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FIRST PHASE ARCHAEOLOGICAL & HERITAGE ASSESSMENT OF THE PROPOSED DIAMOND PROSPECTING AT HOEKPAN 942 & EDEN 893 NEAR PETRUSBURG, IN THE FAURESMITH DISTRICT

EXECUTIVE SUMMARY

De Beers Exploration is planning to do diamond prospecting at the farms Hoekpan 942 and Eden 893, about 4km south west of Petrusburg in the Fauresmith district, Free State. The proposed land lies in a relatively level area on the edge of a pan. The prospecting will be done on 35ha of partly cultivated land.

Although the farms Hoekpan 942 and Eden 893 are located in a cultural and heritage rich area, no historical finds of significance were discovered.

A small collection of heavily patinated Middle Stone Age flakes and flaked cores occur around the pan. The stone artefacts appear to be very old and seem to be a fairly general occurrence in the specific area. The flakes are considered as insignificant for closer investigation. No other cultural remains were found.

It is assumed that the prospecting will have no major impact on the cultural heritage and historical environment at Hoekpan 942 and Eden 893. Further planning of the proposed project may continue and no mitigation measures will be needed.

INTRODUCTION & DESCRIPTION

Scope and Limitations

De Beers Exploration is planning diamond prospecting at the farms Hoekpan 942 and Eden 893, about 4km south west of Petrusburg in the Fauresmith district. The prospecting work will cover a 35ha portion of land. De Beers Exploration commissioned the archaeological and heritage assessment.

The investigation provided the opportunity to examine the site. The soil surface consists of undisturbed grass-covered open veld with a scatter of *Prosopis* trees. This did not have any significant effect on the recording of material during the survey and no limitations were experienced through the site visit.

Methodology

- 1. Standard archaeological survey and recording methods applied.
- 2. Survey of previous HIA reports.
- 3. Site inspection on foot and by vehicle.
- 4. Layout of the area and features plotted by GPS.
- 5. Surroundings and features recorded on camera.
- 6. Preparation of maps & literature.
- 7. Research on the history, archaeology & heritage remains.
- 8. Prepare map coordinates transferred to Google Earth.

INVESTIGATION

De Beers Exploration is planning diamond prospecting at the farms Hoekpan 942 and Eden 893, about 4km south west of Petrusburg in the Fauresmith district. The site was examined on 26 August 2014. Officials from De Beers Exploration supplied the particulars about the locality of the site.

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 represent a major part of the historical environment of human settlements in villages and towns, on farmyards or even deserted places in the open veld. These features are taken into consideration during any cultural investigation.

The land 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).

HISTORY OF THE PETRUSBURG DISTRICT

The town of Petrusburg was established in 1891 to serve the farms in the region between Bloemfontein and Kimberley. The built-up settlement started on a farm

near the Emmaus railway station along the line from Bloemfontein to Kimberley. It is said that some of the original foundations of the first establishment (at Emmaus) are still there. The town ran out of water very soon and had to be moved to the present location on the farm Diepfontein where a strong natural spring was available. The place was named after Petrus Albertus Venter, the owner of the land.

During the Anglo-Boer War (1900-1902), when Lord Roberts occupied Bloemfontein early in May 1900, the British forces surprised the town defence by their approach from the south. In September 1900 Lord Roberts instructed Major Genl. Baden-Powell, to establish a Constabulary Force for the Transvaal, Free State and Swaziland, to be in place by June 1901. The Orange River Colony Constabulary Force consisted of one division. Soldiers were recruited in the Cape Colony and Natal and arrangements were made to enlist more members from England and Canada, with additional remounts in South Africa, Australia and North America. Due to the rapid escalation of hostilities in the Free State and Transvaal, the Constabulary formation had to be increased by December 1900, leading to the addition of a Reserve Division in 1901.

From the time of its establishment, the Constabulary units were employed as a military force engaged in field operations and acting as sentries on the blockhouse lines. By the end of the war a total of nine officers and 85 men of the Constabulary were killed in action or died from wounds, 213 were wounded, while 274 officers and men died from sickness.

