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12 May 2014

Ms René Rademeyer
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Dear Ms Rademeyer,

Palaeontological Scoping Report – Proposed EVRAZ Vametco Operation

As requested, herewith a letter of exemption with regard to the palaeontological aspect of environmental management relevant to the addition of infrastructure at the EVRAZ Vametco Mine development situated northeast of Brits in the Northwest Province of South Africa.

As is evident from my report the proposed development should not have any impact on palaeontological heritage, but have included a mitigation clause.

Yours sincerely

Bruce Rubidge PhD, FGSSA, FRSSA, Pr Sci Nat

PALAEONTOLOGICAL SCOPING REPORT

EXECUTIVE SUMMARY

This is a scoping Palaeontological Impact Assessment report on the addition of infrastructure at the EVRAZ Vametco Mine situated approximately 10 km to the north-east of Brits in the North West Province. The entire area is underlain by rocks of the Precambrian Bushveld Igneous Complex. Although not indicated on the geological map, there is a possibility that Tertiary-Quaternary alluvial deposits could be present.

In my opinion this development will not negatively affect palaeontological heritage. If, in the extremely unlikely event that fossils are exposed in alluvial deposits in low-lying areas in the process of development activities, a qualified palaeontologist must be contacted to assess the exposure for fossils so that the necessary rescue operations are implemented.

INTRODUCTION

The proposed EVRAZ Vametco development is situated approximately 10 km to the northeast of Brits in the Northwest Province of South Africa (Figure 1). The site is located in the Madibeng Local Municipality (MLM) which is one of 6 local municipalities within the Bojanala Platinum District Municipality (BPDM). It covers portions of the farm Krokodilkraal 426 JQ and Uitvalgrond 431 JQ.

The development comprises the following operations; mining, concentrator operations (Crushing, Screening, Milling and Magnetic Separation), extraction and refining.

JMA Consulting (Pty) Ltd requested several specialist investigations to be done, including this Paleontological Assessment. The specialist inputs are required in support of an Environmental Management Plan (EMP) Amendment in terms of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002) (MPRDA) provisions, a Water Use License Application (WULA) in terms of the National Water Act (Act No. 36 of 1998) (NWA) provisions, several potential Waste License Applications (WLA) in terms of the National Environmental Management: Waste Act (Act No. 59 of 2008) (NEMWA), as well as in support of an Environmental Impact Assessment (EIA) required for several proposed listed activities in terms of the National Environmental Management Act (Act No. 62 of 2008) (NEMA).

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- a. Specialist Expertise
Palaeontology/ Stratigraphy/ Geology
- b. Declaration of Independence



12 May 2013

Signature:

Date:

1. Developer:

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2. Consultant:

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Report Date

12 May 2014

BACKGROUND INFORMATION

The EVRAZ Vametco operation is located approximately 6 km to the northeast of Brits in the North West Province (Figure 1).

