UNIVERSITETETS
OLDSAKSAMLING
FREDERIKS GATE 3
0164 OSLO 1

| | |
|---|---|
| Gårds/bruksnavn<br>Tohellinga, u. TO | |
| G.nr./br.nr.<br>108/175,374,376,377 | |
| Kommune<br>ÅS | Fylke<br>Akerrshus |
| Sogn | Prestegjeld |
| Eier/bruker, adr. | |
| Gjelder:<br>Utgravning av steinalderboplasser<br>aug. 1994 | |
| Flyfoto | Kartref.<br>CO 041-5-3 |
| Innber./rapport/reg. ved:<br>Roger GRace | Dato<br>20.02.1995 |

Rapport, se bak

e.s.trykk-Oslo

**TOHELLINGA under TO 108/175,374,376,377, ÅS K. AKERSHUS**

**UTGRAVNING AV STEINALDERBOPLASSER**

**Rapport for forundersøkelsen og utgravningen ved Roger Grace**

**Sammendrag ved Lil Gustafson**

De undersøkte boplassene ligger på en fjellknatt ca. 500 m sørøst for boplassen hvor det er funnet et stort antall karakteristiske bergartsøkser som har gitt navn til "Nøstvetkulturen".

Foranledningen til undersøkelsen var et planlagt kjøpesenter, og tiltakshaver var Ås kommune/Steen og Strøm Invest A/S.

På grunnlag av registreringer hvor det var funnet flintbiter i prøvestikk, foretok Roger Grace en forundersøkelse 11.-15.juli 1994, for å få materiale til en vurdering av nødvendig arbeidsomfang for hovedundersøkelsen.

Selve utgravningen ble foretatt 22.august - 15.sept. 1994. Leder var Roger Grace, ellers deltok Madeleine Adner (3 1/2 uke), Lillian Trinterud (3 uker) og Reidar Solsvik (2 uker).

Forundersøkelsen viste at det dreier seg om to lokaliteter, (lok. 1 og lok. 2) som begge ligger på flater i sørhelling, ca. 63 m o.h. Havet har sannsynligvis stått ca. 62 m høyere enn idag, og fjellknatten var en øy dengang fangstfolkene holdt til her.

Lok. 1
Det ble gravet ut tilsammen 40 m2 ( A 24 m2 og B 16 m2) med totalt 1254 funn, hovedsaklig av flint, noen få biter av bergkrystall og kvarts.

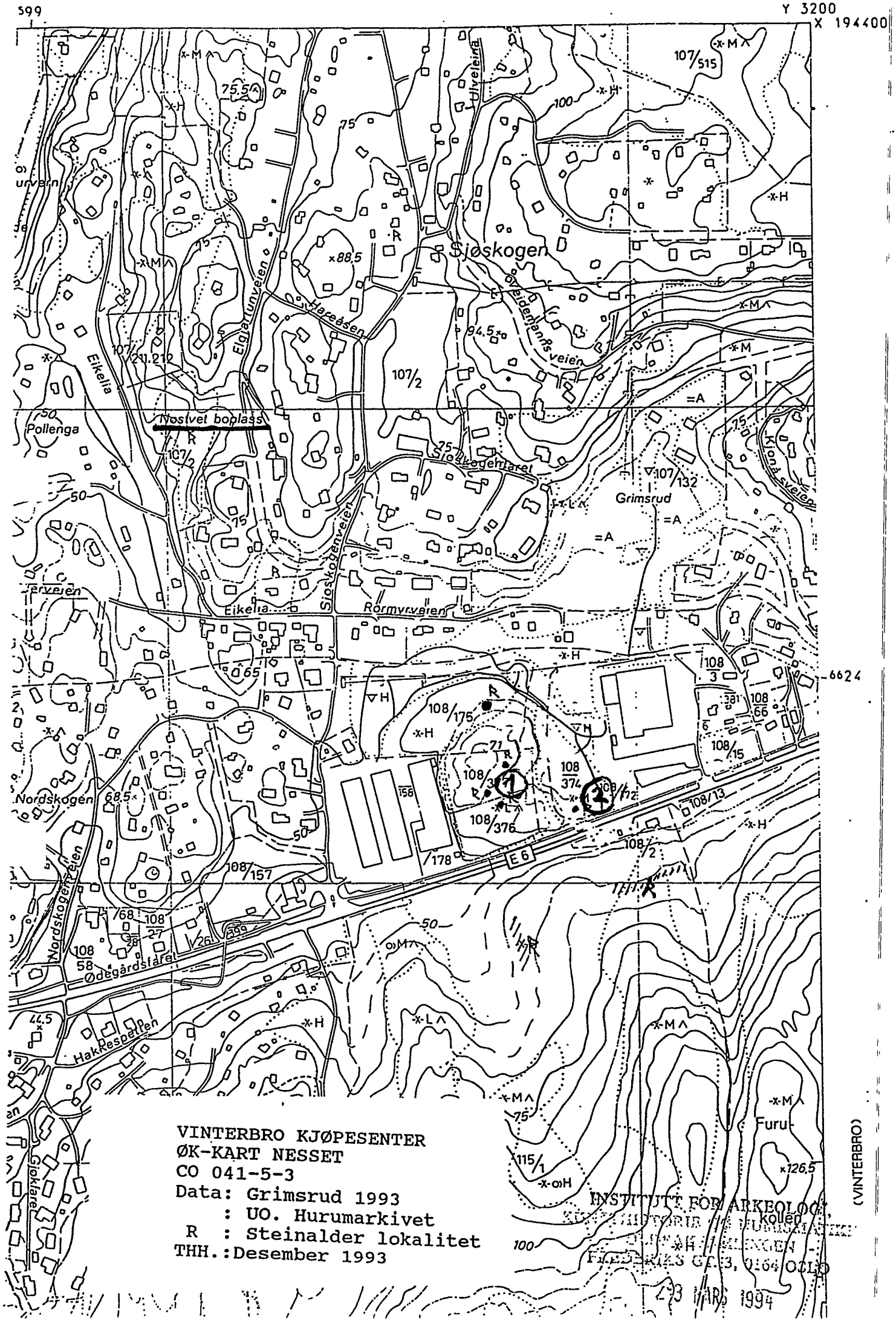
Funnene er svært fragmenterte, det meste er avfall etter redskapsproduksjon. Det er få redskaper: 2 skrapere og 1 fragmentert skraper, ellers biter med retusj (bearbeiding) foruten mikroflekkekjerner og 69 mikroflekker som er karakteristisk for "Nøstvet-kulturen". Det var ingen spor etter "Nøstvetøkser". Noen av flintbitene var brent, men det ble ikke funnet rester av ildsted.

Lok. 2
Det ble gravet ut 8 m2 med tilsammen 47 funn, alt av flint. Det var få redskaper; 2 skrapere, dessuten noen mikroflekker.

Funnene fra de to utgravde lokaliteter tyder på at de er spor etter små grupper på kort besøk. Slitesporsanalysen viser at få av gjenstandene som er etterlatt på boplassene er redskaper. Disse har vært brukt til å skrape bein, muligens også gevir, og å skjære i tre. Bein kan være brukt som skaft til flinteggspyd med mikroflekker innsatt som egg, eller til fiskekroker. Trolig har fangstfolkene benyttet flintknoller som er funnet på stranda, og produsert redskap på stedet. Det er mest avfall som ligger igjen, de gode redskapene har folkene tatt med seg. De topografiske forhold tilsier at fiske

og annen sjømatfangst var bakgrunnen for oppholdet. Både funnene og havnivået viser at det dreier seg om fangstfolk fra "tidlig Nøstvet-tid" omkring 6000 f.Kr.

20.2.95 Vil Soertrøm




VINTERBRO KJØPESENTER
ØK-KART NESSET
CO 041-5-3
Data: Grimsrud 1993
: UO. Hurumarkivet
R : Steinalder lokalitet
THH.:Desember 1993

Roger Grace

# TOHELLINGA LOCATIONS 1 AND 2

**Introduction:**

Tohellinga locations 1 & 2 were discovered during a survey carried out in November 1993 by Ole Grimsrud. The area is situated in Akerhus Fylke, Ås kommune. Only 1 piece of flint was recorded for Location 1 and 2 pieces for Location 2. (These pieces have been catalogued under løsfunn for those locations). An evaluation of the area was carried out in August 1994 by the author (see preliminary report). 35 pieces of flint were found from test pits at Location 1, and 4 pieces at Location 2. As the same grid was retained for the excavation these pieces have been catalogued according to metre square and quadrant, but not to mechanical layer.

Because of the immanent destruction of the area for the construction of the Vintebro shopping centre, the 2 locations were excavated beginning on August 22nd and terminating on September 15th. 40 metres were excavated at Location 1 and 8 metres at Location 2 (see Map 1).

## LOCATION 1

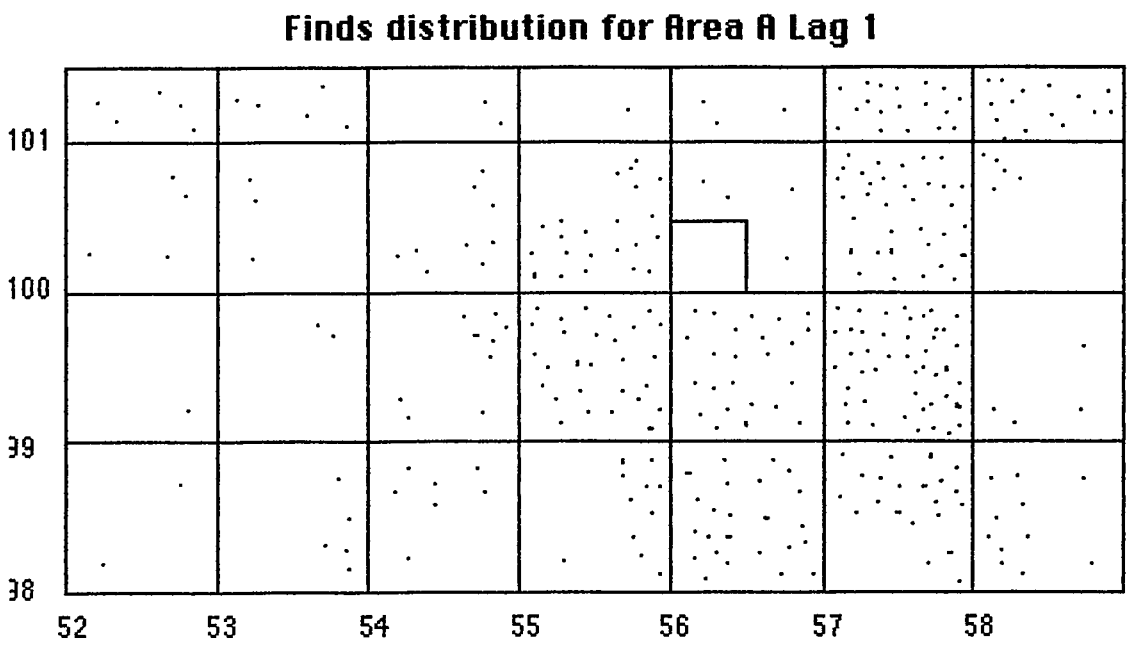
**Description of area:**

Location 1 is situated among dense woods at the top of a steep South facing slope. The area also slopes away to the North, hence the name. The slope to the South was cut off by the construction of the old E6 highway. Location 1 is situated at about 63 m.o.h. with higher outcrops of rock both to the East and West (see Map 2).

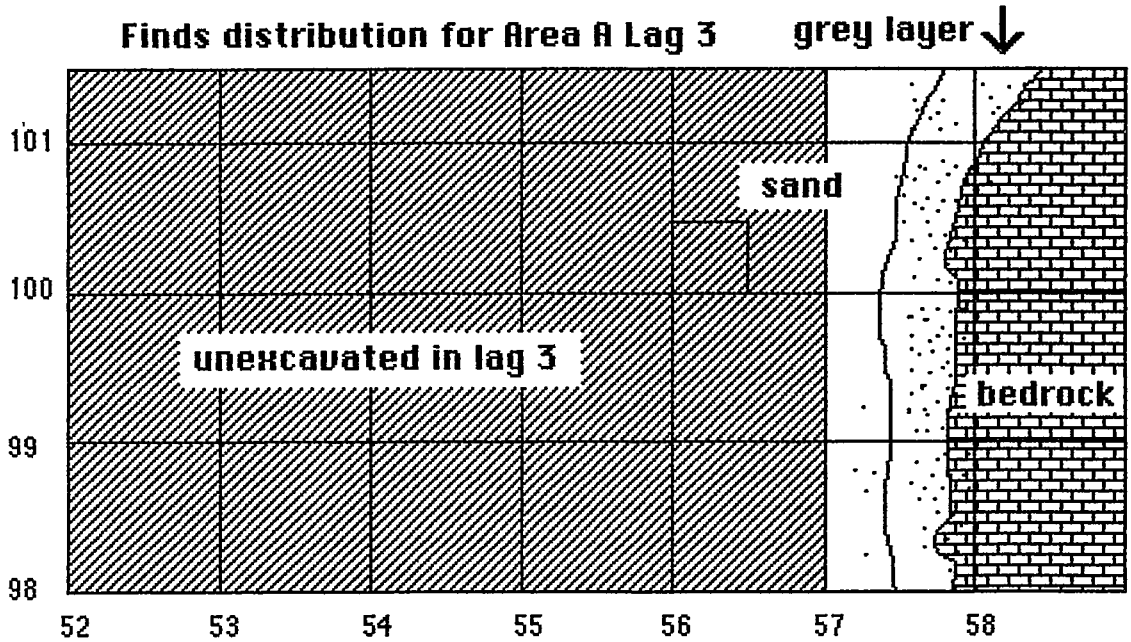
**Excavation procedure:**

### Area A

A grid orientated north-south was set out around the test pit that had produced most material. This area was designated area A and covered 24 square metres (see Map 2). After removal of the turf the area was excavated by 10cm mechanical layers. Because of the lack of material to the west of the excavated area layer 2 was limited to the 18 square metres to the east, (see finds distribution Area A Lag 1- For all finds distribution plans each find is denoted by a point which are randomly distributed within the quad).

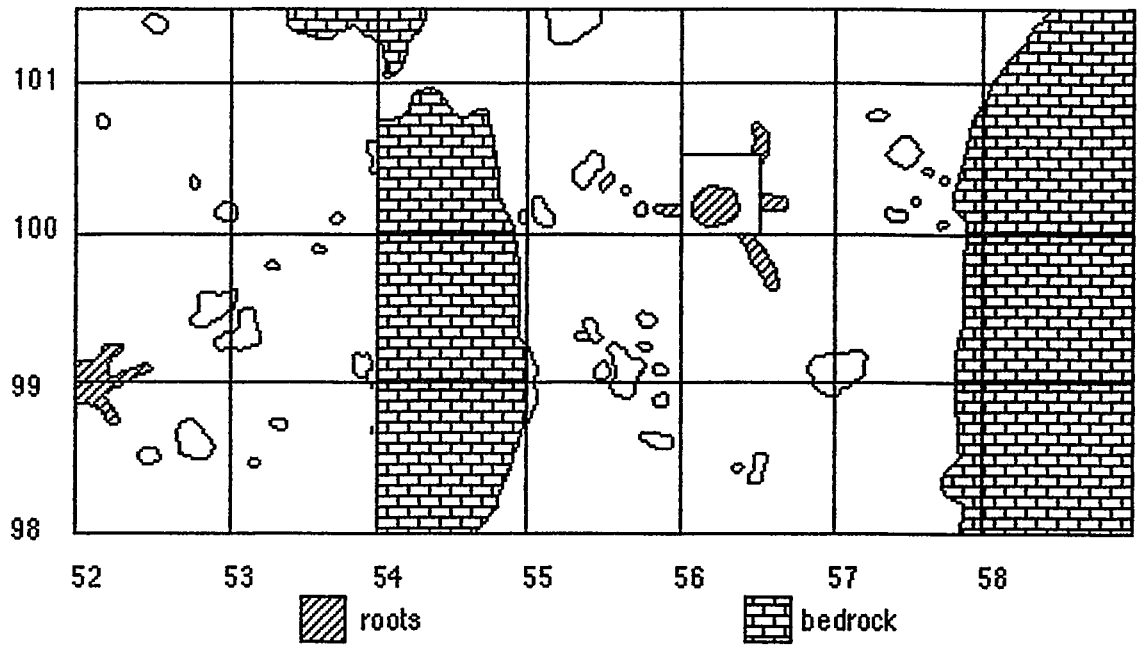



Layer 3 was confined to the 16 square metres to the east as it had been established that nearly all of the finds were coming from the grey, leached out, layer and that the underlying sand was virtually sterile. The finds distribution of area A lag 3 illustrates this. Nearly all the finds are from the grey layer with very few from the sand.



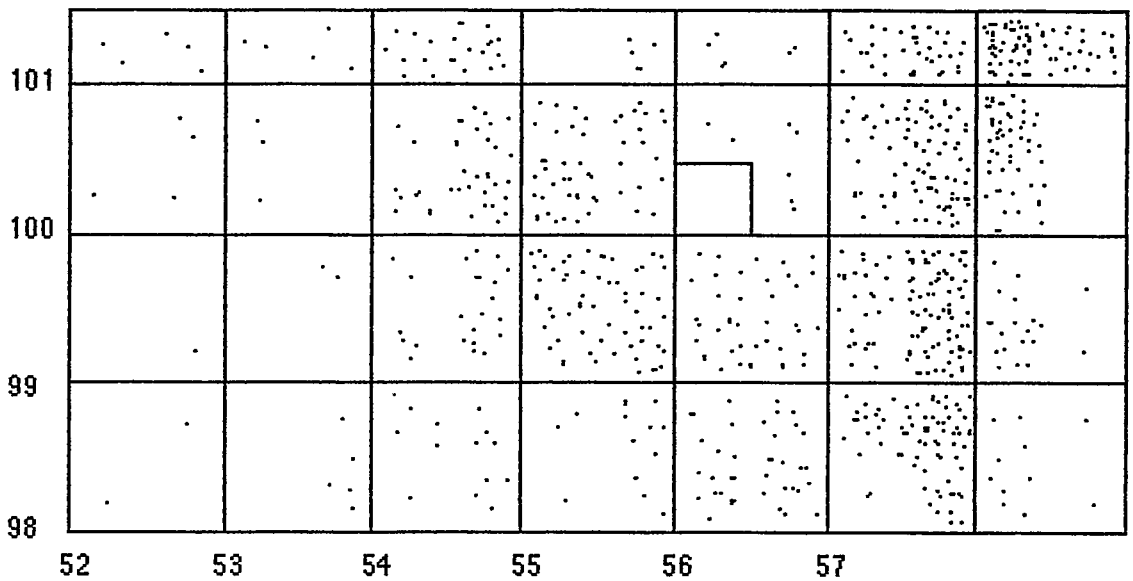
Also bedrock had been reached to the extreme east and in the centre of the excavated area.

**Plan of bedrock and loose rocks area A lag 3**




As can be seen from the finds distribution of all layers combined there are no concentrations of material, not attributable to natural topographic features.

**Distribution of all finds area A**




Therefore no archaeological features present were present.

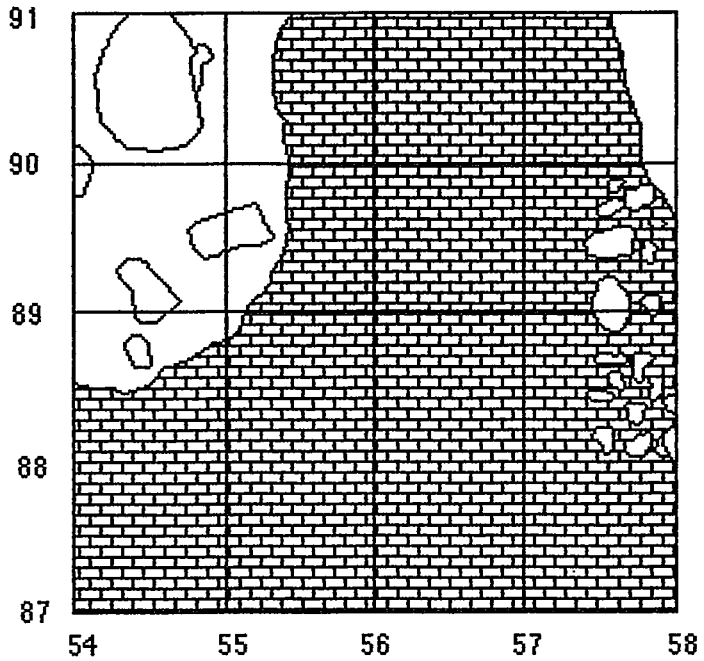
Though the excavation was carried out in 10cm. mechanical layers a record was kept of the depth of the various natural stratigraphic layers. These consisted of turf covering a grey layer of leached out organic material ('H' soil horizon), with underlying sand, down to bedrock. Where the excavation did not reach bedrock, auguring was used to ascertain the depth of the bedrock. Using this information the depositional history of the area can be simulated. Almost all of the finds came from the grey layer so that the topography of the site, at the time that the finds were deposited, can be reconstructed (see Figure 1:F).

## Area B

A separate area was excavated, using the same grid, 7 metres to the south, this was designated Area B (see Map 2).

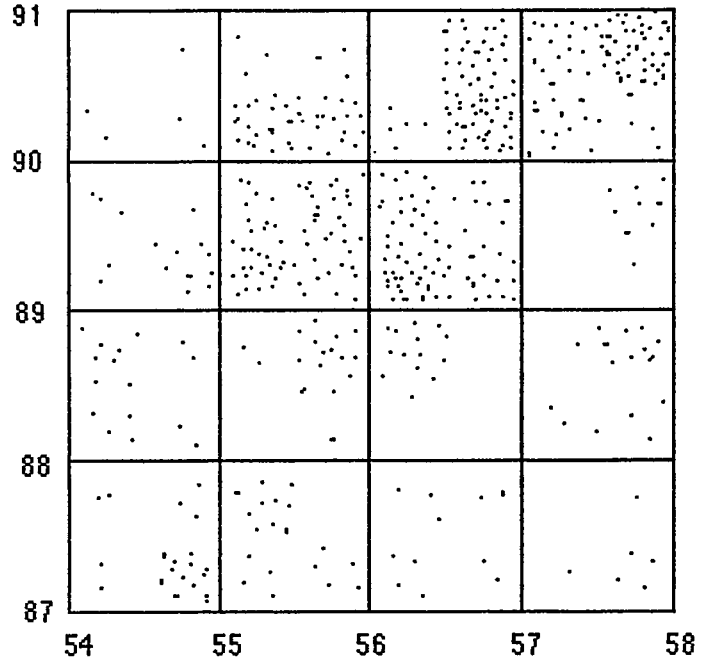
Bedrock was very close to the surface in this area so it was only necessary to excavate two 10cm, mechanical layers. This cleared the area down to bedrock except for an area of sand in the north-west corner of the area, and a small area of grey material in the north-east corner.

