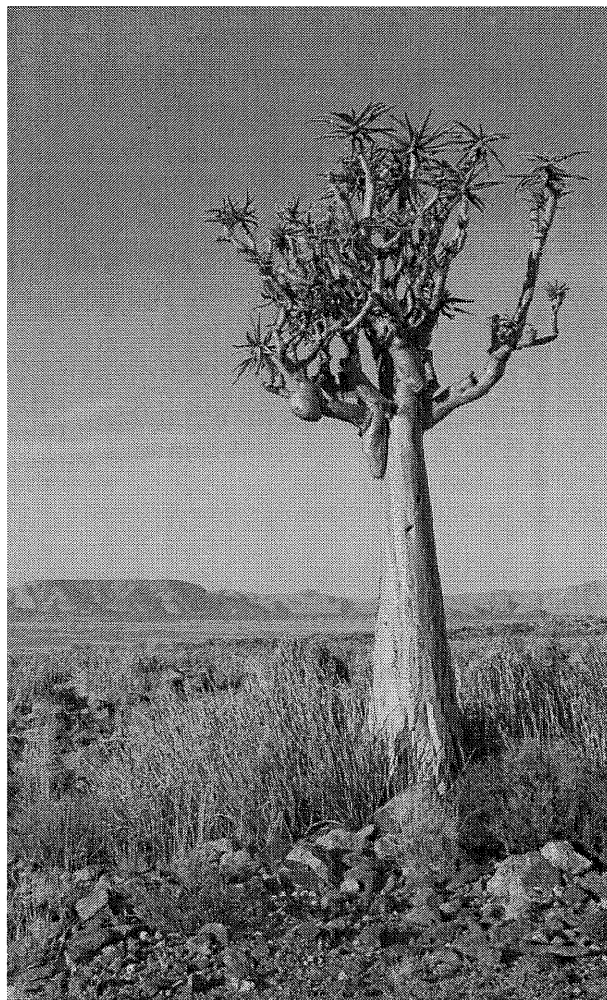


CULTURAL HERITAGE ASSESSMENT

GAMSBERG

**SUPPLEMENTARY OBSERVATIONS TO A PREVIOUS
SPECIALIST REPORT ON ARCHAEOLOGICAL RESOURCES.**



David Morris
McGregor Museum, Kimberley
November 2009, Revised January 2010

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1. INTRODUCTION: TOWARDS A BASELINE DESCRIPTION OF THE PRE-MINING ENVIRONMENT

A previous study (Morris 2000a, 2001) presented an archaeological and historical baseline description of the pre-mining environment at Gamsberg preparatory to proposed zinc mining at the inselberg.

This was set out by way of an initial desktop background survey followed by detailed field observations. The findings were evaluated by way of discussion, and the significance of sites was measured against two sets of criteria used in the management of archaeological resources in South Africa.

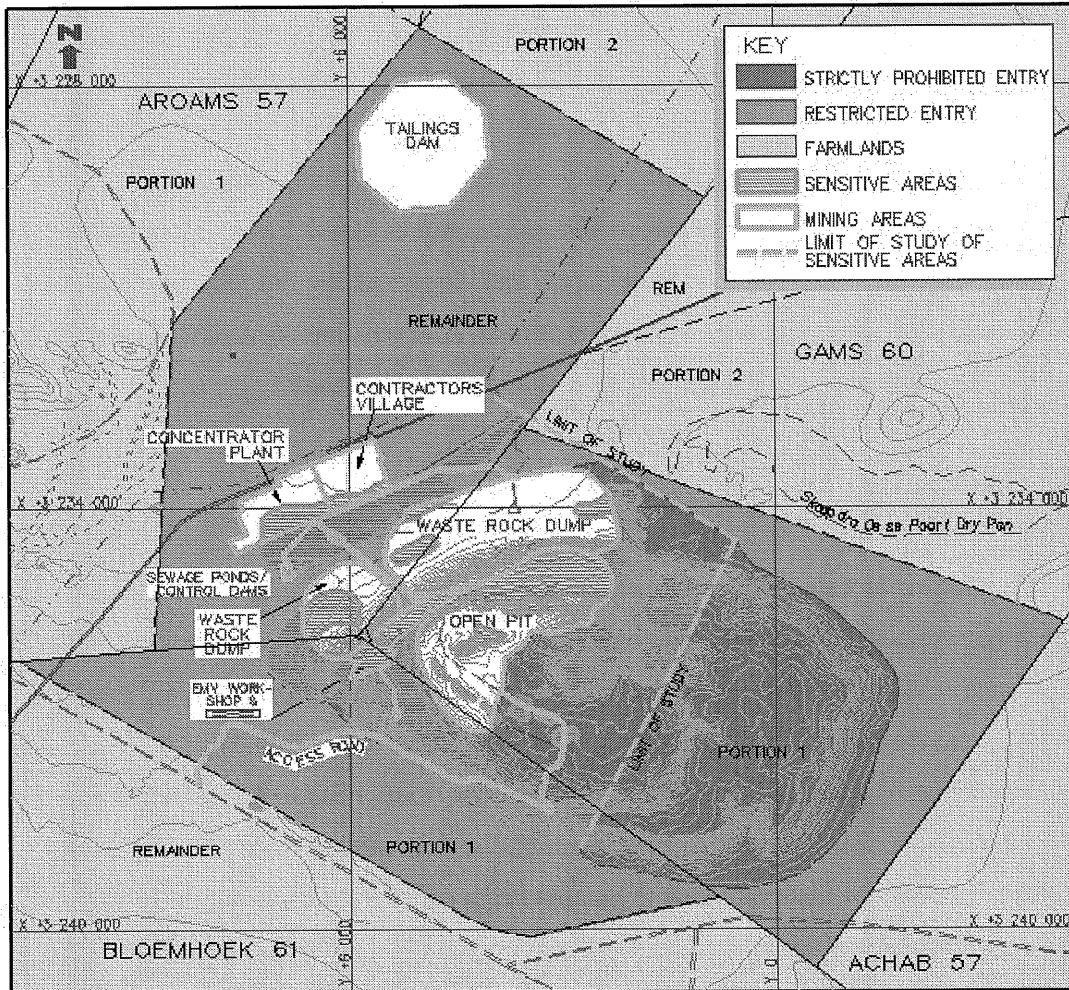
A detailed report (Morris 2000a) was compiled which assessed the likely impacts of every phase of the operation and made recommendations for Phase 2 salvage of archaeological materials. Permits were obtained for the latter tasks. However, the proposed mining at Gamsberg was then shelved owing to a drop in the value of zinc.

Renewed interest resulted in a request to review the study previously undertaken and to extend it for expanded areas of anticipated mining impacts. This report supplements the previous work, with new areas of proposed mining being principally the eastern side of the inselberg and basin. Also to be examined were the kloof which debouches to the north, and a reported cultural heritage feature on the plain to the north of the inselberg.

1.1 Methodology

Initially a desktop was carried out partly reported upon in terms of the assessing spatial coverage in the Gap Analysis (1.2) and by the incorporation of new background information with respect mainly to nineteenth century history, indicated in section 2 of this report.

The review considered reports and field notes for the period 1999-2001.



This vegetation map indicates the farm boundaries and the limit which constrained previous studies.

Supplementary fieldwork was planned and carried out in light of the Gap Analysis (1.2) and the review of earlier work (2, 2.1 - 2.2), the field visit taking place in October 2009.

During field work some of the previously surveyed areas were revisited, but with the main focus being on the investigation of previously unexamined terrain. We concentrated on the eastern side of the inselberg. Maps and Google Earth were used for anticipating areas of potentially better archaeological visibility, but the principal *modus operandi* in the field was a foot survey. The survey focussed on the different kinds of topography, such as small sheltered places in valley areas and kloofs and the flat relatively less rocky plateau spaces, that might have been most attractive for past human activity or dwelling and/or most conducive to the preservation of archaeological traces.

1.2 Gap Analysis

The initial part of this report reviews previous work at the Gamsberg. In summary, previous work established that regionally important archaeological sites existed in the project area, all of these being on the inselberg: one on the northern rim of the inselberg (Site 1) and the rest in the basin (Sites 2 to 5). These sites are as follows: Site 1 – a rich Middle Stone Age workshop; Site 2 – an Acheulean (Earlier Stone Age) workshop; Site 3 – an Acheulean (Earlier Stone Age) workshop; Site 4 – scatters of both Middle Stone Age and Acheulean material along the main stream course in the basin; Site 5 – a small cave with ephemeral Later Stone Age occupation. Minimal archaeological traces were found on the northern and western slopes of the inselberg and the adjacent plain. Where found, these included isolated stone flakes and, at one location, a scatter of ostrich eggshell, probably representing part of a water-flask cache. No traces from the colonial frontier era were found, though remains from this period are known from a site nearby. Some written descriptions of the area date from 1824 and 1872. Twentieth century remains of prospecting and mining activity include a campsite and tins dating from the 1970s.

The five identified sites of importance would be disturbed by the development of the pit and associated infrastructure on top of the inselberg. Recommendations were made for mitigation, namely phase 2 archaeological salvage at selected sites.

The Gap Analysis found that:

The previous study was a systematic survey of the areas originally identified for mining. It also examined the wider spatial context in order to evaluate observations made on and immediately adjacent to the Gamsberg inselberg. The study additionally assessed the evidence of place names and historical accounts as documentation of the more recent protocolonial and colonial history which, it had been noted, included episodes of considerable conflict locally.

It was recommended that detailed survey be extended particularly to areas not covered previously but now included in the area of proposed operations.

The survey had been compliant with relevant heritage legislation. The report had been reviewed by the SA Heritage Resources Agency (SAHRA), which had issued permits for Phase 2 salvage in light of the recommendations made (this work not having been done due to the temporary shelving of the project). The permits for excavation/surface collecting were valid for one year only – hence in the event of future mitigation work as recommended new permits would need to be sought.

Previous findings and conclusions were to be reviewed in light of fresh observations in areas not previously covered; and recommendations revised for salvage if necessary.

The IFC, Performance Standards on Social and Environmental Sustainability (2006) were considered with respect to cultural heritage (it was suggested that South African heritage legislation and requirements were consistent with international standards) and with respect to indigenous people (it was suggested that there may be partial applicability in

the longer term – but that “indigenous people” as defined in the performance standards were not directly involved in the area at present).

2. DESKTOP ASPECT: ARCHAEOLOGICAL AND HISTORICAL BACKGROUND TO THE INVESTIGATION

An initial survey of the literature on the Pofadder-Aggeneys area had shown that minimal work had been undertaken in the region prior to the project (Beaumont *et al.* 1995), although in the 1990s, a few specialist inspections were carried out for Eskom and Black Mountain mine. While by no means in-depth, these latter surveys together with the work of Morris & Beaumont (1991), Beaumont *et. al.*, (op cit.) and Smith (1995), had provided some regional context to the study and an indication of what to expect from an archaeological perspective at Gamsberg. Aspects of the resulting work at Gamsberg itself had supplemented existing data in significant ways providing new insights into the archaeological and cultural heritage of the region.

2.1 Place names and their relevance revisited

Place names – of towns, farms and topographic features – provided insight into the history of the area, some details of which are revisited here, their significance underscored in relation to the histories of the indigenous people of the region.

Of particular relevance are the names of the places Gams, Aroam and Aggeneys – names that were attached to farms once they were parceled out as private property in the first two decades of the twentieth century. These names are derived from Nama names and thus echo an aspect of precolonial spatiality and sensibility here – what Ingold (2000) refers to as a ‘dwelling perspective’. Some of the local debates around the meanings of these names have thrown up details of rather horrific aspects of local history which are

given greater emphasis in this second round of reporting on the heritage significance of Gamsberg.

Gamsberg

In 1824 when Thompson traveled through this area he noted the name of the place as being *t'Kams*, meaning “tufted grass” in the Nama dialect. Nienaber and Raper cite a local farmer, A.J. van Jaarsveld, who similarly asserted that the origin of *Gams* or *Gaams* was in the word *Tha-aams* which was pronounced with a click, where *Tha* means “grass” and *aams* means “mouth”. The Nama *|Gâ-ams* literally means “Grasmond” or “Grasfontein”. The grass in question is most likely to be *Aristida brevifolia* (Nienaber & Raper 1977, 1980). Other possibilities are reviewed in a previous report (Morris 2000a:9).