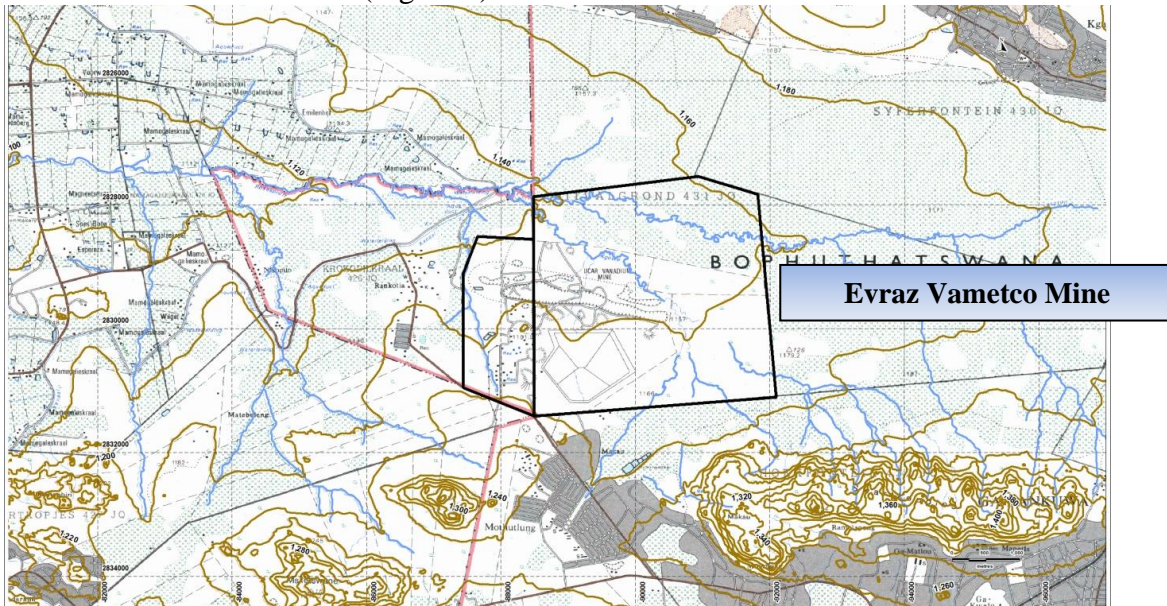


Figure 1: Topographic map of the study area (1:50 000 scale Sheet 2527DB), with the area covered by ECRAZ Vametco Mine outlined in black.

The EVRAZ Vametco operation comprises the following components (Figures 2 and 3): Mining Operation; Concentrator (Crushing, Screening, Milling and Magnetic Separation); Extraction (Roasting, Leaching, Precipitation and Sulphate Recovery), and Refining.

