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15 April 2023

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 the Section 24G Application for the rectification of the commencement of activities for the Samancor Millsell and Waterkloof Sections opencast mining, North West Province**

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.

Elemental Sustainability (Pty) Ltd (Elemental) was appointed by Samancor Chrome Western Chrome Mines (Pty) Ltd. (WCM) to assist Samancor with a Section 24 G process for the unlawful commencement of construction and operation of activities including opencast mining at the Samancor WCM Waterkloof operation.

Mining Right Area

The mineral currently being mined at the Millsell and Waterkloof Sections is chromite and associated minerals in particular the LG6 and LG6A chromitite seams. The converted Mining Right NW30/5/1/2/2/236MR over portions of the farms Waterkloof 305 JQ, Waterval 306 JQ, Waterval 307 JQ, Kroondal 304 JQ and Waterval 303 JQ includes the minerals associated with the mining of chromitite ore, more specifically including platinum, palladium, rhodium, ruthenium, iridium and osmium, gold, silver,

copper, nickel and cobalt, which may be extracted from normal mining of Chromite in the Middle Group (MG) and Lower Group (LG) seams.

Samancor Chrome believed that, collectively, the various approvals that it held, authorised it to carry out mining activities on Portion 146 of the farm Waterkloof 305 JQ. As a result, Samancor Chrome carried out further opencast activities on Portion 146 of the farm Waterkloof 305 JQ, from June 2021 to August 2022. Samancor constructed an opencast pit on the Waterkloof Section, as well as a new road, Waste Rock Dumps (WRD), Overburden dumps and a Run of Mine (ROM) Pad, within the existing mining right area. The Department of Mineral Resources and Energy (DMRE) undertook a site verification on 27 January 2022 and WCM submitted a response on 29 March 2022 to demonstrate authorisation in support of the opencast operation undertaken on the Relevant Portion.

Section 24F (1)(a) of NEMA indicates that “No person may commence an activity listed or specified in terms of section 24(2)(a) or (b) unless the competent authority or the Minister of Mineral and Energy, as the case may be, has granted an Environmental Authorisation for the activity.” The DMRE holds the view that WCM contravened section 24 of the NEMA, in that an opencast operation was undertaken without the required Environmental Authorisation (s).



Figure 1: Google Earth site map of the Waterkloof Opencast Mine (yellow polygon) that is under a S24G application.

The entire area is on non-fossiliferous rocks of the Pyramid Gabbro-norite and Mathlagame Norite-anorthosite, Rustenburg Layered Suite, Bushveld Igneous Complex (Figure 2). These rocks are volcanic rocks that intruded through the Transvaal Supergroup rocks and subsequently have been metamorphosed (Cawthorne et al., 2006). Since these rocks are about 2061 million years old (Schroder et al., 2016) they pre-date the evolution of plants and animals, and they are of volcanic origin, there is no



Figure 3: SAHRIS palaeosensitivity map for the site for the Waterkloof Opencast Mine (S24G application) shown within the yellow oval. Background colours indicate the following degrees of sensitivity: red = very highly sensitive; orange/yellow = high; green = moderate; blue = low; grey = insignificant/zero.

As far as the palaeontological heritage is concerned, no fossils would have been present and so the mining operation has had no impact. The S24G application should be granted.

Yours faithfully



Prof Marion Bamford  
Palaeobotanist; PhD (Wits 1990)

**Reference cited:**

Cawthorn, R.G., Eales, H.V., Walraven, F., Uken, R., Watkeys, M.K., 2006. The Bushveld Complex. 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 261-281.

Palaeosensitivity map:

<https://sahris.sahra.org.za/map/palaeo>

Schröder, S., Beukes, N.J., Armstrong, R.A., 2016. Detrital zircon constraints on the tectonostratigraphy of the Paleoproterozoic Pretoria Group, South Africa. Precambrian Research 278, 362 – 393.

**Declaration of Independence**

This letter has been compiled by Professor Marion Bamford, of the University of the Witwatersrand, sub-contracted by Elemental Sustainability, South Africa. The views expressed in this report are entirely those of the author and no other interest was displayed during the decision making process for the Project.

Specialist: Prof Marion Bamford



Signature: