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A HERITAGE ASSESSMENT STUDY FOR IMPALA PLATINUM LIMITED'S (IMPALA) PROPOSED PROSPECTING DRILL HOLES ON THE FARM DIEPKUIL 116JQ IN THE RUSTENBURG DISTRICT IN THE NORTH-WEST PROVINCE

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EXECUTIVE SUMMARY

This heritage assessment study for Impala Platinum Ltd's (Impala) prospecting drill holes on the farm Diepkuil 116JQ in the Rustenburg District in the North-West Province was done according to Section 38 of the National Heritage Resources Act (No 25 of 1999).

The aims with the heritage assessment were the following, namely:

- To establish whether any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (Box 1) do occur in the Impala Project Area and, if so, to determine the nature, the extent and the significance of these remains.
- To determine whether such remains will be affected by the proposed Impala Project and, if so, to determine appropriate mitigation (management) measures for those heritage resources which may be affected by the project.

The heritage survey and assessment for Impala's proposed prospecting drill holes revealed none of the types and ranges of heritage resources as outlined in Section 38 of the NHRA (No 25 of 1999). Neither will the prospecting project affect any of the heritage resources which have been identified during previous surveys in the larger area.

There is consequently no reason from a heritage point of view why the prospecting drill holes cannot be implemented.

If any unexpected heritage resources may be uncovered during the prospecting project the prospecting team must demarcate such heritage resources with cautionary tape and contact an archaeologist that is accredited with the Association for Southern African Professional Archaeologists (ASAPA) to record the remains and to determine whether it may be negatively influenced by the prospecting project, and if so, determine appropriate mitigation measures.

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General remark

It is possible that this heritage assessment may have missed heritage resources in the Impala Project Area as heritage resources may occur below the surface of the earth and may only be exposed once development commences.

If any heritage resources of significance is exposed during the Impala Project the South African Heritage Resources Authority (SAHRA) should be notified immediately, all

development activities must be stopped and an archaeologist accredited with the Association for Southern African Professional Archaeologist (ASAPA) should be notified in order to determine appropriate mitigation measures for the discovered finds. This may include obtaining the necessary authorisation (permits) from SAHRA to conduct the mitigation measures.

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1 INTRODUCTION

This heritage survey was done for Impala Platinum Limited's (Impala) proposed prospecting drill holes on the farm Diepkuil 116JQ in the Rustenburg District in the North West Province.

Previous heritage surveys that were conducted for developers in the Rustenburg District in the North-West Province indicated that the most common types and ranges of heritage resources which exist in this part of the province consists of stone walled sites which date from the Late Iron Age. However, various types and ranges of heritage resources that qualify as part of South Africa's 'national estate' as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) do occur across the North-West Province (see Box 1, next page).

Box 1: Types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999).

The National Heritage Resources Act (Act 25 of 1999, Section 3) outlines the following types and ranges of heritage resources that qualify as part of the national estate:

- 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 natural features of cultural significance;
- e. Geological sites of scientific or cultural importance;
- f. Archaeological and palaeontological sites;
- g. Graves and burial grounds including-
 - i. Ancestral graves;
 - ii. Royal graves and graves of traditional leaders;
 - iii. Graves of victims of conflict;
 - iv. Graves of individuals designated by the Minister by notice in the Gazette;
 - v. Historical graves and cemeteries; and
 - vi. Other human remains which are not covered in terms of the Human Tissue Act (Act 65 of 1983);
- h. Sites of significance relating to the history of slavery in South Africa;
- i. Moveable objects, including -
 - i. Objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, material, meteorites and rare geological specimens;
 - ii. Objects to which oral traditions are attached or which are associated with living heritage;
 - iii. Ethnographic art and objects;
 - iv. Military objects;
 - v. Objects of decorative or fine art;
 - vi. Objects of scientific or technological interest; and
 - vii. Books, records, documents, photographs, positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act (Act 43 of 1996).

