HERITAGE STATEMENT FOR THE ONVERWACHT PROSPECTING EMP, ONVERWACHT 97IS, 2629AC EVANDER, KINROSS, MPUMALANGA PROVINCE

RUSTENBURG PLATINUM MINES LIMITED

FEBRUARY 2014

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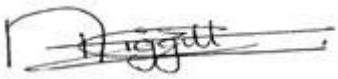
This document has been prepared by **Digby Wells Environmental**.

Report Title: **Heritage Statement for the Onverwacht Prospecting EMP, Onverwacht 97IS, 2629AC Evander, Kinross, Mpumalanga Province**

Project Number: **ANG2615**

Name	Responsibility	Signature	Date
Natasha Higgitt *Assistant Heritage Consultant*	Report writer		10 February 2014
Justin Du Piesanie *Heritage Consultant*	1st Reviewer		10 February 2014
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EXECUTIVE SUMMARY

Digby Wells Environmental (Digby Wells) has been appointed by Rustenburg Platinum Mines Limited (RPM), a subsidiary of Anglo American Platinum Limited (AAP) for the compilation and submission of an Environmental Management Plan (EMP) and Consultation Report in support of the approved application for a Prospecting Right (Ref No. MP 30/5/1/1/2/11684 PR). The Prospecting Right is held for numerous portions, and remaining extents of portions of the farm Onverwacht 97 IS, in the Magisterial District of Bethal. The EMP and associated Public Consultation will be compiled in accordance with the requirements of the Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA) and Regulations in terms of the MPRDA (GN R. 527 of 23 April 2004). The following Heritage study forms part of the EMP as per Section 39(3)(b)(iii) of the MPRDA.

The Heritage Statement Report (HSR) was completed using a text-based research methodology and a field-based screening survey of the project area. The findings presented in this Heritage Statement report indicated that the project area is located in a region where extensive agricultural activities have taken place since the 1950's. As such, the agricultural activities may have disturbed *in situ* heritage resources. A review of the historical aerial imagery of the project area indicated that three historical farmsteads are located within the project area. There is a high probability that burial grounds will be in the project area that would be associated with these farmsteads. According to the Genealogical Society of South Africa, a registered cemetery is located within the project area. During the screening survey, a small sandstone outcrop was identified. The geology of the area falls within the fossil rich *Madzaringwe Formation* .This suggests that the underlying rock formations hold a high potential for palaeontological remains. *Karoo Dolerite* is also present within the project area however this will not contain fossils, as it comprised of plutonic igneous rocks.

Based on the findings of this report, any *in situ* heritage that may be present within the project area is of high significance. These include historical structures, burials, palaeontological resources, rock art and any oral histories pertaining to the alleged instances of mistreatment and modern slavery practises. However, the relative low intensity of the prospecting activities will not significantly impact on heritage resources and direct impact on any heritage resources can be avoided.

Digby Wells is therefore of the opinion that Rustenburg Platinum Mines be exempted from all addition heritage assessments with the following provisions:

- High potential areas where certain types of tangible heritage resources can be expected must be avoided, including:
  - Thickets of trees and areas near occupied and abandoned settlements where burials may be expected;

- Sandstone outcrops and ridges – both in terms of the potential for fossil resources and rock art to occur (especially where shelters are evident);

- That a watching brief be implemented when drill sites are prepared and access routes to such sites are created; and

Chance Finds Procedures (CFP's) must be followed in the event that any heritage resources are identified during any site clearance and when access routes are created. SAHRA should be alerted as soon as possible so that appropriate action can be taken by a qualified specialist.

GLOSSARY OF ABBREVIATIONS AND TERMS

AAP	Anglo America Platinum Limited
ASAPA	Association of South Africa Professional Archaeologists
CFP	Chance Finds Procedures
EIA	Early Iron Age (300 AD – to 900 AD). A period characterised by small stock farming and early metal working (Huffman, 2007).
ESA	The Early Stone Age is defined by the occurrence of large hand axes and cleavers, which can be found in layers dating between ± 2 Million years BP and 250 000 years BP (Esterhuysen & Smith, 2007).
EMP	Environmental Management Plan
HIA	Heritage Impact Assessment
HSS	Heritage Screening Survey
IFC	International Finance Corporation
LIA	Late Iron Age (1400 AD – 1850 AD). A period defined by large migrations, displacement and unrest due to the *Difequane/Mfecane.* Interaction between white settlers and Bantu speakers increased leading to many battles over land (Huffman, 2007).
LSA	The Later Stone Age (LSA) is dated to approximately 20 000 years BP and can be characterized by the presence of microlithic technology and strong signs of ritual practises and complex societies, as well as rock art. Microlithics are produced from very fine-grained material such as quartz or chert, and often used as composite tools where they are hafted onto sticks for arrows. Herders or pastoralists emerge towards the end of the LSA, with ceramics and domesticated stock (Deacon & Deacon, 1999).
MIA	Middle Iron Age (900 AD - 1400 A.D). The rise and fall of kingdoms such as Schroda, K2 and Mapungubwe happened during this period. Large stratified settlements were established as new population groups moved into the country bringing with them trade and a development of material culture (Huffman, 2007)
MJS	Major Jackson Series

MPRDA	Mineral and Petroleum Resources Development Act 2002 (Act No. 28 of 2002)
MSA	The Middle Stone Age (MSA) of Southern Africa is between ±250 000 years to ±20 000 years BP. This period can be defined by the occurrence of blades and points produced from good quality raw material. Bone tools, shell beads and pendants, as well as the use of ochre are also present in the MSA (Deacon & Deacon, 1999)
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act, 1999 (Act 25 of 1999)
NID	Notice of Intent to Develop
RPM	Rustenburg Platinum Mines Limited
SAHRA	South African Heritage Resources Agency
SAHRIS	South Africa Heritage Resources Information Service
SEP	Stakeholder Engagement Plan
WAD	WITS Archaeological Site Database

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1 INTRODUCTION

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2 BACKGROUND INFORMATION OF PROJECT

2.1 Project Details

Prospecting activities will be undertaken over a period of five (5 years) and the application is for both invasive and non-invasive methods. Invasive methods are activities that result in land disturbances and comprise of diamond core drilling, sampling and sampling storage. Non-invasive methods are methods that do not cause disturbances to the land and include desktop research and include detailed geophysical surveys. It is anticipated that one (1) borehole, with a cleared area measuring 20 m x 20 m and respective access roads, will be drilled each year. Minerals that would be prospected for include Platinum Group Metals (PGMs) (palladium, rhodium, iridium, osmium and platinum), gold, copper, nickel, cobalt, silver and chrome.

2.1.1 Location Data

The project area falls under the jurisdiction of the Emalahleni Local Municipality and is situated in the Nkangala District Municipality of Mpumalanga (See Table 2-1). The towns closest to the project area include Kriel (14 km), Kinross (6 km) and Trichardt (15 km).

Table 2-1: Location details for the project

Province	Mpumalanga
Magisterial District	Bethal Magisterial District
District Municipality	Nkangala District Municipality
Local Municipality	Emalahleni Local Municipality
Nearest towns	Kriel, Kinross and Trichardt

1: 50 000 topographical map	2629AC Evander
Relative centre co-ordinates of the project area	-26.354634/ 29.134788
Recording method	Google Earth

2.1.2 Rezoning and/or land subdivision

No re-zoning will be required.