**Plan of bedrock and loose rocks area B: lag 2**



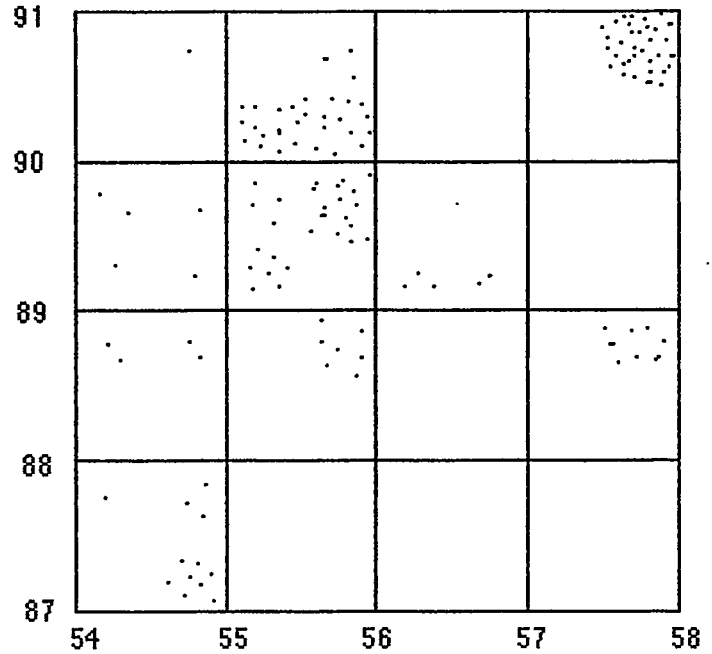

As in area A the sand was virtually sterile, and most of the finds came from the grey layer with some concentrations that were within hollows in the bedrock.

**Finds distribution of all lag 1 & 2: area B**




This was most notable from the finds distribution of lag 2, particularly the concentration in the north-east corner.

**Finds distribution area B: lag 2**




Again the depositional history of the area can be simulated, and the topography of the site, at the time that the finds were deposited, can be reconstructed (see Figure 2:F).

In addition to the test pits excavated during the evaluation a number of other were excavated, the number of finds discovered is given on Map 2.

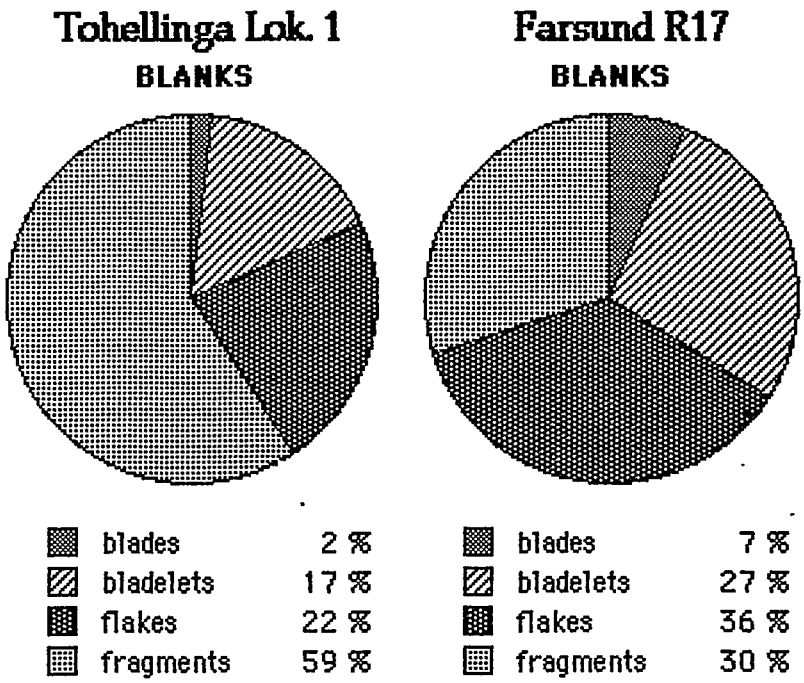
**Finds:**

The finds from Location 1 were predominantly of flint:

| | |
|---|---|
| **Flint** | **1081** |
| **Chert** | **166** |
| **Bergkrystall** | **1** |
| **Kvarts** | **2** |
| **Uberstempt** | **4** |
| **Total** | **1254** |

Of this total 180 of the pieces in excess of 10 mm. (i.e. not splinter) have been analysed in detail. (This sample will be used to make comparisons with other sites similarly analysed). Of this sample only 6 were patinated to any extent, and only 8 were burned. There were no fire cracked rocks. Also the only charcoal found was a few very small flecks, insufficient for carbon dating, and not securely associated with the finds. Therefore there is no evidence of a hearth or extensive use of fire.

The general condition of the material was good, showing little evidence of rolling or extensive frost action. However it was fragmented with many broken pieces. For example 59% of the sample consisted of fragments as opposed to the 30% at the Mesolithic site of Farsund R17 (see Grace 1992).



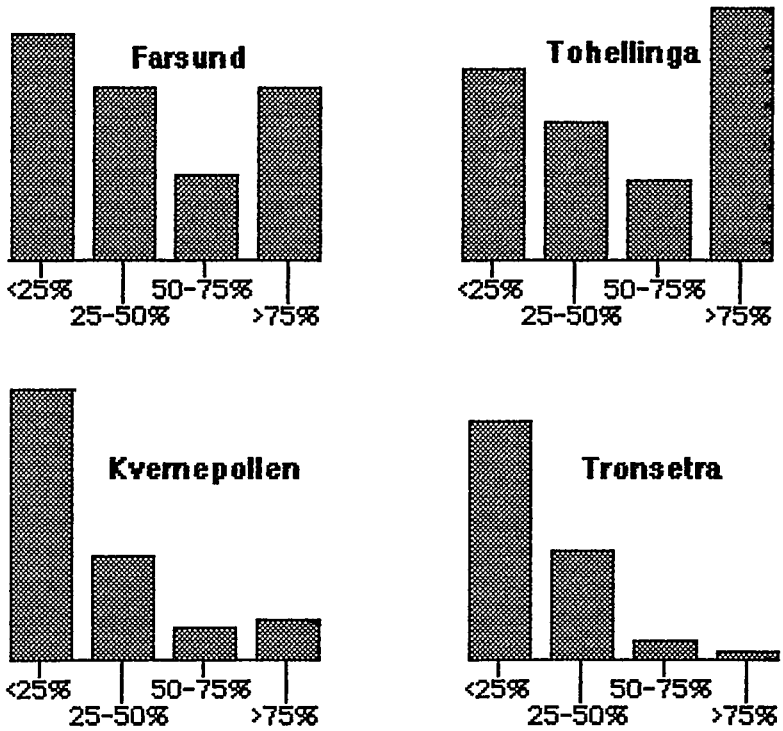

Also the unbroken pieces were on average smaller than those at Farsund:

| | | Tohellinga | Farsund |
|---|---|---|---|
| **averages** | **length** | **17.36** | **23.9** |
| | **width** | **11.14** | **16.44** |
| | **thickness** | **3.8** | **5.7** |

This would indicate that the reduction strategy at Tohellinga was to continue knapping until the material was too small to reduce further.

The distribution of the percentage of cortex indicates that all stages of reduction were present at Tohellinga even though no cobbles of material (flintknoll) were found. The pattern of cortex distribution is similar to that at Farsund where cobbles of flint with a few flakes removed were discovered.

## Pattern of percentage of cortex




In contrast the pattern is different to those from the sites of Kvernepollen (see Grace 1991) and Tronsetra, where the evidence suggests that material was brought into these sites and that all stages of the reduction sequence were not present.

There were very few retouched pieces found at Tohellinga, none of these tools are diagnostic of period or culture.

**215 retouched fragment**
**343 retouched fragment**
**354 retouched flake**
**373 scraper fragment**
**375 scraper**
**377 retouched blade**
**379 scraper**

However 5 core or core fragments were found, one of which was a handle core and one fragment came from a conical bladelet core.

**308 flake core**
**374 flake core fragment**
**376 handle core**
**378 conical bladelet core fragment**
**380 flake core fragment**

These cores along with a significant number of small bladelets, would indicate an affinity with the Nøstvet phase, the handle core and conical blade core being very similar to those from Frebergsvik illustrated in Mikkelsen 1991; pp.101. This would date the site to a period between 4,500 to 6,000 B.C. (see Mikkelsen 1991; pp.86.) No diagnostic Nøstvet axes were found, but this not surprising as no source of suitable material was available.

## Comparison of bladelet sizes

| | Tohellinga | | | Farsund R17 | | |
|---|---|---|---|---|---|---|
| **length** | **mean 15.46** | **sd** | **4.84** | **mean 22.24** | **sd** | **5.04** |
| **width** | **mean 5.38** | **sd** | **1.24** | **mean 7.1** | **sd** | **0.82** |
| **thickness** | **mean 1.78** | **sd** | **0.9** | **mean 2.7** | **sd** | **1.06** |

**Site function:**

The material appears to have been disturbed by natural agencies as there are no concentrations either of activity areas or knapping scatters. As most test pits away from the excavated areas were positive, albeit with only a few pieces, this would suggest that the material is spread over a wide area. The concentrations that are recognisable are related to natural topographic features such as hollows in the bedrock (as in the north-east corner of Location 1;area B) or where material has collected behind an outcrop of bedrock (as in the north-east corner of Location 1;area A). The lack of rolling of the material would indicate a low energy fluvial action such as meltwater moving the material down slope.

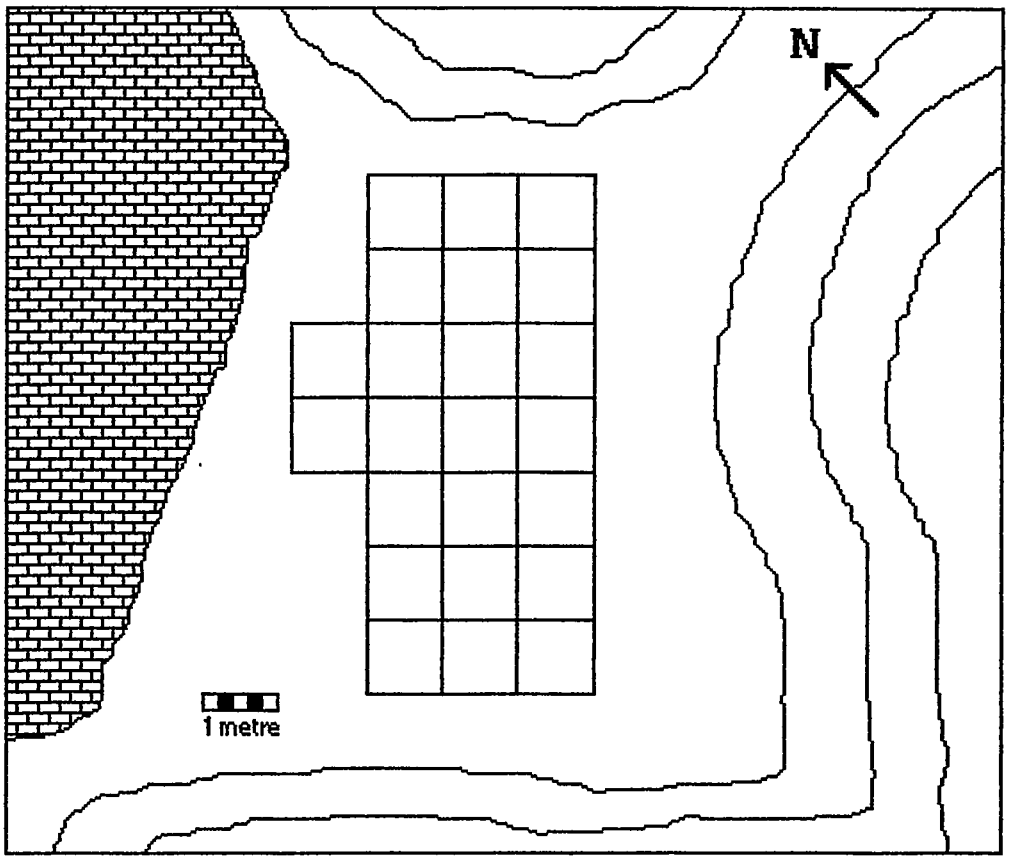
The extreme reduction of the material, and the evidence from the cortex distribution indicating that all stages of reduction were present,

suggests that the main activity was knapping probably exploiting a local source of flint, particularly as 87% of the material is of flint rather than other raw materials. The lack of retouched material supports this interpretation as more 'tools' would be expected if the site was extensively occupied as a 'domestic' area.

## LOCATION 2

Location 2 was situated to the East of Location 1 (see Map 1), and consisted of a small area bounded to the west by a rock wall and fell away steeply to the north and east. To the south the area was curtailed by the construction of the E6 (see plan).

**Plan of Location 2**

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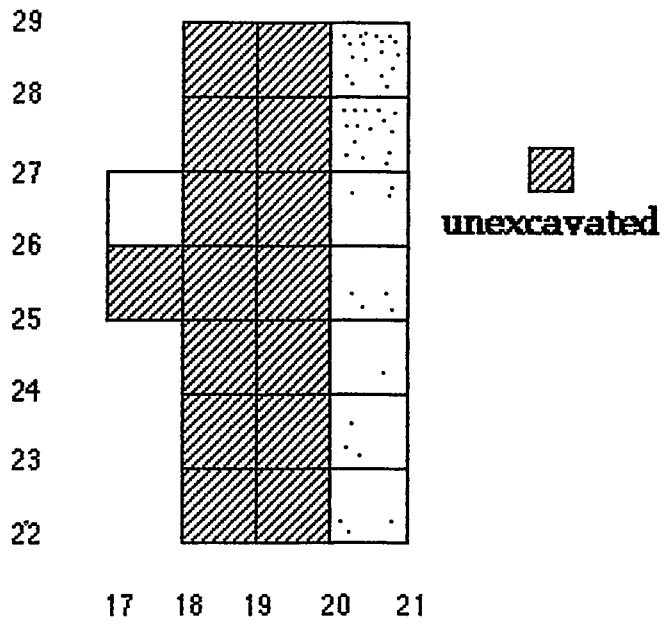
The area was wooded and several trees had to be removed. A grid was set out as illustrated on the plan. A 7 metre strip was excavated along the line of the test pits where the material had been found during the evaluation. Only 49 pieces including the material from the test pits where recovered, 41 pieces of flint and 8 of chert. A square metre to the west was excavated but nothing was found (see plan of finds distribution)

**Tohellinga Location 2**
**finds distribution**




The material consisted of the following types:

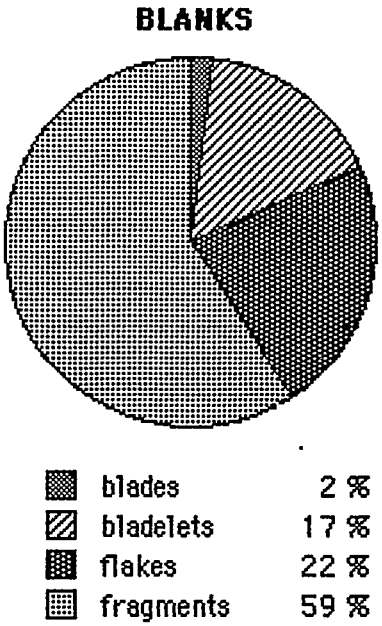
| | |
|---|---|
| **avslag** | **9** |
| **irregular pieces** | **23** |
| **splinter** | **10** |
| **flekker** | **0** |
| **mikroflekker** | **7** |
| | |
| **TOTAL** | **49** |

There were two retouched pieces:

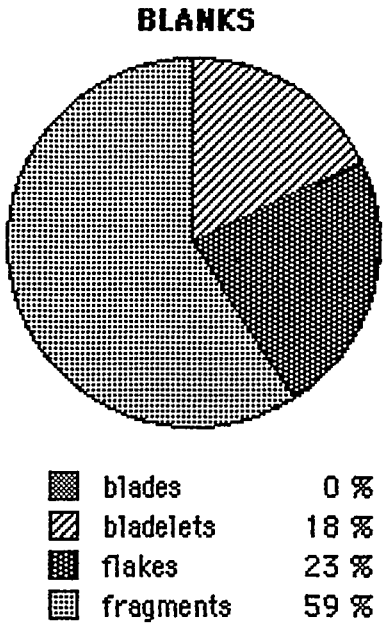
**121 side scraper**
**137 end/side scraper**

This amount of material is insufficient with which to make comparisons with other sites. However the percentages of blank types is almost exactly the same as Location 1.

## Tohellinga Location 1




## Tohellinga Location 2



**Cataloguing:**

The material was catalogued in two ways. First a general catalogue (see Figure 3:A), with information of avslag, avfall, splinter, flekker etc, and the specific catalogue for each individual piece including retouched pieces. The technical information is contained in one data base (see Figure 3:B) and the results of the analysis in another (see Figure 3:C). All these catalogues are written in Hyperscript using the Hypercard application on Apple Macintosh computers. All the catalogues are inter-related so that each can be accessed from each other using 'buttons'. The technological analysis of the individual pieces and the typological analysis of the retouched pieces and cores was carried out with the LITHAN expert system (see Grace, R. 1993).

**References:**

Mikkelsen,E. 1991. Seasonality and Mesolithic Adaption in Norway. pp. 79 -119. in New Directions in Scandinavian Archaeology eds. Kristiansen. K. & Paludan-Muller, C.

Grace. R. Report submitted to Oldsaksamlingen, Farsund project 1992.

Grace. R. Report submitted to Historisk Museum, Kolsnes project 1991.

Grace,R. 1993. The use of expert systems in lithic analysis. Traces et fonction: les geste retrouvés' Eraul 50, vol. 2; 389-400. Liege 1993.

**Appendices :**

Plans and finds distributions of Location 1: areas A and B.

Summary of Catalogues for Location 1 and 2.

Oslo nov. 1994

# REPORT ON USE-WEAR ANALYSIS OF MATERIAL FROM TOHELLINGA

by
Roger Grace

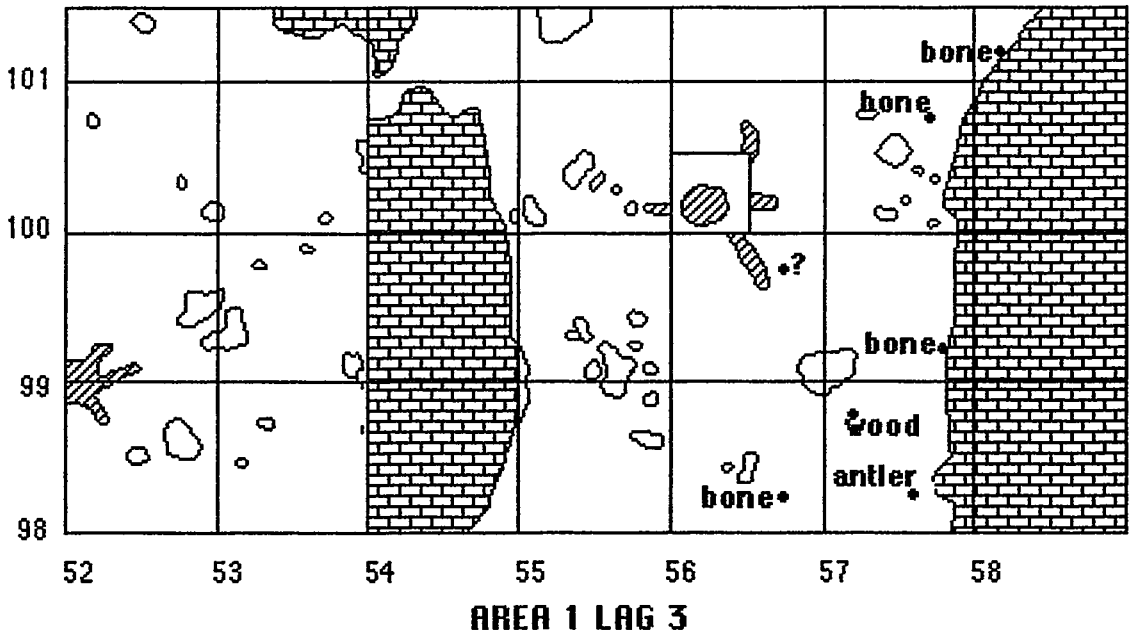
**Lokation 1:**

All the material, except for the pieces less than 10mm (splinter) was examined for use-wear. Of these 923 pieces, 245 were examined microscopically. Only 7 had definite traces of use-wear. These consisted of the following pieces:

| # | TYPE (English) | Type (Norsk) | MOTION | MATERIAL |
|---|---|---|---|---|
| 443 | RETOUCHED FRAGMENT | FRAGMENT MED RETUSJ | SCRAPING | BONE |
| 454 | RETOUCHED FLAKE | AVSLAG MED RETUSJ | SCRAPING | BONE |
| 473 | CONVEX SIDE SCRAPER | SKRAPER MED KONVEKS RETUSJ | SCRAPING | ? |
| 475 | END/ SIDE SCRAPER | SKRAPER MED ENDERETUSJ | SCRAPING | BONE |
| 476 | BLADELET HANDLE CORE | MICRO-FLEKKE HÅNDTAKSKJERNE | SCRAPING | ANTLER |
| 477 | UNRETOUCHED BLADE | FLEKKE | CUTTING | WOOD |
| 479 | FLAKE END SCRAPER | SKRAPER MED ENDERETUSJ | SCRAPING | BONE |

The spatial distribution of the used pieces is illustrated on the plan of lag 3.

**Spatial distribution of used pieces**




All the used pieces came from the Eastern part of Area 1.

The small number of used pieces supports the interpretation of the site as a manufacturing rather than domestic site. More used pieces and a wider range of activities would be expected if the area had been extensively occupied as a domestic site.

A particular interesting result is that the handle core (micro-flekke håndtakskjerne) was used as a scraper. Non of the remaining cores or fragments of cores was used.