The National Heritage Resources Act (Act 25 of 1999, Sec 3) also distinguishes nine criteria for a place and/or object to qualify as 'part of the national estate if they have cultural significance or other special value ...'. These criteria are the following:

- a. Its importance in the community, or pattern of South Africa's history;
- b. Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- c. Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- d. Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- e. Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- f. Its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- g. Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- h. Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and/or
- i. Its significance relating to the history of slavery in South Africa.

2 DETAILS OF THE SPECIALIST

Profession: Archaeologist, Museologist (Museum Scientists), Lecturer, Heritage Guide Trainer and Heritage Consultant

Qualifications:

BA (Archaeology, Anthropology and Psychology) (UP, 1976)

BA (Hons) Archaeology (distinction) (UP, 1979)

MA Archaeology (distinction) (UP, 1985)

D Phil Archaeology (UP, 1989)

Post Graduate Diploma in Museology (Museum Sciences) (UP, 1981)

Work experience:

Museum curator and archaeologist for the Rustenburg and Phalaborwa Town Councils (1980-1984)

Head of the Department of Archaeology, National Cultural History Museum in Pretoria (1988-1989)

Lecturer and Senior lecturer Department of Anthropology and Archaeology, University of Pretoria (1990-2003)

Independent Archaeologist and Heritage Consultant (2003)

Accreditation: Member of the Association for Southern African Professional Archaeologists. (ASAPA)

Summary: Julius Pistorius is a qualified archaeologist and heritage specialist with extensive experience as a university lecturer, museum scientist, researcher and heritage consultant. His research focussed on the Late Iron Age Tswana and Lowveld-Sotho (particularly the Bamalatji of Phalaborwa). He has published a book on early Tswana settlement in the North-West Province and has completed an unpublished manuscript on the rise of Bamalatji metal workings spheres in Phalaborwa during the last 1 200 years. He has excavated more than twenty LIA settlements in North-West and twelve IA settlements in the Lowveld and has mapped hundreds of stone walled sites in the North-West. He has written a guide for Eskom's field personnel on heritage management. He has published twenty scientific papers in academic journals and several popular articles on archaeology and heritage matters. He collaborated with environmental companies in compiling State of the Environmental Reports for Ekurhuleni, Hartebeespoort and heritage management plans for the Magaliesberg and Waterberg. Since acting as an independent consultant he has done approximately 800 large to small heritage impact assessment reports. He has a longstanding working relationship with Eskom, Rio Tinto (PMC), Rio Tinto (EXP), Impala Platinum, Angloplats (Rustenburg), Lonmin, Sasol, PMC, Foskor, Kudu and Kelgran Granite, Bafokeng Royal Resources, Pilanesberg Platinum Mine (PPM) etc. as well as with several environmental companies.

3 DECLARATION OF INDEPENDENCE

I, Julius CC Pistorius, declare that:

I act as the independent environmental practitioner in this application

I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant

I declare that there are no circumstances that may compromise my objectivity in performing such work;

I have expertise in conducting environmental impact assessments, including knowledge of the National Heritage Resources Act (No 25 of 1999) and any guidelines that have relevance to the proposed activity;

I will comply with the Act, regulations and all other applicable legislation;

I will take into account, to the extent possible, the matters listed in regulation 8 of the regulations when preparing the application and any report relating to the application;

I have no, and will not engage in, conflicting interests in the undertaking of the activity;

I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;

I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;

I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;

I will keep a register of all interested and affected parties that participated in a public participation process; and

I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not

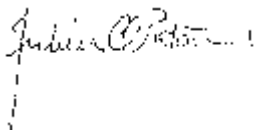
all the particulars furnished by me in this form are true and correct;

will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and

I realise that a false declaration is an offence in terms of regulation 71 and is punishable in terms of section 24F of the Act.

Disclosure of Vested Interest

I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2010.



Signature of the environmental practitioner:
Private Consultant

Name of company:
22 July 2016

Date:

4 SCOPE OF WORK

Impala Platinum Limited (Impala) is proposing to drill two prospecting holes on the farm Diepkuil 116JQ in the Rustenburg District in the North West Province. It is possible that the prospecting drill holes may have an influence on any of the types and ranges of heritage resources as outlined in Section 38 of the National Heritage Resources Act (No 25 of 1999).

