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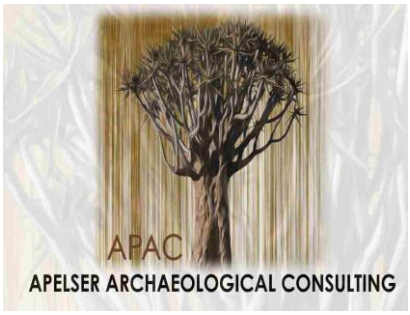

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APAC022/121 **2022-11-30**

To: Me. Natasha Higgit
South African Heritage Resource Agency
P O Box 4637
Cape Town
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RE: Motivation for Exemption from a full Phase I Heritage Impact Assessment – Salene Manganese Gloria Mine Grab Sampling

APelser Archaeological Consulting cc (APAC cc) was appointed by Prescali Environmental Consultants (Pty) Ltd (appointed by Salene Manganese (Pty) Ltd) to conduct a Heritage Impact Assessment as part of an Environmental Authorisation Application for proposed prospecting activities on various properties near Hotazel, Northern Cape Province (NC30/5/1/1/2/13138 PR).

Background to the Project

As part of the EA Application and proposed prospecting activities grab samples will be taken on existing dumps (overburden/waste rock), with 10 samples taken within a 500m radius of 12 identified points.

"In terms of the National Heritage Resources Act, no 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that prior to development it is incumbent on the developer to ensure that a Heritage Impact Assessment is done. This must include the archaeological component (Phase 1) and any other applicable heritage components. Appropriate (Phase 2) mitigation, which involves recording, sampling and dating sites that are to be destroyed, must be done as required.

The quickest process to follow for the archaeological component is to contract an accredited specialist (see the web site of the Association of Southern African Professional Archaeologists www.asapa.org.za) to provide a Phase 1 Archaeological Impact Assessment Report. This must be done before any large development takes place. The Phase 1 Impact Assessment Report will identify the archaeological sites and assess their significance. It should also make recommendations (as indicated in section 38) about the process to be followed. For example, there may need to be a mitigation phase (Phase 2) where the specialist will collect or excavate material and date the site. At the end of the process the heritage authority may give permission for destruction of the sites.

Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, a Palaeontological Desk Top study must be undertaken to assess whether or not the development will impact upon palaeontological resources - or at least a letter of exemption from a Palaeontologist is needed to indicate that this is unnecessary. If the area is deemed sensitive, a full Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary. Please note that a nationwide fossil sensitivity map is available on SAHRIS to assist applicants with determining the fossil sensitivity of a study area.

If the property is very small or disturbed and there is no significant site the heritage specialist may choose to send a letter to the heritage authority motivating for exemption from having to undertake further heritage assessments. Any other heritage resources that may be impacted such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewscapes must also be assessed."

Last mentioned option was decided on for this project which entailed desktop research as part of the assessment. No fieldwork was undertaken as part of this assessment and the Motivation for Exemption from a Full Phase 1 HIA is provided based on aerial images (Google Earth) of the areas, as well as a literature review of the archaeology and history of the study area.

Relevant Legalisation

Aspects concerning the conservation of cultural resources are dealt with mainly in two Acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

The National Heritage Resources Act

According to the Act the following is protected as cultural heritage resources:

a. Archaeological artefacts, structures and sites older than 100 years;
b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography;
c. Objects of decorative and visual arts;
d. Military objects, structures and sites older than 75 years;
e. Historical objects, structures and sites older than 60 years;
f. Proclaimed heritage sites;
g. Grave yards and graves older than 60 years;
h. Meteorites and fossils; and
i. Objects, structures and sites of scientific or technological value.

The National Estate includes the following:

a. Places, buildings, structures and equipment of cultural significance;
b. Places to which oral traditions are attached or which are associated with living heritage;
c. Historical settlements and townscapes;
d. Landscapes and features of cultural significance;
e. Geological sites of scientific or cultural importance;
f. Sites of Archaeological and palaeontological importance;
g. Graves and burial grounds;
h. Sites of significance relating to the history of slavery; and
i. Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.).

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological

resources. According to Section 38 (1) of the Act an HIA must be done under the following circumstances:

a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length.
b. The construction of a bridge or similar structure exceeding 50m in length.
c. Any development or other activity that will change the character of a site and exceed 5 000m^2 or involve three or more existing erven or subdivisions thereof.
d. Re-zoning of a site exceeding 10 000m^2.
e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority.