After the termination of the War, the various Constabulary Troops were ordered to extend their presence over the Free State Colony. Self-contained units of 100 men each, separated to several small outstations to occupy a specific district. This network of posts and patrols aimed to ensure that farms were visited regularly and country boundaries patrolled in the same method. The contention of this ruling was to bring the drifting Black population under control and to enable the repatriation of Burghers and women and children from the concentration camps to proceed without any delay. Despite the good intensions of the British occupational force, the mere presence of the former Constabulary troops acting as policemen hampered the interaction between ordinary Burghers on their farms and the Constabulary, thus causing relations to take several years to normalise. In August 1902, Resident Magistrates took up their duties while depending on the Force to uphold them and give effect to their instructions. After explaining the new administration to the various tribes, Native Commissioners were able to carry out the disarmament of the "Natives" throughout the country. In November 1902, peace was secured and it became viable to reduce the Constabulary force to its original establishment of 6000 men. Different sections were organised according to the Magisterial Districts, with a certain number of men allocated to each district, sub-districts and Police posts. A few troops were retained as a mobile reserve ready for any emergency service. By 1903 the South African Constabulary already included 952 Black troops as so-called

"Native Police". This ruling continued until 1907, when the establishment of an official police force finally substituted the South African Constabulary.

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The archaeological environment of the Free State Province is rich and diverse, representing a long time span during the human past. The area is exceptionally rich in terms of Stone Age material and rock art sites. For various reasons, there is still a relative lack in research records in many parts. Certain Later Iron Age sites have produced important archaeological information (Maggs 1976, Dreyer 1996). These Iron Age sites date between 1660 AD and 1810 AD.

The Later Iron Age archaeological phase brought people to the interior that cultivated crops, kept livestock, produced an abundance of clay pottery in a variety of shapes and sizes and knowledge of smelting copper and iron. Extensive stone walled enclosures characterised the permanent settlements. These living places are known from the prominent Sotho/Tswana settlements at Viervoet (Tihela) near Clocolan, Biddulpsberg (Kurutlele) near Senekal and Marabeng near Ficksburg. A number of Taaibos Korana and Griqua groups, remnants of the Later Stone Age peoples, managed to survive the assimilation by Sotho/Tswana tribes in the region.

Dramatic climate changes resulted in a rapid population growth along the east coast of South Africa. Increased pressure on natural resources and attempts to control trade during the early 19th century brought the emergence of powerful leaders in the area. The subsequent power struggles resulted in a period of instability in the central parts of Southern Africa. This period of strife or wars of devastation, known as the "difaqane" (Sotho/Tswana) or "Mfecane" (Nguni), affected many of the Black tribes in the interior. Attacks from east of the escarpment initiated by the AmaZulu impis of King Chaka in about 1822, were carried on by the AmaNdebele of Mzilikazi and the AmaNgwane of Matiwane into the Free State, thus uprooting among others, the Batlokwa of Sekonyela and Mantatise and various smaller Sotho/Tswana tribes. On their turn, the Batlokwa drove off the Bafokeng of Sebetoane from Kurutlele (Biddulphsberg) near Senekal, who, in their effort to escape the pursuit by the AmaNdebele forces, eventually landed up in the Caprivi (Dreyer & Kilby 2003).

This period of unrest directly affected the peoples of the Free State and Northern Cape, resulting in the displacement of scores of tribesmen, women and children. The stronger tribal groups, such as the AmaNdebele of Mzilikazi, assimilated many of these refugees.

Early European missionaries and travellers ventured into the interior of the country during the 19th century (Dreyer 2001) and the Rev James Archbell established the missionary at Thaba Nchu by 1834. 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.

The study of these stone-walls is based on the classification of settlement patterns, according to a standardised archaeological framework (Maggs 1976). This arrangement of structures and settlements is characterised by connecting walls (Type V), surrounding walls (Type N) and huts with bilobial courtyards (Type Z) respectively. For the distribution of the different settlement patterns in the Free State, refer to the description by Maggs (1976: Maps 38&39 over Maps 304&305). This clustering of sites based on settlement layout is confirmed by associated pottery assemblages with different decoration styles (Maggs 1976:290). The different settlement patterns also produced huts of different materials in different styles.

RIET RIVER STONE WALL SETTLEMENTS (TYPE R)

In our present area the stone wall settlements along the lower parts of the Riet River (Type R) (Maggs 1971, Humphreys & Maggs 1970, Humphreys 1970, Humphreys 1972) are very distinct in geography and culture from the settlements described and classified in the western, central and eastern parts of the Free State (Maggs 1976).