Aroam

This name is derived from the Nama *†aro-* meaning “wag-’n-bietjie” tree (*Ziziphus mucronatus*) and *am* or *am-s* meaning “mouth”. The name could thus be translated as “Wag-’n-bietjiebosfontein”.

Aggeneys

A variety of interpretations exist for Aggeneys/Aggeneis. The name appeared first in written form as *Achenijs* in 1859. In a “Brief history of Aggeneys” published in *The Cape Argus* in July 1973 (Nienaber & Raper 1977:173) the following story is given:

“Aggeneys is the name of a kloof on Vickie Burger’s farm ... Long before the turn of the century, the Bushmen had several strongholds in the mountains between Pofadder and Springbok and from these they carried out raids on the farmers. Finally the farmers could no longer tolerate the marauding Bushmen and formed a commando which followed the spoor of the Bushmen and the livestock that they had stolen to the kloof, which is today known as Aggeneys. Near the kloof they split into three parties which surrounded and

trapped the Bushmen at a spring near the confluence of three ravines. The Bushmen were wiped out and the kloof became known as ‘The Place of Blood’. The Nama Coloureds have always known the kloof as ‘The Place of Water’, as there were several natural springs there, but to this day no-one is quite certain of the origin of the name Aggeneys...” (Nienaber & Raper 1977:173).

Other interpretations are cited by Nienaber and Raper, including the possibility that it means ‘Place of Red Clay’ or that it is associated with reeds (*riete*) (reviewed in Morris 2000a:10).

An important further source not accessed previously comes in the form of C.R. Burger’s (1986) thesis, *’N Ondersoek na die Oorsprong en Betekenis van Plek- en Plaasname in die Landdrosdistrik Namakwaland*, which cites A.J. Burger, a retired farmer, in commentary given in a letter written in 1982 which contradicts the above and links the incident of the killing of Bushmen rather with Gamsberg than with Aggeneys.

“Daar was beslis riete, ook nounog, en daar was ook een of meer fonteine toe my oorlede vader die plaas in 1910 gekoop het. Daar was en is ook nog rooi klei. Ek kan onthou hoe die meide hulle gesigte besmeer het – eintlik ’n rooi sagte klip. Die laaste vesting waar die Boesmans doodgeskiet is deur die Boere, was nie Aggeneys nie, maar baie beslis aan die suiderkant van Gamsberg – so ’n lelike kloof in die berg. Jy kan dit sien as jy met die ou gryspad ry.” (Burger 1986 :147-148). (Emphasis added).

[“There were certainly reeds, even now, and there were also one or more springs when my late father purchased the farm in 1910. There was also and still is red clay. I can remember the Coloured women [*meide*] smearing their faces with it – actually a red soft stone. *The last place where the Bushmen were shot dead by the farmers was not at Aggeneys, but very definitely on the southern side of Gamsberg – a dreadful kloof in the mountain. You can see it if you drive along the old gravel road”*] (Emphasis added).

C.R. Burger thus rejects the meaning 'Place of Blood' for Aggeneys, on the one hand, and is inclined to opt for 'Place of Reeds' – from the Nama *†a* meaning riet and *!keis* meaning place. On the other hand he is quite emphatic and specific about Gamsberg being a site where Bushmen were killed.

Discussion on place names and local histories

One point of significance is that these names appear to derive from Nama usages which began to be fixed in colonial naming conventions by at least 1824. That farms were being sold off as private property here as recently as the second decade of the twentieth century meant that on average indigenous names were surviving longer and entering official geographical nomenclature on a larger scale than elsewhere in the region.

Those amongst whom these names were originally current may well have been responsible for some of the most recent Stone Age material that includes Khoe type ceramics.

Another hint of some continuity from a precolonial past is the evidence that certain traditional customs were still practised locally as can be deduced from the description of the use of 'red clay' or ochre.

However, there are indications of quite radical breaks in continuity, with a significant element of violence punctuating the recent history of the region, as indicated by the stories related above. Further corroborating the local legend, E.J. Dunn mentioned the incident in an 1872 account of a journey through the area. At 'Ghaums' (i.e. Gams), he mentions a spring: "at this water an affray took place between the Boers and Bushmen. The Bushmen scherms, made of stones, still remain, as well as the marks of the bullets on the rocks" (Dunn in Robinson 1978:62). In the previous Gamsberg study (Morris 2000a:11) it was remarked that this may have been a spring on the eastern side of Gamsberg, but the comments in C.R. Burger's study make it most likely that this was on the *south* side of the inselberg. Several massacres are recorded as having taken place in

the region from the mid 1850s, as reported by Louis Anthing to the Colonial Secretary, Cape Town, in 1863, where he exposes deliberate acts of extermination (it has been referred to as genocide) by Boers and Bastards. Anthing specifically alludes to major incidents of this nature in the vicinities of Bosluis and Namies (immediately east of Gamsberg) where “hundreds must have been killed” – while “smaller affairs [were] equally horrible” (Anthing 1863:10).

More than a quarter of a century prior to this, Thompson noted that the local people, called the *Obseses*, were an amalgamated grouping of various ‘tribes’ which had been “assailed by ... formidable enemies.” The latter enemies had included the raiding bands of Afrikaner and probably other frontier bandits and commandos (1827:288, 290-1). The indigenous people of the region had faced sustained onslaughts from at least the 1770s (Penn 2005) and by the later nineteenth century the independent San had essentially been wiped off the face of the country.

Important insights into the pre- and protocolonial adaptation of seasonal/opportunistic aggregation and dispersal by herders in this harsh environment are given by George Thompson who camped at *t’Kams* (Gams) on 24 August 1824 – where in fact the missionary Bartlett of Pella was then temporarily stationed. He remarked that “severe droughts, and consequent failure of pasturage, forced them [Nama herders of Pella] occasionally to disperse themselves in divisions over the country wherever a spring of water exists with grass in the vicinity for their flocks ... the nature of the country is such, that a people like the Namaquas must be nomadic ... as soon as rain falls, the pastures of Pella will instantly spring up, and the scattered divisions of the people will again be reassembled” (Thompson 1827:284).

Thompson interestingly observed that they possessed a breed of sheep different from the fat-tailed variety that was usual further south (1827:289). While fat-tailed sheep lose their fat tails under drought conditions, there is a thin-tailed breed of indigenous sheep known from the eastern side of the subcontinent (E.A. Voigt pers. comm.). Thin-tailed sheep are depicted in rock paintings in the Limpopo basin.

2.2 Late Holocene, rock art and older Stone Age sites reviewed

Three scoping reports for Eskom (Prinsloo 1998; Morris 1999a; 1999b) and one for Black Mountain Mine (Morris 2000b) describe Later Stone Age sites with and without pottery. A sparse surface scatter of possible Middle Stone Age lithics is noted from a farm near Pofadder. An impression gained from these studies was that archaeological visibility in the region is markedly lower than in areas in the Karoo and eastern Bushmanland, to the south east, and along the Orange River (Beaumont & Morris 1990; Morris & Beaumont 1991; Smith 1995). The sample of previous observations was small and limited in scope, but by initial appearances it had seemed that sites of late Holocene age were the most common. The largest site noted (Prinsloo 1998; Morris 1999a) was a herder site with abundant stone artefacts, pottery and fragments of ostrich eggshell, focussed on a water hole known as Schuitklip (an early description of this water hole is to be found in E.J. Dunn's (Robinson 1978) account of a journey there in 1872). These observations are in accord with the findings of Beaumont *et. al.* (1995) and of Smith (1995) in their broader look at the archaeology of the Orange River and its hinterland. Both these latter studies refer further to earlier material from a small number of sites ascribable to the Middle and Earlier Stone Ages.

A report by Deacon (1995) describes rock paintings found on a boulder next to the Aggregate Quarry at Black Mountain Mine, Aggeneys (29°15'26" S; 18°48'12" E). These are simple finger paintings including two "Star" motifs and an indented oval shaped image. Paintings similar to these are to be found over a wide area in the western half of the interior of South Africa, not infrequently on isolated boulders in the Karoo (sometimes along with rock engravings), and in rock shelters. Their age and context is not well understood, but they appear to be associated in this region with KhoeSan (very possibly Khoekhoe) of approximately the last millennium, rather than with other groups regarded as the makers of finger paintings elsewhere in the subcontinent.

In his book, *The Bushman*, Dunn recalled "near N'Ghaums [Gams], I saw an engraving of a hippopotamus being dragged across the dry veldt by several Bushman people by

means of a rope attached to its nose” (1931 : 46). Dunn offers an explanation suggesting that the hippopotamus, associated with water, was shown in this way on the engraving in order that “rain would necessarily follow...and an abundance of food be assured”. Current understandings of Later Stone Age rock art suggest that images of large mammals such as the hippopotamus may well have served as metaphors for “rain animals”. Dunn’s hippo engraving has not as yet been located.

3. OBSERVATIONS MADE IN 1999

In 1999, areas on the northern and western slope of the Gamsberg and the adjacent plains were examined as were the northern and western rim of the inselberg and its basin (Morris 2000a)

3.1 Gamsberg northern slope and adjacent plain

The particular focus of investigation here was on the alternative areas indicated for the waste dump and low grade ore & waste stockpile, as also the alternative areas of proposed development further out on the plain and adjacent to the main road.

Survey of the surfaces north of the berg and on the adjoining northern slope of Gamsberg on the farms Gams and Aroam revealed extremely minimal archaeological traces, namely a very few isolated stone flakes. Where erosion had cut into the surface there was no indication of any artefacts below the surface here either.

Further work required in this area in 2009:

A report concerning a possible cultural feature on the plain north of the main road was received via the botanist Philip Desmet and was flagged for assessment as part of the 2009 up-grading of the report.

3.2 Gamsberg western slope and adjacent plain

The particular focus of investigation, initially in 1999-2000, was on the alternative areas indicated for the tailings site and slimes dam pump station, although the tailings dam was ultimately sited north of the N14.

In parts of this western side of the Gamsberg, on the farm Bloemhoek, a low density of Later Stone Age flaked quartz artefacts was noted, as was an isolated scatter of ostrich eggshell, probably representing part of a water flask cache. Pieces included a mouth fragment. The latter was well clear of the proposed tailings site.

Almost all of the area indicated for the tailings site and slimes dam pump station was found to be essentially devoid of archaeological traces save for very occasional and isolated flaked stone pieces.

3.3 Gamsberg northern and western ridge and basin

The focus of investigation was on the areas indicated for the possible EMV workshop and offices, detonator & accessories magazine, on the Gamsberg rim, and the open pit and associated mining activities and alternative activity sites in the basin.

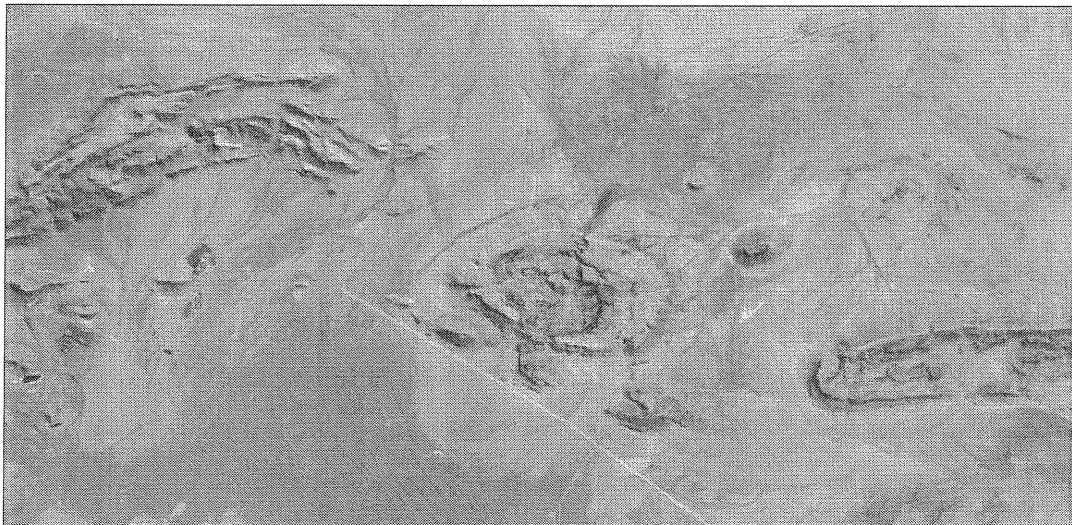
Much of the northern and western ridge of the Gamsberg was found to have extremely minimal archaeological traces, namely occasional isolated flakes.

