

**ARCHAEOLOGICAL DESKTOP STUDY FOR THE
PROPOSED GARATAU AND TUBATSE PLATINUM
MINES**

FOR MSA GROUP SERVICES

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TABLE OF CONTENT

1. INTRODUCTION.....	3
2. METHOD.....	6
3. RESULTS.....	6
3.1. DATABASE SEARCH.....	6
3.2. BATTLEFIELD.....	8
3.3. GOOGLE EARTH SEARCH.....	8
4. MANAGEMENT PLAN.....	11
5. CONCLUSION.....	13
6. REFERENCES.....	14

TABLE OF FIGURES

FIG. 1: LOCATION OF THE PROPOSED GARATAU & TUBATSE MINES.....	4
FIG. 2: CLOSE UP OF THE STUDY AREA.....	5
FIG. 3: LOCATION OF FORT ALBERT IN THE STUDY AREA.....	9
FIG. 4: LOCATION OF SITES NOTED IN THE DESKTOP STUDY.....	10

1. INTRODUCTION

Umlando cc was contracted by MSA Group Services to undertake a desktop heritage survey for the proposed Garatau and Tubatse Platinum Mines, Burgersfort, Mpumalanga. The desktop survey forms part of the environmental scoping study.

The study area is located 20km west of Burgersfort (fig. 1). It consists mainly of a mountainous area with agricultural fields at the base and in the valleys. There are several water sources running a variety of directions. The geology allows for a small rock shelters, and thus human occupation.

The desktop survey will form part of the requirements as stipulated in the National Heritage Resources Act (No. 25 of 1999), referred to as the NHRA. It forms a base line study for future work in the area.

The terms of reference for this study are:

- Identify known heritage sites
- Assess the known sites
- Note types of sites that may occur in the area
- Submit a heritage management plan for the future of the mine
- Note the various legislations pertaining to heritage sites

In addition to this issues that may affect heritage sites are noted.