2.1.3 South African Heritage Resources Information System (SAHRIS) reference numbers

Table 2-2: SAHRIS reference numbers and case officer assigned to Witrand project

Case reference:	ANG2605_Onverwacht_Prospecting_EMP
Case ID:	4619
Case officer:	Not yet assigned

2.2 Relevant Contact Details

The contact details of the developer, consultant and landowners are provided in Table 2-3, to Table 2-5.

Table 2-3: Client contact details

ITEM	COMPANY CONTACT DETAILS
Company	Rustenburg Platinum Mines Limited
Contact person	Barry Jones
Cell no	083 484 9925
E-mail address	barry.jones@angloamerican.com

Table 2-4: Consultant contact details

ITEM	COMPANY CONTACT DETAILS
Company	Digby Wells Environmental
Contact person	Duncan Pettit
Tel no	011 789 9495
Fax no	011 789 9498

ITEM	COMPANY CONTACT DETAILS
Cell no	083 644 5855
E-mail address	Duncan.pettit@digbywells.com
Postal address	Private Bag X10046, Randburg, 2125

Table 2-5: Contact details of affected landowners

Property	Title Deed Owner	Contact person	Contact no	Notified
Onverwacht 97IS RE	In Excess Trading 128 (Pty) Ltd	Mr J. Barnard		Yes (8 Jan 2014)
Onverwacht 97IS Remaining Extent of Portions 1, 2, 3 and 4	Vosstoffel (Pty) Ltd	Mr Nico T and Mrs Anet de Vos		Yes (8 Jan 2014)
Onverwacht 97IS Portion 5	Paulana Boerdery (Pty) Ltd	Mr Nico T and Mrs Anet de Vos		Yes (8 Jan 2014)

3 TERMS OF REFERENCE

RPM has requested Digby Wells to complete an EMP in support of the approved Prospecting Right application in terms of the MPRDA, inclusive of relevant specialist studies. In order to comply with the agreed Terms of Reference, a heritage study was required as one of the requisite specialist studies.

The integration between the heritage component required in terms of the MPRDA and the National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA) is described in the legal framework discussed below.

3.1 Legislative Framework

3.1.1 Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA)

The MPRDA stipulates under Section 5(4) no person may prospect for or remove, mine, conduct technical co-operation operations, reconnaissance operations, explore for and produce any mineral or petroleum or commence with any work incidental thereto on any area without (a) an approved environmental management programme or approved environmental management plan, as the case may be.

According to Section 39(3)(b)(iii), any applicant who is to complete an EMP must investigate, assess and evaluate the impact of the proposed prospecting or mining operation on a national estate referred to in Section 3 (2) of the NHRA.

3.1.2 Mineral and Petroleum Resources Development Amendment Bill, 2013 (Bill 13 of 2013) (MPRDAB)

The Amended MPRDA stipulates under section 16 that “any person who wishes to apply to the Minister for a prospecting right, must simultaneously apply for an environmental authorisation”.

3.1.3 National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA)

Heritage studies are triggered in terms of Section 38(8) of the NHRA where there is a requirement by complementary legislation – in this case Section 39 of MPRDA – to undertake an assessment of the impact of development on heritage resources.

Section 38(8) of the NHRA further stipulates that that the consenting authority, i.e. the Department of Mineral Resources (DMR), must through cooperative government ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of Section 38(3), and must also take into account any comments and recommendations made by the authority.

3.2 Summary of Stakeholder Engagement Plan (SEP)

A Stakeholder Engagement Plan (SEP) was required for the Project. Through public consultation, stakeholders were provided with the platform to contribute essential local knowledge to project planning and design, and thereby influence the decision making process. As such, the Public Participation Process (PPP) was implemented to comply with the requirements for consultation in accordance with Section 5(4) and Section 10 of the MPRDA. Section 5(4) c states that no person may prospect for any mineral without notifying and consulting with the landowner or lawful occupier of the land in question.

Section 10 of the MPRDA states that within 14 days after an application is accepted, a call for all interested and affected parties must be made so that they may submit their comments regarding the application within 30 days from the date of the notice.

4 EXPERTISE OF THE SPECIALISTS

Natasha Higgitt has completed a BA Honours degree in Archaeology at the University of Pretoria. She currently holds the position of Assistant Heritage Consultant at Digby Wells, where she has worked for over two years with experience in Heritage Impact Assessment’s (HIA’s) in Limpopo and Mpumalanga. She has experience in international heritage and social projects in Liberia.

Ms Higgitt is a member of the Association of Southern African Professional Archaeologists (ASAPA) and has Cultural Resources Management Accreditation Status. The curriculum vitae of the specialists are presented in Appendix A.

5 METHODOLOGY

This study primarily employed a qualitative, text-based research methodology with a limited quantitative field-based component as described below.

5.1 Literature review

A literature review of relevant and available published works was completed to inform provide a baseline characterisation description of the cultural landscape within which the project is located, discussed under section 6 below. This baseline was informed by sources ranging from academic publications, unpublished theses; relevant palaeontological and heritage assessments previously completed relevant databases and authoritative websites. Sources that were consulted and cited in this report are listed in the reference list under section 10.

5.2 Historical layering

Historical layering is a process whereby diverse cartographic sources from various time periods are layered chronologically using GIS. The rationale behind historical layering is threefold, as it:

1. Enables a virtual representation of changes in the land use of a particular area over time;
2. Provides relative dates based on the presence/absence of visible features; and
3. Identifies potential locations where heritage resources may exist within an area.

The cartographic sources used in this study included:

- Major Jackson Series (MJS) 1902 Bethal Map
- 340_009_16469 (1954)
- 548_008_00963 (1968)
- 750_005_00173 (1975)

5.3 Heritage Screening Survey

A Heritage Screening Survey (HSS) was conducted for the project on 14th January 2014 on the directly affected properties in the project area. It was conducted through a vehicular survey and the landscape of the project area was recorded and photographed. The aim of the HSS was to verify heritage resources identified during the desktop study, and record the current state of the environment. The results of the HSS are discussed under sections 6 and 8.

5.4 Site Naming

All sites/heritage resources in the study area identified as part of the desktop study and HSS are presented in Appendix B and depicted in Plan 5.

5.4.1 Confirmed heritage resources identified during desktop study

Sites that were identified in previous assessment reports are named or numbered according to the systems used in the respective reports, but are prefixed with the relevant report or case number followed by reference to the relevant NHRA section. For example, a heritage resources identified by Roodt (1999) described as an archaeological site and numbered Site 1 in that report will be

1999-SAHRA-0021/S.35-1

Where report or case numbers do not exist, the site number is prefixed with report author followed by reference to the relevant NHRA section. For example, a heritage resource identified by Van Schalkwyk (2007) and described as an archaeological site and numbered '1' in that report will be

Van Schalkwyk-2007/S.35-1

5.4.2 Heritage resources identified during desktop study and screening survey

Sites not previously recorded but identified through historical layering, desktop studies or during field surveys are prefixed by the SAHRIS case number assigned to the study followed by the map sheet number, relevant NHRA section and site number, i.e.

4618/2629AD/S.35-001

6 STATE OF THE RECEIVING ENVIRONMENT/CULTURAL LANDSCAPE

Geologically, the project area is situated in the *Madzaringwe Formation* (See Plan 4). This formation is characterised by the presence of fluvial sandstone, siltstone, shales and coals. Coal layers have an abundance of plant material but good quality coals do not preserve the plant fossils. However, plant fossils are preserved in the shales found between the coals and the sandstone outcrops found on the surface (Bamford, 2012). According to the PalaeoSensitivity Map on SAHRIS, the project area falls in a high palaeontological sensitivity area. In the south-west corner of the project area, a series of sandstone outcrops forming a broken ridge is present as shown in Figure 6-1. Fossil that could occur include *Glossopteris* leaves, roots and inflorescences, lycopod and sphenophyte stems, ferns, cordaitaleans and early gymnosperms (Bamford, 2012). The dolerite rocks of the Karoo Dolerite Suite are plutonic igneous rocks and will not contain fossils (Rubidge, 2013a; Rubidge, 2013b).