The Kloof areas, settings of high energy run off during heavier rains, were found to be largely devoid of artefacts.

But significant finds were made at five locales on the inselberg's northern rim and within the Gamsberg basin. These were plotted and described.

Site 1

On one portion of the northern ridge, there is a Middle Stone Age workshop site of high regional significance. It had been identified previously by Deacon (1995). This site was quarried, moreover, for the making of a landing strip on the top of Gamsberg, so that artefacts are now to be found along the length of the said landing strip. The *in situ* occurrence is estimated to extend over an area of >150 x 50m, and was revealed in a scraped section to have a depth of at least 100 mm in at least that part of the site. The significance of the site, which is clearly centred on a favoured raw material source, is discussed below.



GoogleEarth image of Gamsberg (centre) relative to the Aggeneys and Namies ranges (to the west and east respectively)

Site 2

Within the Gamsberg basin several sites were noted, almost all of Pleistocene age. The first of these (Site 2) is an Acheulean (Earlier Stone Age) workshop site. Like the Middle Stone Age site on the Gamsberg rim, it is focussed on what was apparently a favoured raw material source outcropping at that point.



The positions of Sites 1-5. A major factor in the clustering of sites at the western end is undoubtedly the fairly localised occurrence of desired raw materials for stone tools.

Site 3

In a similar setting as, and to the south east of, Site 2, a further Acheulean workshop site was located, this time centred on a slightly different quality of quartzite raw material. At both sites 2 and 3 the surface spread of knapped stone is strewn from a flattish area in a slight saddle, and down either side of it over a distance of 100 – 200 m. There was no indication of any depth of deposit at the top, but there may well be some build up of material on the slope.

The significance of sites 2 and 3 is discussed below.

Site cluster 4, valley bottom

Further down in the basin, along the stream courses, are scatters of varying but generally low density of Middle Stone Age and Acheulean material, sometimes mixed, as may be

expected in such a setting. These occurrences, designated for convenience as “Site cluster 4”, were possibly the locales where people were living, or practising subsistence-related activities – as opposed to the workshop sites which are focused on places where particular raw materials occur. Erosion clearly accounts for part of their distribution as well. Initial impressions suggested that some of the Acheulean material next to stream courses could be different in character from that noted in the workshop sites, but only detailed analyses can establish whether or not this is the case.

Site 5

Site 5 is a small cave on the northern side of the basin . It was expected that there might have been some evidence of use by hunter-gatherers of the Later Stone Age. There was, however, almost no trace of archaeological material except for a single quartz flake. The cave had been disturbed by previous mining-related activity. A small test trench is to be recommended to check for material within the deposit, given that “Bushman” are known to have used caves in this region (Dunn 1931: 25).

Additional survey required in 2009

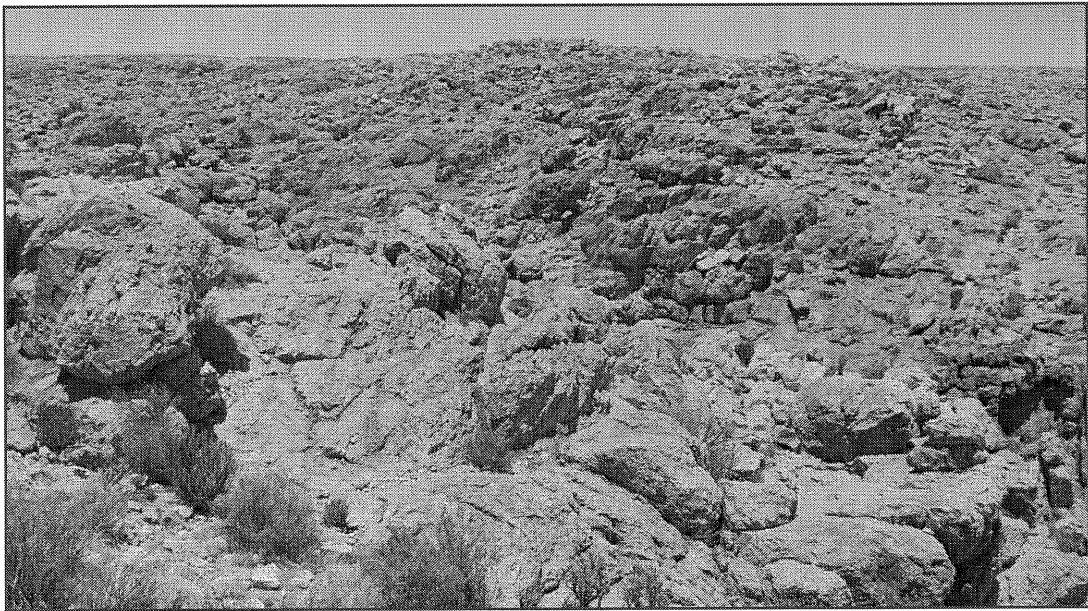
The inclusion of the eastern portion of Gamsberg in a revised mining proposal meant that further work was required on the broader eastern rim of the inselberg and its inner slope, as well as within the kloof that drains the basin to the north.

4. OBSERVATIONS MADE SINCE 2000

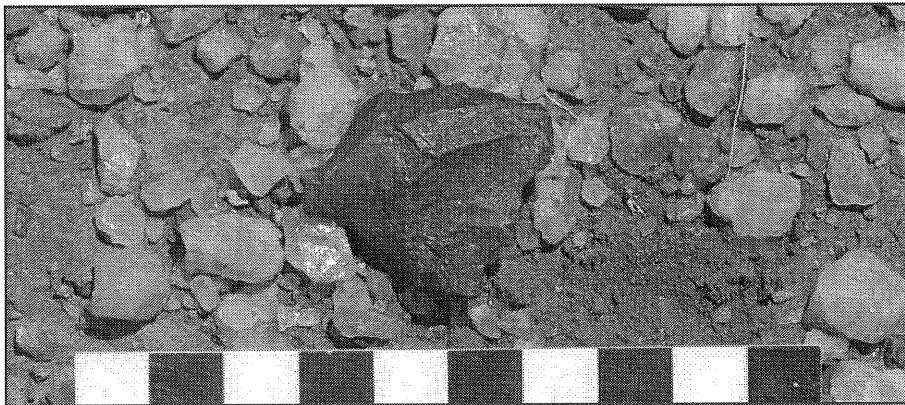
In addition to the main sites previously recorded on the inselberg and in the basin, which were revisited, the following areas were systematically surveyed:

4.1 Eastern inselberg (2009)

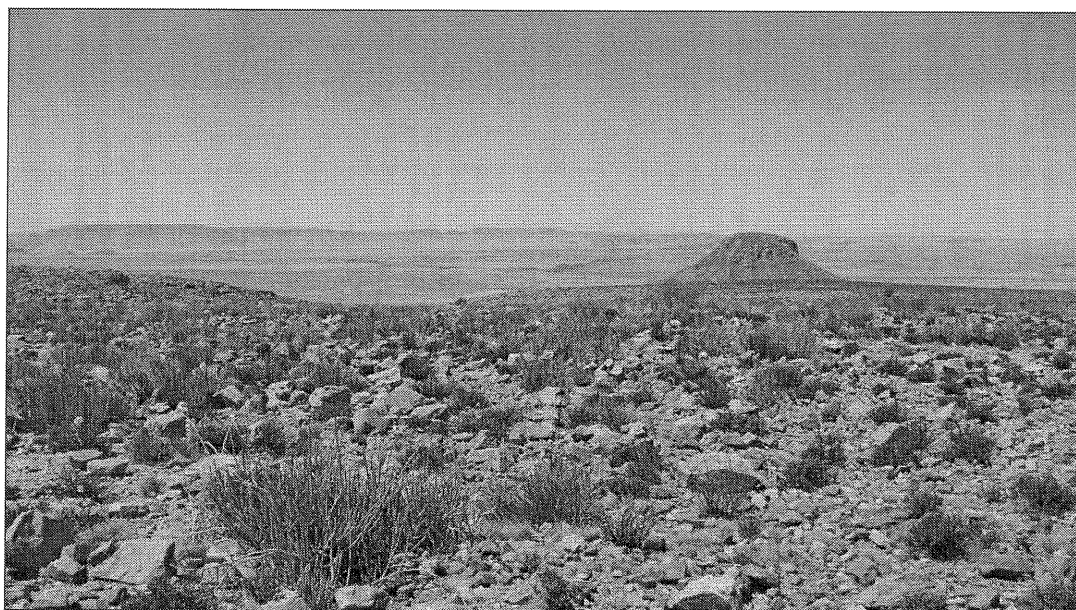
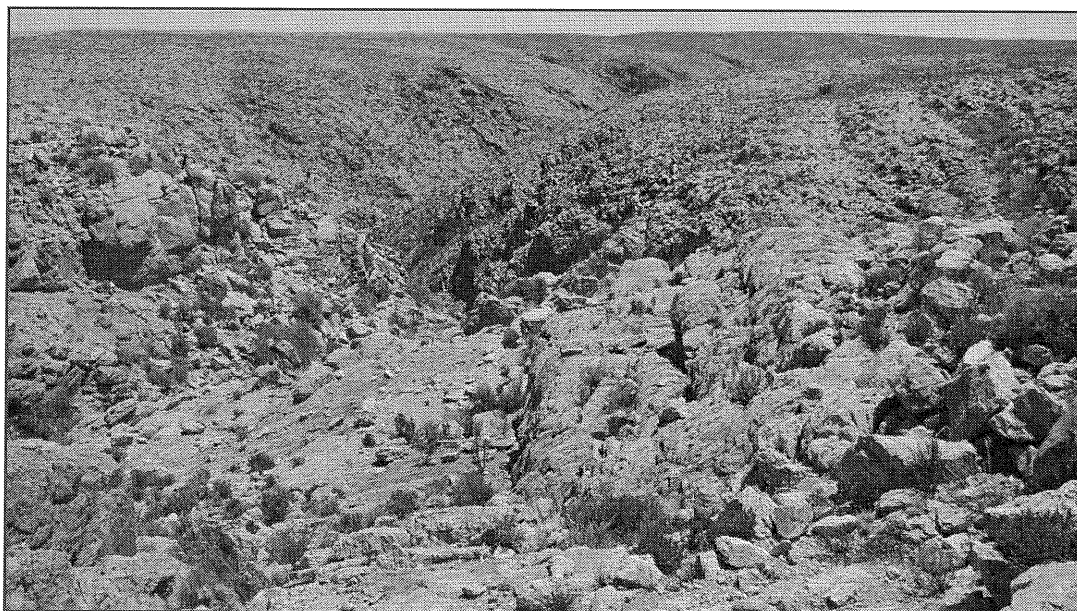
Attention was focused on several parts of the broad eastern rim and within valleys and kloofs sloping eastwards off the Gamsberg and westwards into the basin. On the whole the terrain is extremely rocky, often with minimal or no topsoil, making it a hostile environment for preservation of archaeological traces, and indeed for human occupation in the first instance.



One flat and slightly less rocky locale at $29^{\circ}15'24''\text{S}$ $18^{\circ}59'35''\text{E}$ yielded an extremely low density of probably Middle Stone Age artefacts (up to 20 m apart from one another).