The layout of Type R living sites fits a specific pattern and are mainly limited to dolerite outcrops within 3km from the Riet River, the only constant water source (Map 5). (This is in contrast to the Later Iron Age sites in the central, northern and eastern Free State, where settlements are concentrated up to 3 or 4km from the main rivers). All the Type R settlements are either on top of or next to dolerite sills where sufficient natural building material is available close by. Settlement units are grouped in clusters of up to 7 settlements, with two larger units of 10 and 13 individual structures respectively. Names of farms where settlements are found occur in the list given by Maggs (1971) (Fig.10). Securely established units occur between Jacobsdal and Kalkfontein, where individual clusters are positioned 5 to 10km apart. This spacing is clearly intended to release pressure on grazing pastures and the constant natural water supply. In the region of Afvallingskop and Pramberg (cf. Brink, Dreyer & Loubser 1992), small clusters are found on the opposite side of the river arranged about 1km apart. Type R units are normally placed at the base of hills, on about the same level as the river bank. (Iron Age sites elsewhere in the Free State are found on top of hill plateaus or ridges well above the valley floors below).

The type site of the Type R settlement pattern (OFD1) is located on the farm Oudefontein, 12km north-west of the town of Koffiefontein on the north bank of the Riet River. The Oudefontein site (OFD1) contained a cluster of thirteen settlement units, with another group of ten units on Wintershoek farm, across the river. The stone walls are made of weathered dolerite and are mostly in a

collapsed state at present. Walls were probably only 60-80cm high. Some walls have an irregular appearance, giving the impression of a careless or inexperienced building technique. Enclosure entrances are difficult to recognise, but on smaller structures the openings tend to face the large central enclosure. The settlement pattern of the units consists of larger central circular or oval shaped enclosures surrounded by smaller enclosures. Smaller enclosures tend to be in the region of 14m diameter, up to 21m in the case of the larger structures, with 41m for the largest central enclosure at OFD1. At Afvallingskop the central enclosure measures 70m. Due to the size and placing within the context of these enclosures, it is accepted that they were used as stock kraals. Enclosures in the size range between 6m to 12m diameter are accepted as byres for small stock.

With a ratio of 10m² per head of cattle and 1,5-2m² per small stock unit as used by Dreyer (1992:371), for the calculation of stock byre capacity, the following numbers of cattle and small stock are arrived at in this case. (see also Humphreys 1972:102-):

Diameter	Area m²	Cattle	Small Stock
6m	28,2	3	14
10m	78,6	8	39
12m	113,1m	10	56
14m	153,94	15	75
21m	346,1	35	173
41m	1319,6	132	660
70m	3846,5	385	1923

As an addition to the site layout of the Type R settlements, semicircular structures occur. It is likely that these features could have been erected as a screen for some domestic activity around the living place (Maggs 1971:44). Several small enclosures are found some distance away from the settlement units against the steeper slopes. In several cases the semicircular and smaller structures have household material on the surface around them. With one exception, the surrounding walls at OFD1 are poorly developed, but could have been placed there merely to define the living area of the settlement unit. In some cases these features are only placed on the uphill side of the settlement. Connecting walls between structures are rare and is not considered as a characteristic feature of Type R settlements. In some cases short walls form secondary enclosures, attached either to the inside or outside of the main byre.

Small stone mounds appear inside the larger enclosures. These features may have been graves, as other burials from the area, had been described from the same position (Humphreys & Maggs 1970, Humphreys 1970).

Rock engravings had been reported by Wilman and Battiss from as far back as the 1930s and 1940's. Two sites were discovered at Oudefontein (OFD1), where, depicted in various techniques, highly patinated specimens of quagga, human figures and -footprints, hippo, springbok, ostrich, blesbuck, jackal, eland, fattailed sheep, rhino and not least, several elephant occur. The presence of rock gongs is also mentioned (Maggs 1971:44-45).

Excavations at OFD1 produced well fired, but highly fragmented pottery specimens of bowls, vessels and pots, probably from Later Stone Age origin. There is variety in the range of round bases and size, necks with rounded, slightly rolled over or flattened rims. Most sherds have tempering of fine mudstone grit, sand or grass. An insignificant number of sherds show a herringbone decoration motif in shallow grooves on a rim with comb-stamping impressions.

Excavated stone artefacts include Middle Stone Age stone borers, a small sample of various scrapers, some with secondary trimming, double end-scrapers, a grooved stone made from serpentine stone and a single bored stone from greenish lava. Grinding stones with prominent pecking marks were made from dolerite. Manu-ports with peck and scratch marks were probably carried in to the site.

Metal objects include a fairly large cylindrical copper bead, a small bangle and a curved band than could be the remains of a 2,5cm diameter ring. It is speculated by Maggs (1971:55), that these copper objects could have been carried to the site by Later Iron Age people. A small number of ostrich egg-shell beads and one bone splinter with polished tip were recovered. Other bones show deep chop marks possibly made by an iron tool.

