

9/2/097/8

**PHASE 1 ARCHAEOLOGICAL STUDY
RIETPOORT WATER SUPPLY SCHEME
BITTERFONTEIN
NORTHERN CAPE**

Prepared for

ENVIROAFRICA

By

Jonathan Kaplan
Agency for Cultural Resource Management
P.O. Box 159
Riebeeck West
7306
Ph/Fax: 022 461 2755
Cellular: 082 321 0172
E-mail: acrm@wcaccess.co.za



**APRIL
2002**

Executive summary

No significant archaeological remains were located during a Phase 1 study of the proposed Rietpoort Water Supply Scheme in Bitterfontein in the Northern Cape.

The proposed project comprises supplying potable water by means of an underground pipeline, from Bitterfontein, to small rural communities living in Rietpoort, Molsvlei and Stofkraal.

The pipeline route is approximately 52 km in length.

Low level scatters of Stone Age tools were located close to and along the entire length of the proposed route, between Bitterfontein and Stofkraal. The tools were found in both natural and disturbed veld, in quarries, and in old agricultural fields.

The stone tools are comparable to other tools located in similar contexts in the region, and have all been given low significance ratings.

Two graves were located close to the proposed route, but these will not be impacted by the project.

A fossil bone was found in disturbed alluvial deposits about 17 kms west of Bitterfontein in the proposed route. Sub-fossils do occur in the region, but the area is not well known for fossils.

The impact of the proposed project on significant archaeological remains is considered to be low to negligible.

The probability of locating significant archaeological remains during implementation of the project is also considered to be low.

Fossil bones may be uncovered during excavations for the pipeline.

Overall, the receiving environment is not considered to be archaeologically sensitive, vulnerable or threatened.

With regard to the proposed Rietpoort Water Supply Scheme, the following recommendations are made.

- No archaeological mitigation is required.
- Should any fossil bone be exposed during excavations for the pipeline, or related activities, these should immediately be reported to a professional archaeologist, or the South African Heritage Resources Agency (SAHRA).
- Heritage remains uncovered or disturbed during earthworks should not be disturbed until inspected and verified by a professional archaeologist.

The recommendations are subject to the approval of SAHRA.

1. INTRODUCTION

1.1 Background and brief

EnviroAfrica has requested that the Agency for Cultural Resource Management undertake a Phase 1 archaeological study of the proposed Rietpoort Water Supply Scheme in Bitterfontein in the Northern Cape.

The proposed project comprises supplying potable water by means of an underground pipeline from Bitterfontein, to small rural communities living in Rietpoort, Molsvlei and Stofkraal.

The proposed pipeline route is approximately 52 km in length.

The aim of the study is to locate, identify and map archaeological remains that may be negatively impacted by the construction of the proposed pipeline, and to propose measures to mitigate against the impact.

2. TERMS OF REFERENCE

The terms of reference for the archaeological study were:

1. to determine whether there are likely to be any archaeological sites of significance in the proposed pipeline route;
2. to identify and map any sites of archaeological significance in the proposed pipeline route;
3. to assess the sensitivity and conservation significance of archaeological sites in the proposed pipeline route;
4. to assess the status and significance of any impacts resulting from the proposed development, and
5. to identify mitigatory measures to protect and maintain any valuable archaeological sites that may exist in the proposed pipeline route.

3. THE STUDY SITE

The study site for the proposed project is illustrated in Figure 1.

A plan of the proposed pipeline route is illustrated in Figure 2.

4. APPROACH TO THE STUDY AND DOCUMENTATION OF ARCHAEOLOGICAL SITES

The approach used in the archaeological assessment entailed a foot and vehicle survey of the proposed route. Sites have been plotted using Geographical Positioning System (GPS), mapped and photographed, where necessary.

5. RESULTS OF THE ARCHAEOLOGICAL STUDY

A few Middle Stone Age¹ (MSA) tools were located in Bitterfontein, on the steep rocky slopes below the Bitterfontein reservoir, and in old agricultural fields in the proposed route, immediately north of the reservoir (Figure 3).

A few MSA and Later Stone Age² (LSA) tools, fragments of glass and porcelain, and rusted metal bits, were also found in open sandy patches in the proposed route in disturbed veld at the entrance to the town (Figures 4 & 5).

A few MSA tools, fragments of glass and rusted metal were located in disturbed agricultural fields north of the Bitterfontein granite factory (Figure 6).

All the above tools were located in a severely disturbed and degraded context.

Significance of finds: **low**

Suggested mitigation: **none required**

A few MSA and LSA tools were located on a sheet-washed and eroded sandy bank alongside a small track in the proposed route south of Bloukop (GPS reading S 31°020.169 E 18°24.466), about 12 kms outside Bitterfontein (Figures 7 & 8). The tools comprised a large core, and some flakes and chunks in quartz, chert and silcrete.

