

**PHASE 1 HERITAGE IMPACT ASSESSMENT REPORT ON THE  
FARM PORTIONS POTENTIALLY AFFECTED BY A PROPOSED  
DIRECT RAIL LINK BETWEEN THE SISHEN SOUTH MINE NEAR  
POSTMASBURG AND THE SISHEN – SALDANHA LINE, SIYANDA  
DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE.**

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## **EXECUTIVE SUMMARY**

The purpose of this study was to establish if any heritage sites were present along three alternative routes being considered for a proposed railway line from Beeshoek to a junction with the Sishen – Saldanha line near Olifantshoek in the Siyanda District Municipality of the Northern Cape. A foot survey spanning five days revealed sparse scatters of amorphous stone artefacts on the modern surface along the routes, two Later Stone Age occurrences, of which one may postdate AD 1900, three burial sites, and an old house with a closeby rubbish dump that probably dates to between 1900 and 1950. The lithic discard scatters are of no heritage significance, the graves are away from the routes, but one Later Stone Age site is close to route Options 1 and 2, with mitigation called for there, if either of these routes is decided upon.

## **INTRODUCTORY BACKGROUND**

Transnet Projects is investigating the development of a railway line to link iron ore mining operations near Postmasburg to the Sishen – Saldanha line, at a point where the latter curves to the west, just south – east of Olifantshoek. Three alternative routes are being considered, namely:

- Option 1, running next to the R385, which would involve cutting through a series of hills;
- Option 2, a compromise between Options 1 and 3, that avoids much of the highest ground
- Option 3, which follows the contours, and therefore requires no costly cuttings.

## **LEGISLATIVE REQUIREMENTS**

Sections 35 – 36 of the National Heritage Resources Act (No. 25 of 1999) protects all archaeological and palaeontological sites, as also human remains and structures that are older than 60 years. Section 38 furthermore requires a Heritage Impact Assessment for any linear development, such as a railway line, that exceeds 300 m in length, as in the present case. Any mitigation of a heritage nature in the Northern Cape presently requires a permit issued by the South African Heritage Resources Agency (SAHRA), acting on an agency basis for the Provincial Heritage Agency (PRHA).

This report is part of an Environmental Impact Assessment that is being undertaken by Synergistics Environmental Services (Pty) Ltd on behalf of Transnet Limited.

## **METHODOLOGY USED**

Synergistics had previously arranged access to the farms involved and, in accordance with their instructions, contact was also made with each landowner the day before the anticipated field survey on their properties. This was done by way of walking along an approximately 2 km portion of the route, returning along an adjacent path to the vehicle, then driving to the previous end point, and repeating the process

from there. Particular attention was paid to likely find areas, such as pans and raw material outcrops, and enquiries were regularly made about known graves. These were then inspected, even if they did not fall close to any route. GPS readings were taken at all the localities that were deemed to be of possible or actual heritage significance. Such occurrences were also documented photographically

## **REGIONAL PREHISTORY**

Near Postmasburg there are specularite workings that were mined over the past millennium, and more at Doornfontein (Beaumont & Boshier 1974) and Tsantsabane (Thackeray *et al.* 1983). There are also engravings at Beeshoek (Fock & Fock 1984) that were again studied and largely salvaged a decade ago (Beaumont 1998). The Olifantshoek vicinity remains to be examined in detail, but sites there include: engravings 10 km south – west of the town; a recently found Earlier Stone Age locality on the nearby farm Fuller (Beaumont 2007); and, in the Langeberge to the north, conflict sites of the late 1800's, like Lucas Jantje se Kraal. Further away, in the Kathu area, there are many sites, ranging from historical times to about 850 000 years ago, that include some of the richest recorded Stone Age localities on earth, as evidenced by an estimated 700 million artefacts at one of them, Kathu Townlands 1 (Beaumont & Morris 1990, Beaumont & Vogel 2006).

## **PROJECT SCOPE**

The three railway route options all run on the western side of the R385 gravel road, from a point on the western edge of Beeshoek 448 to a junction with the Sishen – Saldanha line on Portion 3 (Riposo) of Uys 663, in the Siyanda District Municipality of the Northern Cape (Figs. 1 & 2). Proposed infrastructure comprises a single, roughly 35 km long, electrified line flanked by a 50 kV power line and a maintenance road, all within a 65 to 150 m - wide servitude, depending on the size of the cutting needed to maintain a low gradient for planned 5 km – long wagon trains. Beginning in the south, a total of over 40 hrs, from Tuesday 28 August to Saturday 1 September 2007, was spent walking along the routes (Figs. 3 - 5), of which the most time consuming

was the stretch from where the options separate on Portion 2 of Langverwacht 432 and come together again on the eastern side of Venn 655.

## **SUPERFICIAL GEOLOGY**

The stretch from Beeshoek 448 to Portion 2 of Langverwacht 432, as also the Option 1 and 2 route on Makganyene 667, and the Option 3 route on Mapedi 653 (Lynpunt), was largely covered by subhorizontal calcrete, seen to be over 3 m deep in places. Overlying these were beige – reddish sands, generally thin, but over 1 m deep in one Mapedi section. Further towards Olifantshoek the calcretes are replaced by hills of banded ironstone, as at Makganyene 667, or lava, in places with steeply dipping north – south tending interbeds of red jasper, belonging to the Ongeluk Formation (Kent 1980) (Fig. 6). Lower areas are uniformly coated in aeolian Hutton Sands, typically 1 – 2m deep on Uys 663.

## **HERITAGE FINDINGS**

My foot survey generated the following results:

### **Surface Scatters**

1. Beeshoek 448: The route yielded a low density of lithics, 17 in all, comprising irregular flakes and a core, based on quartzite, chert and jaspilite, that varied from fresh to lightly abraded (Fig. 7).
2. Aucampsrus 447: The route yielded a low density of lithics, 9 in all, comprising irregular flakes and cores, based on quartzite, chert and jaspilite, that were largely lightly abraded (Fig. 8).
3. Doornfontein 446: The route yielded a low density of lithics, 6 in all, comprising irregular flakes and cores, based on quartzite, chert and jaspilite, that were all fairly fresh (Fig. 9).