Results of Desktop Heritage Assessment: Motivation for Exemption from a full Phase I Heritage Impact Assessment for the proposed Salene Manganese (Pty) Ltd Gloria Mine Prospecting Activities

Salene Manganese is proposing to conduct prospecting activities for the following minerals:

Aluminium, Silver, Arsenic, Barium, Bismuth, Cerium (Rare Earths), Cadmium, Cobalt, Copper, Caesium, Potassium, Lanthanum (Rare Earths), Lithium, Magnesium, Molybdenum, Neodymium (Rare Earths), Nickel, Phosphorus, Lead, Palladium, Platinum, Rubidium, Sulphur, Scandium (Rare Earths), Silicon, Strontium, Tantalum, Titanium, Vanadium, Tungsten, Yttrium, Zinc and Rare Earths. The minerals Cerium (Rare Earths), Lanthanum (Rare Earths), Neodymium (Rare Earths), Tungsten, Silicon and Rubidium (Rare Earths) are excluded in the following Farms: Olive Pan 282, Gama 283, Smart 314 and Telele 12 as there are already accepted applications for the same minerals and land applied for. The minerals Lead, Cobalt, Zinc, Copper and Nickel Ore are excluded in the Farm Belgravia 264 as there is already an accepted application for the same minerals and land applied for.

The proposed prospecting activities will be located on the Farms Olive Pan 282, Gama 283, Telele 12, Dikgathlong 268, Dibiaghomo 226, Boshof 300, Roldraai 333, Drakenstein 263, East 270, Umtu 281, Olivewood 284, Mooidraai 310, Kongoni 311, Riviera 335, Smart 314, Middleplaats 332, Klipling 271, Hotazel 280, Epsom 285, Tigerpan 286, Botha 313, Mukulu 265, Gloria 266, Wessels 227, Goold 329, Adams 328, Belgravia 264, Mamatwan 331, Sinterfontein 84, York 279, Devon 277 and Perth 276. These properties lie within the Administrative District of Kuruman near Hotazel in the Northern Cape.

The study area and the areas where the grab samples will be taken has been heavily impacted by previous and on-going mining activities and if any cultural heritage sites, features or material (archaeological and/or historical) did exist here in the past it would have been extensively disturbed or completely destroyed as a result.

Figure 1: General location of the study and application area (Google Earth 2022).

Figure 2: Closer view of the study & grab sampling area. The 12 different locations where the sampling is proposed are shown in the circled areas (Google Earth 2022).

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools. In South Africa the Stone Age can be divided in basically into three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago
Middle Stone Age (MSA) less than 300 000 – 20 000 years ago
Later Stone Age (LSA) 40 000 years ago – 2000 years ago

It should also be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

According to David Morris of the McGregor Museum in Kimberley the archaeology of the Northern Cape is rich and varied, covering long spans of human history. The Karoo is particularly bountiful. Some areas are richer than others, and not all sites are equally significant. The significance of sites encountered in the study area may be assessed against previous research in the region and subcontinent. The region's remoteness from research institutions accounts for a relative lack of archaeological research in the area. The area has probably been relatively marginal to human settlement for most of its history, yet it is in fact exceptionally rich in terms of Stone Age sites and rock art, as a relatively few but important studies have shown (Morris 2006).

Stone Age sites are known to occur in the larger geographical area, including the well-known Wonderwerk Cave in the Kuruman Hills, Tsantsabane, an ancient specularite working on the eastern side of Postmasburg, Doornfontein, another specularite working north of Beeshoek and a cluster of important Stone Age sites near Kathu. Additional specularite workings with associated Ceramic Later Stone Age material and older Fauresmith sites (early Middle Stone Age) are known from Lylyfeld, Demaneng, Mashwening, King, Rust & Vrede, Paling, Gloucester and Mount Huxley to the north. Rock engraving sites are known from Beeshoek and Bruce (Morris 2005: 3). Studies done by Kusel (2009) and by Pelser & Van Vollenhoven (2011) at Black Rock and Gloria Mines near Hotazel, not far from the study area did reveal a number of Early to Later Stone Age artefacts and sites in the area. A single stone tool was identified during a 2012 site assessment on the farm Adams 328 close to UMK by the author of this report (Pelser 2012: 17-18). During a 2019 assessment for a PRA in the Hotazel area the author also identified and recorded a fairly large number of Stone Age surface scatter sites (Pelser 2019: 20-25), but these were in areas undisturbed or impacted by any mining or other activities.

If any Stone Age material are to be present in the study and sampling areas then it will most likely be single or small scatters of material in an out of context and disturbed setting.

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artefacts. In South Africa it can be divided in two separate phases (Bergh
1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D.
Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.
Middle Iron Age (MIA) 900 – 1300 A.D.
Late Iron Age (LIA) 1300 – 1840 A.D.

