

**HERITAGE ASSESSMENT REPORT  
ZEUS SUBSTATION EXPANSION,  
VLAKFONTEIN 328, GERT SIBANDE (DC 30)  
DISTRICT, MPUMALANGA, SOUTH AFRICA**

**REPORT FOR PBA INTERNATIONAL**

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**19 June 2007**



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## **EXECUTIVE SUMMARY**

The area of the proposed Zeus substation expansion was surveyed on foot. No sites were discovered, apart from a graveyard, which appears to be on or just within the boundary of the proposed expansion. The graveyard consists of 56 graves. It is recommended that the graveyard be left undisturbed, but should it need to be moved, a set process as determined by the South African Heritage Resources Agency will have to be followed for the grave relocation.

## **Background information on the project**

This report forms part of the environmental impact assessment commissioned by Eskom of the area of the proposed Zeus substation expansion.

Developer: Eskom

Consultant: PBA International

Terms of reference: To assess the area of the proposed expansion of the Zeus substation

Legislative requirements: The Heritage Impact Assessment was carried out in terms of the National Environmental Management Act no. 107 of 1998 and following the requirements of the National Heritage Resources Act no. 25 of 1999.

*Details of the area of the proposed substation expansion:*

Footprint: 466 m x 355 m to the south and west of the current substation

Current land use: agricultural land for grazing

The surveyed area is grassland, with a clayey sandy soil. Numerous dolerite rocks are evident on the surface, often in discrete outcrops.

## **Background to the Archaeology of the area**

No sites in the vicinity have been recorded on the National Museum's database. However, various sites are noted from the literature to occur within 100 kilometers of the surveyed area.

The closest mentioned archaeological sites occur in the Standerton area, about 30 km south of the Zeus site. These are as follows:

- Rock engravings near the Vaal River close to Standerton, +-30 km S-SE of Zeus (Clark 1959: 254)
- Iron Age Type N, Type V and Elongated Type V sites near the Vaal River, +-40 km south of Zeus (Maggs 1976: 39)

There are also records of historical military or military-related sites in the Standerton area. During the First Boer War of 1880-1881, a British garrison was located at Standerton. Forts were built on the surrounding koppies and outworks constructed to the south of the town. The garrison attempted to occupy Stander's Kop and attacked a small fortification occupied by several Boers located about two miles away. Five people from the British forces died during the siege at Standerton (Duxbury et al 1980).

The other known site from the area is that of the Early Pleistocene Cornelia-Uitzoek fossil site, about 70 km south-west of Zeus. The site has yielded important fossil mammal remains (Cooke 1974, Brink & Rossouw 2000) and is the Type locality for the Cornelian Land Mammal Age. A human tooth, dated to about 800 000 years ago was discovered at the site during the recent excavations there (Brink 2002). Stone artefacts from the site have been characterised as early Upper Acheulian (Clark 1974) or Fauresmith (Sampson 1974).

## **Description of area surveyed**

### *Locational Data:*

Map reference: 2629CA Secunda  
Province: Mpumalanga  
Magisterial District: Gert Sibande (DC30)  
Farm: Vlakfontein 328

### *Methodology:*

The area was searched on foot by a team of two people on Friday 15 June 2007. All observations were recorded by means of a GPS. No sampling was undertaken, and the report is based on a visual inspection of the area. All animal burrows, cattle paths and any other ground disturbance, including the Eskom inspection pits, were examined for traces of subsurface material.

### *Restrictions encountered during the survey:*

Visibility of the surface of the ground surface was low for most of the surveyed area as a result of the grass cover. However, there were areas where dolerite rocks and boulders were visible on the surface, and in these areas visibility was better.

### *Details of equipment used in the survey:*

GPS: Garmin etrex Summit  
Digital camera: Sony cybershot

## **Description of sites and material observed:**

### *Location:*

All readings were taken using the GPS as detailed above. Accuracy was to a level of 5m.

The area has been disturbed in the past, as evidenced by heaps of soil and rock, trenches and pits. Numerous pylons also occur in the area, and disturbance is related to the foundations of the pylons. Recent disturbance includes a new road along the eastern side of the expansion and the current substation, and a heavily disturbed area (possibly a pipe line) across the southern section of the surveyed area (see map). Further disturbance in the form of various inspection pits was noted in the area. The inspection pits appeared to have been dug with a back-actor and then refilled. All of the disturbed areas were also surveyed for subsurface material which had possibly been brought up to the surface. The inspection pits indicated that the surface soil layer was relatively thin (as would be consistent with the dolerite outcrops) and that the bedrock was decayed dolerite.

