



an agency of the
Department of Arts and Culture

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CaseID: 10699

Date: Tuesday May 09, 2017
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Interim Comment

In terms of Section 38(8) of the National Heritage Resources Act (Act 25 of 1999)

Attention: Mr Khalid Patel
Tetra4 (Pty) Ltd

Tetra4 has an existing Production Right (12/4/1/07/2/2) to develop gas fields in the Virginia area (centre point is ~20 km to the south west of Virginia Town). The Production Right covers a large area where gas-emitting wells have previously been identified during exploration activities. Free State.

SAHRA issued an Interim Comment for the Tetra4 Cluster 1 case, dated 28/03/2017, requesting that a field based assessment of heritage resources and palaeontological resources is carried out in the Environmental Impact Assessment Phase. Environmental Impact management Services (Pty) Ltd (EIMS) have been appointed by Tetra4 (Pty) Ltd to conduct an Environmental Impact Assessment process in support of an environmental authorisation application to the Petroleum Agency South Africa (PASA) for listed activities in Chapter 4 of the Environmental Impact Assessment Regulation of 2014, of the National Environmental Management Act, 107 Of 1998 (NEMA) triggered by the amendment of a Production Right in terms of Section 102 of Minerals and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA). EIMS has appointed PGS Heritage to conduct a Heritage Impact Report inclusive of a Palaeontological Impact Assessment conducted by Dr L Rossouw.

Birkholtz, P. March 2017. Proposed Tetra4 Cluster 1 Gas Production Project Heritage Study: Impact Level Report.

The author conducted two phases of field assessments, the first phase was for the Heritage Scoping report that SAHRA commented on in the Interim Comment. The second phase was undertaken in February 2017 and the assessment was focused in a 1 km radius of all six proposed exploration wells, and the pipeline routes and CNG gas compressor plant. Sites identified in the second phase of the field assessments were labelled TET1 and 27 sites. Majority of the sites identified are located close to the proposed in-field pipe line with potential indirect impacts to the heritage resources. The following sites are located within the 1 km radius of the proposed six new well pads:

TET 19; TET20; TET21 and TET22: which are all cemeteries and they are of High Significance.

TET23 and TET26 are Stone Age sites located on the banks of the Bosluisspruit with a High artefact density making them of Medium to High Significance.



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TET25 and TET26 are historical buildings of medium significance. They are the remains of homesteads of the colonial period with a chance of uncovering the remains of stillborn baby graves under the foundations.

Rossouw, L. March 2017. Phase 1 Palaeontological Impact Assessment for the proposed Tetra4 Cluster 1 Gas Production Project near Virginia, Free State Province.

Proposed well sites, pipeline route options and the three site options for the Combined Helium, CNG GAS conditioning plants and Compressor Stations are underlain by palaeontologically sensitive rocks of the Volksrust Formation (Ecca Group) and Adelaide Subgroup (Beaufort Group) that are well covered by superficial overburden of very low palaeontological significance. The impact on fossils within these formations by the exploration and well drilling process is rated moderate to low if it is assumed that fossil remains are not uniformly distributed in fossil-bearing rock units.

Overlying them are Quaternary Aeolian sands of the Gordonia Formation and Tertiary sediments associated with terrestrial deposits known as Matjhabeng type sediments.

Recommendations in the PIA include:

Any excavations exceeding a depth of one metre into the overbank sediments at the Bosluisspruit and Sand River crossings must be monitored by a palaeontologist before and during the construction phase of pipelines.

A palaeontologist should be brought in on one occasion to train the ECO of the project to identify potential fossil remains that may be uncovered within the *in situ* sedimentary bedrock. If fossils are encountered and reported, a palaeontologist must be appointed to remove the fossils after applying for a valid collection permit from SAHRA.

Interim Comment

SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit agrees with and endorses the recommendations provided in the Heritage Impact Assessment report and the Palaeontological Impact Assessment report including:

All construction work located near the banks of the Bosluisspruit and the Sand River must be monitored by an archaeologist and a palaeontologist, this also applies to the opening of F4 and F6.

A palaeontologist must be appointed to train the ECO in identifying fossil remains that may be uncovered during the construction phase. From there, the ECO must monitor all excavations into the sedimentary bedrock of the Karoo Supergroup.



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The mitigation measures provided in the Heritage Impact Assessment must be followed through and a report of all the monitoring must be supplied to SAHRA at the end of the construction phase.

The graves must be fenced with an entrance gate for the families to gain access to their family graves. Where the pipeline will be less than 50 m away, the ECO must be present to monitor the construction.

Comments must be obtained from Free State Heritage Resources Authority (HFS) for all structures as defined in section 34 of the National Heritage Resources Act, Act No 25 of 1999 (NHRA) located within the Exploration right area, before the construction phase commences. No damage or destruction of the buildings may occur without a section 34 permit from HFS. The contact details are Ms Ntando Mbatha: mbatha.npz@sacr.fs.gov.za 015 410 4750.

All test excavations in the vicinity of the homesteads must be done under the provision of a section 35 permit issued by SAHRA. If graves are identified then work must cease, and SAHRA Burial Grounds and Graves must be consulted.

With regards to request in the HIA pertaining to an impact assessment of ground water resources as part of Natural Scared Sites as per the submitted report, SAHRA APM Unit currently reserves its position on this matter. Furthermore SAHRA APM Unit states that unless there is evidence of the historical or even archaeological period use of the groundwater in any way (either for water collections or cultural traditions), they cannot be defined as heritage resources in accordance with the National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA). These resources must be addressed by the relevant specialists and the National Water Act, 1998 (Act No 36 of 1998) (NWA). SAHRA cannot provide comments on this issue.

SAHRA cannot issue a Final Comment for this case as the Palaeontological Impact Assessment report does not have a declaration of independence by the author. Please amend the report to include a signed declaration of independence with the title of the development in the declaration.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully



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Nokukhanya Khumalo
Heritage Officer
South African Heritage Resources Agency

John Gribble
Manager: Maritime and Underwater Cultural Heritage Unit / Acting Manager: Archaeology, Palaeontology and
Meteorites Unit
South African Heritage Resources Agency

ADMIN:
Direct URL to case: <http://www.sahra.org.za/node/387381>