The expansion of early farmers, who, among other things, cultivated crops, raised livestock, made ceramic containers (pots), mined ore and smelted metals, occurred in this area between AD 400 and AD 1100 and brought the Early Iron Age (EIA) to South Africa. They settled in semi-permanent villages (De Jong 2010: 35). While there is some evidence that the EIA continued into the 15th century in the South
African Lowveld, on the escarpment it had ended by AD1100. The Highveld became active again from the 15th century onwards due to a gradually warmer and wetter climate. From here communities spread to

other parts of the interior. This later phase, termed the Late Iron Age (LIA), was accompanied by extensive stonewalled settlements, such as the Thlaping capital Dithakong, 40 km north of Kuruman (De Jong 2010: 35-36).

Sotho-Tswana and Nguni societies, the descendants of the LIA mixed farming communities, found the region already sparsely inhabited by the Late Stone Age (LSA) Khoisan groups, the so-called 'first people'. Most of them were eventually assimilated by LIA communities and only a few managed to survive, such as the Korana and Griqua. This period of contact is sometimes known as the Ceramic Late Stone Age and is represented by the Blinkklipkop specularite mine near Postmasburg and finds at the Kathu Pan (De Jong 2010: 36).

No Iron Age sites, features or material are known to occur or to have occurred in the specific study & proposed grab sampling areas.

Factors such as population expansion, increasing pressure on natural resources, the emergence of power blocs, attempts to control trade and penetration by Griquas, Korana and white communities from the south-west resulted in a period of instability in Southern Africa that began in the late 18th century and effectively ended with the settlement of white farmers in the interior. This period, known as the *difaqane* or *mfecane*, also affected the Northern Cape Province, although at a relatively late stage compared to the rest of Southern Africa. Here, the period of instability, beginning in the mid-1820s, was triggered by the incursion of displaced refugees associated with the Tlokwa, Fokeng, Hlakwana and Phuting tribal groups.

The *difaqane* coincided with the penetration of the interior of South Africa by white traders, hunters, explorers and missionaries. The first was P.J.Truter's and William Somerville's journey of 1801, which reached Dithakong at Kuruman. They were followed by Cowan, Donovan, Burchell and Campbell and resulted in the establishment of a London Mission Society station near Kuruman in 1817 by James Read. The Great Trek of the Boers from the Cape in 1836 brought large numbers of Voortrekkers up to the borders of large regions known as Bechuanaland and Griqualand West, thereby coming into conflict with many Tswana groups and also the missionaries of the London Mission Society. The conflict between Boer and Tswana communities escalated in the 1860s and 1870s when the Korana and Griqua communities became involved and later also the British government. The conflict mainly centred on land claims by various communities. For decades the western border of the Transvaal Boer republic was not fixed. Only through arbitration (the Keate Arbitration), triggered by the discovery of gold at Tati (1866) and diamonds at Hopetown (1867) was part of the western border finally determined in 1871. Ten years later, the Pretoria Convention fixed the entire western border, thereby finally excluding Bechuanaland and Griqualand West from Boer domination (De Jong 2010: 36).

The first Geologist to have surveyed the Northern Cape was Dr. A.W.Rogers of the Geological Commission of the Cape Colony in 1906. One of the features he noted was a small hill called Black Rock and reported on the presence of manganese ore at the base of the hill. In 1940 Associated Manganese Mines of South Africa acquired the manganese outcrop known as Black Rock and shortly afterwards started mining the deposit. The ore is extracted by both underground and open cast operations. Mines in the larger area (over and above UMK) include Wessels, N'Chwaning I, N'Chwaning II, Black Rock, Hotazel, Langdon, Devon, Perth, Smart, Adams, Mamatwan (largest opencast mine in the area), Middleplaats and Gloria. **Gloria Mine was opened in 1978** (Kusel et.al. 2009: 3).

There are no known recent historical sites or features such as homestead/farmstead remains (including graves or informal cemeteries) in the study area or areas where the grab sampling work is proposed. If there were any prior to the mining activities commencing in the late 1970's, these would have been extensively disturbed or more likely destroyed. Any Mining related infrastructure here would be less than 60 years of age as well and from a Cultural Heritage point of view of Low Significance.

The aerial images (Google Earth) of the study & grab sampling areas clearly show the heavy impact of mining activities since the late 1970's. The earliest aerial image dates to 1984. Grab samples will be taken on existing dumps (overburden/waste rock), within a 500m radius from the 12 point identified. The possibility of finding any intact archaeological and/or historical sites, features or material in these heavily impacted locations is extremely unlikely. If any are present and found it would likely be individual or small amounts of artefacts such as Stone Age stone tools, out of context and in un-stratified deposits.