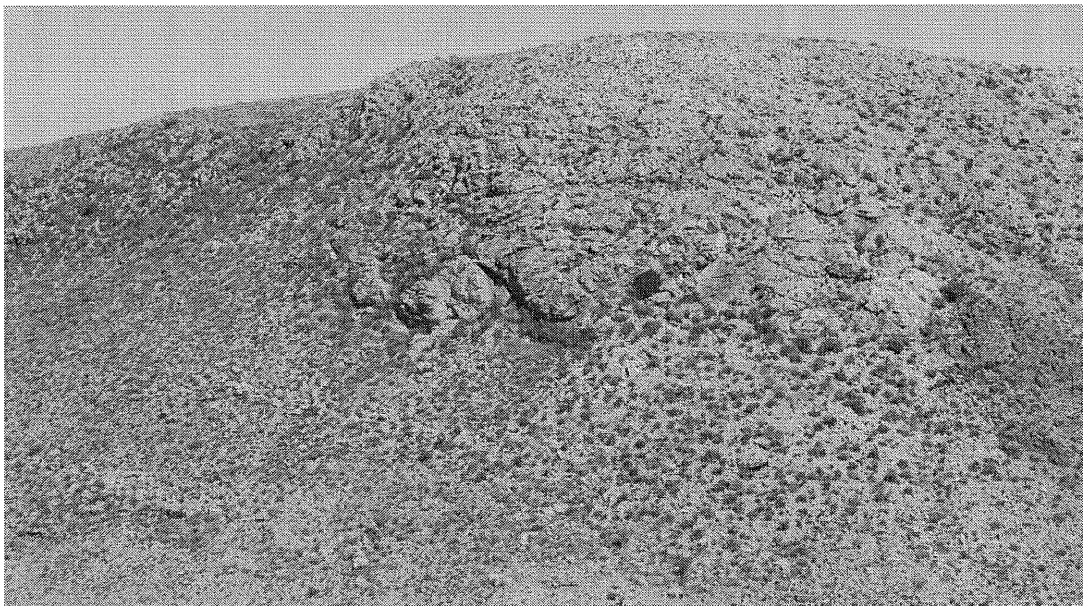
In one of the valleys sloping inwards towards the basin small shelters, for instance at 29°14'29"S 18°59'31"E (which in other settings in the region would generally be expected to stand a good chance of containing some evidence of human activity) were found to be completely devoid of any cultural material whatsoever.



4.2 Within the basin and in the kloof (2009)

Possible shelters were examined against the eastern rim and on the northern side of the kloof entrance (within the basin). It was anticipated that if there was any Later Stone Age occupation within the Gamsberg basin, these were amongst the most likely places where stone tool scatters in driplines or on a shelter talus might be found, or where finger paintings might feature on shelter walls.

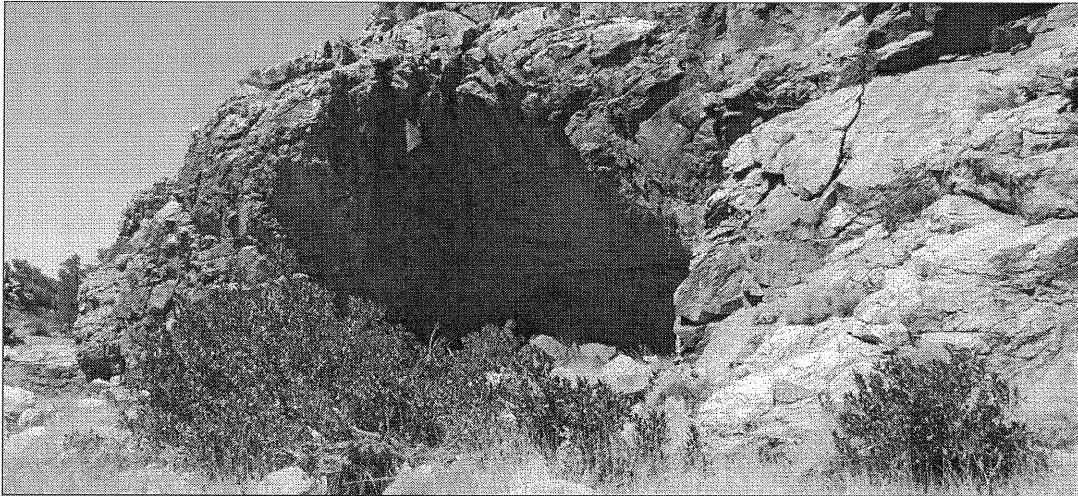
None were found, however, at what were deemed the most promising locales, at $29^{\circ}14'56''\text{S } 18^{\circ}59'12''\text{E}$, $29^{\circ}14'49''\text{S } 18^{\circ}58'27''\text{E}$, and $29^{\circ}14'45''\text{S } 18^{\circ}58'31''\text{E}$.



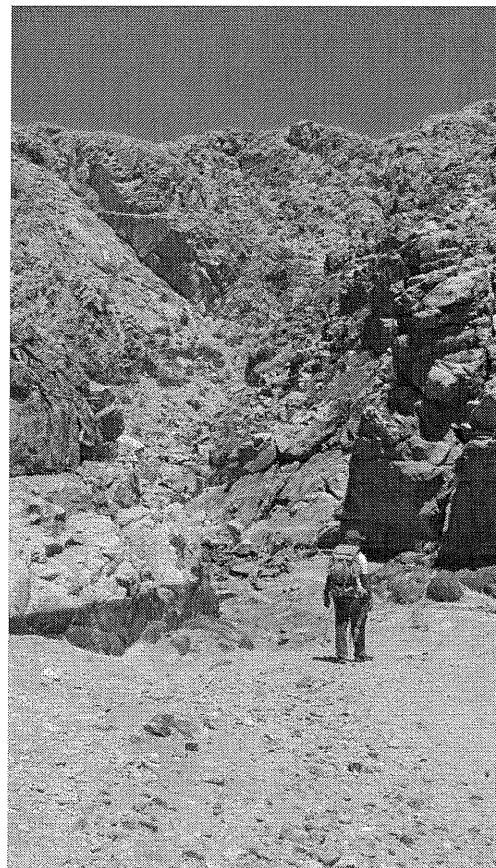
Shelters near the entrance to the kloof – devoid of archaeological traces

The kloof is in many places quite narrow and clearly a zone of high energy water flow at times of heavy rain, so that any traces of past human activity along its banks are likely to have been swept away. Near its northern exit point there is a large overhang at $29^{\circ}13'48''\text{S } 18^{\circ}58'46''\text{E}$ with possible archaeological deposit (it would be necessary to dig a test trench to confirm this, however). Additionally there appears to be a rather faded single finger painting on the wall of the shelter. But none of the features is clear enough

to state definitively that this is an archaeological site. In any event, it seems unlikely that the mine would have a major impact at this point.



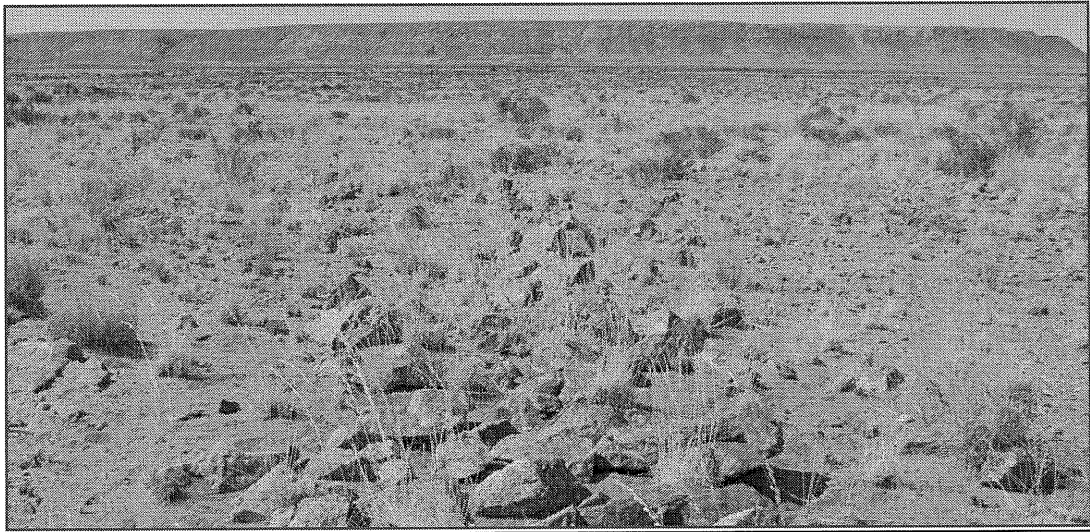
Faint trace of finger-painted ochre?



Narrow kloof with high-energy erosion

4.3 Feature on plain north of main road (2009)

The feature reported by the botanist Philip Desmet was visited and found to be a mid-twentieth century mining prospecting site on a low ridge where bedrock outcrops. Alignments of stone appeared to indicate where drilling machinery had been positioned. A cement capping evidently covering a drilling point at $29^{\circ}10'56.9''\text{S}$ $18^{\circ}56'27.4''\text{E}$ was coded "2293 / 54". Bottle glass and wire in the vicinity probably relate to this event. A small quantity of ostrich eggshell fragments is possibly indicative of a Later Stone Age context at the ridge but no stone tools or any other artefacts were seen.



Drilling site north of Gamsberg



4.4 Further localities (2001)

Three sites were investigated in 2001 after being located outside areas of then anticipated mining impact (hence not covered by the survey in 1999-2000) by Mr Lionel Jonck (Morris 2001). For present purposes these are given a separate numbering series, Sites B1-3, with mention of a further site somewhat west of the Gamsberg (reported previously under the name Aggenneys – Morris 2000a), here designated Site C1.

Site B1.

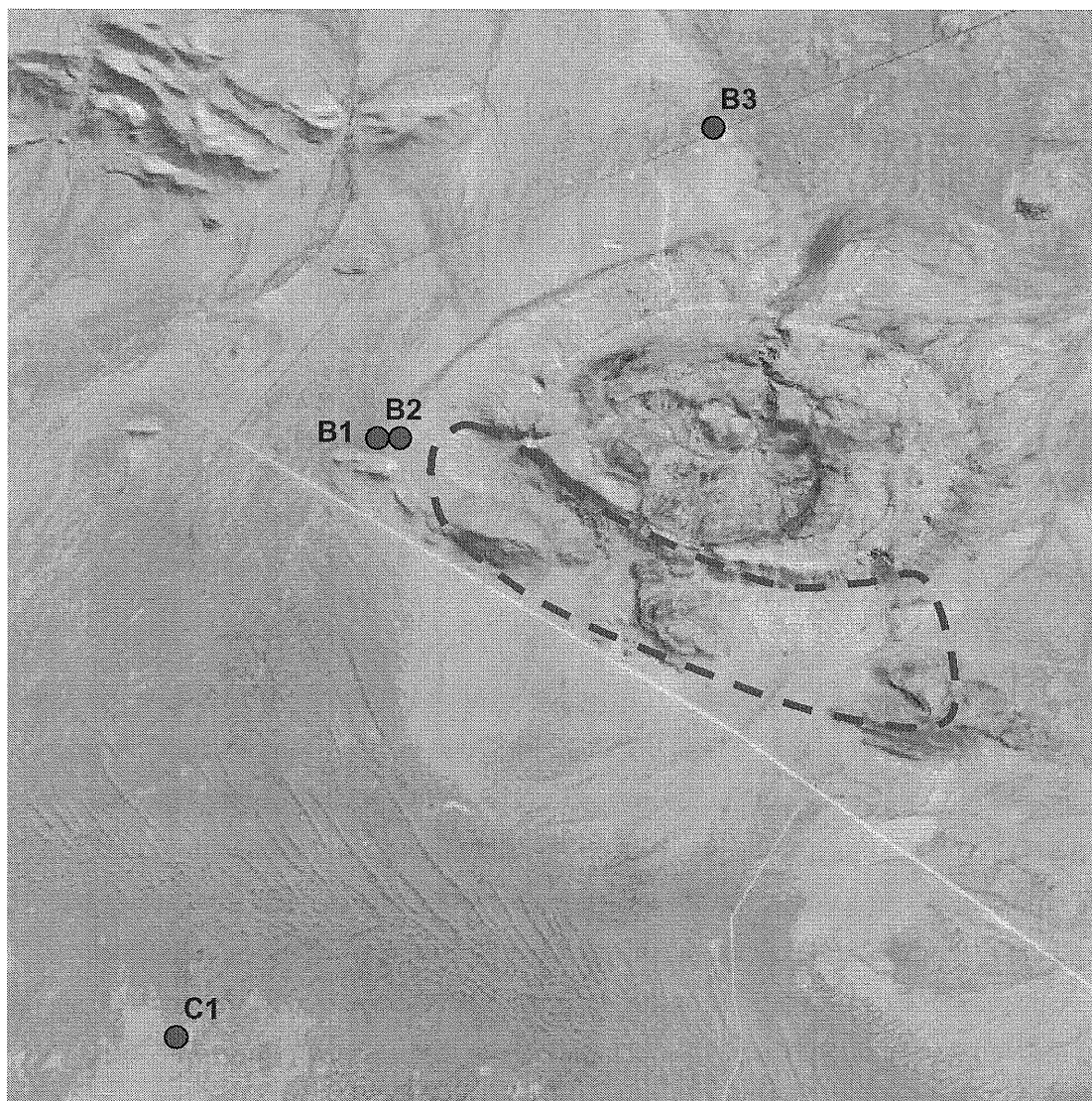
A possible grave site at 29°14'55"S 18°54'27"E on the lower slope of a dune flanking a dry watercourse north west of the Gamsberg, consisting of two small mounds of stone (diameter 0.5 m), two disturbed mounds of stone and a patch of somewhat less concentrated stones. It could not be stated with certainty that these were graves but if they are they do not reflect colonial/missionary-influenced rectangular grave form. Broken bottle glass was the only artefactual material in the vicinity, not necessarily associated (Morris 2001).