The aims with the heritage survey and assessment therefore were the following, namely:

- To establish whether any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (Box 1) do occur in the project area and, if so, to determine the nature, the extent and the significance of these remains.
- To determine whether such remains will be affected by the prospecting project and, if so, to determine appropriate mitigation (management) measures for those heritage resources which may be affected by the proposed project.

5 LEGAL FRAMEWORK

South Africa's heritage resources ('national estate') are protected by international, national and regional legislation which provides regulations, policies and guidelines for the protection, management, promotion and utilization of heritage resources. South Africa's 'national estate' includes a wide range of various types of heritage resources as outlined in Section 3 of the National Heritage Resources Act (NHRA, Act No 25 of 1999) (see Box 1).

According to the NHRA (Act No 25 of 1999) heritage resources are categorised using a three-tier system, namely Grade I (national), Grade II (provincial) and Grade III (local) heritage resources.

At the provincial level, heritage legislation is implemented by Provincial Heritage Resources Agencies (PHRAs) which apply the National Heritage Resources Act (Act 25 of 1999) together with provincial government guidelines and strategic frameworks. Metropolitan or Municipal (local) policy regarding the protection of cultural heritage resources is also linked to national acts and is implemented by the South African Heritage Resources Agency (SAHRA) and the Provincial Heritage Resources Agencies.

At a national level heritage resources are dealt with by the National Heritage Council Act (Act No 11 of 1999) and the National Heritage Resources Act (Act No 25 of 1999).

5.1 Legislation relevant to heritage resources

The identification, evaluation and assessment of heritage resources in South Africa are regulated by the following legislation:

- National Environmental Management Act (NEMA) Act 107 of 1998
- National Heritage Resources Act (NHRA) Act 25 of 1999
- Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002

5.2 The National Heritage Resources Act (NHRA)

According to the NHRA (Act No 25 of 1999) the 'national estate' comprises the following (see Box 1):

- 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. Graveyards, burial grounds and graves older than 60 years
- h. Meteorites and fossils
- i. Objects, structures and sites of scientific or technological value.

Elaborating on the above the 'national estate' also includes (Box 1):

1. Places, buildings, structures and equipment of cultural significance
2. Places to which oral traditions are attached or which are associated with living heritage
3. Historical settlements and townscapes
4. Landscapes and features of cultural significance
5. Geological sites of scientific or cultural importance
6. Archaeological and paleontological sites of importance
7. Sites of significance relating to the history of slavery
8. Movable objects (e.g. archaeological, paleontological, meteorites, geological specimens, military and ethnographic objects, books etc.)

5.3 Heritage Impact Assessment studies

According to Section 38 of the National Heritage Resources Act (Act No 25 of 1999) a Heritage Impact Assessment (HIA) process must be followed under the following circumstances:

- The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length

- The construction of a bridge or similar structure exceeding 50m in length
- Any development or activity that will change the character of a site and which exceeds 5 000m² or which involve three or more existing erven or subdivisions thereof
- Re-zoning of a site exceeding 10 000 m²
- Any other category provided for in the regulations of SAHRA or a provincial heritage authority

5.4 Regulations with regard to heritage resources

The regulations outlined below are applicable to the types and ranges of heritage resources which are the most common in the region where the heritage study was conducted, namely:

5.4.1 Buildings and structures

According to Section 34(1) of the NHRA (Act No 25 of 1999) no person may alter (demolish) any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or any other facility made by people and which is fixed to land and which includes fixtures, fittings and equipment associated with such structures.

Alter means any action which affects the structure, appearance or physical properties of a place or object, whether by way of structural or any other works such as painting, plastering, decorating, etc..