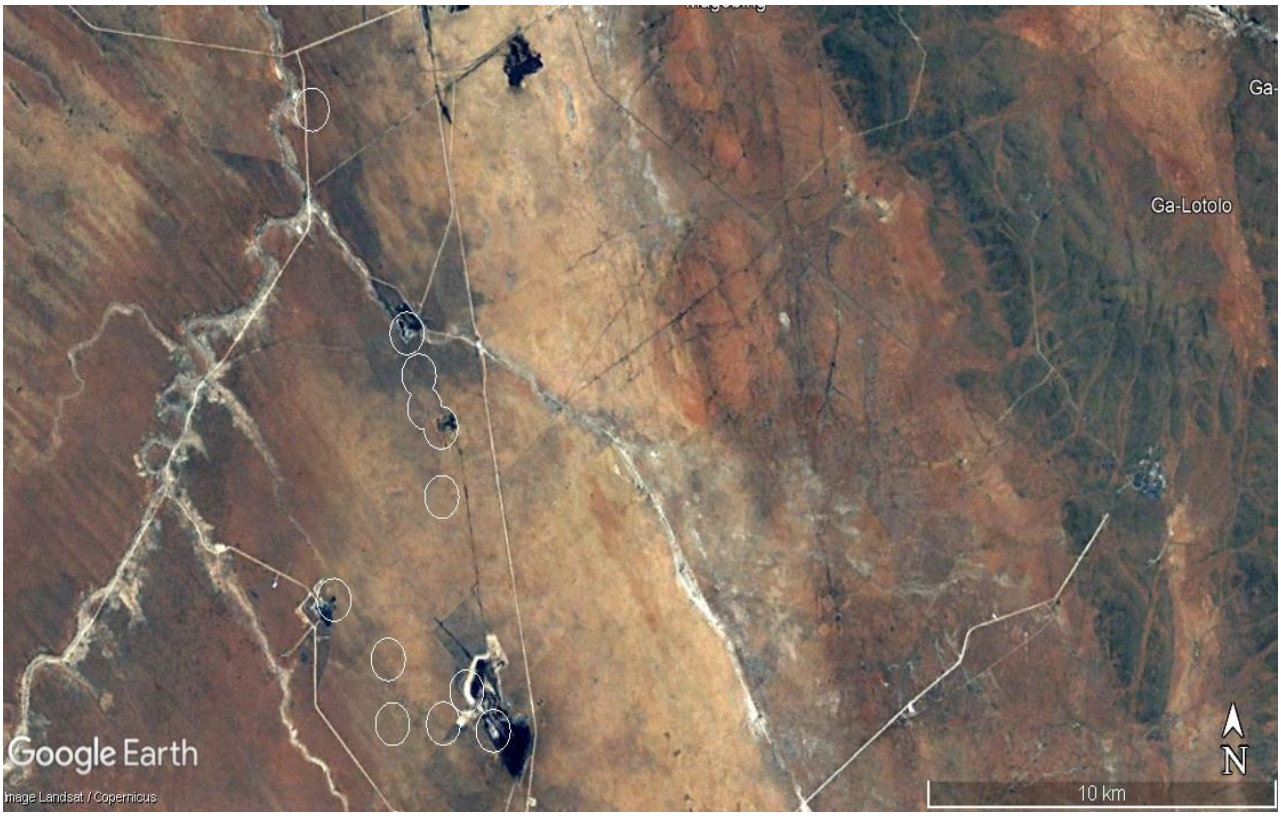

Figure 3: Closer view of the area in 1984. Although mining activities had commenced by then a number of the sampling areas had not yet been impacted (Google Earth 2022).

Figure 4: By 2004 the mining impacts had increased (Google Earth 2022).

Figure 5: This 2014 image shows the increased & expanding mining operation's impacts on the study & proposed sampling area (Google Earth 2022).

Finally, to conclude based on all the evidence obtained during the desktop study and the information provided, it is therefore recommended that Exemption from undertaking a full Phase I Heritage Impact Assessment for the proposed Gloria Mine prospecting work and grab sampling work in the selected areas be granted to the applicants. The possibility of any impacts on existing archaeological and/or historical sites, features or material are deemed to be highly unlikely.

The following needs to be taken into consideration however:

The subterranean nature of cultural heritage (archaeological and/or historical) resources must always be kept in mind. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward. This could include previously unknown and unmarked graves and/or cemeteries.

Should there be any questions or comments on the contents of this document please contact the author as soon as possible.

Kind regards

Anton Pelser

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