Site B2.

A surface scatter of Ceramic Later Stone Age material at 29°14'55"S 18°54'57"E on a flat sandy area a few hundred metres up the dry watercourse from the alleged graves mentioned above. Artefacts include fragments of ostrich eggshell, pottery (including decorated sherds and a lug fragment), stone tools made on quartz and river-rounded pebbles. In addition there is bottle glass and porcelain. Bone is preserved in places. The assemblage is reminiscent of that at Aggenneys (Morris 2000a) and is consistent with late herder sites in the region, with an over-printing of proto-colonial traces. There is a stone cairn similar to that noted at the alleged grave Site B1, mentioned above.

The site is of singular importance as it reflects sub-recent Later Stone Age activity in the area, not seen within the Gamsberg itself. It appears that people of this period were

exploiting resources mainly on the outer edges of the inselberg and not on or within the mountain. It is possible that the site relates somehow to the period of genocide against the San in the area, particularly in view of the co-occurrence of colonial era artefacts.



Significant sites (B1-3, C1) beyond the areas of anticipated mining impact. The dashed line indicates the possible location of the massacre site referred to by Dunn in 1872 and in Burger's 1986 place name study.

Site B3.

This site is also outside of areas originally indicated for potential mining impacts, situated at 29°11'59"S 18°58'51"E, just north of the national road Aggeneys to Pofadder and approximately opposite the Gamsberg kloof opening. Dome-shaped rock outcrops in a sea of sand define a feature that might have afforded some shelter from wind and a place where water probably collected after rain. A fair abundance of Ceramic Later Stone Age material was found there – pottery, stone tools and ostrich eggshell, as well as some glass. It is therefore similar to Site B2, above, and, like the Aggeneys site, Site C1 (Morris 2000a and see below), it has 'boat-shaped' grinding grooves in the outcropping bedrock. These sites probably represent repeated short-duration encampments by transhumant herders or hunter-gatherers with sheep and pottery, probably mainly in the last millennium (transhumance being the seasonal migration of livestock and the people who tend them).

Site C1.

This was an important comparative observation made at a Ceramic LSA site on the farm Aggeneys, at about 29°19'55"S 18°53'21"E, recorded in 1999 (Morris 2000a), west of the Koa Valley dunes (south of the national road Pofadder to Springbok and west of the Loop 10 road). Thin, grit-tempered pottery, typical of ceramics linked with Cape Coast and Orange River herders, was found along with stone artefacts made from quartz and flaked river pebbles. There was a fair quantity of ostrich eggshell fragments. Closely analogous material was located on the sandy flanks of a non-perennial watercourse on the Koa Valley side of the Black Mountain inselberg to the north west (Morris 2000b). 'Boat-shaped' grinding grooves were noted at various points on granite outcrops at the Aggeneys site. These outcrops formed hollows where water collects, turning this into something of a seasonal oasis in a parched region – for hunter-gatherers and, more especially (in this instance) for herders exploiting grazing away from the Orange River. The debris on the site could reflect an accumulation from return visits by the latter people, perhaps in the last several centuries prior to or overlapping colonial encroachment. An

overprinting of porcelain fragments shows that either herders themselves in trading contact with frontiersmen (Boers/Bastaards) or those frontiersmen themselves used the site subsequently.

5. DISCUSSION

Observations made at, and in connection, with Gamsberg are categorised here by age and discussed under the headings: Most recent traces; Colonial frontier traces; Later Stone Age traces; Middle Stone Age traces; and Earlier Stone Age traces.

5.1 Most recent traces

The most recent remains of an archaeological nature at Gamsberg are the traces of previous mining/prospecting activity in the twentieth century. They include a prospectors' or surveyors' camp-site half way up the inside of the western rim (with circular clearings, perhaps for bell-tents?), where corned beef tins (*Damara Meat*, Windhoek, with metric measures, would tally with a date of circa 1971 when geologists were identifying rocks of gossan type at Gamsberg). Remains of various structures in and around the inselberg are linked to late twentieth century mining-related activity, and include water drainage features, prospecting drilling sites, road-ways and a landing strip.

Note: While "archaeological" is taken in this instance to mean literally "material traces of past human activity", and thus including the most recent past, the remains referred to here do not qualify as "archaeological" in terms of the NHRA of 1999. Those remains would potentially be protected as built structures (when they become 60 or more years old) or as part of an intangible heritage landscape. While some of these sites/features have been recorded by way of photographs and location data, none is considered to be of presently major significance from a heritage perspective.

5.2 Colonial frontier traces

From the colonial frontier era of the eighteenth and nineteenth centuries, written records include the travelogues of George Thompson (1827) and E.J. Dunn (1931, Robinson 1978) who visited the area in 1824 and 1872 respectively. Their observations (and see Penn 2005) shed some light on the local history of the nineteenth century. Place names were coming to be fixed in the colonial frontier period and these capture vestiges of indigenous sensibilities.

A much more prominent appreciation now exists concerning the history of genocide against the Bushmen in this area (Anthing 1863), with strong indications that a kloof on the south side of Gamsberg was one of the massacre sites, referred to by Dunn in 1872 (Robinson 1978), by Burger (1986) and, more obliquely, by Anthing (1863; Jose Manuel de Prada-Samper pers. comm. 2009).

Since some of the specific evidence about this episode was coming to light only during and after the field visit in October/November 2009, it would be important to revisit the area to try to substantiate clues with respect to a particular kloof on the south side of the inselberg.

A call has already been made for massacre sites to be identified on the ground and declared as Provincial Heritage Sites (e.g. by the historian Dr Jose de Prada-Samper in discussion with staff of the Northern Cape Struggle History Project and Ngwao Bošwa ya Kapa Bokone – the Provincial Heritage Resources Authority). This clearly could have an influence on plans with respect to mining at Gamsberg. (One comment received was that “mining here would be like mining Auschwitz”). Such sites could ultimately form part of a /Xam and Khomani Heartland World Heritage Site, already on South Africa’s Tentative List, although the main centre for the /Xam is likely to be further to the south east in the area between Kenhardt and Carnarvon.

Claims that archaeological traces relating to these incidents had been found within the Gamsberg basin (Dicey 2005:166-7) could not be substantiated (William Dicey pers.comm. – who uses an image from the rim of Gamsberg as the cover picture for his book, *Borderline*), but material which could well be relevant includes the Later Stone Age sites with ceramics and porcelain discussed in the next section. Some of these latter sites are close to the inselberg, although in 2000/2001 they fell outside of the areas of anticipated mining impact.

5.3 Later Stone Age (LSA) traces

The records of the early travellers are of value for interpreting the final Later Stone Age traces in the area. On the face of it, it was something of a surprise that so little evidence of a LSA presence was to be found at Gamsberg, not least because Late Holocene LSA sites were the predominant archaeological signature noted in albeit limited surveys elsewhere in the Aggeneys-Poafadder region.

The considerable “background noise” of massively preponderant small nodules of white quartz strewn over most the surfaces surveyed, could have hampered the identification of LSA sites, as local assemblages of the period are dominated by stone artefacts made from such nodules. But known sites in the vicinity (documented at Aggeneys and Black Mountain) also invariably have lithics made from exotic fine-grained river pebbles (no artefacts on this raw material noted on the Gamsberg inselberg or in the basin). Moreover, fragments of ostrich eggshell from broken water flasks are usually present (none found on Gamsberg inselberg, only a few on a dune immediately west of the inselberg – but see Site B2 and B3 as well as C1). Most of the known LSA sites in the region also have pottery. The absence of these additional features in areas examined on the inselberg and in the basin suggests that if there was a LSA presence within the project area it was so ephemeral as to leave minimal traces in the archaeological record.

The sites B2 and B3 as well as C1, summarised above (section 4.4), show that late LSA inhabitants of the area indeed preferentially occupied other parts of the landscape, namely

dune areas and alongside certain features including outcrops of bedrock where water collects and might remain for a time in hollows after rains. Two of these sites have grinding grooves; and they all have stone artefacts, fine grit-tempered pottery and ostrich eggshell fragments. Another common feature of the sites is colonial era glass and porcelain, representing either interaction by LSA people with colonial farmers or the so-called Bastards, or use of the sites by these frontiersmen themselves, or both.

Beaumont *et al.* (1995) have shown, with reference to the LSA, that “virtually all the Bushmanland sites so far located appear to be ephemeral occupations by small groups in the hinterland on both sides of the [Orange] river” (1995:263). This was in sharp contrast to the substantial herder encampments along the Orange River floodplain itself, which reflected the “much higher productivity and carrying capacity of these bottom lands.” “Given choice,” they add, “the optimal exploitation zone for foragers would have been the Orange River.” The advent of herders in the Orange River Basin, Beaumont *et al.* argue, led to competition over resources and ultimately to marginalisation of hunter-gatherers, some of whom then occupied Bushmanland, probably mainly in the last millennium, and focused their foraging activities on the limited number of water sources in the region. “Surveys of large areas away from [such water sources] have failed to yield any signs of human occupation, except around the granite inselsberg extruding above the peneplain, ... the red dunes which produced clean sand for sleeping, or around the seasonal pans” (Beaumont *et al.* 1995:264). It is clear that, possibly following good rains, herders themselves moved into the hinterland (the Aggeneys, C1, site may reflect this archaeologically). A further process attested by Thompson (1824) for herder groups settled at the stronger springs such as Pella, is that such groups will have dispersed during periods of drought. At such times competition between groups over resources, and stress within already marginalised hunter-gatherer society, must have intensified.

The ‘Bushmen’ ultimately exterminated at sites such as Gamsberg would have been probably the last stone tool makers and the last representatives of the Later Stone Age in this part of South Africa.

5.4 Middle Stone Age (MSA) traces

The extraordinarily rich MSA workshop site, Site 1, at the top of the northern rim of the Gamsberg inselberg, is thus far a regionally exceptional feature. What seems certain is that the site was focused on a form of raw material, gossan, apparently favoured locally in MSA times. The surrounding plains are strewn predominantly with gneiss and ubiquitous small surface nodules of quartz. In such an environment, something of a premium must have been placed in those rocks with good or suitable flaking qualities, and this no doubt accounts for the extensive use of this localised Gamsberg source. Artefacts from here were carried away at least as far as the Gamsberg basin, and regional surveys may well show a wider distribution.

The significance of the site can be gauged in part from the known distribution of MSA sites at a regional scale. Beaumont *et al.* have shown that “substantial MSA sites are uncommon in Bushmanland” (1995:241): and those that have been documented thus far have generally yielded only small samples (Morris & Beaumont 1991; Smith 1995).

It has been suggested that “the relatively few [sites] that have been discovered [in Bushmanland] appear to be largely confined to the MSA3 or late MSA1 phases of that technocomplex” (Beaumont *et al.* 1995:241). Volman’s (1984) scheme places the MSA1 in Marine Isotope Stage 6 (cold with warm oscillations, ending at 128 ka BP), the MSA3 in Stage 5a-3 (late Last Interglacial through Last Glacial, cold with warm oscillations, c. 82-32 ka BP).

Examination of the unusually high density of artefacts at Gamsberg Site 1 could shed new light on the later Pleistocene occupation of the western interior of South Africa. Whether or not it would be possible to resolve the palaeoenvironmental context of this Gamsberg occupation is uncertain. Two scenarios are possible: that glacial conditions resulted in a higher incidence of winter rainfall, further inland than at present, to support increased intensity of human occupation (MSA1 or MSA3) or that warmer than present

Last Interglacial conditions resulted in a marked westward shift of summer rainfall, to support a generally higher biomass and intensity of human occupation (MSA2).