FIG. 1: LOCATION OF THE PROPOSED GARATAU & TUBATSE MINES

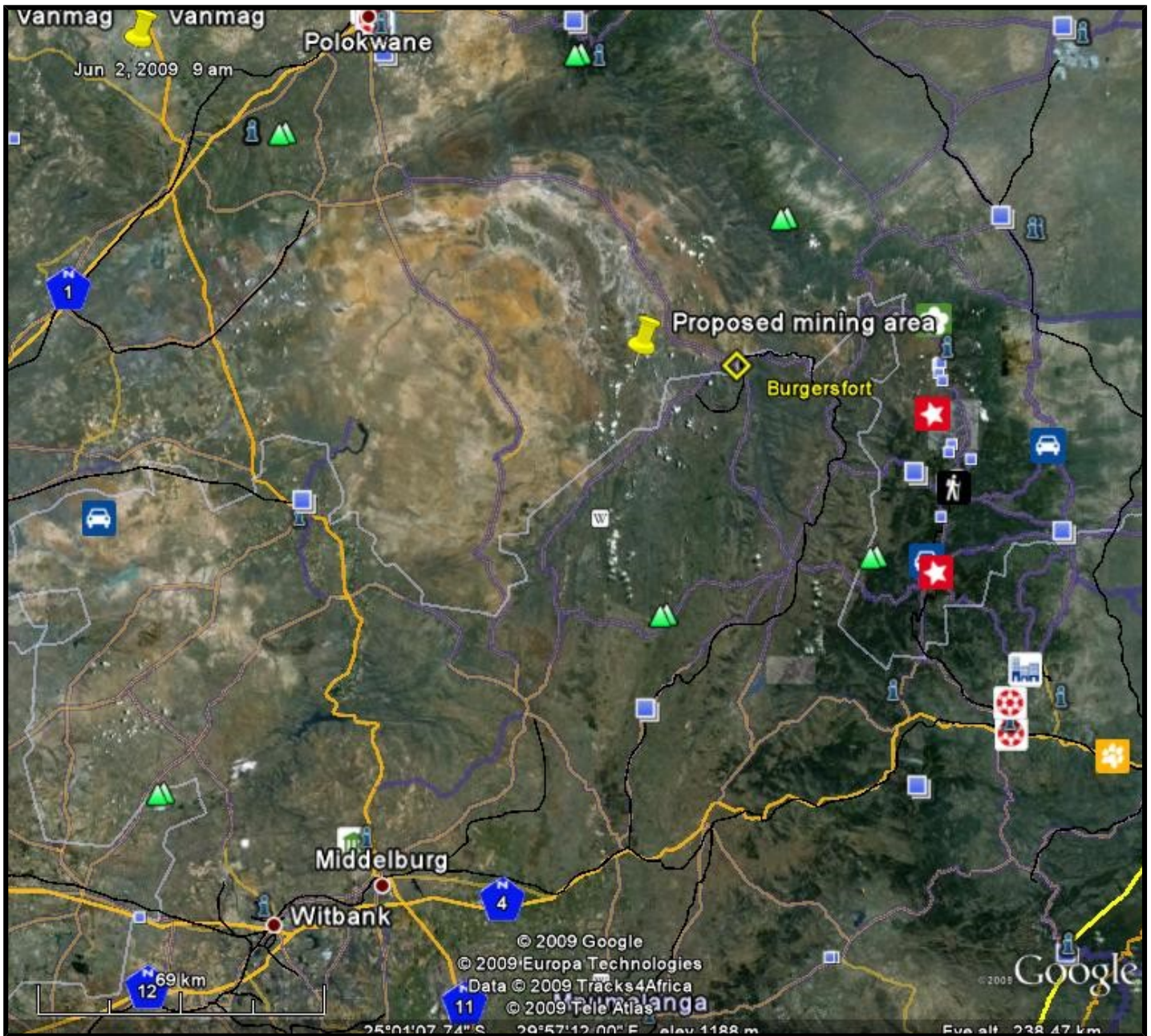


FIG. 2: CLOSE UP OF THE STUDY AREA¹



¹ Study area outlined in white

2. METHOD

Various institutions who may have undertaken research in this area were consulted. Only one institution replied with positive information regarding known sites of the area. The database is referred to as the “Heritage Atlas Database”. Any findings from future surveys will be submitted to this database.

Photography (from Google Earth) was used to scan the area for old stone walled settlements, abandoned settlements and potential overhangs.

The purpose of the desktop study is mainly to see if any ‘fatal flaws’ exist. A site visit and field survey will occur in the next phase of the project. The next phase of the project would entail a site visit and survey of the affected area.

3. RESULTS

3.1. DATABASE SEARCH

The “Heritage Atlas Database” search yielded seven heritage sites. These are mostly graves and one historical building. The sites recorded in the database are not from a systematic survey. That is, the sites were recorded arbitrarily and not from a planned survey of the area.

3.1.1.1. Graves

There are six graves noted in the database. The graves date from the very recent past (i.e. 21st century) to ~100 years ago. The surrounding community still claims these graves.

All human graves are considered to be very sensitive, especially if a living community claims the human remains. Human graves thus have high significance and should only be affected as a last resort.

Human graves are covered by various pieces of legislation depending on their age. These include:

- The National Heritage Resources Act of 1999 (for graves older than 60 years)
- The Human Tissues Act (for graves older/younger than 60 years)
- Various municipal by-laws (for graves younger than 60 years)

3.1.1.2. Buildings

There are two known buildings in the affected area: a Lutheran church and a historical building. The church is probably older than 30 years and it has a historical connection with Alexander Marensky. Marensky was a missionary who played several important roles in the formation of the Lutheran church in what was then called Transvaal. The building itself is not directly associated with Marensky but is related to the role of the Lutheran church in the area.

The second building is called Fort Albert² and dates to 1878-1879. The fort is briefly mentioned by Kinsey (1972, 1973) in its relation to the 1st and 2nd Sekukuni (*sic*) wars of 1876 and 1878-1879, respectively. The Fort is presumed to be related to the Battle of Sekhukhuneland (1879) see below. Further research into this structure will be required. If the fort still exists then it should not be damaged, but preserved. Archaeological excavations may be required if there are no structures relating to the fort,

² The National Register on Google Earth has it listed as Port Albert (1878)

All built structures older than 60 years are protected by the heritage legislation. The age of the church will need to be confirmed.

3.2. BATTLEFIELD

According to the national register of heritage sites the Battle of Sekhukhuneland (1879) occurred to the north of the affected area Kinsey (1972, 1973). The approximate location is shown in Figure 4. The extent of the battlefield is unknown and some of it may extend into the study area. Further study into this battlefield will be required.

