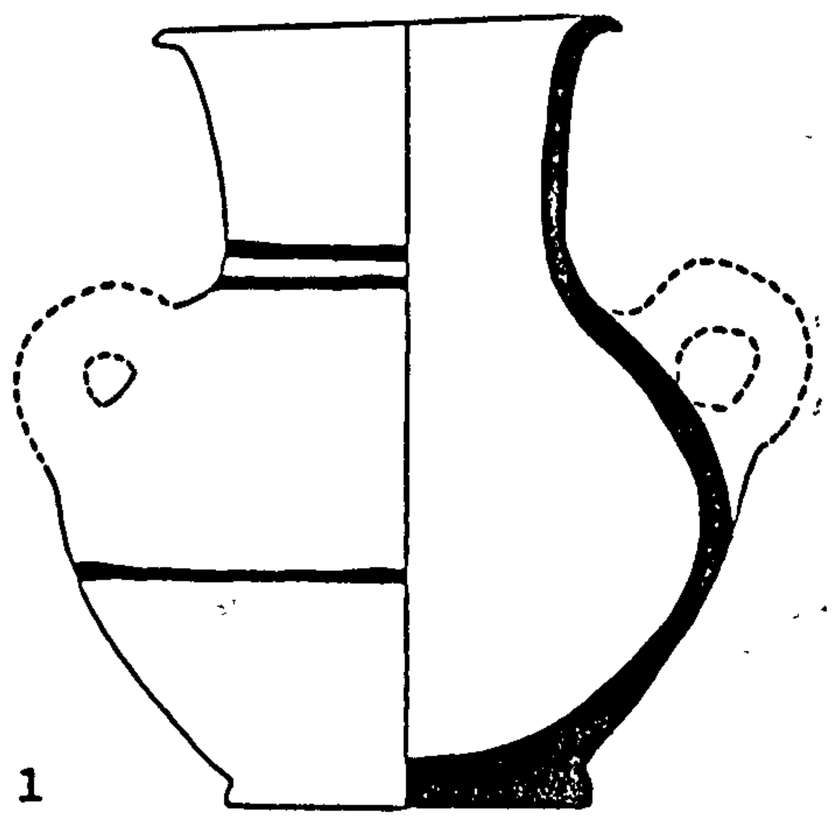
5

T.5 No.348

0 2 4 6 8 10 15

centimetres

Fig. 37. Tomb 5 LBA Jugs



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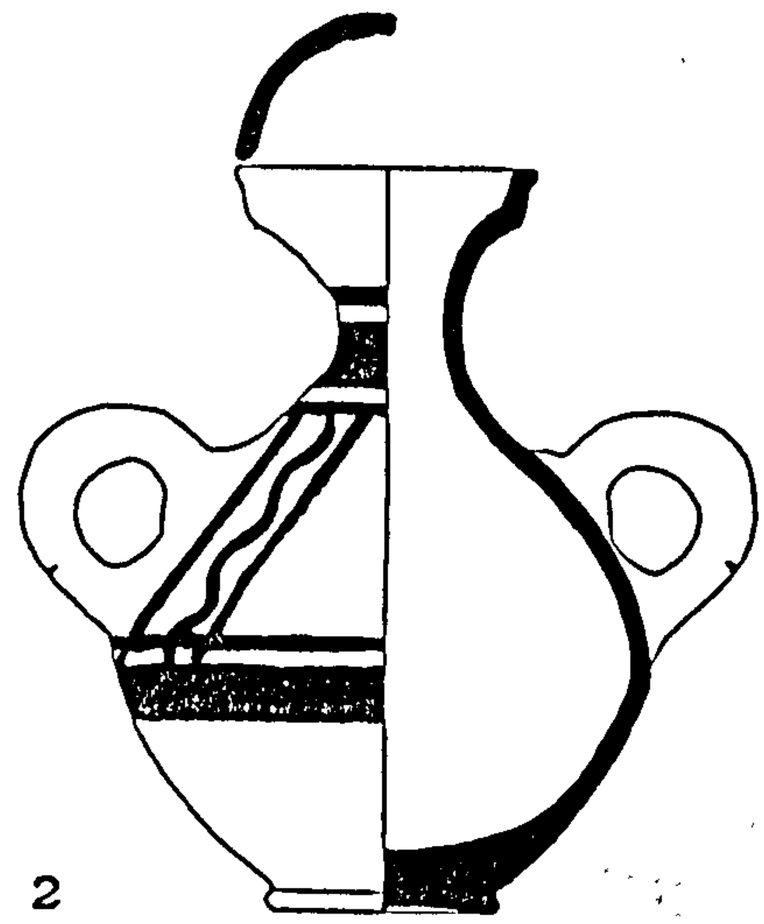
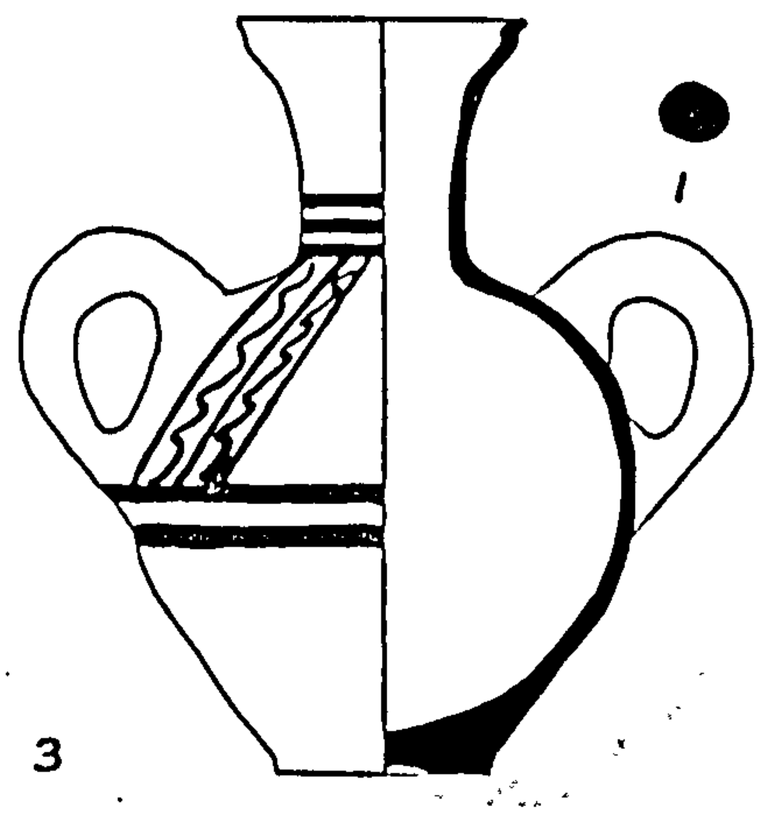
T.5 No.261



2

T.5 No.295



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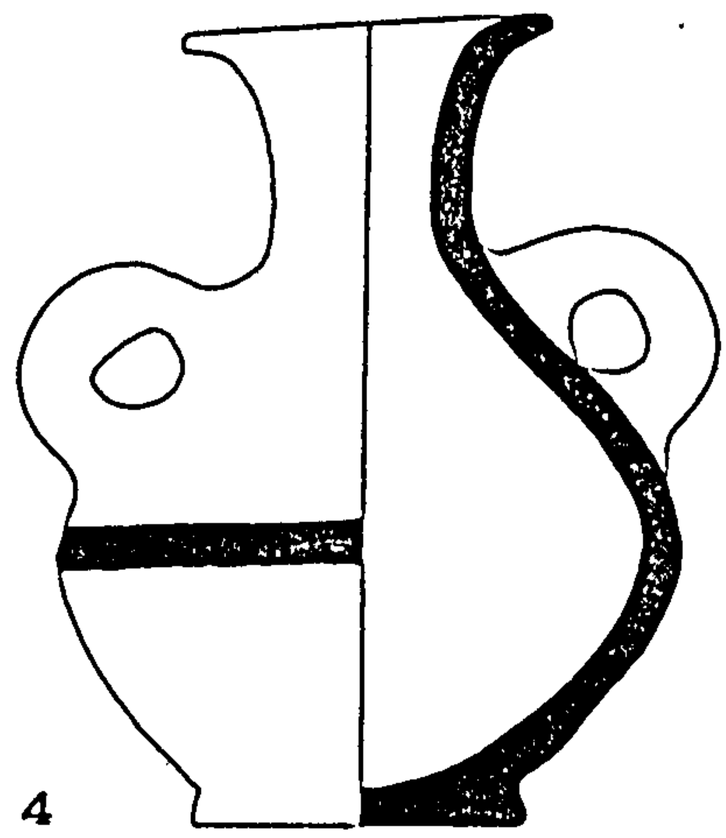
T.5 No.305



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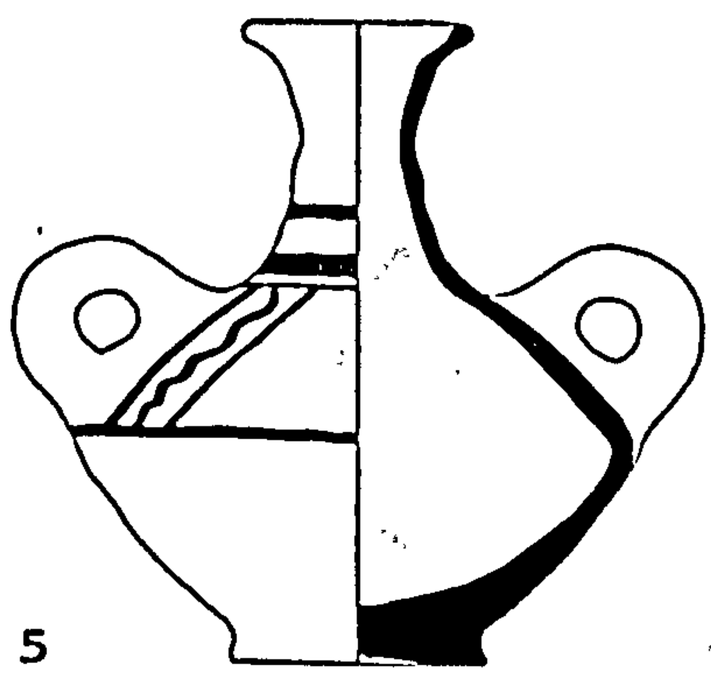
T.5 No.327



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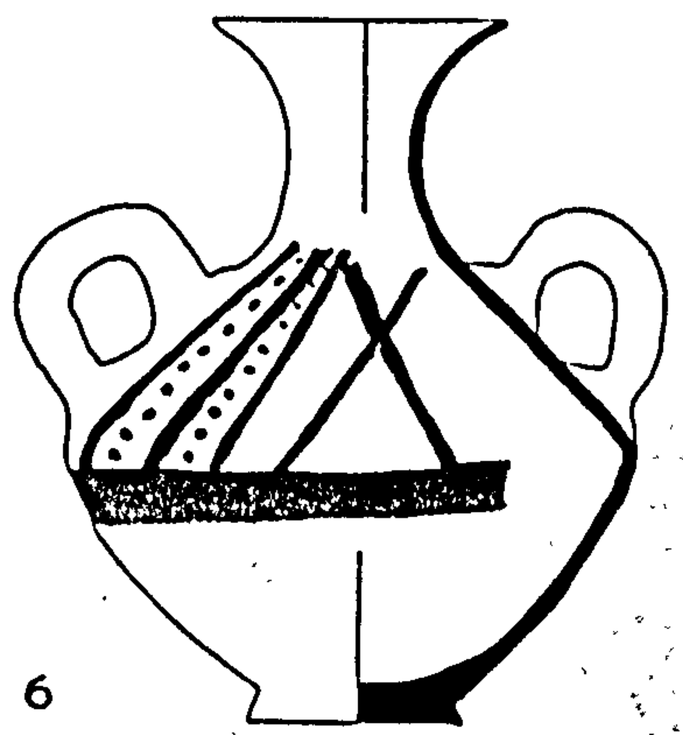
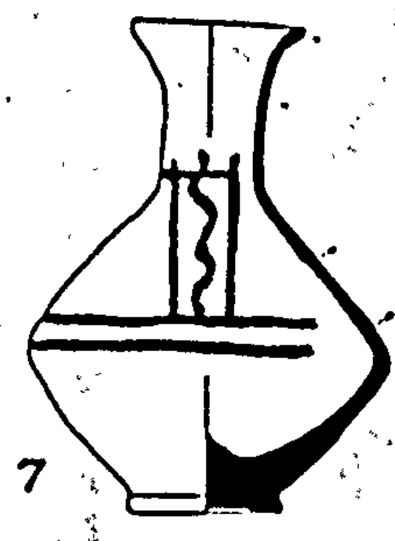
T.5 No.331



6

T.5 No.346

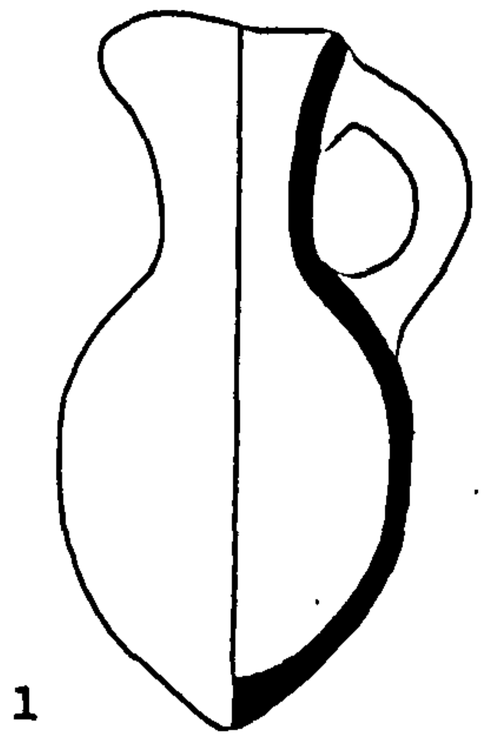


7

T.5 No.307

centimetres 0 2 4 6 8 10 15

Fig. 38. Tomb 5 LBA decorated Jugs



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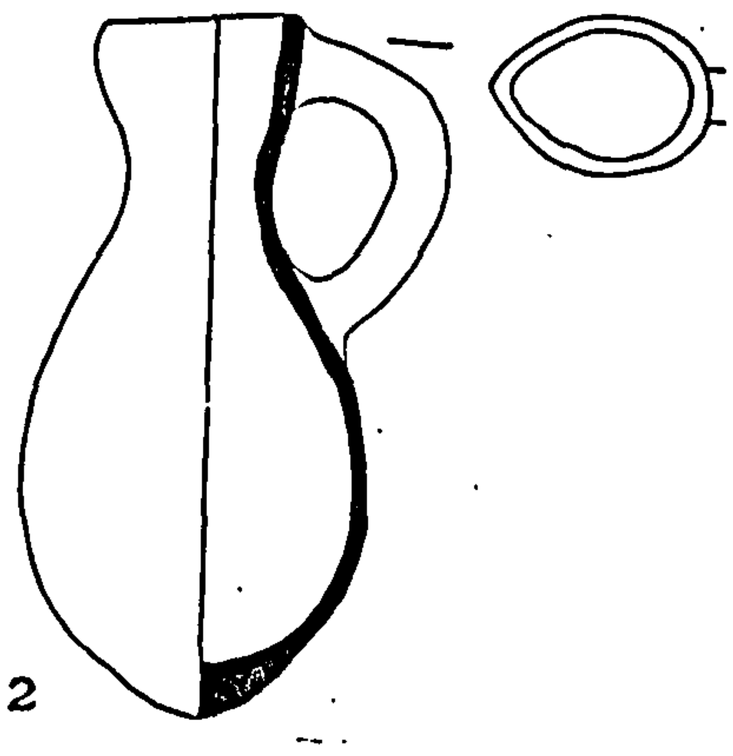
T.5 No.263



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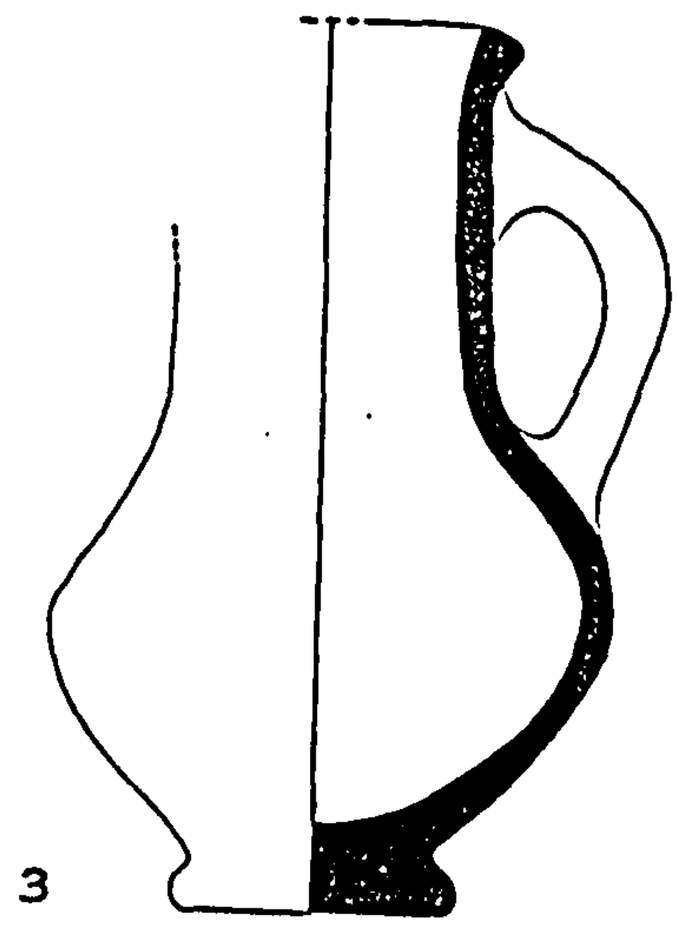
T.5 No.290



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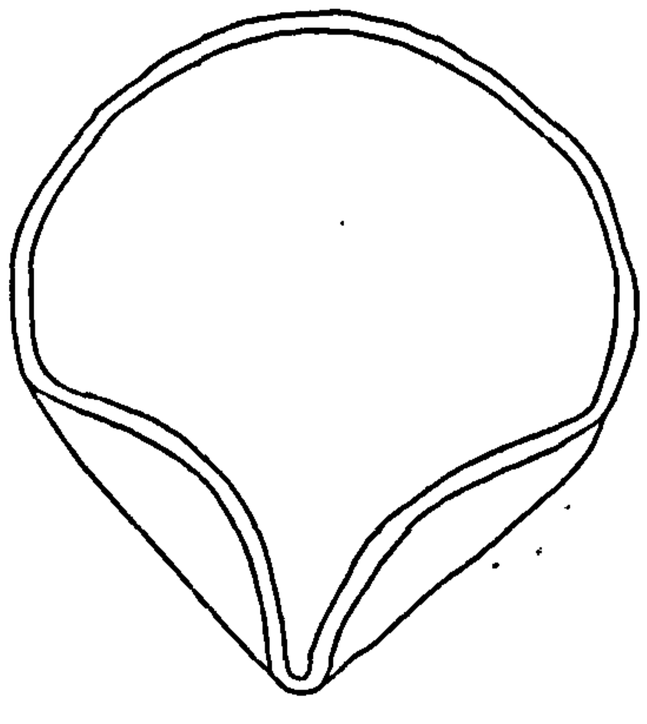

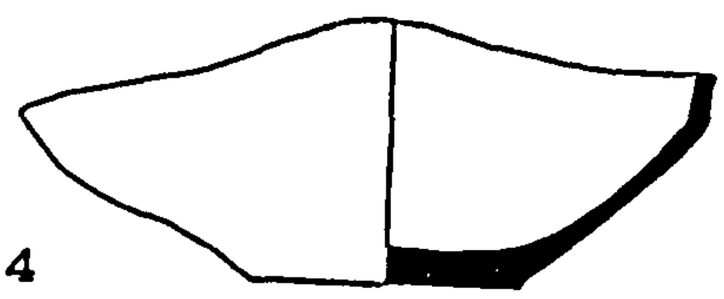

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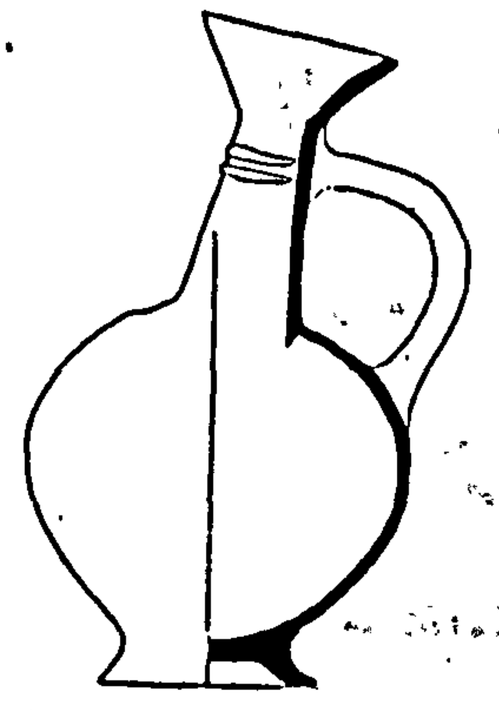

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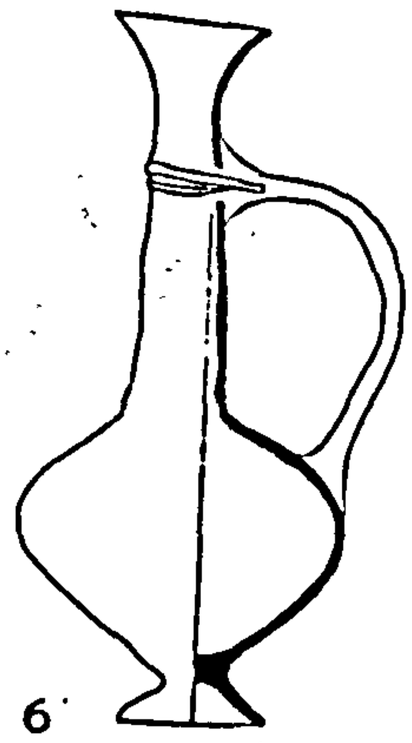

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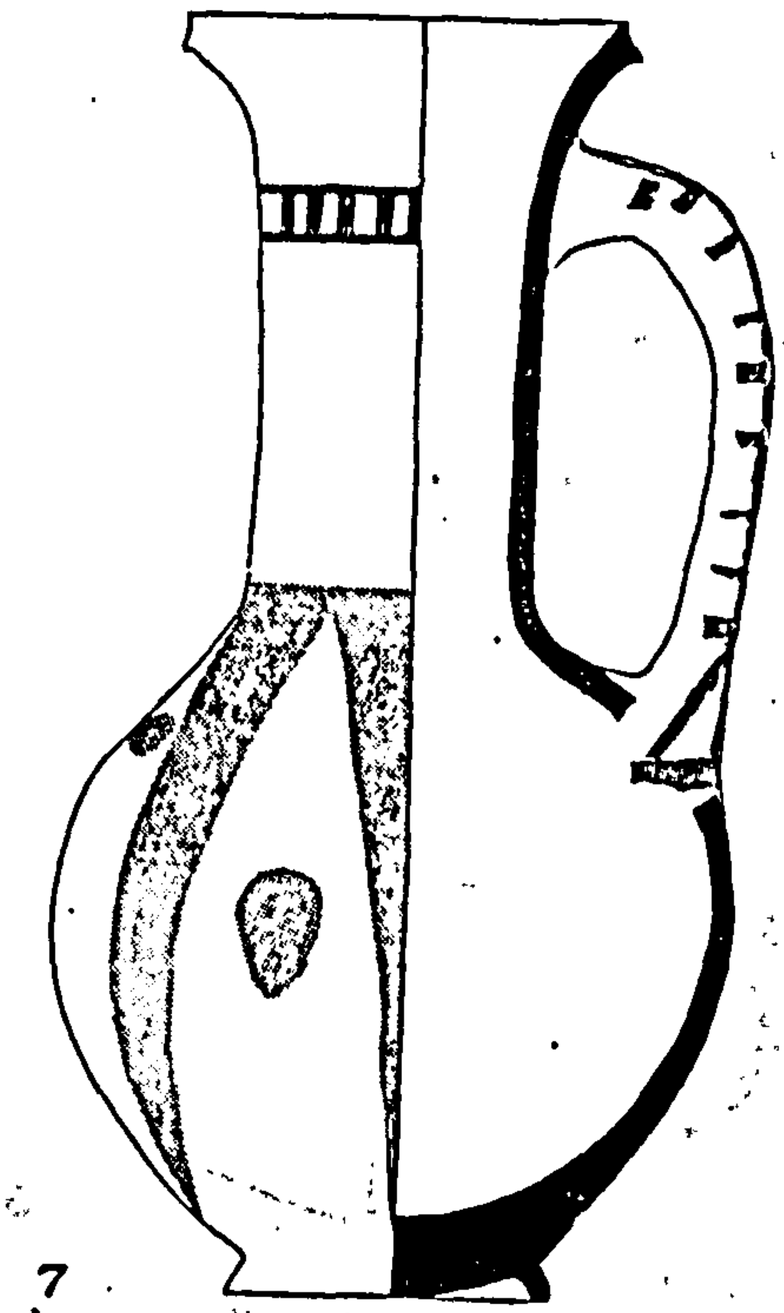


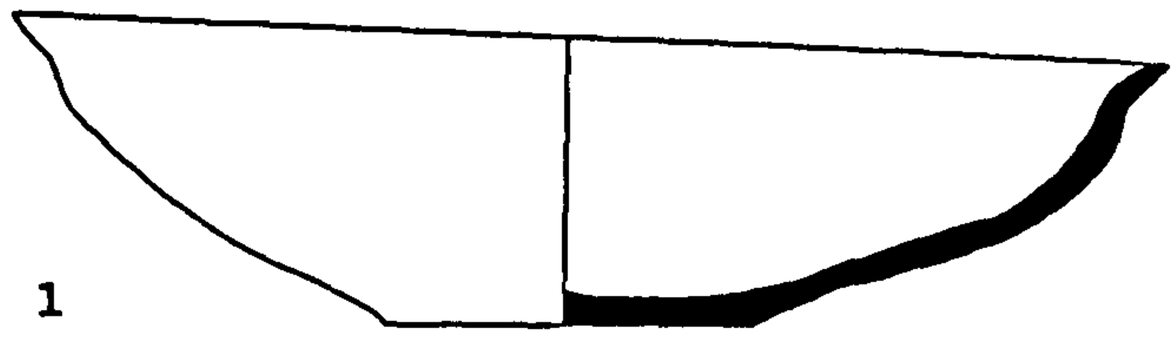
7

T.5 No.308

centimetres

0 2 4 6 8 10 15

Fig. 39. Tomb 5 Dippers, Lamps and Base Ring Ware



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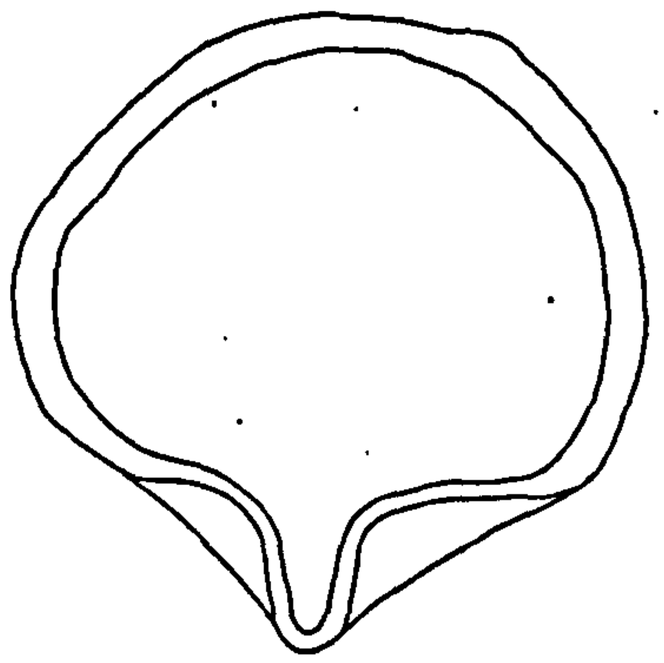
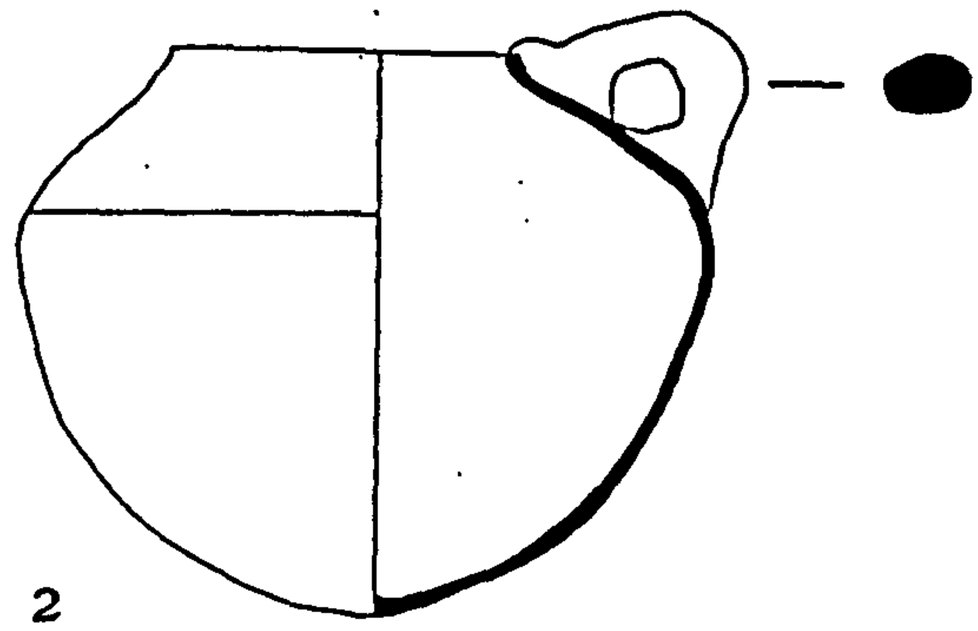
T.4 No.92





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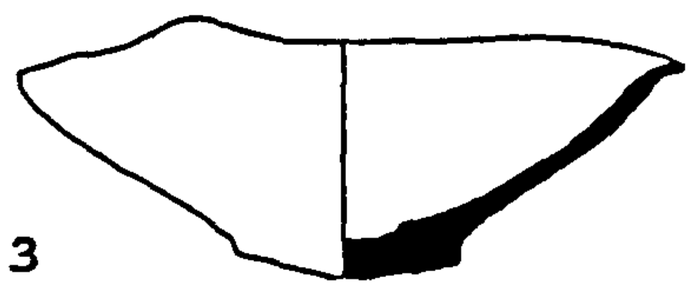
T.4 No.108



