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**FIRST PHASE ARCHAEOLOGICAL & HERITAGE ASSESSMENT  
OF THE BORROW PITS FOR THE REPAIR & UPGRADE OF THE  
IRRIGATION INFRASTRUCTURE AT SOVERBY & CURRIES  
CAMP NEAR KEIMOES, NORTHERN CAPE PROVINCE**

**EXECUTIVE SUMMARY**

Repair and upgrading of the irrigation water supply infrastructure at Soverby and Curries Camp near Keimoes in the Northern Cape is planned. Water distribution canals and bridges along the Orange River were damaged by the floods of 2011. The developers plan to replace about 25km of the existing canals by concrete pipes of varying diameters. Drainage canals over a distance of about 12km will be repaired and upgraded with concrete linings or pipes. Additionally, nearly 25 bridges and a 50m long diversion weir will likewise be repaired. Crushed rock material for the concrete work, will be obtained from at least three existing or new borrow pits.

The flood plains are used for agricultural irrigation activities, resulting in a labyrinth of water canals and track ways that bisects the area.

Several scatters of archaeological material occur in the form of stone flakes and flaked cores concentrated at specific points on higher land away from the river. The artefacts were made from lithic sources of banded ironstone, chert and agate. No actual tools occur and the flakes can be identified as Later Stone Age material. The flakes appear as a general occurrence on the koppies and hills in the area above the floodwater line.

Although the affected areas are on the flood plain where no graves are expected, caution is needed to avoid damage to any graves or human skeletal remains that might be discovered. Cultural and historical remains occur in the form of porcelain shards, Anglo-Boer War food can remains, living sites and farmyard remains, such as house debris, stock enclosures and threshing floors.

I recommend that the planning and development of the borrow pits may proceed. Mitigation measures will be needed in case of the discovery of human graves.

## **INTRODUCTION & DESCRIPTION**

### **Scope and Limitations**

NSVT Environmental Consultants from Bloemfontein is handling the Environmental Impact Assessment process on behalf of the Northern Cape Department of Agriculture, Land Reform and Rural Development, who commissioned the archaeological assessment of the borrow pits for the water supply infrastructure at Soverby and Curries Camp near Keimoes.

The investigation provided the opportunity to examine the proposed areas of development. The topography of the site is determined by the geology and is dominated by the Orange River delta forming many streams and islands. In the west along the N14 main road, the soil surface consists of bare rocky outcrops with red sandy soil and calcrete and quartz scatters, which changes to alluvial sand near the river. The area contains a short grass cover with scatters of aloes and shrubs and bushes on the surface.

Although the network of canals and pathways along the river forms a maze and is an actual nightmare to figure out, no serious limitations were experienced during the inspection of the borrow pit sites.

### **Methodology**

1. Standard archaeological survey and recording methods were applied.
2. A survey of the literature was done to obtain information about the archaeology and cultural heritage of the area.
3. The borrow pit sites were investigated on foot.
4. The layout of the area as well as objects and features were plotted by GPS and the coordinates transferred to Google Earth.
5. The surroundings and features were recorded on camera.

### **INVESTIGATION**

The restoration and upgrading of the water supply infrastructure at Soverby and Curries Camp, 10km north of Keimoes along the Orange River is planned (Map 1). Irrigation canals and bridges have been damaged by the floods of 2011. Concrete pipes will replace twenty-five kilometres of existing canals in the Carries Camp and Soverby area, while drainage canals over a distance of about 12km will also be repaired and upgraded by the installation of concrete linings. Nearly 25 bridges will be renovated and a 50m water diversion weir will likewise be repaired. The need for crushed rock material for the concrete work necessitates the re-opening and mining of at least three existing or new borrow pits.

The borrow pit sites have entrance from the N14 main road from Upington, where the land surface is stony and bare with scattered calcrete outcrops (Fig.35). Different aloe species i.e. *Aloe claviflora* (Canon aloe) (Fig.34) and *Aloe garipeensis* (Figs.9&10) appear in abundance. A few *Acacia erioloba* trees (Fig.11) and *Prosopis* bushes (Figs.1&2) grow here and there.

The site inspection was done on 29 August 2003, in the company of Dr Johan du Preez from ECO CARE Environmental Consultants, Bloemfontein.

The area was examined for possible archaeological and historical material and to establish the potential impact on any cultural material that might be found. The Heritage Impact Assessment (HIA) is done in terms of the National Heritage Resources Act (NHRA), (25 of 1999) and under the National Environmental Management Act, 1998 (Act. 108 of 1998).

Not much is known about the history of the particular piece of land. Diamond mining is rapidly becoming an important industry in the Northern Cape. The history of diamond mining in this region was investigated and documented by several authors (Beet n.d., Rosenthal n.d., Shonge, Visser & van Riet Lowe 1937). Extensive agricultural activities have been performed on the flood plains in the delta along the Orange River (Map 3). These agricultural irrigation activities have resulted in a labyrinth of water canals and track ways that bisect the area.

The study aims to locate and evaluate the significance of cultural heritage sites, archaeological material, manmade structures older than 60 years, and sites associated with oral histories and graves that might be affected by the proposed developments. In many cases, planted and self-sown trees and other types of vegetation determine a major part of the historical landscape of human settlements in villages and towns, on farmyards or even deserted places in the open veld. These features should be recognised and taken into consideration during any cultural investigation.

