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## **FIRST PHASE ARCHAEOLOGICAL & CULTURAL HERITAGE ASSESSMENT OF THE PROPOSED IRON ORE MINING DEVELOPMENTS ON PORTION 2 OF THE FARM DEMANENG 546, KURUMAN, NORTHERN CAPE**

### **EXECUTIVE SUMMARY**

Iron ore mining developments are planned on Portion 2 of the farm Demaneng 546 near Kathu, in the district of Kuruman, Northern Cape.

Previous archaeological investigations indicated that Early Stone Age artefacts of exceptional technological skills occur in the form of hand axes and pointed flakes in the red sand deposits of the area. The distribution of these stone tools could be fairly general and widespread in the surroundings of Kathu.

While exhilarating finds were made in the red sand deposits around Kathu, it appears that the geology has changed rapidly towards the present area of investigation towards the hills. The deep red sand deposit transformed into the more hilly area with a rich iron ore accumulation visible on the surface.

Although no stone tools or flakes were found at Demaneng, it might be possible that lithic material could appear in certain lower sandy areas. The impact of the proposed mining developments on the cultural heritage of the site should be handled with caution.

Other historical remnants occur in the form of ruined buildings, which could be the remains of old mining activities of long ago and could be possibly be older than sixty years. The farmer reported that his father bought the farm in 1963, when the buildings were already there. The structures are in a dilapidated state and there is no obvious function or practical use to restore and to preserve these features of unknown origin.

I recommend that the proposed developments and planning of the site may proceed on provision that caution should be taken during the excavations. In the case of the discovery of any stone flakes or tools, the work should immediately be stopped and reported to the archaeologist or to officials at the McGregor Museum, Kimberley.

It is important that the extensions of the mine should be clarified with archaeologists at the McGregor Museum and with the local branch of the Northern Cape Provincial Heritage Resources Agency (PHRA) in Kimberley (Department of Sport, Arts & Culture, Kimberley).

## **INTRODUCTION AND DESCRIPTION**

### **Scope and Limitations**

The investigation provided an opportunity to examine the proposed mining area.

Dense thorn veld vegetation presented difficult circumstances during the investigation of area, either by vehicle or on foot. Limitations were experienced in some cases where the bush became difficult to penetrate and detours had to be taken.

### **Methodology**

1. The different points were reached by vehicle and each area was inspected on foot.
2. GPS points were taken and the surroundings and features recorded on camera.
3. The site is compared with other known archaeological sites in the region.

## **INVESTIGATION**

Iron ore prospecting and mining activities will extend over Portion 2 of the farm Demaneng 546, near Kathu in the district of Kuruman, Northern Cape. The site was visited on 19 and 20 October 2010. Karien van der Merwe, Environmental Consultant from Kimberley, gave directions to the site and an official of the mine accompanied me at the farm.



RESERVOIR DAM 27°49'32"S. 023°03'47"E Altitude 1265m (Figs.18-20)

D 27°51'28"S. 023°01'25"E Altitude 1374m (Figs.4-7).

## RESULTS

### FINDS

From previous archaeological investigations, researchers are aware that Early Stone Age artefacts of exceptional technological skill occur in the form of hand axes and pointed flakes in the red sand deposits (Fig.21) of the area (Figs.23&24). The distribution of these artefacts could be fairly general and widespread in the surroundings of Kathu (Beaumont 1990, 2007; Dreyer 2006, 2008a, 2010).

After several seasons of excavations at Kathu Pan and elsewhere near Kathu, Beaumont (1990) has designated the importance of the Early Stone Age lithic material. Investigations at Kathu cemetery (Beaumont 1990, 2007) and at Hartnolls (Dreyer 2006) and Bestwood 459RD (Dreyer 2008a, 2010), produced Early Stone Age hand axes and pointed flakes (Figs.23&24) in abundance. Test trenches at Bestwood did not deliver any artefacts, but tools were collected in an old sand borrow pit from a layer about 2m below the surface level (Fig.22) (Dreyer 2008a, 2010).

