

APPENDIX 1

ARCHAEOLOGICAL IMPACT ASSESSMENT FOR GYPSUM INDUSTRIES IN RESPECT OF PROPOSED MINING AT KRAANKUL ON THE FARMS ZEERUST AND SPRINGBOKSPOOR.

PHASE 1 SURVEY : SPECIALIST INPUT

INTRODUCTION

Background to the project and this report is provided above.

The Northern Cape is renowned in the annals of South African archaeology for its wealth of stone age sites (eg. Goodwin and van Riet Lowe 1929). These represent expressions of the Earlier, Middle and Later Stone Ages through Pleistocene and Holocene times. Typological and stratigraphic relationships amongst local Pleistocene assemblages have been reassessed most recently by Beaumont (eg. Beaumont & Morris 1990), based mainly on river-bank and pan sites west of Kimberley; and at Florisbad, to the north east, by Clarke, Kuman and Henderson (Clarke 1985; Kuman and Clarke 1986; Henderson in prep.).

SETTING

The proposed mining area is within a large shallow pan system consisting of Cenozoic sediments overlying Eccca shales. These sediments become waterlogged after good seasonal rains, as indeed they were on the occasion of our visit.

ARCHAEOLOGICAL OBSERVATIONS: 21 JANUARY 1997

The proposed mining area was traversed on foot to gauge the nature of archaeological traces preserved there.

Most of the surface areas we crossed were found to be veneered by a low to very low density of stone artefacts (at no point more than 1 artefact per square metre, and usually much less than this), mainly of estimated Pleistocene age. These included triangular flakes with faceted striking platforms and convergent dorsal scars. Lateral retouch occurs on some of the points noted. Typologically these artefacts, made on hornfels (lydianite), are characteristic of the Middle Stone Age (MSA).

Prospecting pits, together with aardvark and porcupine burrows, afforded us the opportunity to

assess sub-surface densities in the shallow soil. Our observations indicated the same low to very low densities within the pan sediment.

No bone or shell was noted.

SIGNIFICANCE

The stone age material found is similar to that to be found at comparable locales such as river banks and the margins of palaeo-lakes, swamps or pools, in the eastern part of this province and western Free State. Material noted during our survey may derive from the pan margin.

At Florisbad, in the western Free State, a site where exceptional preserving conditions have prevailed, a spring eye was the focus of human activities (Clarke 1985; Kuman & Clarke 1986; Henderson in prep.). At one of the MSA sites there bone is preserved, as also evidence of hearths. The site provides clues concerning the regional cultural succession.

At Alexandersfontein/Mauritsfontein outside Kimberley, J.H. Power collected the so-called "Alexandersfontein Variant" of the MSA (Goodwin & van Riet Lowe 1929), subsequently reassessed by Butzer *et al.* (1973; 1983). Acheulean and Later Stone Age assemblages were also documented, and at some sites mixing of assemblages noted. Sealed primary MSA sites proved elusive. Late Pleistocene radiocarbon dates initially given for sediments associated with MSA here (Butzer *et al.* 1973) are problematic (Butzer 1983), and a more likely age for the palaeo-lake and MSA occurrences might be in the region of 120 000 years BP (i.e. O-18 Stage 5e).

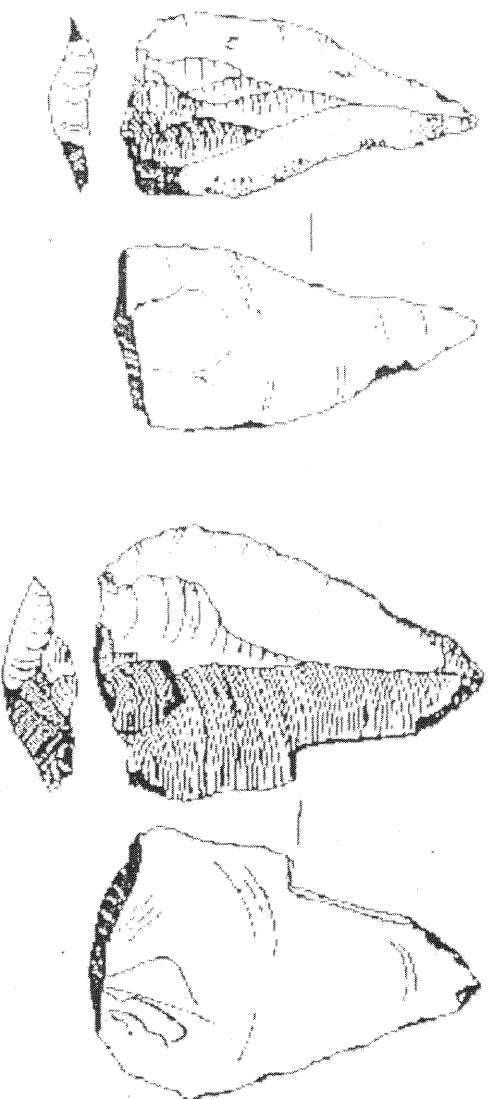
Sites along the Vaal River at Nooitgedacht give an indication of the regional succession including Post-Howieson's Poort MSA and MSA1, and with classic Mossel Bay type points associated with calcified silts reckoned to have been deposited during O-18 Stage 5e, circa 120 000 years BP (Beaumont 1990).