Anglo-Boer War (1900-1902) camping and skirmish sites in the Free State and Northern and Eastern Cape, should be recorded. Distinctive food cans and specific types of fired cartridge cases normally identify these sites. Conflict sites between early White farmers and Bushmen in the Northern and Eastern Cape could contain gunflints and fired cartridge cases and should likewise be noted.

## **ARCHAEOLOGICAL & HISTORICAL BACKGROUND**

The archaeological environment of the Northern Cape is rich and diverse, representing a long time span of the human past. The area is exceptionally rich in terms of Stone Age material and rock art sites. Some areas are richer than other and not all the sites are equally significant (Beaumont et al. 1995,

Beaumont & Morris 1990). For various reasons, there is a relative lack in research records, but certain sites such as the Wonderwerk Cave in the Kuruman Hills, several ancient specularite mines near Postmasburg and a number of significant Stone Age sites near Kathu (Beaumont 1990, 2007), have produced important archaeological information. Beaumont (1990) has indicated the importance of the Early Stone Age lithic material after many seasons of excavations at Kathu Pan and elsewhere near the town.

Other Stone Age sites near Kathu were discovered during previous Archaeological and Heritage Impact Assessments (HIA) at Bokpoort (Dreyer 2006, 2012) and Upington (2010, 2012). Exceptional hand axes and flakes were found on bare sandy patches at Hartsnoll 458. Similar artefacts were discovered on municipal land adjacent to the Kathu Cemetery (named Uitkoms 4 by Beaumont 2007). Other related material was found at Bestwood 459RD, directly opposite the main entrance from the N14 into Kathu (Dreyer 2008). According to the technology these artefacts fit in with the later part of the Early Stone Age (Acheulean) (2 million to 150 000 years ago). Beaumont declared that these artefacts resemble the material found in controlled excavation at Wonderwerk Cave, which dated to 500 000 years BP.

Khoi stock farmers moved into this area between AD 400 and AD 1100. Black farming communities followed into the Northern Cape. This phase known as the Later Iron Age (AD 1300 to about 1840 AD), brought people who cultivated crops, kept livestock, produced an abundance of pottery in a variety of shapes and sizes and smelted metals. Extensive stone walled enclosures characterised their semi-permanent settlements. These remnants are known from the prominent Sotho/Tswana settlements at Dithakong, the Bathlaping capital near Kuruman. A number of Korana and Griqua groups, remnants of the Later Stone Age peoples, managed to survive the assimilation by Sotho/Tswana tribes in the region.

Early European missionaries and travellers ventured into the inland of the country during the 19<sup>th</sup> century and reached Dithakong as early as 1801. Several of the marauding hordes affected the lives of the Batswana people living at Dithakong near the mission station of Robert and Mary Moffat near Kuruman.

## **LOCALITY**

The settlements at Soverby and Curries Camp along the Orange River are located about 10km north of Keimoes and borders on the N14 main road from Upington to Springbok in the Northern Cape Province (Map 1).

The following GPS coordinates (Cape scale) were taken (Maps 4-7).

<b>BP1 SOVERBY</b>	28°41'43"S. 021°01'15"E Altitude 741m (Figs.1-5).
<b>SOVERBY B</b>	28°41'44"S. 021°01'14"E Altitude 743m (Fig.17).
<b>WEIR</b>	28°41'46"S. 021°02'03"E Altitude 750m (Fig.15).
<b>B</b>	28°42'00"S. 021°01'22"E Altitude 743m (Fig.18).
<b>CC BP1</b>	28°39'37"S. 021°01'35"E Altitude 794m (Figs.20&21).
<b>CC BP2</b>	28°40'16"S. 021°01'36"E Altitude 797m (Figs.23&24).
<b>CCA</b>	28°40'26"S. 021°02'49"E Altitude 757m (Map 6).
<b>CCB</b>	28°40'35"S. 021°02'58"E Altitude 759m (Fig.25).
<b>CCC</b>	28°40'12"S. 021°03'08"E Altitude 750m (Fig.26).
<b>CCD Ø 13m</b>	28°40'12"S. 021°03'02"E Altitude 758m (Fig.30).
<b>CCE</b>	28°40'15"S. 021°02'59"E Altitude 754m (Figs.32&33).

## **RESULTS**

### **FINDS**

Scattered hills and rocky outcrops (Figs.10,17&18,26), some of which contain large boulders resembling monoliths (Fig.25), present first-rate prehistoric lookout posts and lithic tool manufacturing sites (Figs.26-29).

Archaeological material, in the form of scatters of worked stone flakes, occur at various places near BP1 (Fig.12), Point B at Soverby (Fig.19), BP1 at Curries Camp (Fig.22) and on the hill at Point C, Curries Camp (Figs.26-29). The artefacts were made from lithic sources of banded iron stone, chert and agate, which had clearly been carried in from the riverbed. No actual tools occurred and the collection includes core flakes and flaked cores. The artefacts can only be classified as Later Stone Age material. This period is calculated to have lasted over the past 40 000 years.

Human living sites can be identified from the remains of houses (Figs.4&5, 17&18), a stock kraal (Fig.8), threshing floors at BP1 (Figs.6&7) and on the hill at Soverby (Figs.21&22) and at Point D near Curries Camp (Fig.41). BP1 also produced a single milk can lid (Fig.14), dating from the Anglo-Boer War and a porcelain shard (Fig.13). No other buildings with any cultural value exist at the site.

A floodwater control sluice at Soverby (Fig.16) has a date of 6/10/1989 inscribed in the concrete.

No graves were found near the borrow pit sites and on the flood plain along the river.