Figure 6-1: Sandstone ridges located near the dam in the eastern section of the project area (Photograph by N Higgitt, 2014).

Fossil plants such as *Breytenia* were identified approximately 46 km east in similar sandstone ridges during the palaeontological field survey for the Msobo Coal (Pty) Ltd Consbrey Colliery (SAHRIS Case ID: 1722). Previously, only one other specimen was recorded in the 1950's by Edna Plumstead and therefore any subsequent finds of this fossil plant would be highly valued (Plumstead, 1962).

In general, the Mpumalanga Province has a sparse Stone Age record. The predominant evidence is Later Stone Age (LSA) material often found in rock shelter and at times associated with rock art, for example at Hope Falls Shelter, Leslie Falls Shelter and Horos Cave approximately 17 km west from the project area (Turner & Wadley, 1987).

A type V stone-walled settlement was identified by Van Schalkwyk (2003a) 17 km east of the project area measuring approximately 600 m x 300 m. A second type V stone-walled settlement is present 7 km south from the project area. This site, known as Wildebeesfontein (S.35-001), was previously investigated and excavated by Taylor in 1979. Human remains, beads (clay and ostrich eggshell), metal, fragments of a smoking pipe and ceramics were uncovered. Some of the ceramic fragments were decorated with comb-stamped pattern, fingernail impressions and notches on the rim (Taylor, 1979). (Please see Appendix C for a

list of all identified heritage resources). Type V settlements refer to a standard core of stonewalled cattle enclosures surrounded by beehive houses and grain bins (Maggs, 1976).

During the 18th and 19th century, the region experienced turmoil caused by the *Mfecane*. The *Mfecane* was a period of significant population movement and displacement of interior groups as the Zulu Kingdom expanded. The region is marked by unrest, resulting in 'refuge' sites. Due to this, large settlements are uncommon during this time as groups could not settle permanently (Makhura, 2007)

It was during this period of unrest that Boers (Voortrekkers) started to move into the interior during the latter part of the 19th century. As the *Mfecane* has pushed most groups out of the interior, the Boers believed they were moving into empty lands and began to claim areas for themselves (Makhura, 2007).

Historically, farmers in the vicinity exploited the coal deposits since the 1860s, but purely for domestic use. It was not until the discovery of diamonds in Kimberly in 1867 and gold on the Witwatersrand in 1886 that the exploitation of the coal deposits was for commercial purposes such as mining. It was due to this demand that the town Bethal was proclaimed in 1880 (Pistorius, 2008a). It was shortly after this that war erupted between the British Forces and Boers, resulting in the second Anglo-Boer War starting in 1899.

Records within NASA indicate the possibility of a school on the farm of Onverwacht. A list of books including dictionaries and school stationary was ordered on the 25 May 1899 (TAB/OD/0/OR9045/99).

Kinross was proclaimed as a village in 1915, and gained municipal status in 1965. The naming of the town has been under debate, where some stated that the town is named after the Scottish town of the same name, others say that the railway engineers who were involved in the construction of the Springs-Breyten named the village or that the original surveyor of the town gave it its name (Raper, 1987).

According to the Genealogical Society of South Africa Database, a cemetery is present within the project area (S.36-001); Onverwacht, dates on the headstone are unknown at this point.

It was not until the 1950s that mines in the area surrounding Kinross began to open, exploiting the coal fields (Pistorius, 2008b). However, the surrounding areas were still dominated by the presence of agricultural activities. Historical aerial imagery of the project area clearly demonstrates agricultural activities have been occurring within the project area since 1954. A review of the historical cartographic maps drawn by Major Jackson dated to 1902 indicate that he farm Onverwacht was demarcated and a farmstead and some roads are present within the project area. The estimated age of the farmstead is thus 102 years old (Figure 6-2). The historical aerial imagery shows that in 1954 a total of five farmsteads are present within the project area as shown in Figure 6-3. In 1968, all five farmsteads and the dam are present (See Figure 6-4) and by the present day, two other dams are present with the project area.