Significance of finds: **low**

Suggested mitigation: **none required**

A large fossil vertebra (as yet unidentified) was also found eroding out of a sandy bank alongside the sandy track south of Bloukop (Figure 9).

Significance of find: **unknown**

Suggested mitigation: **the bones have been collected for identification purposes**

¹ A term referring to the period between 250 000 and 20 000 years ago.

² A term referring to the final 20 000 years of precolonial history in southern Africa.

A few MSA tools were located in two old quarries between Soutpoort and Rietpoort.

MSA tools were located in the natural veld on the hills opposite Witklip Farm.

MSA tools were located in the route between Rietpoort and Molsvlei, in natural veld and in old agricultural fields (Figure 10).

MSA tools were also located behind the school in Molsvlei, and alongside the road between Molsvlei and Stofkraal.

The majority of tools were located in a disturbed context.

Significance of finds: **low**

Suggested mitigation: **none required**

The tools located during the study are all similar to low level scatters of MSA and LSA tools which have been found at Kotzesrus, Strykskloof, Leeuikuil, Elandskop, Toontjiesklip, Middelpuuts and Grootriet, in the Bitterfontein District (Kaplan 2000). All these occurrences have been given low significance ratings.

Sub-fossils have been found in the study area, in borrow pits and soil profiles, for example, in localised alluvial deposits, but according to Dr Dave Roberts of the Council for Geoscience (pers. comm.), the area is not well known for fossils.

5.1 Other finds

Two burials were located close to, and alongside the proposed route, but these will not be impacted by the proposed project.

One burial (GPS reading S 31°00.409 E 18°09.498) was located about 100 m north of the road reserve, opposite the proposed route (Figure 11).

The other burial (GPS reading S 30°57.596 E 18°04.175) was located in the road reserve alongside the proposed route near the entrance to Put se Kloof (Figure 12).

Significance of finds: **high**

Suggested mitigation: **none required**

human burials are protected under the National Heritage Resources Act (No. 25 of 1999).

It is an offence to destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority.

6. IMPACT STATEMENT

The impact of the proposed development on significant archaeological sites or remains is considered to be low to negligible.

The probability of locating significant archaeological sites/remains during implementation of the project is also considered to be low.

7. CRITERIA USED IN THE EVALUATION OF ARCHAEOLOGICAL SITES

The criteria used in the evaluating the importance of the Rietpoort archaeological remains includes the following:

- the state of preservation of the site;
- the range and density of cultural material present on the site;
- the type of site; for example cave, shell midden, open air site;
- the approximate age of the site;
- rarity of occurrence; and
- regional, national and international importance

8. LEGISLATION

Archaeological sites and human burial remains are protected under the National Heritage Resources Act (No. 25 of 1999).

It is an offence to destroy, damage, excavate, alter, or remove from its original position, or collect, any archaeological material or object, without a permit issued by the South African Heritage Resources Agency (SAHRA).

It is also an offence to destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority.

9. CONCLUDING STATEMENT

The receiving environment is not considered to be archaeologically sensitive, vulnerable or threatened.

The probability of locating significant fossils remains during implementation of the project is also considered to be low (Dave Roberts, pers. comm.).

10. RECOMMENDATIONS

With regard to the proposed Rietpoort Water Supply Scheme in Bitterfontein, the following recommendations are made.

- No archaeological mitigation is required.
- Should any fossil bone be exposed during excavations for the pipeline, or related activities, these should immediately be reported to a professional archaeologist, or the South African Heritage Resources Agency (SAHRA).
- Heritage remains uncovered or disturbed during earthworks should not be disturbed until inspected and verified by a professional archaeologist.

The recommendations are subject to the approval of SAHRA.

11. REFERENCES

Kaplan, J. 2000. Archaeological study, Telkom SA Radio Networking Systems, Bitterfontein, Northern Cape. Report prepared for Diane Erasmus Environmental Services.

