

AN INITIAL ASSESSMENT OF HERITAGE RESOURCES ON THE COASTAL FARM, BRAZIL: NAMAQUALAND

Prepared for

Trans Hex Mining Ltd.

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1. INTRODUCTION

At the request of Trans Hex, a visit was undertaken during the period 19th to 22nd March 2001, to examine areas of the coastal farm Brazil, on the Namaqualand coast, to determine the approximate level of impact that may occur as a result of prospecting and mining operations in the future. The farm is currently owned by the state and is sandwiched between De Beers owned properties between the towns of Koingnaas and Kleinsee. The location of Brazil is shown in Figure 1.

No specific mining or infrastructure plans are available at present and so specific areas could not be targeted for investigation. This survey is therefore more an attempt to ascertain the likelihood of finding sites in particular areas, and secondly to gauge the potential scale of impact mitigation in different areas.

David Halkett of the Archaeology Contracts Office was accompanied by Herman Bruwer (Trans Hex Environmental Officer), who pointed out the possible location of mining activities.

Some areas examined have been impacted by past activities, conducted prior to the introduction of environmental legislation. As a result, the workings of many of the earlier operations are still clearly visible, where rehabilitation was not a requirement. Mining was undertaken as early as 1964 by Terra Marina, and later by Weskus Mynbou. Trans Hex have also previously undertaken some prospecting.

2. AREA OF INVESTIGATION

2.1 Area surveyed

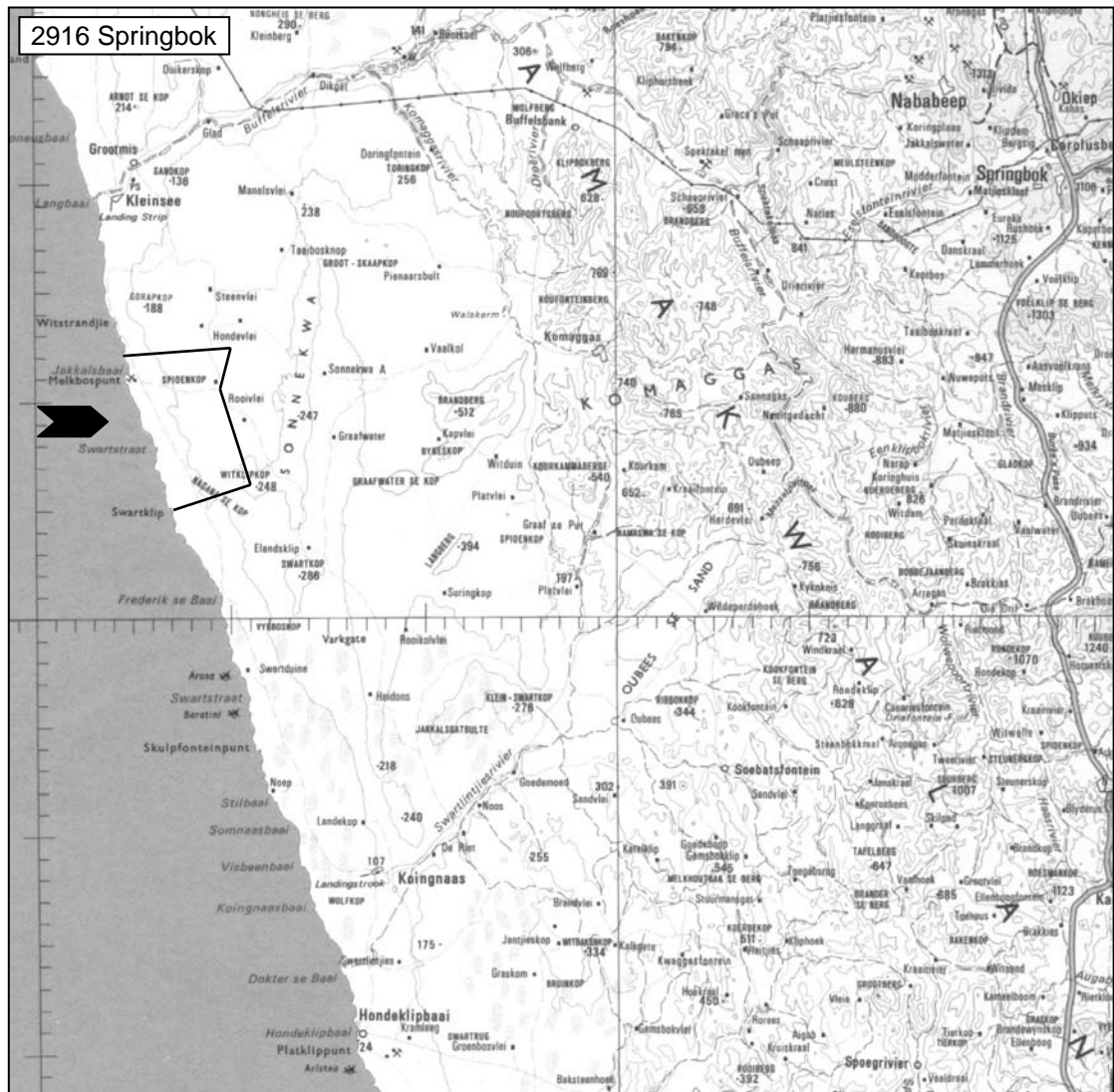
According to Mr. Bruwer, the coastal dunes will probably not be impacted by the planned mining activities since rehabilitation of these areas is expensive and difficult. Activities will thus tend to concentrate on the gently sloping land between the tarred Kleinsee-Koingnaas road and the inland edge of the coastal dune field. Accordingly, the current reconnaissance concentrated on the yellow sand plains with occasional forays into the white dunes near the shore.