### *Description of sites:*

No sites were found in the area surveyed. However, a graveyard was located in the western portion of the surveyed area. This graveyard lies either on the boundary of the area, or just within it. Three inspection pits were dug around the graveyard (see map),

so it was assumed during the survey that the area is included in the substation expansion.

*Description of material:*

The graveyard consists of 56 graves (see graveyard plan). The distribution of the graves is indicated on the plan, but is basically linear in a north-south direction. Two of the graves (at the 'head' of the graveyard) face north, while the rest of the graves face east. The graveyard is located on a hillside, which slopes downhill towards the north. Three of the graves have gravestones or plaques with names on (although only two can still be read), and these indicate that the graves are probably those of local farm workers. Two of the graves have dates: 1922 and 1968. The 1968 grave is one of the two graves at the 'head' of the graveyard, while the 1922 grave is located near to the middle of the graveyard. This would appear to indicate that most of the graves are older than 1968. All graves older than 60 years outside a formal burial ground are protected by the National Heritage Resources Act (Act no. 25 of 1999).

*Distribution of other occurrences*

A line of packed rocks was observed near to the graveyard. The purpose of these rocks is difficult to determine.

Two sets of hollows were observed near to the graveyard. These hollows (a set of three and a set of five) are circular, about 2 to 5 m in diameter, and appear to have been dug with the aid of a machine. Their purpose is unknown.

Various other indications of disturbance and digging in the ground were observed. Heaps of soil and rock were observed under the pylons on the eastern side of the surveyed area, and appear to relate to the digging of a ditch nearby.

No cultural material was found on the surface or in the vicinity of the dolerite outcrops.

**Statement of Significance (Heritage Value)**

The graveyard could be a place of significance to the descendants of the people buried there. It is assumed that these are the graves of local farm workers, who may no longer be in the vicinity. This would, however, have to be established through research and community consultation.

The only other cultural material observed is the line of packed rocks, but this would be deemed of low significance, as the line is not associated with any other structure or cultural material, and its purpose cannot be determined.

**Field Rating**

The field rating for the graveyard would be:

Generally Protected A (Field Rating IV A): this site should be mitigated before destruction (generally High/Medium significance);

See recommendations below.

## **Risk preventative measures associated with construction**

### Summary of the measures

<b>Aspect</b>	
Existing and newly discovered sites of archaeological interest	Graveyard recorded
<b>Impact</b>	
Damage to existing and newly discovered sites	Graveyard would have to be mitigated if it is to be disturbed or moved.
<b>Mitigation</b>	
<b>Identify roles and responsibilities</b>	If the graveyard is to be disturbed or moved, an archaeologist would be required to undertake such removal. Community or social consultation would have to take place. A management plan has to be set in place if the graveyard is to be left undisturbed.
<b>Regulations and permits</b>	Permit required from SAHRA

### **Recommendations**

No further action is required for any of the occurrences observed apart from the graveyard.

There are two options that can be considered in relation to the graveyard:

1. The graveyard remains in situ:

A management plan for the graveyard during and after construction needs to be in place. This is to ensure that the graves are not damaged during the construction phase, and that they are not inadvertently damaged in the future.

The graveyard needs to be marked on all maps and plans of the substation.

An attempt should also be made to establish whether there are people who still have links with the graveyard, whether they visit the graves, and whether they wish to have access to the graves in future. Any management plan will have to include the results of this investigation and consultation with the relevant individuals. A mutually acceptable management plan will have to be adhered to, with responsibilities for the maintenance of the graveyard clearly outlined, as well as mechanisms for monitoring this. Should access be required to the graveyard by relatives, this must be clearly set out in the management plan.

2. The graveyard is relocated:

If the graveyard is to be relocated, a permit will have to be obtained from SAHRA for the purpose. Although one of the graves dates to 1968, and therefore technically falls outside the ambit of the Act, the probability is high that many of the graves will be older than 60 years. It may be possible to establish this through a process of community consultation and research.