4. Vlakfontein 433, Ptns. 1 & 2: The route yielded a low density of lithics, two irregular cores and one irregular flake, all based on quartzite and fairly fresh (Fig. 10).
5. Langverwacht 432, Ptn. 2 & R/E: The Options 1 & 2 routes, over a low ridge, yielded a low density of lithics, 7 in all, comprising irregular flakes and cores, based on banded ironstone and fairly fresh (Fig. 11).
6. Makganyene 667, Ptn. 2 (Air field area): The Options 1 & 2 routes yielded a low density of lithics, namely 2 irregular cores and 2 irregular flakes, all based on banded ironstone and fairly fresh (Fig. 12).
7. Metseatsididi 666, Ptn. 1 (Kouwater): The Options 1 & 2 routes, on a hillside, revealed a low density of lithics, 10 in all, comprising irregular flakes and cores, based on a greenish rock and red jasper, the former lightly patinated (Fig. 13).
8. Mapedi 653, Ptn. 1 (Elim): A small hill west of the Option 3 route yielded a low density of lithics, 6 in all, comprising irregular flakes and cores, all based on banded ironstone and fairly fresh (Fig. 14).
9. Mapedi 653 (Lynpunt): The Option 3 route yielded a low density of lithics, 10 in all, comprising irregular flakes and cores, mainly based on red and brown jasper, and all fresh, bar one (Fig. 15).
10. Compass 665: The Option 1 route, on a hillside, yielded a low density of lithics, 6 in all, comprising irregular flakes and cores, based on a greenish rock and red jasper, the former lightly patinated (Fig. 16).
11. Mamaghodi 654: The Option 1 & 2 routes, ca. 150m north – west of the entrance gate, yielded a modest density of lithics, 9 in all, comprising irregular flakes and cores, mainly based on a greenish rock, and varying from fresh to moderately patinated (Fig. 17).

12. Venn 655: A flat area, east of the route, yielded a modest density of lithics, 14 in all, including irregular flakes, a discoidal core and a blade core, mainly based on a greenish rock, and varying from fresh to moderately patinated (Fig. 18).

13. Uys 663, Ptn. 5 (De Put): No surface lithics were seen, but a gully east of the route revealed a fresh broken jaspilite flake, in rubble on bedrock and below a metre of sterile red Hutton Sands.

### **Stone Age Sites**

1. Mamaghodi 654: On the Option 1 route, just north of the entrance gate, there is a Later Stone Age site, some 20 x 30 m in extent, at 28° 06' 15.8" S, 22° 52' 49.5"E (Fig. 19). Fresh artefacts, including blades, are based on quartzite, a greenish rock, chert, jaspilite and quartz. Seemingly associated with these are early 20<sup>th</sup> century bottle and ceramic fragments.

2. Venn 655: Just west of Surface Scatter 12 is a small Later Stone Age site, some 2 x 3 m in extent, at 28° 03' 52.1" S, 22° 52' 03.9" E. The fresh stone artefacts there, mainly based on a greenish rock, occur on and in soft grey sand with a hearth area, in which a charred zebra – sized tooth was seen. In the near vicinity there were also patinated greenish rock artefacts, which were also photographed (Fig. 20).

### **Graves**

1. Makganyene 667, R/E: A cluster of ten stone covered graves lie west of the Option 2 route at 28° 09' 16.4" S, 22° 53' 59.2" E (Fig. 21). One was 2 x 2.5 m in size, with cement blocks as part of the pile, and another had an unmarked headstone.

2. Mapedi 653, Ptn.1 (Elim): A fenced graveyard of Hilton (1889 – 1950), Jack (1923 – 2002) and Norma Pedlar (1971 – 2003) is located, west of the Option 3 route, at 28° 09' 02.3" S, 22° 51' 51.4" E (Fig. 22).

3. Mamaghodi 654: Two abutting stone covered graves, with no headstones or names, were found at 28° 06' 42.7" S, 22° 52' 28.7" E (Fig. 23). A fragment of early 20<sup>th</sup> century ceramics, that may be associated with the graves, was found nearby (Fig. 24).

## **Structures**

Venn 655: The route on the lower slopes of a hill, intersect a derelict early 20<sup>th</sup> century house, to the south of which is a rubbish heap, up to ca. 0.6 m deep and 3 x 3 m in extent, at 28° 03' 54.3" S, 22° 51' 54.9" E (Fig. 25).

## **DISCUSSION**

The recorded surface scatters reflect occasional between-site discard and *ad hoc* flaking events that probably span hundreds of millennia on an almost static regional ground surface. These are of no heritage significance, given the lack of stratigraphic context and the absence of any diagnostic formal tools.

All of the burial sites are well away from any of the route options, and whereas Graves 3 are only possibly early 20<sup>th</sup> century, it seems very likely that the large Makganyene burial ground relates to the mining of the nearby kimberlite pipe, which was found by A.S. Richter in 1922 (Hocking 1983) and worked until a few decades ago.

As regards the old Venn house, which lies close to the line of the route there, this is deemed to be in too poor a state to warrant conservation, while a sampling of the nearby rubbish heap would only be desirable if a systematic study was undertaken at Stone Age Site 1 at Mamaghodi.

Stone Age Site 2 on Venn is not directly in the way of the route over that farm. Site 1 on Mamaghodi is consequently the only Stone Age Site that is potentially endangered by any of the route options. It would certainly be destroyed if either route Option 1 or 2 were to be implemented. This locality gains its particular interest



from the fact that early 20<sup>th</sup> century items there show a very similar distribution to the stone artefacts, which may, or may not, be fortuitous. Of relevance in that regard is a 1919 photograph in the McGregor Museum collections which shows a San couple at Mount Temple in the Langeberge, not 15 km from Mamaghodi (Fig. 26). The group there is recorded as comprising “Piet & Katje; Piet’s mother, old Lys & her husband; old Hans”, while next to a mat, in the clearer original, there is a tin can, indicating, as with the names, that these people were in contact with nearby farmers. It may therefore be that Site 1 at Mamaghodi reflects just such links, and, if so, the stone artefacts there could postdate AD 1900, which is long after stone flaking is widely believed to have ceased in South Africa.

## RECOMMENDATIONS

My field survey revealed that only one heritage site falls within the areas covered by the three route options. This is Stone Age Site 1 at Mamaghodi, a Later Stone Age occurrence, which lies in the pathway of route Options 1 and 2 there. Mitigation will be required if either of those route options is decided upon. It is recommended that this should be by way of a Phase 2 excavation. Funding of that should include storage costs and the processing of at least one radiocarbon date.