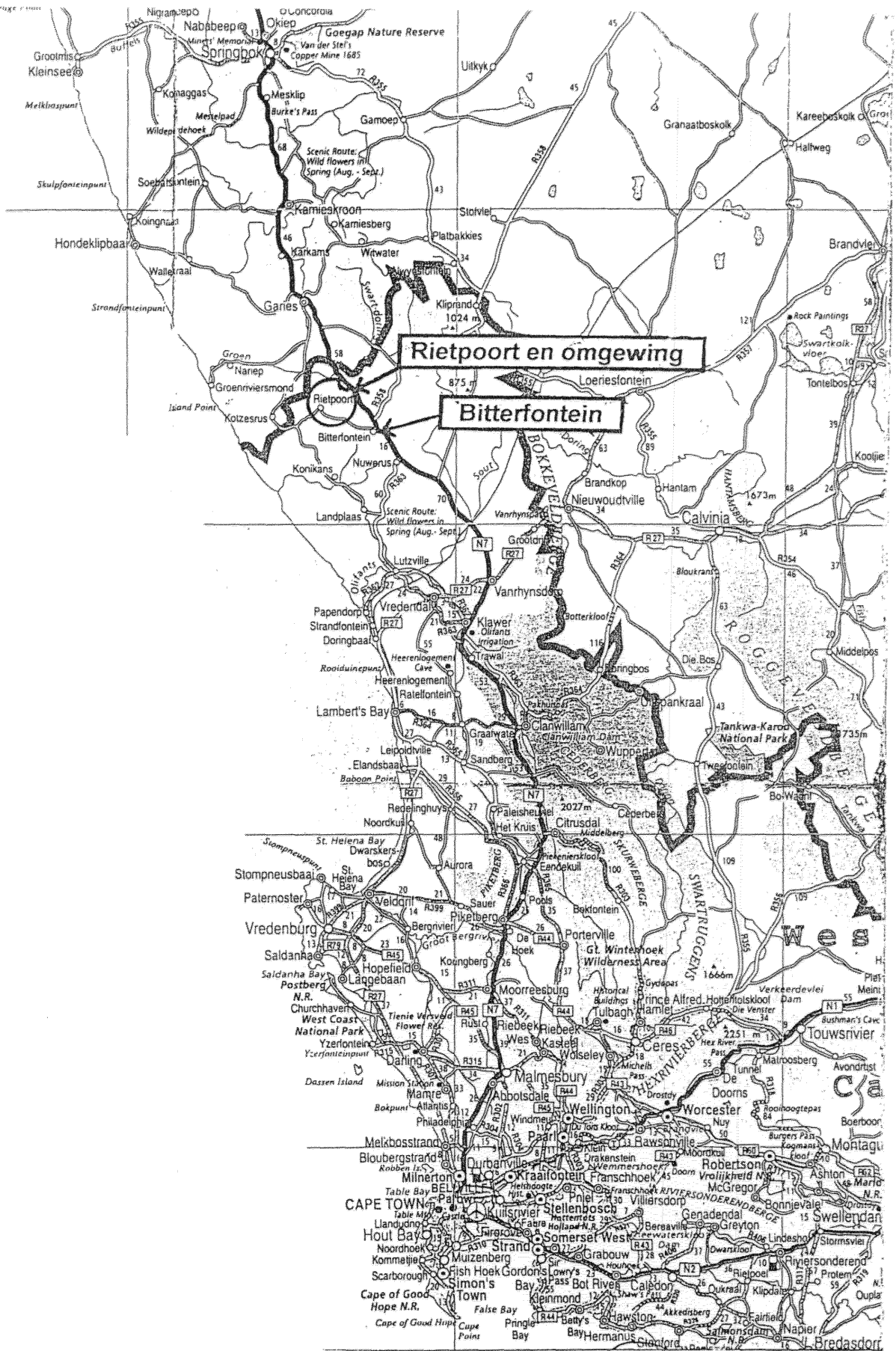


Figure 1. Phase 1 Archaeological Study, Rietpoort Water Supply Scheme. Map of the study area.