## **IMPACT ASSESSMENT**

The potential impact of the borrow pit developments on the heritage resources of the sites are considered to be of minor significance. Mitigation measures will only be needed in case of the discovery of human graves.

The scatters of stone artefacts described above are located on the higher parts of the terrain and will not be affected by the proposed mining activities or by the floodwaters of the Orange River.

## **RECOMMENDATIONS**

The impact resulting from the proposed mining activities at the borrow pits on the archaeological and heritage resources are considered to be of minor significance.

There are no obvious reasons to delay further planning of the developments at the specific site. I recommend that the planning of the proposed borrow pit developments may proceed.

## **MITIGATION**

There is always the possibility that human skeletal remains may occur during excavations and mining activities. In such a case, caution is needed to avoid damage to any human skeletal remains and should immediately be reported to Heritage Northern Cape in Kimberley and to SAHRA in Cape Town.

In case of the discovery of human graves, the burials should be fenced and protected.

## **ACKNOWLEDGEMENTS**

I thank Dr Johan du Preez from ECOCARE Environmental Consultants, Bloemfontein, for taking me to the site.

**SELECT BIBLIOGRAPHY:**

BEAUMONT, P.B., SMITH, A.B. & VOGEL, J.C. 1995. Before the Einiqua: the archaeology of the frontier zone. In Smith, A.B. (Ed.). Einiqualand: Studies of the Orange River Frontier. Cape Town: University of Cape Town Press.

BEAUMONT, P.B. & VOGEL, J.C. 1989. Patterns in the age and context of rock art in the Northern Cape. South African Archaeological Bulletin 44(150):73-81.

BEAUMONT, P.B. & MORRIS, D. 1990. Guide to archaeological sites in the Northern Cape. Kimberley: McGregor Museum.

BEET, G. n.d. The grand old days of the diamond fields. Cape Town: Maskew Miller.

DEACON, J. 1992. Archaeology for Planners, Developers and Local Authorities. Cape Town: National Monuments Council.

DREYER, J. 2006. First phase archaeological and cultural heritage assessment of the proposed concentrated solar thermal plant (CSP) at the farms Olyvenhouts Drift, Upington, Bokpoort 390 and Tampansrus 294/295, Groblershoop, Northern Cape. EIA Report for Bohlweki Consultants, Johannesburg.

DREYER, J. 2010. First phase archaeological & heritage assessment of the residential developments at Pabalello, Upington, Northern Cape. MDA Environmental Consultants, Bloemfontein.

DREYER, J. 2012. First phase archaeological and cultural heritage assessment of the proposed water pipeline from Sanddraai 391 to Bokpoort 390, Groblershoop, Northern Cape. EIA Report for SSI Engineers, Sandhurst.

DREYER, J. 2013. First phase archaeological & heritage assessment of the housing developments at Melkstroom 563, Upington, Northern Cape. MDA Environmental Consultants, Bloemfontein.

HUMPHREYS, A.J.B. 1986. Searching for the past. Cape Town: David Philip.

MORRIS, D. 1988. Engraved in place and time: a review of variability in the rock art of the Northern Cape and Karoo. South African Archaeological Bulletin 43(148):109-121.

MORRIS, D. 1990a. 'Etchings' and 'Intaglios' in the Upper Karoo: Part 1: The engravings at Springbok Oog. In Beaumont, P.B. & Morris, D. Guide to archaeological sites in the Northern Cape. Kimberley: McGregor Museum.

MORRIS, D. 1990b. 'Etchings' and 'Intaglios' in the Upper Karoo: Part 2: Engravings on Jagtpan and adjacent farms. In Beaumont, P.B. & Morris, D. Guide to archaeological sites in the Northern Cape. Kimberley: McGregor Museum.

PISTORIUS, J.C.C. 1994. Eskom Archaeological Site Identification Guide. Johannesburg: Eskom.

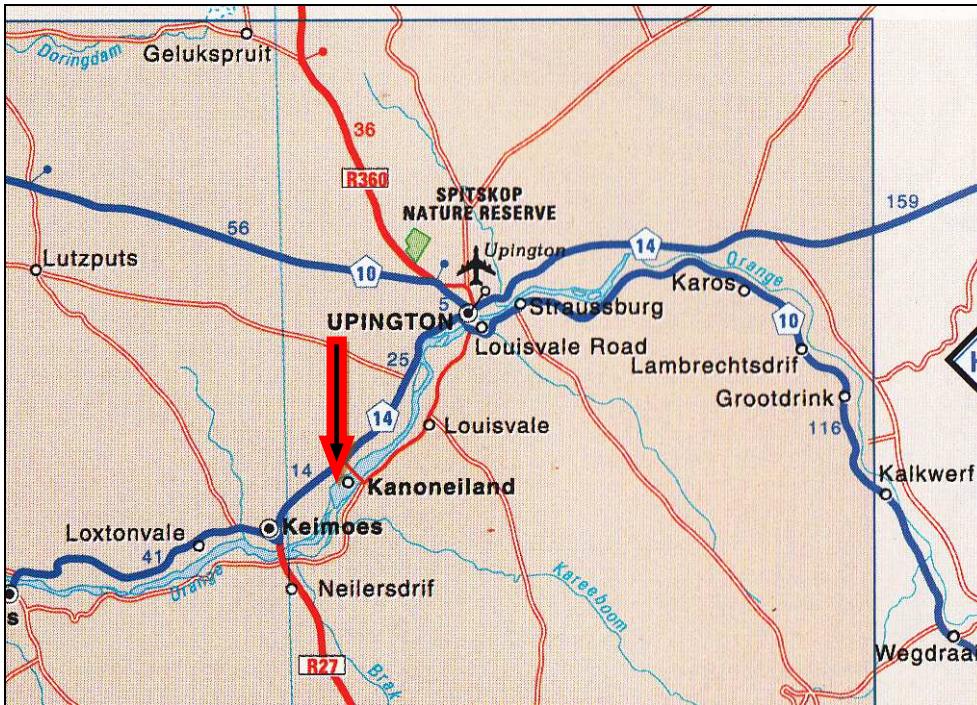
ROSENTHAL, E. (n.d.). The River of Diamonds. Cape Town: Howard Timmins.

