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Ref: SOU5014

Dr Ragna Redelstorff
Heritage Officer Archaeology, Palaeontology & Meteorites Unit
South African Heritage Resources Agency
111 Harrington Street
Cape Town 8001

Dear Dr Redelstorff

**RE: Request for Exemption of any Palaeontological Impact Assessment for the
proposed South32 SA Coal Holdings (Pty) Ltd Klipspruit Water Treatment Plant
Project, near Ogies, Mpumalanga
SAHRIS CaseID: 12710**

In my capacity as a professional palaeontologist, I am requesting exemption for palaeontological impact assessment in terms of the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998) which requires that the proposed development must be preceded by the relevant impact assessment, in this case for palaeontology.

South32 SA Coal Holdings (Pty) Ltd proposes to build a water treatment plant (WTP) and its associated infrastructure to treat mine affected water. The WTP is located within an existing coal mine on Portions 2 and 14 of the farm Klipfontein 3 IS, Oogiesfontein 4 IS, Prinshof 2 IS and Phola Plant 830 IS, in the eMalahleni Local Municipality of the Mpumalanga Province. The extent of the proposed plant will be 1.51 ha and the water pipelines will be about 5.2 km, construction includes the clean water discharge pipelines and mine water pipelines to the WTP, the WTP (1.06 ha in extent) and laydown area (0.45 ha).

Digby Wells Environmental (Pty) Ltd have been appointed by South32 SA Coal Holdings (Pty) Ltd to undertake the Environmental Impact Assessment process. Based on the report by Hardwick and DuPiesanie (2018), either a site visit or a letter requesting

exemption was requested in the SAHRA interim report (Case Id: 12710; N Khumalo, 01 October 2018).

A letter of exemption is being requested because the surface area has been highly disturbed by the current mining activities and this is clearly evident in the Google Earth map (Fig. 1). Furthermore, the fossils associated with the shale lenses between coals are in the form of impression fossils of *Glossopteris* leaves, lycopods, sphenophytes and ferns (Plumstead, 1969; Anderson and Anderson, 1985; Johnson et al., 2006). Impressions or imprints of the fossil plants are very delicate and weather rapidly, so as soon as they are exposed to the air they will begin to deteriorate. In addition, the *Glossopteris* flora from the Vryheid Formation is common and widespread (Anderson and Anderson, 1985). Only very well-preserved fossils would be of any scientific interest. In my opinion, based on the literature and my own field experience, it is highly unlikely that any fossils of scientific interest will be sufficiently well preserved along the proposed route for the WTP pipes, or the WTP itself.



Figure 1: Google Earth map indicating the pipeline route for the Klipspruit WTP. Note the extensive alteration of the whole area.



Figure 2: Geological map of the area around the Farm Klipfontein. The location of the proposed WTP pipelines is indicated within the yellow rectangle. Abbreviations of the rock types: C-Pd = Dwyka Group; Pv = Vryheid Formation; Jd = Jurassic dykes Map enlarged from the Geological Survey 1: 250 000 map 2628 East Rand ERPM.

Therefore, I request exemption for any further palaeontological assessment for this project.

Yours faithfully

Prof Marion Bamford
Palaeobotanist; PhD (Wits 1990)

References cited:

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Hardwick, S., Du Piesanie, J. August 2018. Notification of Intent to Develop, Environmental Impact Assessment for the Klipspruit Colliery Water Treatment Plant and associated pipeline, Mpumalanga

Johnson, M.R., van Vuuren, C.J., Visser, J.N.J., Cole, D.I., Wickens, H.deV., Christie, A.D.M., Roberts, D.L., Brandl, G., 2006. Sedimentary rocks of the Karoo Supergroup. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J., (Eds). The Geology of South Africa. Geological Society of South Africa, Johannesburg / Council for Geoscience, Pretoria. Pp 461 – 499.

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