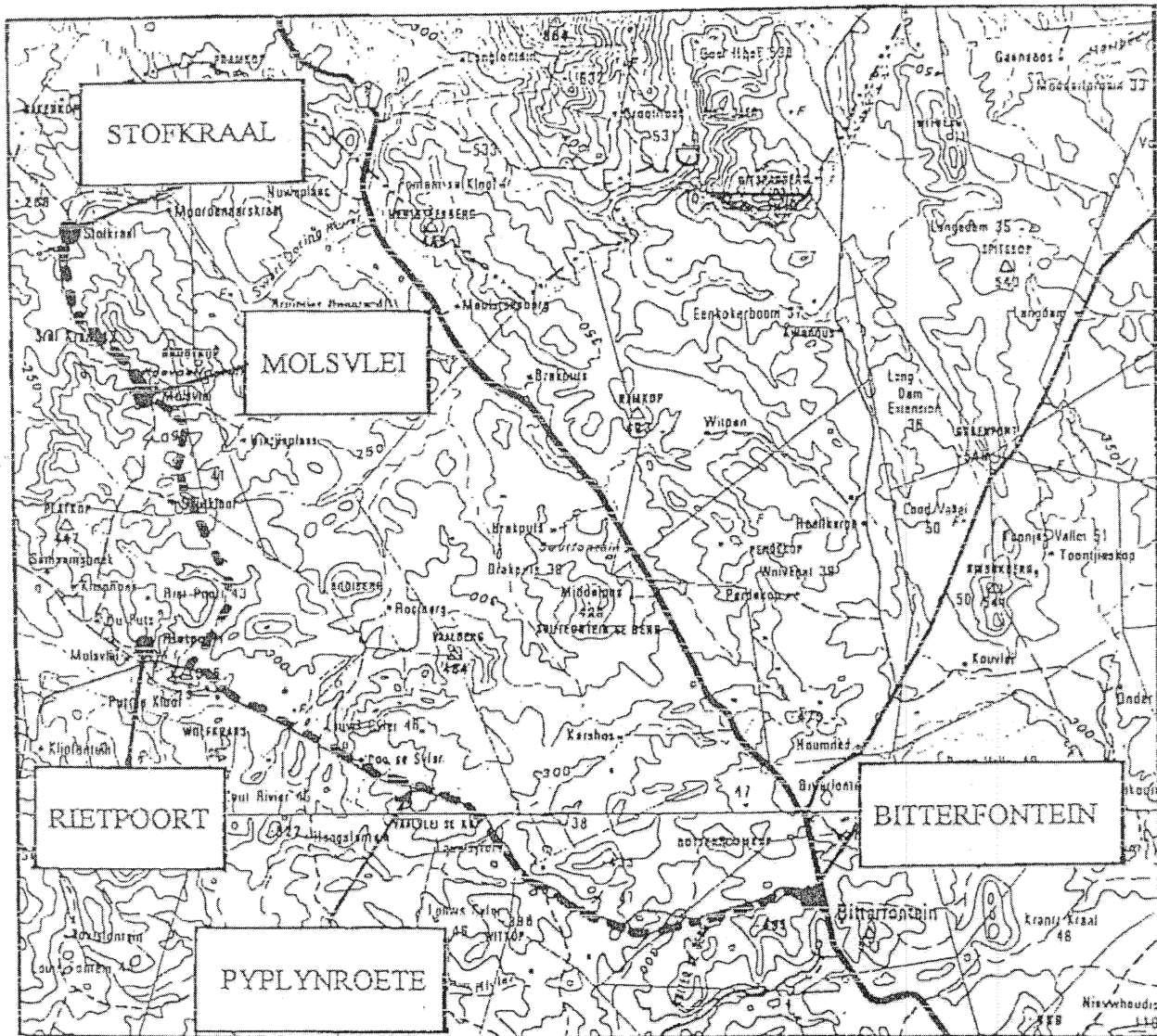


Figure 2. Phase 1 Archaeological Study, Rietport Water Supply Scheme. The proposed pipeline route.

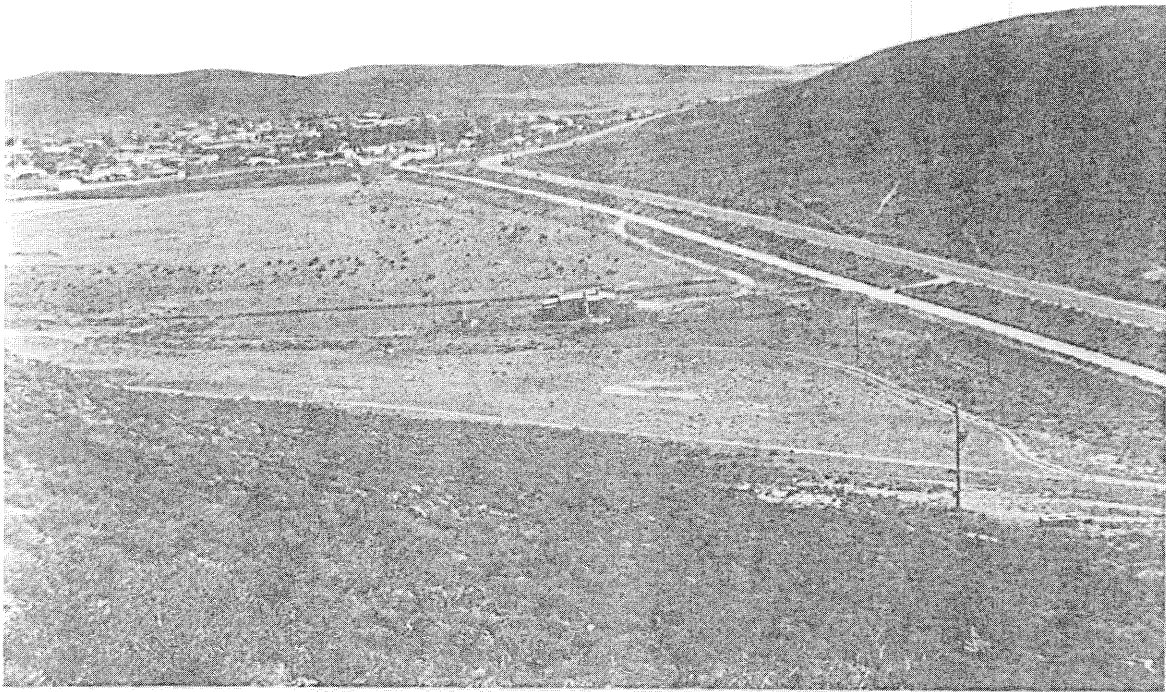


Figure 3. Phase 1 Archaeological Study, Rietpoort Water Supply Scheme: MSA tools were located on the rocky slopes below the Bitterfontein Reservoir, and in old agricultural fields north of the reservoir.