2.2 Method

The prolific network of tracks and roads were followed in a vehicle. Frequent stops were made during which features of the landscape were examined on foot. Positions of located sites were recorded using a hand held Garmin GPS (set for WGS84) and notes were kept on the content and significance of the sites.

2.3 Previous work

A preliminary investigation of the site of a proposed nuclear reactor on the farm Brazil was undertaken in 1991 (Parkington and Hart 1991). The preliminary nature of the study meant that only very limited information on site content was recorded. Site locations were made on 1:10 000 orthophotos and thus no lat-lon co-ordinates are available. While there is some overlap between the 1991 and the 2001 surveys, the earlier one concentrated on the area closer to the coast around the proposed site of the power station.



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Location of survey



3. RESULTS

76 archaeological sites were located during the visit. Latitude and longitude co-ordinates, basic observations, significance of the sites and potential mitigation is presented in Table 1, while additional more detailed observations of content is presented in Table 2. Note that all co-ordinates are recorded using the WGS84 datum.

3.1 Site types and age

The majority of sites observed are shell scatters with varying amounts of associated artefactual material dating to the LSA (Late Stone Age) from the last few thousand years. The presence of particular formal stone artefactual types indicates that some sites predate 2000BP, while the presence of ceramics on some others indicates that those most likely date after 2000BP. A few of the near shore sites contain great amounts of shell probably as a result of multiple visits overlapping each other. Inland sites are most often discrete and show more clearly, traces of spatial patterning. No identifiable colonial sites were observed, but a broken ceramic vessel of 19th century manufacture was noted on one of the sites.

A very small number of sites contain only scatters of stone artefactual material. In some cases these appear to be close to, although not directly linked with shell scatters. The types and size of material would seem to indicate that these also date to within the last few thousand years but the fact that they seem not to be associated with shell scatters, as is the norm, should be investigated.

Other stone scatters are found in depressions that may be old pans. This material probably dates from the Early stone age (ESA). A single quartz outcrop was found to have been extensively quarried and traces of ESA, MSA (Middle Stone Age) and LSA material was abundant in the vicinity.

3.2 Site location

The most common location for sites is in deflation hollows. These are very numerous in the recent white aeolian sands close to the shore, but are also found on the flat plains where occasional blowouts occur in the yellow sands. It was found that on the plains, raised areas and blowouts more often than not contained archaeological material, seeming to indicate that people in the past were focussing on these features. It is not possible to say why, although wind and visibility may have been factors. In some instances, sites are found in deflations in the lee of dunes indicating that some attempt was being made to escape the wind. The dune cordon adjacent to the shoreline contains huge amounts of shellfish remains. This always occurs where rocky shoreline is present .

At the extreme southern end of Brazil are a number of shell scatters unlike the majority of other sites. These sites are piles of weathered shellfish remains on the open plains with no apparent geographical focus. Similar sites to these were observed during a survey of portions of the farm Samsons Bak (Halkett and Hart 1997).