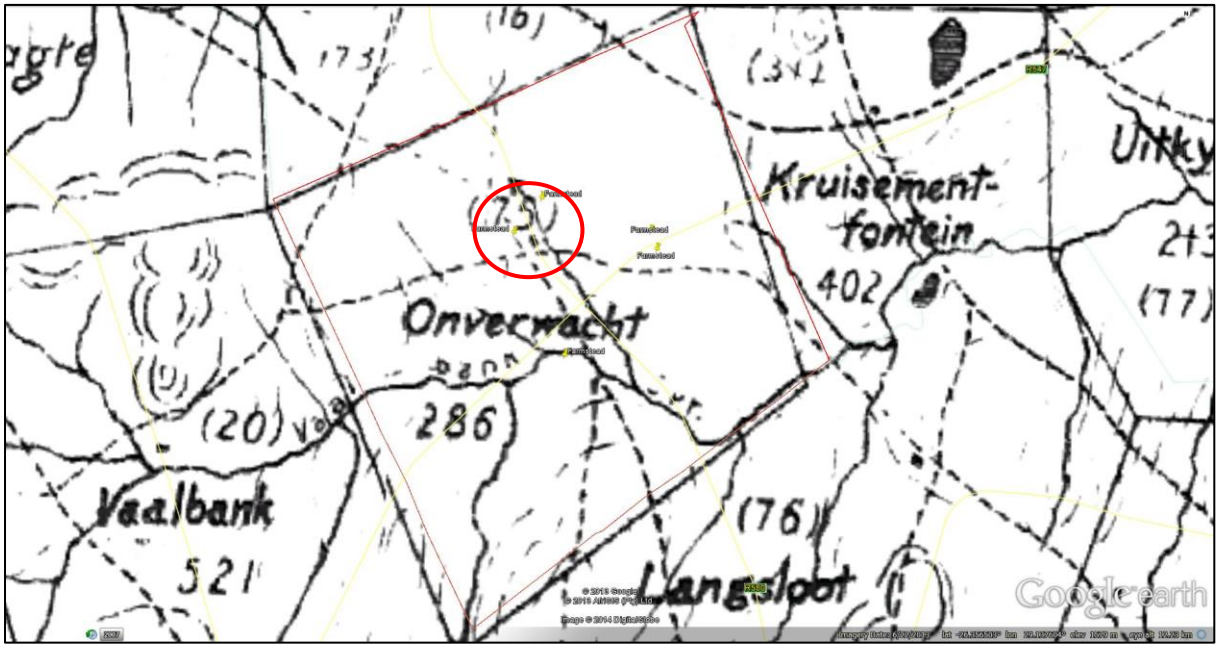

Figure 6-2: 1902 Bethal MJS map of the project area

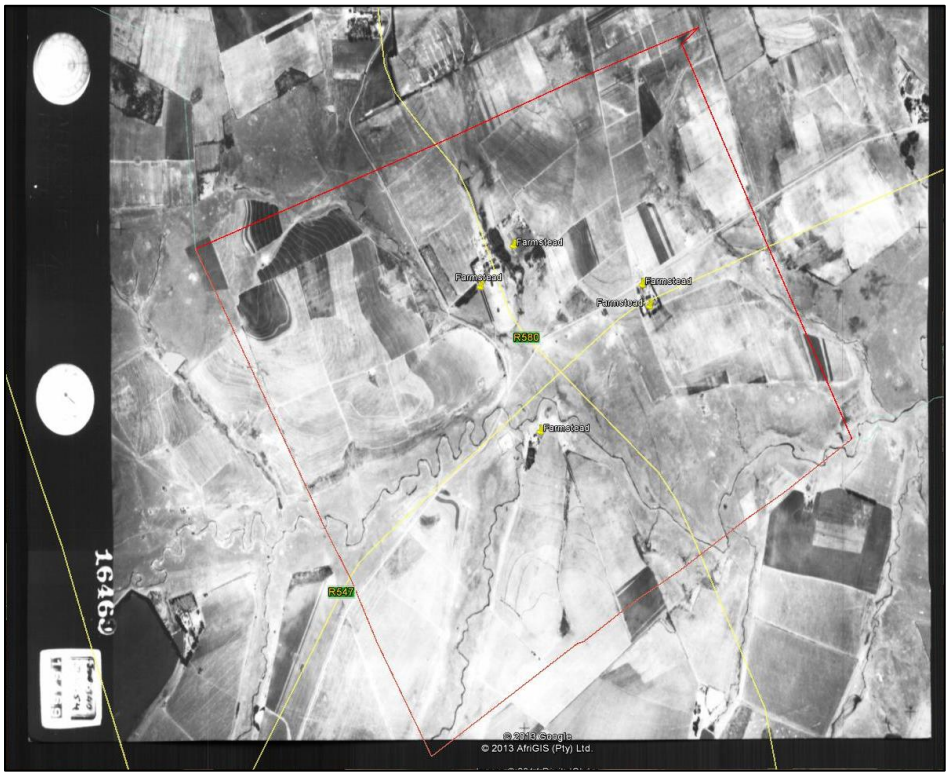

Figure 6-3: Historical aerial imagery from 1954 of the project area with present day farmstead locations.

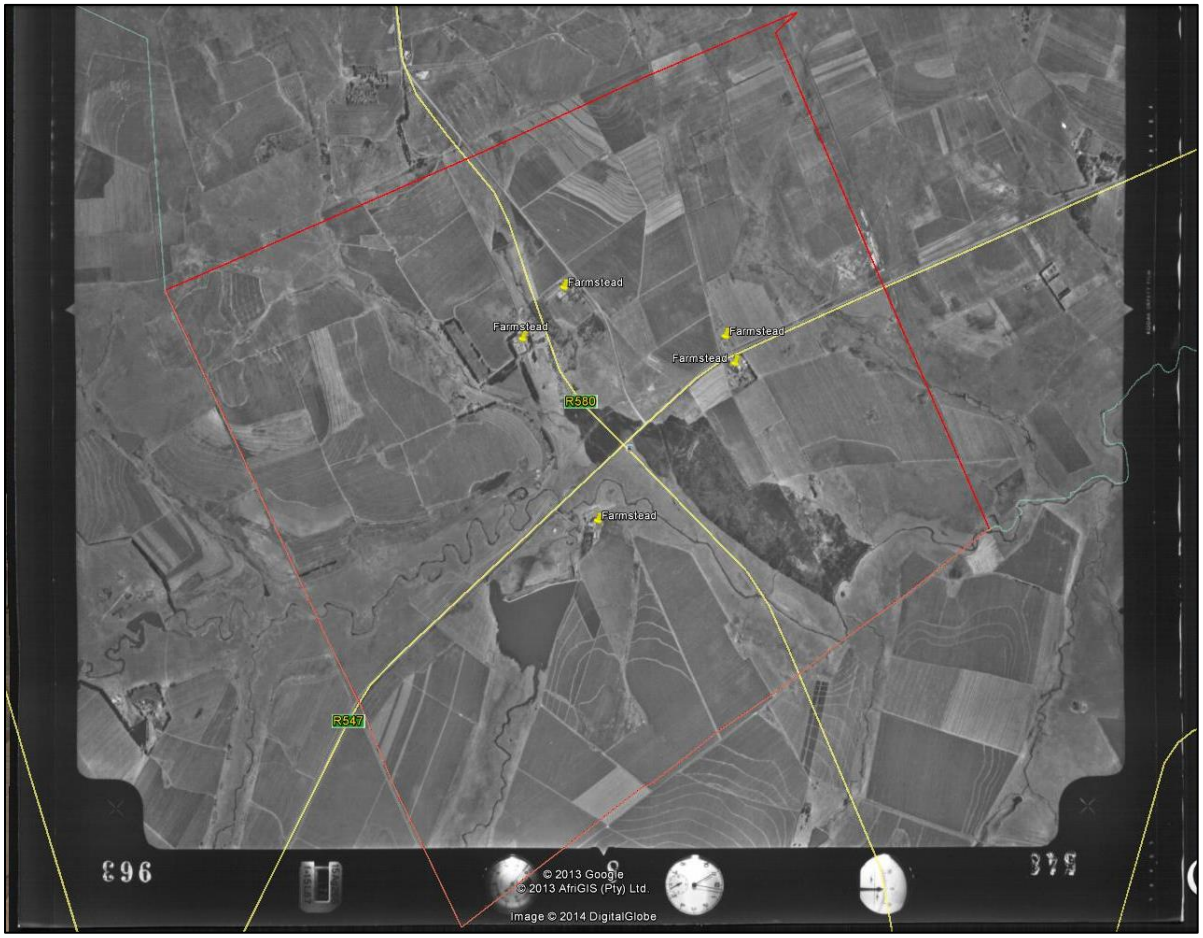

Figure 6-4: Historical aerial imagery from 1968 of the project area with present day farmstead locations.

The project area is dominated by agricultural fields and open grasslands, with large groves of trees as shown in Figure 6-5. Rolling hills with small sandstone outcrops were identified and are presented in Figure 6-1. A large dam is present in the eastern section of the project area as shown in Figure 6-6.

Figure 6-5: Open grasslands and agricultural fields within the Onverwacht project area (Photograph by N Higgitt, 2014).

Figure 6-6: Dam and large grove of trees located in the eastern section of the project area (Photograph by N Higgitt, 2014).

The surrounding farms came under scrutiny, when allegations of the mistreatment of farmworkers been to circulate. Gert Sibande, at the time an up and coming member of the ANC, and later the president of the organisation, was in the early 1940s, concerned with the exploitative practices on the farms around the Bethal area. He at first went undercover, and helped break the story of the slave like conditions in the then Leftist New Age newspaper, then under the editorship of struggle icon Ruth First. The story was first published in 1947. The claims of the newspaper were denied by farmers in the area, but were picked up again in 1952 in Drum Magazine (Holden & Mathabatha, 2007). The story described how labourers in the Bethal District were coerced into working under contract and that the methods used for recruiting these individuals were below decent practices. The story also described the severe beatings that the workers often underwent, resulting in one case with the death of the worker. Workers who had been unfortunate enough to be recruited in this manner were shipped to Bethal. Another reporter, Henry Nxumalo, also went to Bethal with a photographer to investigate the farms. Eventually the article was published in 1952. Records in NASA include hand written letters and official letters of complaint from farm labourers to the Commissioner of Native Affairs citing abuse from their employers. When investigated and questioned, the labourers denied the letters of complaint and in most cases, any investigation was dropped (SAB/BAO9907/C41/3/19).