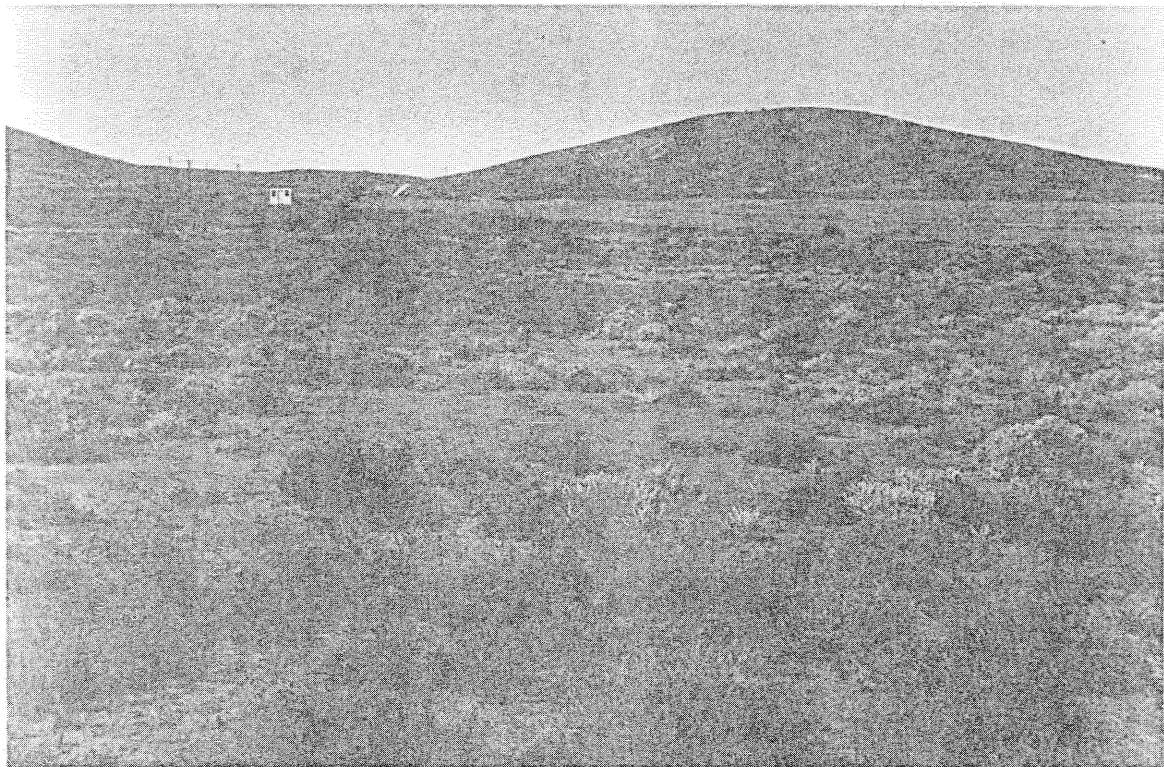


Figure 4. Phase 1 Archaeological Study, Rietpoort Water Supply Scheme: MSA & LSA tools were found in open sandy patches at the entrance to Bitterfontein.