The National Heritage Resources Act (Act No. 25 of 1999, see Appendix 1) and SAHRA permit regulations (*Government Gazette* Vol. 240, No. 21239) have strict guidelines, which must be followed during a grave relocation process

**NOTE:** Should the developer encounter any heritage resources, not reported on in this document, and as defined and protected by the NHRA (1999) during the course of development, the developer should immediately cease operation in the immediate vicinity and report the site to SAHRA or an ASAPA accredited CRM archaeologist.

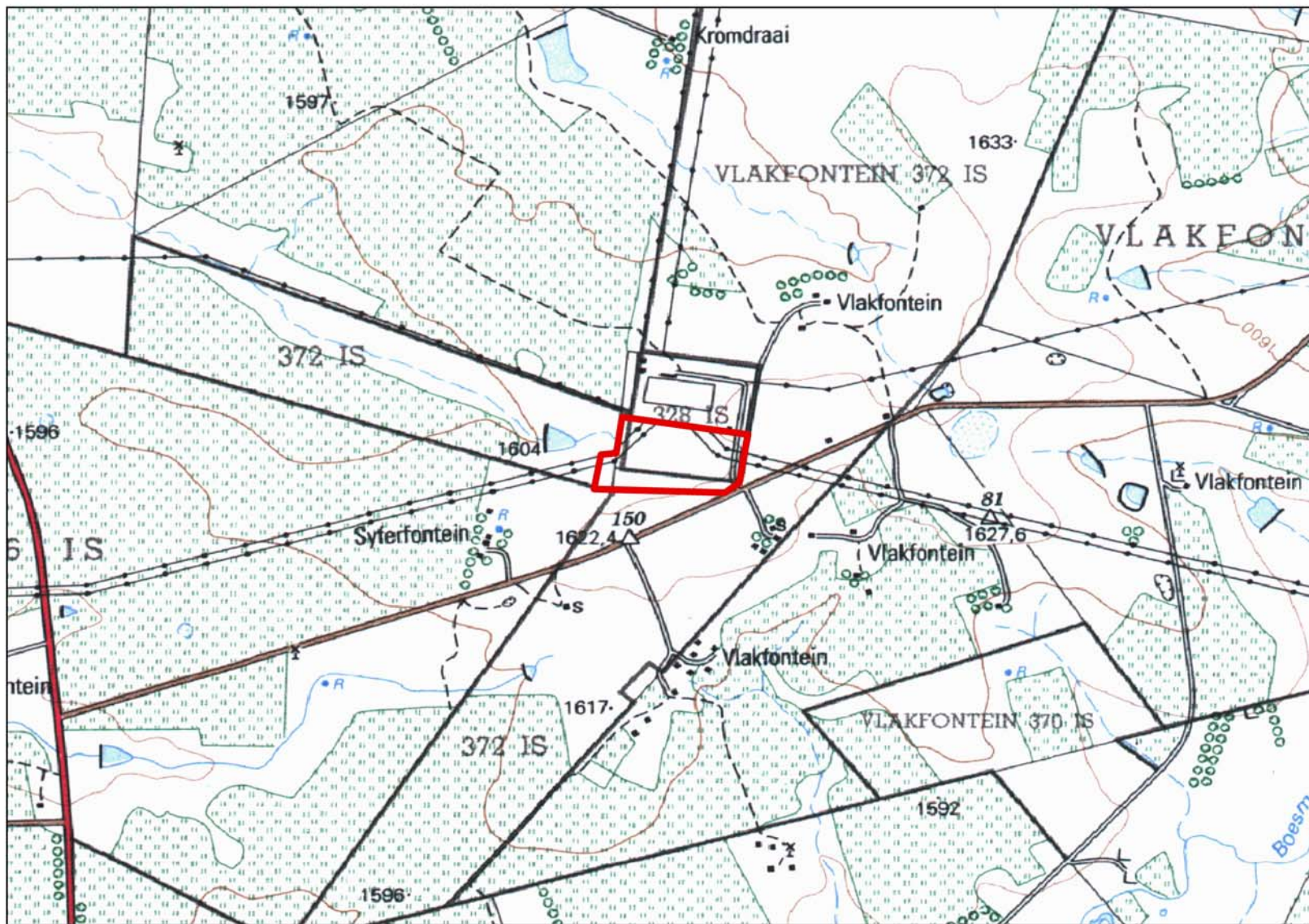
### References:

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## Maps:

<b>Legend: Map 1 -3</b>					
<b>Zeus Substation Survey</b>					
<b>Map Signage</b>	<b>Notes</b>	<b>South</b>	<b>East</b>	<b>Latitude(Y)</b>	<b>Longitude(X)</b>
<b>B</b>	Boundary point	26 41 48.1	29 05 33.1	-26.69669	29.09253
<b>B</b>	Boundary point	26 41 56.2	29 05 31.7	-26.69894	29.09214
<b>B</b>	Boundary point	26 41 53.3	29 05 10.2	-26.69814	29.08617
<b>B</b>	Boundary point	26 41 45.2	29 05 11.7	-26.69589	29.08658
<b>B</b>	Boundary point	26 41 57.4	29 05 09.1	-26.69928	29.08586
<b>B</b>	Boundary point	26 41 58.0	29 05 29.2	-26.69944	29.09144
<b>IP</b>	Inspection pits, no artefacts	26 41 46.1	29 05 12.8	-26.69614	29.08689
<b>IP</b>	Inspection pits, no artefacts	26 41 49.4	29 05 11.4	-26.69706	29.08650
<b>IP</b>	Inspection pits, no artefacts	26 41 51.9	29 05 12.0	-26.69775	29.08667
<b>IP</b>	Inspection pits, no artefacts	26 41 46.7	29 05 16.8	-26.69631	29.08800
<b>IP</b>	Inspection pits, no artefacts	26 41 52.2	29 05 19.4	-26.69783	29.08872
<b>IP</b>	Inspection pits, no artefacts	26 41 47.3	29 05 20.5	-26.69647	29.08903
<b>IP</b>	Inspection pits, no artefacts	26 41 54.9	29 05 07.5	-26.69858	29.08542
<b>IP</b>	Inspection pits, no artefacts	26 41 51.5	29 05 08.0	-26.69764	29.08556
<b>IP</b>	Inspection pits, no artefacts	26 41 55.4	29 05 11.2	-26.69872	29.08644
<b>IP</b>	Inspection pits, no artefacts	26 41 54.0	29 05 27.7	-26.69833	29.09103
<b>IP</b>	Inspection pits, no artefacts	26 41 53.7	29 05 30.4	-26.69825	29.09178
<b>S</b>	Packed stone line	26 41 55.9	29 05 09.3	-26.69886	29.08592
<b>S</b>	Stone heaps	26 41 51.0	29 05 31.9	-26.69750	29.09219
<b>H</b>	Hollows	26 41 56.3	29 05 08.2	-26.69897	29.08561
<b>H</b>	Hollows	26 41 56.8	29 05 10.6	-26.69911	29.08628
<b>G</b>	Grave	26 41 54.0	29 05 09.7	-26.69833	29.08603
<b>GB</b>	Graveyard boundary	26 41 54.0	29 05 09.5	-26.69833	29.08597
<b>GB</b>	Graveyard boundary	26 41 54.4	29 05 09.3	-26.69844	29.08592
<b>GB</b>	Graveyard boundary	26 41 54.5	29 05 09.6	-26.69847	29.08600
<b>GB</b>	Graveyard boundary	26 41 55.5	29 05 09.5	-26.69875	29.08597
<b>GB</b>	Graveyard boundary	26 41 55.5	29 05 09.2	-26.69875	29.08589