## Results of use-wear analysis: Lokation 1

| # | COORD | LEVEL | TYPE | MOTION | HARDNESS | MATERIAL |
|---|---|---|---|---|---|---|
| 300 | 116x55y sv | PS | FRAGMENT | UNUSED | | |
| 301 | 116x55y sv | PS | FRAGMENT | UNUSED | | |
| 302 | 116x55y sv | PS | AVSLAG | UNUSED | | |
| 303 | 116x55y sv | PS | FRAGMENT | UNUSED | | |
| 305 | 101x55y sv | PS | AVSLAG | UNUSED | | |
| 306 | 101x55y sv | PS | FRAGMENT | UNUSED | | |
| 307 | 101x55y sv | PS | FRAGMENT | UNUSED | | |
| 308 | 101x55y sv | PS | AVSLAG | UNUSED | | |
| 309 | 101x55y sv | PS | FRAGMENT | UNUSED | | |
| 310 | 101x55y sv | PS | FRAGMENT | UNUSED | | |
| 311 | 101x55y sv | PS | FRAGMENT | UNUSED | | |
| 312 | 101x55y sv | PS | FRAGMENT | UNUSED | | |
| 313 | 101x55y sv | PS | FRAGMENT | UNUSED | | |
| 314 | 94x55y sv | PS | FLEKKE | UNUSED | | |
| 315 | 94x55y sv | PS | FRAGMENT | UNUSED | | |
| 316 | 89x55y sv | PS | FRAGMENT | UNUSED | | |
| 317 | 89x55y sv | PS | FRAGMENT | UNUSED | | |
| 318 | 89x55y sv | PS | AVSLAG | UNUSED | | |
| 319 | 89x55y sv | PS | AVSLAG | UNUSED | | |
| 320 | 89x55y sv | PS | FRAGMENT | UNUSED | | |
| 321 | 89x55y sv | PS | FRAGMENT | UNUSED | | |
| 322 | 89x55y sv | PS | FRAGMENT | UNUSED | | |
| 323 | 89x55y sv | PS | MIKRO-FLEKKE | UNUSED | | |
| 324 | 89x55y sv | PS | AVSLAG | UNUSED | | |
| 325 | 89x55y sv | PS | FRAGMENT | UNUSED | | |
| 326 | 89x55y sv | PS | FRAGMENT | UNUSED | | |
| 327 | 89x55y sv | PS | FRAGMENT | UNUSED | | |
| 328 | 89x55y sv | PS | FRAGMENT | UNUSED | | |
| 329 | 89x55y sv | PS | AVSLAG | UNUSED | | |
| 330 | 85x55y sv | PS | FRAGMENT | UNUSED | | |
| 331 | 85x55y sv | PS | FRAGMENT | UNUSED | | |
| 332 | 82x64y sv | PS | AVSLAG | UNUSED | | |
| 333 | 82x64y sv | PS | MIKRO-FLEKKE | UNUSED | | |
| 334 | 77x65y nv | PS | AVSLAG | UNUSED | | |
| 335 | 77x65y nv | PS | FRAGMENT | UNUSED | | |
| 336 | 101x58y sø | 2 | FRAGMENT | UNUSED | | |
| 337 | 101x58y sø | 2 | FRAGMENT | UNUSED | | |
| 338 | 101x58y sø | 2 | FRAGMENT | UNUSED | | |
| 339 | 101x58y sø | 2 | FRAGMENT | UNUSED | | |
| 340 | 101x58y sø | 2 | FRAGMENT | UNUSED | | |
| 341 | 101x58y sø | 2 | FRAGMENT | UNUSED | | |
| 342 | 101x58y sø | 2 | FRAGMENT | UNUSED | | |
| 343 | 101x58y sø | 2 | FLEKKE | UNUSED | | |
| 344 | 101x58y sø | 2 | AVSLAG | UNUSED | | |
| 345 | 101x58y sø | 2 | MIKRO-FLEKKE | UNUSED | | |
| 346 | 101x58y sv | 2 | FRAGMENT | UNUSED | | |
| 347 | 101x58y sv | 2 | FRAGMENT | UNUSED | | |
| 348 | 101x58y sv | 2 | FRAGMENT | UNUSED | | |
| 349 | 101x58y sv | 2 | FRAGMENT | UNUSED | | |
| 350 | 101x58y sv | 2 | FRAGMENT | UNUSED | | |
| 351 | 101x58y sv | 2 | FRAGMENT | UNUSED | | |
| 352 | 101x58y sv | 2 | FRAGMENT | UNUSED | | |

| | | | | |
|---|---|---|---|---|
| 353 | 101x58y sv | 2 | FRAGMENT | UNUSED |
| 354 | 101x58y sv | 2 | FRAGMENT | UNUSED |
| 355 | 101x58y sv | 2 | AVSLAG | UNUSED |
| 356 | 101x58y sv | 2 | AVSLAG | UNUSED |
| 357 | 101x58y sv | 2 | AVSLAG | UNUSED |
| 358 | 101x58y sv | 2 | AVSLAG | UNUSED |
| 359 | 101x58y sv | 2 | FRAGMENT | UNUSED |
| 360 | 101x58y sv | 2 | FRAGMENT | UNUSED |
| 361 | 101x58y sv | 2 | FLEKKE | UNUSED |
| 362 | 101x58y sv | 2 | FRAGMENT | UNUSED |
| 363 | 101x58y sv | 2 | FRAGMENT | UNUSED |
| 364 | 101x58y sv | 2 | AVSLAG | UNUSED |
| 365 | 101x58y sv | 2 | FRAGMENT | UNUSED |
| 366 | 101x58y sv | 2 | FRAGMENT | UNUSED |
| 367 | 101x58y sv | 2 | AVSLAG | UNUSED |
| 368 | 101x58y sv | 2 | MIKRO-FLEKKE | UNUSED |
| 369 | 101x58y sv | 2 | MIKRO-FLEKKE | UNUSED |
| 370 | 101x58y sv | 2 | BROKEN MIKRO-FLEKKE | UNUSED |
| 371 | 101x58y sv | 2 | BROKEN MIKRO-FLEKKE | UNUSED |
| 372 | 101x58y sv | 2 | BROKEN MIKRO-FLEKKE | UNUSED |
| 373 | 100x52y nø | 1 | FRAGMENT | UNUSED |
| 374 | 100x52y nø | 1 | AVSLAG | UNUSED |
| 375 | 100x52y sø | 1 | AVSLAG | UNUSED |
| 376 | 100x52y sv | 1 | FRAGMENT | UNUSED |
| 377 | 100x56y sø | 2 | FRAGMENT | UNUSED |
| 378 | 100x56y sø | 2 | FRAGMENT | UNUSED |
| 379 | 101x57y sø | 3 | FRAGMENT | UNUSED |
| 380 | 101x57y sø | 3 | FRAGMENT | UNUSED |
| 381 | 101x57y sø | 3 | FRAGMENT | UNUSED |
| 382 | 101x57y sø | 3 | FRAGMENT | UNUSED |
| 383 | 101x57y sø | 3 | MIKRO-FLEKKE | UNUSED |
| 384 | 101x57y sø | 3 | BROKEN MIKRO-FLEKKE | UNUSED |
| 385 | 101x57y sø | 3 | BROKEN MIKRO-FLEKKE | UNUSED |
| 386 | 101x57y sø | 3 | BROKEN MIKRO-FLEKKE | UNUSED |
| 387 | 99x54y sv | 2 | FRAGMENT | UNUSED |
| 388 | 99x54y sø | 2 | FRAGMENT | UNUSED |
| 389 | 99x54y nø | 2 | FRAGMENT | UNUSED |
| 390 | 99x54y nø | 2 | AVSLAG | UNUSED |
| 391 | 99x54y nø | 2 | FRAGMENT | UNUSED |
| 392 | 99x54y nø | 2 | FRAGMENT | UNUSED |
| 393 | 100x57y nø | 3 | FRAGMENT | UNUSED |
| 394 | 100x57y nø | 3 | MIKRO-FLEKKE | UNUSED |
| 395 | 100x57y nø | 3 | AVSLAG | UNUSED |
| 396 | 100x57y nø | 3 | FRAGMENT | UNUSED |
| 397 | 100x57y nø | 3 | AVSLAG | UNUSED |
| 398 | 100x57y nø | 3 | AVSLAG | UNUSED |
| 399 | 100x57y nø | 3 | AVSLAG | UNUSED |
| 400 | 100x57y nø | 3 | FRAGMENT | UNUSED |
| 401 | 100x57y nø | 3 | FRAGMENT | UNUSED |
| 402 | 100x57y nø | 3 | FRAGMENT | UNUSED |
| 403 | 100x57y nø | 3 | BROKEN MIKRO-FLEKKE | UNUSED |
| 404 | 100x57y nø | 3 | FRAGMENT | UNUSED |
| 405 | 100x57y nø | 3 | BROKEN FLEKKE | UNUSED |
| 406 | 100x57y nø | 3 | BROKEN MIKRO-FLEKKE | UNUSED |
| 407 | 100x57y nø | 3 | FRAGMENT | UNUSED |
| 408 | 100x57y nø | 3 | BI-POLAR KJERNE | UNUSED |
| 409 | 100x57y nø | 3 | FRAGMENT | UNUSED |
| 410 | 100x57y sø | 3 | FRAGMENT | UNUSED |

| | | | | | | |
|---|---|---|---|---|---|---|
| 411 | 100x57y sø | 3 | MIKRO-FLEKKE | UNUSED | | |
| 412 | 100x57y sø | 3 | AVSLAG | UNUSED | | |
| 413 | 100x57y sø | 3 | FRAGMENT | UNUSED | | |
| 414 | 100x57y sø | 3 | AVSLAG | UNUSED | | |
| 415 | 100x57y sø | 3 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 416 | 100x57y sø | 3 | AVSLAG | UNUSED | | |
| 417 | 99x57y nø | 3 | FRAGMENT | UNUSED | | |
| 418 | 99x57y nø | 3 | FRAGMENT | UNUSED | | |
| 419 | 99x57y nø | 3 | AVSLAG | UNUSED | | |
| 420 | 99x57y nø | 3 | FRAGMENT | UNUSED | | |
| 421 | 99x57y nø | 3 | AVSLAG | UNUSED | | |
| 422 | 99x57y nø | 3 | FRAGMENT | UNUSED | | |
| 423 | 99x57y nø | 3 | FRAGMENT | UNUSED | | |
| 424 | 99x57y nø | 3 | AVSLAG | UNUSED | | |
| 425 | 99x57y nø | 3 | FRAGMENT | UNUSED | | |
| 426 | 99x57y nø | 3 | MIKRO-FLEKKE | UNUSED | | |
| 427 | 99x57y nø | 3 | AVSLAG | UNUSED | | |
| 428 | 99x57y sv | 3 | AVSLAG | UNUSED | | |
| 429 | 99x57y sø | 3 | FRAGMENT | UNUSED | | |
| 430 | 99x57y sø | 3 | FRAGMENT | UNUSED | | |
| 431 | 99x57y sø | 3 | FRAGMENT | UNUSED | | |
| 432 | 99x57y sø | 3 | FRAGMENT | UNUSED | | |
| 433 | 99x57y sø | 3 | FRAGMENT | UNUSED | | |
| 434 | 99x57y sø | 3 | FRAGMENT | UNUSED | | |
| 435 | 99x57y sø | 3 | FRAGMENT | UNUSED | | |
| 436 | 99x57y sø | 3 | AVSLAG | UNUSED | | |
| 437 | 99x57y sø | 3 | AVSLAG | UNUSED | | |
| 438 | 99x57y sø | 3 | AVSLAG | UNUSED | | |
| 439 | 99x57y sø | 3 | AVSLAG | UNUSED | | |
| 440 | 99x57y sø | 3 | MIKRO-FLEKKE | UNUSED | | |
| 441 | 99x57y sø | 3 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 442 | 99x57y sø | 3 | MIKRO-FLEKKE | UNUSED | | |
| 443 | 99x57y sø | 3 | FRAGMENT MED RETUSJ | SCRAPING | HARD | BONE |
| 444 | 100x58y nv | 3 | FRAGMENT | UNUSED | | |
| 445 | 100x58y nv | 3 | AVSLAG | UNUSED | | |
| 446 | 101x58y sv | 3 | FRAGMENT | UNUSED | | |
| 447 | 101x58y sv | 3 | FRAGMENT | UNUSED | | |
| 448 | 101x58y sv | 3 | FRAGMENT | UNUSED | | |
| 449 | 101x58y sv | 3 | FRAGMENT | UNUSED | | |
| 450 | 101x58y sv | 3 | AVSLAG | UNUSED | | |
| 451 | 101x58y sv | 3 | AVSLAG | UNUSED | | |
| 452 | 101x58y sv | 3 | AVSLAG | UNUSED | | |
| 453 | 101x58y sv | 3 | MIKRO-FLEKKE | UNUSED | | |
| 454 | 101x58y sv | 3 | AVSLAG MED RETUSJ | SCRAPING | HARD | BONE |
| 455 | 99x56y nø | 1 | FRAGMENT | UNUSED | | |
| 456 | 99x56y nø | 1 | FRAGMENT | UNUSED | | |
| 457 | 99x56y nø | 1 | FRAGMENT | UNUSED | | |
| 458 | 99x56y nø | 1 | FRAGMENT | UNUSED | | |
| 459 | 99x56y nø | 1 | AVSLAG | UNUSED | | |
| 460 | 99x56y nø | 1 | AVSLAG | UNUSED | | |
| 461 | 99x56y nv | 1 | FRAGMENT | UNUSED | | |
| 462 | 99x56y nv | 1 | FRAGMENT | UNUSED | | |
| 463 | 99x56y nv | 1 | MIKRO-FLEKKE | UNUSED | | |
| 464 | 99x56y nv | 1 | AVSLAG | UNUSED | | |
| 465 | 99x56y sv | 1 | FRAGMENT | UNUSED | | |
| 466 | 99x56y sv | 1 | AVSLAG | UNUSED | | |
| 467 | 99x56y sv | 1 | AVSLAG | UNUSED | | |
| 468 | 99x56y sø | 1 | FRAGMENT | UNUSED | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 469 | 99x56y sø | 1 | FRAGMENT | UNUSED | | |
| 470 | 99x56y sø | 1 | FRAGMENT | UNUSED | | |
| 471 | 99x56y sø | 1 | AVSLAG | UNUSED | | |
| 472 | 99x56y sø | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 473 | 99x56y nø | 2 | SKRAPER MED KONVEKS RETUSJ | SCRAPING | MEDIUM /HARD | ID |
| 474 | 98x56y nø | 2 | BROKEN AVSLAG KJERNE | UNUSED | | |
| 475 | 100x57y nø | 1 | SKRAPER MED ENDERETUSJ | SCRAPING | HARD | BONE |
| 476 | 98x56y sø | 2 | MICRO-FLEKKE HÅNDTAKSKJERNE | SCRAPING | MEDIUM /HARD | ANTLER |
| 477 | 98x57y nv | 2 | FLEKKE | CUTTING | MEDIUM | WOOD |
| 478 | 100x54y sø | 1 | KONISKE MICRO FLEKKEKJERNER | UNUSED | | |
| 479 | 98x56y sv | 1 | SKRAPER MED ENDERETUSJ | SCRAPING | HARD | BONE |
| 480 | 90x55y sv | 2 | BROKEN KJERNE | UNUSED | | |
| 481 | 87x54y nv | 1 | AVSLAG | UNUSED | | |
| 482 | 88x54y sv | 1 | FRAGMENT | UNUSED | | |
| 483 | 90x56y nø | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 484 | 98x55y sv | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 485 | 99x57y nv | 2 | BROKEN FLEKKE | UNUSED | | |
| 486 | 100x57y sø | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 487 | 100x54y sø | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 488 | 99x55y sø | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 489 | 99x55y sv | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 490 | 99x55y nv | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 491 | 100x57y sø | 2 | MIKRO-FLEKKE | UNUSED | | |
| 492 | 100x57y nø | 2 | MIKRO-FLEKKE | UNUSED | | |
| 493 | 100x55y sv | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 494 | 99x56y sv | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 495 | 99x56y sø | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 496 | 90x57y nø | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 497 | 90x57y nø | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 498 | 98x53y sø | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 499 | 100x58y nv | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 500 | 88x54y sv | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 501 | 90x56y sø | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 502 | 87x54y nv | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 503 | 89x55y nø | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 504 | 90x55y sv | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 505 | 98x56y nv | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 506 | 98x56y nv | 1 | MIKRO-FLEKKE | UNUSED | | |
| 507 | 98x56y sø | 1 | MIKRO-FLEKKE | UNUSED | | |
| 508 | 98x56y sv | 1 | BROKEN FLEKKE | UNUSED | | |
| 509 | 89x56y sø | 1 | MIKRO-FLEKKE | UNUSED | | |
| 510 | 100x58y sv | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 511 | 89x56y sv | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 512 | 89x56y sv | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 513 | 89x56y sv | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 514 | 98x57y nø | 3 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 515 | 98x57y nø | 3 | MIKRO-FLEKKE | UNUSED | | |
| 516 | 98x57y nø | 3 | AVSLAG | UNUSED | | |
| 517 | 98x57y nø | 3 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 518 | 98x57y nø | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 519 | 101x54y sv | 2 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 520 | 101x54y sv | 2 | MIKRO-FLEKKE | UNUSED | | |

| | | | | |
|---|---|---|---|---|
| 521 | 101x54y sv | 2 | BROKEN MIKRO-FLEKKE | UNUSED |
| 522 | 101x52y sv | 1 | BROKEN MIKRO-FLEKKE | UNUSED |
| 523 | 88x54y nv | 1 | BROKEN MIKRO-FLEKKE | UNUSED |
| 524 | 98x57y sø | 3 | BROKEN MIKRO-FLEKKE | UNUSED |
| 525 | 99x57y sv | 1 | MIKRO-FLEKKE | UNUSED |
| 526 | 101x53y sv | 1 | MIKRO-FLEKKE | UNUSED |
| 527 | 101x58y sø | 1 | MIKRO-FLEKKE | UNUSED |
| 528 | 99x57y sø | 1 | BROKEN MIKRO-FLEKKE | UNUSED |
| 529 | 99x55y sø | 1 | MIKRO-FLEKKE | UNUSED |
| 530 | 98x56y sø | 2 | BROKEN MIKRO-FLEKKE | UNUSED |
| 531 | 98x54y nv | 1 | FRAGMENT | UNUSED |
| 532 | 98x54y nø | 1 | AVSLAG | UNUSED |
| 533 | 98x54y nø | 1 | AVSLAG | UNUSED |
| 534 | 88x57y nø | 2 | AVSLAG | UNUSED |
| 535 | 101x54y sø | 2 | BROKEN MIKRO-FLEKKE | UNUSED |
| 536 | 98x57y nø | 1 | FRAGMENT | UNUSED |
| 537 | 99x55y nø | 1 | FRAGMENT | UNUSED |
| 538 | 98x55y nø | 1 | AVSLAG | UNUSED |
| 539 | 99x57y sø | 1 | FRAGMENT | UNUSED |
| 540 | 99x56y nv | 2 | AVSLAG | UNUSED |
| 541 | 100x55y sv | 2 | AVSLAG | UNUSED |
| 542 | 101x54y sv | 2 | KJERNE | UNUSED |
| 543 | 98x56y sv | 2 | AVSLAG | UNUSED |
| 544 | 100x57y nv | 1 | AVSLAG | UNUSED |
| 545 | 89x55y nv | 2 | FRAGMENT | UNUSED |

PS = prøvestyker ID = insufficient data

**Lokation 2:**

All the material, except for the pieces less than 10mm (splinter) was examined for use-wear. These 39 pieces were examined microscopically, and only 2 had definite traces of use-wear. These consisted of the following pieces:

| # | TYPE (English) | Type (Norsk) | MOTION | MATERIAL |
|---|---|---|---|---|
| 121 | STRAIGHT SIDE SCRAPER | SKRAPER MED RETT RETUSJ | WHITTLING | WOOD |
| 137 | END/SIDE SCRAPER | SKRAPER MED ENDERETUSJ | SCRAPING | WOOD |

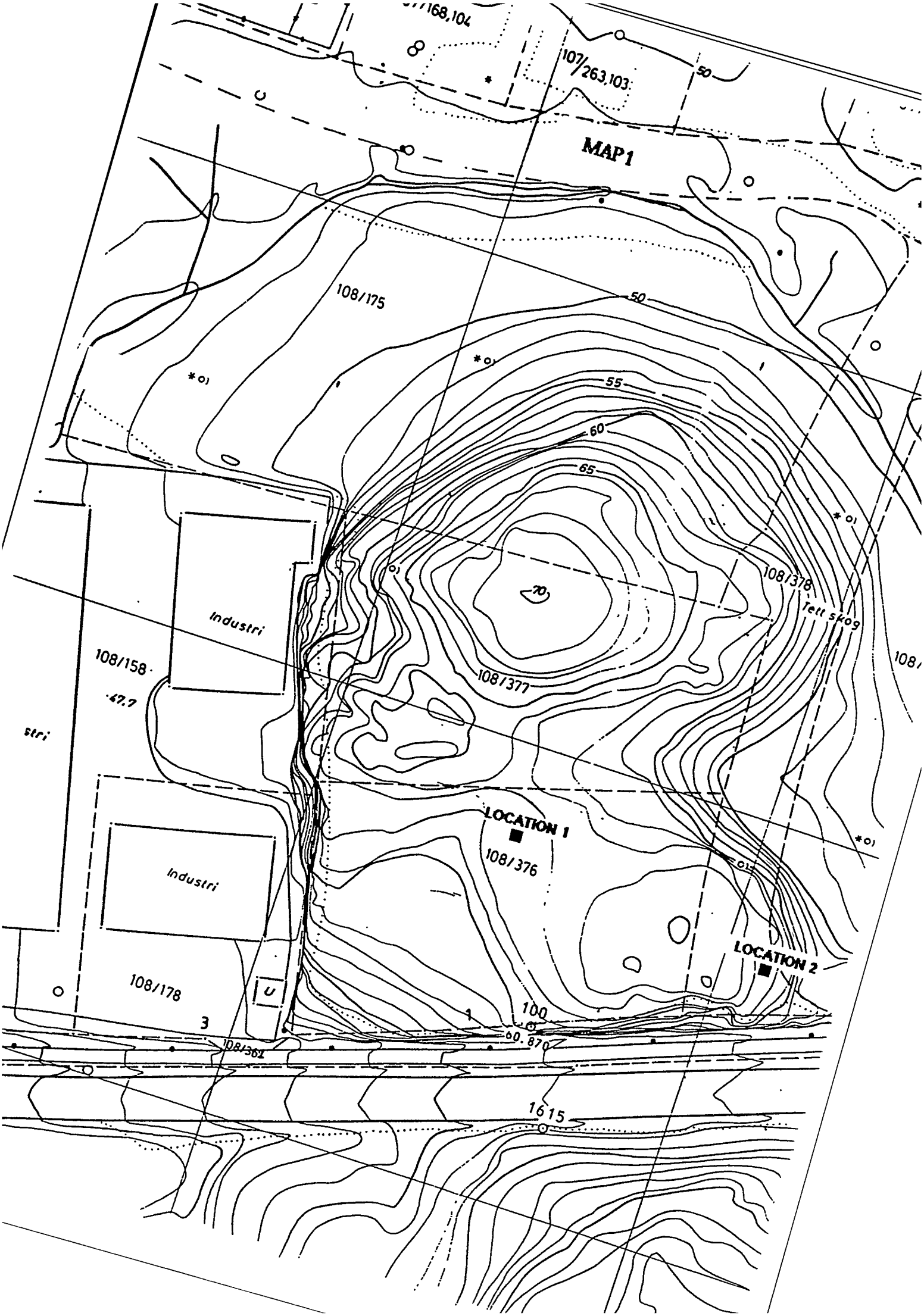
Number 121 could only be interpreted from the macro information as the course grain size of the flint made observation of the surface impossible. Therefore the interpretation of whittling wood is based on tool morphology and edge wear only.