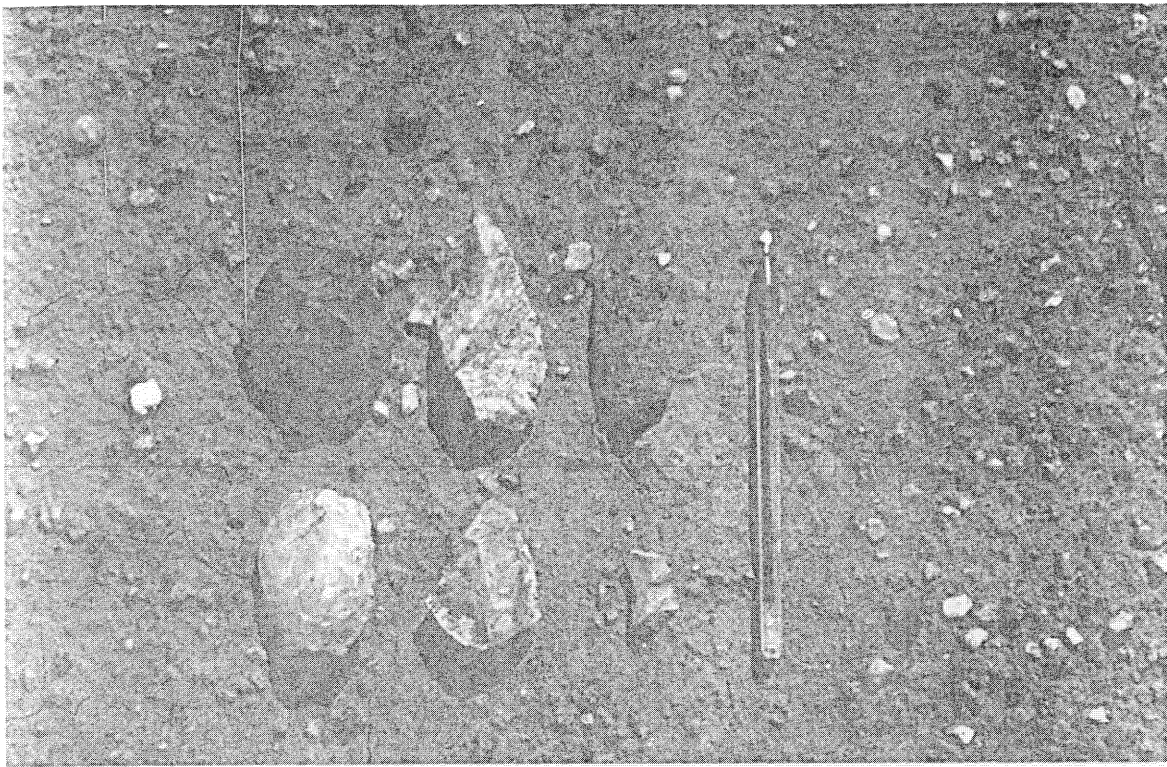


Figure 5. Phase 1 Archaeological Study, Rietpoort Water Supply Scheme: MSA & LSA tools in open patches at the entrance to Bitterfontein.

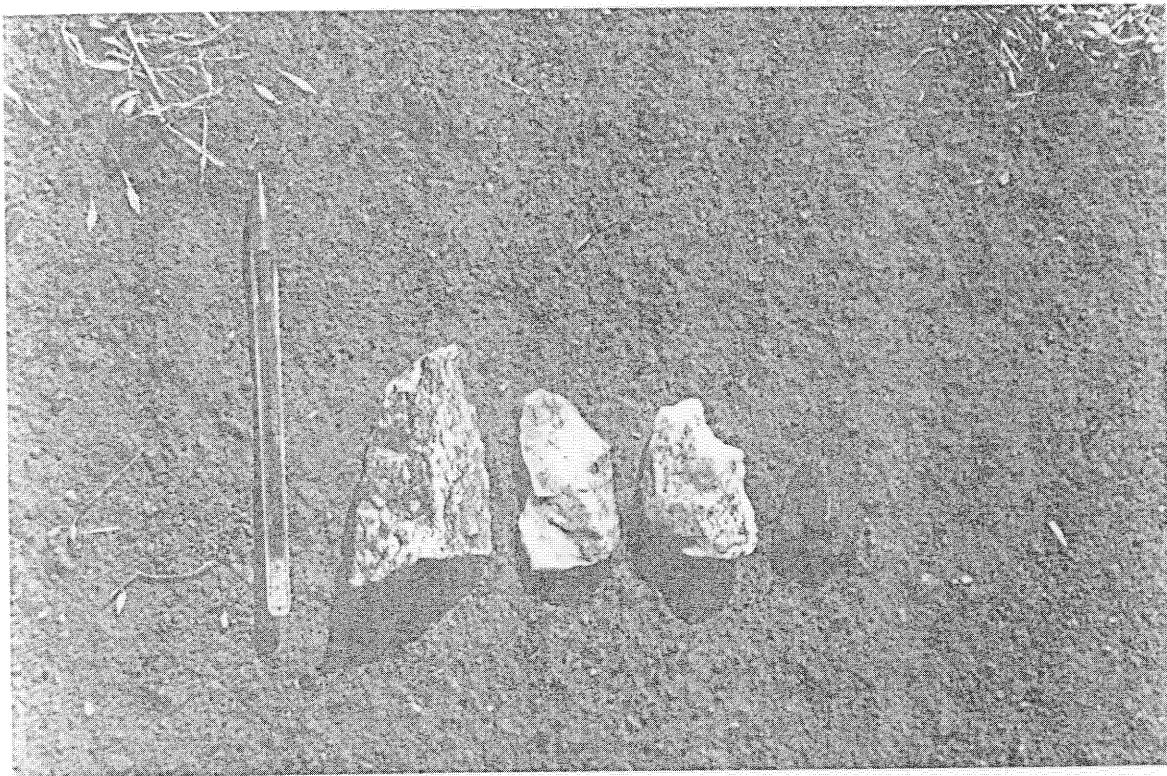


Figure 6. Phase 1 Archaeological Study, Rietpoort Water Supply Scheme: MSA tools in old fields north of the granite factory in Bitterfontein.