The article sparked off an investigation by the government, but the issue was dismissed by the then commissioner for native affairs, H. F Verwoerd. In archives, two newspaper articles published in the Sunday Times Reporter and Sunday Times Correspondent in early 1959 depict a story of the alleged kidnapping and subsequent abuse of “Veldtman” Nkwelo, a thirteen year old boy from Umtata. According to the articles, he was taken from his home near Umtata and taken by train to work on a farm near Kinross (revealed to be the farm Onverwacht). After a few weeks, he wrote to his grandmother where he begged her to rescue him from the farm (SAB/NTS/2273/741/280).

In august 1959, the ANC approved a plan for a major boycott of the Bethal farms as a protest against what was termed “black birding” (a form of slavery by way of deception and often kidnapping) (Britannica, 2014). The ‘Potato Boycott’ was eventually called off after 2 months, but the episode served as inspiration for a broader resistance movement against the state (Holden & Mathabatha, 2007). There is a monument dedicated to Gert Sibande within the town of Bethal.

In terms of strengthening the economy of the surrounding area, one of the strategic objectives is to provide tourist activities and routes with the focus on Bethal (31 km east of the project area) and a cultural and heritage tourism node (Govan Mbeki Local Municipality, 2013). A short list is available within the Govan Mbeki LM 2013 Spatial Development Framework (SDF). These include Provincial Heritage sites such as the Dutch Reformed Church and the Old Magistrate’s Office. The Bethal Museum and Borehole UC 65 are included in the list of heritage sites. The UC 65 was the first borehole to penetrate the Kimberley Reef. This event led to the development of an important new South African goldfield, viz the Evander Goldfield. The project area also falls within an area that has been

deemed fit for a Rural Restructuring Zone, as well as within the region earmarked for mining development (Govan Mbeki Local Municipality, 2013).

7 SOURCES OF RISK

Potential impacts as a result of project activities could change the existing status of identified heritage resources within the Witrand project area.

Environmental aspects during the construction phase of the proposed project that may cause impacts on heritage resources include:

- Site clearing and the removal of topsoil for prospecting sites;
- The construction of access roads to the prospecting sites; and
- Influx of workers and the possibility of vandalism.

8 DISCUSSION OF FINDINGS

The results of this HSR show that heritage resources such as historical structures, burial grounds, however due to extensive agricultural activities as shown by the 1954 historical aerial imagery, *in situ* heritage resources may have been disturbed. The PaleoSensitivity Map and regional geology indicate that the area has a very high sensitivity (based on the occurrence of sedimentary rocks). During the HSS, sandstone ridges were identified and these have a high potential for palaeontological remains, rock art and LSA resources due to the close proximity to other rare sites in the surrounding areas that exhibit the same characteristics. Any palaeontological resources or Stone Age sites that are uncovered within the project area will be of high significance due to the lack of such resources in the province as a whole. Additionally, if any of the highly significant resources highlighted above are identified, this could in turn assist with the tourist node planned for the neighbouring Municipality mandate as pointed out in the 2013 SDF.

In terms of intangible heritage, there is a memory of modern slavery within the area due to the allegations of mistreatment and kidnapping of farmworkers in the 1940's and 1950's. This must be considered a highly significant heritage resource as instances of slavery are not as prevalent within the interior as they are on the coast.

As per the project description, only one borehole, with a cleared area measuring 20 m x 20 m will be drilled each year. The impact on the identified heritage resources will be low as the boreholes can be positioned to avoid areas of high heritage sensitivity.

The identified areas of potentially high heritage sensitivity include the following:

- Sandstone ridges (high potential for rock art and palaeontological remains); and
- Groves of trees (previous project experience shows that that the potential for historical remains and burial grounds are high within groves of trees).

While drilling operations can be positioned away from heritage resources, possible sources of risks include influx of workers, site clearance and the construction of access roads. This

can lead to the accidental destruction of or damage to heritage resources, exposure of subsurface deposits and fossils, and restricted access to ancestral sites, as well as vandalism of heritage resources. Any adverse change to heritage resources may further reduce the potential of a resource to contribute to information and understanding of the region's and South Africa's historical development.

9 CONCLUSION AND RECOMMENDATIONS

Based on the findings of this report, any *in situ* heritage that may be present within the project area is of high significance. These include historical structures, burials, palaeontological resources, rock art and any oral histories pertaining to the alleged instances of mistreatment and modern slavery practises. However, the relative low intensity of the prospecting activities will not significantly impact on heritage resources and direct impact on any heritage resources can be avoided.

Digby Wells is therefore of the opinion that Rustenburg Platinum Mines be exempted from all addition heritage assessments with the following provisions:

- High potential areas where certain types of tangible heritage resources can be expected must be avoided, including:
  - Thickets of trees and areas near occupied and abandoned settlements where burials may be expected;
  - Sandstone outcrops and ridges – both in terms of the potential for fossil resources and rock art to occur (especially where shelters are evident);
- That a watching brief be implemented when drill sites are prepared and access routes to such sites are created; and

CFP's must be followed in the event that any heritage resources are identified during any site clearance and when access routes are created. SAHRA should be alerted as soon as possible so that appropriate action can be taken by a qualified specialist.

10 REFERENCES

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Appendix A: Curriculum Vitae

NATASHA HIGGITT

Ms Natasha Higgitt

Assistant Heritage Consultant

Social Department

Digby Wells Environmental

1 EDUCATION

- University of Pretoria
- BA Degree (2008)
- Archaeology Honours (2010)
- Title of Dissertation- Pass the Salt: An Archaeological analysis of lithics and ceramics from Salt Pan Ledge, Soutpansberg, for evidence of salt working and interaction.

2 LANGUAGE SKILLS

- English - Excellent (read, write and speak)
- Afrikaans - Fair (read, write and speak)
- Italian – Poor (Speaking only)

3 EMPLOYMENT

- July 2011 to Present: Assistant Heritage Consultant at Digby Wells Environmental
- April 2011 to June 2011: Lab assistant at the Albany Museum Archaeology Department, Grahamstown, Eastern Cape
- April 2010 to March 2011: Intern at the Archaeology Department, Albany Museum, Grahamstown, Eastern Cape under the Department of Sports, Recreation, Arts and Culture, Eastern Cape Government, South Africa (DSRAC)

4 FIELD EXPERIENCE

- Human remains rescue excavation at St Francis Bay, Eastern Cape
- Human remains rescue excavation at Wolwefontein, Eastern Cape

- Recorded two rock art sites at Blaauwbosch Private Game Reserve, Eastern Cape
- Attended a 2 week excavation/study tour in the Friuli Region in Italy, organised by the *Società Friulana di Archeologia*, sponsored by *Ente Friuli nel Mondo*, and excavated a 12th century medieval castle
- Attended a 2 week excavation in Limpopo, Waterpoort Archaeological Project organised by Xander Antonites (Yale PhD Candidate)
- A total of 5 University of Pretoria Archaeology field schools in Limpopo and Gauteng spanning over 4 years