SMITH, A.B. (Ed.). 1995. Einiqualand: Studies of the Orange River Frontier. Cape Town: UCT Press.

SOHNGE, P.G. VISSER, D.J.L. & VAN RIET LOWE, C. 1937. The geology and archaeology of the Vaal River Basin. Pretoria: Government Printer.



### LIST OF ILLUSTRATIONS

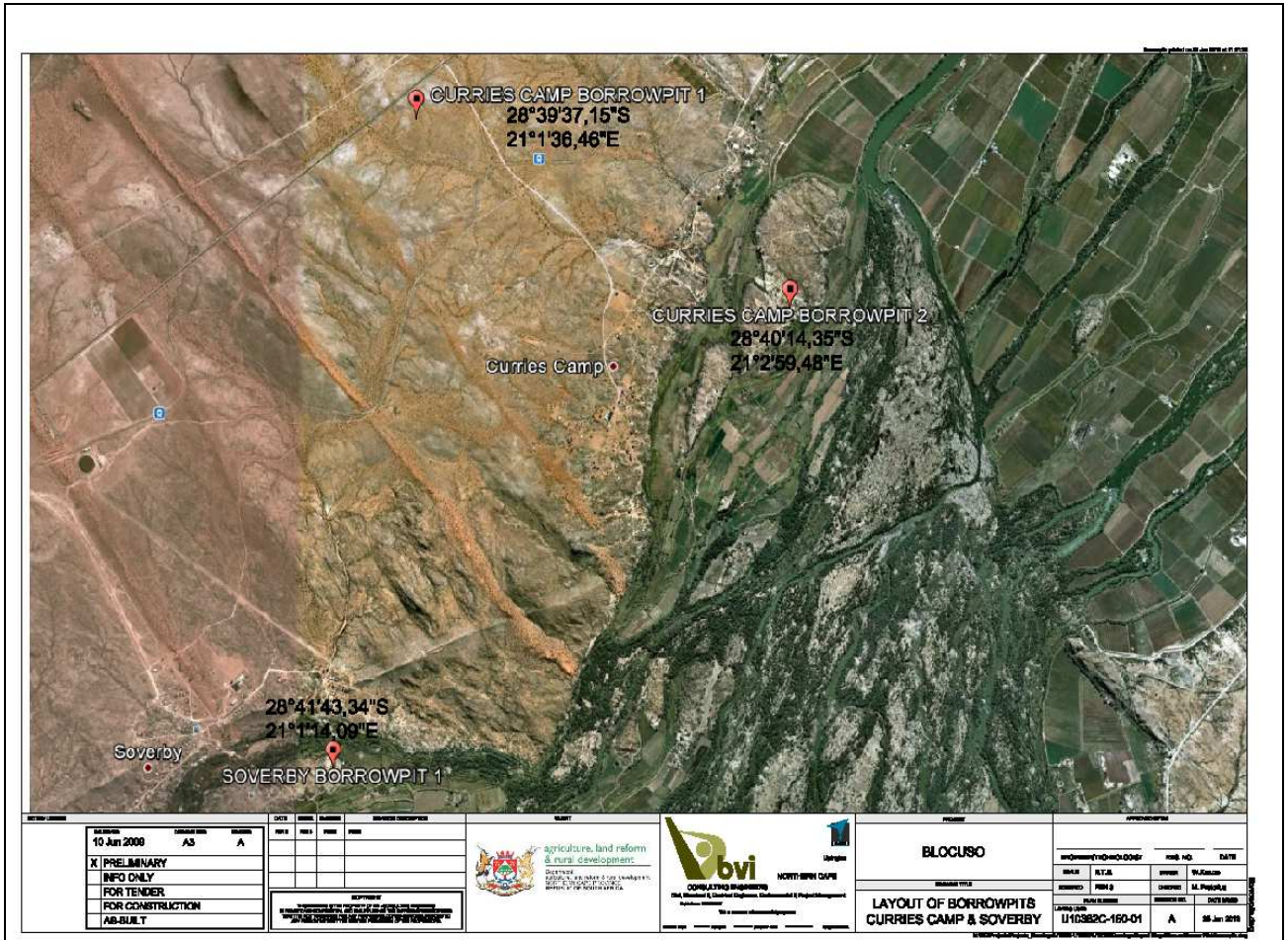


Map 1 Upington, Keimoes & Kanoneiland along the Orange River.



Fig.1 Existing BP1 at Soverby.