5.4.2 Graves and burial grounds

Graves and burial grounds are divided into the following:

- a. ancestral graves
- b. royal graves and graves of traditional leaders

- c. graves of victims of conflict
- d. graves designated by the Minister
- e. historical graves and cemeteries
- f. human remains

In terms of Section 36(3) of the NHRA (Act No 25 of 1999) no person, without a permit issued by the relevant heritage resources authority, may:

- a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- b) destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Unidentified graves are handled as if they are older than 60 years until proven otherwise.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the Ordinance on Excavations (Ordinance no. 12 of 1980) (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated) before exhumation can take place. Human remains can only be handled by a registered undertaker or an institution declared under the Human Tissues Act (Act 65 of 1983 as amended).

5.4.3 Archaeology, palaeontology and meteorites

Section 35(4) of the NHRA (Act No 25 of 1999) deals with archaeology, palaeontology and meteorites and states that no person without a permit issued by the responsible heritage resources authority (national or provincial) may:

- destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site or any meteorite;
- destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological material or object or any meteorite;
- trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or paleontological material or object, or any meteorite; or bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological material or objects, or use such equipment for the recovery of meteorites.
- alter or demolish any structure or part of a structure which is older than 60 years.

Heritage resources may only be disturbed or moved by an archaeologist after being issued with a permit received from the South African Heritage Resources Agency (SAHRA). In order to demolish heritage resources the developer has to acquire a destruction permit by from SAHRA.

6 METHODOLOGY

The heritage survey and assessment was conducted by means of the following:

6.1 Desktop study

Literature relating to the pre-historical and the historical unfolding of the Rustenburg District was reviewed. This review provides a broad chronological overview of the region ranging from pre-historical times to the historical period including the development of platinum and chrome mining in the region. It also refers to the Bafokeng and other Tswana clans who, together with the colonial Voortrekkers, were the most influential pre-historic and historical groups in the region. This contextual evidence contributes to a better understanding of the identity and meaning of heritage sites which may occur in and near the Impala Project Area.

A number of heritage studies which were done for developers near the project area also provided information regarding the general heritage characteristics of the larger project area (see 'Bibliography relating to earlier heritage studies', Part 11).

The desktop study also involved consulting heritage data banks maintained at institutions such as the North-West Provincial Heritage Resources Agency in Mafekeng, the Archaeological Data Recording Centre at the National Flagship Institute (Museum Africa) in Pretoria and the national heritage resources register at the South African Heritage Resources Agency (SAHRIS) in Cape Town.

The Impala project area was also studied by means of maps on which it appears (Sun City 2527AC 1: 50 000 topographical maps; 2527 Pretoria 1:250 000 map and Google imagery).

6.2 Fieldwork and research

The prospecting drill holes and its surroundings were surveyed by means of pedestrian surveys. Track logs which were registered with a GPS instrument outline the pedestrian survey. The project and larger area was also surveyed during at least

one occasion in the past, namely (see 'Bibliography relating to earlier heritage studies', Part 10).



Figures 01(a) and (b) - Track pathways registered with a GPS outlines the routes that were followed during the pedestrian surveys (above and below).



6.3 Assumptions and limitations

It is possible that the heritage survey and assessment may have missed heritage resources in the project area as heritage sites may occur below the surface of the earth and may only be exposed once development commences.

If any heritage resources of significance is exposed during the prospecting project the SAHRA should be notified immediately, all development activities must be stopped and an archaeologist accredited with the ASAPA should be notify in order to determine appropriate mitigation measures for the discovered finds. This may include obtaining the necessary authorisation (permits) from SAHRA to conduct the mitigation measures.

7 THE PROJECT AREA

7.1 Location

The project area is located on the farm Diepkuil 116JQ approximately 25km to the north of Rustenburg in the North West Province. The two prospecting drill holes respectively are located near the northern boundary of the farm (DK6) and towards the central part of the farm close to its eastern boundary (DK5).

The village of Diepkuil is located directly to the east of the prospecting drill holes. Further to the south is the Ga Nape mountain range with its extensive occurrence of stone walled sites and further to the north-west the three smaller mountains of Tlhatlhane in the north, Tlhatlhe in the centre and Sefakwe in the south. These mountains are also home to historical and pre-historical Sotho-Tswana villages. The contemporary villages of Maile and Tsitsing are located to the north-west and to the south-east of Diepkuil on opposite sides of the R556 which runs between Rustenburg and Sun City.

