

Appendix 5

AN ARCHAEOLOGICAL SURVEY OF BELLSBANK DIAMOND MINE, REX MINING  
(PTY) LTD, JAN KEMP DORP DISTRICT, NORTHERN CAPE

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## Executive Summary

The cumulative effect of long-term mining activities (present and past) in the area resulted in an almost totally disturbed surface area with almost no possibility of finding intact archaeological deposits.

However, historic settlements such as Site 9 (2824AB3) provide an opportunity to record sites that are representative of the socio-economic environment and living conditions of mine workers in a specific temporal and spacial setting. The documenting and recording of such a site will enable archaeologists to better understand and interpret the pre-colonial past of the Northern Cape.

Please note that no mining activities may take place on Site 9 (2824AB3) without further archaeological investigations and/or permits from the National Heritage resources Agency (SAHRA) for the destruction thereof.

### 1. Introduction

The Archaeology Contracts Unit (UNISA) conducted an investigation, focussing on the cultural resources, of the Bellsbank Diamond Mine, Rex Mining (Pty) Ltd, Jan Kempdorp District, Northern Cape. This report forms part of an EMPR and was requested by Van Riet & Louw Landscape Architects.

The aim of this investigation is to locate, identify and document visible archaeological artefacts, structures (including graves) and settlements of cultural significance in the existing and possible future mining areas.

### 2. Terms of Reference

The terms of reference of this survey are as follows:

- \* Compile a brief contextualisation of the area's ethnographic and colonial history
- \* Provide a detailed description of all archaeological artefacts, structures (including graves) and settlements within the mining areas
- \* Assess the significance of the impact of the mining activities on the archaeological remains within the area
- \* Estimate the level of sensitivity/importance of the archaeological remains within the area
- \* Propose possible mitigation measures provided that such action is necessitated by the mining activities

### 3. Definitions and Approach

Archaeological remains can be defined as human-made objects, which reflect past ways of life, deposited on or in the ground.

All archaeological remains, artificial features and structures older than 100 years and historic structures older than 60 years are protected by the relevant

legislation, in this case the **National Heritage Resources Act (NHRA) (Act No. 25 of 1999)**. The Act makes an archaeological impact assessment as part of an EIA and EMPR mandatory. No archaeological artefact, assemblage or settlement (site) may be moved or destroyed without the necessary approval from the **South African Heritage Resources Agency (SAHRA)**. Full cognisance is taken of this Act in making recommendations in this report. Cognisance will also be taken of the **Minerals Act (Act No 50 of 1991)** and the **National Environmental Management Act (Act No 107 of 1998)** when making any recommendations.

Cultural resources are non-renewable.

The guidelines as provided by the **NHRA (Act No. 25 of 1999)** in Section 3, with special reference to subsection 3, and the Australian ICOMOS Charter (also known as the Burra Charter) are used when determining the cultural significance or other special value of archaeological or historical sites.

The certainty of prediction is definite, unless stated otherwise.

It should be kept in mind that archaeological deposits usually occur below ground level. Should artefacts or skeletal material be revealed at the site during construction, such activities should be halted, and a university or museum would be required to be notified in order for an investigation and evaluation of the find(s) to take place (*cf. NHRA (Act No. 25 of 1999)*, Section 36 (6)).

A copy of this report will be lodged with the **South African Heritage Resources Agency (SAHRA)** as stipulated by the **National Heritage Resources Act (NHRA) (Act No. 25 of 1999)**, Section 38 (especially subsection 4).

#### 4. Methodology

##### 4.1 Literature Study

Various archaeological and ethnographic sources were consulted to compile a concise cultural framework of the area under investigation.

##### 4.2 Maps and Other Sources

The mining area was localised by using the 1:50 000 Topographic Map 2824AB (Bellsbank) followed by an on-site investigation. A detailed aerial photograph of the mining area was used for orientation. The orientation and location of the sites were determined by using a Global Positioning System (GPS)<sup>1</sup> correlated with the geographic features (i.e. rivers, fields, topography etc.) of the survey area.

##### 4.3 Fieldwork

An on-site investigation was conducted on 25 November 2002. Utilising the existing

<sup>1</sup> According to the manufacturer a standard deviation is to be expected when determining the location of sites. However, care has been taken to correlate the reading with the topography and to obtain a low dilution of precision (DOP) before plotting sites on a map. The datum point is WGS 84.

road system the whole area was extensively surveyed by vehicle and on foot. Emphasis was placed on indications of significant historical and prehistorical settlements and structures (including graves).