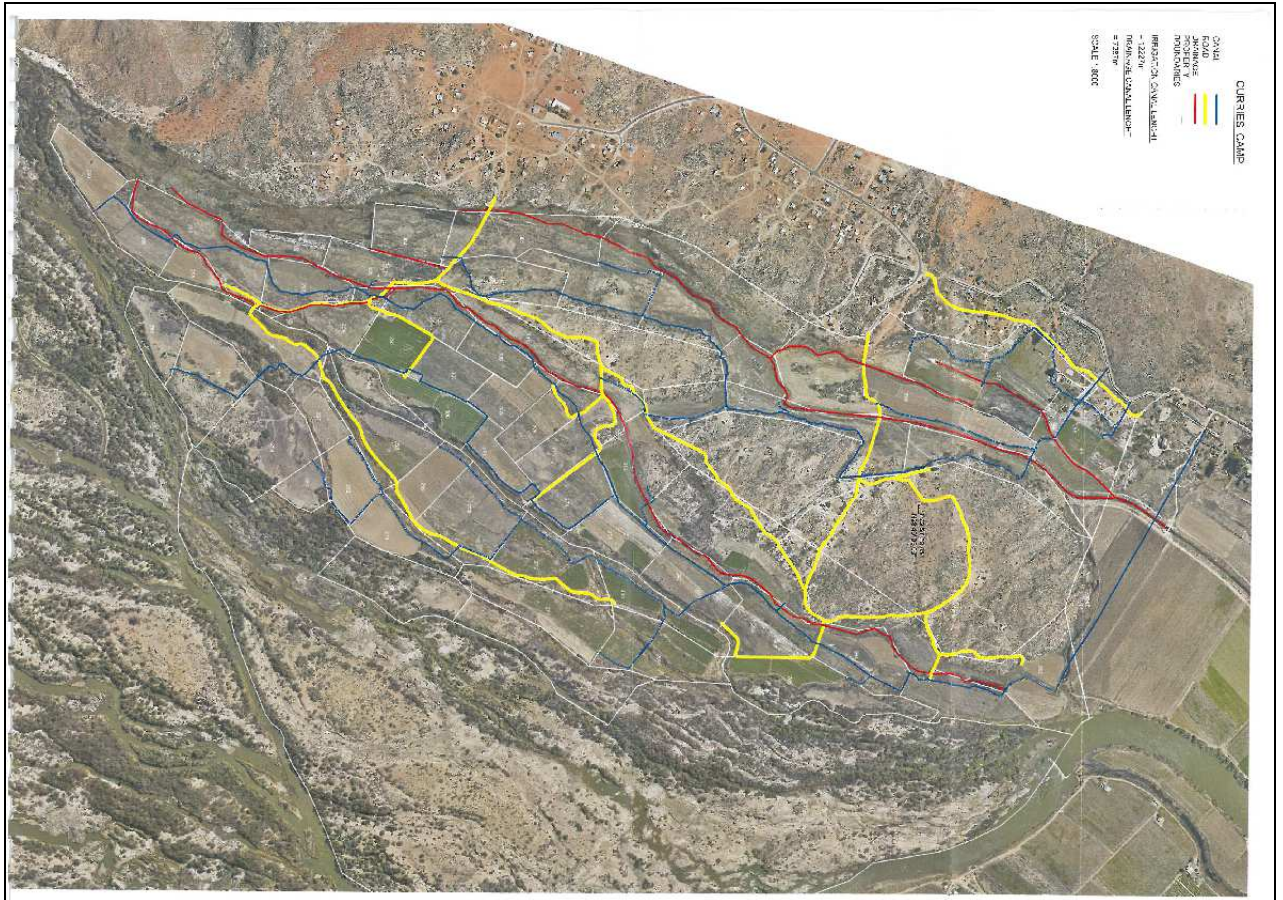


Map 2 Locality of Curries Camp & Soverby borrow pits along the Orange River.



Fig.2 Existing BP1 at Soverby.