Legend

 Surveyed Area

800 400 0 800 Meters

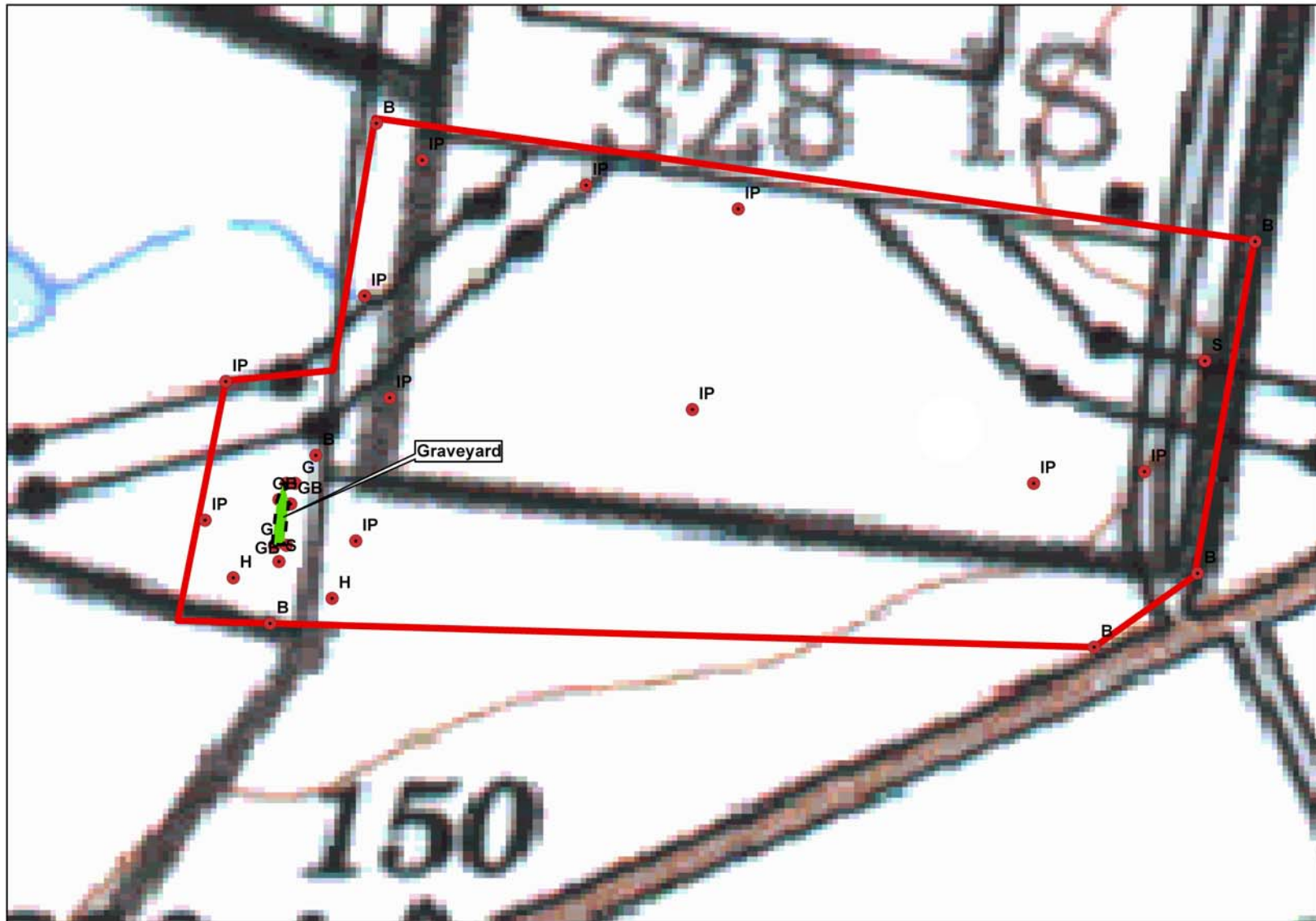
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2629CA