Figure 7. Phase 1 Archaeological Study, Rietpoort Water Supply Scheme: MSA & LSA tools south of Bloukop.



Figure 8. Phase 1 Archaeological Study, Rietpoort Water Supply Scheme: Eroded and sheet-washed slopes south of Bloukop.



Figure 9. Phase 1 Archaeological Study, Rietpoort Water Supply Scheme: Fossil bones south of Bloukop. Arrows indicate bones.

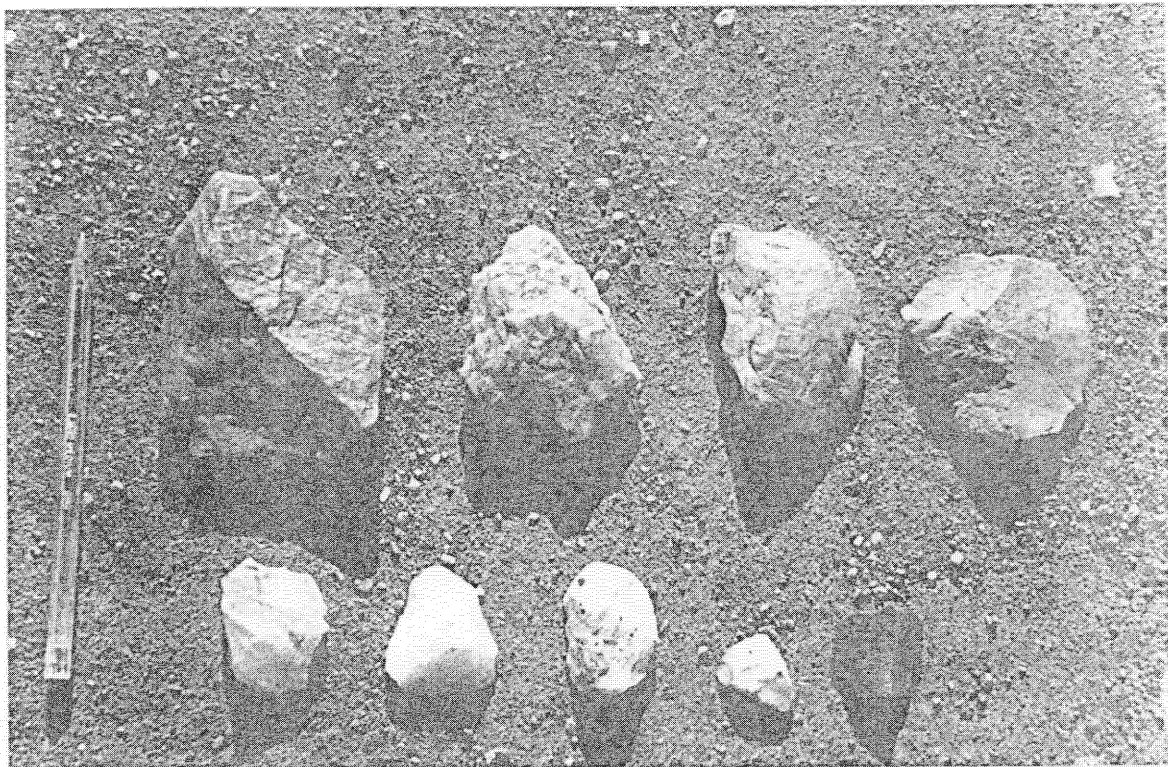


Figure 10. Phase 1 Archaeological Study, Rietpoort Water Supply Scheme: Collection of MSA tools between Rietpoort and Molsvlei.