#### 5. Area Description

The area of investigation consisted mainly of existing mining activities in the extent of 18 shafts with associated tailings, dumps and evaporation dams. Kimberlite deposits which are found mainly along seams and dykes are mined by using vertical mining techniques. The present Bellsbank Mine probably incorporated several smaller claims which may have been registered in the early 1900s. Several claim signs (small painted plates), structures, remains of small scale mining (e.g. dumps and cavities) and a worker settlement attest to earlier mining activities in the area. The cumulative effect of these long-term mining activities (present and past) resulted in an almost totally disturbed surface area with almost no possibility of finding intact archaeological deposits. The original land surface was moderately flat with an elevated area in the north-western corner. Archaeological studies have shown that rich Stone Age deposits are associated with the Vaal River (cf Van Riet Louw 1952). Due to the close proximity of the mining area to the river (the mine is situated a few kilometres south-east of the Vaal River) the occurrence of stone tools in the investigated area is very probable.

#### 6. Chronological Framework

PERIOD	APPROXIMATE DATE
Early Stone Age	more than c. 2 million years ago - c. 250 000 years ago
Middle Stone Age	c. 250 000 years ago - c. 25 000 years ago
Later Stone Age (Includes San Rock Art)	c. 25 000 years ago - c. AD 200 (up to historic times in certain areas)
Early Iron Age	c. AD 400 - c. AD 1025
Late Iron Age (Stonewalled sites)	c. AD 1025 - c. AD 1830 (c. AD 1640 - c. AD 1830)

#### 7. Archaeological and Ethnohistorical Context

##### 7.1 Stone Age

As a result of extended periods of erosion and deposition of geological material in the Vaal River basin over millions of years, the Stone Age sequence of the area is not always visible on the landscape. The underlying premise is that Stone Age people usually had their activity areas near or on the banks of the current river. As the position of the riverbed fluctuated through time stone tools from different periods (e.g. Early, Middle and Late Stone Age) may be found in different geological deposits.

All geological deposits older than 2 million years (from the later phase of the Pliocene Epoch) will be excluded from this study as this is the start of the Early Stone Age sequence in South Africa. Older deposits from the later Tertiary Period will thus not contain stone tools.

The riverbed of the Vaal River seems to have migrated southwards during the Quaternary Period (last 2 million years) which means that the older gravel deposits will be north of the current riverbed (more resistant diabase (andesite) north and less resistant Karoo sediments [shales] south). This erosion process releases quartzites, quartz, chert, agate and jasper from upstream conglomerates which makes these materials readily available for Stone Age people to manufacture stone tools (Van Riet Louw 1952:135, 137). In addition, the scales (south of the riverbed) were baked by igneous dolerites from below which resulted in indurated shale (various such places were identified on Geluk), one of the most ideal mediums for stone tool manufacture. Prehistoric people were thus not only attracted to the river area for the water and game but also to obtain raw material for tool manufacture.

As indicated, geological evidence suggests that the Vaal River have been migrating south for millions of years and it thus follows that most of the rich Stone Age deposits are situated north of the river. The possibility of finding rich Stone Age deposits south of the river is thus less likely.

## **7.2 Iron Age**

The Northern Cape is characterised by a low Iron Age precents on the landscape, as a result of the general high aridity of the region. Arid areas are usually not conducive to cattle rearing and agriculture. During prehistoric times, these areas were mostly occupied by Stone Age and nomadic pastoral Khoekhoen groups.

**Early Iron Age** (EIA) settlements (dated between c. AD 400 - 1025) are usually located on low-lying below foothills, close to water. During this period settlements are not characterised by stone walls.

**Late Iron Age** (LIA) occupation phase has been linked to the arrival of the Northern Sotho, Southern Sotho, Tswana and Nguni-speaking groups between the sixteenth to seventeenth centuries AD. Later settlements are characterised by stone-walled enclosures situated on defensive hilltops (especially c. AD 1640 - AD 1830s) and multichrome Moloko pottery.

## **7.3 Ethnohistorical Sequence**

The area was characterised by long periods of conflict (since 1825) between the BaThlaping in the northern areas around Taung and the Griqua groups in the south. With the discovery of diamonds in the mid-1800s and in the influx if white people added to the conflict especially with the regard to the possession of land. Diamond mines eventually resulted in heterogenous groups (representing people from all over South

Africa) settling near the mines in *locations* (cf Breutz 1968).