**ZEUS**  
Eskom Substation

Prepared by  
Archaeology Department  
National Museum



Map 1: LOCATION OF SURVEYED AREA, VLAKFONTEIN 328, GERT SIBANDE (DC 30) DISTRICT, MPUMALANGA, SOUTH AFRICA



Legend  
 Surveyed Area  
 Surveyed Points

100 50 0 100 Meters

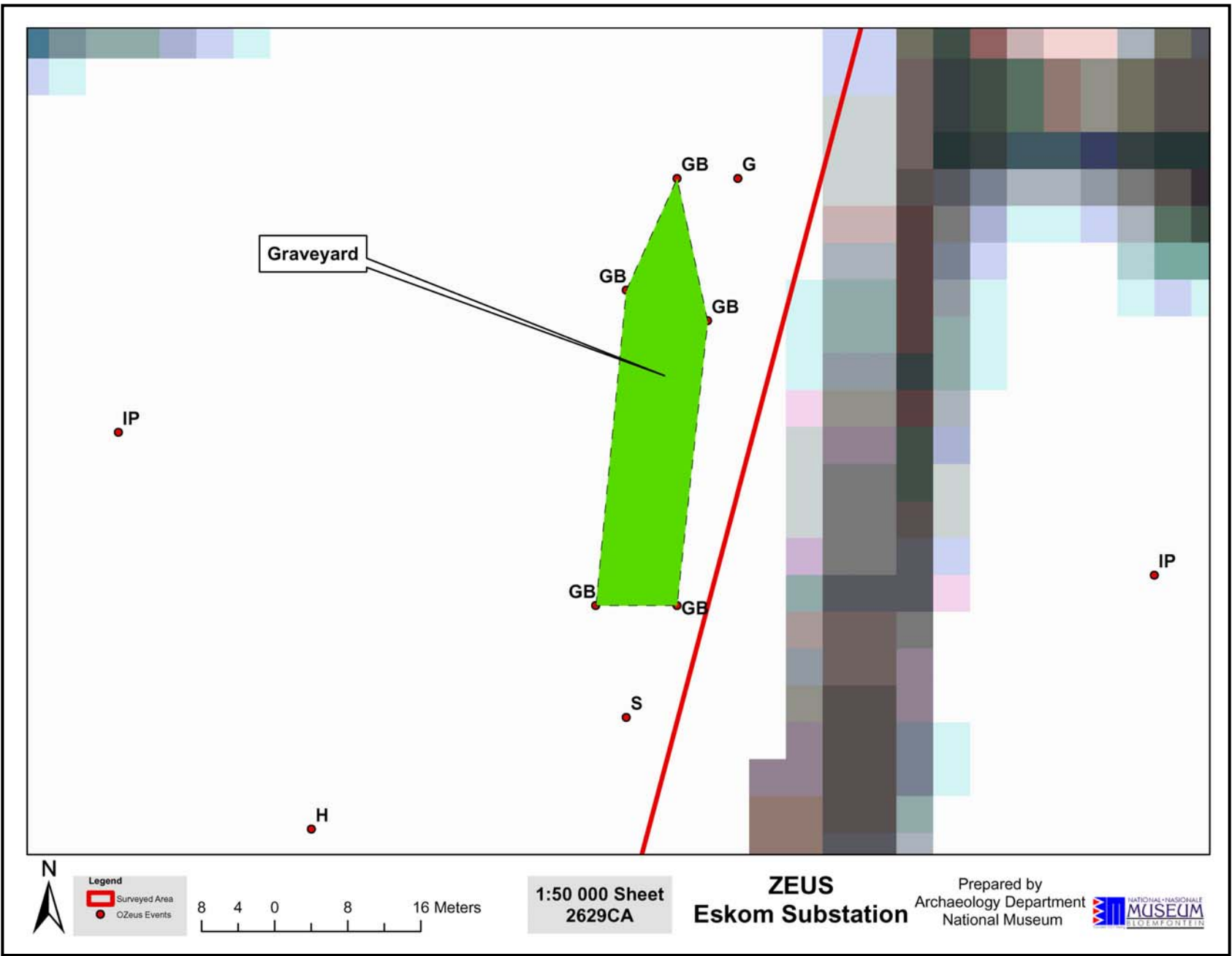
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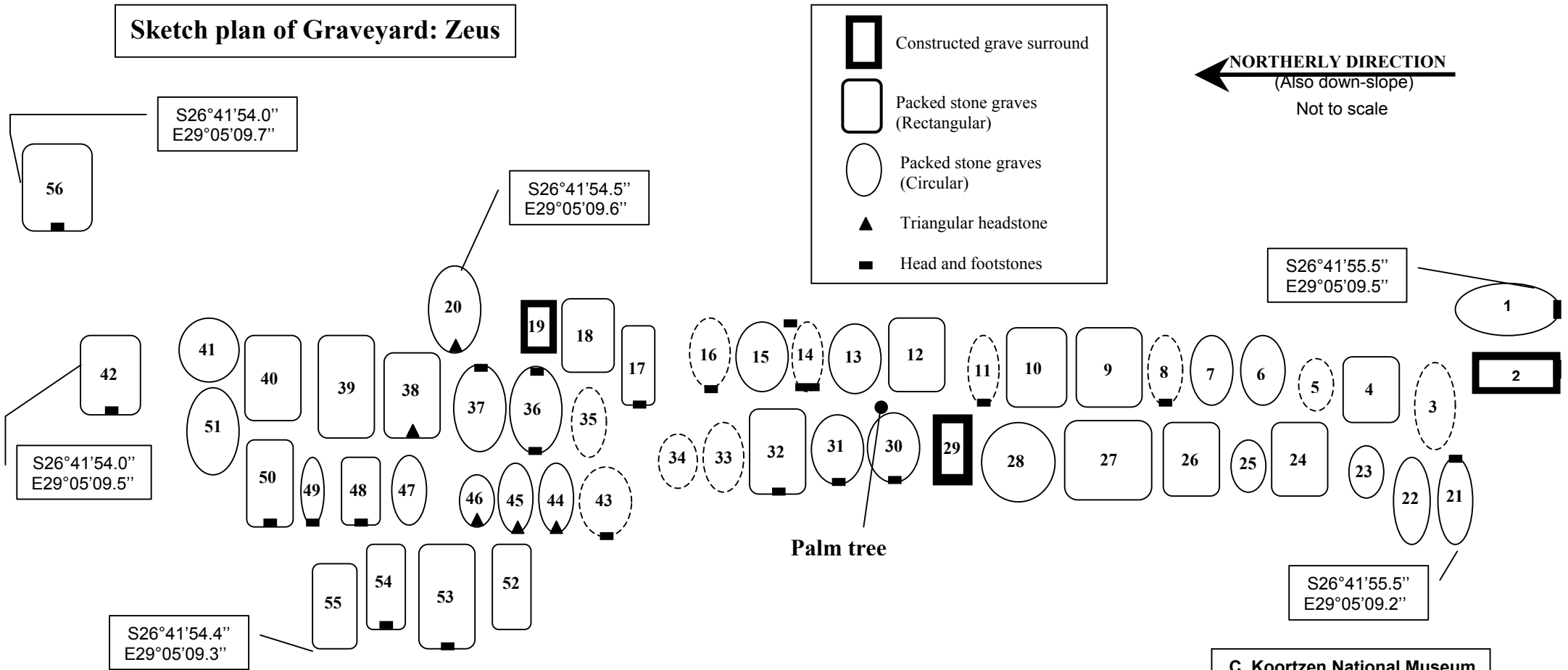


