



BPI for Palaeontological Research

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Ms Stella Moeketse
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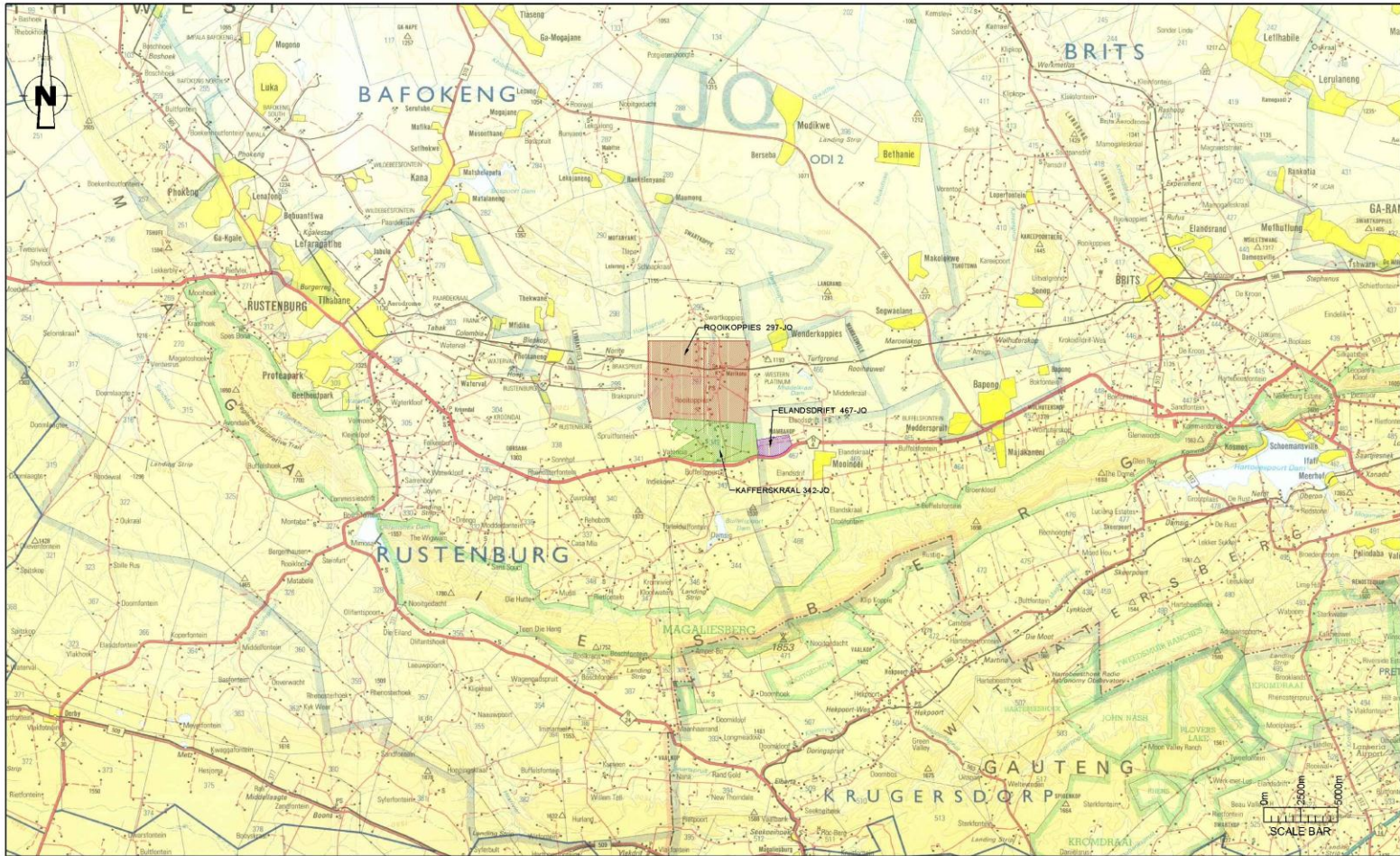
Dear Ms Moeketse,

Tharisa Mine near Marikana town – Palaeontological Environmental Impact Assessment

As requested, I have undertaken a desktop EIA to assess the possible affect on palaeontological heritage which will result from mining activities at Tharisa Mine on the farms Kafferskraal 342,JQ, Rooikoppies 297 JQ and Elandsdrift 467 JQ in the Rustenburg and Madibeng Local Municipalities (Figure 1).

Following the 1:250 000 geological map (sheet 2526 Rustenburg 1981) the entire proposed development area is underlain by igneous rocks of the Rustenburg Layered Suite of the Bushveld Igneous Complex. This is an intrusive igneous body comprising a series of ultramafic-mafic layers and a suite of associated granitoid rocks. As these rocks are Precambrian in age and are of igneous origin it is highly unlikely that fossils will be affected by the proposed subsurface mining development.

In a few places, overlying the rocks of the Rustenburg Layered suite, there may be small exposures of unconsolidated Quaternary deposits which are not shown on the geological map. If present, these will be the only sedimentary deposits in the area which could be affected by the mining development, and as the deposits are not consolidated it is very unlikely that any fossils will be present.



<p>Metago Environmental Engineers (Pty) Ltd Consulting Engineers & Scientists</p> 	<p>THARISA MINERALS REGIONAL SETTING OF THE PROPOSED PROJECT AREA</p>	<p>06/2011 T014-12</p>	<p>FIGURE 1</p>
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In my opinion this development will not negatively affect palaeontological heritage. I suggest that, from a paleontological perspective, this mining development may proceed. However should any ancient bone or plant material be uncovered in the process of mining activities then a qualified palaeontologist must be contacted to assess the situation.

In the case of a chance find the following procedure should be included in your management plan:

- Contact a professional palaeontologist to assess the situation and decide on appropriate action.
- A list of accredited palaeontologists is available from South Africa Heritage Resources Agency (SAHRA) in Cape Town

Bibliography:

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Yours sincerely

Professor Bruce Rubidge PhD, Pr Sci Nat