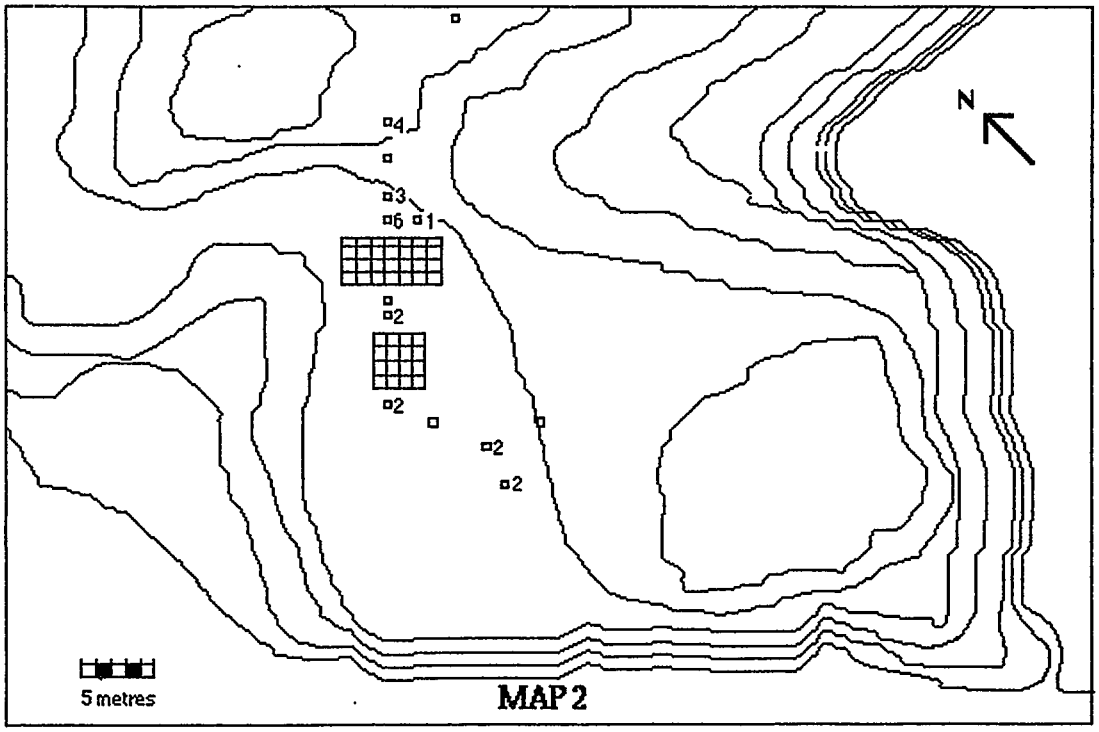
Number 137, though retouched on both sides and on the distal end, was only used on the distal end.

## Results of use-wear analysis: Lokation 2

| # | COORD | LEVEL | TYPE | MOTION | HARDNESS | MATERIAL |
|---|---|---|---|---|---|---|
| 100 | 22x20y sv | PS | AVSLAG | UNUSED | | |
| 101 | 22x20y sv | PS | AVSLAG | UNUSED | | |
| 102 | 28x20y sv | PS | AVSLAG | UNUSED | | |
| 103 | 28x20y sv | PS | FRAGMENT | UNUSED | | |
| 104 | 26x20y nv | 1 | FRAGMENT | UNUSED | | |
| 105 | 28x20y sø | 1 | AVSLAG | UNUSED | | |
| 106 | 28x20y sø | 1 | AVSLAG | UNUSED | | |
| 107 | 28x20y nø | 1 | FRAGMENT | UNUSED | | |
| 108 | 28x20y nø | 1 | FRAGMENT | UNUSED | | |
| 109 | 28x20y nø | 1 | FRAGMENT | UNUSED | | |
| 110 | 28x20y nø | 1 | FRAGMENT | UNUSED | | |
| 111 | 28x20y nv | 1 | BROKEN FLEKKE LET | UNUSED | | |
| 112 | 28x20y nv | 1 | FRAGMENT | UNUSED | | |
| 113 | 28x20y nv | 1 | FRAGMENT | UNUSED | | |
| 114 | 28x20y nv | 1 | FRAGMENT | UNUSED | | |
| 115 | 28x20y nv | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 116 | 28x20y nv | 1 | MIKRO-FLEKKE | UNUSED | | |
| 117 | 23x20y sv | 1 | AVSLAG | UNUSED | | |
| 118 | 23x20y sv | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 119 | 23x20y nv | 1 | FRAGMENT | UNUSED | | |
| 120 | 24x20y sø | 1 | AVSLAG | UNUSED | | |
| 121 | 24x20y sø | 1 | SKRAPER MED RETT RETUSJ | WHITTLING | MEDIUM | WOOD |
| 122 | 25x20y sø | 1 | FRAGMENT | UNUSED | | |
| 123 | 25x20y sv | 1 | FRAGMENT | UNUSED | | |
| 124 | 27x20y sv | 1 | FRAGMENT | UNUSED | | |
| 125 | 27x20y sv | 1 | AVSLAG | UNUSED | | |
| 126 | 27x20y sv | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 127 | 27x20y sø | 1 | FRAGMENT | UNUSED | | |
| 128 | 27x20y sø | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 129 | 27x20y nø | 1 | FRAGMENT | UNUSED | | |
| 130 | 27x20y nø | 1 | AVSLAG | UNUSED | | |
| 131 | 27x20y nv | 1 | FRAGMENT | UNUSED | | |
| 132 | 27x20y nv | 1 | FRAGMENT | UNUSED | | |
| 133 | 27x20y nv | 1 | FRAGMENT | UNUSED | | |
| 134 | 27x20y nv | 1 | FRAGMENT | UNUSED | | |
| 135 | 27x20y nv | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 136 | 27x20y nv | 1 | BROKEN MIKRO-FLEKKE | UNUSED | | |
| 137 | 27x20y nv | 1 | SKRAPER MED ENDERETUSJ | SCRAPING | MEDIUM | WOOD |

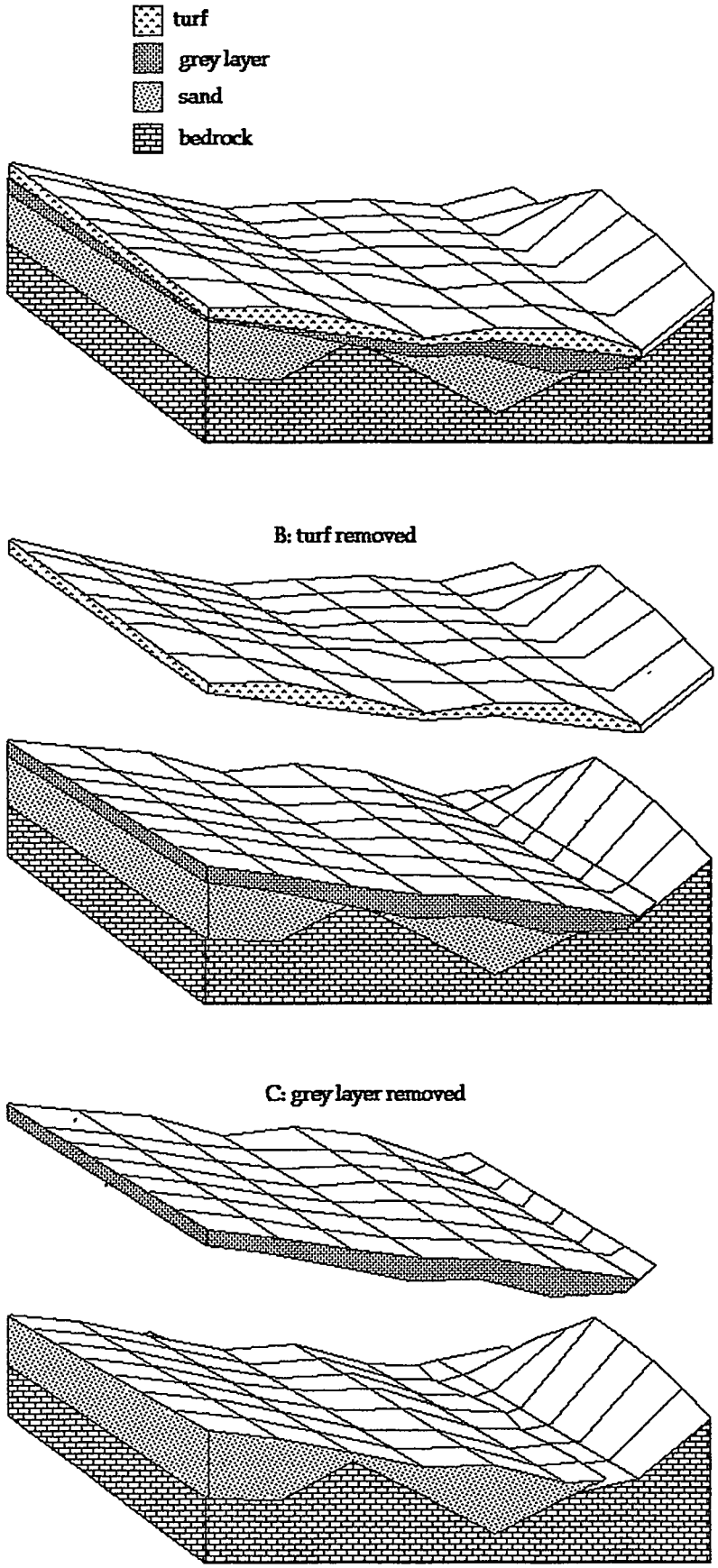
PS = prøvestyker ID = insufficient data


MAP 1
107/263,103
168,104
50
108/175
55
60
65
70
108/378
Tett skog
108/377
Industri
108/158
47,7
Industri
LOCATION 1
108/376
LOCATION 2
108/178
U
3
100
60,870
108/362
1615

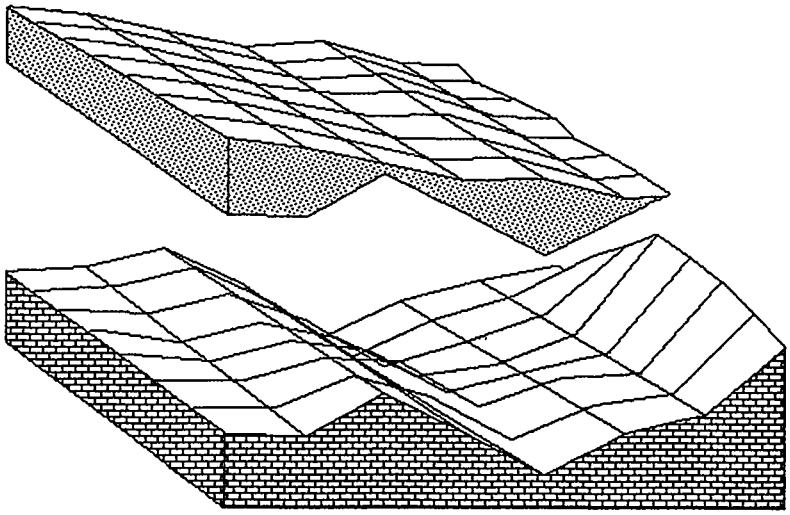



MAP 2

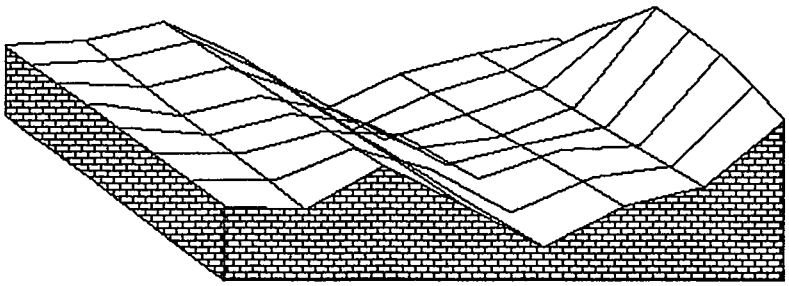
Figure 1: A Location 1 area A



D: sand removed



E: bedrock



F: topography at time of occupation

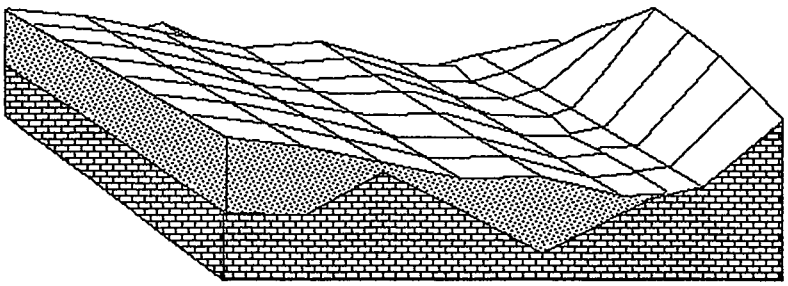
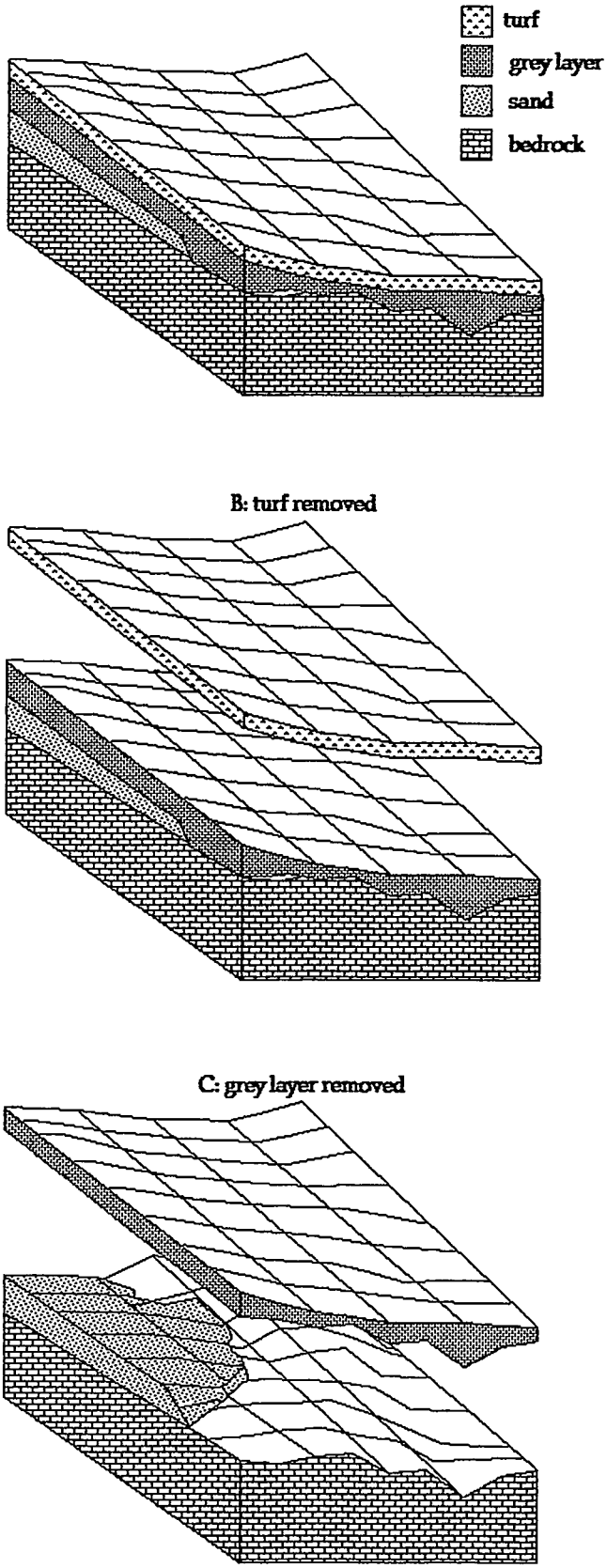
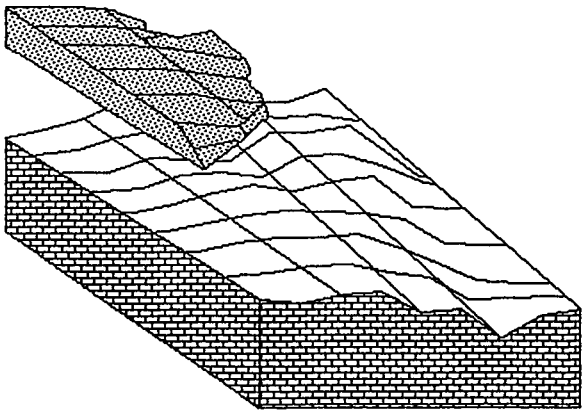


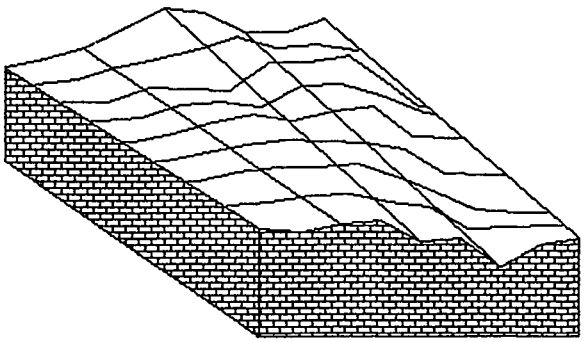
Figure 2: A Location 1 area B



D: sand removed



E: bedrock



F: topography at the time of occupation

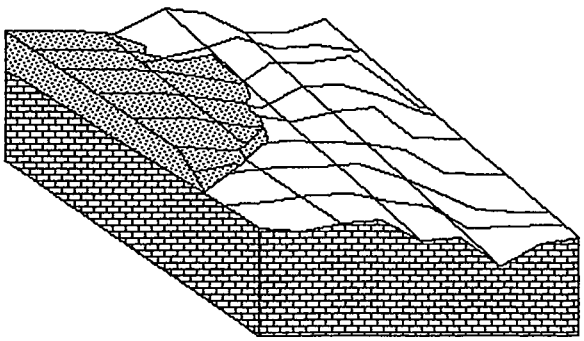


Figure 3 a: general catelogue

C 34478 TOHELLINGA LOKATION 1

# 22 99x57y sø lag 3 cat. # 229-39

| | | |
|---|---|---|
| AVSLAG | | 4,flint |
| total | 4 | |
| IRREGULAR | | 6,flint,1,chert |
| total | 7 | |
| TOTAL AVSLAG | 11 | |
| SPLINTER | | 3,flint |
| total | 3 | |
| TOTAL AVFALL | 14 | |
| FLEKKER | 0 | |
| MIKROFLEKKER | 3 | 3,flint |
| TOTAL FLEKKER | 3 | |
| # TOTAL PIECES | 17 | |

artifacts

243 retouched fragment

Figure 3 b: technical information of specific catelogue

TOOL # 275 Material flint Coord 100x57y nø 1

TOOL length 32 width 20 thickness 11 weight -

mid-point width 17 mid-point thickness 9

PLATFORM width 0 thickness 0 type missing

| | | | | |
|---|---|---|---|---|
| LATERAL EDGES | non-parallel | | DORSAL RIDGES | non-parallel |
| CORTEX | none | | | # |
| PERCUSSION | missing | missing | missing | |
| BUTT | missing | | | |
| BULB | missing | | | |
| RETOUCH | flake | | | |
| POSITION OF RETOUCH | distal | | left | right |
| RETOUCH TYPE | use | continuous | unifacial | direct |
| EDGE FORM | concave | convex | | |
| END FORM | straight | | | |

RESULTS

Figure 3c: results of specific catelogue

TOOL # 275 | flint | 100x57y nø | 1

REPORT

TYPE: END/ SIDE SCRAPER | FLAKE

TECH TYPE: INDETERMINATE | NO DATA | NON-CORTICAL

TECH

microwear data: ?

MACRO

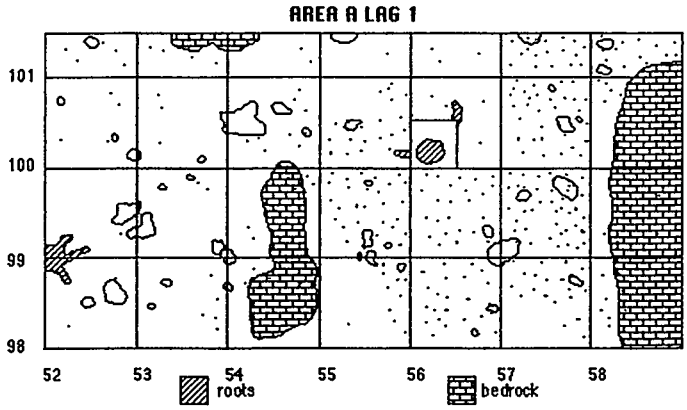
MICRO

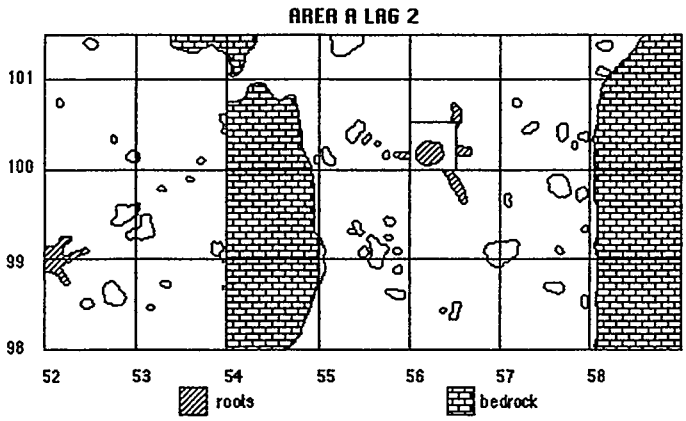
FUNCT TYPE ?