A preliminary look at a small sample of the material from Gamsberg Site 1 shows the presence of flake blades, un-retouched points and minimal retouch as a whole. There is some indication of butt reduction, regarded as evidence for hafting. These features point, very tentatively, to either MSA1 or, perhaps more strongly, MSA2 ascription, as characterised by Volman (1984). But what Volman earlier called “Early MSA” (MSA1, MSA2) and “Late MSA” (MSA3) are not readily distinguishable on the basis of their artefacts alone (Volman 1981). In terms of likely mining impacts, the significance of the site is high (see section 6 & tables 1-3, below, on issues of significance) and mitigation measures previously recommended are considered appropriate (Morris 2000a).

5.5. Earlier Stone Age (ESA) traces

Gamsberg Sites 2 and 3 are ESA Acheulean workshop sites that are centred on outcropping raw material on the western side of the Gamsberg basin. These are amongst the very few known Acheuland sites in Bushmanland, and for this reason alone they are of high regional significance.

Beaumont *et al.* (1995:240-1) note a widespread low density stone artefact scatter of Pleistocene age across areas of Bushmanland to the south east, where raw materials mainly quartzite cobbles, were derived from the Dwyka till. Systematic collections of this material made at Olyvenkolk, south west of Kenhardt and Maans Pannen, east of Gamoep, could be separated out by abrasion state into a fresh component of MSA with prepared cores, blades and points, and a large aggregate of moderately to heavily weathered ESA. The latter included Victoria West cores on dolerite, long blades, and a very low incidence of handaxes and cleavers. The Middle (and perhaps in some instances Lower) Pleistocene occupation of the region that these artefacts reflect must have occurred at times when the environment was more hospitable than today. This is suggested by the known greater reliance of people in Acheulean times on quite restricted

ecological ranges, with proximity to water being a recurrent factor in the distribution of sites. This must have been the case at Gamsberg, where clearly another draw-card, and undoubtedly the *raison d'être* for Sites 2 and 3, was the availability of suitable raw material for stone tool manufacture.

The artefacts found at these two Gamsberg sites include handaxes and Victoria West cores. The distribution of the rather specialised Victoria West technique of tool production in the Acheulean is known to be relatively restricted to the Karoo, western Free State, Transvaal and part of the Northern Cape Province – in short, a certain geographical spread within the interior of the subcontinent (Sampson 1974, Volman 1984). The method is not in evidence in the southern Cape; nor is it found north of the Limpopo. However, writing in the early 1970s, Sampson noted that “nothing is yet known of the (Acheulean) typology of the western and eastern regions of the subcontinent”(Sampson 1974:121), the western-most known occurrence of Victoria West then being the vast site of Nakop near the Namibian border (Brain & Mason 1955;Sampson 1974). The evidence from Gamsberg has the potential to shed important light on this question, and for now at least extends the known distribution of the Victoria West technique yet further westwards.

Current efforts with cosmogenic nuclide burial dating of a sequence of the Acheulean which includes Victoria West cores at Canteen Kopje at Barkly West may help position these industries in time (Gibbon, Leader & Kuman 2009). ESA and MSA material was noted in a low density scatter alongside the water courses at the bottom of the Gamsberg basin (Site cluster 4). In the absence of more detailed investigation, it was not clear how the Acheulean component, in particular, relates to the workshop sites 2 and 3.

6. SIGNIFICANCE

6.1 Criteria to be used for archaeological significance assessment

In addition to guidelines provided by the National Heritage Resources Act, archaeological criteria for use in assessing relative significance of archaeological resources have been developed (based on Deacon and Whitelaw 1997) and found to be suitable in Northern Cape settings (Morris 2000a).

Estimating site potential

Table 1 is a classification of landforms and visible archaeological traces for estimating the potential for archaeological sites (after J. Deacon and National Monuments Council). Type 3 sites tend to be those with higher archaeological potential. There are notable exceptions, such as the renowned rock art site Driekopseiland, near Kimberley, which is on landform L1 Type 1. Generally, moreover, the older a site the poorer the preservation. Estimation of potential, in the light of such variables, thus requires some interpretation.

Assessing site value by attribute

The second matrix (Table 2) is adapted from Whitelaw (1997), who developed an approach for selecting sites meriting heritage recognition status in KwaZulu-Natal. It is a means of judging a site's archaeological value by ranking the relative strengths of a range of attributes. While aspects of this matrix remain qualitative, attribute assessment is a good indicator of the general archaeological significance of a site, with Type 3 attributes being those of highest significance.

Table 1. Classification of landforms and visible archaeological traces for estimating the potential for archaeological sites (after J. Deacon, National Monuments Council).

Class	Landform	Type 1	Type 2	Type 3
L1	Rocky surface	Bedrock exposed	Some soil patches	Sandy/grassy patches
L2	Ploughed land	Far from water	In floodplain	On old river terrace
L3	Sandy ground, inland	Far from water	In floodplain or near feature such as hill	On old river terrace
L4	Sandy ground, coastal	>1 km from sea	Inland of dune cordon	Near rocky shore
L5	Water-logged deposit	Heavily vegetated	Running water	Sedimentary basin
L6	Developed urban	Heavily built-up with no known record of early settlement	Known early settlement, but buildings have basements	Buildings without extensive basements over known historical sites
L7	Lime/dolomite	>5 myrs	<5000 yrs	Between 5000 yrs and 5 myrs
L8	Rock shelter	Rocky floor	Sloping floor or small area	Flat floor, high ceiling
Class	Archaeo-logical traces	Type 1	Type 2	Type 3
A1	Area previously excavated	Little deposit remaining	More than half deposit remaining	High profile site
A2	Shell or bones visible	Dispersed scatter	Deposit <0.5 m thick	Deposit >0.5 m thick; shell and bone dense
A3	Stone artefacts or stone walling or other feature visible	Dispersed scatter	Deposit <0.5 m thick	Deposit >0.5 m thick

Table 2. Site attributes and value assessment (adapted from Whitelaw 1997)

Class	Attribute	Type 1	Type 2	Type 3
1	Length of sequence/context	No sequence Poor context Dispersed distribution	Limited sequence	Long sequence Favourable context High density of arte/ecofacts
2	Presence of exceptional items (incl regional rarity)	Absent	Present	Major element
3	Organic preservation	Absent	Present	Major element
4	Potential for future archaeological investigation	Low	Medium	High
5	Potential for public display	Low	Medium	High
6	Aesthetic appeal	Low	Medium	High
7	Potential for implementation of a long-term management plan	Low	Medium	High

Table 3 Summary of salient characteristics of the Gamsberg sites

Site	Landform	Archaeological traces	Attribute types				Comments
			1	2	3	4	
1	L1 Type 2	A3 Type 2 (Depth of lithic accumulation unknown)	T3	... T3 T1 T3	High density of artefacts High regional rarity No organics High research potential as rare regional MSA site
2	L1 Type 2	A3 Type 1 (May occur in sediment down-slope)	T3	... T3 T1 T3	Fairly high density of artefacts High regional rarity No organics High research potential as rare regional ESA site
3	L1 Type 2	A3 Type 1 (May occur in sediment down-slope)	T3	... T3 T1 T3	Fairly high density of artefacts High regional rarity No organics High research potential as rare regional ESA site
4	L3 Type 3	A3 Type 1 (Occurs in sediment in places)	T1	... T2 T1 T2	Dispersed, poor context Limited, subject to investigation No organics Medium, subject to investigation
5	L8 Type 3 (Partially disturbed)	A3 Type 2 (Subject to further investigation)	T1	... T1 T2 T1	Prob limited sequence, if any Low regional rarity Poss organic preservation Low, subject to investigation
B1	L3 Type 2	A3 Type 1	T1	... T2 T1 T1	Single period Uncertain None Low, subject to investigation
B2	L3 Type 2	A3 Type 2	T1	... T2 T2 T2	Probably limited sequence LSA poss regionally signif OES and fragmented bone Medium
B3	L3 Type 2	A3 Type 2	T1	... T2 T2 T1	Probably limited sequence LSA poss regionally signif OES and fragmented bone Medium
C1	L3 Type 2	A3 Type 2	T1	... T2 T2 T2	Probably limited sequence LSA poss regionally signif OES and fragmented bone Medium

7. RECOMMENDATIONS

Preliminary comments are made here subject to a formal impact assessment being carried out once a final mine design is agreed upon and made available.

7.1 Salvage and further investigation

In some of the areas in question the sites (particularly Sites 1-5) would probably be destroyed by the proposed mining. In others the identified sites may or would be outside of areas of mining impact. It was previously recommended that mitigation by way of salvage be carried out at least in the case of Sites 1-5 (SAHRA having issued permits at the time for this to take place). Site C1 is likely to be safe from any negative impact. The possible impacts of mining activity on Sites B1, B2 and B3 need to be investigated further, and it is possible that they need to be salvaged. Decisions on this remain subject to a formal impact assessment once the final mine design is available.

Physical salvage of sites would need to take place well before the construction and operational phases. Detailed recommendations and proposals for mitigation would need to be elaborated once the final mine design has been formulated and the full impact assessment carried out.

Further investigation of the possible massacre site is recommended in light of new clues (November 2009) about the location and nature of it. It is possible that a call might be made for the preservation of such a site and its conservation as a Provincial Heritage Site.

7.2 Possible sub-surface features

It is important to note that in areas where impacts are estimated to be low after the recommended mitigation, subsurface archaeological materials may still come to light during construction and/or operational phases. Such materials could include, inter alia, human burials (not all precolonial graves were marked with cairns and thus there may not

be surface indications of their existence); subsurface strata containing significance concentrations of stone artefacts not visible at the surface; or a cache of ostrich eggshell water flasks. In the event of any significant feature such as the above being uncovered it should be reported immediately to SAHRA/the PHRA and an archaeologist for evaluation and mitigation if necessary.

7.3 Curation and display

It was recommended previously that one of the mitigation measures would be the creation of a museum or resource centre for Gamsberg. This recommendation is endorsed for future consideration in the fill impact assessment, particularly in view of the emerging status of Gamsberg in relation to the nineteenth century demise of the 'Bushmen' of this region.

Materials salvaged would be analysed, marked and stored at the McGregor Museum in Kimberley (as the accredited repository for archaeological materials of the Northern Cape), with all resultant records, illustrations and reports being archived as part of the collection in accordance with SAHRA guidelines and museum policy, inter alia for long-term researcher access. A selection of typical examples of artefacts could be made available for exhibition in any eventual museum/resource centre at Gamsberg, together with relevant reports/publications, posters, and so on, with materials also being generated for use in local schools.

8. ACKNOWLEDGEMENTS

I thank Mr Petrus Wilson (Wildebeest Kuil Rock Art Centre) who assisted in the field and Mr Vincent Dinku (McGregor Museum Archaeology Department) who assisted with the compilation of the report. I acknowledge Dr Jose Manuel de Prada-Samper for discussions on Anthing's report and the genocide against the Bushmen, and Mr William Dicey concerning his visit to Gamsberg. At Aggeneys, Ms Chrizette Neethling and Mr

Koos Beukes helped with various aspects of the survey including the loan of a 4x4 vehicle for driving into the Gamsberg and the arrangement of accommodation. Thanks finally to Lindsay Shand, Franciska Lake and Donald Gibson of SRK Consulting for assisting with many aspects of the work; and to Teresa Steele and Donald Gibson for useful comments on the report.

9. REFERENCES

Anthing, L. 1863. Letter to the Cape Parliament. Cape Blue Book.

Beaumont, P. B., & Morris, D. 1990. *Guide to archaeological sites in the Northern Cape*. Kimberley: McGregor Museum

Beaumont, P. B., Smith, A.B., & Vogel, J.C. 1995. Before the Einiqua: the archaeology of the frontier zone. In A. B. Smith (ed.). *Einiqualand: studies of the Orange River frontier*, Cape Town: UCT Press.

Brain, C. K., & Mason, R.J. 1955. A later African Chelles-Acheul site near Nakop, South Kalahari. *South African Archaeological Bulletin* 10: 22-25.

Burger, C.R. 1986. 'N ondersoek na die oorsprong en betekenis van plek- en plaasname in die Landdrosdistrik Namakwaland. Universiteit Stellenbos.

Deacon, J. nd. Archaeological Impact Assessment - specialist input to planning and design. Unpublished notes compiled for the National Monuments Council.

Deacon, J. 1995. Memorandum on archaeological sites at Aggeneys. Unpublished Memorandum, National Monuments Council.