The Diepkuil cemetery is situated on the western outskirts of the village of Diepkuil in close proximity of the northern border of Diepkuil 116JQ (Sun City 2527AC 1: 50 000 topographical maps; 2527 Pretoria 1:250 000 map and Google imagery) (Figure 2).

7.2 The proposed prospecting drill holes

The proposed prospecting drill holes comprise the following:

- DK5 is located to the west of the southern tip of the village of Diepkuil. The drill hole is situated west of a small dry stream on a flat stretch of turf veld which is partly devoid of any vegetation cover.
- DK6 is located near the northern boundary of Diepkuil 116JQ and to the west of the large formal Diepkuil cemetery (Figure 21).

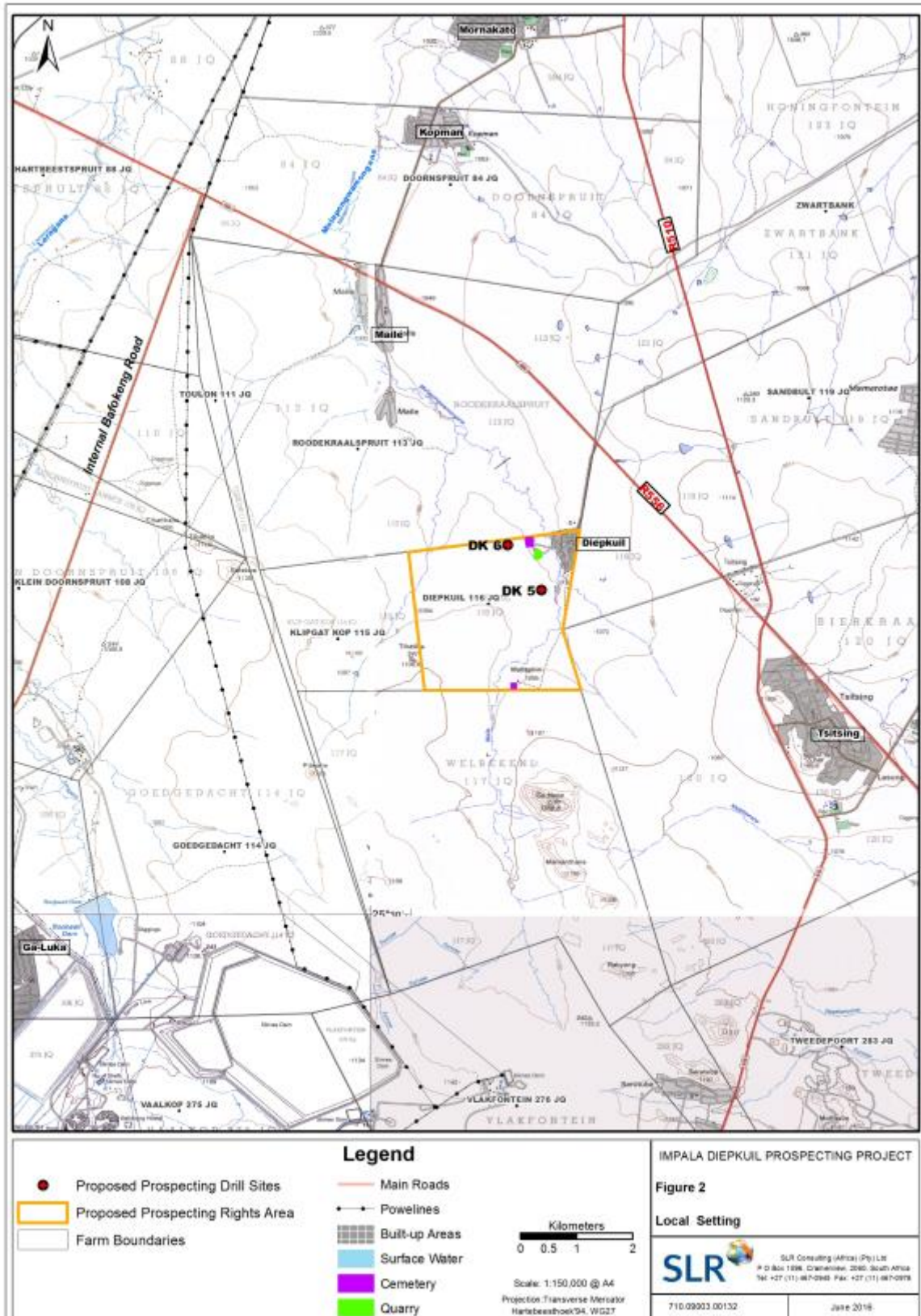


Figure 2- Regional setting for Impala Platinum’s proposed prospecting drill holes on Diepkuil 116JQ north of Rustenburg in the North-West Province (above).

7.3 Contextualising the Project Area

Several studies for developers have been conducted in the larger project area some of which are listed in Part 11 'Select Bibliography'. These studies have indicated that the most common heritage resources which occur in the region are the following:

- Stone walled sites which date from the Late Iron Age which can be associated with various pre-historical and historical Tswana spheres of influence.
- Formal and informal graveyards which can be associated with colonial farmers and farm workers.

Heritage resources which are scarce in the larger Project Area include the following:

- Stone Age sites with dense concentrations of stone tools on the surface of the land.
- Historical platinum and chrome mining activities which sometimes are associated with limited infrastructure.

The following overview of pre-historical, historical and cultural evidence outlines the types and range of heritage resources which do occur across the larger Project Area.

7.3.1 Stone Age and rock art sites

Stone Age sites are marked by stone artefacts that are found scattered on the surface of the earth or as parts of deposits in caves and rock shelters. The Stone Age is divided into the Early Stone Age (ESA) (covers the period from 2.5 million years ago to 250 000 years ago), the Middle Stone Age (MSA) (refers to the period from 250 000 years ago to 22 000 years ago) and the Late Stone Age (LSA) (the period from 22 000 years ago to 200 years ago).