Map 2: CLOSE UP OF SURVEYED AREA, VLAKFONTEIN 328, GERT SIBANDE (DC 30) DISTRICT, MPUMALANGA, SOUTH AFRICA



Map 3: CLOSE UP OF GRAVEYARD, VLAKFONTEIN 328, GERT SIBANDE (DC 30) DISTRICT, MPUMALANGA, SOUTH AFRICA

# Sketch plan of Graveyard: Zeus



## C. Koortzen National Museum

- 2- ABEL / KHANYE / 1968 MEI 2. Cement headstone, painted black. Name written in wet cement and then painted white on top of the black. Grave surround consists of two brick rows stacked on top of each other, plastered on top and on inside. Grave was fenced off originally, only 4 poles remain, 3 still standing, SW pole still has some barbwire attached (photo: 17,18)
- 17- Red granite-like headstone with cement on back, some white paint remains can be seen on top and on the back. Smoothed on sides (photo: 19)
- 19- Headstone missing. Grave surround consists of single brick row. Different types of bricks were used, some also had cement on them, indicating that the bricks were reused and collected from various sources. Inside of grave is covered with a roughly made cement slab. Grave diameters: +- 1.5mx0.8m. Possible child grave (photo:20)
- 29- II LOVING MEMORY OF / OUR LATE *OU PLAAITJIE* / MATHETSE MPATLANYANE / PASSED AWAY 1922 / EVER REMEMBERED BY OFFSPRING / REST IN PEACE. Rectangular gray granite headstone. Grave surround consists of 4 granite slabs. Grave covered with gravel embedded in cement. It appears that the headstone and grave surround was done afterwards, being placed on top of old grave cover (photo: 21)
- 32- Square sandstone-like headstone
- 39- Very neatly packed with stones in rectangular shape (photo: 22)
- 40- Two metal plaques. Same metal used. Names written in black paint on opposite sides of sheets. Possibly two individuals with same surname.  
Plate 1: NAME: A M O S? / M H I A N g A    Plate 2: NAME: P/M? A H/A? ? ? / M H I? A? N? g? A? (photo:23,24)