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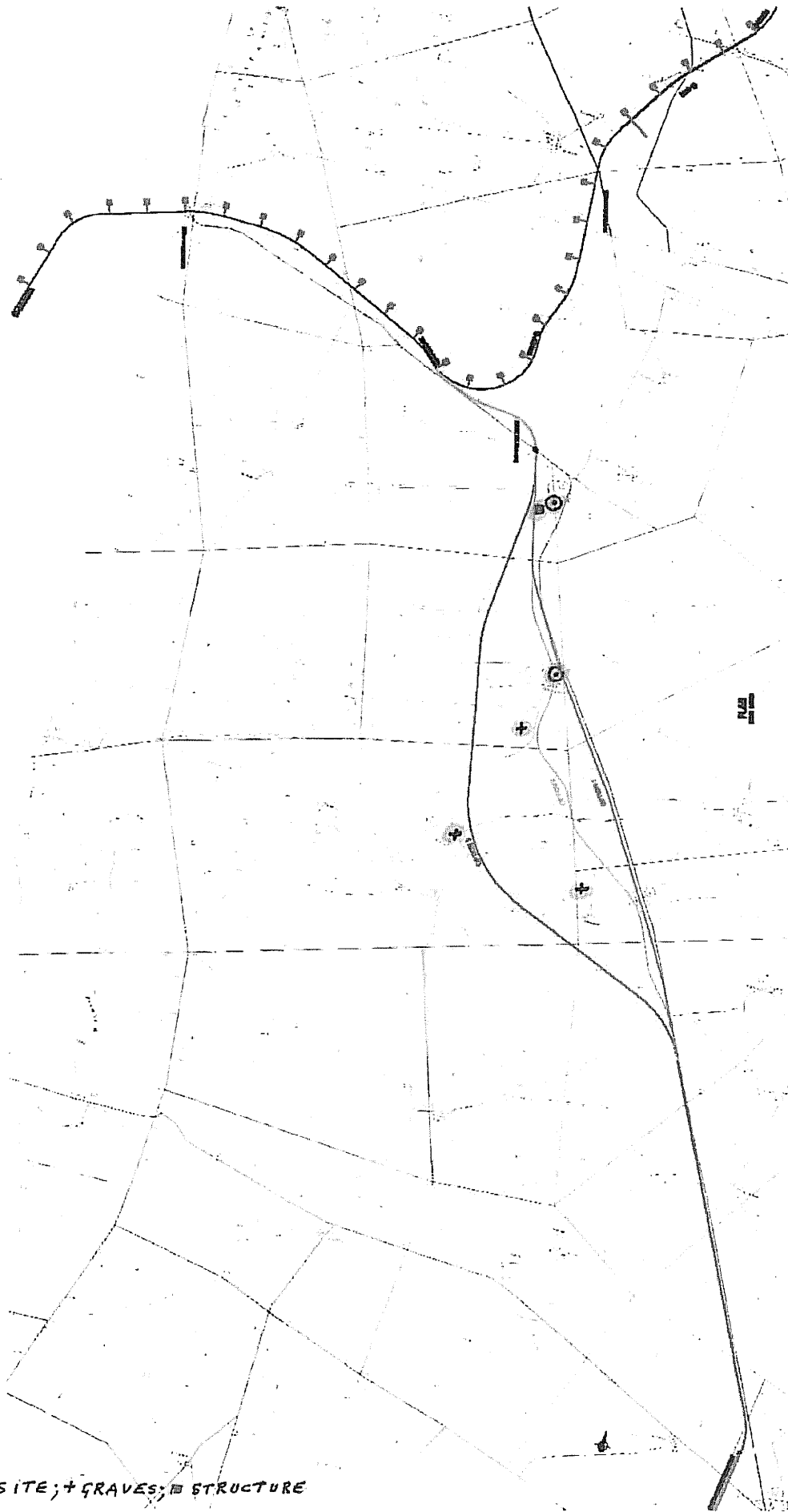