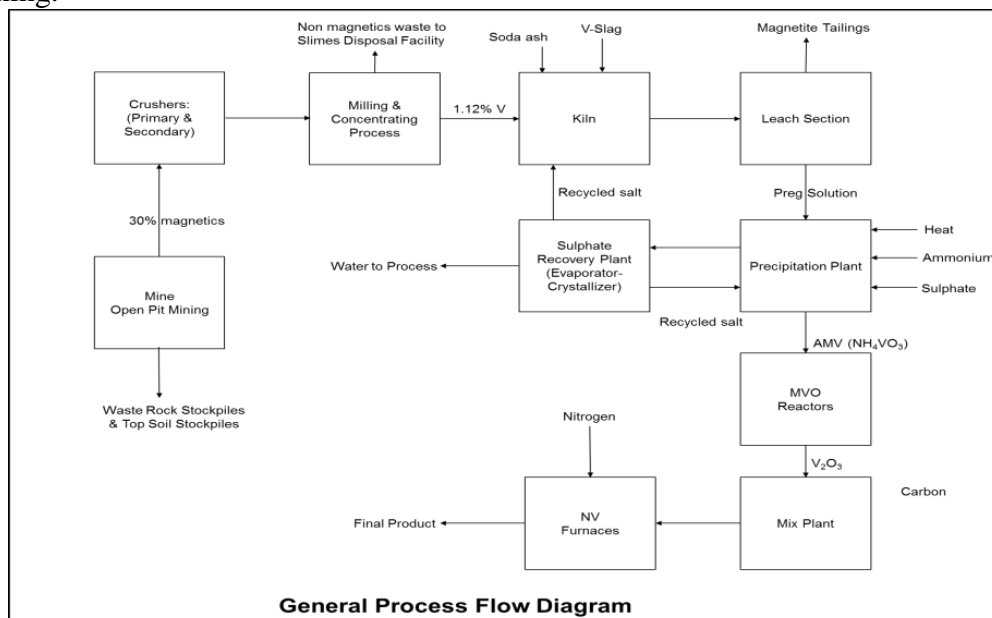


Figure 2: EVRAZ Vametco - general process flow diagram

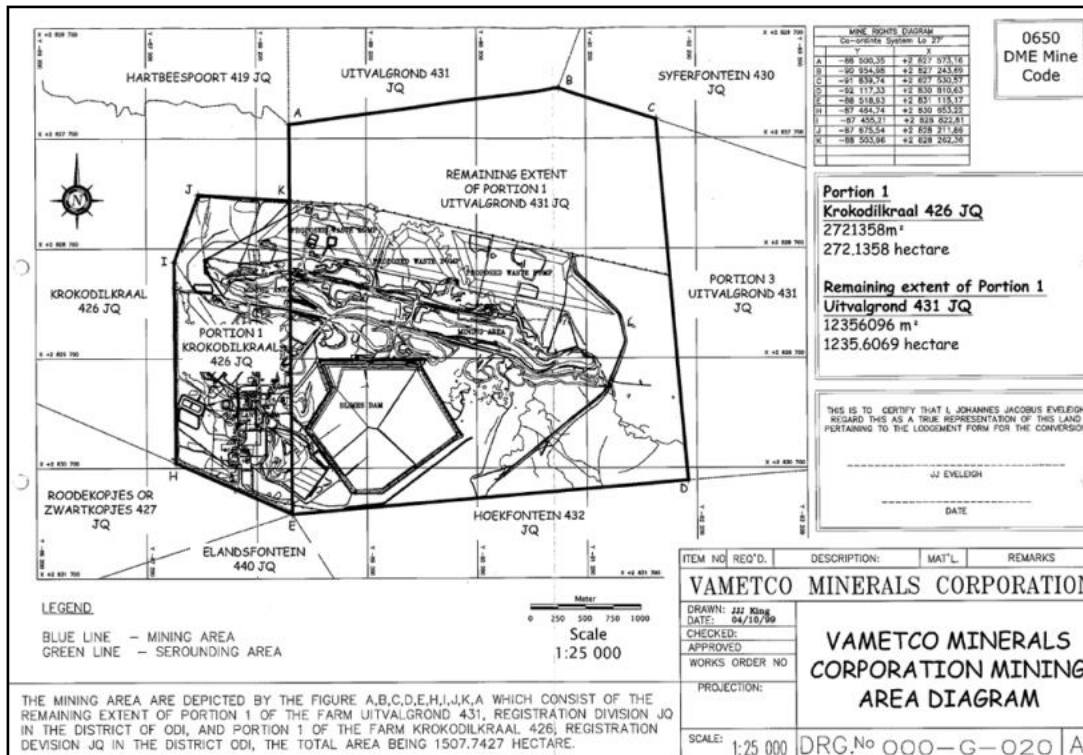


Figure 3: EVRAZ Vametco Mine Operations Layout Plan

DESCRIPTION OF PROPERTY

The EVRAZ Vametco operation is located between Brits and Pretoria in North West Province and the development area, outlined in Figures 1 & 3, is situated on the following two farms:

- Portion 1 of the farm Krokodilkraal 426 JQ
- Remaining extent of Portion 1 of the farm Uitvalgrond 431 JQ.

GEOLOGICAL SETTING

Following the 1:250 000 Geological Map Series of the Republic of South Africa (Sheet 2526 Rustenburg, 1981), the area for the proposed development is situated entirely on norites and anorthosites through to gabbros, harzburgites, magnetites and pyroxenites of Rustenburg Layered Suite of the Precambrian Bushveld Igneous Complex. These include the Bierkraal Magnetite Gabbro's (Vu), Pyramid Gabbro-norites (Vg) (Figure 4). In addition dolerite (do), syenite (s) and diabase (di) dykes are present and surficial Quaternary unconsolidated sedimentary deposits are present along river courses to the north of the study area.

BACKGROUND TO PALAEOONTOLOGY OF STUDY AREA

As the rocks of the Bushveld Complex and the dolerite, syenite and diabase dykes are of igneous origin there is no possibility of fossils being present. In the Quaternary alluvial deposits in the low-lying areas along river courses there is a slight, but very unlikely, possibility that fossils could be present. The geological map does not indicate the presence of alluvial deposits.