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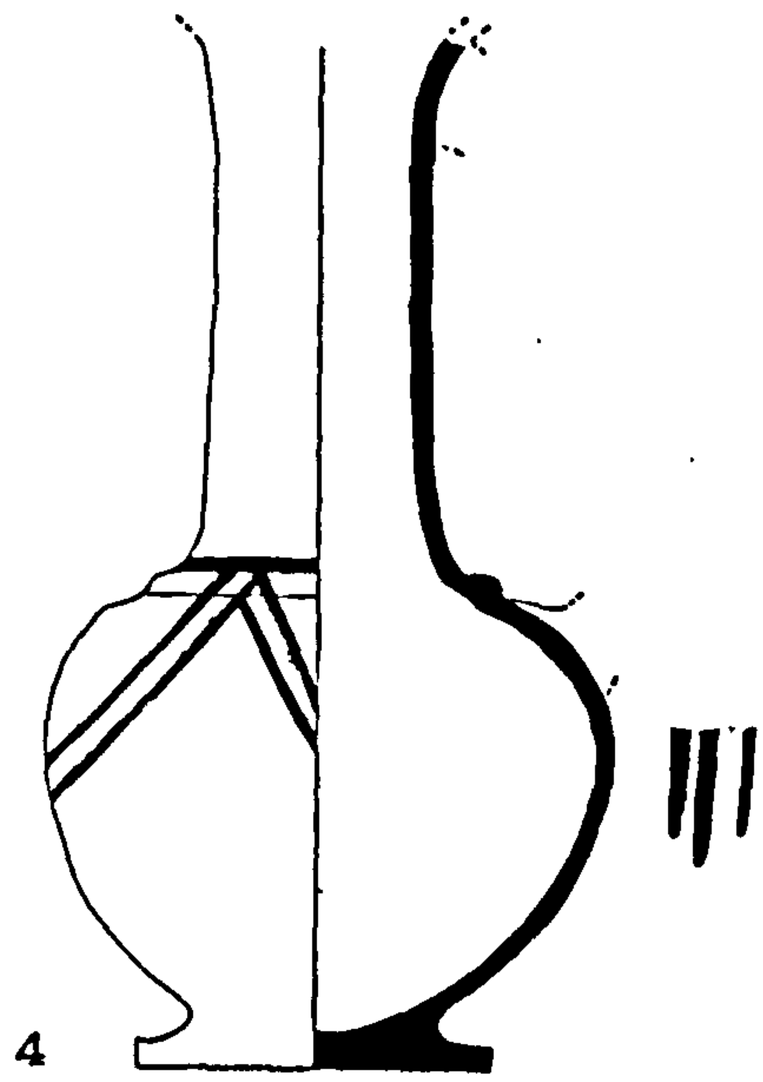

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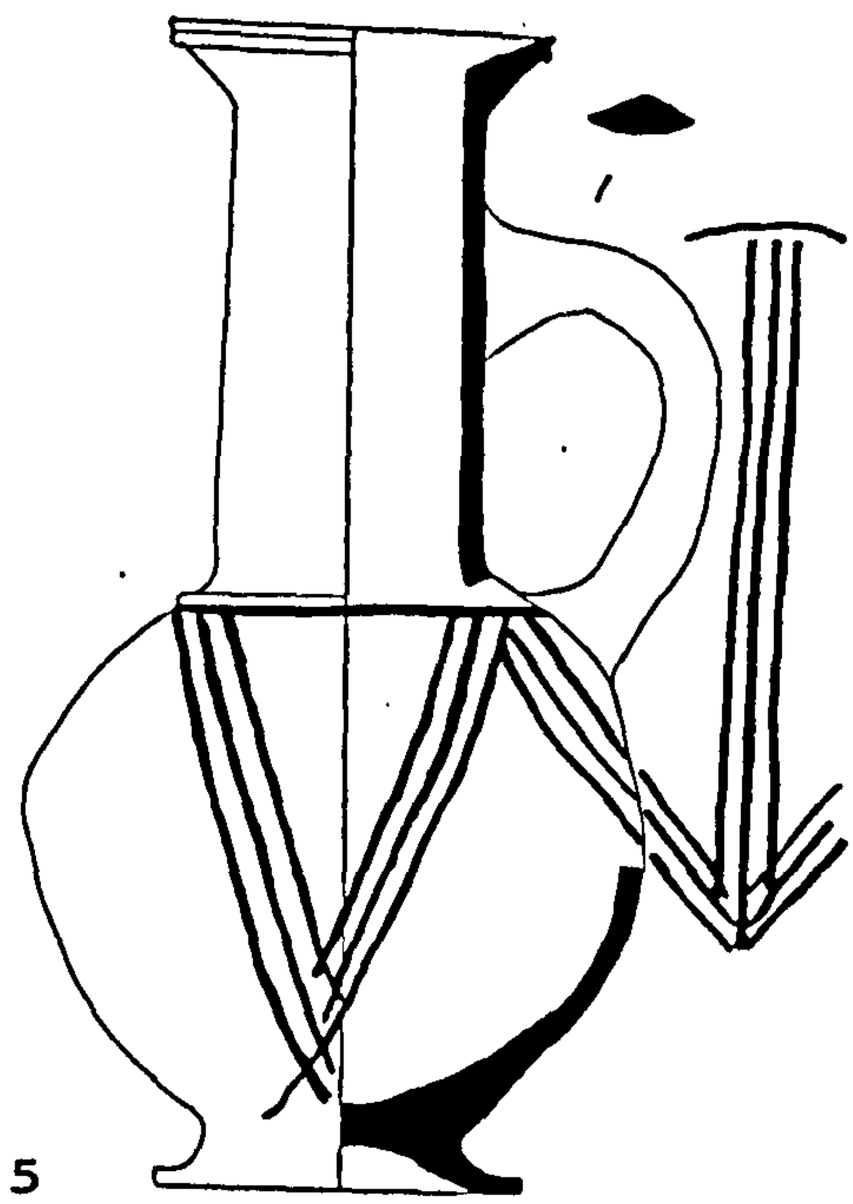
T.4 No.89



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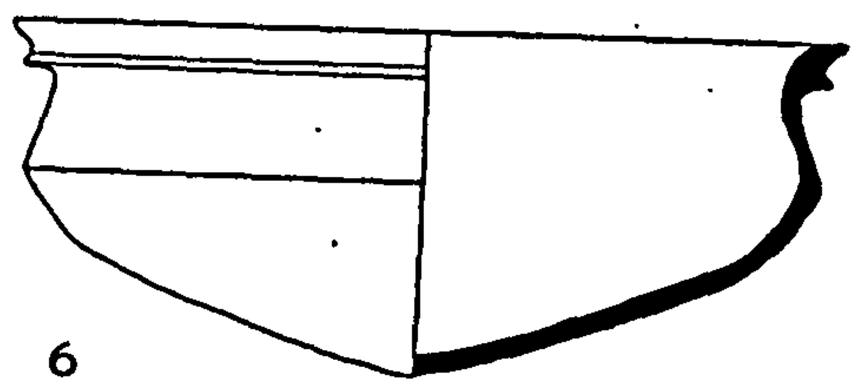
T.4 No.119

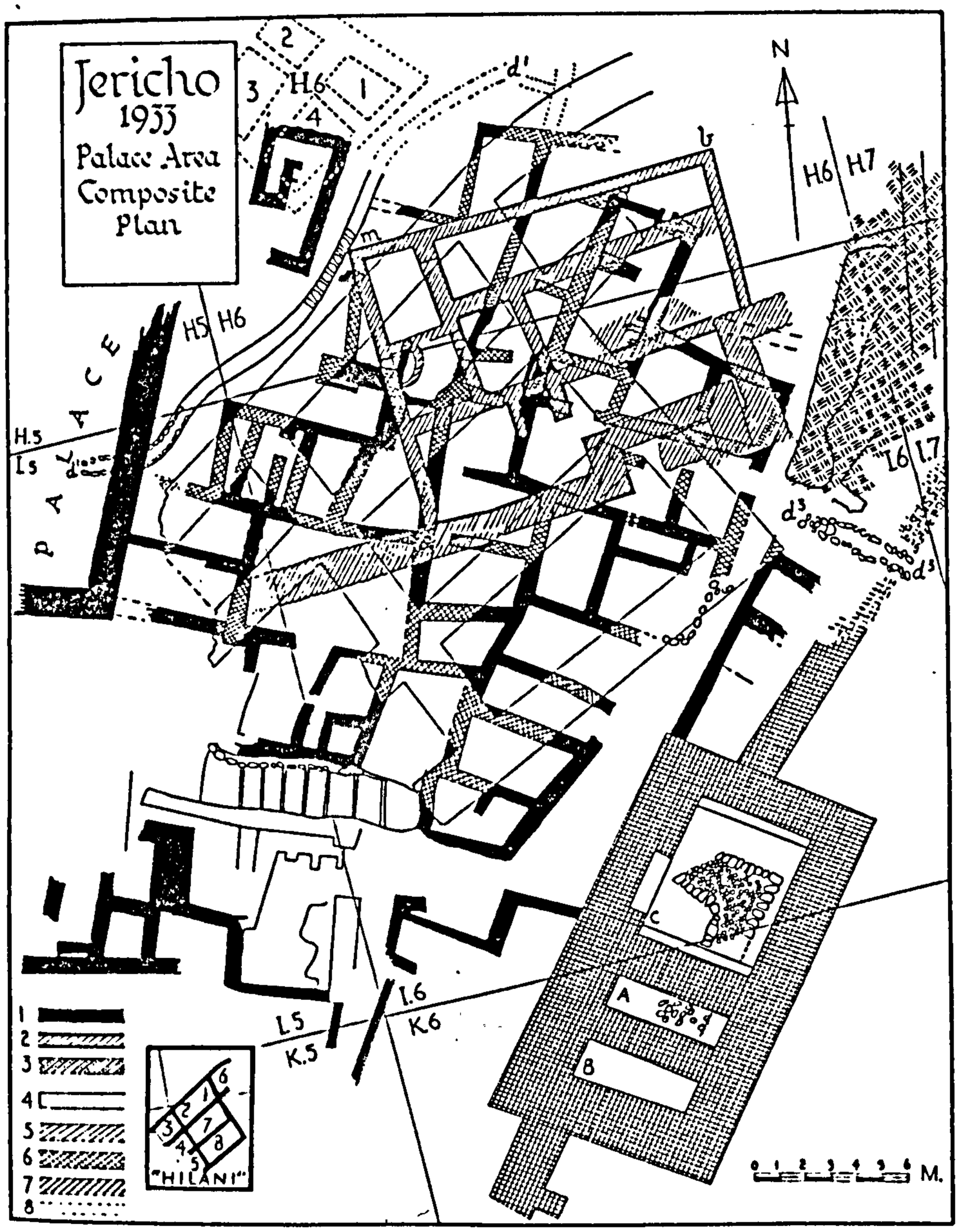


6

T.13 No.90

centimetres 0 2 4 6 8 10 15

Fig. 40. Tombs 4 and 13 LBA Pottery



J.33. COMPOSITE PLAN OF SUPERIMPOSED BUILDINGS IN THE PALACE AREA.

1. PALACE STORE-ROOMS (M.B II).
2. MIDDLE BUILDING (LBA.)
3. MIDDLE BUILDING OVER PALACE STORE-ROOMS.
4. "HILANI" (E.I A. I).
5. "HILANI" OVER MIDDLE BUILDING
6. "HILANI" OVER PALACE STORE-ROOMS.
7. "HILANI" OVER MIDDLE BUILDING AND PALACE STORE-ROOMS
8. HOUSE IN SQUARE H.6.

Fig. 41. Middle Building Plan (from Garstang 1934, pl.XIII))

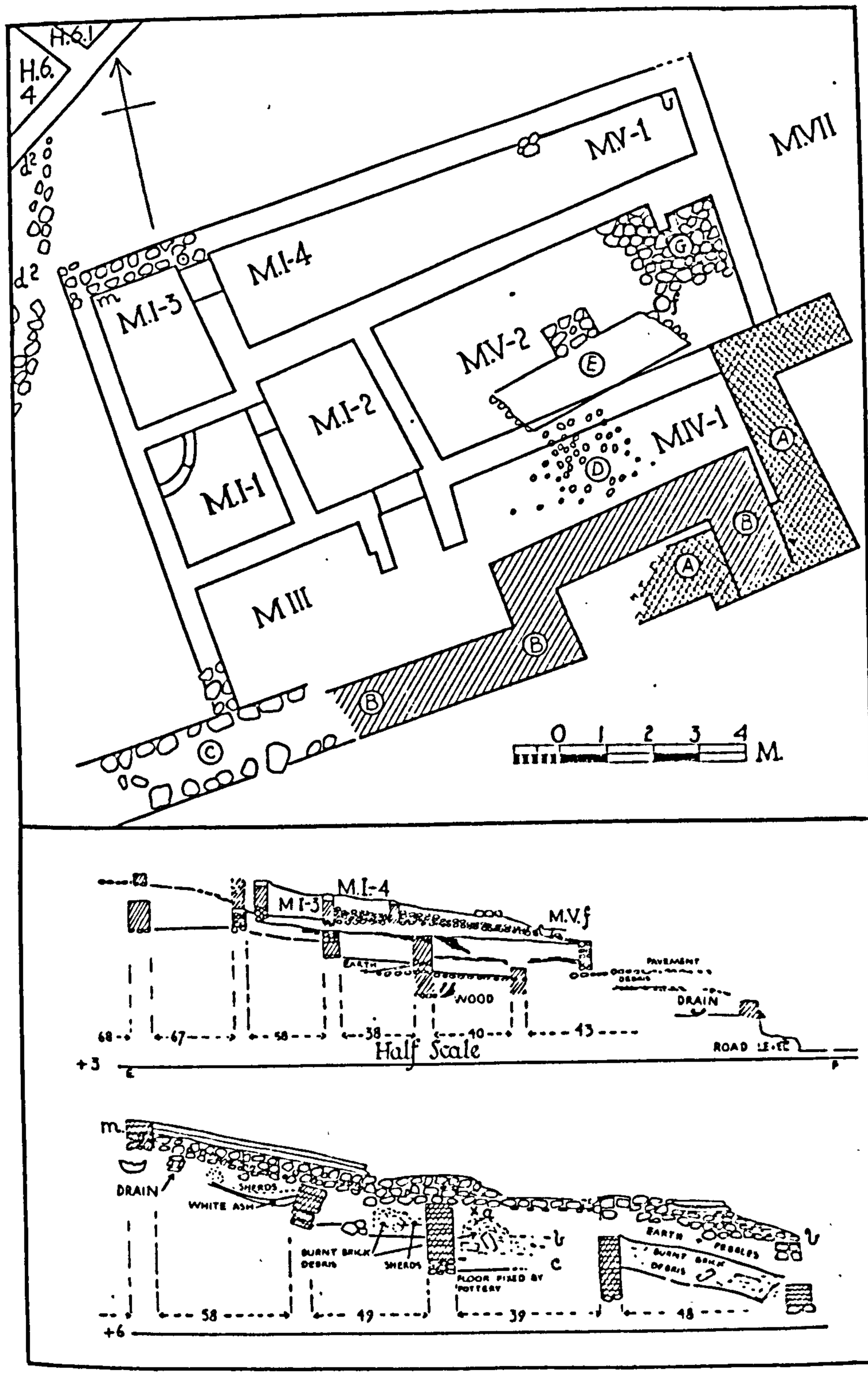


Fig. 42. Middle Building plan and section
(from Garstang 1934, pl.XIV)