FIG 2    © SITE; + GRAVES; ▭ STRUCTURE

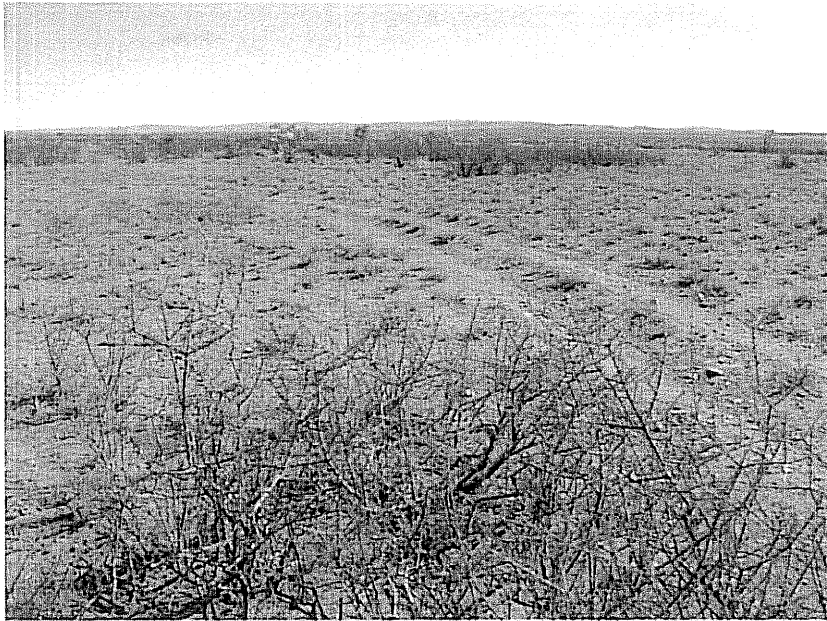


FIG 3

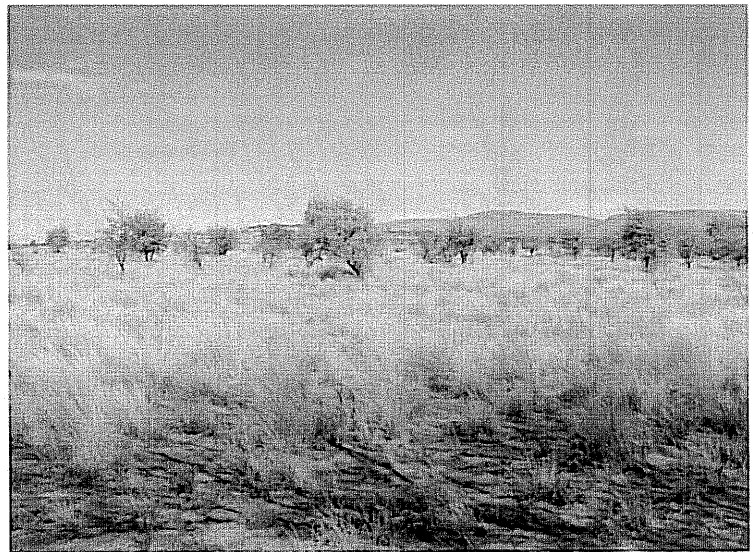


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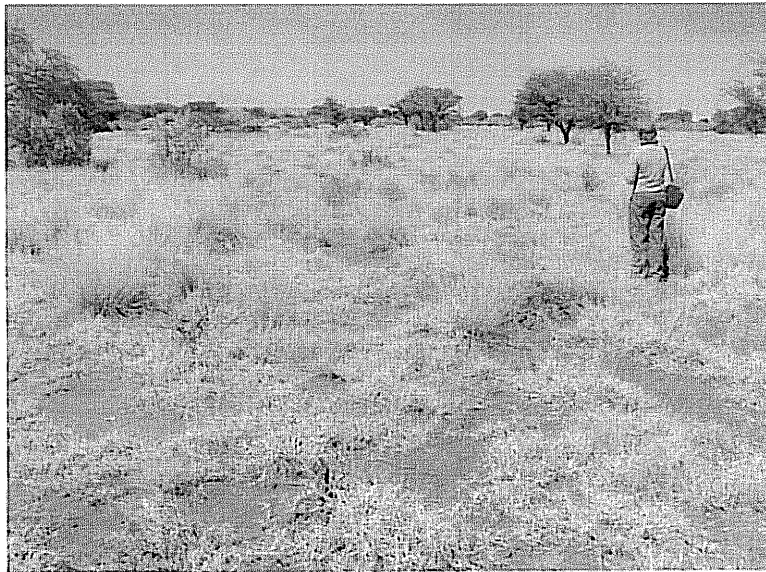


FIG 5

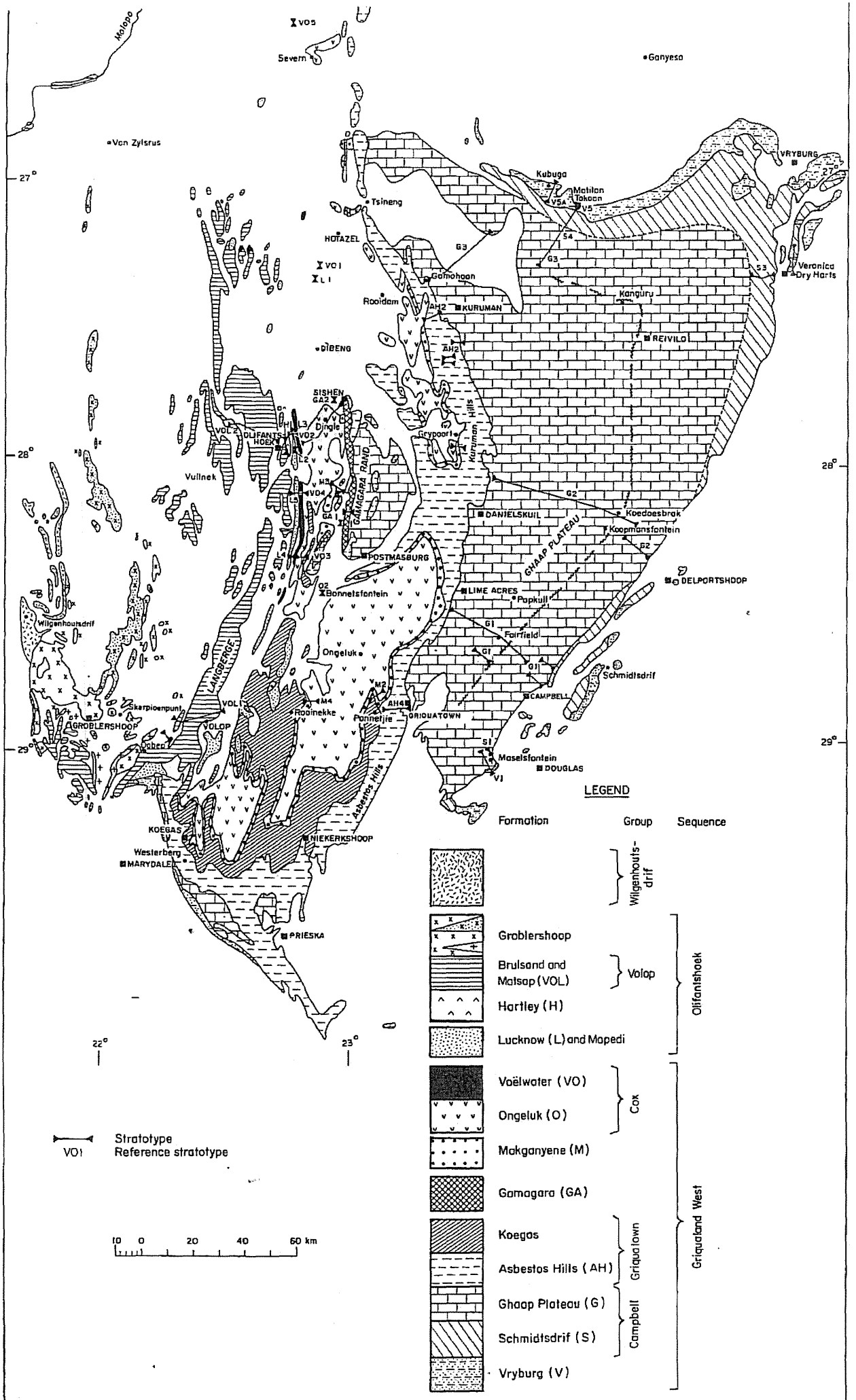
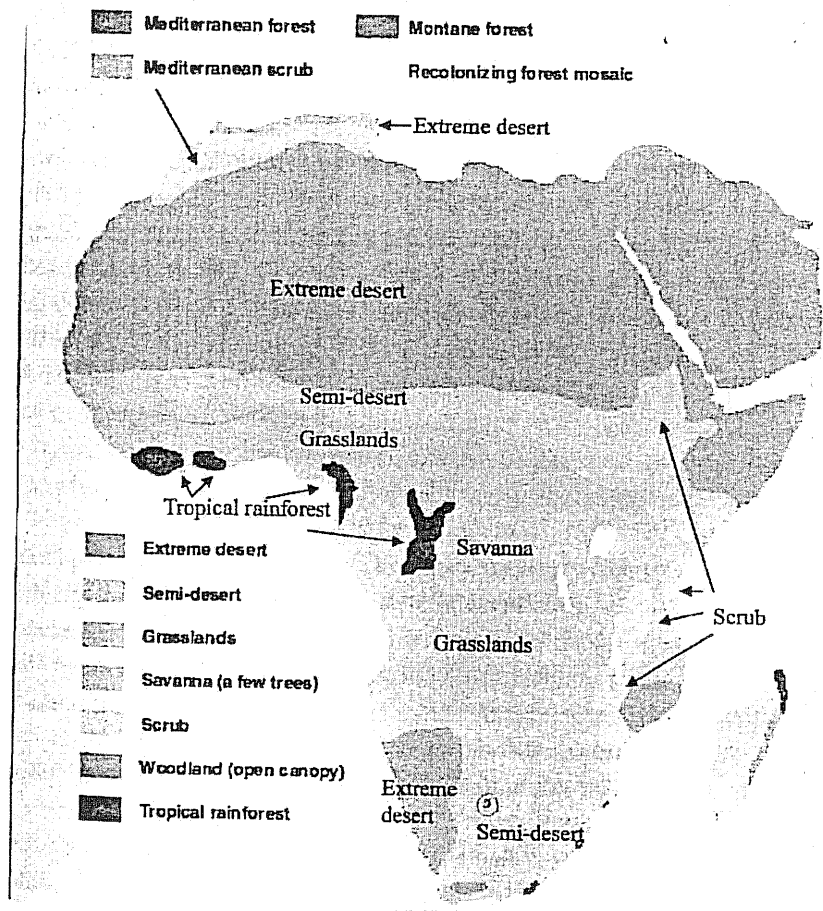


FIG 6.