The limited distribution of Type R settlements confirms its occurrence as a local cultural development for over 130km along the Riet River. The prominent stone walling suggests a more settled way of living, with the main form of survival concentrated on stock farming, supported by hunting and gathering of veld food. The lack of information on their hut type indicates a fragile construction of perishable material. It is possible that the huts could have had a light pole frame work covered by reed mats.

A short review on the possible occupants of the sites during the late 18th and early 19th century, records various pastoral and hunting groups along the Orange and Vaal River confluence as far back as 1779. The Griqua, for one, had extended contact with the colonists and have learnt to speak Dutch. From the early 19th century the names of the Griqua and Korana had been applied randomly to all Khoikhoi groups of the Orange River flood basin. Along the Riet River the Kora is mentioned in the area at the confluence of the Riet and Vaal Rivers. It is stated that by 1822, the Bushmen between the Orange and Riet Rivers, were keeping many sheep and goats until they fell prey to some group of

Nguni speakers. Another group of Bushmen who were keeping countable numbers of cattle are mentioned along the Riet and Vaal Rivers. At about the same time, Burchell met Bushmen at the Riet-Vaal confluence, which appeared to be of mixed decent, showing physical features of Bushmen, Kora and Batswana people. They kept sheep, goats and cattle, which they declared they have raided from some unidentified Bantu-speaking tribes (Maggs 1971:57).

By 1835, Dr Andrew Smith found the area around the Riet-Vaal River junction under Griqua (Waterboer and Kok) and Tswana control. He mentions various Kora, San and mixed groups in the area with other Griqua-parties regularly travelling by. At the time European farmers and several Sotho and Tswana tribesmen, which became displaced by the unrest caused by the Difaqane (1822-±1830) moved into the area. This could explain the presence of the Tswana villages along the lower Riet River. These settlements have not been mentioned by Burchell in 1811 and must have been established afterwards. There is record of a complaint by Adam Kok about the Kora, who raided cattle from the Bushmen along the Riet River in 1829. With time, the Kora seem to have gradually moved away to mission stations further inland. After 1845 there is no longer mention of them being in the Riet-Vaal River region (Maggs 1971:58). According to Stow (1905) some of the semi-pastoral groups remaining with their chief Kousob (Skeel Koos?) who, by 1850 claimed rights over the area along the Riet, Modder and Vaal Rivers.

It is accepted that the Sotho/Tswana cattle herders did not enter the area along the Riet River before 1829. Historical records have no evidence of any of the Sotho/Tswana peoples present in the Riet River area, before the Difaqane. Sotho/Tswana tribes, such as the Tlhaping, Rolong and Southern Sotho groups are mentioned living some 150-200km distant from the Type R settlements. It appears that the Later Iron Age tribes were not moving further southwards, probably halted by the limits enforced by ranging environmental and climate conditions. It is alleged that the people along the Riet and Vaal Rivers were engaged in trade relations with the Sotho/Tswana tribesmen to the east, but there is no resemblance between the material culture of the Type R units and other Later Iron Age sites in the Free State (Maggs 1971:59).

Several decades later (1854 to 1868), during the outbreak of the border wars between the Basotho Nation of Moshoeshoe and the Burghers of the Free State Republic along the Caledon River in the east, the Taaibosch-Korana of Skeel Koos and other wandering Batswana tribesmen under Mankurwane, exploited the disorder to perform stock raids along the Orange River in the western Free State (Van Heerden 1908).

LOCALITY

De Beers Exploration is planning to do diamond prospecting at the farms Hoekpan 942 and Eden 893 about 4km south west of Petrusburg in the Fauresmith district (Map 1). The prospecting will be done on a 35ha piece of land running up to the edge of a pan (Maps 2&4). The pan is covered by a grey-brown clay deposit with grass cover (Figs.5&6) in contrast to the red sandy soil and calcrete rocks outside (Figs.1&2).

The farms are reached via the S581 gravel road from a turn-off from the N8 main road outside Petrusburg.

The following GPS co-ordinates were taken (Cape Scale) (Surveyor-General 1973): (Map 4).

Da	29°08'25"S	025°22'57"E. Alt 1345m (Figs.1&2).
Db	29°08'58"S	025°22'56"E Alt 1343m (Figs.3&4).
Dc	29°09'00"S	025°22'56"E. Alt 1344m (Figs.5&6).