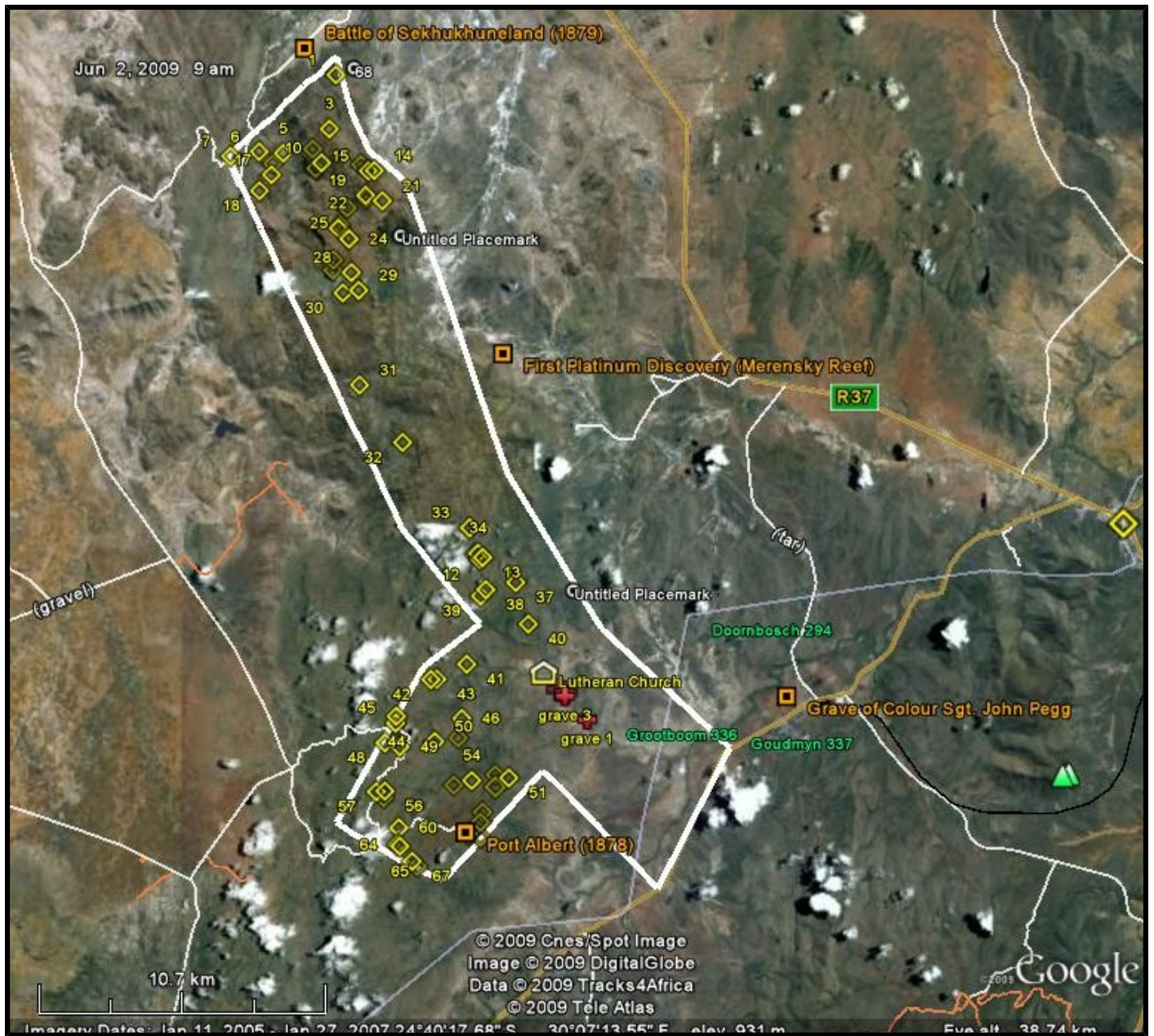
3.3. GOOGLE EARTH SEARCH

The survey using aerial photography indicated that at least 67 areas have some form of boundaries or stone walling. These areas were mapped on Google Earth imagery and are illustrated in figure 4. Each potential site was given a number for future surveys. The site numbers have co-ordinates (in latitude and longitude) so that they can be easily located in the future.

These potential sites are currently on 'vacant' land and are not used by the local community (as of January 2005 – the date of the aerial imagery). Some areas may date to the recent past, Historical Period, or even the Late Iron Age. These would need to be confirmed by a field survey.

The aerial imagery also shows several cliffs, overhangs and boulders that could be associated with San gatherer-hunter occupation and/or rock art.