Dunn, E. J. 1931. *The Bushmen*. London: Charles Griffin & Co.

- Dacey, W. 2005. *Borderline*. Cape Town: Kwela.
- Gibbon, R., Leader, G.M. & Kuman, K. 2009. Canteen Kopje – report to SAHRA.
- Ingold, T. 2000. *The perception of the environment: essays in livelihood, dwelling and skill*. London: Routledge.
- Morris, D. 1999a. Archaeological impact assessment, ‘Southern Option’, powerline ‘Schuitdrift’ to ‘Paulputs’, Pofadder District, Northern Cape. Unpublished Report to Eskom.
- Morris, D. 1999b. Archaeological impact assessment, Skuitklipkop Microwave Tower, Kenhardt District, Northern Cape. Unpublished Report to Eskom.
- Morris, D. 2000a. Gamsberg Zinc Project environmental impact assessment specialist report: archaeology.
- Morris, D. 2000b. Archaeological impact assessment, Black Mountain Mine, Aggeneys, Northern Cape. Unpublished report to Walmsley Environmental Consultants.
- Morris, D. 2000c. Archaeological specialist report: desktop assessment of possible archaeological resources along the proposed route, Helios to Aggeneys, Northern Cape. Appendix G in Eyethu Engineers CC: *Scoping report: environmental impact assessment for the proposed Aggeneys to Helios 400 kV transmission line*. Eskom Transmission Group.
- Morris, D. 2001. Gamsberg Zinc: supplementary report on archaeological resources at Gamsberg. Unpublished report for Gamsberg Zinc Project.

- Morris, D. & Beaumont, P.B. 1991. !Nawabdanas: archaeological sites at Renosterkop, Kakamas District, Northern Cape. *South African Archaeological Bulletin* 46:115-124.
- Nienaber, G.S., & Raper, P.E. 1977. *Toponymica Hottentotica*. SA Naamkundesentrum RGN Naamkudesreeks 6
- Nienaber, G.S., & Raper, P.E. 1980. *Toponymica Hottentotica*. SA Naamkundesentrum RGN Naamkudesreeks 10.
- Penn, N. 2005. *The Forgotten Frontier: Colonist and Khoisan on the Cape's Northern Frontier in the 18th Century*. Athens, Ohio and Cape Town: Ohio University Press and Double Storey Books.
- Prinsloo, H.P. 1998. Argeologiese omgewingsverslag: Pofadder en Aggeneys omgewing. For Klopfer Environmental Consultants.
- Robinson, A.M.L. (ed) 1978. *Selected articles from the Cape Monthly Magazine NS, 1870-1876*. Cape Town: Van Riebeeck Series Second Series No 9.
- Sampson, C. G. 1974. *The Stone Age archaeology of South Africa*. New York: Academic Press.
- Smith, A.B. 1995. Archaeological observations along the Orange River and its hinterland. In A. B. Smith (ed.). *Einiqualand: studies of the Orange River frontier*, Cape Town: UCT Press.
- Thompson, G. 1827. *Travels and adventures in Southern Africa*. Reprint, Cape Town: Africana Connoisseurs Press, 1962.

Volman, T.P. 1981. The Stone Age in Southern Africa. PhD dissertation, University of Chicago, Illinois.

Volman, T.P. 1984. Early prehistory of Southern Africa. In Klein, R.G. (ed) Southern African prehistory and palaeoenvironments. Rotterdam: A.A. Balkema.

Whitelaw, G. 1997. Archaeological monuments in KwaZulu-Natal: a procedure for the identification of value. *Natal Museum Journal of Humanities*. 9:99-109.

10. APPENDICES

A. PROPOSAL FOR ARCHAEOLOGICAL MITIGATION FOR GAMSBERG ZINC PROJECT (October 2000)

Comment: Should mining proceed, this proposal would need to be revisited in light of subsequent findings reviewed above.

B. PERMITS ISSUED BY SAHRA FOR MITIGATION AT GAMSBERG (November 2000)

Comment: These permits have expired and new permits would need to be obtained. SAHRA presently issues archaeological permits on behalf of Ngwao Bošwa ya Kapa Bokone (Northern Cape Heritage Authority) but this may change if Bošwa is accredited for archaeology.

C. SUPPLEMENTARY REPORT ON ARCHAEOLOGICAL RESOURCES AT GAMSBERG (January 2001)

Comment: The findings of this report were incorporated in the new report (section 4.4 above).

Proposal for archaeological mitigation for Gamsberg Zinc Project

**David Morris
McGregor Museum, Kimberley
3 October 2000**

Introduction

The Specialist Report of March 2000 made the recommendation (6.3) that:

"If mining proceeds at Gamsberg, this report proposes the salvage of three sites by way of representative samples recovered by archaeological excavation, and by way of test trenches at two further sites which the survey shows may be significant. The report additionally makes proposals concerning curation of the material recovered."

Archaeological salvage of sites

The following detail concerning archaeological salvage is given in section 6.3.1 from the Specialist Report of March 2000:

- Site 1: MSA site on northern ridge of inselberg. The report recommends excavation to recover a sample from the site which is sufficient to assess, at the least, typology and possible spatial patterning. There was no evidence of organic preservation. Artefact density is such that an assemblage of up to 30 000 pieces artefacts could well be amassed by way a relatively small excavation.
Estimated time needed for field salvage: 12 days.
- Sites 2 and 3: Two Acheulean workshop sites inside western ridge of inselberg. There appeared to be little deposit on either of these sites, so that the report recommends systematic surface collection to record the sites. At least two test trenches in each case are recommended to assess whether there is any depth of deposit containing artefacts on the lower portions of the sites.
Estimated time needed for field salvage: 12 days.
- Site cluster 4: Acheulean and MSA material in the stream courses in the bottom of the Gamsberg basin. A test trench(es) is recommended to recover and assess the nature of these accumulations relative to workshop sites on the sides of the Gamsberg basin.
Estimated time needed for field salvage: 5 days.
- Site 5: Possible ephemeral LSA occupation in small cave - with possibility of stratigraphy. A test trench is recommended to assess whether any cultural material is preserved there.
Estimated time needed for field salvage: 3 days.

Programme for archaeological salvage

Section 6.3.2 of the report stated that, if permitted by the South African Heritage Resources

Agency, it should be possible to achieve the above salvage of sites in three fieldwork sessions (a sizable expected load of excavated material would need to be transported to Kimberley for analysis and curation at the end of each session), with breakdown of fieldwork tasks as follows (see also Table 1):

- Session 1 (12 days): Excavation at Site 1.
- Session 2 (12 days): Systematic collection and excavation at Sites 2&3.
- Session 3 (8 days): Test trenches at Sites 4&5.

It is recommended that unskilled labour be recruited locally to assist with this task. Four individuals, preferably able to read and write, would be sufficient. Marking of artefacts could commence in the field.

**Table 1 (adapted from Table 98 in the Specialist Report).
Revised schedule for archaeological mitigation measures, Gamsberg.**

Stage 1		Stage 2	Stage 3
Salvage of sites: Gamsberg (See 6.3.1 - 6.3.2, page 97)		Analysis and curatorial (See 6.3.3 - 6.4, pages 98-99)	Reports, outputs (See 6.4, page 99)
Tasks	Field session 1	Analysis and description of salvaged material, Archaeology Lab, McGregor Museum, Kimberley	Generate reports, professional and popular
	Field session 2		Generate material suitable for use in local schools and/or for tourists where appropriate
	Field session 3	Curatorial tasks - marking artefacts, packaging, accessioning and shelving	Provide advice where necessary re museum/ resource centre in Gamsberg area
			Generate display brief and posters etc
Duration	Allow six weeks including three sessions of fieldwork estimated at 12, 12 and 8 days respectively	Four months including two and a half months for curatorial tasks	Twelve months or longer (concurrent with Stage 2) depending on decisions re museum/ resource centre

Provisional programme for December 2000 to January 2001

If approval for the project is granted before 11 December 2000, and given the constraints of the festive season, it is proposed to carry out a first field session lasting 11-19 December 2000. It may be possible to complete the first excavation in that period (longer hours of sunlight at that time of the year will allow for increased productivity per day).

A second field session is planned for 8-19 January, and a third session for 23-27 January 2001.

A preliminary report on the salvage of sites would be submitted to SAHRA immediately on

completion of the fieldwork, on the strength of which approval for mining is likely to be granted by SAHRA the Gamsberg Zinc Project.

Analysis and curation of salvaged material

Salvaged material would need to be analysed, marked and boxed at the McGregor Museum in Kimberley (Section 6.3.3 of the Specialist Report). A detailed final report describing the sites and the assemblages salvaged from them would be compiled. The South African Heritage Resources Agency is likely to stipulate, in any permit issued for this work, that material be housed at an institution, such as the McGregor Museum, where requisite archaeological curatorial and archival standards are met. In that case, all notes, analyses and interpretations would also be archived there.

Provision would need to be made for transportation of material from Gamsberg; for suitable packaging in transit; and for packaging and shelving in storage. Assistance would be required for analysis, marking and curation: one individual, who is literate, to complete the marking, and one individual preferably with computer experience, to assist with curatorial aspects; both to be employed in Kimberley for a period of three months.

A museum or resource centre for Gamsberg

The Specialist Report recommended (Section 6.4) that if formation of a museum/information/resource centre was approved, it is suggested that a Heritage Committee or equivalent body be formed, with project, local community and specialist representation on it, to decide on the nature of the facility and to formulate plans for its establishment.

As an interim measure, and in response to I&AP concerns, temporary exhibits by way of posters and information sheets may be prepared on the archaeology of Gamsberg, for display and distribution locally.

Permanent displays, which contain examples of the excavated material and interpretations based on the above analysis, and other relevant objects and panels, would follow in due course.

It is anticipated that such a facility would require staff. The articulation between such a facility and the project, the local community, museum authorities, tourism authorities and other interested and affected parties is an issue that would need to be decided, with draft Northern Cape Museums legislation, and the accepted minimum standards for museums in South Africa, having some bearing on the matter.

A museum or similar facility could fulfill an important role for tourism and community development in the region, both during the life of the mine and after. It is an area blessed with a number of unsung attractions, such as the historic mission settlement and cathedral at Pella, the stark and singular natural environment, and, not least, a history of human survival in a harsh landscape, through many thousands of years, some of the details of which are only now coming to light.

SAHRA

South African Heritage Resources Agency

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P.O. BOX 4637, CAPE TOWN, 8000
TEL (021) 462-4502 - FAX (021) 462-4509

OUR REF : 9/2/066/0001

YOUR REF:

ENQUIRIES: Mary Leslie, Archaeologist

DATE : 3 November 2000

Mr David Morris
McGregor Museum
P O Box 316
Kimberley
8300

Dear David

EXCAVATION PERMITS: GAMSBERG 1-5

Enclosed please find the requested permits for the Gamsberg sites. SAHRA wishes you success with your excavations, and looks forward to receiving your reports in due course.

Yours sincerely



for **INTERIM CHIEF EXECUTIVE OFFICER**

copy Regional Manager: SAHRA Northern Cape

SAHRA

South African Heritage Resources Agency

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TEL (021) 462-4502 - FAX (021) 462-4509

OUR REF : 9/2/066/0001

YOUR REF:

ENQUIRIES: Mary Leslie, Archaeologist

DATE : 3 November 2000

PERMIT No. 80/00/10/008/51

Issued under Section 35(4) of the National Heritage Resources Act, Act No. 25 of 1999. Permission is hereby given:

to: Mr D Morris,
of: the McGregor Museum, P O Box 316, Kimberley, 8300,
for: excavation at Gamsberg 5, at approximately 29.14.17S, 18.57.10E, on the farm Gams, in the Namakwaland District, Northern Cape Province.