ESA sites are more often than not found in blowouts (old pans) with calcretes exposed at the base. These tend to be on the higher lying areas.

Site #	Latitude*	Longitude*	Period	Type	Significance	Action**
BR001	29°47.942'	17°04.641'	LSA	shell scatter	low	level 1
BR001a	29°47.942'	17°04.641'	LSA	shell scatter	low	level 1
BR001b	29°47.942'	17°04.641'	LSA	shell scatter	low	level 1
BR001c	29°47.942'	17°04.641'	LSA	shell scatter	low	level 1
BR001d	29°47.942'	17°04.641'	LSA	shell scatter	low	level 1
BR002	29°48.119'	17°04.878'	LSA	shell scatter w artefacts	low-medium	level 2
BR003	29°48.055'	17°04.831'	LSA	shell scatter	low	level 1
BR004	29°48.120'	17°05.014'	LSA	shell scatter w minimal artefacts	low	level 1
BR005	29°47.996'	17°05.158'	LSA	shell scatter w artefacts	low-medium	level 2
BR006	29°48.288'	17°05.129'	LSA	shell scatter w artefacts	low-medium	level 2
BR007	29°47.982'	17°05.440'	LSA	shell scatter	low	level 1
BR008	29°49.742'	17°05.288'	LSA	shell scatter w artefacts	low-medium	level 2
BR009	29°48.188'	17°04.726'	LSA	shell scatter w artefacts	medium	level 3
BR010	29°49.627'	17°05.353'	LSA	shell scatter w artefacts	low-medium	level 2
BR010a	29°49.627'	17°05.353'	LSA	shell scatter w artefacts	low-medium	level 2
BR011	29°49.509'	17°05.320'	LSA	shell scatter w artefacts	high	level 3
BR012	29°49.719'	17°05.726'	LSA	shell scatter	low	level 1
BR013	29°50.104'	17°06.023'	LSA	shell scatter w minimal artefacts	low	level 1
BR014	29°50.014'	17°06.018'	LSA	shell scatter w artefacts	low-medium	level 2
BR015	29°50.063'	17°06.110'	LSA	shell scatter w minimal artefacts	low	level 1
BR016	29°50.104'	17°06.147'	LSA	stone artefact scatter	medium	level 3
BR017	-	-	-	-	-	-
BR018	29°49.967'	17°06.333'	LSA	shell scatter w artefacts	low-medium	level 2
BR019	29°49.952'	17°06.373'	MSA?	stone artefact scatter	low-medium	level 2
BR020	29°49.886'	17°06.810'	MSA/LSA	stone artefact scatter	low-medium	level 2
BR021	29°50.692'	17°06.051'	LSA	shell scatter w minimal artefacts	low	level 1
BR022	29°51.081'	17°06.181'	LSA	shell scatter w artefacts	low	level 1
BR023	29°50.996'	17°05.849'	LSA	shell scatter w minimal artefacts	medium	level 3
BR024	29°51.092'	17°05.924'	LSA	shell scatter	low	level 1
BR025	29°51.127'	17°05.938'	LSA	shell scatter w minimal artefacts	low	level 1
BR026	29°51.309'	17°05.798'	LSA	shell scatter w minimal artefacts	low	level 1
BR027	29°51.314'	17°05.709'	LSA	shell midden w artefacts	low-medium?	level 3
BR028	29°51.291'	17°05.644'	LSA	shell midden w artefacts	low-medium?	level 3
BR029	29°51.526'	17°05.945'	LSA	shell scatter w artefacts	high	level 3
BR030	29°51.343'	17°06.285'	LSA	shell scatter w minimal artefacts	low	level 1
BR031	29°51.304'	17°06.290'	LSA	shell scatter w minimal artefacts	low	level 1
BR032	29°51.664'	17°06.271'	LSA	shell scatter w artefacts	low-medium	level 2
BR033	29°51.478'	17°06.263'	LSA	shell scatter w artefacts	low	level 1
BR034	29°51.567'	17°06.265'	LSA	shell scatter w minimal artefacts	low	level 1
BR035	29°51.604'	17°06.270'	LSA	shell scatter w artefacts	medium	level 3
BR036	29°51.621'	17°06.272'	LSA	shell scatter w artefacts	low	level 1
BR037	29°51.808'	17°06.310'	LSA	shell scatter w artefacts	low	level 1
BR038	29°51.874'	17°06.307'	LSA	shell scatter w artefacts	low-medium	level 2
BR039	29°51.990'	17°06.335'	LSA	shell scatter w artefacts	medium	level 3
BR040	29°53.222'	17°06.403'	LSA	shell scatter w artefacts	low-medium	level 2
BR041	29°54.611'	17°06.943'	LSA	shell scatter w artefacts	low	level 1
BR041a	29°54.602'	17°06.941'	LSA	shell scatter w artefacts	low	level 1
BR041b	29°54.588'	17°06.946'	LSA	shell scatter w artefacts	low	level 1
BR041c	29°54.591'	17°06.954'	LSA	shell scatter w artefacts	low	level 1
BR041d	29°54.576'	17°06.949'	LSA	shell scatter w artefacts	low	level 1
BR041e	29°54.572'	17°06.953'	LSA	shell scatter w artefacts	low	level 1
BR041f	29°54.568'	17°06.950'	LSA	shell scatter w artefacts	low	level 1
BR041g	29°54.568'	17°06.961'	LSA	shell scatter w artefacts	low	level 1
BR042	29°53.520'	17°07.874'	LSA	shell scatter	low	level 1
BR043	29°53.370'	17°07.587'	LSA	shell scatter w artefacts	low	level 1
BR044	29°52.903'	17°07.423'	LSA	shell scatter w minimal artefacts	low	level 1
BR045	29°52.615'	17°07.312'	LSA	shell scatter w minimal artefacts	low	level 1
BR046	29°50.461'	17°07.099'	LSA	shell scatter w minimal artefacts	low	level 1
BR047	29°50.425'	17°07.066'	LSA	shell scatter w minimal artefacts	low	level 1
BR048	29°50.404'	17°07.049'	LSA	shell scatter w minimal artefacts	low	level 1
BR049	29°50.370'	17°07.079'	LSA	shell scatter w minimal artefacts	low	level 1
BR050	29°50.350'	17°07.097'	LSA	shell scatter	low	level 1
BR051	29°50.633'	17°07.265'	LSA	shell scatter w minimal artefacts	low	level 1