Typological and stratigraphic resolution of MSA assemblages, based as yet on just a few sites, remains relatively poor at the regional scale. Sites of higher density and superior preservation, eg. in primary context and with associated bone, are thus of vital significance.

RECOMMENDATIONS

The artefacts thinly veneered across the "floor" at the proposed Kraankuil mining site are representative of the kinds of archaeological materials found at other sites in the region. Their likely secondary derivation, possible mixing of more than one episode of MSA, and of occasional Later Stone Age flakes, and their very low density means that as an assemblage these artefact spreads are of limited research value.

The impact of the proposed Kraankuil mining project on the archaeological resources of the area would not be significant.



Middle Stone Age artefacts from Kuman & Clarke's (1986: Fig 6) excavations at Florisbad, comparable to some of the material found during this survey.

REFERENCES

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29 January, 1997

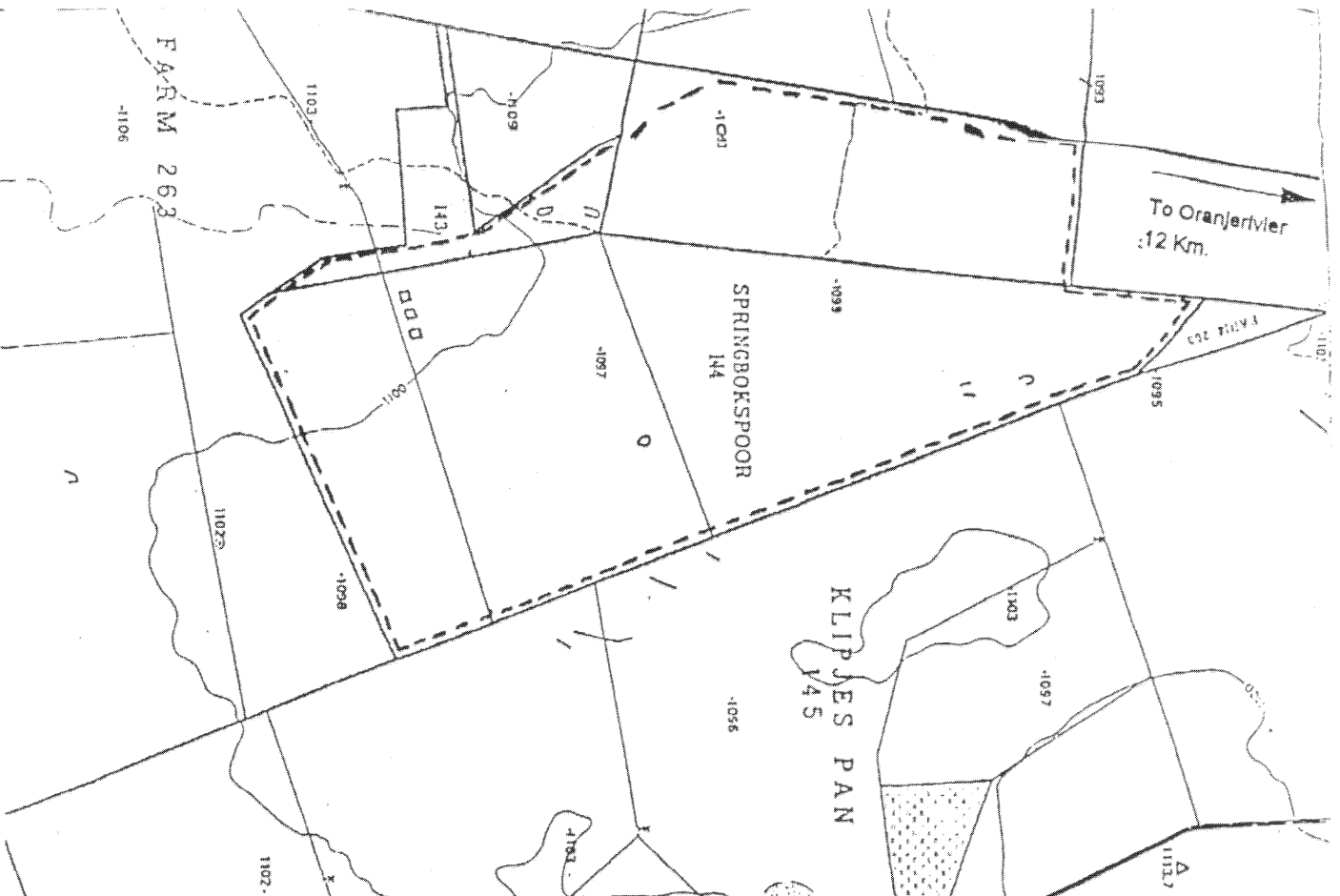
KRAANKUIL GYPSUM

PROJECT

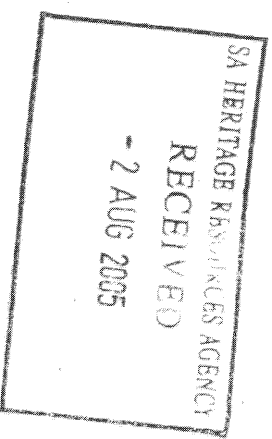
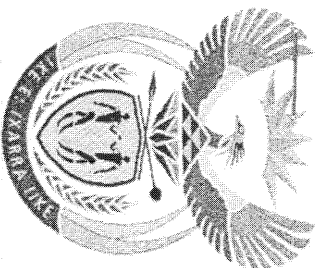
LOCATION MAP - COPY
OF 1:50 000 SCALE MAP
KRAANKUIL (2924 CC)

FARMS - SPRINGBOKSPOOR
No. 144, ZEERUST No. 262
AND KARREE BOSCH PAN
No. 143, PORTION 4

- ☐ SECONDARY ROAD
- ☐ MINE ACCESS ROAD
- ☐ SPRINGBOKSPOOR,
KARREE BOSCH PAN
AND ZEERUST
- FARM BOUNDARIES
- ☐ PROPOSED WORKSHOP
/ACCOMMODATION AREA
- ☐ GYPSUM - MINERAL
RIGHTS AREA
- ☐ PROPOSED MINING
AREA
- ☐ RAILWAY LINES
AND ROAD



Map indicating the proposed mining area and servitude, Zeerust and Springbokspoor, Kraankuil Gypsum Project.