While exhilarating finds were made in the red sand deposits with significant stands of *Erioloba* trees (Fig.25) around Kathu, it appears that the geology has changed rapidly towards the present area of investigation at Demaneng. The deep red sand deposits transform into hills, which produce the rich iron ore accumulations (Figs.4-7).

Historical remains occur in the form of ruined buildings (Figs.8-12), which could be the remnants of old manganese mining activities of many years ago. The walls were constructed out of concrete blocks (Fig.8), with concrete lintels (Fig.10), of which some are very low (Fig.8) and wooden doorframes and windowpanes (Figs.10&11). A concrete lined pit with dividing wall down the centre (Fig.12) was found in close association with one of the building clusters. Several old and well-used wheelbarrows were dumped into the pool (Fig.13). The purpose of this feature below ground level is uncertain.

A single glass soft drink bottle from Sullivan's in Kimberley (Fig.14), and baked bricks from New Castle (Fig.16) gave no indication of the age of the occupation of the site.

A collection of drill bits (Fig.15) which show some hammering on one end was found near a cluster of buildings.

No sign of any other cultural or historical material was found in the proposed area of development on Demaneng 546.

I anticipate that due to the wide and general distribution of the Early Stone Age artefacts in the Kathu area, there is a slight possibility that the new mining activities at the farm Demaneng 546 could also encounter some of the same kind of lithic material.

Although no stone tools or flakes were visible on the surface, it might be possible that these stone tools could likewise appear at Demaneng. The impact of the proposed mining developments on the cultural heritage of the site should be handled with caution.

### **IMPACT ASSESSMENT**

I anticipate that the old buildings could be older than sixty years. The structures are in a dilapidated state and there is no obvious function or practical purpose to restore and to preserve these features of unknown origin.

### **RECOMMENDATIONS**

Judging from the geology and the rapid soil change, there are no obvious reasons to delay the commencement of further planning and development of the site.

I recommend that the proposed developments and planning of the site may proceed, if caution should be taken during the excavations. In the case of the discovery of any stone flakes or tools, the work should immediately be stopped and reported to the archaeologist or to officials at the McGregor Museum, Kimberley.

The extension of the mine should also be clarified with the local branch of the Northern Cape Provincial Heritage Resources Agency in Kimberley (Department of Sport, Arts & Culture, Kimberley).

### **MITIGATION**

Concerning the area for the proposed developments, mitigation measures will be required in case of the discovery of stone tools and flakes.

Every archaeological and historical site is unique and should be treated as a non-renewable commodity. All efforts should be made to avoid the unnecessary disturbance or destruction of any cultural remains. I stress, therefore, that in case

of the discovery of any human skeletal material, stone tools, pottery or other archaeological or historical material during the course of the work, all activities should temporarily be stopped and stabilised in the specific area. The archaeologist should be notified for an in situ inspection by officials and specialists from the McGregor Museum, Kimberley.