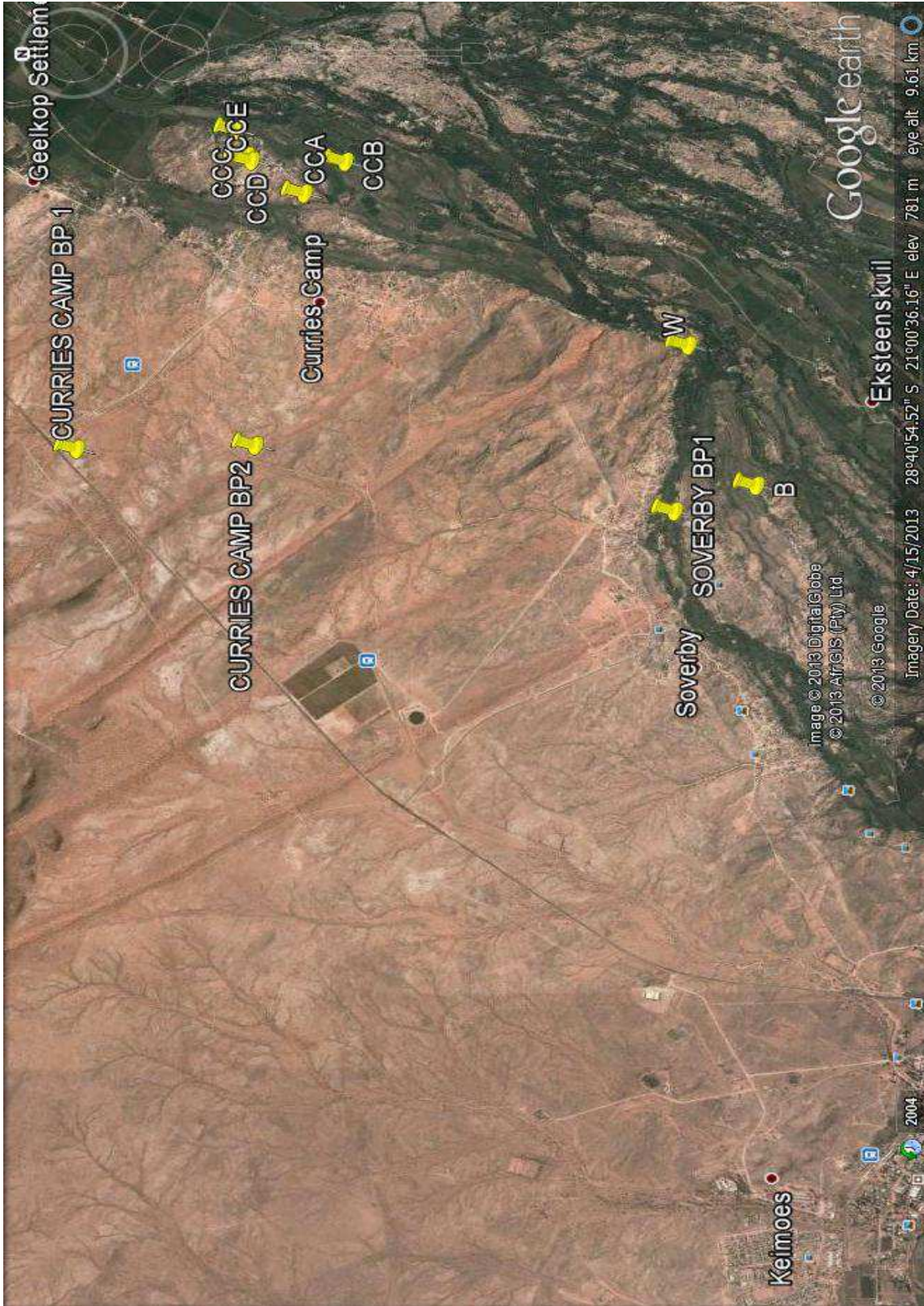


Map 3 Labyrinth of irrigation canals along the Orange River at Curries Camp.



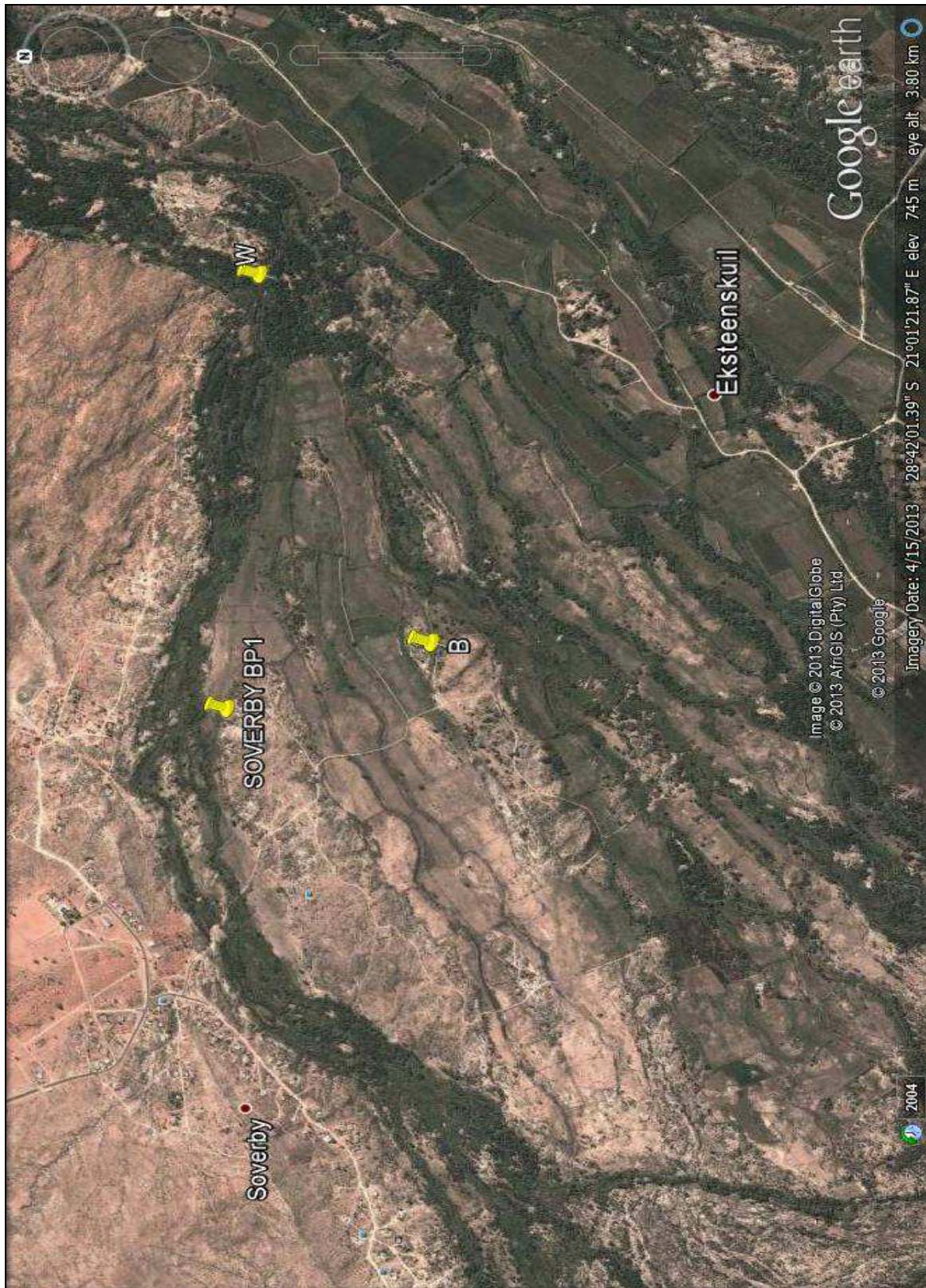
Fig.3 Existing BP1 at Soverby.