5 PROJECT EXPERIENCE

- Heritage Statement for a Proposed Acetylene Gas Production Facility, located near Witkopdorp, Daleside, south of Johannesburg, Gauteng Province for Erm Southern Africa (Pty) Ltd (Digby Wells Environmental)
- Heritage Impact Assessment for the Platreef Platinum Project, Mokopane, Limpopo for Platreef Resources (Digby Wells Environmental)
- Heritage Statement for ATCOM and Tweefontein Dragline Relocation Project, near Witbank, Mpumalanga Province for Jones and Wagner Consulting Civil Engineers (Digby Wells Environmental)
- Heritage Statement Report for the Wilgespruit Bridge Upgrade, Pretoria, Gauteng Province for Iliso Consulting (Pty) Ltd (Digby Wells Environmental)
- Heritage Statement Report for the Kosmosdal sewer pipe bridge upgrade, Pretoria, Gauteng Province for Iliso Consulting (Pty) Ltd (Digby Wells Environmental)
- Phase 1 Heritage Impact Assessment for the Thabametsi Coal Mine, Lephalale, Limpopo for Exxaro Coal (Digby Wells Environmental)
- Heritage Statement for the Zandbaken Coal Mine Project, Zandbaken 585 IR, Sandbaken 363 IR and Bosmans Spruit 364 IS, Standerton, Mpumalanga for Xtrata Coal South Africa (Digby Wells Environmental)
- Phase 1 Heritage Impact Assessment for the Brakfontein Thermal Coal Mine, Mpumalanga for Universal Coal (Digby Wells Environmental)
- Development of a RAP for Aureus Mining for the New Liberty Gold Mine Project, Liberia (Digby Wells Environmental)
- Phase 1 Archaeological Impact Assessment for the MBET Pipeline, Steenbokpan, Limpopo (Digby Wells Environmental)
- Notice of Intent to Develop and Cultural Resources Pre-Assessment for Orlight SA (PTY) Ltd Solar PV Project. 2012. (Digby Wells Environmental)
- Agricultural Survey for Platreef ESIA, Mokopane, Limpopo. 2011. (Digby Wells Environmental)

- Cultural Resources Pre-Assessment for the Proposed Sylvania Everest North Mining Development in Mpumalanga, near Lydenburg. 2011. (Digby Wells Environmental)
- Phase 2 Mitigation of Archaeological sites at Boikarabelo Coal Mine, Steenbokpan, Limpopo. 2011. (Digby Wells Environmental)
- Cultural Resources Pre-Assessment for Proposed Platinum Mine Prospecting in Mpumalanga, near Bethal for Anglo Platinum. 2011. (Digby Wells Environmental)
- Cultural Resources Pre-Assessment for proposed Platinum Mine at Mokopane, Limpopo for Ivanhoe Platinum. 2011. (Digby Wells Environmental)
- Phase 1 AIA Mixed-use housing Development, Kwanobuhle, Extension 11, Uitenhage, Eastern Cape. 2011.
- Phase 1 AIA Centane to Qholora and Kei River mouth road upgrade survey, Mnquma Municipality, Eastern Cape. 2011. (SRK Consulting)
- Phase 1 AIA Clidet Data Cable survey, Western Cape, Northern Cape, Free State and Eastern Cape. 2011. (SRK Consulting)
- Phase 1 AIA Karoo Renewable Energy Facility, Victoria West, Northern Cape. 2011. (Savannah Environmental)
- Phase 1 AIA Windfarm survey in Hamburg, Eastern Cape. 2010. (Savannah Environmental)
- Phase 1 AIA Windfarm survey in Molteno, Eastern Cape. 2010. (Savannah Environmental)
- Phase 1 AIA Housing Development at Motherwell, P.E. 2010. (SRK Consulting)
- Phase 1 AIA Sand quarry survey in Paterson, Eastern Cape. 2010. (SRK Consulting)
- Phase 1 AIA Quarry Survey at Victoria West. 2010. (Acer [Africa] Environmental Management Consultants)
- Phase 1 AIA Quarry Survey at Port Elizabeth. 2010. (E.P Brickfields)

6 PROFESSIONAL AFFILIATIONS

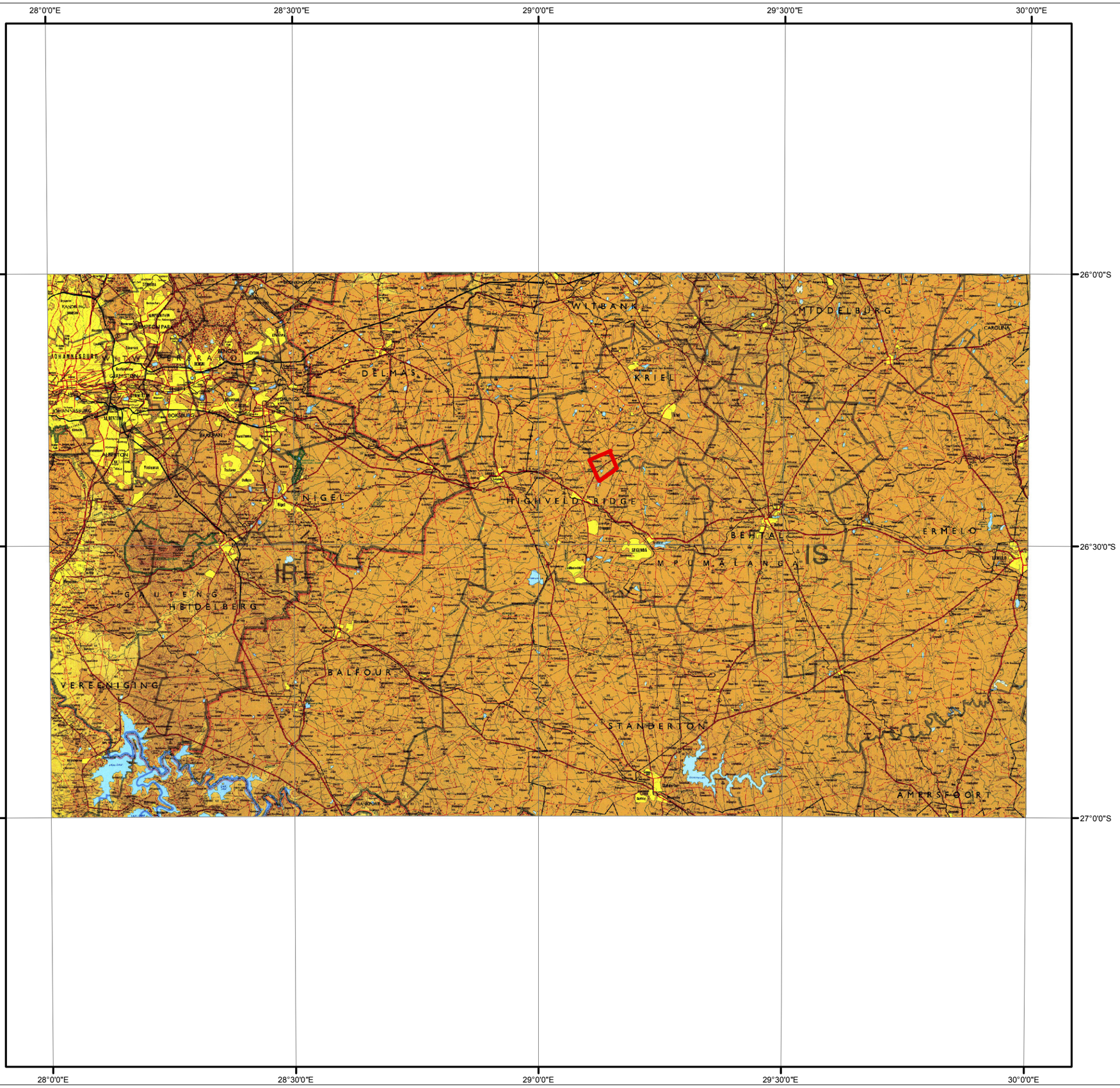
- Association of Southern African Professional Archaeologists (ASAPA): Professional member
- Association of Southern African Professional Archaeologists (ASAPA): CRM Practitioner (Field Supervisor: Stone Age, Iron Age and Rock Art)
- South African Museums Association: Member