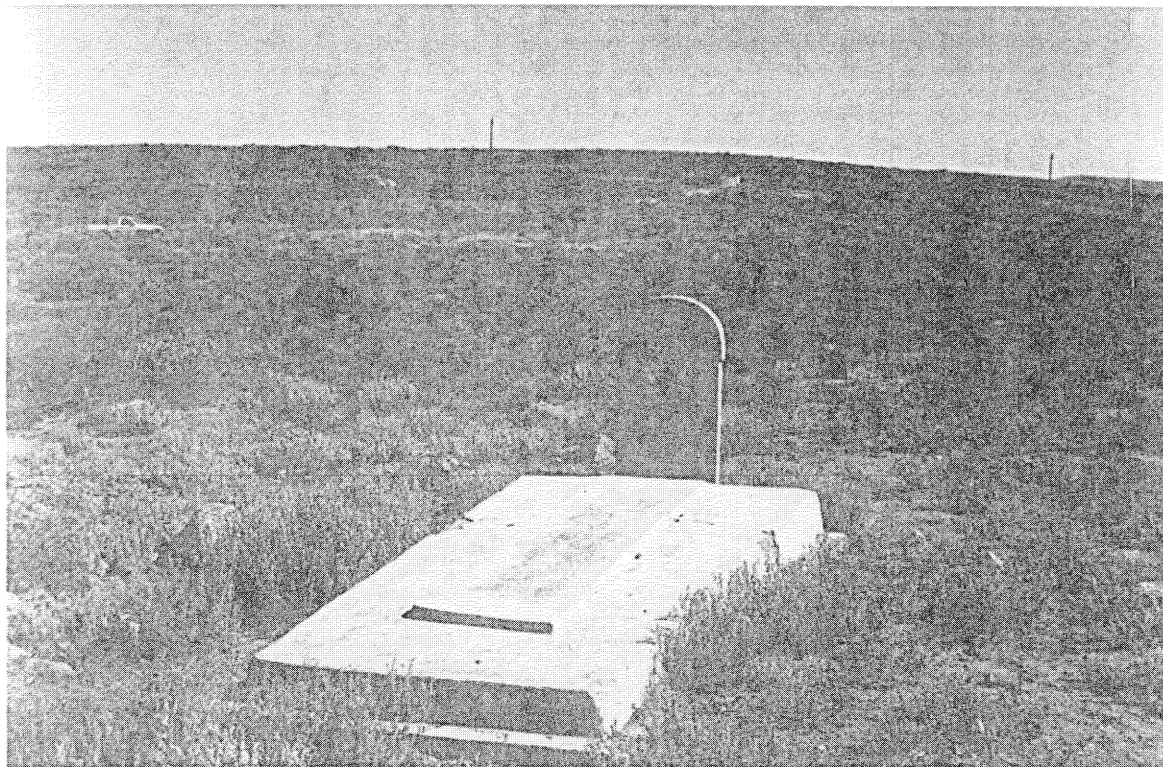


Figure 11. Phase 1 Archaeological Study, Rietpoort Water Supply Scheme: Burial north of the proposed route.

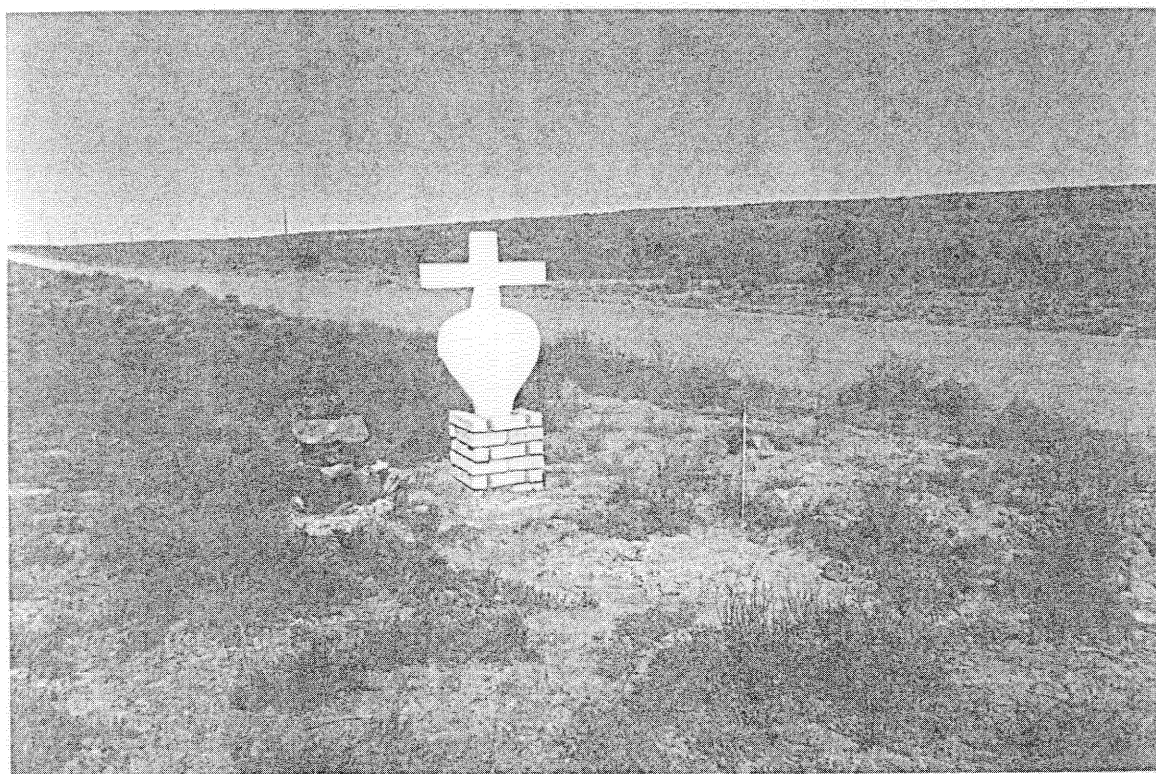


Figure 12. Phase 1 Archaeological Study, Rietpoort Water Supply Scheme: Burial alongside the proposed route near Put se Kloof.