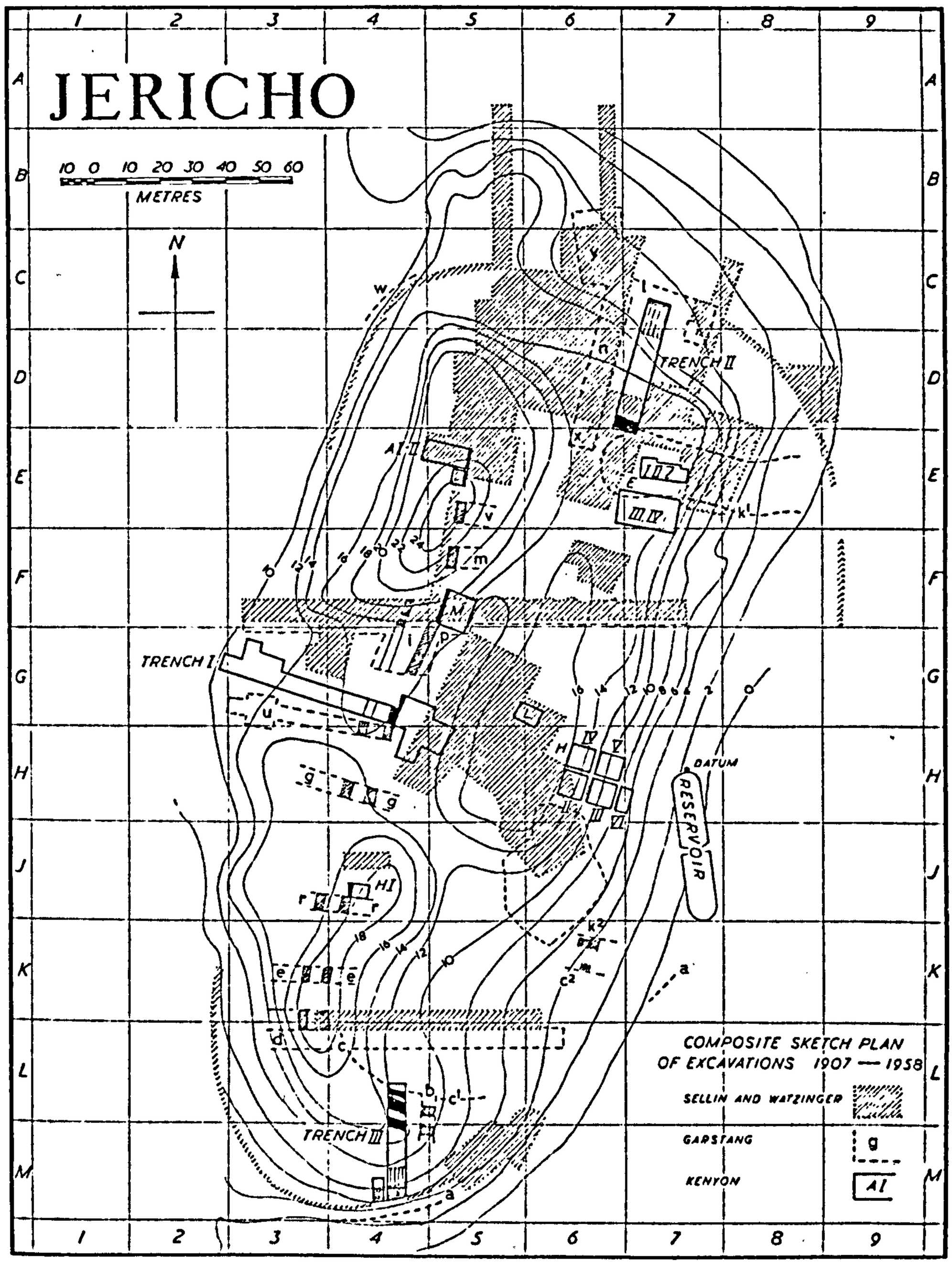


Fig. 43. Plan of Jericho excavations (from Kenyon 1981, fig.1)

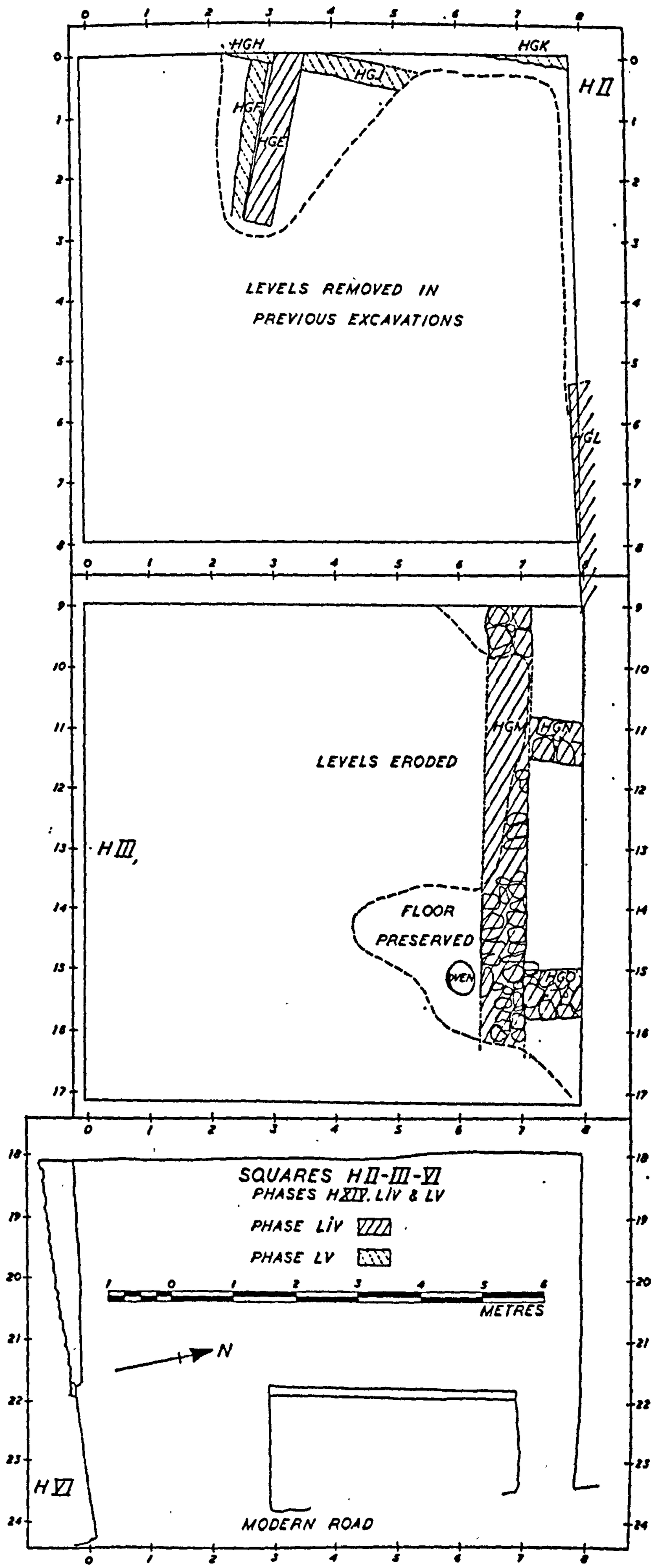
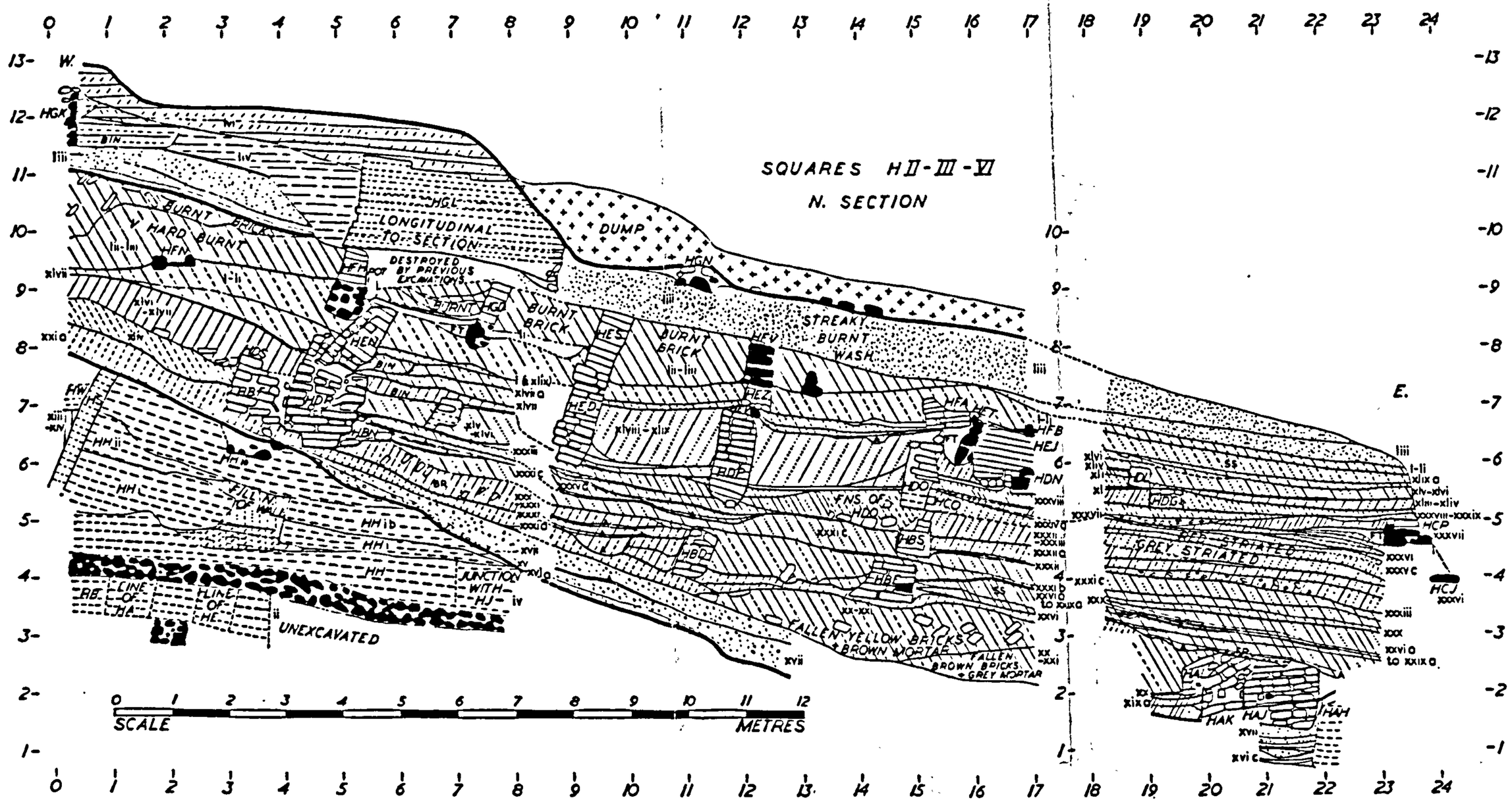


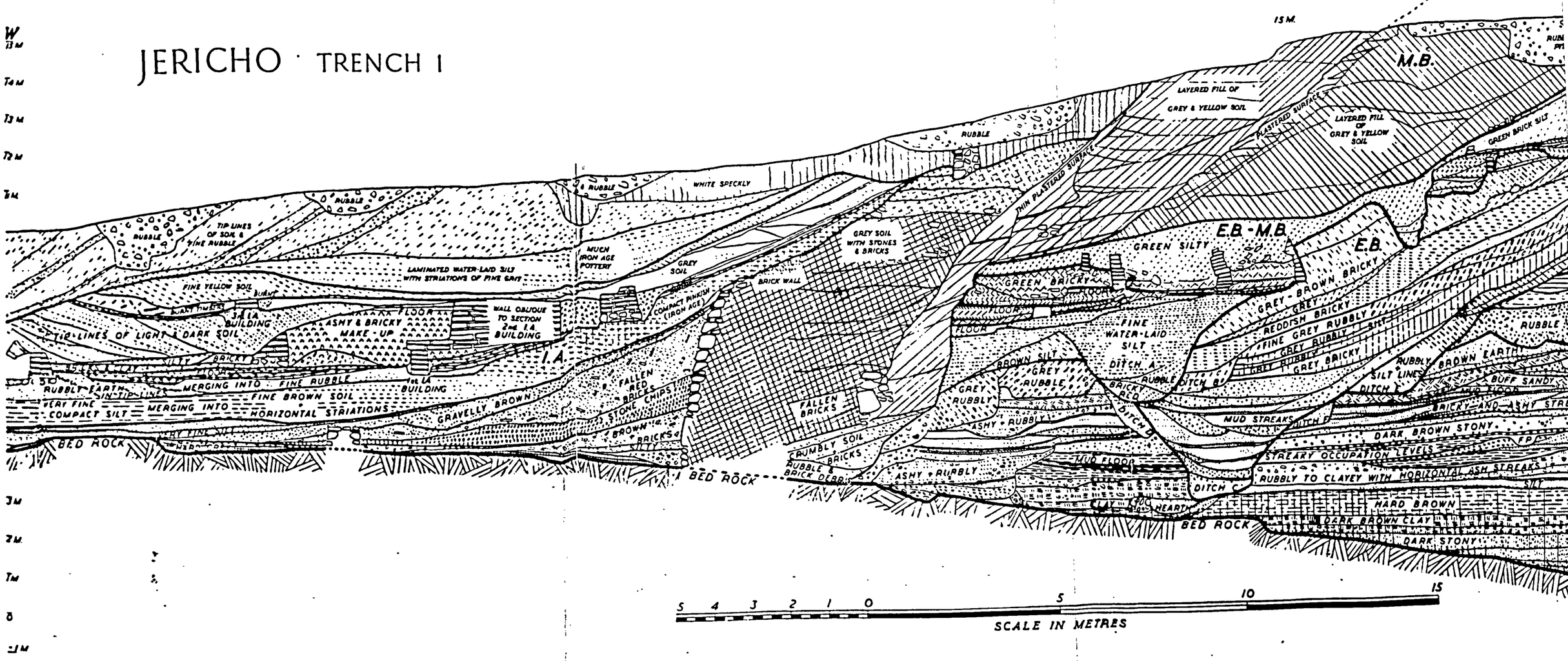
Fig. 44. Plan of LBA walls (from Kenyon 1981, pl.336)



Squares HII, III, VI. North Section. *Errata: Phase numbered xvic, between c. 20·80 m. and 21·80 m. E., 0·80 m. H., should be xvi. Phase numbered xxx, between c. 18·20 m. E., 3·50 m. H. and 23 m. E., 3 m. H., should be xxxib. Phase numbered xxxiii, c. 23·10 m. E., 3·20 m. H., should be xxxii.*

Fig. 45. (from Kenyon 1981, pl.339)