## **ACKNOWLEDGEMENTS**

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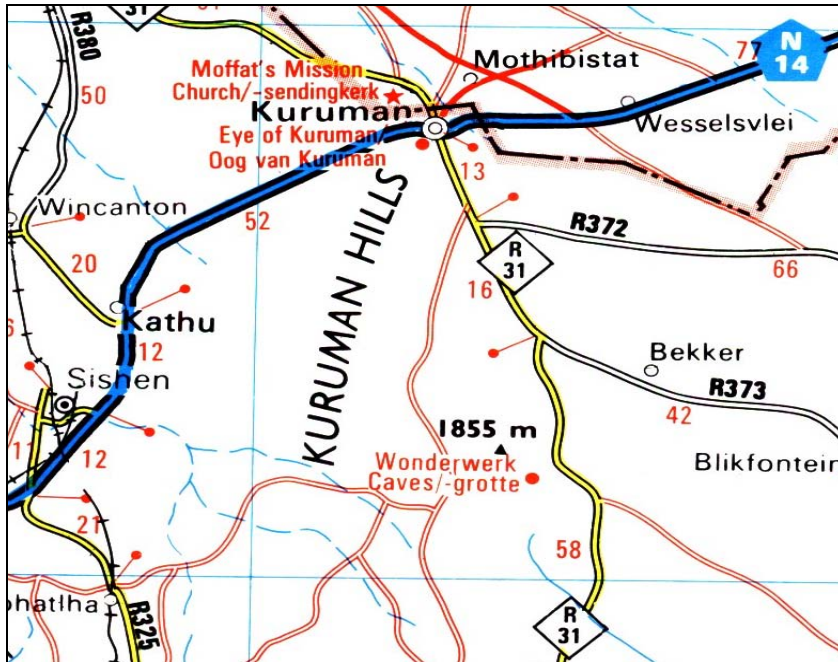
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