20,000 - 16,000 <sup>14</sup>C years ago



8,000 - 7,000 <sup>14</sup>C years ago

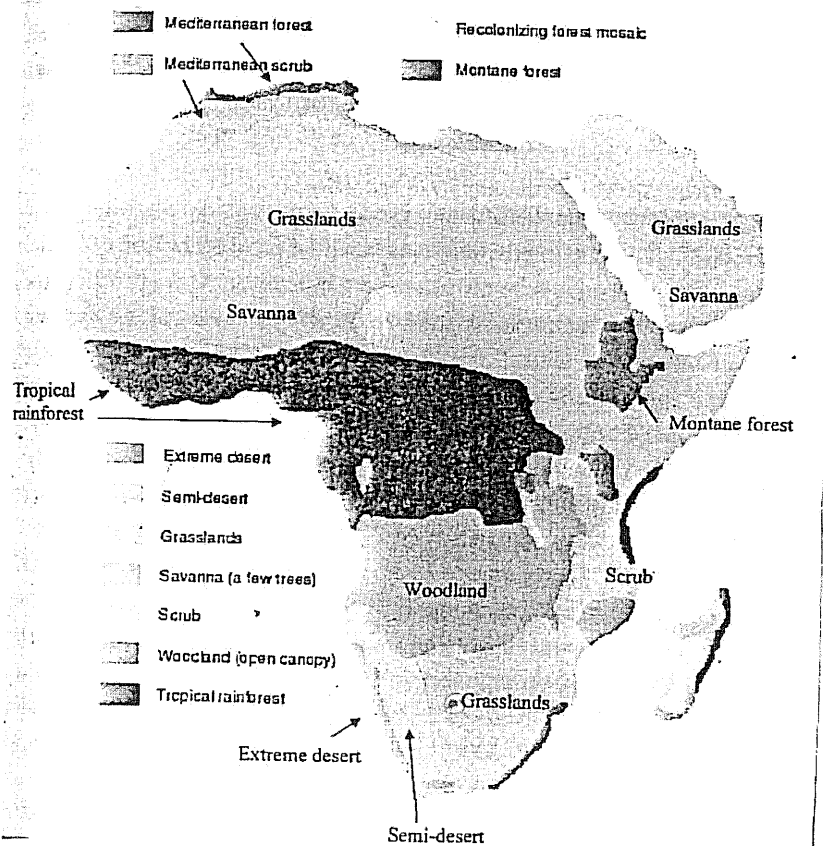


FIG 7



FIG 8

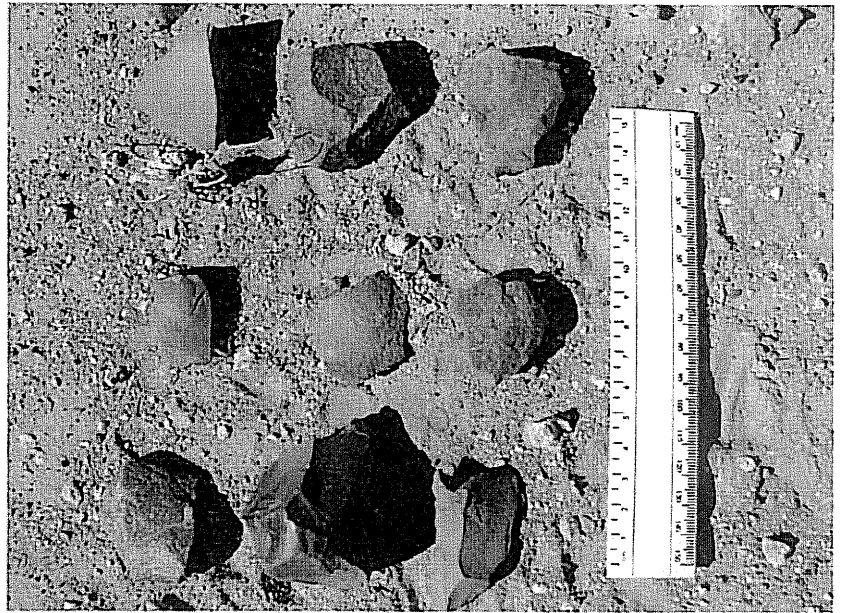


FIG 9

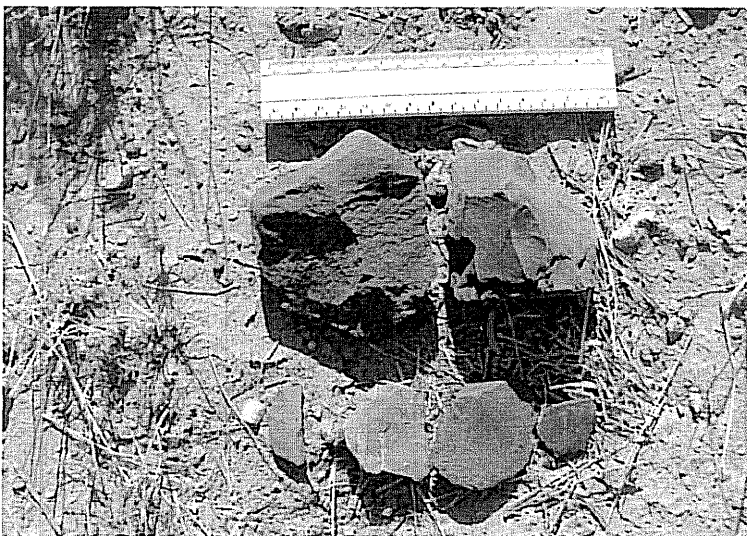


FIG 10