JERICHO · TRENCH I



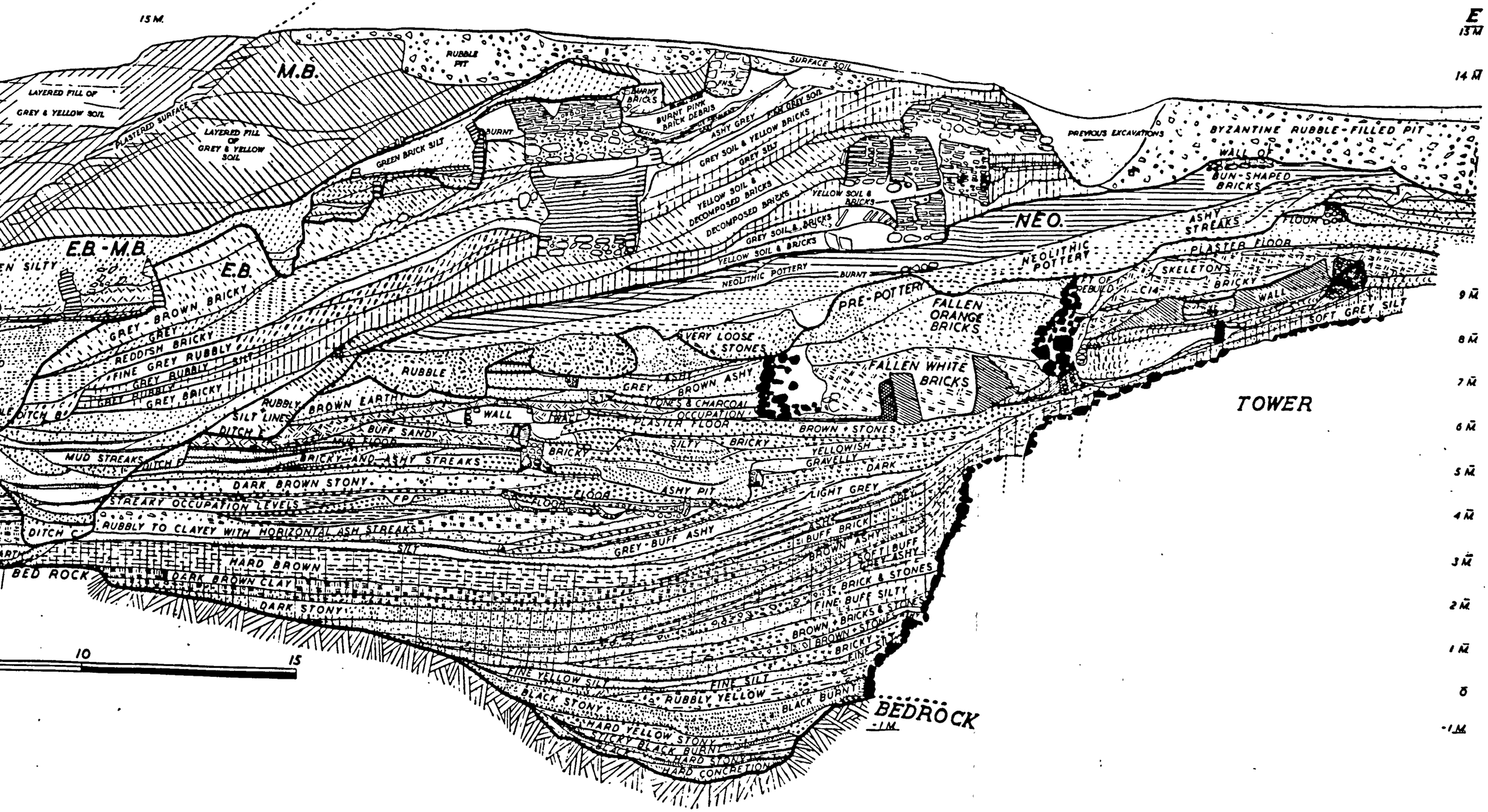
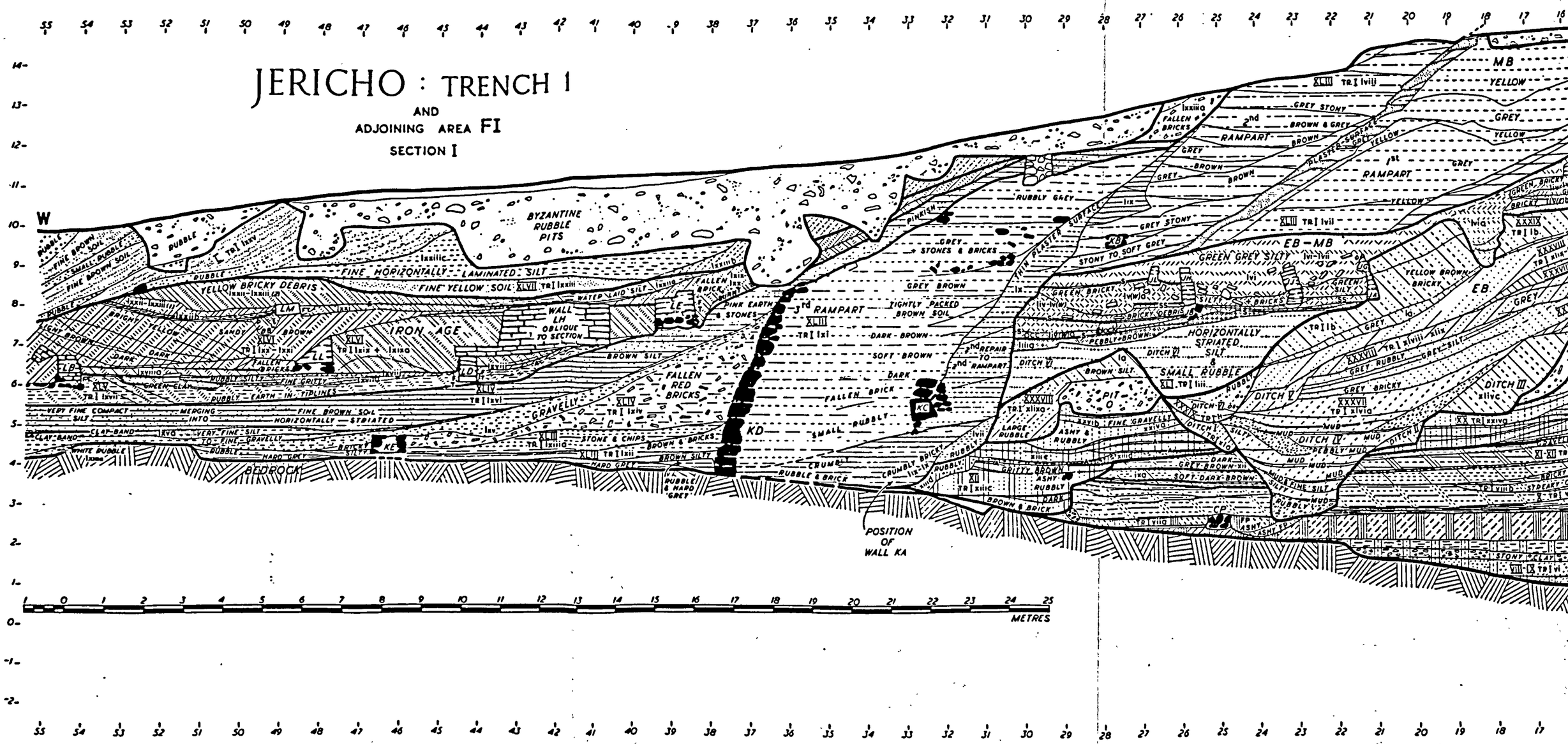


Fig. 46. Trench I section (from Kenyon 1956a, 70/71)


JERICHO : TRENCH I
AND
ADJOINING AREA FI
SECTION I
W
BYZANTINE RUBBLE PITS
IRON AGE
WALL LH OBLIQUE TO SECTION
FINE HORIZONTALLY LAMINATED SILT
FINE YELLOW SOIL
YELLOW BRICKY DEBRIS
FALLEN RED BRICKS
GRAVELLY
BEDROCK
3rd RAMPART
2nd RAMPART
1st RAMPART
EB-MB
EB
MB
HORIZONTALLY STRIATED SILT
SMALL RUBBLE
DITCH V
DITCH IV
DITCH III
PIT
POSITION OF WALL KA
METRES

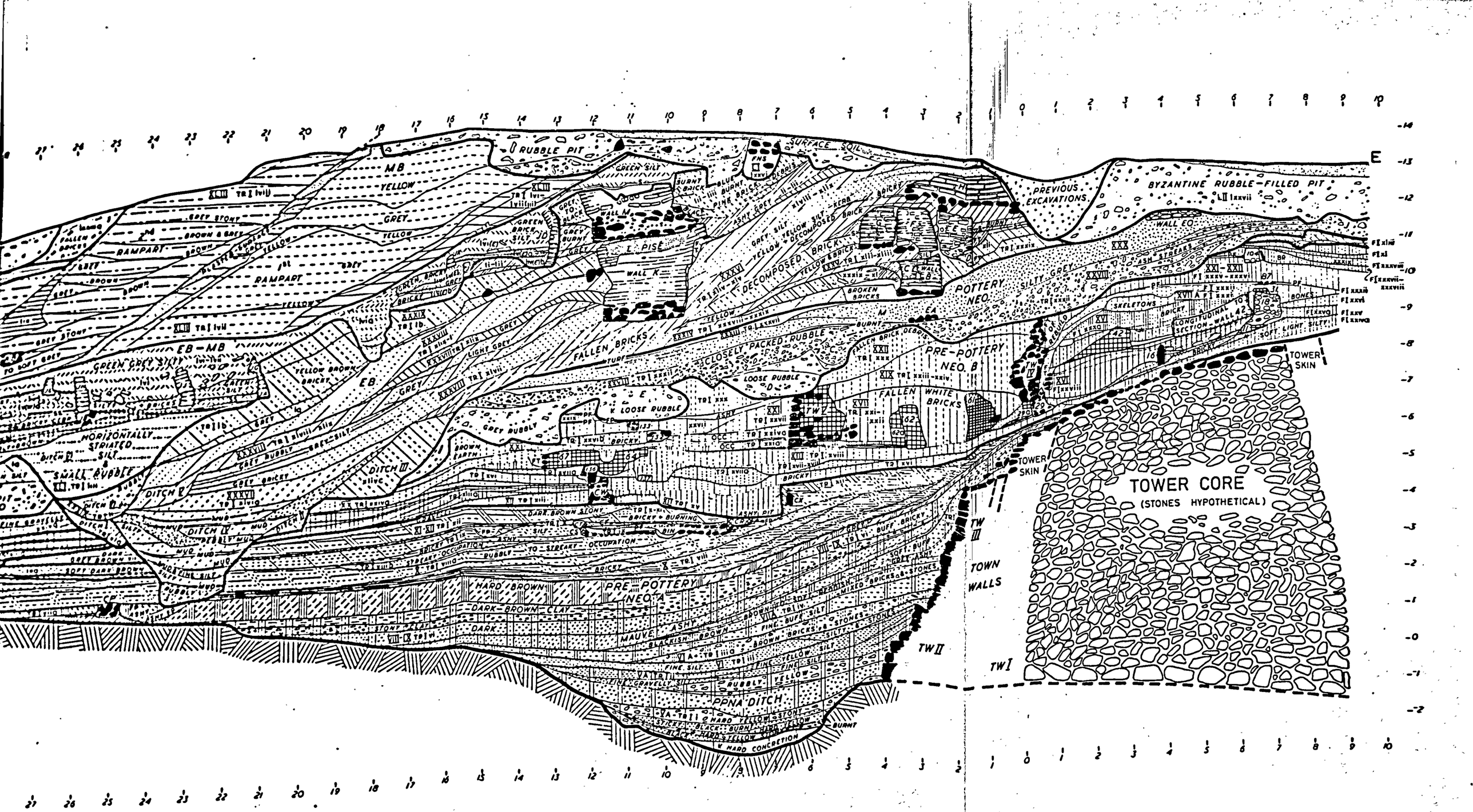


Fig. 47. Trench I section (from Kenyon 1981, pl.236)

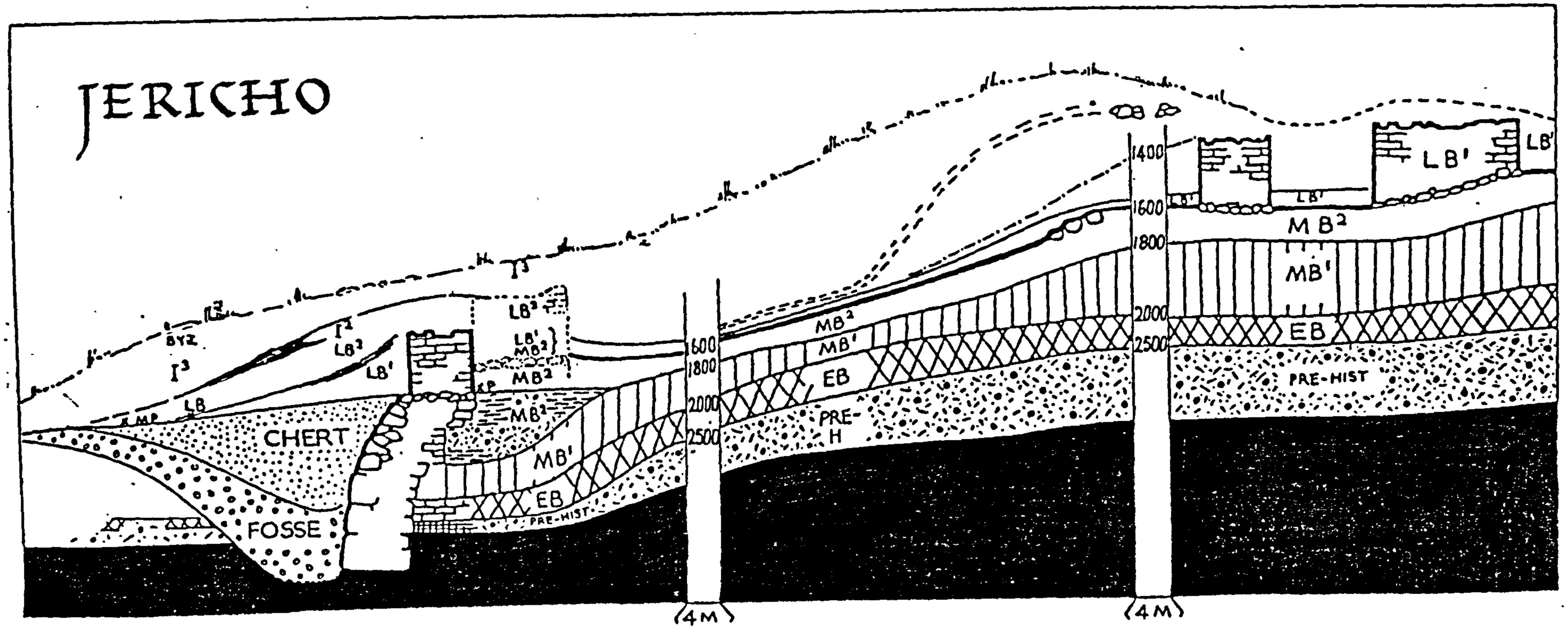


Fig. 48. Garstang section (from Garstang 1930, pl.VI)

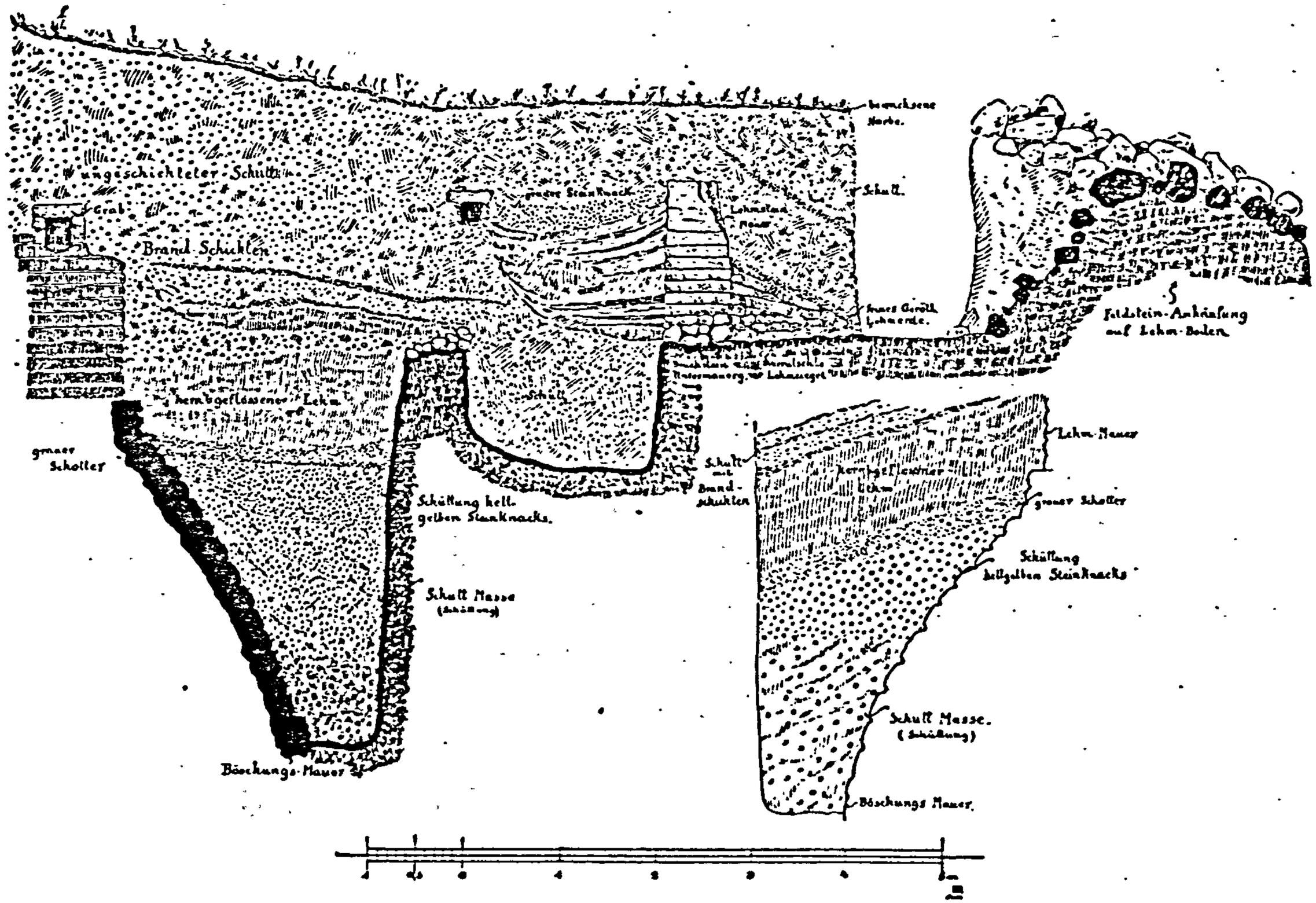


Fig. 49. North section (from Sellin and Watzinger 1913, Abb.34)