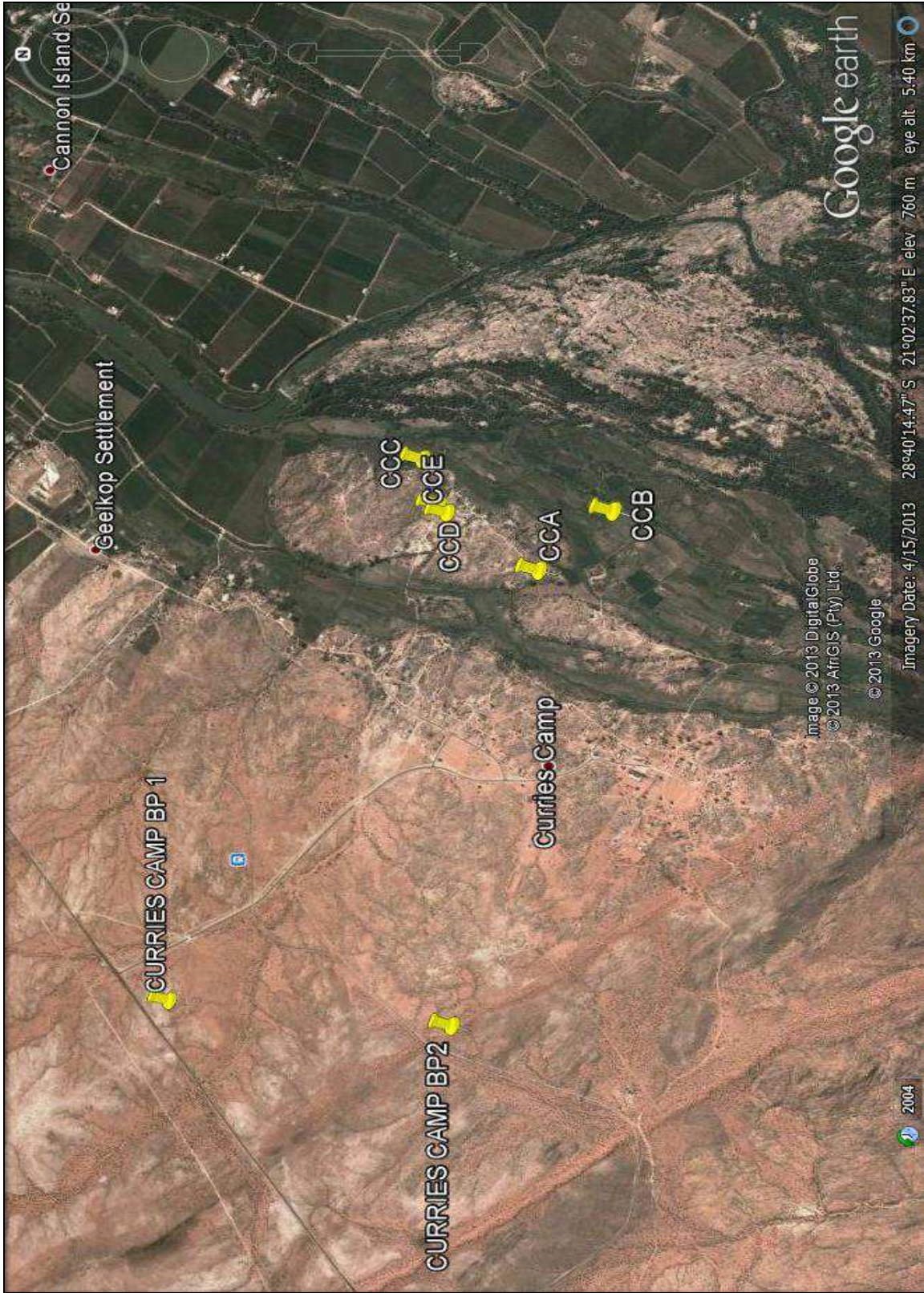
Map 4 Coordinate points of the borrow pits and other features at Curries Camp & Soverby.