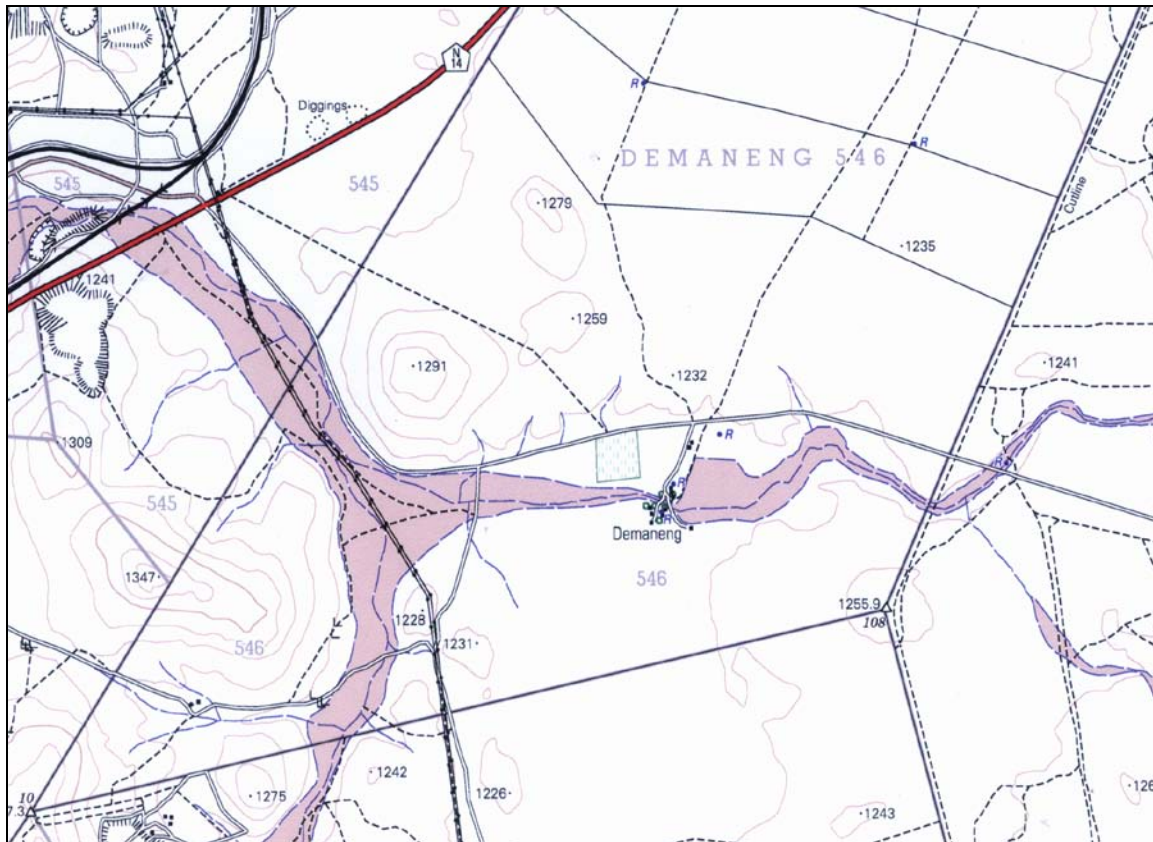
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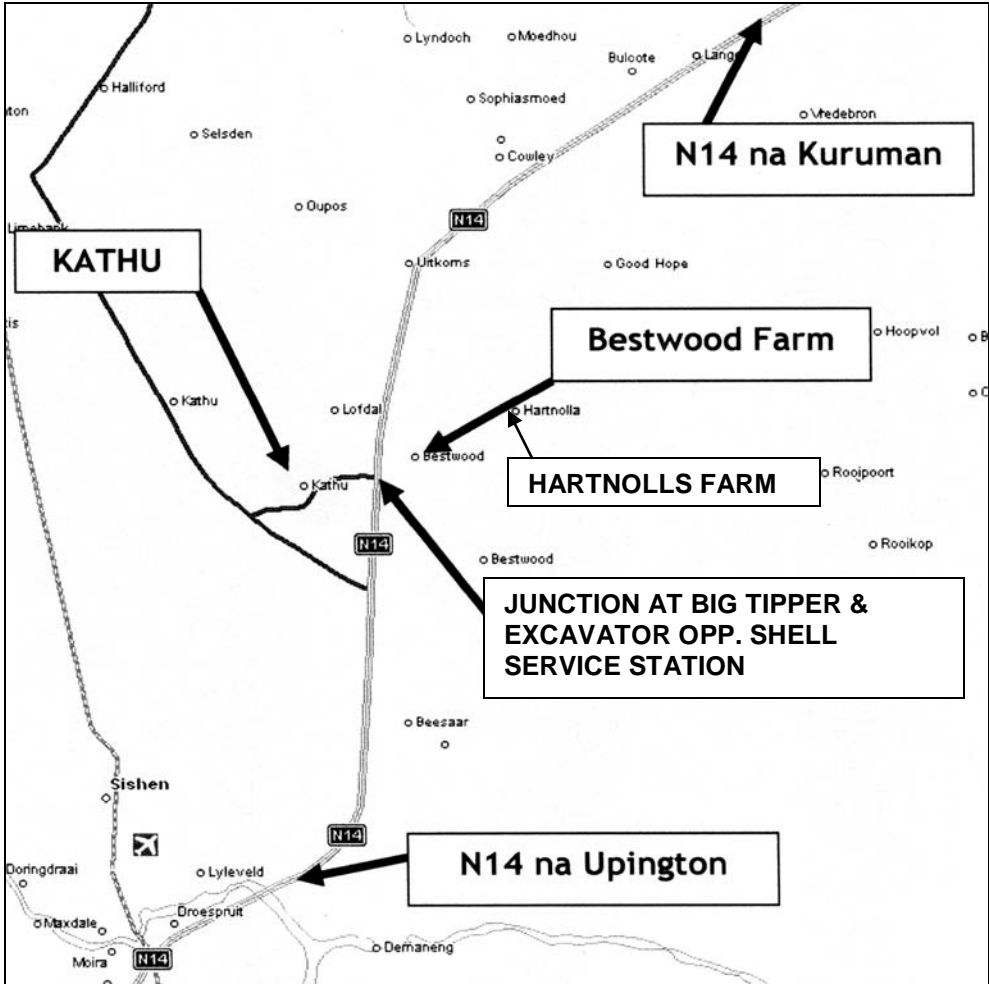
**LIST OF ILLUSTRATIONS**