Plate 1. Tomb 5 No.184: straw particle x 320

Plate 2. Tomb 5 No.184: flint inclusion x 640

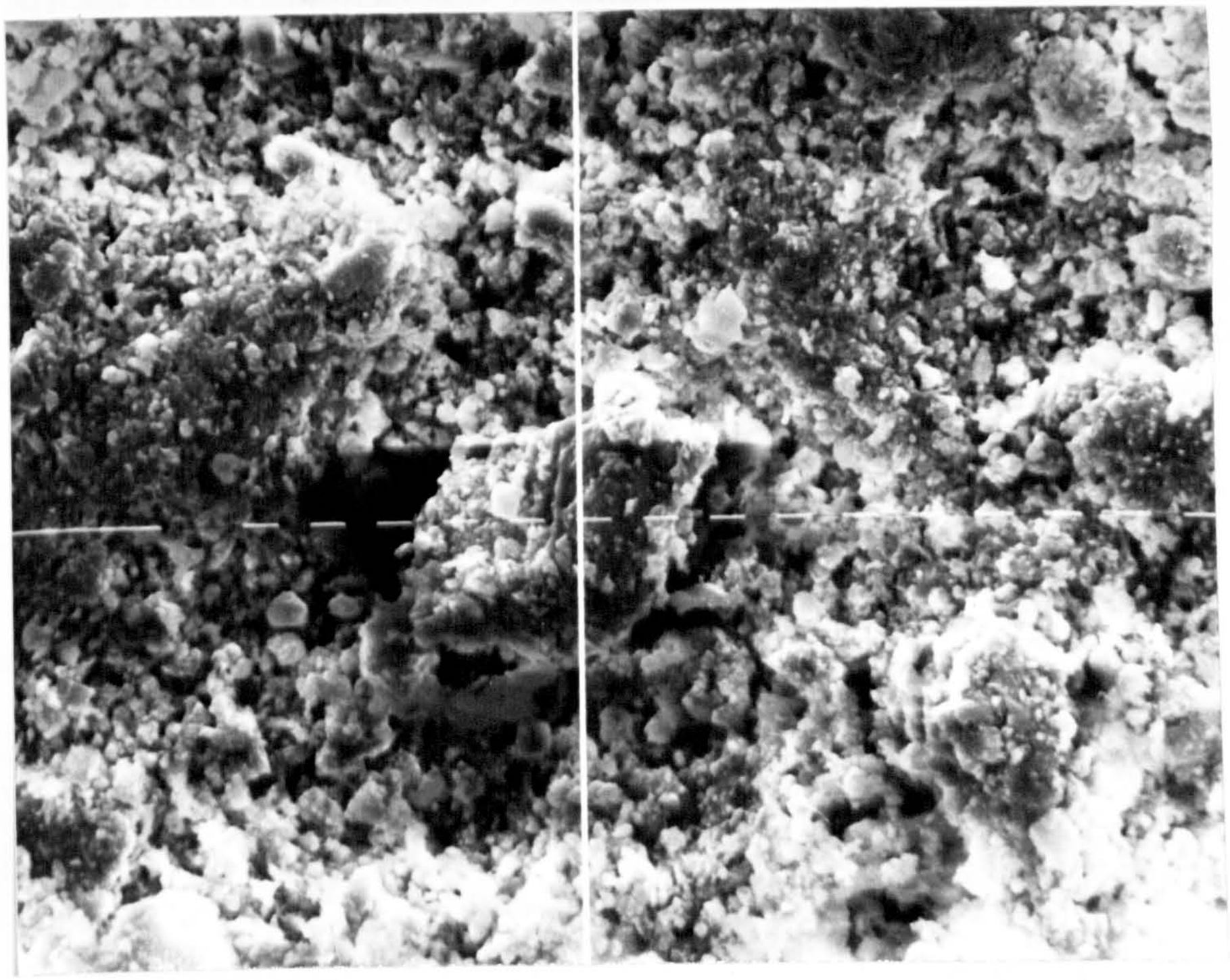


Plate 3. Tomb 5 No.152: natural quartz inclusion x 640

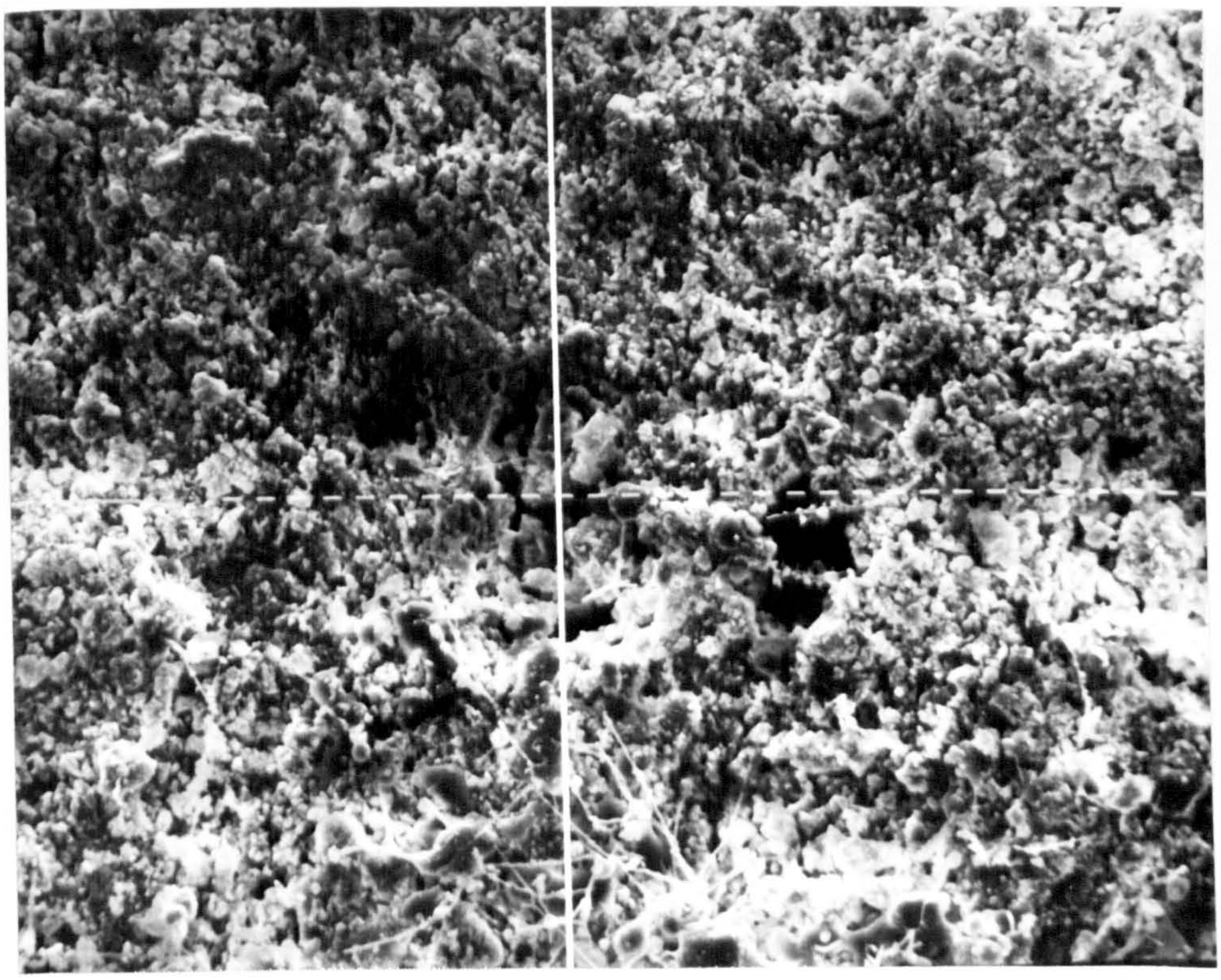


Plate 4. Tomb 5 No.192: shattered limestone inclusion x 160

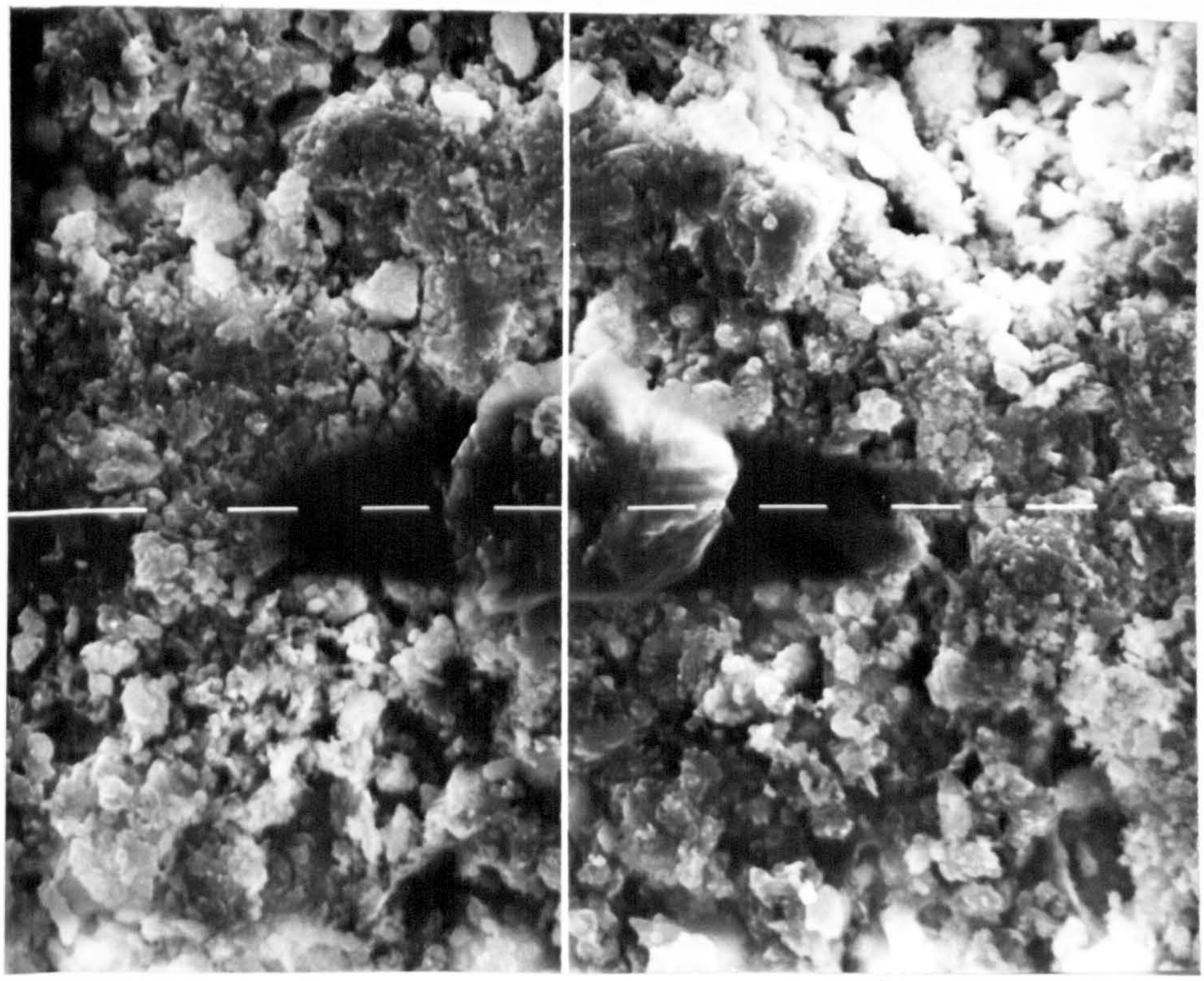


Plate 5. Tomb 5 No.192: quartz or flint inclusion x 320

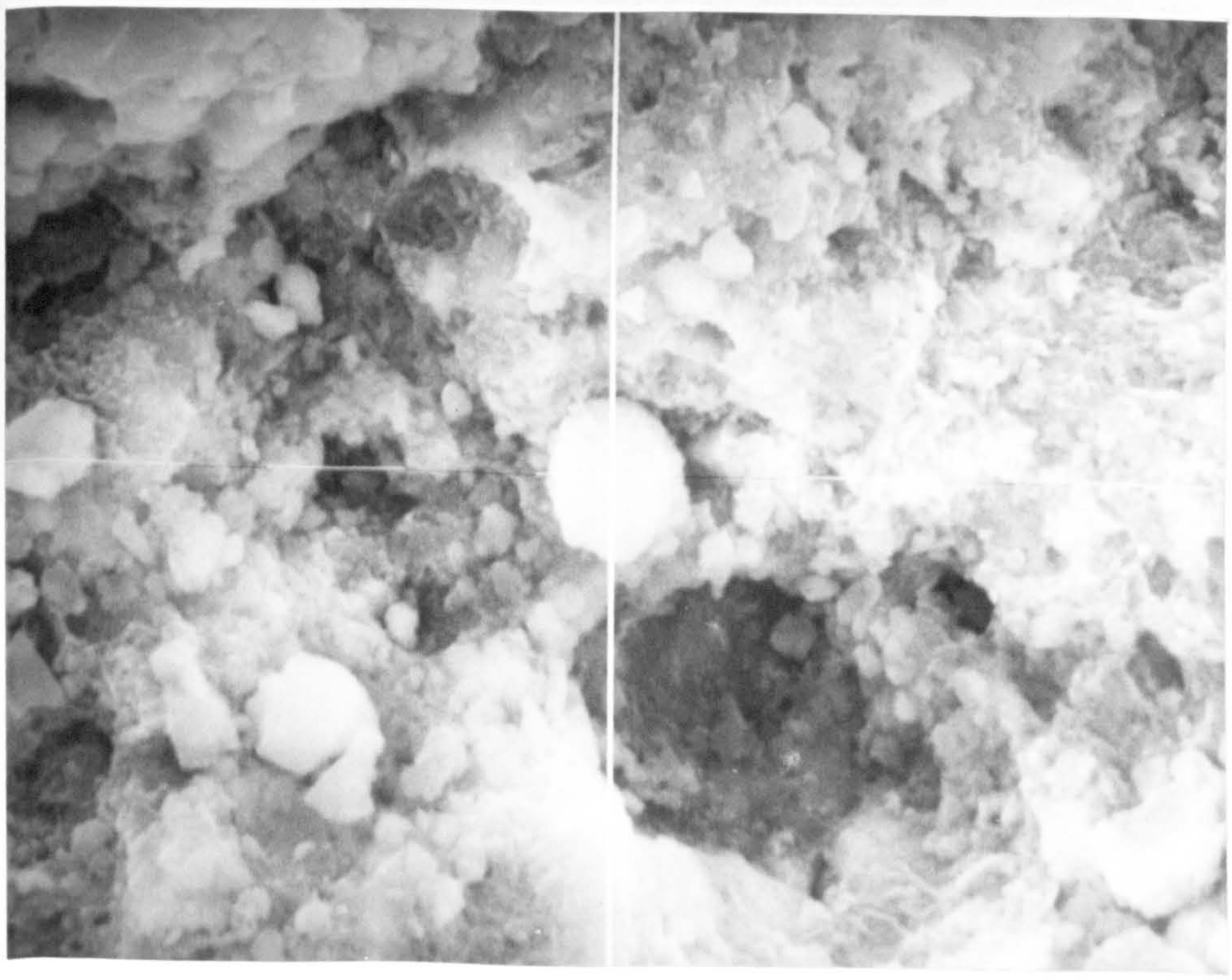


Plate 6. Tomb 5 No.221: grog particle x 1250