FINDS

Several heritage impact assessments on residential developments at Petrusburg and borrow pit mining along the N8 main road to Kimberley recorded a variety of Middle Stone Age lithic material (Dreyer 2003, 2005, 2006, 2010, 2012, 2013, 2014). These finds include individual Acheulean hand axes (±10cm in length) (later phase of the Early Stone Age) and collections of Middle Stone Age flakes and cores. The majority of the finds represent heavily patinated stone flakes and scrapers, together with a single well-used upper grinding stone.

In the present case heavy patinated Middle Stone Age flakes and flaked cores are found in an area along the pan (Figs.7&8) at Hoekpan 942 and Eden 893 (Figs.5&6) (Map 2). The artefacts seem to be a fairly general occurrence, limited to the specific area.

Although the farms Hoekpan 942 and Eden 893 are located in this cultural rich area, no other historical and archaeological finds were discovered.

IMPACT ASSESSMENT

Heavily patinated stone flakes occur at the site. The distribution of the stone artefacts seem to be a fairly general occurrence and taking into consideration that only a relatively small part of the area will be affected, the cultural material could be evaluated as insignificant.

There will be no major impact caused by the prospecting developments on any heritage resources.

RECOMMENDATIONS

The impact resulting from the new prospecting developments on the archaeological and heritage resources is 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 prospecting developments may proceed.

MITIGATION

No mitigation measures will be required in case of the present developments.

ACKNOWLEDGEMENTS

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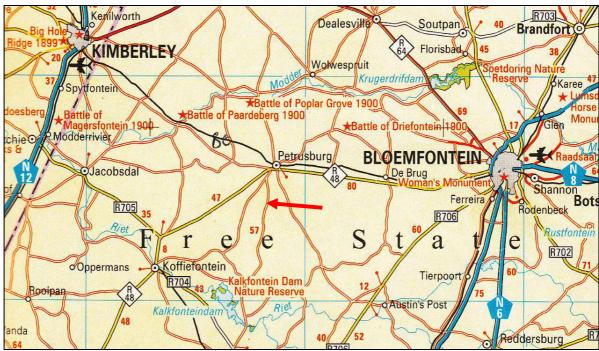
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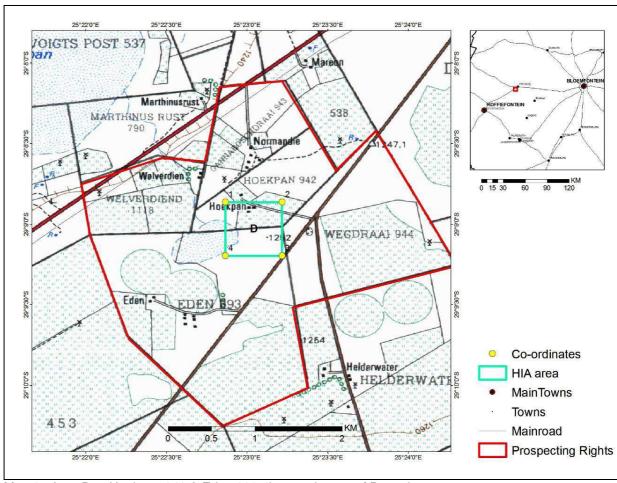
LIST OF ILLUSTRATIONS



Map 1 Locality of Petrusburg in relation to Bloemfontein.



Fig.1 Point Da at Eden 893 near Petrusburg.



Map 2 Area D at Hoekpan 942 & Eden 893 4km south west of Petrusburg.



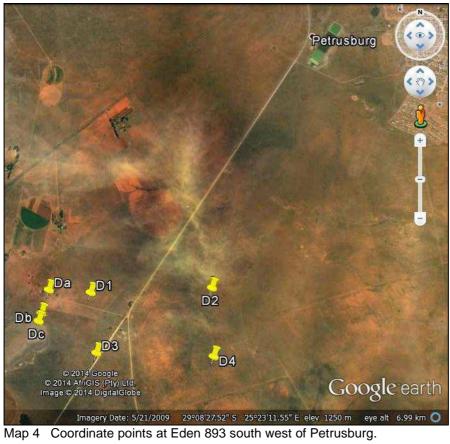
Fig.2 Point Da at Eden 893 near Petrusburg.



Map 3 Grogspan 142 (I,J,K), Pretoriusdam 550 (C) and Eden 893 (D) in relation to Petrusburg.