Appendix B: Location and Site Maps

Plan 1

Onverwacht Prospecting EMP

Regional Setting 1:250 000



Legend

Project Area

2628 East Rand

DIGBY WELLS ENVIRONMENTAL

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Kilometres
1:800 000

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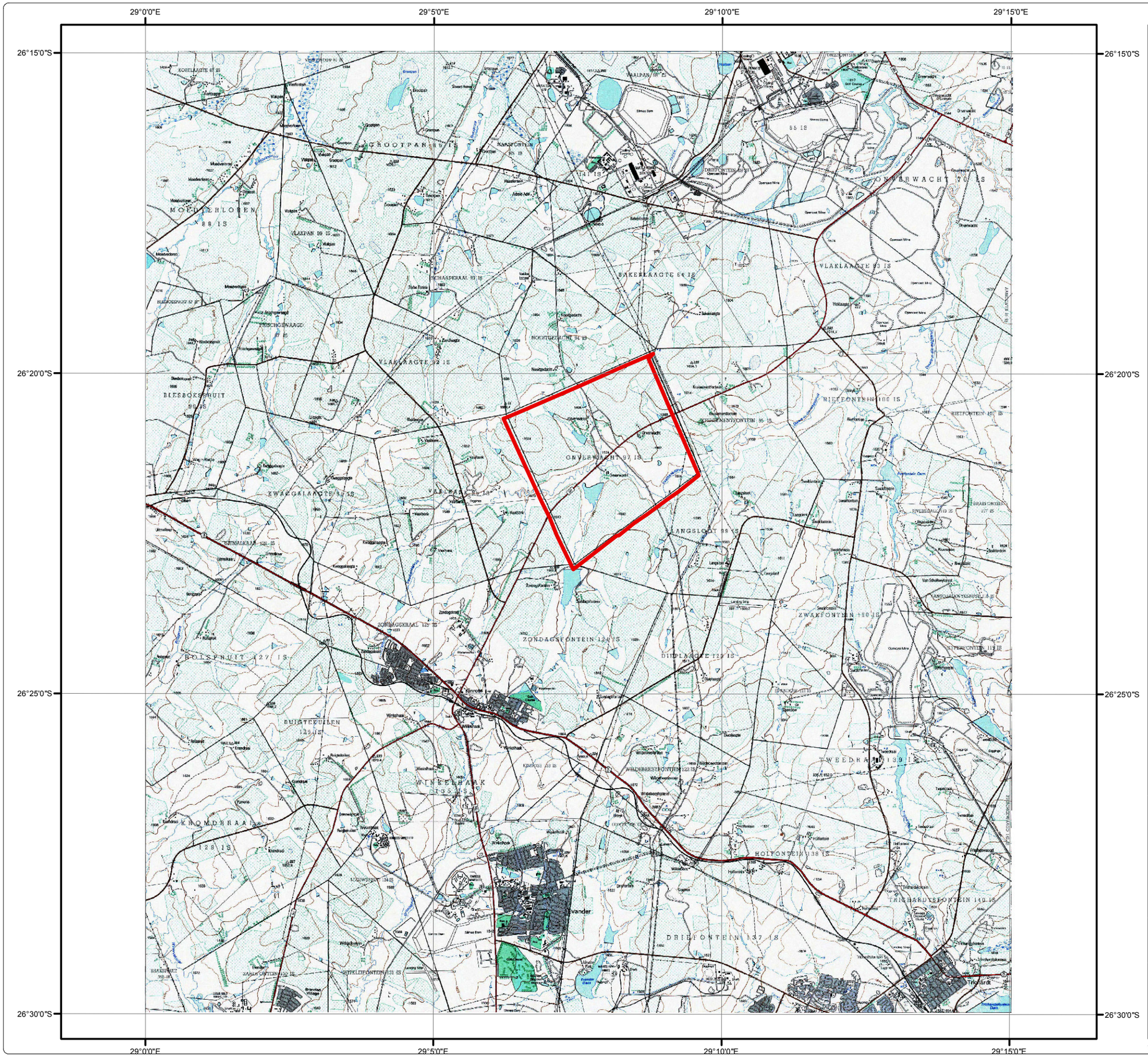
Plan 2

Onverwacht Prospecting EMP

Regional Setting 1:50 000



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Project Area

2629AC Evander

DIGBY WELLS ENVIRONMENTAL

• Sustainability • Service • Positive Change • Professionalism • Future Focused • Integrity

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Kilometres

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Plan 3

Onverwacht Prospecting EMP

Regional Setting 1:10 000

Legend

Project Area

2629AC

DIGBY WELLS ENVIRONMENTAL

• Sustainability • Service • Positive Change • Professionalism • Future Focused • Integrity

Projection: Transverse Mercator	Ref #: pks.ANG2615.201401.017
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Kilometres

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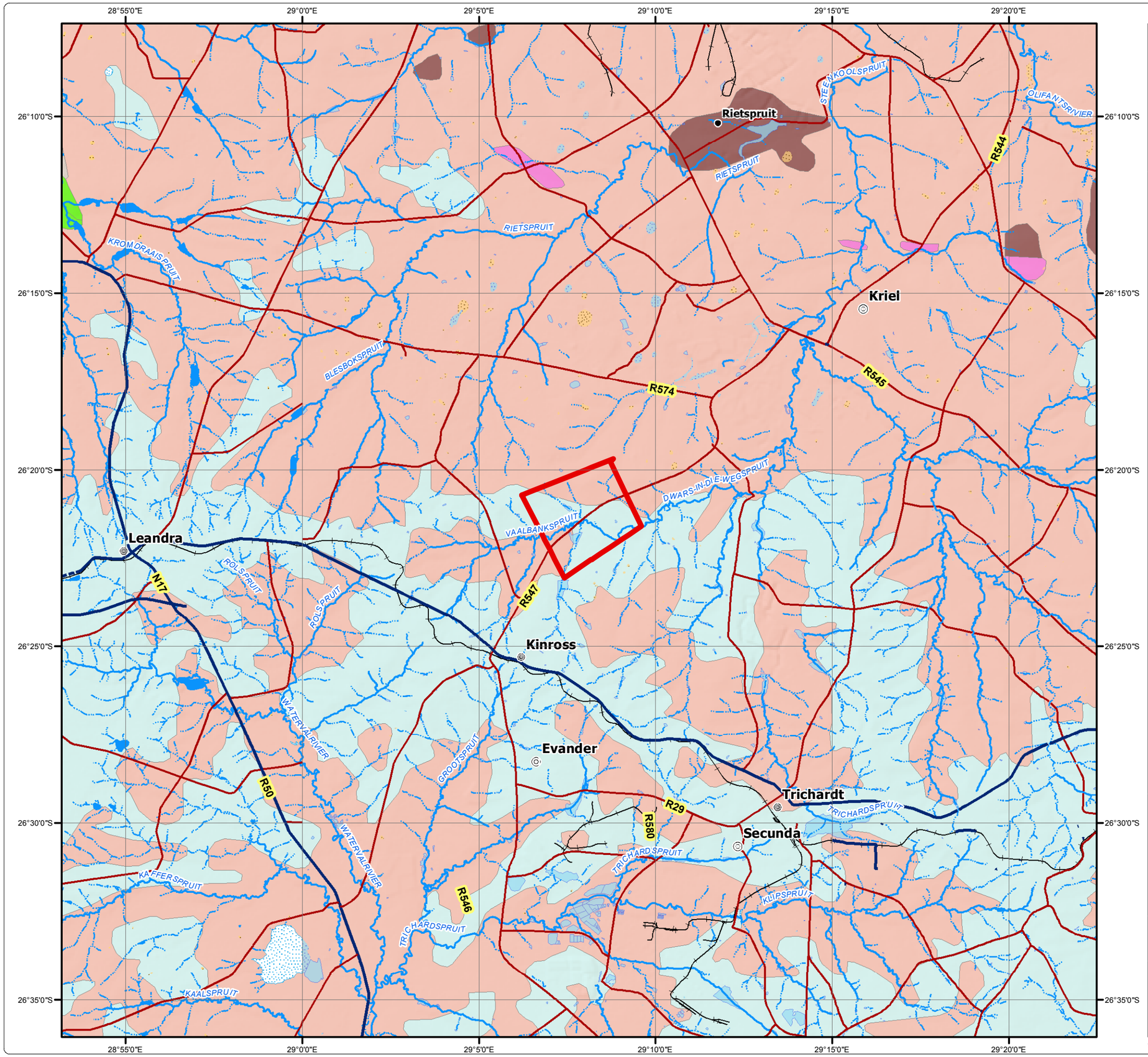
Plan 4