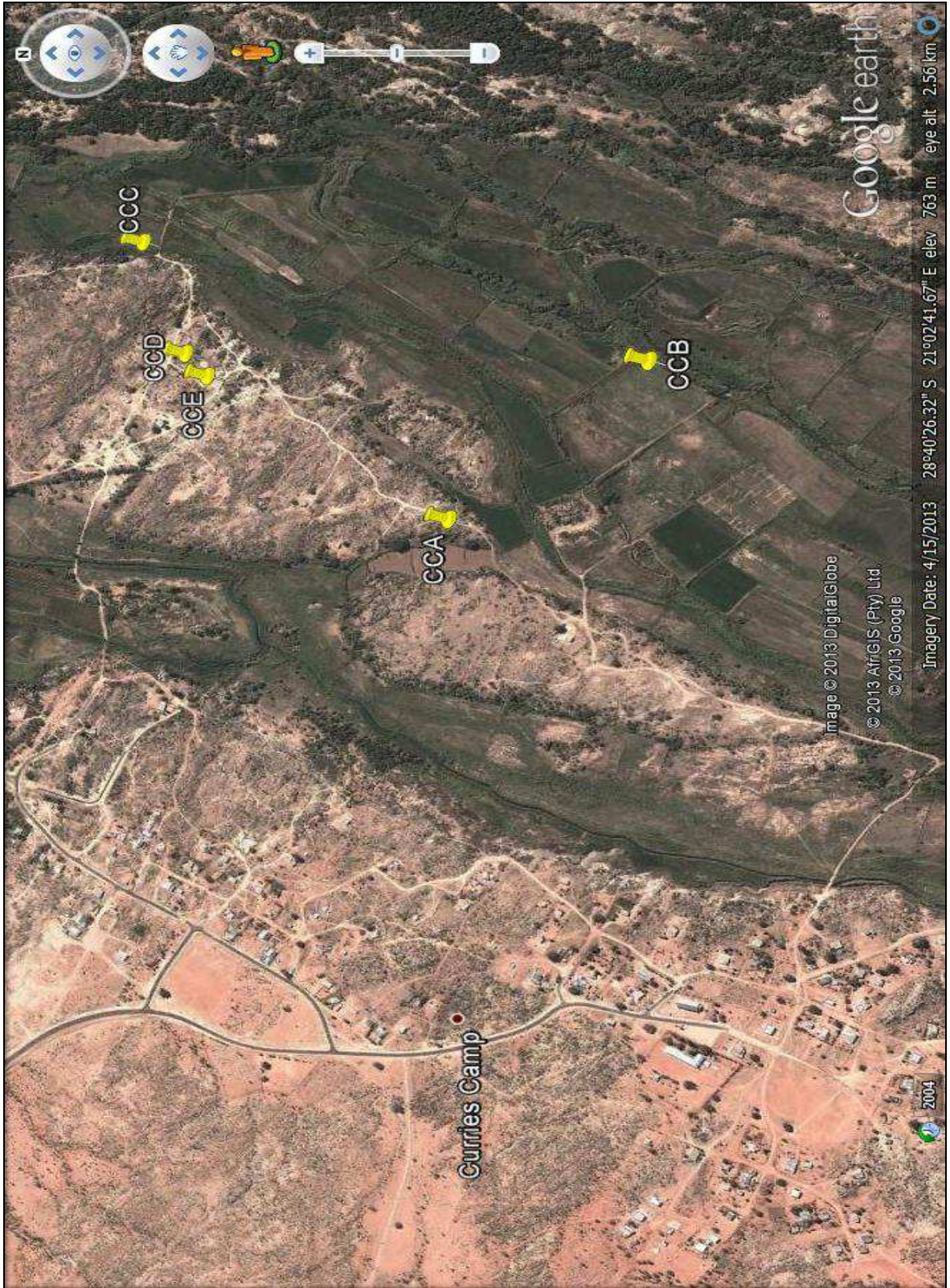
Map 5 Soverby borrow pit (BP1). (W = position of weir).





Map 6 BP1 & BP2 at Curries Camp.





Map 7 Locality of Curries Camp.





Fig.4 Ruin with bricks & mortar walls BP1 Soverby.



Fig.5. Ruin with bricks & mortar walls BP1 Soverby.





Fig.6 Threshing floor near BP1, Soverby.



Fig.7 Threshing floor near BP1, Soverby.



Fig.8 Stone walled stock kraal near BP1, Soverby.



Fig.9 *Aloe gariensis* near BP1, Soverby.





Fig.10 Stand of *Aloe gariensis* near BP1, Soverby.



Fig.11 Kameeldoringboom (*Acacia erioloba*) near BP1, Soverby.



Fig.12 Collection of stone flakes from BP1, Soverby (Pocket knife = 84mm).



Fig.13 Porcelain shard from BP1, Soverby (Pocket knife = 84mm).



Fig.14 Anglo-Boer War milk can lid from near BP1, Soverby (Pocket knife = 84mm).





Fig.15 New weir in river branch at Soverby.



Fig.16 Floodwater control sluice at Soverby. Date 6/10/1989 inscribed in concrete.



Fig.17 Point B on top of hill at Soverby.



Fig.18 Point B on top of hill at Soverby.





Fig.19 Stone flakes and flaked cores from Point B at Soverby (Pocket knife = 84mm).



Fig.20 Borrow Pit 1 at Curries Camp (CCBP1).



Fig.21 Borrow Pit 1 at Curries Camp (CCBP1).



Fig.22 A single flaked core at Borrow Pit 1, Curries Camp (CCBP1) (Pocket knife = 84mm).





Fig.23 Borrow Pit 2 at Curries Camp (CCBP2).



Fig.24 Borrow Pit 2 at Curries Camp (CCBP2).





Fig.25 Monoliths with *Aloe gariensis* near Point CCB, Curries Camp.



Fig.26 Hill at Point CCC, Curries Camp.





Fig.27 Scatter of stone flakes at Point CCC, Curries Camp.



Fig.28 Stone flakes on hill at Point CCC, Curries Camp (Pocket knife = 84mm).





Fig.29 Stone flakes on hill at Point CCC, Curries Camp (Pocket knife = 84mm).



Fig.30 Cement clad threshing floor ( $\pm 13$ m diameter) at Point CCD, Curries Camp.



Fig.31 Point CCD at Curries Camp.



Fig.32 Point CCE at Curries Camp.





Fig.33 Point CCE, Curries Camp.



Fig.34 Canon aloe at Point CCE, Curries Camp.



Fig.35 Quartz and gritty soil cover on the surface at Curries Camp.