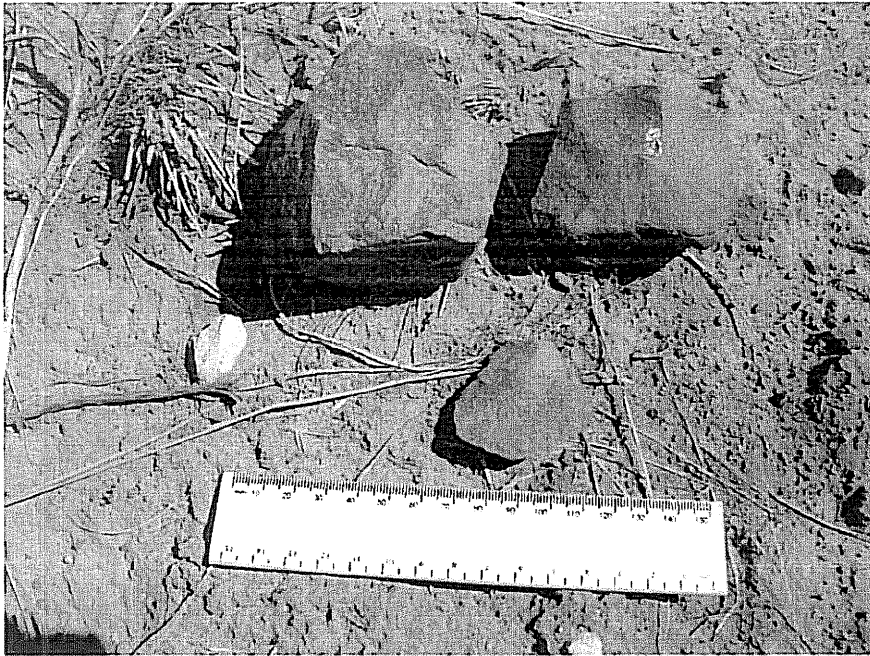


FIG 11

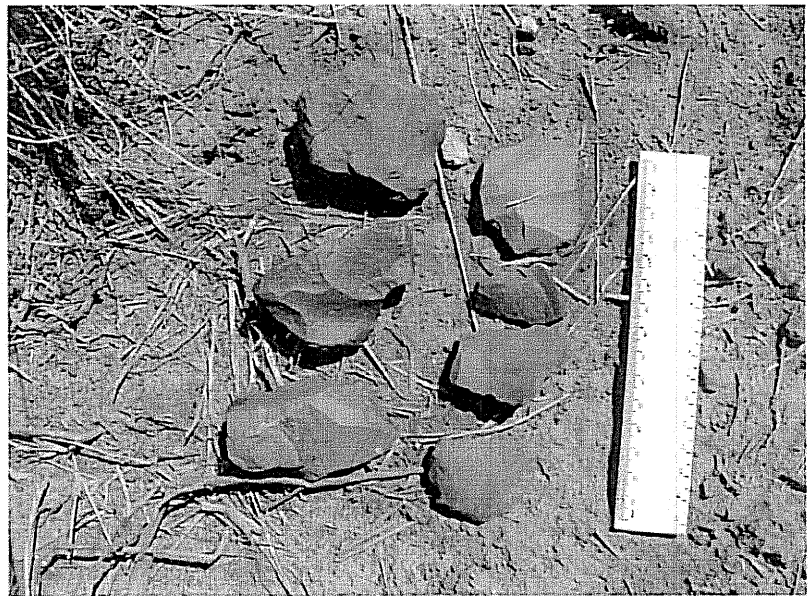


FIG 12

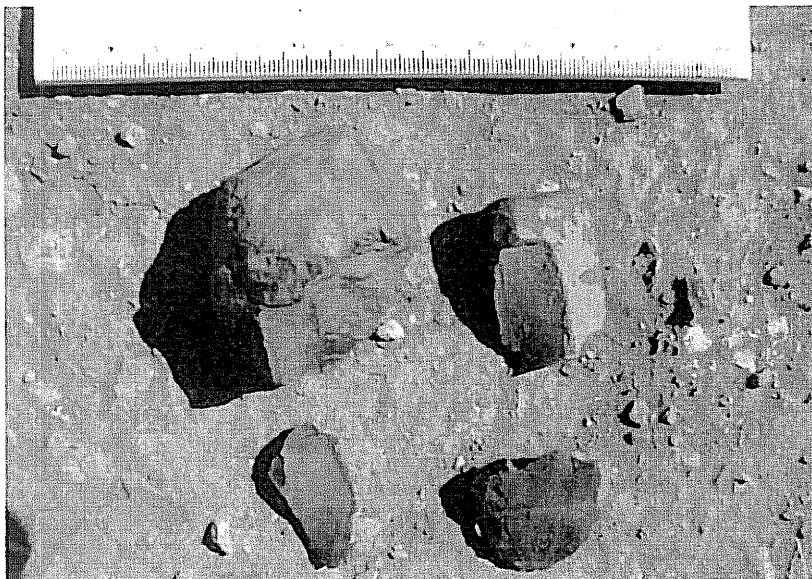


FIG 13

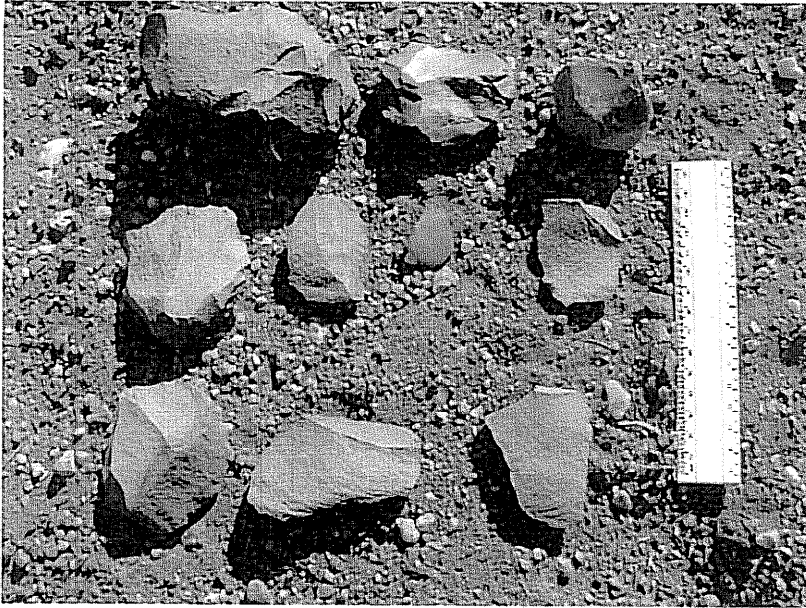


FIG 14



FIG 15

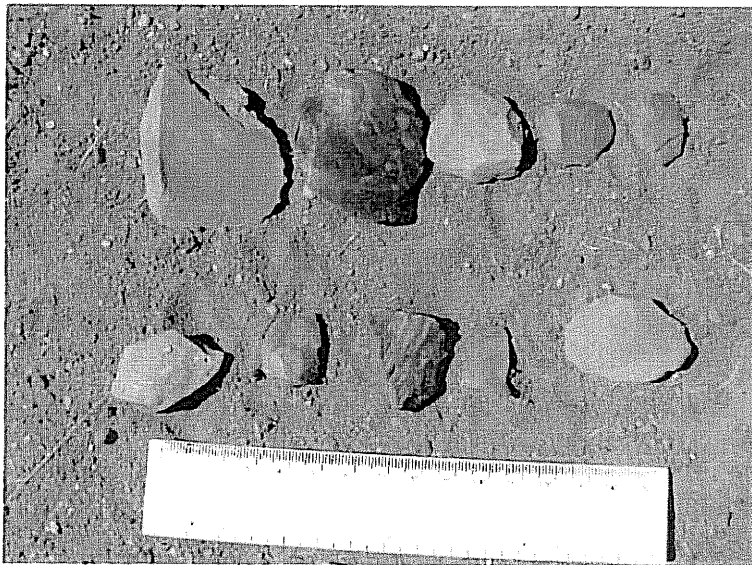