The project area is not known to contain significant numbers of Stone Age sites from any of the different periods identified for the Stone Age. The insignificant amount of information about Stone Age sites can partly be attributed to the fact that the divide between the Magaliesberg and the Thaba-ea-Maralla range of mountains comprises outstretched grass veld with limited volcanic rock to manufacture stone tools. Stone

Age hunters probably utilized the grass veldt to hunt antelope and other small game but settled in the surrounding mountainous areas where there are adequate rock shelters and caves for semi-permanent settlements.

7.3.2 Iron Age sites

The Iron Age is associated with the first agro-pastoralists or farming communities who lived in semi-permanent villages and who practised metal working during the last two millennia. The Iron Age is usually divided into the Early Iron Age (EIA) (covers the 1st millennium AD) and the Later Iron Age (LIA) (covers the first 880 years of the 2nd millennium AD). It seems as if no Early Iron Age sites occur in the Rustenburg area. However, this region is known for its former and current occupation by clans of the Tswana people.

The oldest legends state that the Fokeng entered the Transvaal through Tweedepoort, under the leadership of Nape, the earliest known Fokeng chief. This was before c. AD1700. The group moved south-eastwards and settled on the banks of the Elands River (Kgetleng). Fokeng groups detached themselves from the main branch and moved southwards on different occasions settling along the Thaba-ea-Maralla mountain range at various places such as Serutube, Marakana, Tsitsing (Kanana), Thekwane and Photsaneng (or Bleskop) when they arrived in the Rustenburg district, from as early as the 17th century. Simultaneously, other clans occupied Phôkeng, the original town lands of what later became Rustenburg and the foothills of the Magaliesberg. The Fokeng then gradually expanded their influence and presence over the great divide between the Magaliesberg in the west and the Thaba-ea-Maralla mountain range in the east (Môkgatle 1971, Coertze 1987).

