



an agency of the
Department of Arts and Culture

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CaseID: 10699

Date: Tuesday March 28, 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 has applied for a 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.

Tetra4 (Pty) Ltd is proposing to open 13 exploration wells for gas production and to drill 6 more exploration wells, the total area of the Production right is 14 316 ha covering 59 farms and it is named Tetra Cluster 1. The opening of 13 exploration wells will include the construction of a CNG gas processing plant, well pipelines with compressors, production well site connections. The Tetra Cluster 1 facility is located in the Matjhabeng and Masilonyana Local Municipalities of the Free State Province.

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 Scoping Report inclusive of a Palaeontological Desktop Assessment conducted by Dr Gideon Groenewald.

Birkholtz, P. May 2016. Tetra4 (Pty) Ltd – Cluster 1 – Proposed First Phase Gas Production from 12 Historic Wells Heritage Study: Scoping Level Report.

The author carried out background research of the history of the study area including an initial field survey. The initial field survey identified 45 heritage sites, comprising 21 cemeteries, 22 historic structures, one Stone Age site, one Historical archaeological midden and one site consisting of historic road markers.

Groenewald, G. May 2016. Palaeontological desktop Assessment for the Proposed Tetra4 Development near Matjhabeng (Virginia), Matjhabeng Local Municipality, Lejweleputswa District Municipality, free state province.

The report submitted is a short desktop analysis which revealed that the study area is underlain by Permian shale and sandstone of the Adelaide Subgroup (Beaufort Group), Jurassic dolerites of the Karoo Supergroup, Quaternary aged Aeolian sands of the Gordonia Formation and Tertiary aged sediments associated with



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terrestrial deposits known as Matjhabeng type sediments. The palaeontological sensitivity of the study area ranges from Very High palaeontological sensitivity (the Adelaide Subgroup and Tertiary aged sediments) to a Low palaeontological sensitivity (The Karoo Supergroup dolerite).

The author of the Palaeontology Scoping recommends the following potential impact assessments to be carried out in the Environmental Impact Assessment Phase:

1. The EAP as well as the ECO for this project must be made aware of the fact that the Beaufort Group sediments contains very highly significant fossil remains, albeit mostly exposed during infrastructure development. Several types of fossils have been recorded from this Group in the Karoo Basin of South Africa, with special mention of the Adelaide Subgroup. Similar fossil richness is observed in Tertiary aged sediments at Matjhabeng.
2. In areas that are allocated a Very High and High Palaeontological sensitivity and specifically where deep excavation into bedrock is envisaged (following the geotechnical investigation), or where fossils are recorded during the geotechnical investigations, a qualified palaeontologist must be appointed to assess and record fossils at specific footprints of infrastructure developments (Phase 1 PIA) before development as well as during excavations for the development.
3. The Aeolian sand of the Gordonina Formation covers the rocks of the highly significant Adelaide Subgroup and all the areas underlain by this formation is allocated a High Palaeontological sensitivity and a qualified Palaeontologist must visit all the sites of outcrop before excavation and during the activities of the Project if excavation will be deeper than 1.5m.
4. These recommendations must form part of the EMP of the project.

A detailed foot survey must be carried out for the proposed new 6 exploration wells, proposed new CNG gas processing plant and other associated infrastructure developments. Once the field assessments have been carried out, an assessment of impacts on the entire identified heritage resources must be compiled in a Heritage Impact Assessment report, this report must also be inclusive of the Palaeontological Impact Assessment, Visual Impact Assessment on the Heritage resources and a cumulative impact assessment on the local heritage resources by the proposed development. The survey and report must be conducted and compiled by a suitably qualified archaeologist with knowledge of historic built environment.

Interim Comment

SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit accepts both Palaeontological and Heritage Scoping Reports and agrees with the provided recommendations, however SAHRA cannot provide a Final Comment until a Palaeontological and Heritage Field assessment is carried out in the Environmental Impact Assessment phase. The Heritage Impact Assessment must be inclusive of a Palaeontological Impact



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Assessment, a Visual Impact Assessment on identified heritage resources and an archaeological, graves and historic buildings assessment. Once the report is completed it must be submitted to the case on SAHRIS.

The Environmental Impact Assessment report and all its appendices must also be submitted to the case. Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

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>