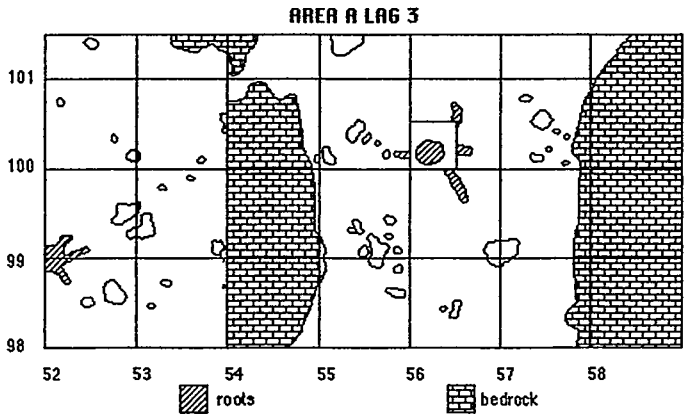
FAST

marginal retouch on right lat
concave on left let
retouch on end do FAST

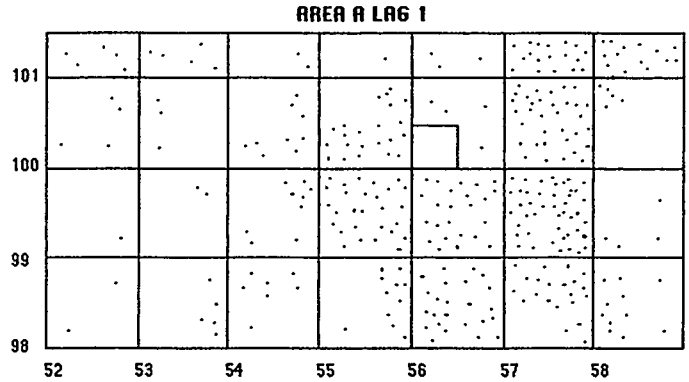
Plans of area A layers 1-3

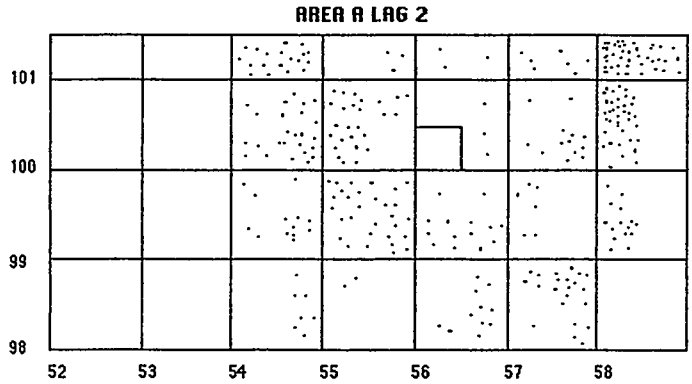


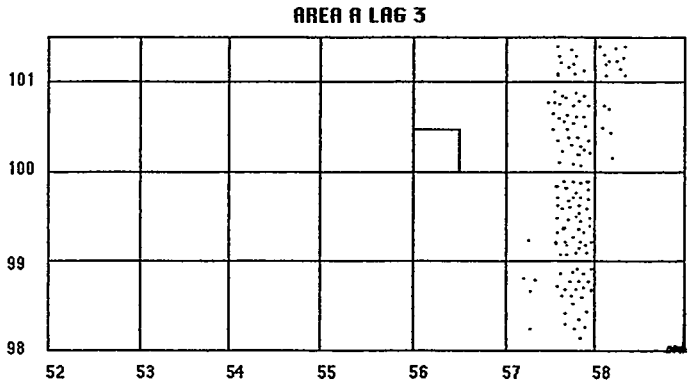



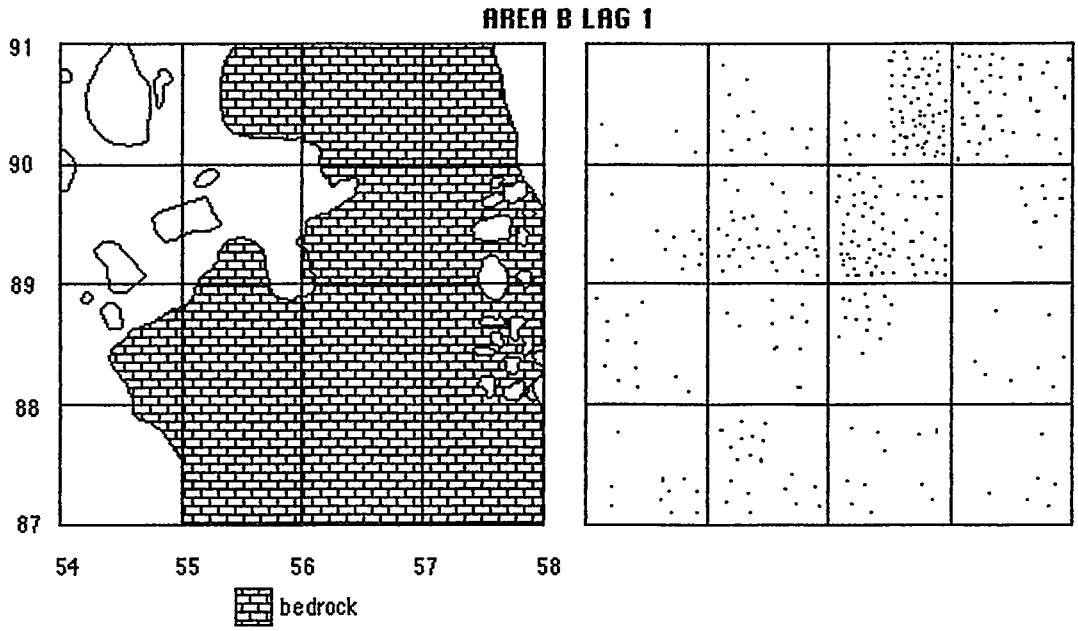
**Finds distributions: area A layers 1-3**

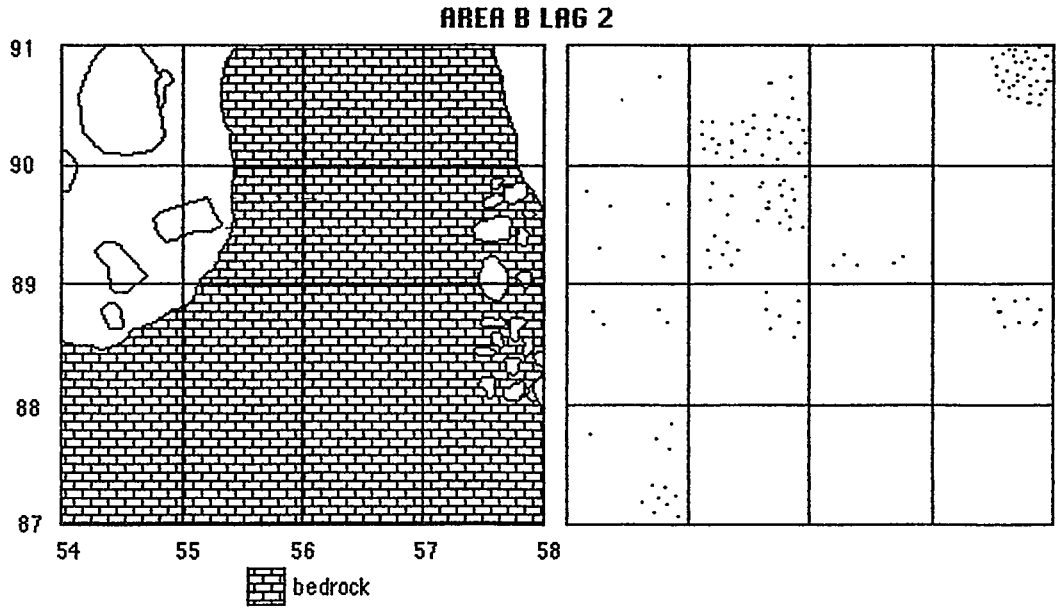


## Plans and finds distribution area B layers 1-2



# TOHELLINGA LOK 1

1 116x55y sv LAG ps avslag 1 irreg 2 splinter 1 tot.avfall 4 TOTAL 4
2 101x44y sv LAG ps avslag 1 irreg 6 splinter 2 tot.avfall 9 TOTAL 9
3 94x55y sv LAG ps flekker 1 TOTAL 1
4 89x55y sv LAG ps avslag 2 irreg 6 splinter 5 tot.avfall 13 flekker 1 TOTAL 14
5 85x55y sv LAG ps irreg 2 tot.avfall 2 TOTAL 2
6 82x64y sv LAG ps avslag 1 tot.avfall 1 flekker 1 TOTAL 2
7 77x65y sv LAG ps avslag 1 irreg 1 tot.avfall 2 TOTAL 2
8 101x58y sø LAG 2 avslag 2 irreg 7 splinter 2 tot.avfall 11 flekker 1 TOTAL 12
9 101x58y sv LAG 2 avslag 6 irreg 16 splinter 4 tot.avfall 26 flekker 5 TOTAL 31
10 100x52y nø LAG 1 avslag 1 irreg 1 tot.avfall 2 TOTAL 2
11 100x52y sø LAG 1 avslag 1 tot.avfall 1 TOTAL 1
12 100x52y sv LAG 1 irreg 1 tot.avfall 1 TOTAL 1
13 100x56y sø LAG 2 irreg 2 tot.avfall 2 TOTAL 2
14 101x57y sø LAG 3 irreg 4 splinter 1 tot.avfall 5 flekker 4 TOTAL 9
15 99x54y sv LAG 1 irreg 1 splinter 1 tot.avfall 2 TOTAL 2
16 99x54y sø LAG 1 irreg 1 tot.avfall 1 TOTAL 1
17 99x54y nø LAG 1 avslag 1 irreg 3 splinter 2 tot.avfall 6 TOTAL 6
18 100x57y nø LAG 3 avslag 5 irreg 7 splinter 9 tot.avfall 21 flekker 3 TOTAL 24
19 100x57y sø LAG 3 avslag 3 irreg 2 splinter 3 tot.avfall 8 flekker 2 TOTAL 10
20 99x57y nø LAG 3 avslag 5 irreg 6 splinter 12 tot.avfall 23 TOTAL 23
21 99x57y sv LAG 3 avslag 1 tot.avfall 1 TOTAL 1
22 99x57y sø LAG 3 avslag 4 irreg 7 splinter 3 tot.avfall 14 flekker 3 TOTAL 17
23 100x58y sv LAG 3 splinter 1 tot.avfall 1 TOTAL 1
24 100x58y nv LAG 3 avslag 1 irreg 1 splinter 2 tot.avfall 4 TOTAL 4
25 101x58y sv LAG 3 avslag 3 irreg 4 splinter 3 tot.avfall 10 flekker 1 TOTAL 11
26 99x56y nø LAG 1 avslag 2 irreg 4 splinter 1 tot.avfall 7 TOTAL 7
27 99x56y nv LAG 1 avslag 2 irreg 2 splinter 2 tot.avfall 6 TOTAL 6
28 99x56y sv LAG 1 avslag 2 irreg 1 tot.avfall 3 TOTAL 3

29 99x56y sø LAG 1 avslag 1 irreg 3 splinter 3 tot.avfall 7 flekker 1
TOTAL 8
30 100x56y sø LAG 1 irreg 1 tot.avfall 1 TOTAL 1
31 100x56y nø LAG 1 irreg 1 tot.avfall 1 TOTAL 1
32 100x56y nv LAG 1 irreg 1 splinter 1 tot.avfall 2 TOTAL 2
33 99x57y nv LAG 2 avslag 2 splinter 1 tot.avfall 3 flekker 1 TOTAL 4
34 99x57y sv LAG 2 irreg 2 tot.avfall 2 TOTAL 2
35 88x57y nø LAG 2 avslag 5 irreg 2 splinter 6 tot.avfall 13 TOTAL 13
36 90x57y nø LAG 2 avslag 8 irreg 14 splinter 15 tot.avfall 37 flekker 2
TOTAL 39
37 99x56y nv LAG 2 avslag 1 tot.avfall 1 TOTAL 1
38 99x56y nø LAG 2 avslag 1 tot.avfall 1 TOTAL 1
39 99x56y sø LAG 2 avslag 1 irreg 1 splinter 3 tot.avfall 5 flekker 1
TOTAL 6
40 99x56y sv LAG 2 avslag 1 irreg 3 splinter 1 tot.avfall 5 flekker 1
TOTAL 6
41 98x56y sø LAG 2 irreg 5 tot.avfall 5 flekker 1 TOTAL 6
42 98x56y sv LAG 2 avslag 1 irreg 1 tot.avfall 2 TOTAL 2
43 98x56y nø LAG 2 avslag 2 splinter 1 tot.avfall 3 TOTAL 3
44 100x55y nv LAG 2 avslag 1 irreg 3 splinter 5 tot.avfall 9 TOTAL 9
45 100x55y sv LAG 2 avslag 1 irreg 3 splinter 7 tot.avfall 11 flekker 1
TOTAL 12
46 100x55y nø LAG 2 avslag 2 irreg 2 splinter 1 tot.avfall 5 TOTAL 5
47 101x57y sv LAG 2 irreg 3 tot.avfall 3 TOTAL 3
48 101x57y sø LAG 2 irreg 1 splinter 3 tot.avfall 4 TOTAL 4
49 98x55y nv LAG 2 avslag 1 irreg 1 tot.avfall 2 TOTAL 2
50 100x57y nv LAG 2 irreg 1 tot.avfall 1 TOTAL 1
51 100x57y nø LAG 2 flekker 1 TOTAL 1
52 100x57y sv LAG 2 irreg 2 tot.avfall 2 TOTAL 2
53 100x57y sø LAG 2 irreg 7 splinter 1 tot.avfall 8 flekker 1 TOTAL 9
54 101x57y sv LAG 1 irreg 7 splinter 1 tot.avfall 8 TOTAL 8
55 101x57y sø LAG 1 avslag 3 irreg 1 splinter 6 tot.avfall 10 TOTAL 10
56 88x55y nø LAG 1 avslag 2 irreg 4 splinter 1 tot.avfall 7 TOTAL 7
57 88x55y sø LAG 1 irreg 1 tot.avfall 1 TOTAL 1
58 88x55y nv LAG 1 irreg 2 tot.avfall 2 TOTAL 2
59 99x55y nv LAG 2 irreg 4 splinter 6 tot.avfall 10 flekker 1 TOTAL 11
60 99x55y sv LAG 2 irreg 1 tot.avfall 1 flekker 1 TOTAL 2
61 99x55y nø LAG 2 avslag 1 irreg 2 splinter 3 tot.avfall 6 TOTAL 6

62 99x55y sø LAG 2 avslag 2 irreg 4 splinter 4 tot.avfall 10 flekker 1
TOTAL 11
63 101x55y sø LAG 1 irreg 1 tot.avfall 1 TOTAL 1
64 101x56y sø LAG 1 irreg 1 tot.avfall 1 TOTAL 1
65 101x56y sv LAG 1 avslag 1 irreg 1 tot.avfall 2 TOTAL 2
66 100x57y nv LAG 1 avslag 5 irreg 5 tot.avfall 10 TOTAL 10
67 100x57y nø LAG 1 avslag 4 irreg 4 splinter 1 tot.avfall 9 TOTAL 9
68 100x57y sø LAG 1 avslag 5 irreg 2 tot.avfall 7 flekker 1 TOTAL 8
69 100x57y sv LAG 1 irreg 4 splinter 3 tot.avfall 7 TOTAL 7
70 87x55y sø LAG 1 irreg 5 tot.avfall 5 TOTAL 5
71 87x55y nv LAG 1 irreg 6 splinter 4 tot.avfall 10 TOTAL 10
72 87x55y sv LAG 1 avslag 3 irreg 1 tot.avfall 4 TOTAL 4
73 89x55y nv LAG 1 irreg 3 splinter 1 tot.avfall 4 TOTAL 4
74 89x55y nø LAG 1 splinter 4 tot.avfall 4 TOTAL 4
75 89x55y sø LAG 1 irreg 10 splinter 4 tot.avfall 14 flekker 1
TOTAL 15
76 99x52y sø LAG 1 splinter 1 tot.avfall 1 TOTAL 1
77 101x54y sø LAG 2 avslag 4 irreg 3 splinter 3 tot.avfall 10 flekker 1
TOTAL 11
78 101x54y sv LAG 2 avslag 1 irreg 3 splinter 1 tot.avfall 5 flekker 3
TOTAL 8
79 89x54y sv LAG 1 irreg 1 tot.avfall 1 TOTAL 1
80 89x54y sø LAG 1 avslag 3 irreg 2 splinter 4 tot.avfall 9 TOTAL 9
81 89x54y nv LAG 1 splinter 1 tot.avfall 1 TOTAL 1
82 100x58y sv LAG 2 avslag 3 irreg 7 splinter 2 tot.avfall 12 flekker 1
TOTAL 13
83 100x58y nv LAG 2 avslag 5 irreg 12 splinter 6 tot.avfall 23 flekker 1
TOTAL 24
84 98x58y sv LAG 1 irreg 6 tot.avfall 6 TOTAL 6
85 98x58y nv LAG 1 avslag 1 irreg 1 splinter 1 tot.avfall 3 TOTAL 3
86 98x54y sv LAG 2 irreg 3 splinter 1 tot.avfall 4 TOTAL 4
87 98x54y nv LAG 2 irreg 2 splinter 1 tot.avfall 3 TOTAL 3
88 131x60y sv LAG PS irreg 2 tot.avfall 2 TOTAL 2
89 89x56y nv LAG 1 irreg 12 splinter 8 tot.avfall 20 TOTAL 20
90 89x56y nø LAG 1 irreg 7 splinter 1 tot.avfall 8 TOTAL 8
91 89x56y sø LAG 2 avslag 1 tot.avfall 1 TOTAL 1
92 89x56y sv LAG 2 irreg 1 splinter 2 tot.avfall 3 TOTAL 3

93 89x56y sv LAG 1 avslag 3 irreg 10 splinter 10 tot.avfall 23 flekker 3
TOTAL 26

94 89x56y sø LAG 1 avslag 3 irreg 4 splinter 5 tot.avfall 12 flekker 1
TOTAL 13

95 100x58y nv LAG 1 avslag 1 irreg 4 tot.avfall 5 TOTAL 5

96 99x58y sv LAG 1 irreg 1 splinter 1 tot.avfall 2 TOTAL 2

97 98x57y nv LAG 2 irreg 3 splinter 1 tot.avfall 4 TOTAL 4

98 98x57y nø LAG 2 avslag 1 irreg 5 splinter 5 tot.avfall 11 flekker 1
TOTAL 12

99 98x57y sv LAG 2 irreg 1 tot.avfall 1 TOTAL 1

100 101x53y sv LAG 1 splinter 1 tot.avfall 1 flekker 1 TOTAL 2

101 101x53y sø LAG 1 irreg 3 tot.avfall 3 TOTAL 3

102 101x52y sv LAG 1 irreg 1 tot.avfall 1 flekker 1 TOTAL 2

103 101x52y sø LAG 1 irreg 1 splinter 2 tot.avfall 3 TOTAL 3

104 99x57y sø LAG 1 avslag 2 irreg 8 splinter 4 tot.avfall 14 flekker 1
TOTAL 15

105 99x57y nø LAG 1 avslag 4 irreg 8 tot.avfall 12 TOTAL 12

106 99x57y nv LAG 1 avslag 4 irreg 5 splinter 4 tot.avfall 13
TOTAL 13

107 99x57y sv LAG 1 irreg 4 tot.avfall 4 flekker 1 TOTAL 5

108 98x53y sø LAG 1 avslag 1 irreg 2 tot.avfall 3 flekker 1 TOTAL 4

109 99x53y nø LAG 1 irreg 2 tot.avfall 2 TOTAL 2

110 98x57y nø LAG 1 avslag 5 irreg 5 splinter 2 tot.avfall 12
TOTAL 12

111 98x57y sø LAG 1 avslag 2 irreg 1 tot.avfall 3 TOTAL 3

112 98x57y nv LAG 1 avslag 2 irreg 4 tot.avfall 6 TOTAL 6

113 100x54y sø LAG 1 avslag 1 splinter 2 tot.avfall 3 TOTAL 3

114 100x54y sv LAG 1 irreg 2 splinter 1 tot.avfall 3 TOTAL 3

115 100x54y nø LAG 1 irreg 2 splinter 1 tot.avfall 3 TOTAL 3

116 100x55y nø LAG 1 irreg 5 tot.avfall 5 TOTAL 5

117 100x55y sø LAG 1 avslag 3 irreg 2 splinter 2 tot.avfall 7 TOTAL 7

118 100x55y sv LAG 1 avslag 2 irreg 8 tot.avfall 10 TOTAL 10

119 101x58y sv LAG 1 avslag 1 irreg 6 splinter 1 tot.avfall 8 TOTAL 8

120 101x58y sø LAG 1 avslag 1 irreg 4 splinter 1 tot.avfall 6 flekker 1
TOTAL 7

121 98x57y sø LAG 3 avslag 1 irreg 4 splinter 2 tot.avfall 7 flekker 1
TOTAL 8

122 98x57y nø LAG 3 avslag 3 irreg 3 splinter 6 tot.avfall 12 flekker 4 TOTAL 16
123 98x57y nv LAG 3 irreg 1 splinter 2 tot.avfall 3 TOTAL 3
124 98x57y sv LAG 3 splinter 1 tot.avfall 1 TOTAL 1
125 99x55y nø LAG 1 avslag 2 irreg 5 tot.avfall 7 TOTAL 7
126 99x55y sv LAG 1 avslag 1 irreg 2 splinter 2 tot.avfall 5 TOTAL 5
127 99x55y nv LAG 1 avslag 2 irreg 4 splinter 4 tot.avfall 10 TOTAL 10
128 99x55y sø LAG 1 irreg 5 tot.avfall 5 flekker 1 TOTAL 6
129 90x54y sv LAG 1 irreg 2 tot.avfall 2 TOTAL 2
130 90x54y sø LAG 1 irreg 2 tot.avfall 2 TOTAL 2
131 87x54y sv LAG 1 irreg 2 tot.avfall 2 TOTAL 2
132 87x54y sø LAG 1 irreg 2 splinter 5 tot.avfall 7 TOTAL 7
133 87x54y nv LAG 1 avslag 1 tot.avfall 1 TOTAL 1
134 101x55y sø LAG 2 irreg 3 tot.avfall 3 TOTAL 3
135 100x56y nø LAG 2 irreg 1 tot.avfall 1 TOTAL 1
136 98x57y sø LAG 2 irreg 4 tot.avfall 4 TOTAL 4
137 90x55y sø LAG 1 irreg 3 tot.avfall 3 TOTAL 3
138 90x55y sv LAG 1 avslag 3 irreg 4 tot.avfall 7 TOTAL 7
139 90x55y nv LAG 1 splinter 3 tot.avfall 3 TOTAL 3
140 101x56y sø LAG 2 irreg 1 tot.avfall 1 TOTAL 1
141 101x56y sv LAG 2 irreg 2 tot.avfall 2 TOTAL 2
142 88x54y sø LAG 1 irreg 2 tot.avfall 2 TOTAL 2
143 88x54y nv LAG 1 avslag 1 irreg 4 tot.avfall 5 flekker 1 TOTAL 6
144 88x54y sv LAG 1 irreg 3 tot.avfall 3 flekker 1 TOTAL 4
145 98x54y nø LAG 1 avslag 2 tot.avfall 2 TOTAL 2
146 98x54y sv LAG 1 avslag 1 tot.avfall 1 TOTAL 1
147 98x54y nv LAG 1 avslag 1 irreg 3 tot.avfall 4 TOTAL 4
148 99x54y sv LAG 2 irreg 2 tot.avfall 2 TOTAL 2
149 99x54y sø LAG 2 irreg 4 splinter 4 tot.avfall 8 TOTAL 8
150 99x54y nv LAG 2 irreg 2 tot.avfall 2 TOTAL 2
151 99x54y nø LAG 2 avslag 1 tot.avfall 1 TOTAL 1
152 100x54y nø LAG 2 irreg 3 splinter 4 tot.avfall 7 TOTAL 7
153 100x54y sv LAG 2 irreg 2 splinter 2 tot.avfall 4 TOTAL 4
154 100x54y sø LAG 2 avslag 1 irreg 8 splinter 2 tot.avfall 11 flekker 1 TOTAL 12
155 100x54y nv LAG 2 splinter 2 tot.avfall 2 TOTAL 2
156 100x53y sv LAG 1 splinter 1 tot.avfall 1 TOTAL 1