Plate 7. Tomb 5 No.221: morphology x 80

Plate 8. Tomb 5 No.221: morphology x 640

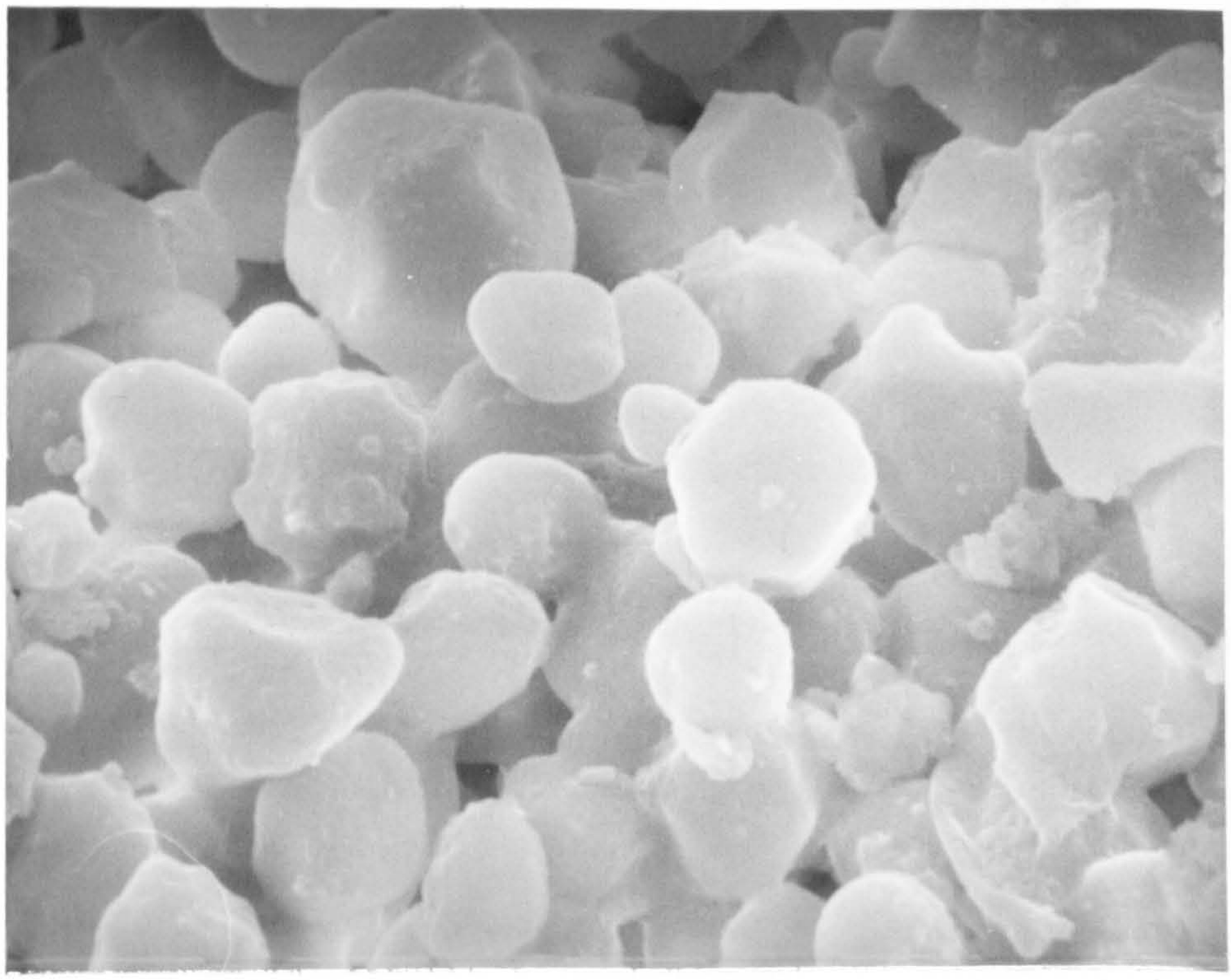


Plate 9. Tomb 5 No.221: morphology x 1250

Plate 10. Tomb 4 No.105: straw striations x 160

Plate 11. Tomb 4 No.105: straw striations x 80

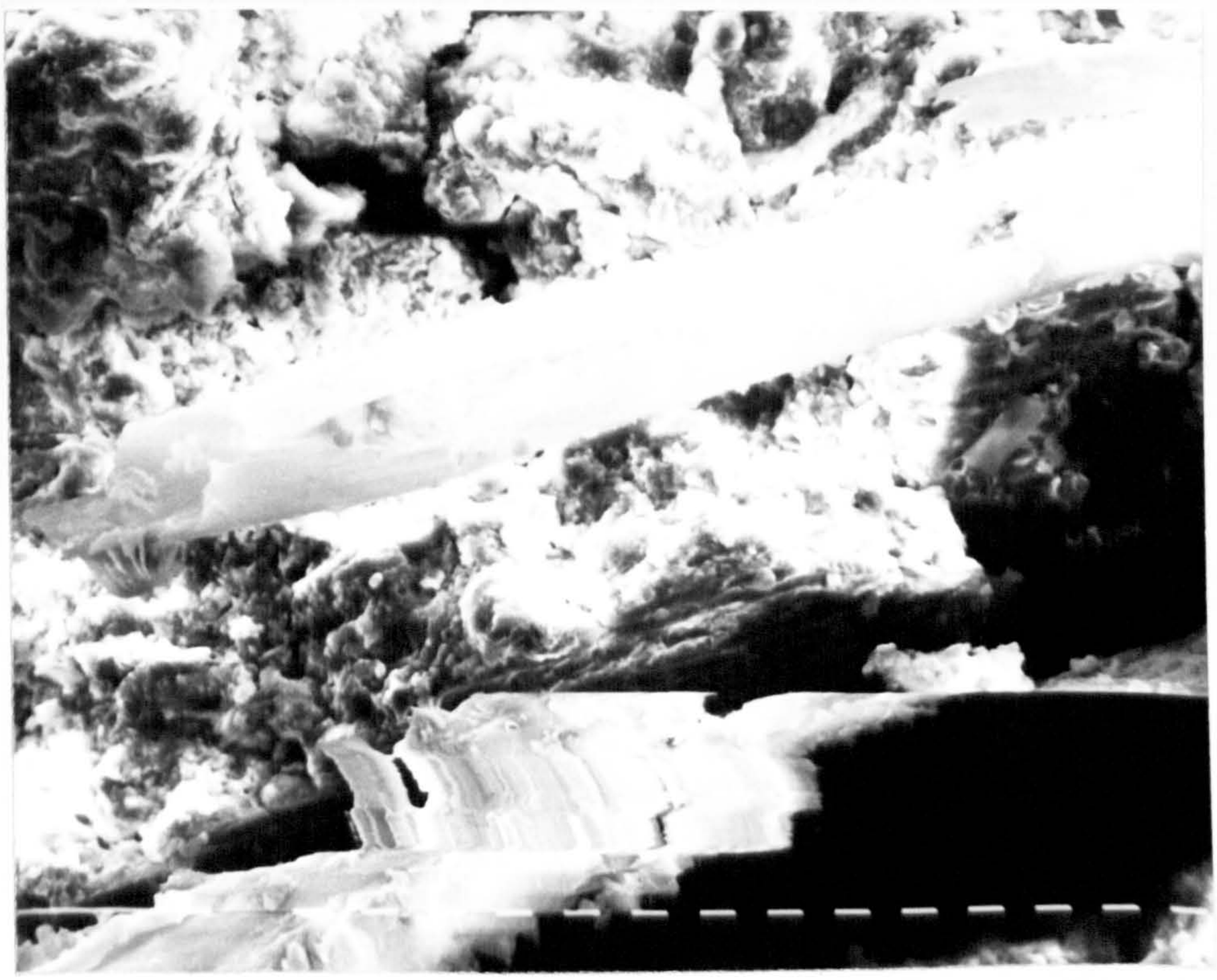


Plate 12. Tomb 4 No.105: straw remnant x 320

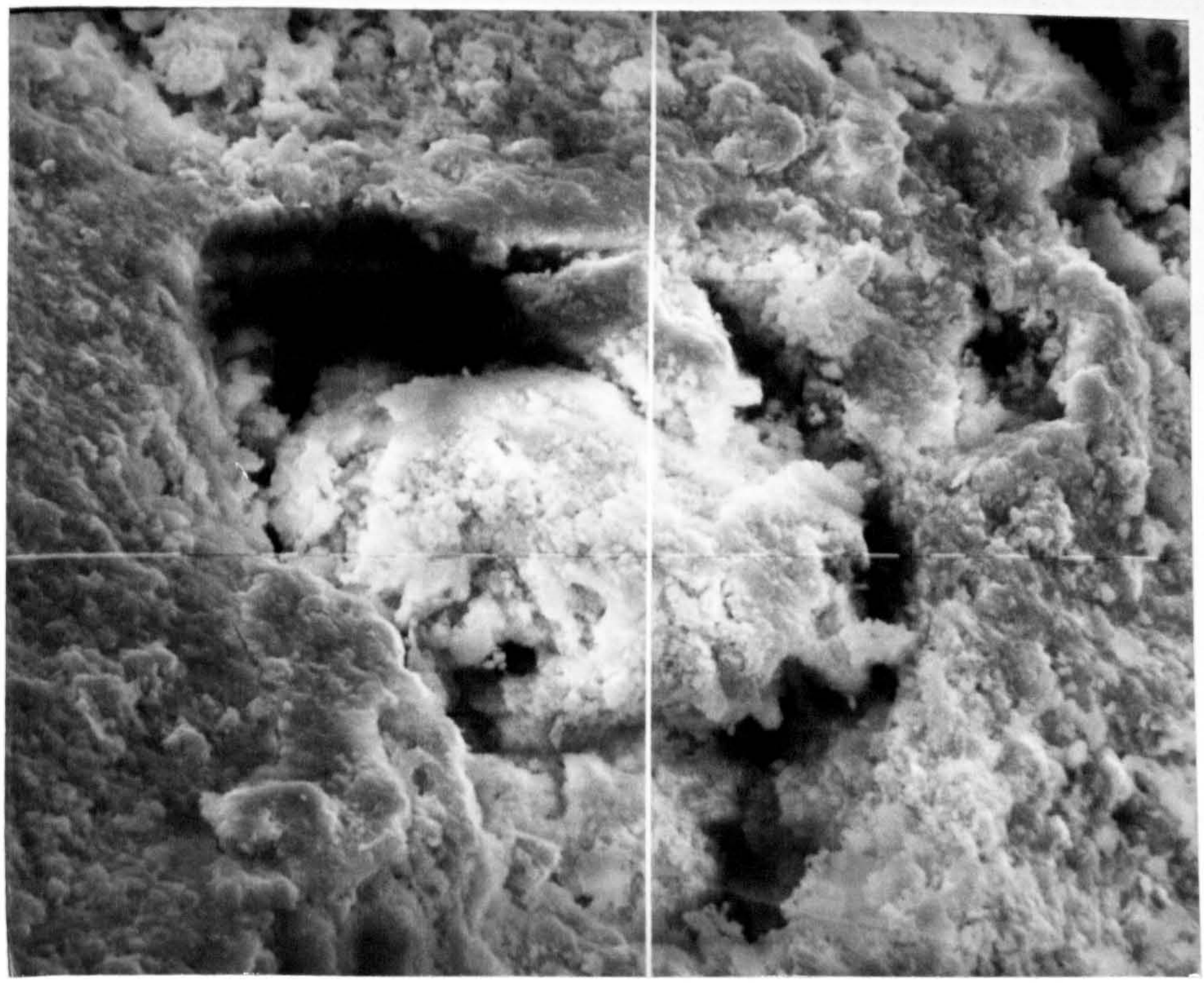


Plate 13. Tomb 5 No.336: limestone inclusion x 320

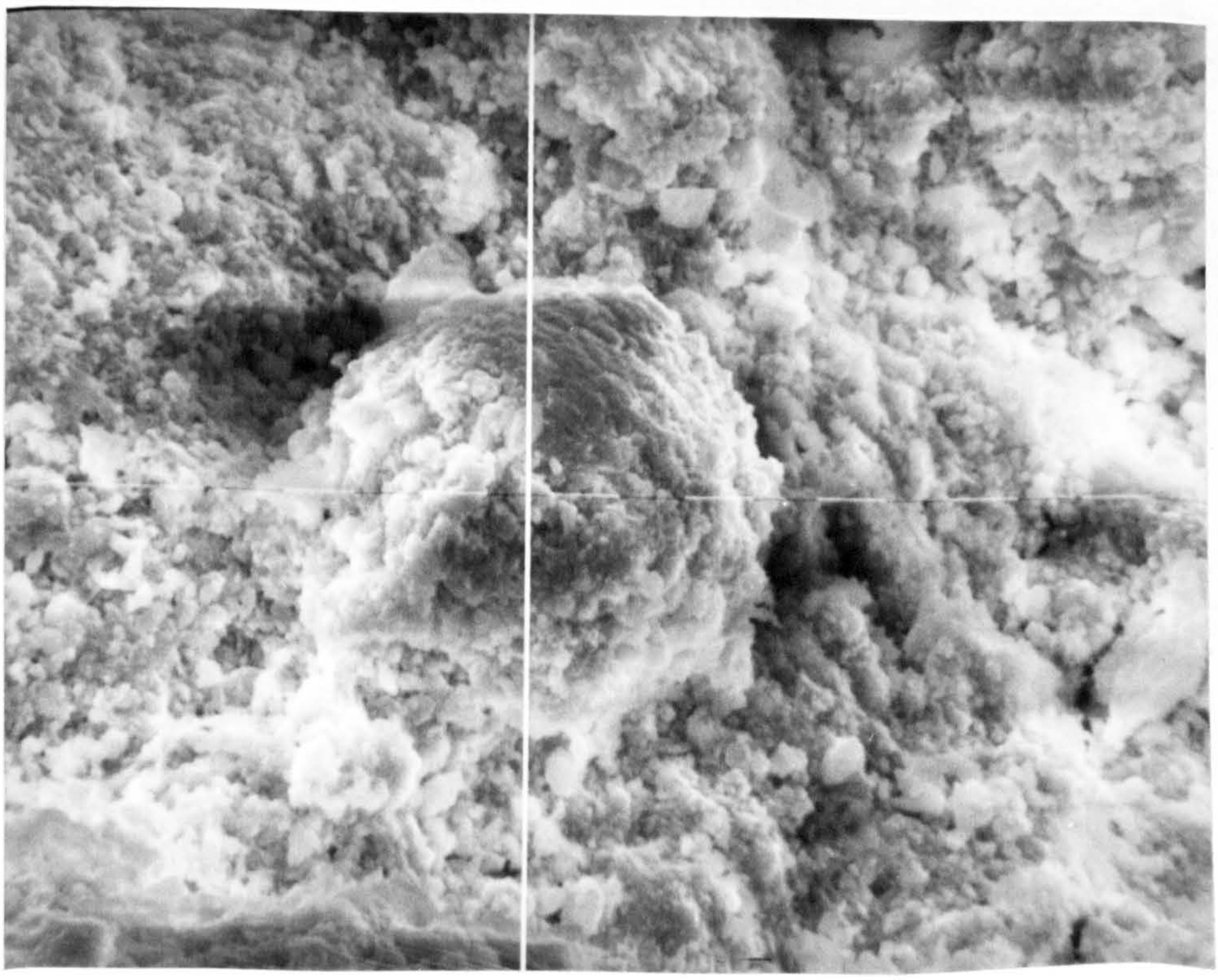


