



SOUTH AFRICAN HERITAGE RESOURCES AGENCY
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FOR ATTENTION: **PHRA: Northern Cape, PHRA Eastern Cape**

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REVIEW COMMENT ON ARCHAEOLOGICAL DESKTOP STUDY

BY ARCHAEOLOGY/ PALAEOLOGY UNIT OF THE HERITAGE RESOURCES AGENCY

South Africa has a unique and non-renewable archaeological and palaeontological heritage. Archaeological and palaeontological sites are protected in terms of the National Heritage Resources Act (Act No 25 of 1999) and may not be disturbed without a permit. Archaeological Impact Assessments (AIAs) and Palaeontological Impact Assessments (PIAs) identify and assess the significance of the sites, assess the potential impact of developments upon such sites, and make recommendations concerning mitigation and management of these sites. On the basis of satisfactory specialist reports SAHRA or the relevant heritage resources agency can assess whether or not it has objection to a development and indicate the conditions upon which such development might proceed and assess whether or not to issue permission to destroy such sites.

AIAs and PIAs often form part of the heritage component of an Environmental Impact Assessment or Environmental Management Plan. They may also form part of a Heritage Impact Assessment called for in terms of section 38 of the National Heritage Resources Act, Act No. 25, 1999. They may have other origins. In any event they should comply with basic minimum standards of reporting as indicated in SAHRA Regulations and Guidelines.

This form provides review comment from the Archaeologist of the relevant heritage resources authority for use by Heritage Managers, for example, when informing authorities that have applied to SAHRA for comment and for inclusion in documentation sent to environmental authorities. It may be used in conjunction with Form B, which provides relevant peer review comment.

- A. PROVINCIAL HERITAGE RESOURCES AUTHORITY: **Northern Cape and Eastern Cape**
- B. AUTHOR(S) OF REPORT: **Mr Frans Prins**
- C. ARCHAEOLOGY CONTRACT GROUP: **Active Heritage CC**
- D. CONTACT DETAILS: **P.O. Box 94, Howick, 3290, Email: feprins@gmail.com**
- E. DATE OF REPORT: **February 2011**
- F. TITLE OF REPORT: **EMP for the South Western Karoo Basin Gas Exploration Application Project CULTURAL HERITAGE: EASTERN PRECINCT**
- G. Please circle as relevant: Archaeological component of EIA / **Draft EMP** / HIA / CMP/ Other (Specify)
- H. REPORT COMMISSIONED BY (CONSULTANT OR DEVELOPER): **Golder Associates Africa**
- I. CONTACT DETAILS: **Ms Marisa du Toit or Ms Annerine Prinsloo, P.O. Box 6001, Halfway House, 1685, Tel: 011 254 4944, email: easternkaroo@golder.co.za**

REVIEW COMMENT ON ARCHAEOLOGICAL DESKTOP STUDY

Mr Frans Prins

Dated: February 2011, Received: March 2011

EMP for the South Western Karoo Basin Gas Exploration Application Project CULTURAL HERITAGE: EASTERN PRECINCT

INTRODUCTION

Mr Prins undertook a desktop study to identify possible heritage resources in the 30 000 km² area defined as "Eastern precinct", proposed for gas exploration by Shell Exploration Company B.V. The company applied to the Petroleum Agency of South Africa (PASA) for the rights to exploration of potential shale gas in the Karoo Basin. Three different applications were put forward and the related EMPs will be submitted to PASA before the 14th of April 2011.

The exploration will entail three different phases: the first will consist mainly of a geophysical data acquisition process, the second phase will involve the drilling of up to eight exploration wells for each Precinct up to 5km depth to identify the shale layer. According to the EMP, the size of each well site will be approximately 100m x 100m. This will not include however the associated infrastructure, such as, for instance, the construction of new access roads or the upgrade of old ones and the establishment of campsites. Then third phase will endeavour hydraulic fracturing and testing on the boreholes, which proved being gas bearing.

The desktop study carried out for this project took into consideration several sources of information compiling, as a result, a complete and comprehensive list of already identified and possibly identifiable heritage resources. No maps were provided as the literature source did not often report GPS co-ordinates. In the second phase of the Heritage Impact Assessment a map will however be required.

An important shortfall of the project is the absence of a palaeontological assessment, even in the form of a desktop or scoping study. The palaeontological heritage, for which the Karoo is internationally renowned, is mentioned in Chapter 4.11.2 of Volume 1 of the Draft EMP, but no professional assessment by a palaeontologist is included in the draft EMP. More specifically, the Tarkastad Subgroup, the Adelaide Subgroup and the Molteno Formation have proved to be highly fossiliferous.

DISCUSSION

The Eastern Precinct comprises a 30 000 km² area spreading across both the Eastern and Northern Cape, even if most of the precinct is included in the Eastern Cape. The archaeological tradition of the Eastern Cape is certainly not as well studied and known as other provinces in the country. Most of the research has been confined to the south of the province, along the coastline, leaving the interior of the country not well researched. From the few surveys undertaken in the area it is known that the area included in this precinct was occupied since the Early Stone Age with few sites located at the bottom of the Sneeuwberge Mountains. More sites were identified for the Middle Stone Age, but certainly most sites from the Stone Age date to the Later Stone Age.