FIG 16

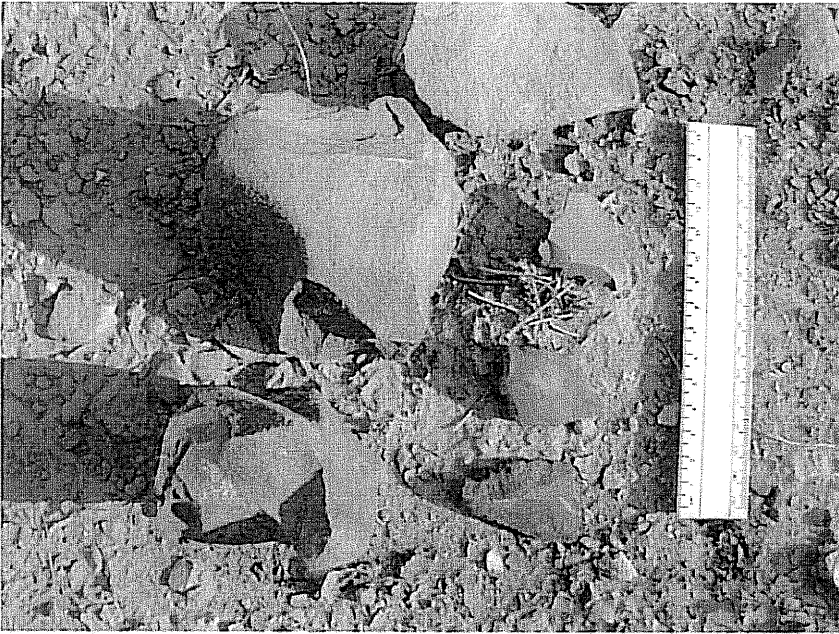


FIG 17



FIG 18



FIG 19

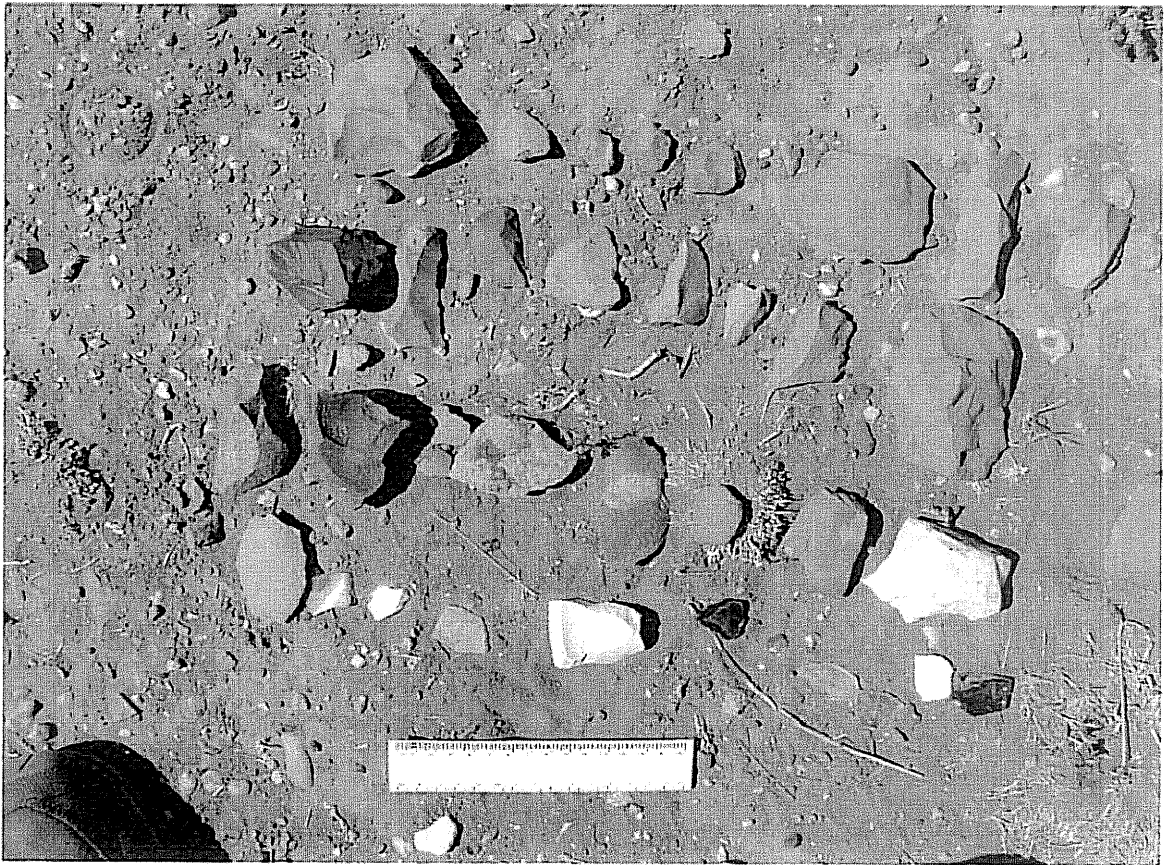


FIG 20

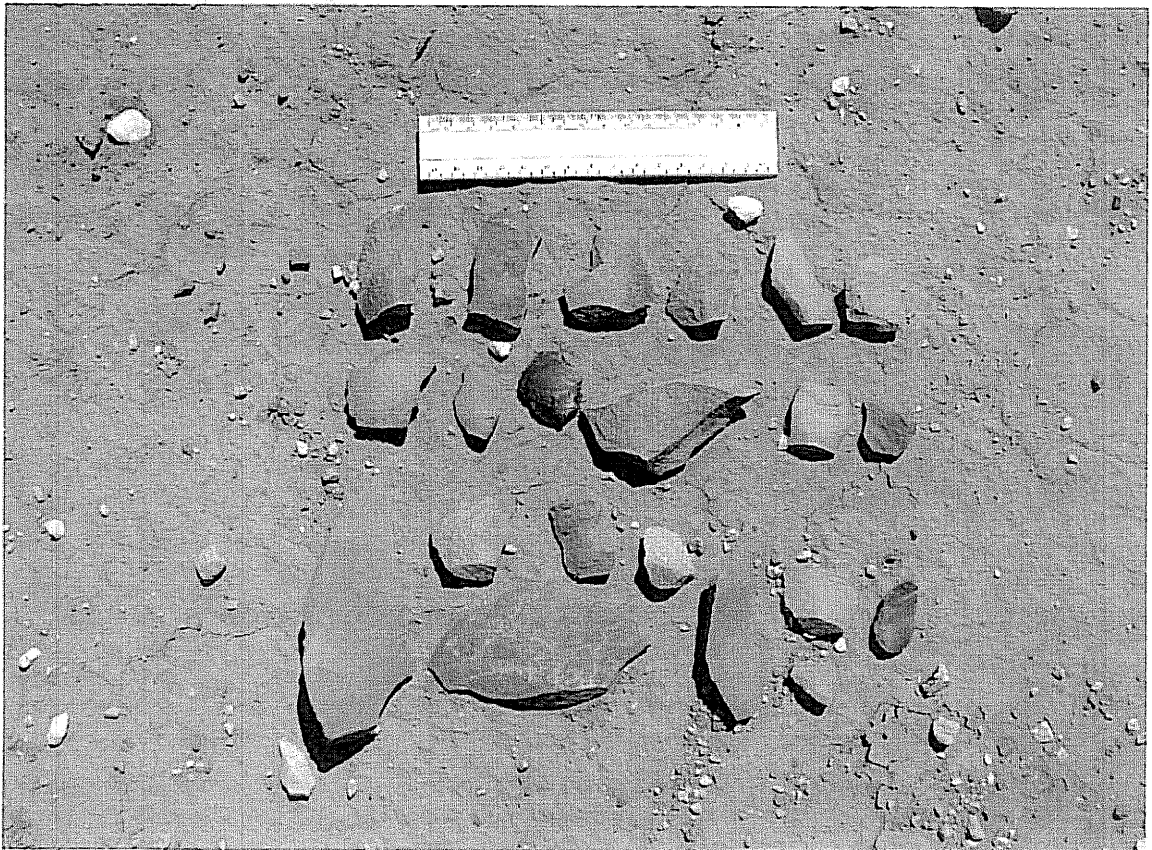


FIG 21



FIG 22



FIG 23



FIG 24