157 100x53y nv LAG 1 irreg 2 tot.avfall 2 TOTAL 2
158 101x54y sø LAG 1 irreg 1 splinter 1 tot.avfall 2 TOTAL 2
159 98x52y sv LAG 1 irreg 1 tot.avfall 1 TOTAL 1
160 98x52y nø LAG 1 irreg 1 tot.avfall 1 TOTAL 1
161 98x58y nø LAG 1 irreg 1 tot.avfall 1 TOTAL 1
162 98x58y sø LAG 1 irreg 1 tot.avfall 1 TOTAL 1
163 98x55y sø LAG 1 irreg 3 tot.avfall 3 TOTAL 3
164 98x55y sv LAG 1 flekker 1 TOTAL 1
165 98x55y nø LAG 1 avslag 4 irreg 3 tot.avfall 7 TOTAL 7
166 98x56y sv LAG 1 irreg 6 tot.avfall 6 flekker 1 TOTAL 7
167 98x56y nv LAG 1 avslag 1 irreg 3 tot.avfall 4 flekker 2 TOTAL 6
168 98x56y nø LAG 1 avslag 1 irreg 3 tot.avfall 4 TOTAL 4
169 98x56y sø LAG 1 irreg 6 tot.avfall 6 flekker 1 TOTAL 7
170 99x58y sv LAG 2 avslag 3 irreg 7 splinter 1 tot.avfall 11 TOTAL 11
171 99x58y nv LAG 2 avslag 2 irreg 1 splinter 1 tot.avfall 4 TOTAL 4
172 89x55y nø LAG 2 avslag 3 irreg 7 splinter 5 tot.avfall 15 flekker 1
TOTAL 16
173 89x55y nv LAG 2 irreg 3 splinter 1 tot.avfall 4 TOTAL 4
174 89x55y sø LAG 2 irreg 4 splinter 3 tot.avfall 7 TOTAL 7
175 88x54y nv LAG 2 avslag 2 tot.avfall 2 TOTAL 2
176 88x54y nø LAG 2 avslag 1 irreg 1 tot.avfall 2 TOTAL 2
177 90x55y sø LAG 2 avslag 2 irreg 7 splinter 8 tot.avfall 17 TOTAL 17
178 90x55y nv LAG 2 irreg 3 tot.avfall 3 TOTAL 3
179 90x55y sv LAG 2 irreg 8 splinter 1 tot.avfall 9 flekker 1 TOTAL 10
180 89x54y sø LAG 2 avslag 1 tot.avfall 1 TOTAL 1
181 89x54y nø LAG 2 irreg 1 tot.avfall 1 TOTAL 1
182 89x54y sv LAG 2 irreg 1 tot.avfall 1 TOTAL 1
183 89x54y nv LAG 2 irreg 1 splinter 1 tot.avfall 2 TOTAL 2
184 90x54y nø LAG 2 avslag 1 tot.avfall 1 TOTAL 1
185 87x54y sø LAG 2 avslag 1 irreg 7 tot.avfall 8 TOTAL 8
186 87x54y nv LAG 2 flekker 1 TOTAL 1
187 87x54y nø LAG 2 avslag 1 irreg 1 splinter 1 tot.avfall 3 TOTAL 3
188 88x56y nv LAG 1 avslag 3 irreg 4 splinter 7 tot.avfall 14
TOTAL 14
189 89x57y sø LAG 1 avslag 1 tot.avfall 1 TOTAL 1
190 89x57y nø LAG 1 avslag 1 irreg 4 splinter 3 tot.avfall 8 TOTAL 8
191 90x57y nø LAG 1 irreg 7 splinter 2 tot.avfall 9 TOTAL 9
192 90x57y sv LAG 1 irreg 7 splinter 6 tot.avfall 13 TOTAL 13

| | | |
|---|---|---|
| 193 | 90x57y sø LAG 1 irreg 3 tot.avfall 3 | TOTAL 3 |
| 194 | 90x57y nv LAG 1 irreg 11 splinter 5 tot.avfall 16 | TOTAL 16 |
| 195 | 88x57y sv LAG 1 irreg 1 splinter 2 tot.avfall 3 | TOTAL 3 |
| 196 | 88x57y sø LAG 1 irreg 1 splinter 2 tot.avfall 3 | TOTAL 3 |
| 197 | 88x57y nø LAG 1 irreg 1 tot.avfall 1 | TOTAL 1 |
| 198 | 88x57y nv LAG 1 irreg 1 tot.avfall 1 | TOTAL 1 |
| 199 | 87x56y nø LAG 1 irreg 2 tot.avfall 2 | TOTAL 2 |
| 200 | 87x56y sv LAG 1 avslag 1 irreg 1 splinter 2 tot.avfall 4 | TOTAL 4 |
| 201 | 87x56y sø LAG 1 irreg 1 splinter 1 tot.avfall 2 | TOTAL 2 |
| 202 | 87x57y sø LAG 1 irreg 1 splinter 3 tot.avfall 4 | TOTAL 4 |
| 203 | 87x57y sv LAG 1 irreg 1 tot.avfall 1 | TOTAL 1 |
| 204 | 87x57y nø LAG 1 irreg 1 tot.avfall 1 | TOTAL 1 |
| 205 | 87x57y nv LAG 1 avslag 1 irreg 2 tot.avfall 3 | TOTAL 3 |
| 206 | 90x56y sø LAG 1 avslag 5 irreg 22 splinter 16 tot.avfall 43 flekker 1 | TOTAL 44 |
| 207 | 90x56y nø LAG 1 avslag 1 irreg 16 splinter 3 tot.avfall 20 flekker 1 | TOTAL 21 |
| 208 | 90x56y sv LAG 1 irreg 4 splinter 1 tot.avfall 5 | TOTAL 5 |
| 209 | 103x55y sv LAG PS avslag 1 irreg 5 tot.avfall 6 | TOTAL 6 |
| 210 | 103x57y nø LAG PS irreg 1 tot.avfall 1 | TOTAL 1 |
| 211 | løsfunn irreg 1 tot.avfall 1 | TOTAL 1 |

NB: nye nr. etter slides posseanelype: se bak

TOOLS:

| | | | |
|---|---|---|---|
| 105 | 101x44y sv ps | retouched flake | flint |
| 115 | 94x55y sv ps | retouched fragment | patinated flint |
| 208 | 100x57y nø lag 3 | bipolar core | flint |
| 243 | 99x57y sø lag 3 | retouched fragment | flint |
| 254 | 101x58y sv lag 3 | retouched flake | flint |
| 273 | 99x56y nø lag 2 | scraper fragment | flint |
| 276 | 98x56y sø lag 2 | bladelet core | flint |
| 274 | 98x56y nø lag 2 | flake core fragment | flint |
| 275 | 100x57y nø lag 1 | side scraper | flint |
| 277 | 98x57y nv lag 2 | retouched blade | flint |
| 278 | 100x54y sø lag 1 | bladelet core fragment | flint |
| 279 | 98x56y sv lag 1 | flake scraper | flint |
| 280 | 90x55y sv lag 1 | core fragment | flint |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 193 | 90x57y sø LAG | 1 | irreg | 3 | tot.avfall | 3 | | TOTAL | 3 |
| 194 | 90x57y nv LAG | 1 | irreg | 11 | splinter | 5 | tot.avfall 16 | TOTAL | 16 |
| 195 | 88x57y sv LAG | 1 | irreg | 1 | splinter | 2 | tot.avfall 3 | TOTAL | 3 |
| 196 | 88x57y sø LAG | 1 | irreg | 1 | splinter | 2 | tot.avfall 3 | TOTAL | 3 |
| 197 | 88x57y nø LAG | 1 | irreg | 1 | tot.avfall | 1 | | TOTAL | 1 |
| 198 | 88x57y nv LAG | 1 | irreg | 1 | tot.avfall | 1 | | TOTAL | 1 |
| 199 | 87x56y nø LAG | 1 | irreg | 2 | tot.avfall | 2 | | TOTAL | 2 |
| 200 | 87x56y sv LAG | 1 | avslag 1 | irreg | 1 | splinter | 2 | tot.avfall 4 | TOTAL 4 |
| 201 | 87x56y sø LAG | 1 | irreg | 1 | splinter | 1 | tot.avfall 2 | TOTAL | 2 |
| 202 | 87x57y sø LAG | 1 | irreg | 1 | splinter | 3 | tot.avfall 4 | TOTAL | 4 |
| 203 | 87x57y sv LAG | 1 | irreg | 1 | tot.avfall | 1 | | TOTAL | 1 |
| 204 | 87x57y nø LAG | 1 | irreg | 1 | tot.avfall | 1 | | TOTAL | 1 |
| 205 | 87x57y nv LAG | 1 | avslag 1 | irreg | 2 | tot.avfall | 3 | TOTAL | 3 |
| 206 | 90x56y sø LAG | 1 | avslag 5 | irreg | 22 | splinter | 16 | tot.avfall 43 | flekker 1 TOTAL 44 |
| 207 | 90x56y nø LAG | 1 | avslag 1 | irreg | 16 | splinter | 3 | tot.avfall 20 | flekker 1 TOTAL 21 |
| 208 | 90x56y sv LAG | 1 | irreg | 4 | splinter | 1 | tot.avfall 5 | TOTAL | 5 |
| 209 | 103x55y sv LAG | PS | avslag 1 | irreg | 5 | tot.avfall | 6 | TOTAL | 6 |
| 210 | 103x57y nø LAG | PS | irreg | 1 | tot.avfall | 1 | | TOTAL | 1 |
| 211 | løsfunn | | irreg | 1 | tot.avfall | 1 | | TOTAL | 1 |

NB: nye nr. etter slitesporanalyse

## TOOLS

| | | | |
|---|---|---|---|
| 305 | 101x44y sv ps | retouched flake | flint |
| 315 | 94x55y sv ps | retouched fragment | patinated flint |
| 408 | 100x57y nø lag 3 | bipolar core | flint |
| 443 | 99x57y sø lag 3 | retouched fragment | flint |
| 454 | 101x58y sv lag 3 | retouched flake | flint |
| 473 | 99x56y nø lag 2 | scraper fragment | flint |
| 476 | 98x56y sø lag 2 | bladelet core | flint |
| 474 | 98x56y nø lag 2 | flake core fragment | flint |
| 475 | 100x57y nø lag 1 | side scraper | flint |
| 477 | 98x57y nv lag 2 | retouched blade | flint |
| 478 | 100x54y sø lag 1 | bladelet core fragment | flint |
| 479 | 98x56y sv lag 1 | flake scraper | flint |
| 480 | 90x55y sv lag 1 | core fragment | flint |

## MATERIALS

| | | | | |
|---|---|---|---|---|
| AVSLAG | 197 flint | 11 chert | 1 bergkrystall | 1 uberstempt |
| IRREG | 524 flint | 111 chert | 2 kvarts | 3 uberstempt |
| SPLINTER | 295 flint | 36 chert | | |
| FLEKKER | 1 flint | 3 chert | | |
| MIKROFLEKKER | 64 flint | 5 chert | | |
| TOTALS | 1081 flint | 166 chert | 1 bergkrystall | 2 kvarts |
| | | 4 uberstempt | | |
| TOTAL | 1254 | | | |

## DEBITAGE

| | |
|---|---|
| AVSLAG | 210 |
| IRREG | 640 |
| SPLINTER | 331 |
| FLEKKER | 4 |
| MIKROFLEKKER | 69 |
| TOTAL | 1254 |

## TOHELLINGA LOK 2

| | | | |
|---|---|---|---|
| 1 | 22x20y sv LAG ps | avslag 2 tot. avfall 2 | TOTAL 2 |
| 2 | 28x20y sv LAG ps | avslag 1 irreg 1 tot. avfall 2 | TOTAL 2 |
| 3 | 26x20y nø LAG 1 | splinter 2 tot. avfall 2 | TOTAL 2 |
| 4 | 26x20y nv LAG 1 | irreg 1 tot. avfall 1 | TOTAL 1 |
| 5 | 28x20y sø LAG 1 | avslag 2 splinter 1 tot. avfall 3 | TOTAL 3 |
| 6 | 28x20y nø LAG 1 | irreg 4 splinter 2 tot. avfall 6 | TOTAL 6 |
| 7 | 28x20y nv LAG 1 | irreg 4 splinter 1 tot. avfall 5 flekker 2 | TOTAL 7 |
| 8 | 23x20y sv LAG 1 | avslag 1 tot. avfall 1 flekker 1 | TOTAL 2 |
| 9 | 23x20y nv LAG 1 | irreg 1 tot. avfall 1 | TOTAL 1 |
| 10 | 24x20y sø LAG 1 | avslag 1 tot. avfall 1 | TOTAL 1 |
| 11 | 25x20y sø LAG 1 | irreg 1 splinter 1 tot. avfall 2 | TOTAL 2 |
| 12 | 25x20y sv LAG 1 | irreg 1 splinter 1 tot. avfall 2 | TOTAL 2 |
| 13 | 27x20y sv LAG 1 | irreg 2 tot. avfall 2 flekker 1 | TOTAL 3 |
| 14 | 27x20y sø LAG 1 | irreg 1 tot. avfall 1 flekker 1 | TOTAL 2 |
| 15 | 27x20y nø LAG 1 | avslag 1 irreg 1 splinter 2 tot. avfall 4 | TOTAL 4 |
| 16 | 27x20y nv LAG 1 | irreg 4 tot. avfall 4 flekker 2 | TOTAL 6 |
| 17 | 22x20y sø LAG 1 | avslag 1 tot. avfall 1 | TOTAL 1 |
| 18 | Løsfunn | irreg 2 tot. avfall 2 | TOTAL 2 |

## TOOLS

| | | | |
|---|---|---|---|
| 121 | 24x20y sø lag 1 | side scraper | flint |
| 137 | 27x20y nv lag 1 | scraper | flint |

## MATERIALS

| | | |
|---|---|---|
| AVSLAG | 8 flint | 1 chert |
| IRREG | 21 flint | 2 chert |
| SPLINTER | 5 flint | 5 chert |
| FLEKKER | 0 | |
| MIKROFLEKKER | 7 flint | |
| TOTALS | 41 flint | 8 chert |

TOTAL 49

## DEBITAGE

| | |
|---|---|
| AVSLAG | 9 |
| IRREG | 23 |
| SPLINTER | 10 |
| FLEKKER | 0 |
| MIKROFLEKKER | 7 |
| | |
| TOTAL | 49 |

BLACK & WHITE: FILM 1 Neg. nr. 23155

0 location 1 area A from east
1 location 1 area A from east
2 location 1 area A from east
3 location 1 area A from west
4 location 1 area A from west
5 location 1 area A from west
6 close of bedrock eastern end of location 1 area A
7 location 1 area A from west
8 looking north from location 1 area A
9 location 1 area A from south west
10 location 1 area A from north east
11 looking over location 1 area A from north
12 looking down on location 2 from west
13 overexposed
14 overexposed
15 location 2 from north
16 location 2 from north
17 looking over location 2 from south east
18 looking over location 2 from south east
19 looking over location 2 from north
20 location 2 from west
21 looking south from location 2

BLACK & WHITE:FILM 2 Neg. nr. 23156

0 details of bedrock of location 1 area B
1 details of bedrock of location 1 area B
2 details of bedrock of location 1 area B
3 details of bedrock of location 1 area B
4 details of bedrock of location 1 area B
5 details of bedrock of location 1 area B
6 location 1 area B from north east
7 location 1 area A from south
8 location 1 area A from west
9 location 1 area A from south
10 location 1 area A from south showing western part of area
11 location 1 area A from north east
12 location 1 area A from north east
13 location 1 area A from north east
14 location 1 area A from north east
15 location 1 area A from north showing western part of area
16 location 1 area A from south west
17 location 1 area B
18 surrounding woods location 1
19 surrounding woods location 1
20 surrounding woods location 1
21 surrounding woods location 1

DATE Neg. nr. 23155

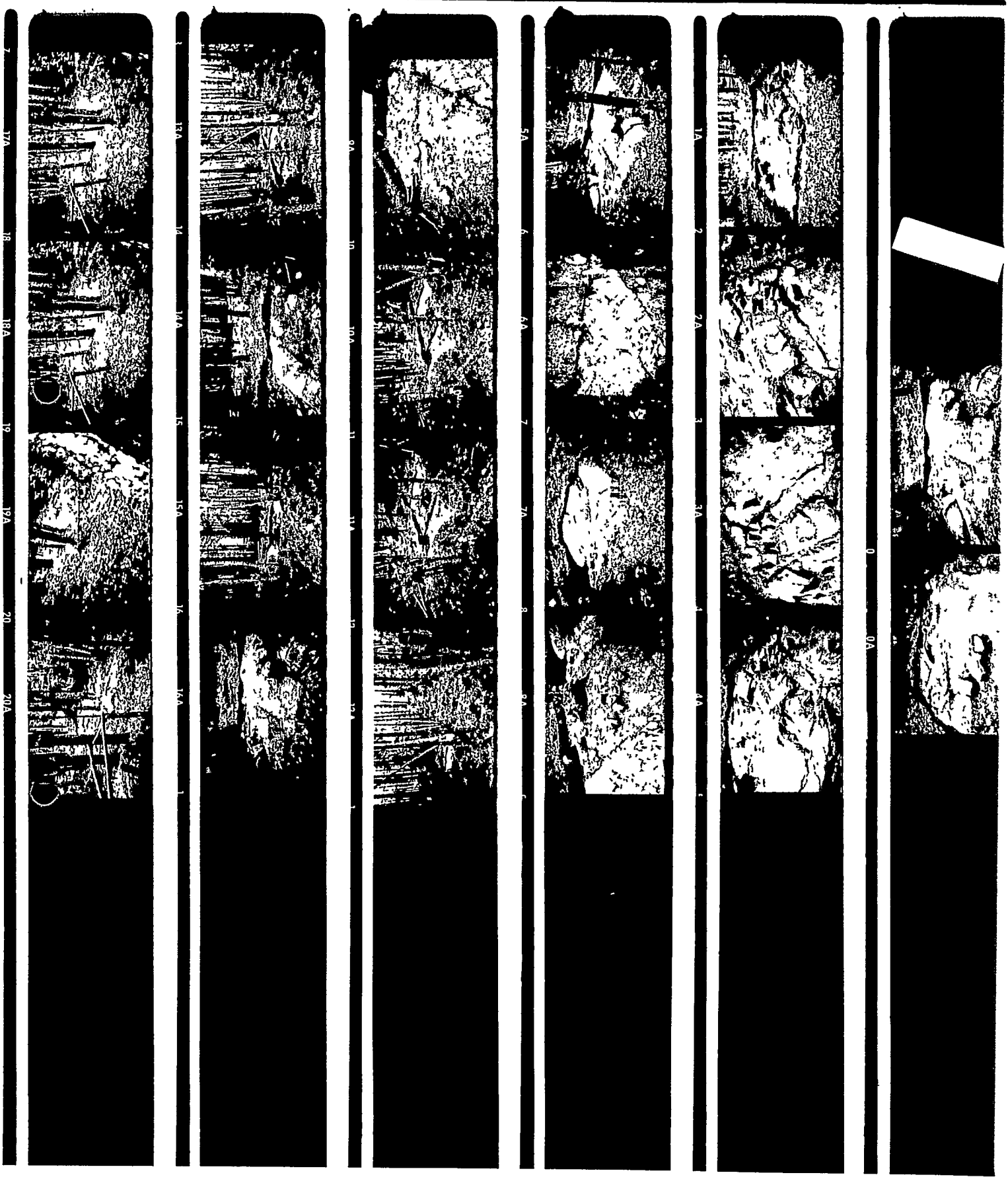
SUBJECT TOKFILLINGA FILM 1

TECHNICAL DATA

DATE Neg. nr. 23156

SUBJECT TOHELLINGA FILM 7

TECHNICAL DATA

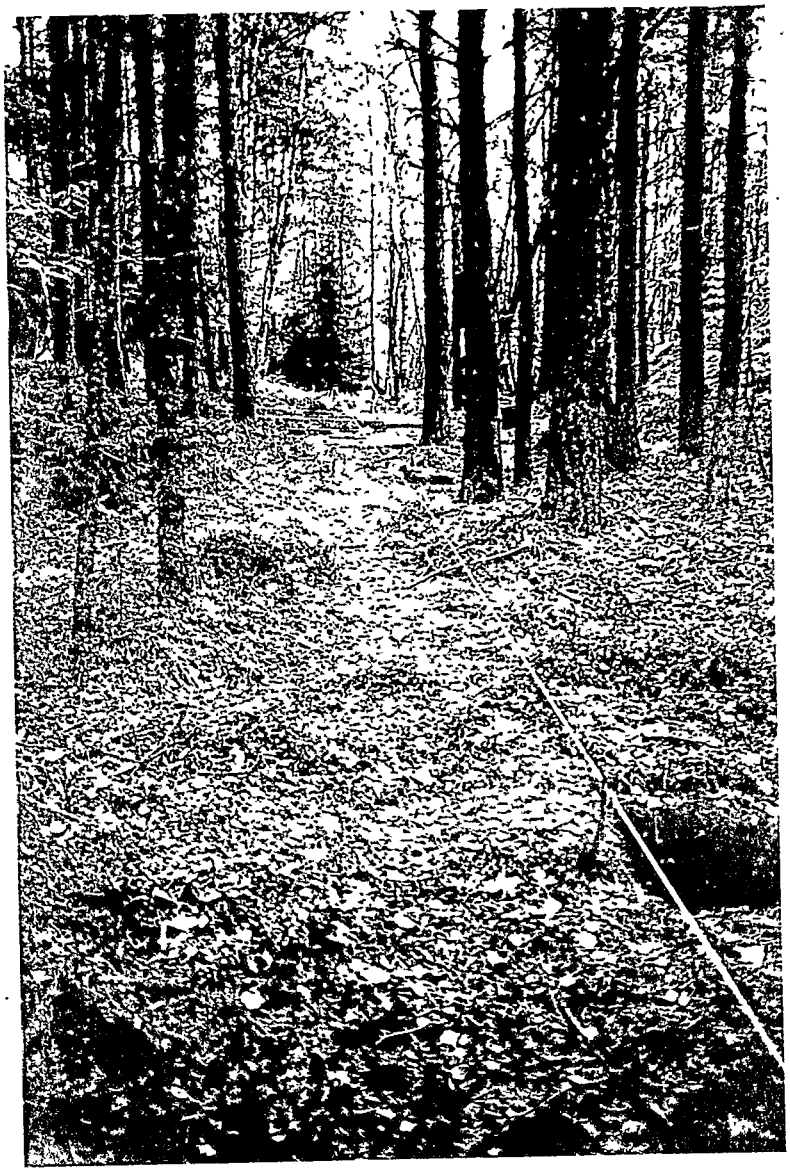


# TOHELLINGA PHOTO LIST

COLOUR SLIDES

1 view of profile cut by road south of Location 2
2 view of profile cut by road south of Location 2
3 location 2 from south
4 location 2 from south west
5 location 2 from south east
6 location 1 area B from east
7 location 1 area A from north
8 location 1 area A from east
9 location 1 area A from west
10 location 2 from south showing trench
11 location 2 square 26x17y
12 location 2 from south west
13 location 2 from north east
14 location 1 area A from west
15 location 1 area A from east
16 location 1 area A from south of western edge of area
17 location 1 area A from south showing bedrock in central part of area
18 location 1 area A from south showing bedrock in eastern part of area
19 location 1 area A from south showing eastern part of area
20 ?
21 location 1 area B from south showing bedrock in eastern part of area
22 location 1 area B from south showing bedrock
23 location 1 area B from east showing bedrock
24 location 1 area B from north showing bedrock
25 location 1 area B from west showing bedrock
26 location 1 area A from west showing bedrock at eastern edge of area
27 location 1 area A from south east
28 location 1 area A from east
29 location 1 area B from area A
30 looking over location 1 area A from north
31 location 1 area B showing bedrock
32 location 1 area B from east showing bedrock
33 location 1 area B from south showing bedrock
34 close up location 1 area B of south east of area
35 illustrating wooded nature of area
36 illustrating wooded nature of area
37 illustrating wooded nature of area
38 illustrating wooded nature of area