DEPARTMENT OF MINERALS AND ENERGY
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From: Directorate: Mineral Development: Northern Cape **Date:** 26 July 2005

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Ref: NC 30/5/1/1/3/2/1/(239) EM

The Director
South African Heritage Resources Agency
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Attention: MARY LESLIE

CONSULTATION IN TERMS OF SECTION 40 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT 2002, (ACT 28 OF 2002) FOR THE APPROVAL OF AN ENVIRONMENTAL MANAGEMENT PLAN IN RESPECT OF PORTION 1 OF SPRINGBOKSPOOR NO 144 AND PORTION 4 OF KAREE BOSCH PAN NO 143 IN THE MAGISTERIAL DISTRICT OF HOPETOWN, NORTHERN CAPE REGION.
APPLICANT: BPB Gypsum Pty Ltd

Attached herewith, please find a copy of an EMP received from the above-mentioned applicant, for your comments.

It would be appreciated if you could forward any comments or requirements your Department may have in the case in hand to this office and to the applicant within **60 days as from**

26 July 2005 to 23 September 2005, failure of which will lead to the assumption that your Department has no objection(s) or comments with regard to this application and this Department will in that instance proceed with the finalisation thereof.

Consultation in this regard has also been initiated with other relevant State Departments. In an attempt to expedite the consultation process please contact **Mr. Aubrey Tshivhandekano** of this office to make arrangements for a site inspection or for any other enquiries with regard to this application.

Your co-operation will be appreciated.

N.A. Tshivhandekano
REGIONAL MANAGER: MINERAL DEVELOPMENT
NORTHERN CAPE REGION