## 8. Description of Sites

No undisturbed surface deposits were recorded in the survey area as a result of prolonged mining activities. Only historic structures associated with earlier mining and prospecting were recorded.

### 8.1 Site 1 (2824AB1)

The site consists of a historic homestead with three house foundations (Fig. 1) and two small stone-walled enclosures (Fig. 2 & 3). The house foundations are square, and were built with cement and bricks. The houses probably had 2 - 3 rooms. High concentrations of surface scatters, of pieces of porcelain, glass and iron were recorded. No middens were identified. The two stone-walled enclosures were probably used for keeping livestock. The walls are approximately 0,5 metres high and are 5metres in diameter.

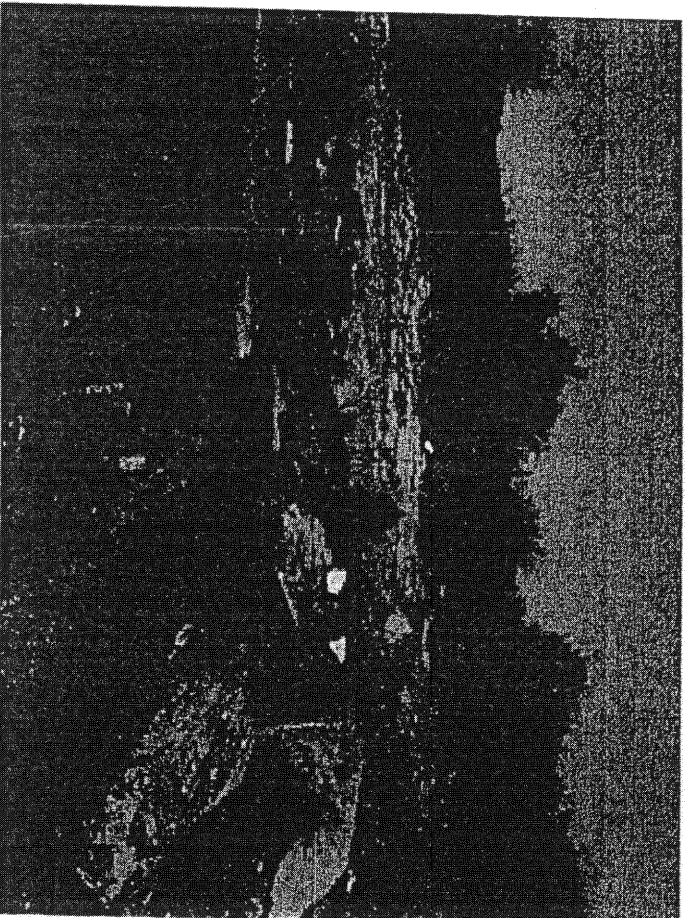


Figure 1

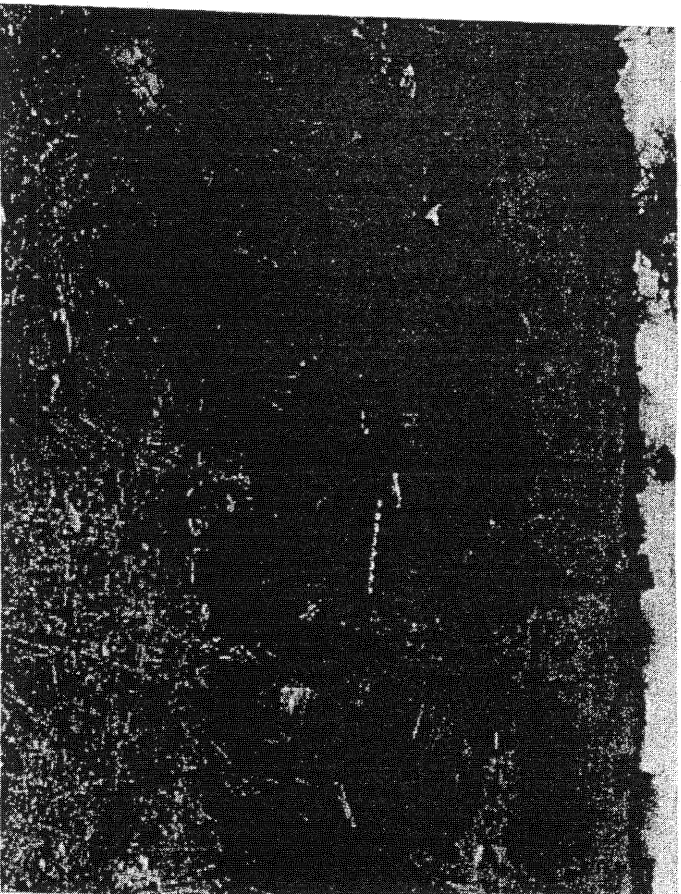


Figure 2

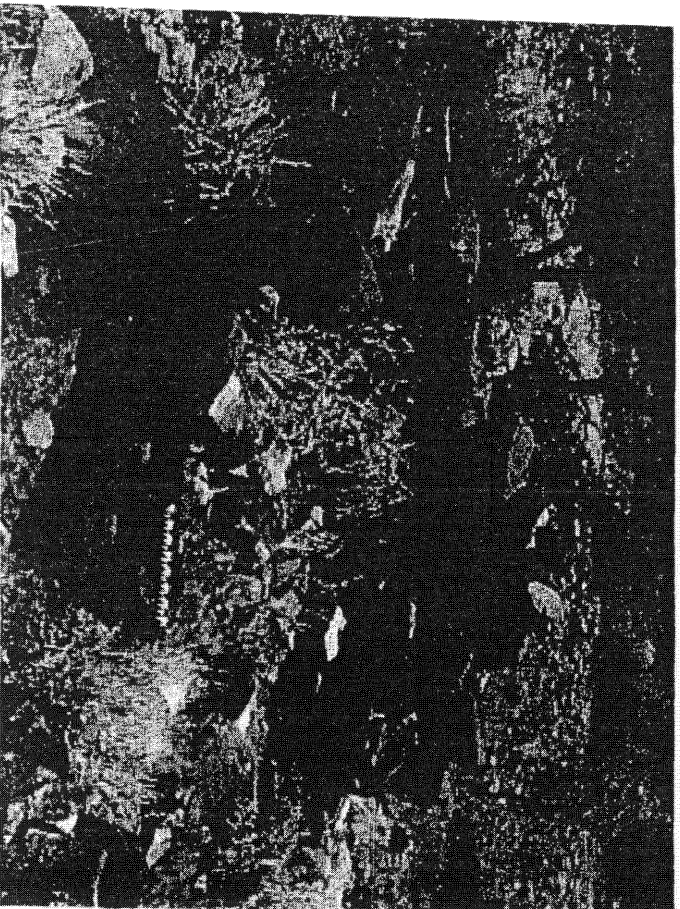


Figure 3

#### 8.2. Site 4 (2824AB2)

This site consists of several historic structures. A dilapidated building built of dressed dolomite blocks (Fig. 4), an old dismantled cement dam (approximately 10 metres in diameter) and two circular feeding troughs (Fig. 5) were recorded. The area around the site is open and was probably disturbed during activities associated with the features. It is uncertain what these structures were used for.