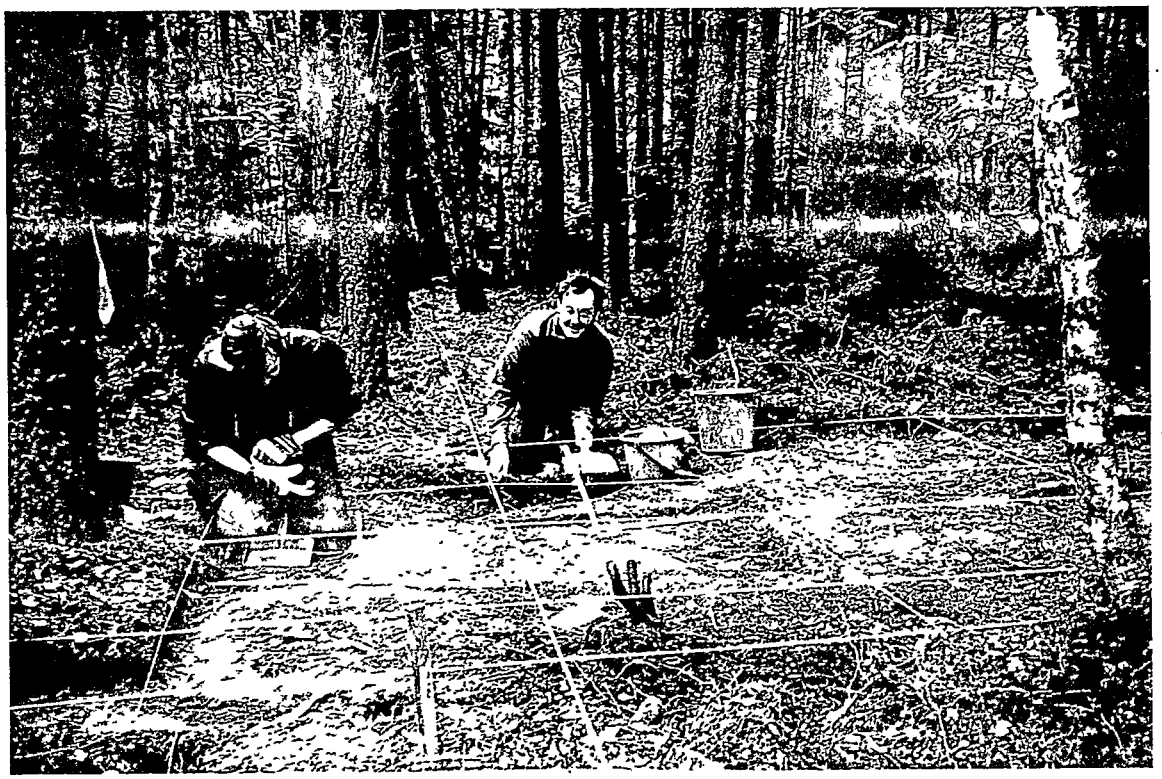
Tohellinga
Ås k. Akershus



lokalitet 1 mot NØ

lok 1
mot S

Lok. 1 mot



Lok. 1 mot SV

Roger Grace

# TOHELLINGA PRELIMIARY REPORT

**Introduction:**

The field work for the Tohellinga area took place from the 11th to the 15th of July 1994. Test pits were excavated to discover the nature and numbers of finds and to establish the depth and nature of the sediments (**see Appendix 1**).

## LOCATION 1

**Survey:**

A base line was established along so that the different areas of Location 1 could be linked (**see plan**). The initial question was to establish whether there was a continuation of finds or whether or not they were localized. The line of test pit along 55x revealed two sedimentological areas. To the north beneath the organic layer,leached grey layer and sand deposits, there was a layer of light brown silty material that was consolidated. No finds were found in this deposit and should be considered sterile. Generally most artifacts came from the interface between the grey leached layer and the sand The profiles of the test pits to the north (55x 116y sv, 55x 111y sv, 55x 106y sv, Fig.1) have this silty layer but it was not present to the south in test pits (55x 101y sv, 55x 94y sv, 55x 89y sv, 55x 85y sv, Fig 2).

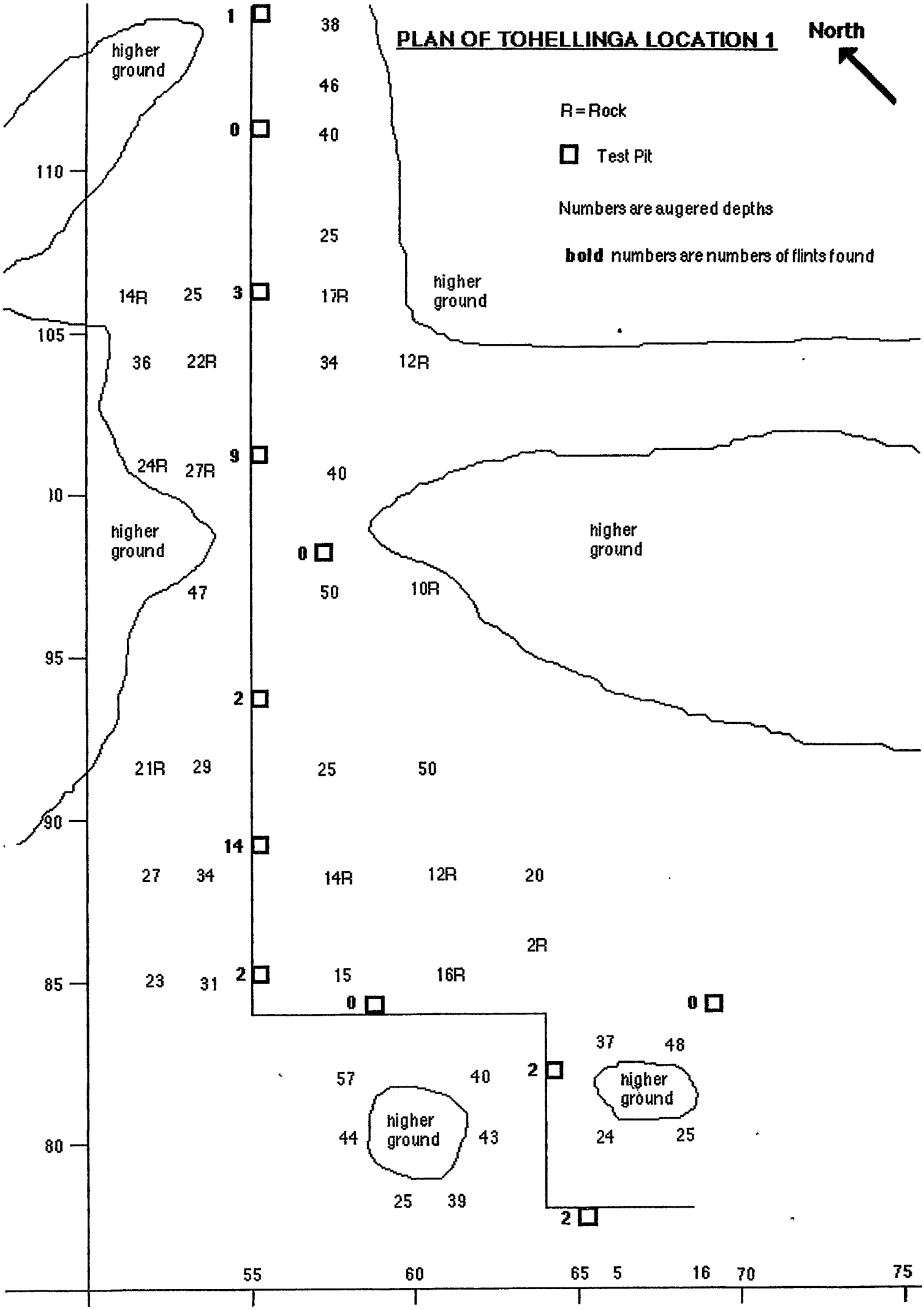

PLAN OF TOHELLINGA LOCATION 1
North
R = Rock
Test Pit
Numbers are augered depths
**bold** numbers are numbers of flints found
higher ground
higher ground
higher ground
higher ground
higher ground
higher ground
110
105
10
95
90
85
80
55
60
65
5
16
70
75
1
38
46
0
40
25
3
14R
25
17R
36
22R
34
12R
9
24R
27R
40
0
50
10R
47
2
21R
29
25
50
14
27
34
14R
12R
20
2R
2
23
31
15
16R
0
0
37
48
2
57
40
44
43
24
25
25
39
2

Figure 1

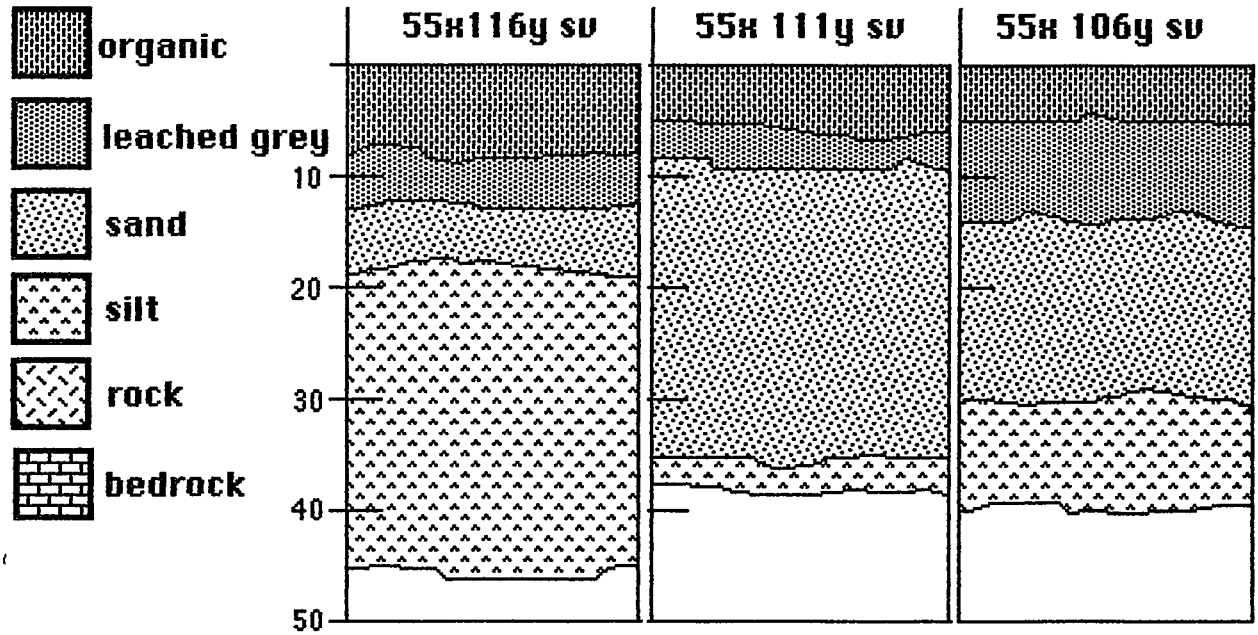
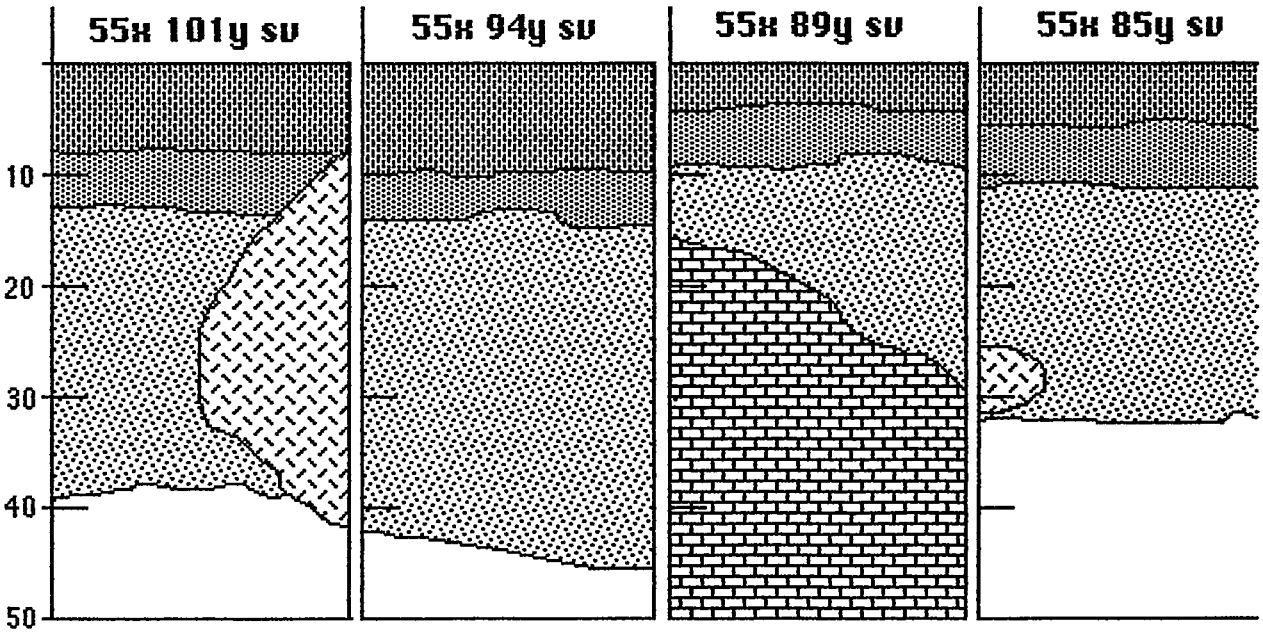



Figure 2




In the northern area only 3 pieces of flint were found. In the southern area 27 pieces of flint were discovered. So it would appear that the southern area without the silty layer is the central position of the site.

The area to the south east produced only 4 pieces of flint and would seem a peripheral area, as with the northern part.

**Depth of deposits:**

A number of points along the grid were tested using an auger to establish the depth of the deposits. These positions and depths are marked on the plan. Nowhere did the deposits reach a depth greater than 50cm. Around test pit 55x 89y sv, in which most flints were found (n=14) bedrock was found at as little as 14 cm. depth, as it was in the test pit. This would suggest that the find bearing deposits will not be very thick.

**Geographical location:**

The higher ground has been marked on the plan. This has not been mapped accurately but gives an impression of the likely size of the site as it is situated between rocky outcrops.

**The Finds:**

35 pieces of flint/chert were found, 23 of these were fragments. The remaining 12 consisted of 2 bladelets, 1 blade and 7 flakes, 2 of these flakes were less than 10 mm. and therefore were 'chips' or flake *splinter* .

There is a small amount of marginal retouch on 2 fragments and 1 flake. The retouched pieces are insufficiently diagnostic to type as specific tools or to draw any technological conclusions that would allow assignment to an industry or culture. However one of the bladelets is a plunging bladelet (*sidefragment*) with 2 parallel dorsal ridges most probably coming from a bladelet core. This would indicate a Mesolithic date.

**Recommendations:**

The procedure of excavation should centre on the areas with the greatest numbers of finds. The areas around test pits 55x 101y sv, and 55x 89y sv should be opened initially, with a view to joining the two areas depending on results. This conjoined area would appear to represent the centre of the site. The finds of a few pieces in the test pits some distance from this area perhaps represents displacement of material from the central area.

## LOCATION 2

**Survey:**

A base line running north-south was established. Only 2 test pits were excavated because of the small size of the area **(see plan)**. The sections of these pits are illustrated in **Appendix 1.** Only 2 pieces of flint/chert were found in each pit.

**Depth of deposits:**

In addition to the test pits a number of augured sounding were made **(see plan).** Nowhere did the depth of deposits reach beyond 50cm. The sediments consisted entirely of an organic layer, the leached layer (E horizon) and sand.

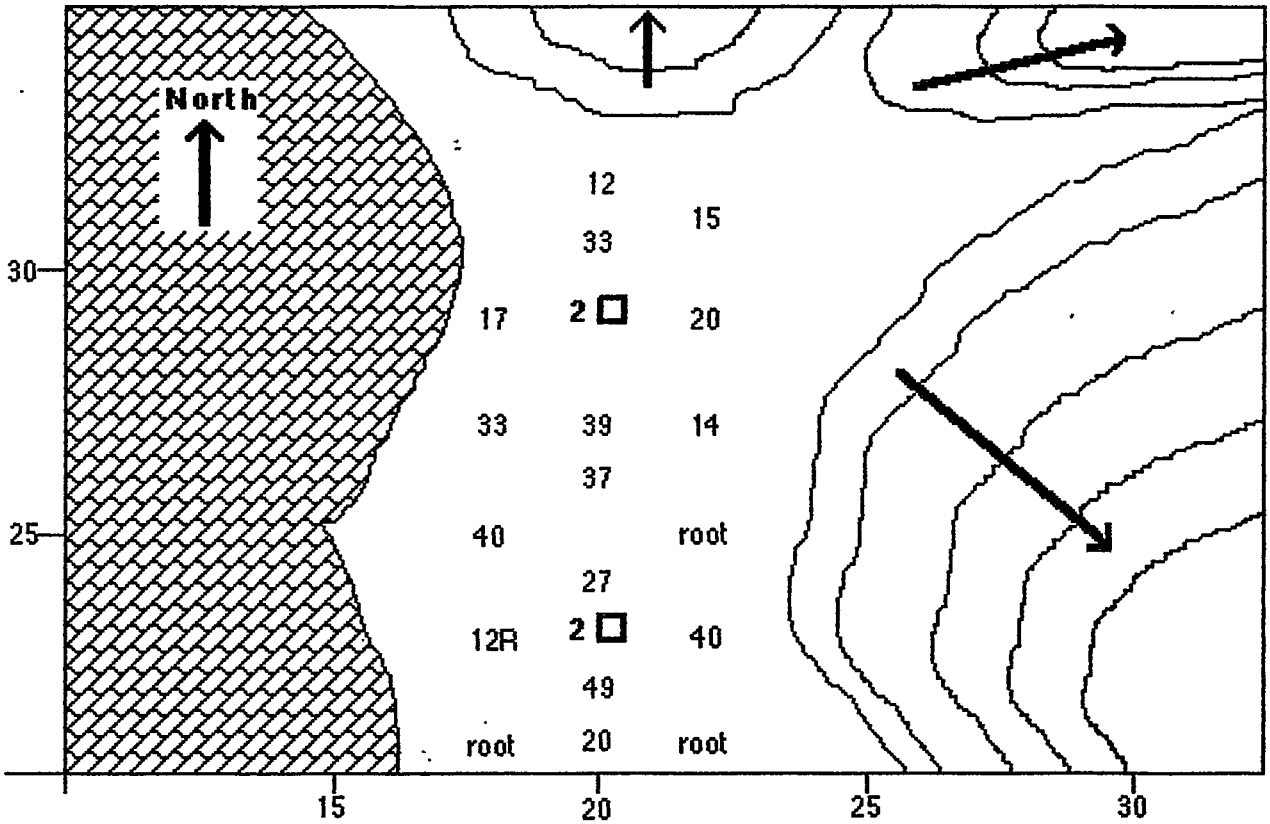
**Geographical location:**

The area is very small (a maximum of 12 x 8 metres) with steep slopes dropping away from the site on three side the west side being limited by a rock wall. The site has been truncated to the south by the construction of the E6 road. Given the present geographical location the site perhaps represents a peripheral area of what might have been a larger site.

**The Finds:**

The finds consisted of 3 flakes and a flake fragment. No retouched pieces were found, and so no typological or technological conclusions can be made.

PLAN OF TOHELLINGA LOCATION2




**Recommendations:**

A small test area could be opened to discover if a greater concentration of finds could be made. However because of the truncation of the area by the E6 the site is unlikely to produce much material or represent undisturbed areas.