Sotho-Tswana clans such as the Tlôkwa and Kgatla occupied the Pilanesberg further to the north whilst the Kwena Modimosana chiefdoms of Mmatau and Ramanamela occupied the mega stone walled complexes known as Molokwane and Bôitsemagano to the west of the Magaliesberg (Schapera 1942, Breutz 1954, 1968; Pistorius 1994, 1996). The Batlowa occupied the area directly to the north of the Project Area as they established their capitals at Marothodi and Pilwe (north-west) on the farm Vlakfontein 207JP (Breutz 1954, 1968). The Project Area therefore corresponds and

coincides with the former spheres of influence of the Bafokeng who lived further to the south and the Batlowa who lived further to the north. This occupation occurred at mountains and kopjes in the region from as early as the Late Iron Age (17th century to the 19th century), during the Historical Period (second half of the 19th century to the 20th century) and in the more recent past (the last sixty years).

Numerous pre-*difaqane* and *difaqane* wars took place in the Central Bankeveld during the last quarter of the 18th century and the first three decades of the 19th century. These wars led to the displacement of large numbers of Tswana clans in the Bankeveld. Refugee sites occupied by dislodged Tswana became a common sight (Lye 1975). The Matabele of Mzilikazi caused chaos and havoc in the Bankeveld. The Matabele established several settlement complexes in this region from whence they maintained a grip on the indigenous population. One of these Zulu/Nguni residences (*imis*) and military kraals (*amakhanda*) was discovered during an archaeological survey in the newly developed Thlabane-West suburb, north of Rustenburg (Pistorius 1996). The Matabele intermarried with the Fokeng. One of Mzilikazi's sons, Nkulumane, was buried in Phôkeng. His grave is today wrongly indicated as 'Mzilikazi's grave' in the main street in Phôkeng (Rasmussen 1978; Pistorius 1997a, 1997b & 1998).

7.3.3 Remains relating to mining heritage

The earliest mining activities in South Africa which were done by Colonists were confined to the mining for salt, lead and limestone. Gold mining followed in the second half of the 19th century whilst the mining for other minerals followed after the discovery of the platinum bearing deposits in the Merensky Reef in the late 19th century (Wagner 1973).

Andries Lombaard's discovery of platinum nuggets in the Moopetsi River on the farm Maandagshoek in the Steelpoort area in 1924 can be considered the initial discovery of the Merensky Reef.

The Merensky Reef occurs, geographically, in the westerly and the easterly parts of the Bushveld Complex. These two limbs of the Complex are confined to the North-

West Province and to the Northern and the Mpumalanga Provinces of South Africa. The Merensky Reef has been traced for a total distance strike extent of 283km, 138 kilometres of which is in the eastern limb and 145 kilometres in the western limb of the Bushveld Complex. Vertical depths of 1 900m have been registered along the Reef, which also indicates its continuity.

The eastern limb of the Reef is geologically less well known than the western limb because mining activities in this part of the Reef have been limited.

During the great platinum boom of 1925 over fifty companies were started in the Union of South Africa to exploit the mineral resources of the Bushveld Complex and the Waterberg district. Oxidized ores were initially taken from the Merensky Reef. When these ores had been exhausted, they were replaced by sulphide ores (Wagner 1973). Chrome deposits also proved to be an important resource in the geology of Rustenburg and chrome mining activities accelerated during the last decades with the opening of several chrome mines in this area (Viljoen & Reimold 1999).

Remains associated with old platinum, chrome and other mining activities still exist in the Rustenburg District. These include shafts, headgear, infrastructure and even underground workings. Access to underground mines could be gained through incline shafts or adits dug into kopjes or into the level ground, at a slight angle.

The infrastructure of early 20th century platinum mines consisted mainly of cement and brick buildings covered with corrugated iron. Important plants included treatment plants, power plants as well as mills. Other conspicuous structures were the towering headgear of vertical shafts and incline shafts, a limited number of which may still be found in the Rustenburg, Potgietersrust and Lydenburg areas.

7.3.4 Remains from the historical period and from the recent past

The discontinuous nature of the northern tip of the Magaliesberg mountain range, near the Project Area, was important for the movement of people such as traders between the Western Bankeveld and the Central Bankeveld. During the 19th century

this part of the mountain served as a trail through which wagons passed on their way to Rustenburg and further to the east.