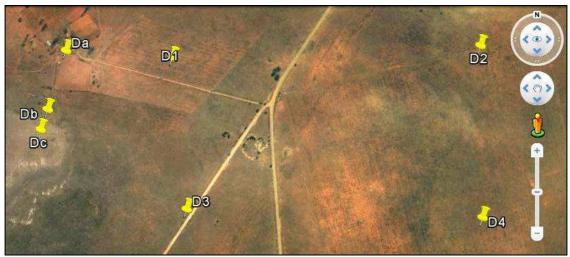


Fig.3 Point Db at Eden 893 near Petrusburg.





Point Db at Eden 893 near Petrusburg. Fig.4



Map 4 Coordinate points at Eden 893, Petrusburg.



Fig.5 Point Dc at Eden 893 near Petrusburg.



Point Dc at Eden 893 near Petrusburg.

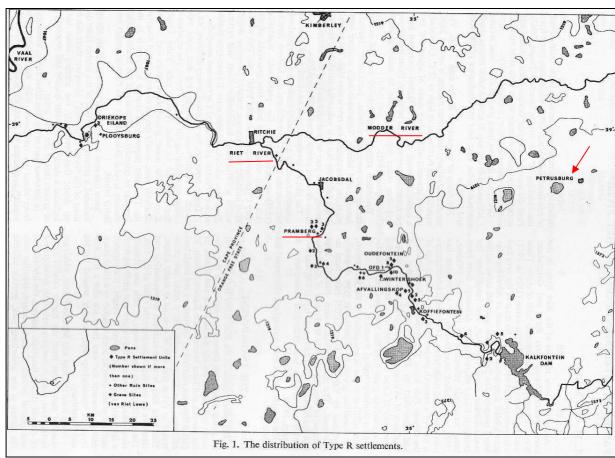




Fig.8 Stone flake from the edge of the pan at Eden 893 (Pocket knife = 84mm).



Fig.9 Calcrete from the ploughing fields at Eden 893 near Petrusburg.



Map 5 Distribution of Type R settlements along the Riet River (After Maggs 1971).

Farm Name from 1: 50 000 series maps	No. of units on farm	No. of units in cluster	Hollow between hills	Flat ground beside hill	Gentle rocky hill slope	Natural terrace on hillisde	Flat hilltop
Kalkfontein	5	5	1	1	3		
Bergfontein	1	1		1		DIEDV.	
Telegraassontein	2	2	1	1			
Poortjie	4	5 1 2 4 3 7		alla mi	THE DE	4	
Koffiefontein	3	3	- N - 10 B	3			
Rooidraai	7	7	4	3		E DE LOS	
Leeuwarden	1	1	1				
Afvallingskop	9	5	4 1 3 2				2
Afvallingskop		4	2	1	1	11 110	
OFD 1 (Oudefontein)	13	13	10	1	2	note in	
Wintershoek	11	10	9	1			
Wintershoek	-	1	1	1000		0800 00	
De Kiel	6	6	6				
De Aar	4	4	4	PET PITTE	ins sieli		
Waterval	3 2	3	2	1	eu , aug	al Lids	
Khartoum		2	2 2 3 2			A STATE	
Pramberg	7	3	3			E SECTION AND ADDRESS.	
Pramberg		3 2 3 2 2 2 3	2			SPECIFIC	
Pramberg		2		2			THE ST
Driekops Eiland	3		3				344
Mierkraal	1	1	1			125	
Weltevrede	1	1	THE REAL PROPERTY.				1
Christian Drift	1	1					1
Totals	84	84	55	15	6	4	4

Fig.10 Type R settlements on farms along the Riet River (After Maggs 1971).

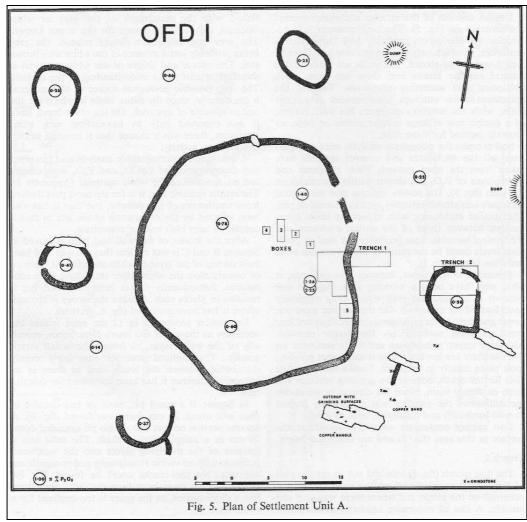


Fig.11 Layout of Type R settlement OFD1, Oudefontein on the Riet River (After Maggs 1971).