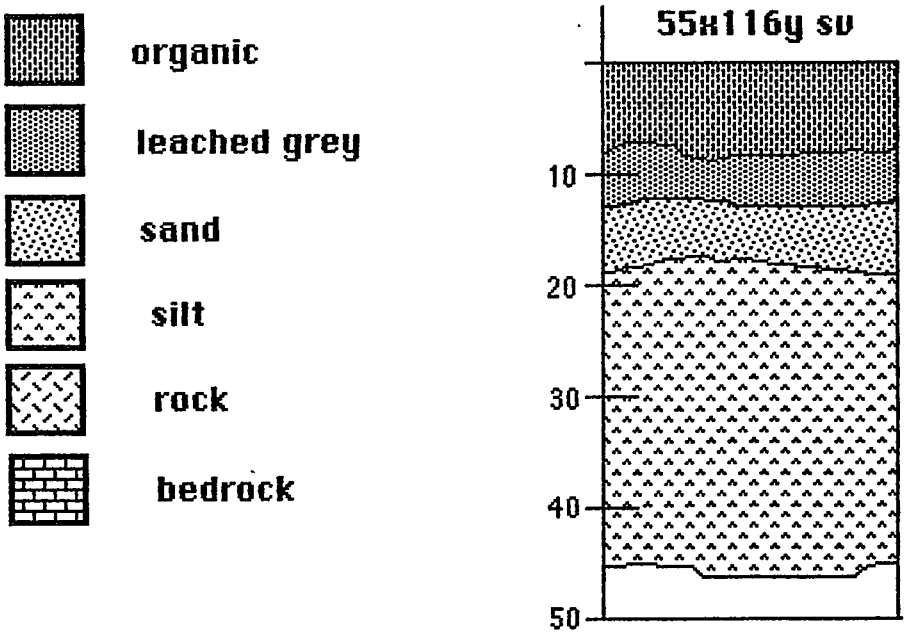
APPENDIX 1

TOHELLINGA LOCATION 1

TEST PITS: finds and sections

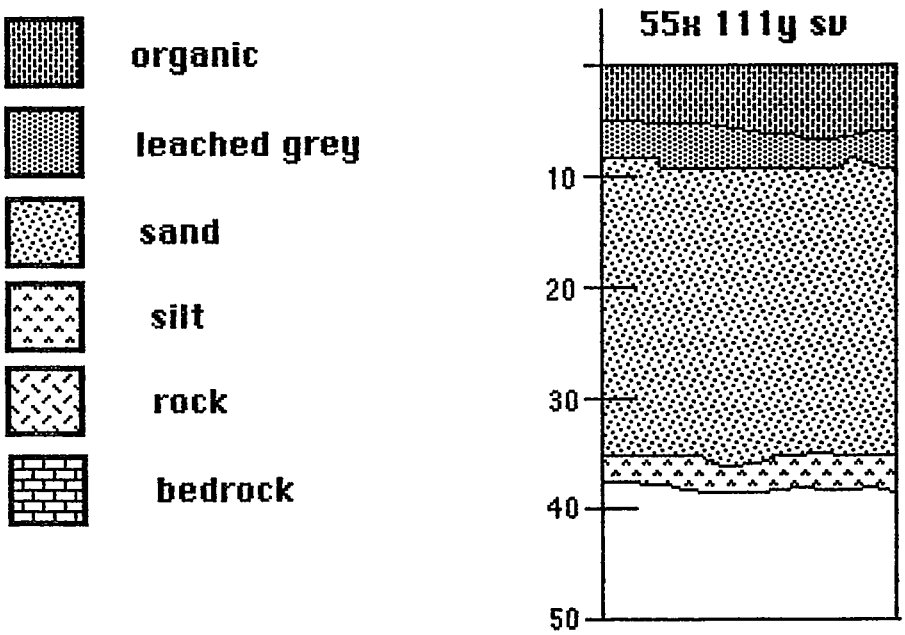
**55x 116y sv**

1 piece of flint #100 unretouched distal fragment with cortex




**55x 111y sv**

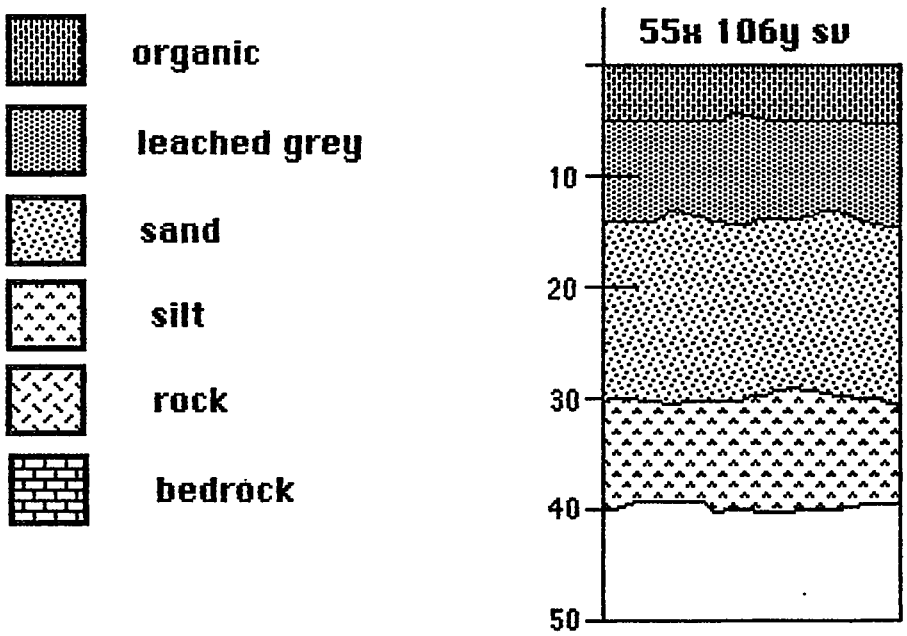
no finds



**55x 106y sv**

3 pieces of flint

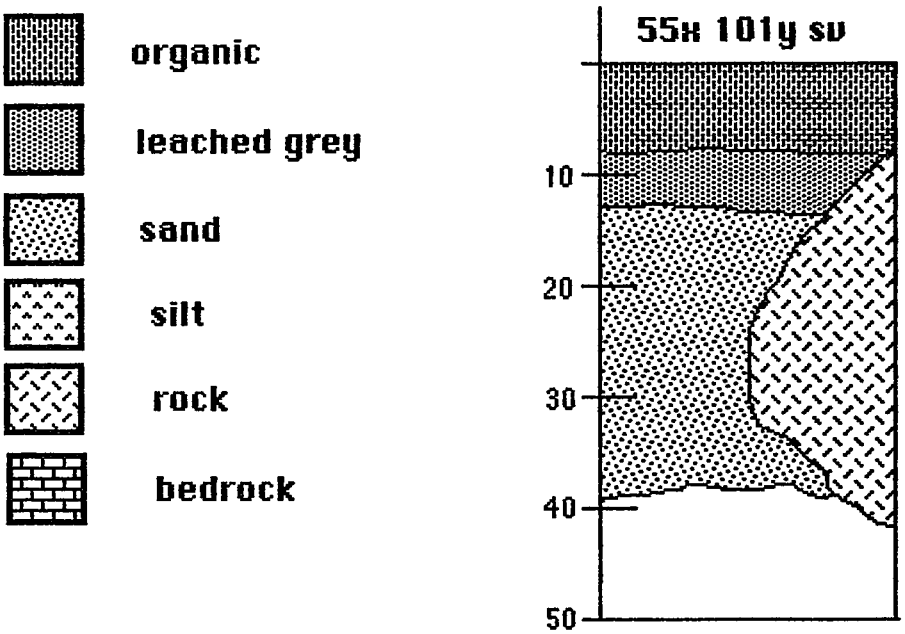
#101 unretouched distal fragment with cortex
#102 unretouched flake
#103 unretouched distal fragment



**55x 101y sv**

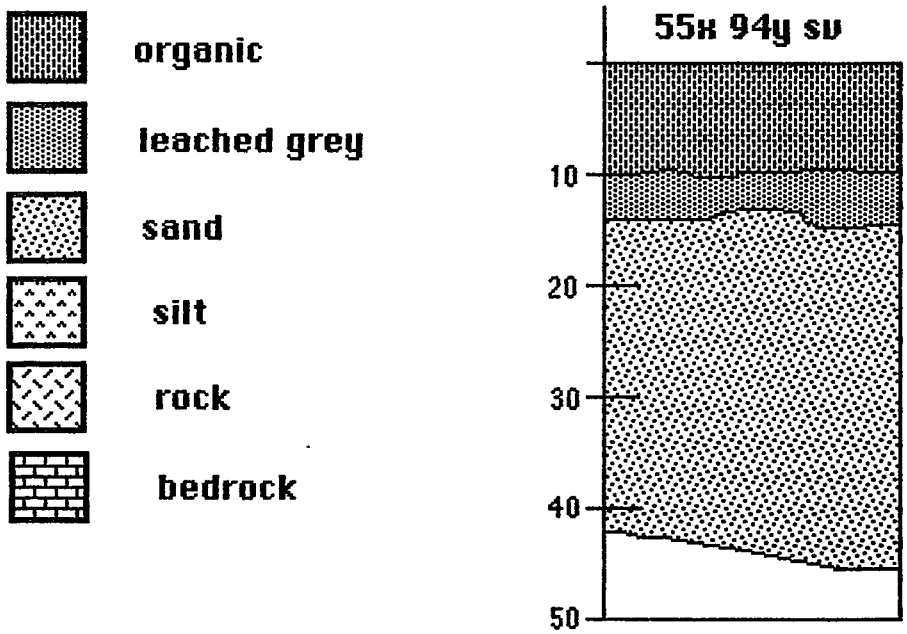
9 pieces of flint

#105 retouched flake
#106 unretouched medial fragment
#107 unretouched distal fragment
#108 (chert) unretouched flake
#109 unretouched proximal fragment
#110 unretouched medial fragment with cortex
#111 unretouched fragment
#112 (chert) unretouched fragment with cortex
#113 unretouched fragment- burnt



**55x 94y sv**

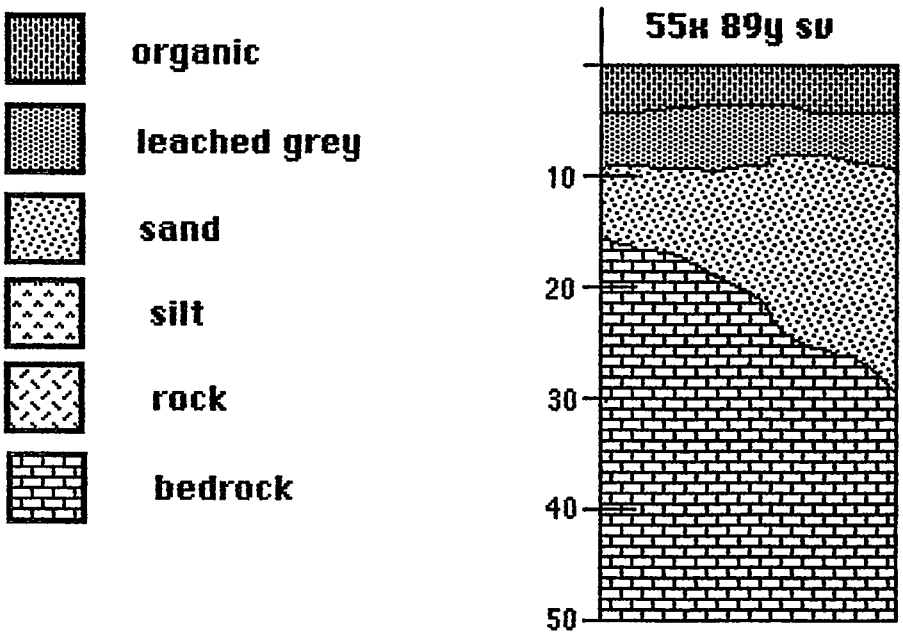
2 pieces of flint #114 (chert) unretouched bladelet
#115 retouched distal fragment



**55x 89y sv**

14 pieces of flint

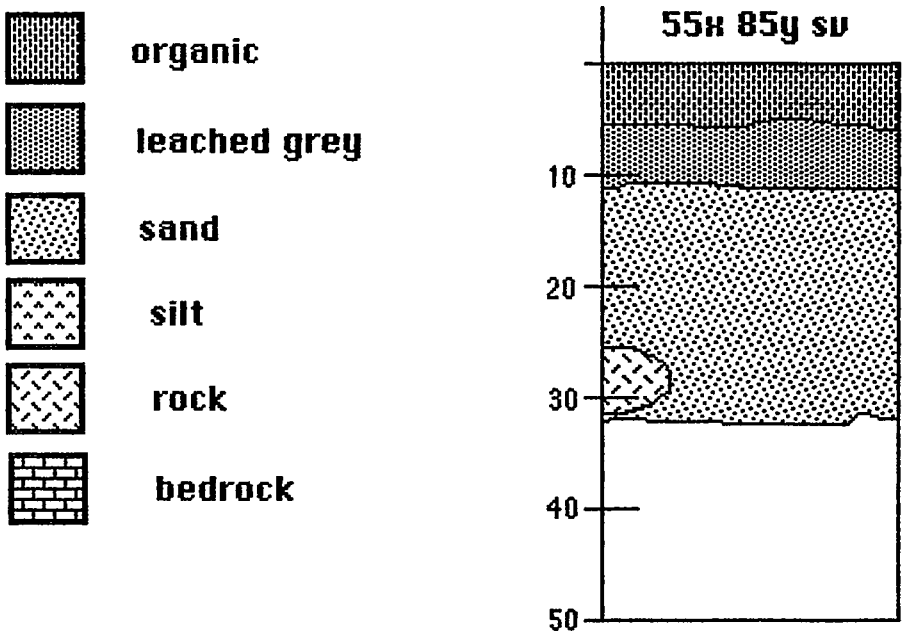
#116 (chert) retouched fragment
#117 (chert) unretouched distal fragment
#118 (chert) unretouched flake
#119 (chert) unretouched flake
#120 (chert) unretouched fragment
#121 (chert) unretouched fragment
#122 (chert) unretouched distal fragment
#123 (chert) unretouched bladelet
#124 unretouched flake
#125 unretouched fragment
#126 (chert) unretouched fragment
#127 (chert) unretouched distal fragment
#128 unretouched fragment
#129 (chert) unretouched flake



**55x 85y sv**

2 pieces of flint #130 unretouched fragment

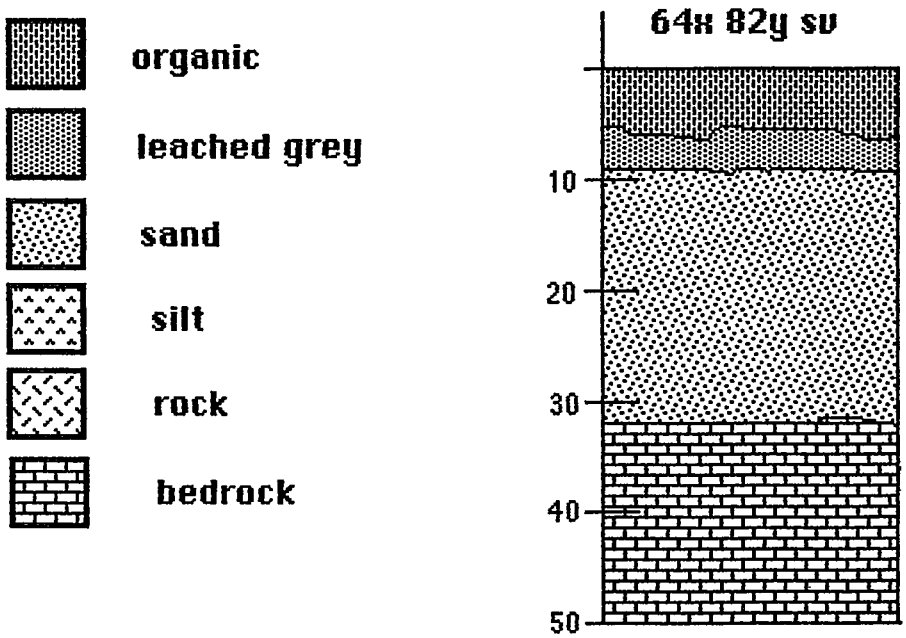
#131 (chert) unretouched proximal fragment

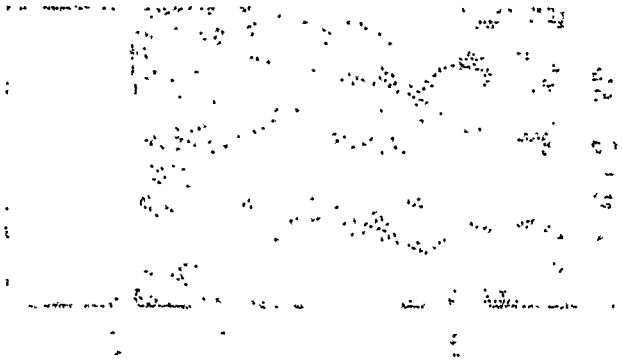



**64x 82y sv**

2 pieces of flint #132 (chert) unretouched flake

#133 unretouched bladelet - plunging fracture from bladelet core- patinated



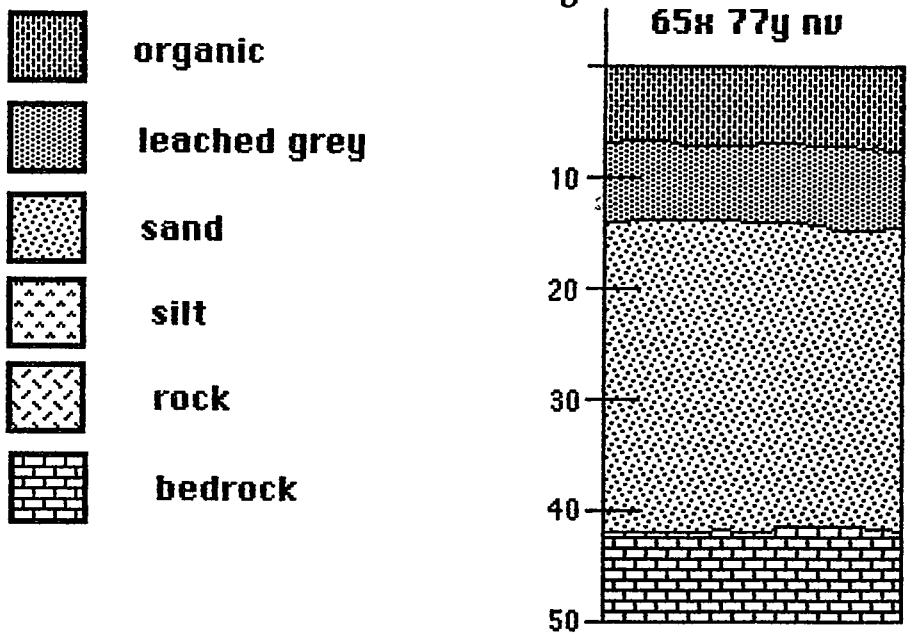


**65x 77y nv**

2 pieces of flint

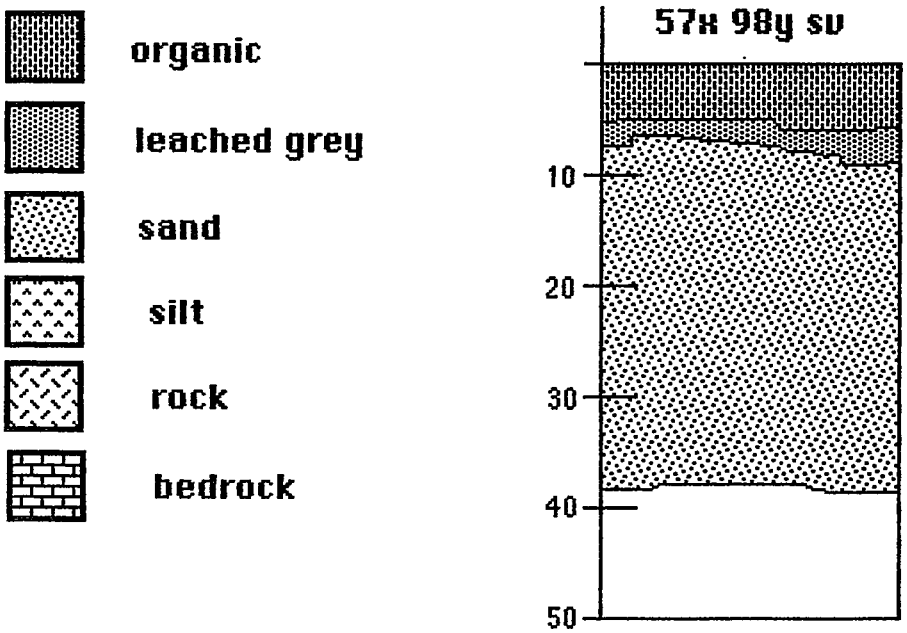
#134 unretouched flake

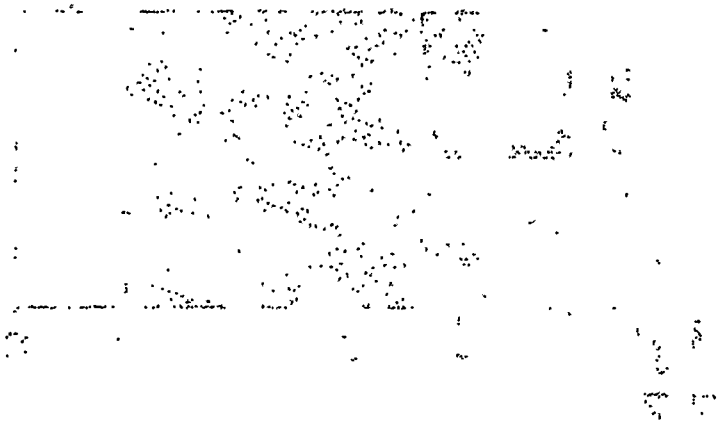
#135 unretouched distal fragment




**57x 98y sv**

no finds



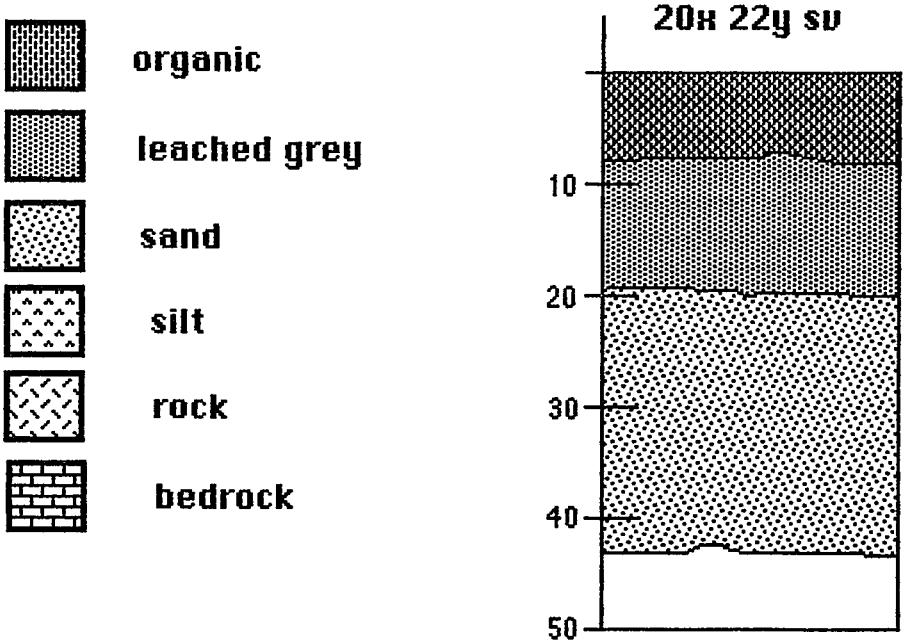


## TOHELLINGA LOCATION 2

**20x 22y sv**

2 pieces of flint #100 unretouched flake with cortex

#101 unretouched flake




**20x 28y sv**

2 pieces of flint #102 (chert) unretouched flake

#103 (chert) unretouched fragment