FIG. 4: LOCATION OF SITES NOTED IN THE DESKTOP STUDY⁴



⁴ Yellow diamond with number = possible heritage site; red cross = known grave; orange square = monument/site on the national register; green text = unconfirmed grave(s)

4. MANAGEMENT PLAN

The desktop study indicates that there are potentially many heritage sites in the study area. Most of these sites are protected by the National Heritage Resources Act (No. 25 of 1999), although the church and some graves may be exceptions. The mining process is unlikely to cause direct damage to most of these sites, except where shaft entrances occur. The infrastructure related to the mining process will probably affect heritage sites. In the case of the Garatau and Tubatse mines, the following infrastructures will potentially affect heritage sites:

- Water reticulation
- Roads: tar and dirt leading to and around the mine
- Electrification of the site: a substation and/or transmission lines\
- Concentrator plants
- Processing plant
- Conveyor belts
- Stock piles
- Tailings
- Location of waste material from the mine
- Sewerage treatment plant

In addition to the above, there are also indirect impacts. Some of the community may be resettled elsewhere. The resettlement program may occur in heritage sensitive areas and would require a survey.

The issue of graves is of great concern. Currently community members are placing ancestral graves so that roads do not affect them⁵. Communities tend to recognise graves within living memory, but not those beyond, especially if the older graves have become 'sunken' or have become unkempt. The desktop study indicates that there are several older settlements and these probably have

⁵ Information from the 7 April 2009 minutes

associated human graves. A proper heritage survey must be undertaken before the layout plan of the mine is finalised.

The heritage survey can be undertaken in two ways:

- Option 1. Only those areas to be directly affected by the mining process and infrastructures are surveyed; or,
- Option 2. The entire study area is surveyed

Option 1 would initially seem to be cost-effective, as it would only concentrate on actual damages. However, it would entail an additional survey for every new servitude or structure. The risk of sites being accidentally damaged would be left unmanaged

Option 2 will allow for a database of all sites in the study area to be recorded. This database can then be used as part of the mine planning process. That is, the location of proposed infrastructures can occur in association with heritage sites. The heritage sites will have various levels of significance and thus the mine planning would not damage significant sites.

Option 2 also has a further benefit in that the survey of the study area will allow for a baseline of heritage sites and their current status. This means that the mining company cannot be accused of damaging sites if these sites are already damaged. The status of the sites should form part of the general database. It is therefore suggested that Option 2 is the preferred option.

Regardless of which option is chosen the heritage survey will need to take the following into consideration:

- Sacred sites relating to the community.
 - The community will need to identify any sacred areas, or areas of historical significance, prior to the final heritage survey. This can be achieved by requesting information at the next community meeting.

- Have at least one member from the community to assist in the surveys
 - This person should also act as an intermediary for the community, especially for the location of known ancestral graves.
 - This person would be trained during the survey on basic site identification and history, and thus be employed if any mitigatory work is required. This person would be able to explain to members of the community the process and purpose of mitigation and management, as they would have a working knowledge of heritage management.

The next step for the heritage study is to undertake the survey and to locate and assess all sites. The assessment would rate the significance of each site and propose a site-specific management plan per site.

It is recommended that a system of site reporting be established within the mining company. If any new sites are located, or if any are damaged, a procedure of regarding reporting would be in place.

It is further recommended that a regular audit of heritage sites is undertaken during the life span of the mine. This should be undertaken at least every five years. This will allow for the monitoring of sites and be able to determine during which period a site was damaged, if at all, and if any sites are deteriorating as a result of the mining process. E.g., rock art sites may deteriorate faster if there is an increase in air pollutants. The heritage audits however are only feasible if Option 2 were implemented.

5. CONCLUSION

A heritage desktop survey of the proposed Garatau and Tubatse Platinum mines was undertaken. The desktop study noted 7 previously recorded heritage

sites, and 67 possible heritage sites. The desktop survey also noted that there are several areas that may relate to San gatherer-hunter occupation.

It is suggested that there are two options for future work. Option 1 is to survey only those areas directly affected, while Option 2 is to survey the entire study area. Option 2 is preferred, as it will allow for a base line study of all heritage sites. The base line can be used for planning purposes as well as providing the current status of known heritage sites before construction and mining operations commence.

6. REFERENCES

Kinsey, H.W. 1972. The Sekukuni Wars. **Military History Journal Vol. 2 No 5**

Kinsey, H.W. 1973. The Sekukuni Wars Part II. **Military History Journal Vol. 2 No 6.**