Map 1 Kathu & Sishen in relation to Kuruman and the N14.

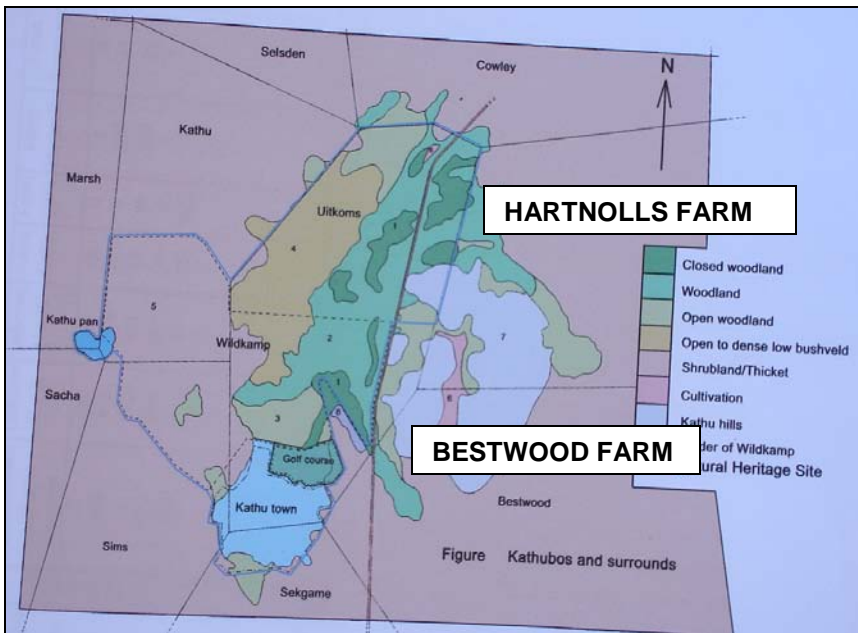


Map 2 Locality of Demaneng 546 along the N14 main road (2723CC).

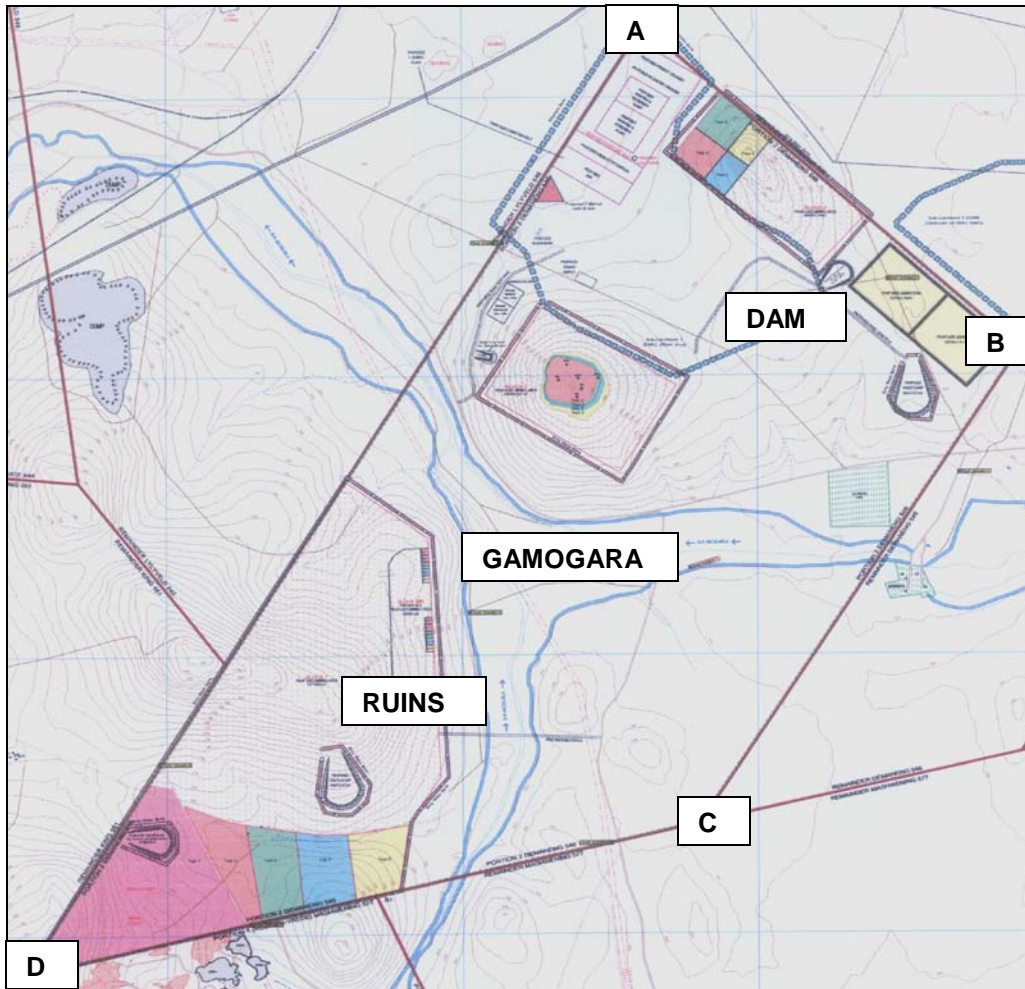




Map 3 Locality of Bestwood & Hartnolls Farms in relation to the N14 junction.