The following conditions apply:

1. Adequate recording methods as specified in the Regulations and Guidelines pertaining to the National Heritage Resources Act must be used. Note that the position of all excavations must be marked on a plan of each site.
2. A standard site record form must be lodged with the McGregor Museum.
3. All material collected and excavated will be curated by the McGregor Museum.
4. A progress report must be submitted to SAHRA on or before 1 June 2001 and a final report is due on or before 1 December 2001. SAHRA reserves the right to withhold further permits if progress is not deemed satisfactory.
5. Reprints of all published papers, or copies of theses or reports resulting from this work must be lodged with SAHRA.
6. If a published report has not appeared within three years of the lapsing of this permit, the report required in terms of the permit will be made available to researchers on request.
7. It is the responsibility of the permit holder to obtain permission from the landowner for each visit, and conditions of access imposed by the landowner must be observed.
8. It is the responsibility of the permit holder to fill in excavations and protect sites during and after excavation to the satisfaction of SAHRA and the landowner.
9. SAHRA shall not be liable for any losses, damages or injuries to persons or properties as a result of any activities in connection with this permit.
10. SAHRA reserves the right to cancel this permit upon notice to the permit holder.

This permit is valid until 01/12/2001.

for INTERIM CHIEF EXECUTIVE OFFICER

SA HERITAGE RESOURCES AG.
SA INTERIM CHIEF EXECUTIVE OFFICER-AGENCY


Date: 3/11/2000

Place: Cape Town

SAHRA

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OUR REF : 9/2/066/0001

YOUR REF:

ENQUIRIES: Mary Leslie, Archaeologist

DATE : 3 November 2000

PERMIT No. 80/00/10/009/51

Issued under Section 35(4) of the National Heritage Resources Act, Act No. 25 of 1999. Permission is hereby given:

to: Mr D Morris,
of: the McGregor Museum, P O Box 316, Kimberley, 8300,
for: excavation & collection, at Gamsberg 3, at approximately 29.14.51S, 18.57.15E, on the farm Gams,
in the Namakwaland District, Northern Cape Province.

The following conditions apply:

1. Adequate recording methods as specified in the Regulations and Guidelines pertaining to the National Heritage Resources Act must be used. Note that the position of all excavations must be marked on a plan of each site.
2. A standard site record form must be lodged with the McGregor Museum.
3. All material collected and excavated will be curated by the McGregor Museum.
4. A progress report must be submitted to SAHRA on or before 1 June 2001 and a final report is due on or before 1 December 2001. SAHRA reserves the right to withhold further permits if progress is not deemed satisfactory.
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This permit is valid until 01/12/2001.

for INTERIM CHIEF EXECUTIVE OFFICER ... SA HERITAGE RESOURCES AGENCY ... SA. LEWIS/11/11/0001/PERSON-AGENTS/KAT

Date: 3/11/2000

Place: Cape Town

SAHRA

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OUR REF : 9/2/066/0001

YOUR REF:

ENQUIRIES: Mary Leslie, Archaeologist

DATE : 3 November 2000

PERMIT No. 80/00/10/010/51

Issued under Section 35(4) of the National Heritage Resources Act, Act No. 25 of 1999. Permission is hereby given:

to: Mr D Morris,
of: the McGregor Museum, P O Box 316, Kimberley, 8300,
for: excavation & collection, at Gamsberg Cluster 4, at approximately 29.14.36S, 18.57.22E, on the farm Gams, in the Namakwaland District, Northern Cape Province.

The following conditions apply:

1. Adequate recording methods as specified in the Regulations and Guidelines pertaining to the National Heritage Resources Act must be used. Note that the position of all excavations must be marked on a plan of each site.
2. A standard site record form must be lodged with the McGregor Museum.
3. All material collected and excavated will be curated by the McGregor Museum.
4. A progress report must be submitted to SAHRA on or before 1 June 2001 and a final report is due on or before 1 December 2001. SAHRA reserves the right to withhold further permits if progress is not deemed satisfactory.
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10. SAHRA reserves the right to cancel this permit upon notice to the permit holder.

This permit is valid until 01/12/2001.

for INTERIM CHIEF EXECUTIVE OFFICER

SA HERITAGE RESOURCES AGENCY
SA HERITAGE RESOURCES AGENTSKAP

Date: 3/11/2000

Place: Cape Town

SAHRA

South African Heritage Resources Agency

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OUR REF : 9/2/066/0001

YOUR REF:

ENQUIRIES: Mary Leslie, Archaeologist

DATE : 3 November 2000

PERMIT

No. 80/00/10/011/51

Issued under Section 35(4) of the National Heritage Resources Act, Act No. 25 of 1999. Permission is hereby given:

to: Mr D Morris,
of: the MacGregor Museum, P O Box 316, Kimberley, 8300,
for: excavation & collection at Gamsberg 2, at approximately 29.14.46S, 18.57.11E, on the farm Gams, in the Namakwaland District, Northern Cape Province.

The following conditions apply:

1. Adequate recording methods as specified in the Regulations and Guidelines pertaining to the National Heritage Resources Act must be used. Note that the position of all excavations must be marked on a plan of each site.
2. A standard site record form must be lodged with the McGregor Museum.
3. All material collected and excavated will be curated by the McGregor Museum.
4. A progress report must be submitted to SAHRA on or before 1 June 2001 and a final report is due on or before 1 December 2001. SAHRA reserves the right to withhold further permits if progress is not deemed satisfactory.
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This permit is valid until 01/12/2001.

for INTERIM CHIEF EXECUTIVE OFFICER

SA HERITAGE RESOURCES AGENCY
M. Leslie
SA HERITAGE RESOURCES AGENCY

Date: 3/11/2000

Place: Cape Town

SAHRA

South African Heritage Resources Agency

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YOUR REF:

ENQUIRIES: Mary Leslie, Archaeologist

DATE : 3 November 2000

PERMIT No. 80/00/10/012/51

Issued under Section 35(4) of the National Heritage Resources Act, Act No. 25 of 1999. Permission is hereby given:

to: Mr D Morris,
of: the McGregor Museum, P O Box 316, Kimberley, 8300,
for: excavation & collection at Gamsberg 1, at approximately 29.14.02S, 18.57.33E, on the farm Gams, in the Namakwaland District, Northern Cape Province.

The following conditions apply:

1. Adequate recording methods as specified in the Regulations and Guidelines pertaining to the National Heritage Resources Act must be used. Note that the position of all excavations must be marked on a plan of each site.
2. A standard site record form must be lodged with the McGregor Museum.
3. All material collected and excavated will be curated by the McGregor Museum.
4. A progress report must be submitted to SAHRA on or before 1 June 2001 and a final report is due on or before 1 December 2001. SAHRA reserves the right to withhold further permits if progress is not deemed satisfactory.
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This permit is valid until 01/12/2001.

for INTERIM CHIEF EXECUTIVE OFFICER

SA HERITAGE RESOURCES AGENCY
SA ERVENISHUWENON-AGENTSAP
M. Coetzee

Date: 3/11/2000

Place: Cape Town

ARCHAEOLOGICAL SPECIALIST REPORT

**GAMSBURG ZINC PROJECT:
SUPPLEMENTARY REPORT
ON ARCHAEOLOGICAL RESOURCES
AT GAMSBURG**

Prepared for
Gamsberg Zinc Project

David Morris
McGregor Museum, Kimberley
19 January 2001

Gamsberg Zinc Project
Supplementary report on archaeological resources at Gamsberg

David Morris:
McGregor Museum, Kimberley
19 January 2001

This report is supplementary to archaeological observations made at Gamsberg near Aggeneys in 1999 (Morris 2000a). It was reported that Gamsberg Zinc Project personnel at Aggeneys had found what was suspected might be graves on the mining property.

On 18 January 2001 Mr Lionel Jonck indicated the sites that he had found. These are described and assessed. Management recommendations are given.

Locality 1

Situated at 29.14.55 S; 18.54.27 E (GPS).

This site is in an area not indicated as a focus of any mining activity and which was not investigated in the baseline survey.

The site is on the lower slope of a dune feature flanking a dry watercourse north west of the Gamsberg. It consists of two small mounds of stone; two disturbed mounds; and a patch of somewhat less concentrated stones. The first two have a diameter of about 0.5 m. The only artefactual material in the vicinity was a piece of broken bottle glass.

It cannot be stated with any certainty that these represent graves; but it is a distinct possibility. If so, then their circular plan does not reflect missionary influence and the possibility follows that they may be of pre- or proto-colonial Khoisan context. An alternative interpretation relates to mounds erected to Haitisi-aibib, a mythical folk hero of the Khoekhoen who died many times and was reborn (Barnard 1992) - but it might be unusual for several such cairns to occur together.

Recommendation: Disturbance of graves should be avoided. Since this is not an area of anticipated mining impacts, it is recommended that the vicinity be indicated as sensitive, perhaps with protective fencing around the mound cluster.

Locality 2

Situated at 29.14.55 S; 18.54.57 E (GPS).

This site is a few hundred metres upstream along the dry watercourse from Locality 1 and is in a similar setting, a flat area of sand at the foot of a dune.

The site consists of a surface scatter of Ceramic Later Stone Age artefacts including fragments of ostrich eggshell water flasks, pottery (including decorated sherds and a

lug fragment), stone tools made from quartz and river-rounded pebbles, as well as fragments of bottle glass and porcelain. Bone is preserved in places. Similar to the site on Aggeneys (Morris 2000a), it is consistent with the pattern for late herder sites in the region (Morris 2000c), with an over-printing of colonial (or proto-colonial) era occupation reflected by the glass and porcelain. There is also a stone mound similar to those at Locality 1.

Recommendation: This site is not in an area expected to be impacted by mining. It is a sensitive area in terms of this archaeological resource and care must be taken that it is not disturbed. Information on it and similar sites in the area (see below) should be included in the interpretive/visitors' centre.

Locality 3

It was alleged that there were graves in the new Tailings Dam site area, but in the event it seemed that the "graves" in question were those of Locality 1, above. Mr Lionel Jonck was not aware of any possible graves in the Tailings Dam area. The area was nevertheless visited and briefly scanned to assess the likelihood of graves occurring there. LSA in the form of a few flakes and a single piece of ostrich eggshell was noted on a stone ridge at the north western part of the area. The area is considered to be of low archaeological sensitivity and no signs of graves were noted. Recommendations with respect to unexpected finds during construction (Morris 2000a) should be followed.

Locality 4

Situated at 29.11.59 S 18.58.51 E (GPS).

This site falls outside the mining property but is included here since it does shed additional light on the Later Stone Age presence in the area. It is situated immediately north of the national road approximately opposite the Gamsberg kloof opening. Dome-shaped rock outcrops in a sea of sand define a feature that might have afforded some shelter and water after rains. A fair abundance of Ceramic Later Stone Age (herder) artefacts - ostrich eggshell, pottery, lithics - was found to occur there. There is also some glass. The site is therefore similar to Locality 2, above. Additionally there are grinding grooves on the rock outcrops, such as were noted at the Aggeneys site (Morris 2000a). These sites probably represent repeated short-duration encampments by transhumant herders, probably mainly in the last millennium.

Ethnography indicates a tendency amongst Khoisan not to dwell directly at the water source (one such being the Gamsberg kloof), partly on religious grounds since such water sources were often considered potent; partly for practical reasons (other groups and wild animals visit the water source). Herder site distributions in the region also reflect a preference for sandy rather than stony areas as living sites (Smith 1995 cited in Morris 2000a). The placement of herder sites around Gamsberg is consistent with these considerations.

The herder sites identified during the surveys at Gamsberg and Black Mountain Mine (Morris 2000a, 2000b) and in areas to the south (Morris 2000c) undoubtedly relate to ancestors of populations presently in the region.

Recommendation: Note existence of such sites that reflect past use of the Gamsberg environment. Information on them should be included in the interpretive/visitors' centre.

Acknowledgements

I thank Mr Stewart Whyte and Mr Lionel Jonck of Gamsberg Zinc Project for their assistance in the field during visits to Localities 1-3. Thanks also to the Gamsberg Zinc Project for providing accommodation at Aggeneys

References

- Barnard, A. 1992. Hunters and herders of Southern Africa: a comparative ethnography of the Khoisan people. Cambridge: Cambridge University Press.
- Morris, D. 2000a. Gamsberg Zinc Project environmental impact assessment specialist report: archaeology. Unpublished report to Envirolink.
- Morris, D. 2000b. Archaeological impact assessment, Black Mountain Mine, Aggeneys, Northern Cape. Unpublished report to Walmsley Environmental Consultants.
- Morris, D. 2000c. Archaeological specialist report: desktop assessment of possible archaeological resources along the proposed route, Helios to Aggeneys, Northern Cape. Appendix G in Eyethu Engineers CC: *Scoping Report: Environmental Impact Assessment for the proposed Aggeneys to Helios 400 kV transmission line*. Eskom Transmission Group.