According to the literature, many sites have been identified in the interior of the Eastern Cape mostly as caves and rockshelters, but also as open air sites. Related to the same period there are about 300 rock art sites, most of which falling into the Eastern Precinct and kraals identified in the Zeekoe River Valley. Evidence from the historical period includes forts and structures from the frontier wars, graveyards and 37 provincial heritage sites, mostly historic buildings.

SAHRA RECOMMENDATIONS

The SAHRA Archaeology, Palaeontology and Meteorite Unit recommends that:

- The proposed position (including the alternatives) of the drilling boreholes must be decided and assessed in consultation with an archaeologist and a palaeontologist. The specialists will provide with information regarding the presence of known heritage sites in the area.

- After the potential positions of the boreholes and all associated infrastructure have been decided in consultation with heritage specialists, a Heritage Impact Assessment must be compiled and submitted to SAHRA for comments. The assessment will need to include a map indicating the position of all heritage sites identified both in the desktop and Phase 1 assessments in relation with the proposed position for the boreholes.
 - o A Phase 1 Archaeological Impact Assessment comprehensive of a field survey must be included in the HIA. Given the sensitivity of the precinct in terms of rock art sites, it is recommended that a rock art specialist is part of the HIA team.
 - o A Palaeontological Impact Assessment must be submitted to SAHRA before any earth moving activities occur, SAHRA will then comment about the feasibility of the project. SAHRA will not be able to comment on any palaeontological aspects of the heritage until an assessment of the palaeontological potential is undertaken.
 - o The boreholes will most likely affect the sense of place of the landscape, therefore it is requested that the cultural landscape and living heritage aspects of the Precinct are assessed during the Heritage Impact Assessment.
- It is requested that an archaeologist and a palaeontologist are consulted regarding the position of any prospecting drilling, trenching or earth moving activity. Monitoring might be required during these activities.
- Decisions on Built Environment (e.g. structures over 60 years), Cultural Landscapes and associated Living Heritage (e.g. sacred sites) must be made by the Provincial Heritage Resources Authority of the Northern Cape (Mr. Joas Sinthumule jsinthumule@ncpg.gov.za).
- Any alterations to the original plan must be discussed with the heritage specialists who will advise whether the revised plan is deemed suitable from a heritage perspective. The outcome of the discussion must be communicated to SAHRA and the relevant Provincial Heritage Resources Authorities.
- No archaeological or palaeontological site may be altered or destroyed without a destruction permit to SAHRA.

CONCLUSION

Before any drilling, trenching, prospecting or earth moving activity occur, SAHRA requires that a Heritage Impact Assessment is undertaken and submitted to SAHRA and Heritage of Northern Cape for comments.

SIGNATURE OF ARCHAEOLOGIST PROCESSING REPORT: *Mfalimberti*

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SIGNATURE OF SAHRA HEAD ARCHAEOLOGIST: *(Signature)*

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NAME OF HERITAGE RESOURCES AGENCY: SAHRA.....

PLEASE NOTE THAT THE COMMENT (ABOVE OR APPENDED) CONSTITUTES THE COMMENT OF THE HERITAGE RESOURCES AGENCY ARCHAEOLOGIST AND THAT ANY DEVELOPMENT THAT INVOLVES DESTRUCTION OF ANY ARCHAEOLOGICAL/PALAEONTOLOGICAL SITE IS STILL SUBJECT TO A PERMIT/PERMISSION FOR DESTRUCTION OF SUCH SITE GIVEN TO THE DEVELOPER BY THE RELEVANT HERITAGE RESOURCES AGENCY ARCHAEOLOGICAL AND PALAEONTOLOGICAL PERMIT COMMITTEE (THIS WILL BE SUBJECT TO APPROVAL OF THE PHASE 2 OR ARCHAEOLOGICAL/ PALAEONTOLOGICAL MITIGATION AS NECESSARY). THIS REPORT MAY BE TAKEN ONLY AS APPROVAL IN TERMS OF SECTION 35 OF THE NATIONAL HERITAGE RESOURCES ACT. THE PROVINCIAL MANAGER OF THE HERITAGE RESOURCES AUTHORITY MUST ADVISE AS TO APPROVAL IN TERMS OF HERITAGE ISSUES ENCOMPASSED BY OTHER ASPECTS OF THE LEGISLATION, SUCH AS ISSUES OF THE BUILT ENVIRONMENT (STRUCTURES (E.G. FARM HOUSES), OVER 60 YEARS), INDIGENOUS KNOWLEDGE SYSTEMS OR OF CULTURAL LANDSCAPES AS THIS IS NOT WITHIN THE SCOPE OF THE ARCHAEOLOGIST.