Traders such as Schoon and McLuckie (1829), who were the first white people to visit the area north of the Magaliesberg, missionaries such as Robert Moffat (1829), scientists such as Andrew Smith (1835) and the adventurer Cornwallis Harris (1836) trekked through the Magaliesberg (and over the farm Boschoek) on their way to the eastern part of the Central Bankeveld, where some of them visited Mzilikazi of the Matabele (Ndebele) who occupied at least three villages complexes in the region (Horn 1996, Harris 1963, Lye 1975).

Rustenburg is the third oldest town established by Colonials (Voortrekkers) in the former Transvaal area during the first half of the 19th century. The governor of the Zuid-Afrikaanse Republiek proclaimed the town in September 1851. The Transvaal Volksraad met in the town in 1852.

Other important decisions relating to the church and the state were also taken in this town. Rustenburg also served as the seat for the Zuid-Afrikaanse Republiek before Pretoria became the capitol (Bergh 1992, Pretorius 1967).

Paul Kruger, who served as President of the Zuid-Afrikaanse Republiek, owned the farm Boekenhoutfontein, south of Boschoek. His family occupied the farm during the second half of the 19th century. The buildings on the farm were destroyed during the Anglo-Boer War. The farm was declared a national heritage site in 1936 and has been preserved by the Simon van der Stel Foundation until recently.

8 THE HERITAGE SURVEY AND ASSESSMENT

8.1 Prospecting drill hole DK5

This prospecting borehole west of a dry stream is associated with a flat outstretched piece of turf veld. Part of the veld was cleared from indigenous trees and grass. It is possible that the general area may have been utilized for dry land agriculture in the more recent past. No heritage resources of significance (particularly graves) were observed within the proposed prospecting drill site area. This was confirmed by Joel Mautle a local herder who was encountered during the survey whilst he was grazing his cattle.



Figures 3 & 4- The general area where prospecting drill hole DK5 will be drilled on Diepkuil 116JQ (above and below).



8.1 Prospecting drill hole DK6

This prospecting bore hole west of Diepkuil's formal cemetery is associated with a flat outstretched piece of turf veld. Part of the veld closer to the cemetery was cleared from indigenous trees and grass. It is possible that this area may have been utilized in the more recent past as a piece of land on which dry land agriculture was practised. No heritage resources of significance were observed within the proposed prospecting drill sites.



Figures 5 & 6- The general area where prospecting drill hole DK6 will be drilled on Diepkuil 116JQ. The town of Diepkuil (in the far background) is situated to the east of the proposed prospecting drill site (above and below).

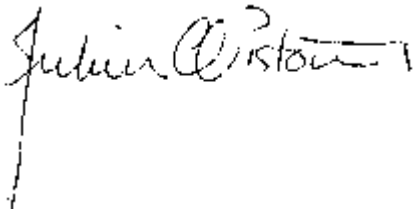


9 CONCLUSION AND RECOMMENDATIONS

The heritage survey and assessment for Impala's proposed prospecting drill holes on Diepkuil 116JQ revealed none of the types and ranges of heritage resources as outlined in Section 38 of the National Heritage Resources Act (No 25 of 1999). Neither will the prospecting project affect any of the heritage resources which have been identified during previous surveys in the larger area.

There is consequently no reason from a heritage point of view why the prospecting drill holes cannot be implemented.

If any unexpected heritage resources may be uncovered during the prospecting project the prospecting team must demarcate such heritage resources with cautionary tape and contact an archaeologist that is accredited with the Association for Southern African Professional Archaeologists (ASAPA) to record the remains and to determine whether it may be negatively influenced by the prospecting project, and if so, determine appropriate mitigation measures.

A handwritten signature in black ink, appearing to read 'Julius CC Pistorius', with a vertical line extending downwards from the end of the signature.

Dr Julius CC Pistorius
Archaeologist & Heritage Consultant
Member ASAPA

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