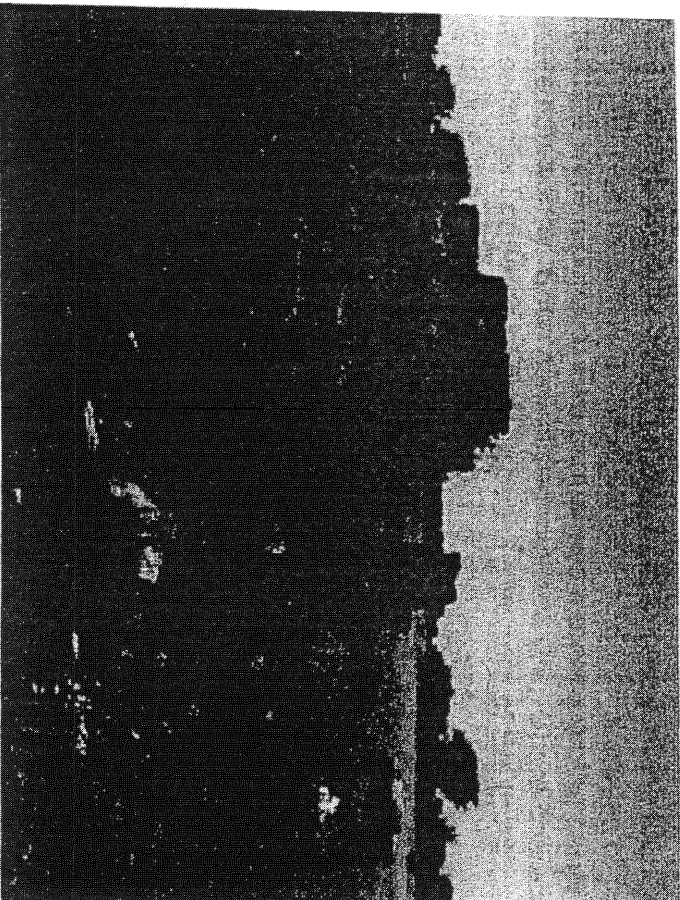


Figure 4

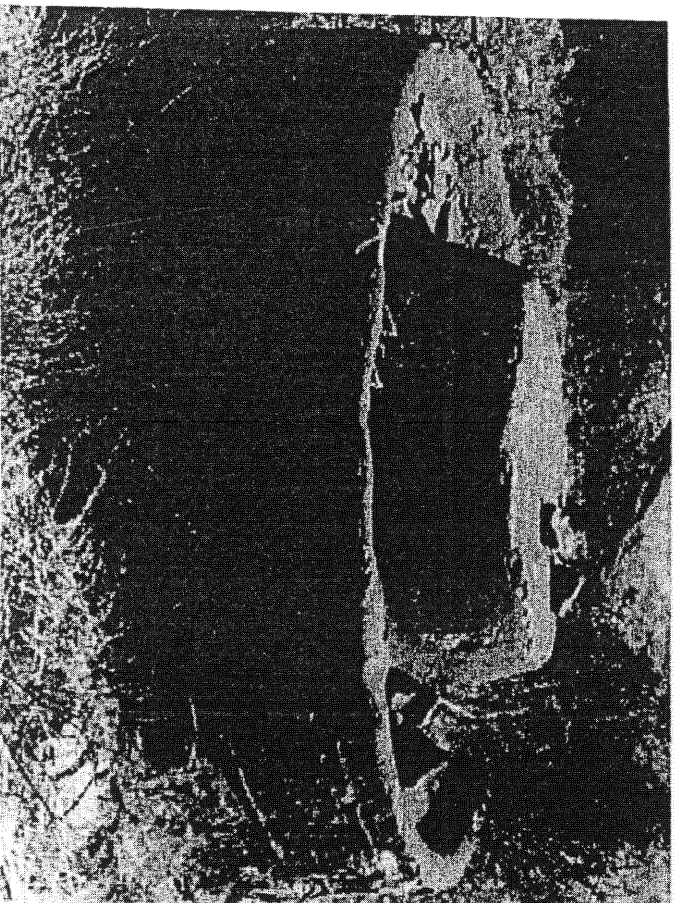


Figure 5

### 8.3 Site 9 (2824AB3)

The site consists of an extensive settlement probably associated with mine workers in the area during the first part of the 20<sup>th</sup> century. The settlement is approximately 300 - 200 metres in extent and consists mainly of structures and houses built of dressed dolomite blocks (Fig. 6). The settlement has a square layout with



perpendicularly crossing roads (as found in westernised townships). The walls of most of the structures are only about 1 metre high but most of the foundations are intact (Fig. 7 & 8). High concentrations of surface scatters of pieces of porcelain, glass, metal cans were recorded. Two centralised middens on the periphery of the settlement are noteworthy. Such centralised middens (Fig. 9) are characteristic of precolonial settlement patterns of bantu-speaking people of South Africa. No graves were found in or in the immediate vicinity of the settlement.

The site is representative of the socio-economic environment and living conditions of mine workers during a specific time period. As such it should be documented more extensively, especially recording the layout by using aerial photographs. If possible future mining activities should avoid this historic settlement. It is possible that the site is older than 60 years and therefore protected by the National Heritage Resources Act (Act No. 25 of 1999). It is likely that a permit from the South African Heritage Resources Agency (SAHRA) must be obtained before mining activities can have a possible negative impact on the settlement.