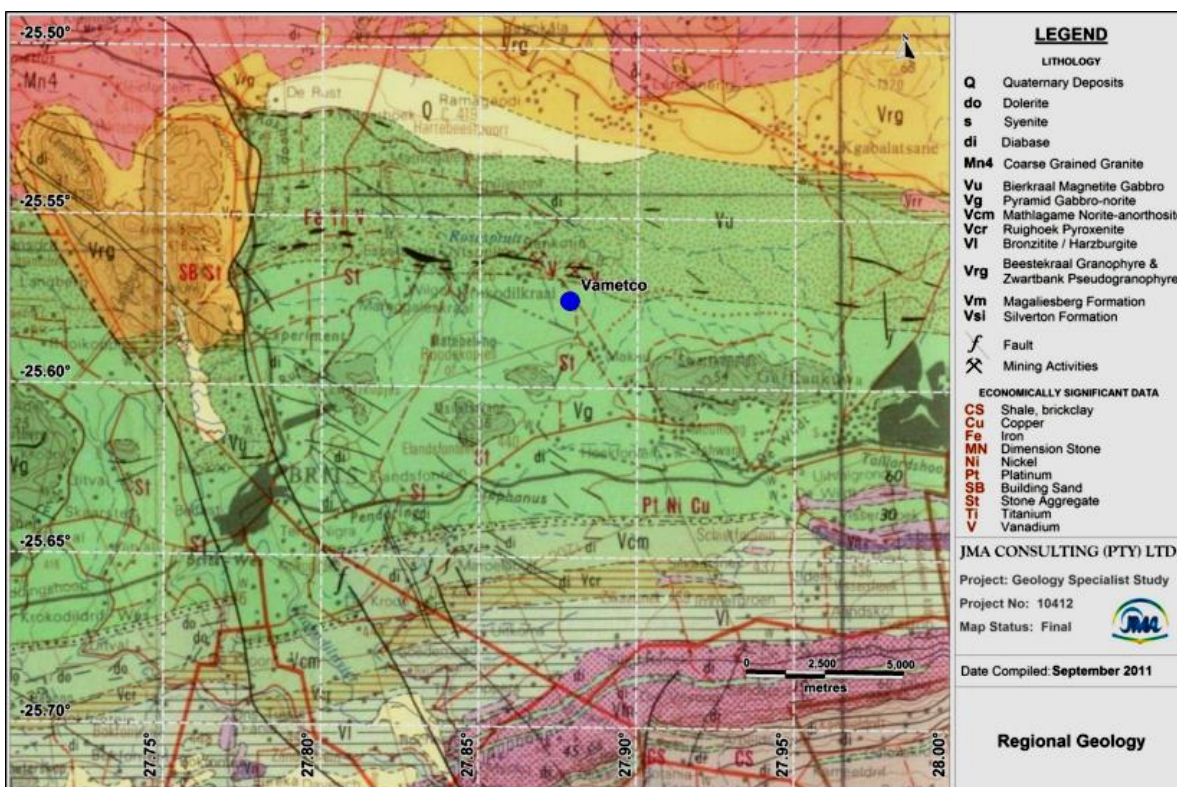


Figure 4: Geological map (1:250 000 Geological Map Series of the Republic of South Africa - Sheet 2526 Rustenburg, 1981) showing the position of the study area

RECOMMENDATION

In my opinion this development will not negatively affect palaeontological heritage and suggest that, from a paleontological perspective, this development should proceed. If, in the extremely unlikely event that fossils are exposed in Tertiary-Quaternary alluvial deposits, it will create a unique opportunity to explore the area for fossils.

It is thus recommended that, should fossils be exposed, a qualified palaeontologist be contacted to assess the exposure for fossils so that the necessary rescue operations are implemented. Depending on the nature of the fossils discovered, this could entail excavation and removal to a registered palaeontological museum collection. A list of professional palaeontologists is available from South African Heritage Resources Agency (SAHRA).

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