Map 4 Official map showing Kathubos and Erioloba surroundings.



Map 5 Plan of the proposed developments at Demaneng 546, Kuruman (2723CC). Coordinate points are indicated.



Fig.1 Point A facing north.



Fig.2 Point A facing south.



Fig.3 Soil surface at Point A.



Fig.4 Highest point in the region at Point D.



Fig.5 Point D.



Fig.6 Profile of test pit below Point D.



Fig.7 Geological profile at Point D.



Fig.8 Ruin walls made of concrete blocks at Demaneng 546, near Kathu.



Fig.9 Wall with low concrete lintel at Demaneng.



Fig.10 Wall with concrete lintel and wooden doorframe.



Fig.11 Wooden windowframes in the concrete walls.



Fig.12 Concrete lined pit with dividing wall down the centre. Note water line on the wall.



Fig.13 Several old and well-used wheelbarrows were dumped into the pool.





Fig.14 Orange Crush bottle from Sullivan's Mineral Water Works in Kimberley.



Fig.15 Drill bits near the buildings. Metal pegs show signs of hammering at one end.



Fig.16 New Castle inscribed fired bricks.



Fig.17 Profile of test pit in alluvial deposit in the Gamogara flood floor.



Fig.18 Water reservoir dam site on hill facing north.



Fig.19 Water reservoir dam site on hill facing east.



Fig.20 Water reservoir dam site on hill facing west.

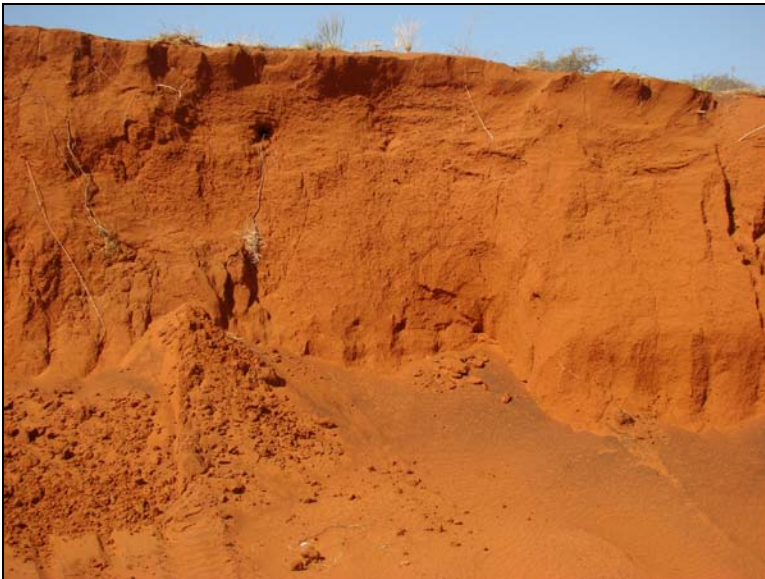


Fig.21 Sterile wall in new sand borrow pit at Bestwood, Kathu (Dreyer 2010).



Fig.22 Stones and flakes in old sand borrow pit at Bestwood, Kathu (Dreyer 2008).



Fig.23 Stone tools and flakes exposed in old sand borrow pit at Bestwood. Pocket knife = 83mm (Dreyer 2008).



Fig.24 Hand axes and flakes from Dreyer's site near the Kathu cemetery.  
(Match box = 52mm x 36mm) (Dreyer 2006).



Fig.25 *Acacia erioloba* trees near sand borrow pit at Bestwood (Dreyer 2008).