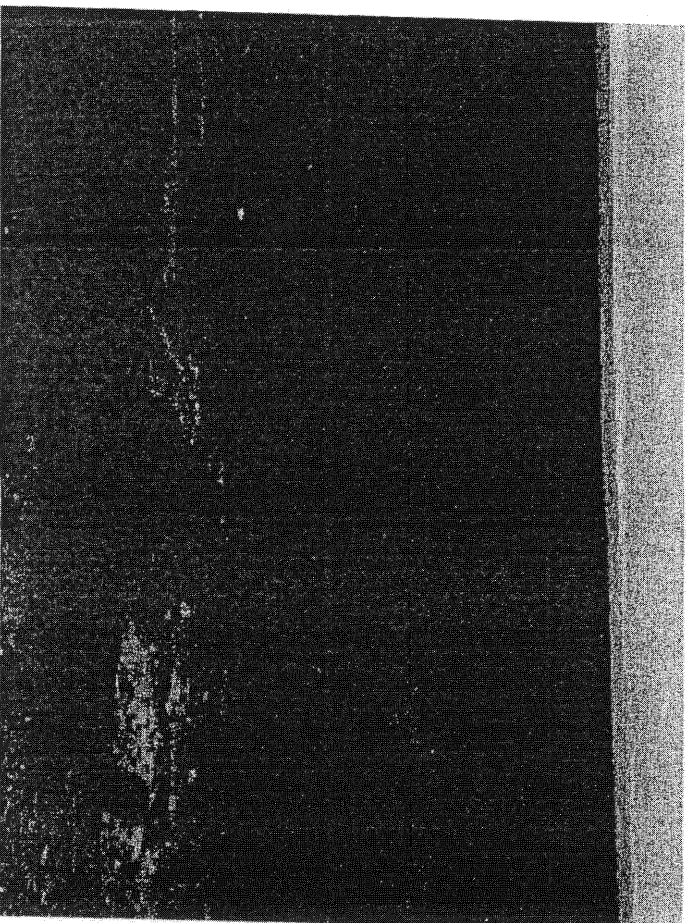


Figure 6

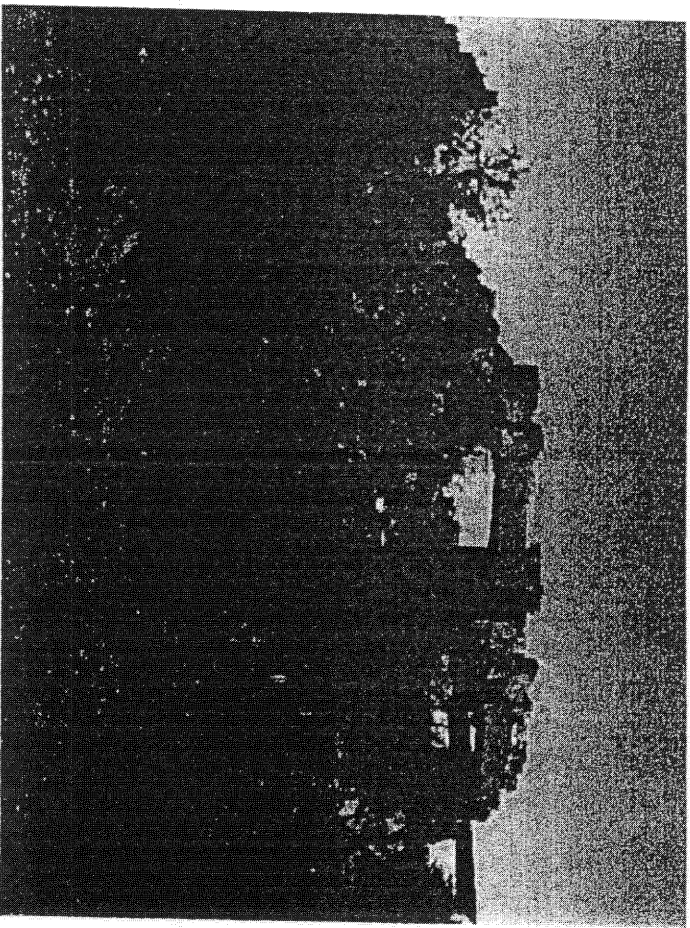


Figure 7

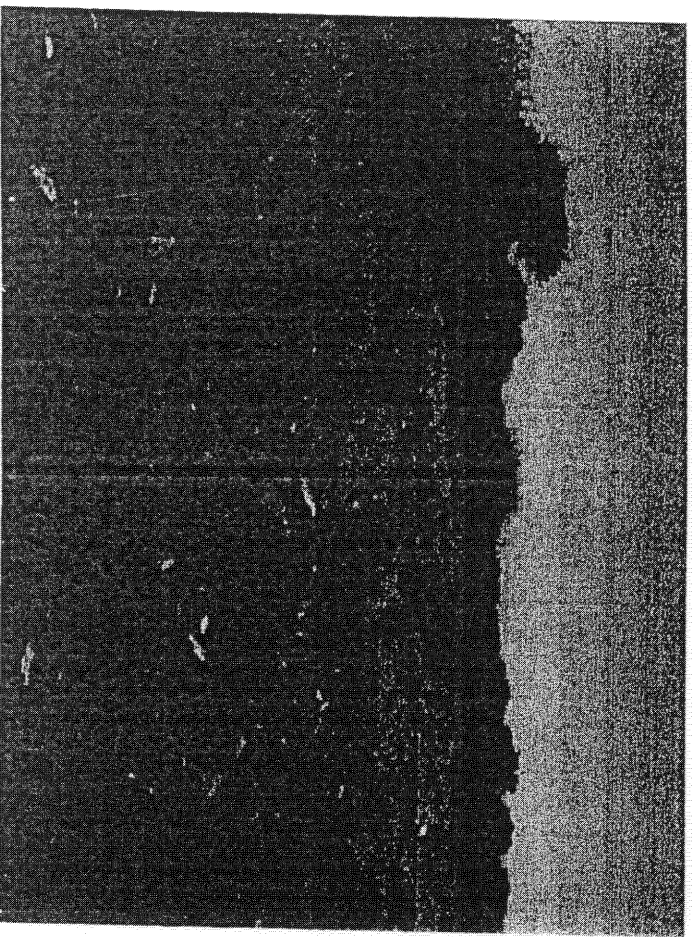


Figure 8

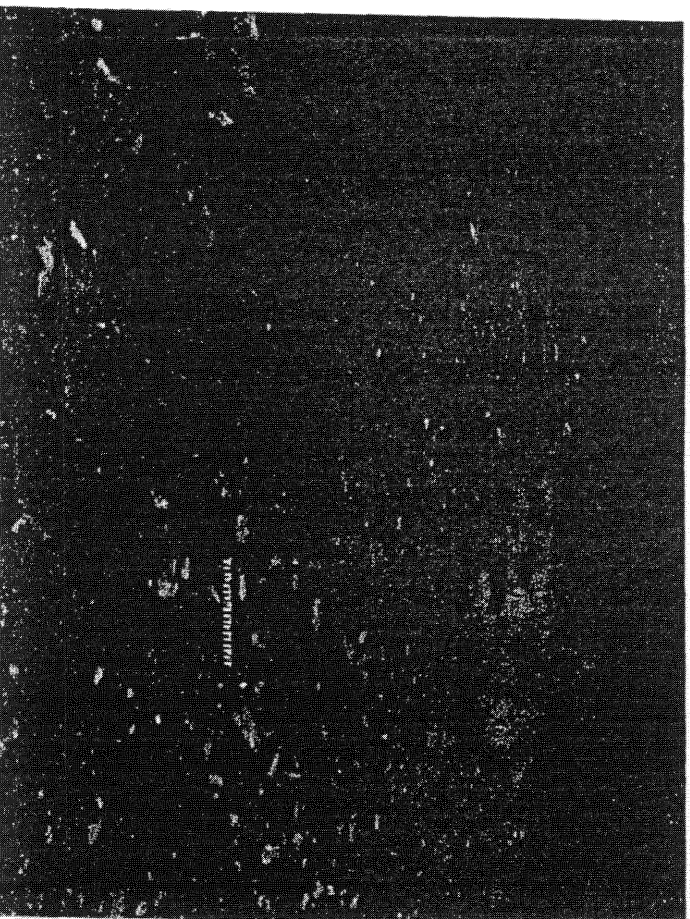


Figure 9

## 9. Summary of Sites

Site No	Site Type	Position	Significance	Status of Impact
1 (2824AB1)	Historic homestead	Peter	Low	Negative
4 (2824AB2)	Historic structures	Peter	Medium	Negative
9 (2824AB3)	Historic settlement	Peter	Medium	Negative

## 10. Conclusions and Recommendations

The cumulative effect of long-term mining activities (present and past) in the area resulted in an almost totally disturbed surface area with almost no possibility of finding intact archaeological deposits.

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#### REFERENCE

Breutz, P.-L. 1968. The Tribes of the Districts of Tuang and Herbert. Government Printer, Pretoria.

Van Riet Lowe, C. 1952. The Vaal River Chronology: An up-to-date-- Summary. *South African Archaeological Bulletin*. No. 28 (7).