Plate 14. Tomb 5 No.336: gypsum inclusion x 640

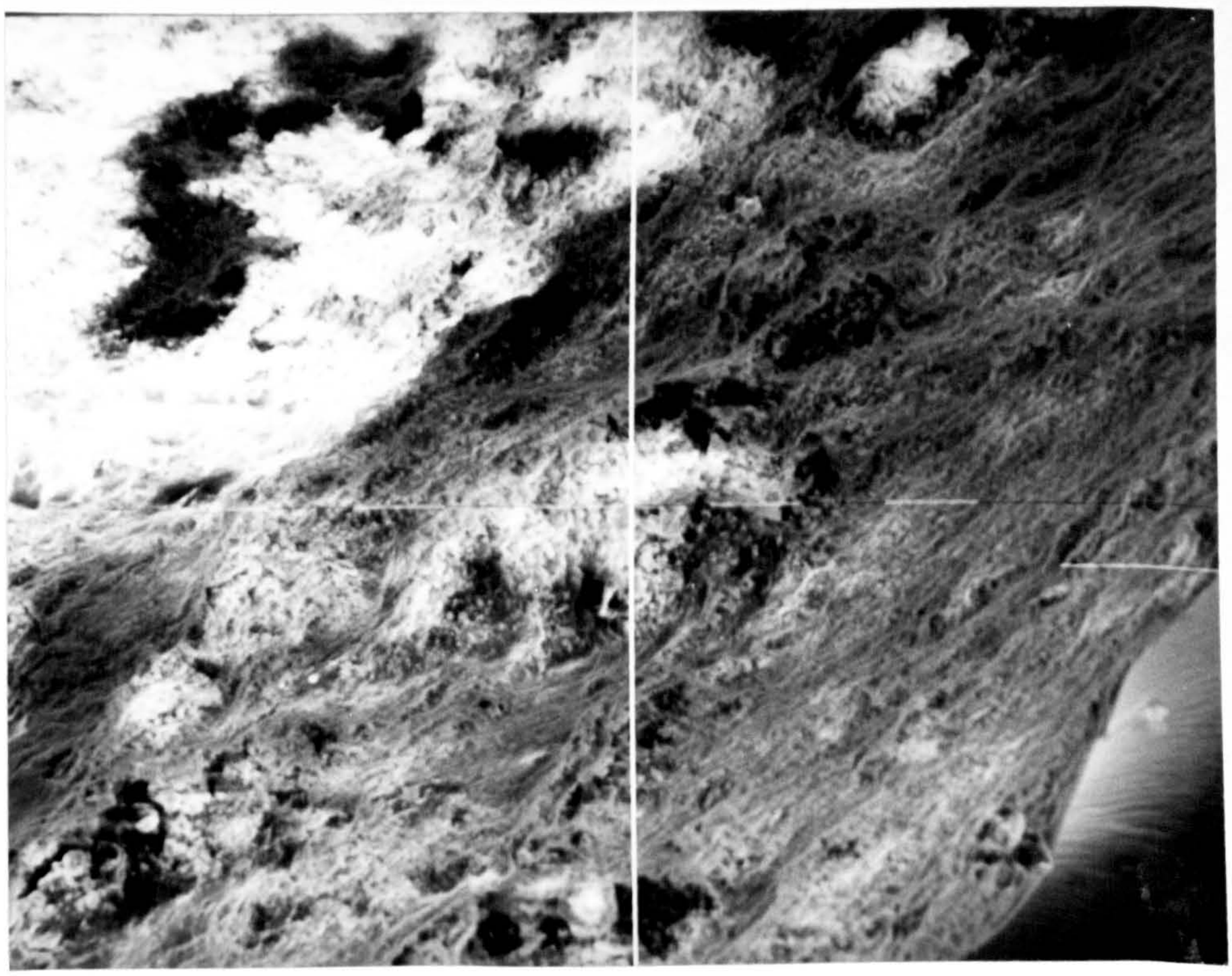


Plate 15. Tomb 5 No.351: desiccated limestone inclusion x 80

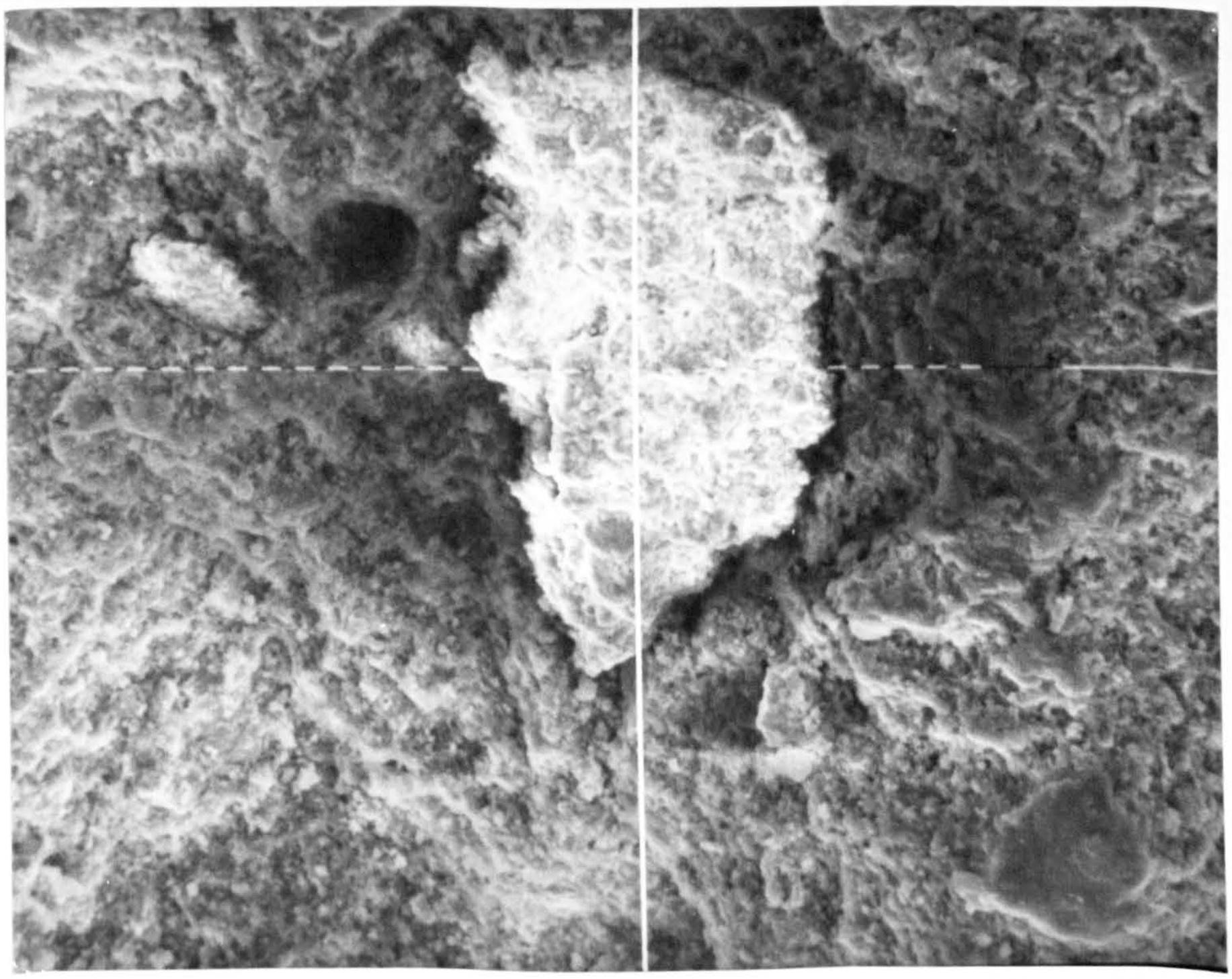


Plate 16. Tomb 5 No.353: limestone inclusion x 160

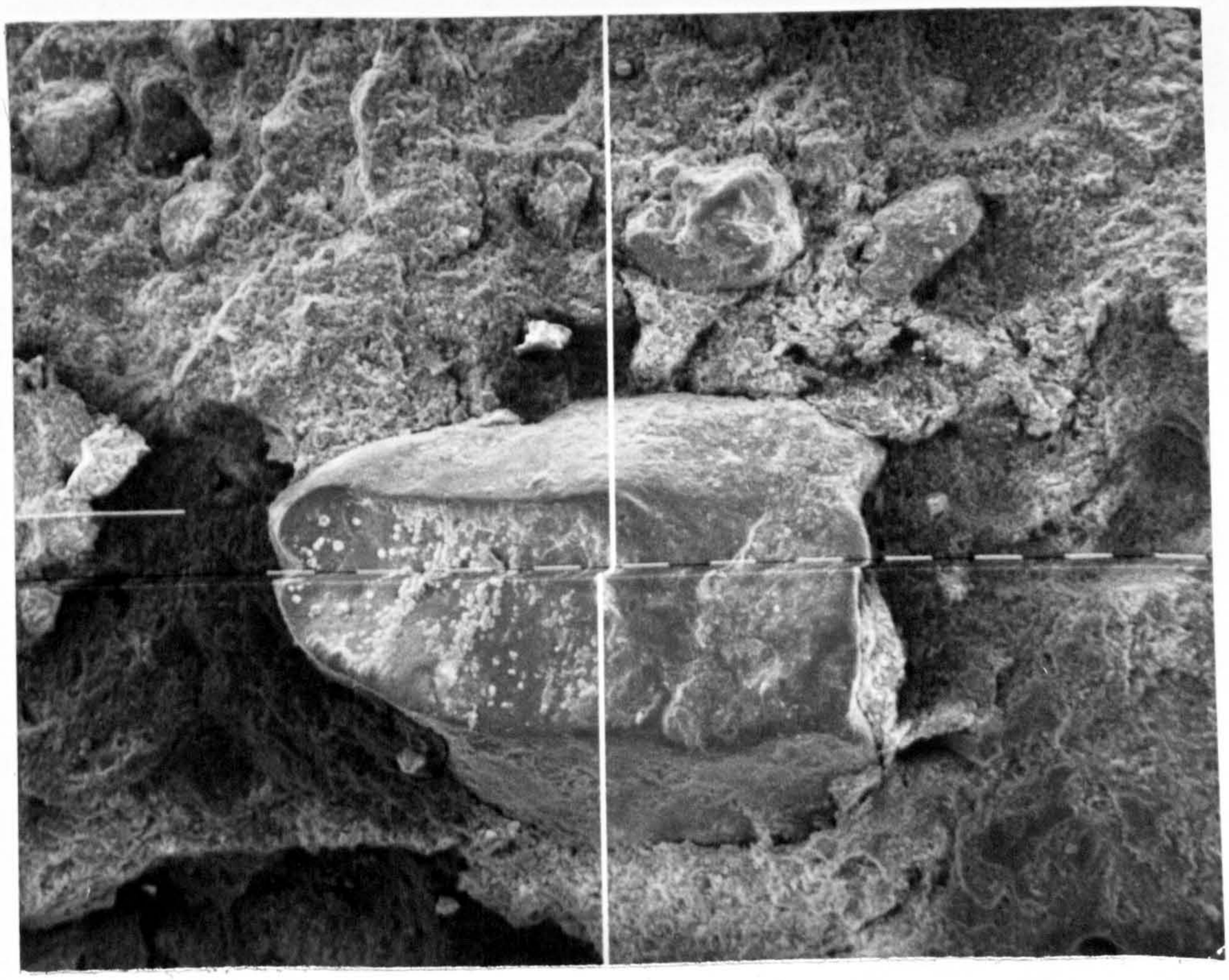


Plate 17. Tomb 5 No.353: flint inclusion x 40

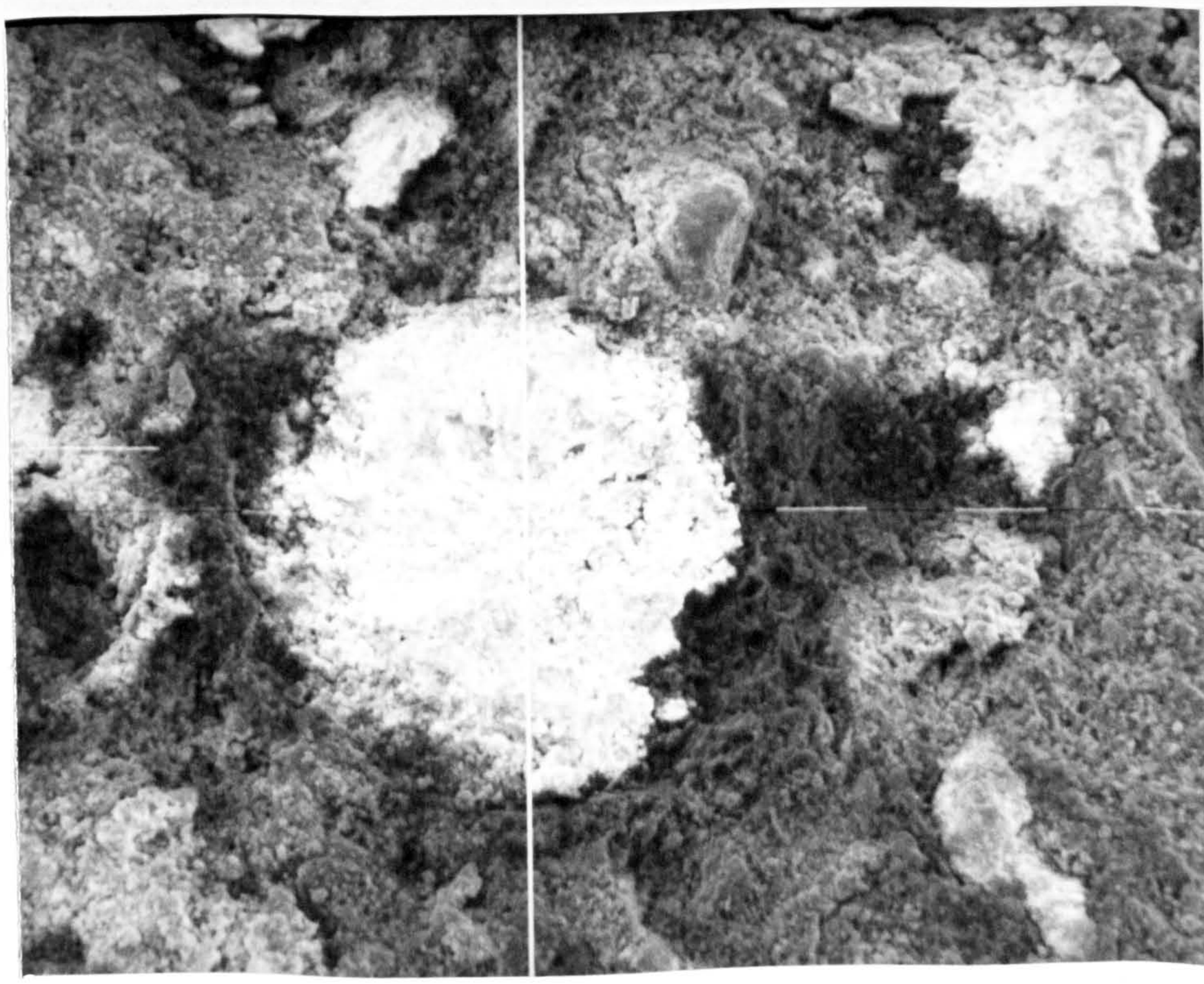


Plate 18. Tomb 5 No.353: gypsum or grog inclusion x 80

Plate 19. Tomb 5 No.359: limestone inclusion x 1250