Onverwacht Prospecting EMP

Regional Geology



Legend

- Project Area
- Major Town
- Secondary Town
- Other Town
- Settlement
- Arterial / National Route
- Main Road
- Railway Line
- Perennial Stream
- Non-Perennial Stream
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan

Geology

- Karoo Dolerite Sui
- Lebowa Granite Sui, Bushveld Cplx
- Madzaringwe Fm, Karoo Spgrp
- Pretoria Grp, Transvaal Spgrp
- Rooiberg Grp, Transvaal Spgrp

DIGBY WELLS ENVIRONMENTAL

• Sustainability • Service • Positive Change • Professionalism • Future Focused • Integrity

Projection: Transverse Mercator	Ref #: pks.ANG2615.201401.006
Datum: WGS84	Revision Number: 1
Central Meridian: 29°E	Date: 07/01/2014

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Kilometres
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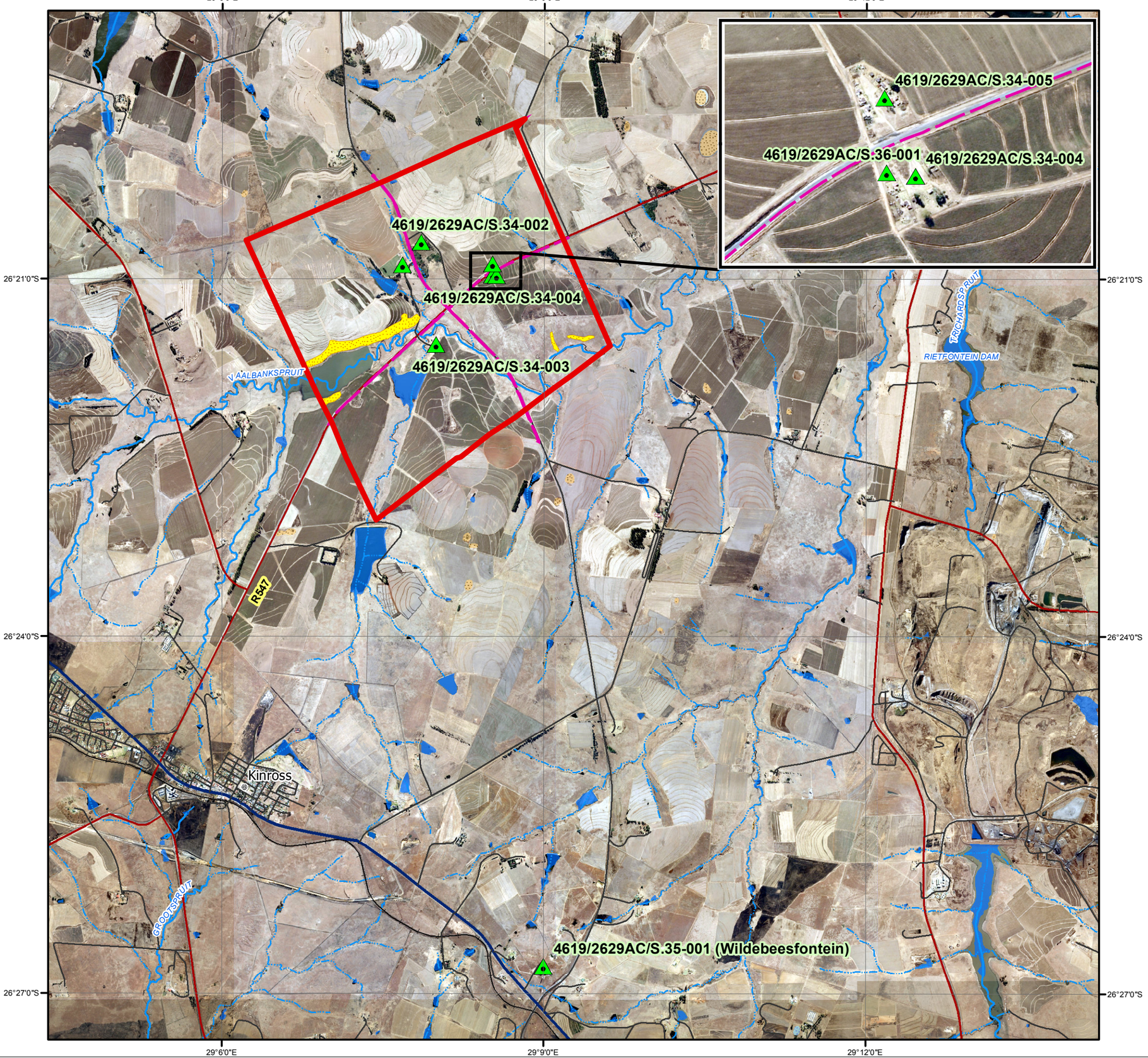
Plan 5

Onverwacht Prospecting EMP

Heritage Resources and Sensitivity



Legend

- Project Area
- Secondary Town
- Other Town
- Arterial / National Route
- Main Road
- Minor Road
- Railway Line
- Perennial Stream
- Non-Perennial Stream
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan

Heritage Resources and Sensitivity

- Heritage Sites
- Heritage Tracks
- Sandstone Ridges

DIGBY WELLS ENVIRONMENTAL

• Sustainability • Service • Positive Change • Professionalism • Future Focused • Integrity

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Kilometres

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Appendix C: Identified Heritage Resources

Identified Heritage Resources

Site ID	Site type	Description	Latitude	Longitude	Reference
4619/2629AC/S.35-001 (Wildebeesfontein)	Iron Age	Stone walled settlement	-26.446712	29.149645	Taylor, 1979
4619/2629AC/S.36-001	Cemetary	Onverwacht cemetary	-26.35	29.141667	GSSA
4619/2629AC/S.34-001	Historical	Farmstead dating to 1902	-26.348557	29.127714	340_009_16469
4619/2629AC/S.34-002	Historical	Farmstead dating to 1954	-26.345407	29.130561	340_009_16469
4619/2629AC/S.34-003	Historical	Farmstead dating to 1954	-26.359731	29.132856	340_009_16469
4619/2629AC/S.34-004	Historical	Farmstead dating to 1954	-26.350082	29.142271	340_009_16469
4619/2629AC/S.34-005	Historical	Farmstead dating to 1954	-26.348421	29.141625	340_009_16469