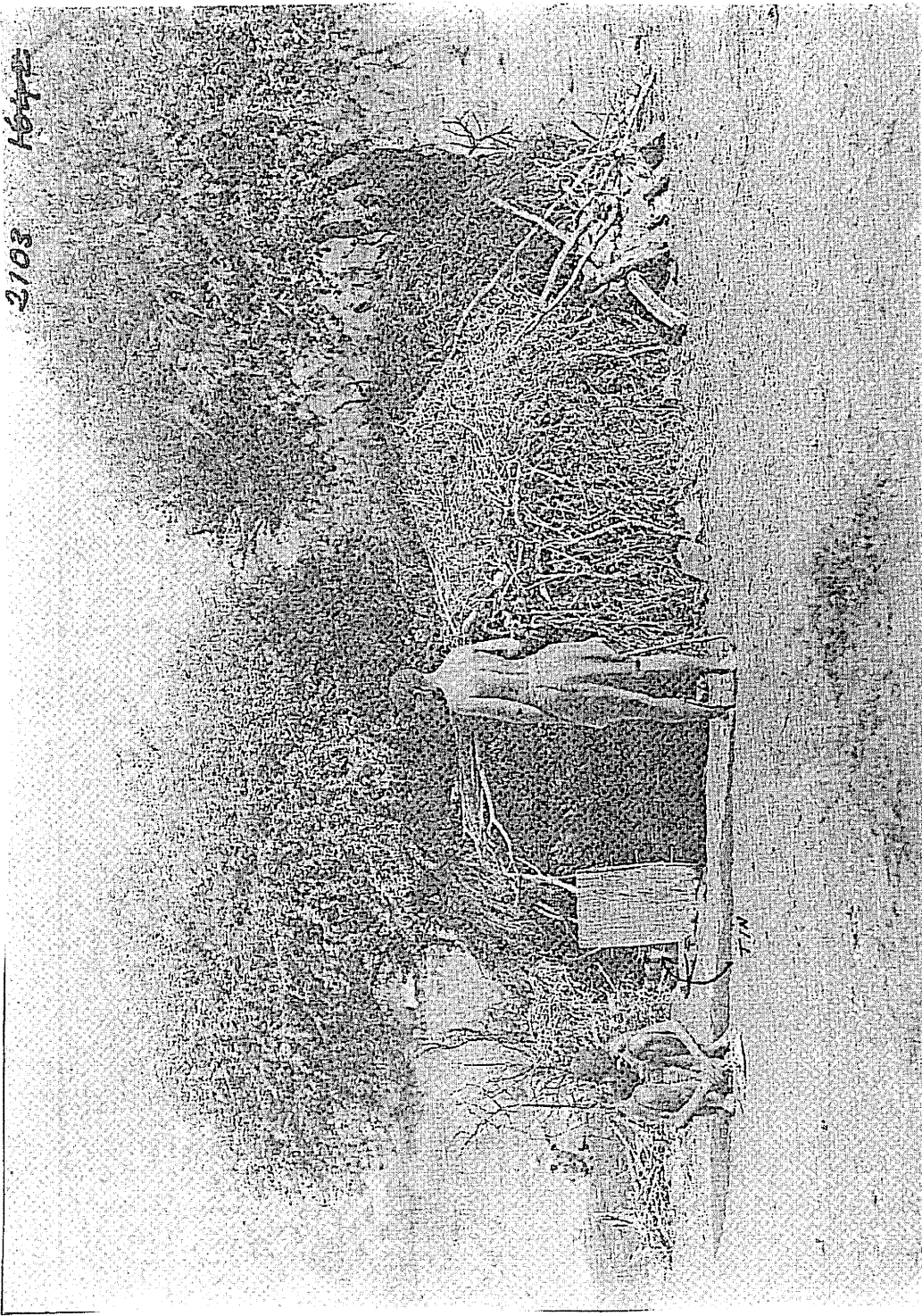


FIG 25



FIG 26

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Mr. Beak's nest on Mt. Temple - a double nest - for 1919.  
Pict. F. Katié; Pict. Motté; dr. Lys; Mr. Katié's, Old Haro.  
(1919)

FIG 27.