Table 1: Summary of primary site information (contd on next page)

Site #	Latitude	Longitude	Period	Type	Significance	Action**
BR052	29°50.663'	17°07.432'	LSA	shell scatter w artefacts	low	level 1
BR053	29°50.693'	17°07.445'	ESA/MSA	artefact scatter	low	level 1
BR054	29°50.873'	17°07.189'	LSA	shell scatter w minimal artefacts	low	level 1
BR055	29°51.176'	17°06.844'	LSA	shell scatter w minimal artefacts	low	level 1
BR056	29°51.736'	17°06.641'	LSA	shell scatter w artefacts	medium-high	level 3
BR057	29°52.212'	17°07.028'	LSA	shell scatter w minimal artefacts	low	level 1
BR058	29°52.322'	17°07.055'	LSA	shell scatter w artefacts	medium	level 3
BR059	29°52.427'	17°07.114'	LSA	shell scatter w artefacts	medium	level 3
BR060	29°52.049'	17°06.996'	LSA	shell scatter w artefacts	low	level 1
BR061	29°51.994'	17°06.995'	LSA	shell scatter w artefacts	low-medium	level 2
BR062	29°52.740'	17°07.926'	ESA/MSA/LSA	artefact scatter	low	level 1
BR063	29°52.992'	17°07.166'	LSA	shell scatter w minimal artefacts	low	level 1
BR064	29°53.034'	17°07.059'	LSA	shell scatter w minimal artefacts	low	level 1
BR065	29°50.470'	17°06.274'	LSA	shell scatter w minimal artefacts	low	level 1

* Co-ordinates based on the WGS84 datum

** Only if there is to be an impact on the sites as a result of mining or related activities

Table 1: (contd) Summary of primary site information

Level 1: Recover shell sample for future C¹⁴ dating (if any);
Document shell species and artefacts in a 2x1m area;
Collect any specials;

Level 2: Recover shell sample for future C¹⁴ dating (if any);
Document shell species and artefacts from a larger area in multiples of 2x1m areas –
document variability in shell piles if necessary and collect dating material from piles
containing different species;
Collect formal artefacts and specials;

Level 3: Recover shell sample for future C¹⁴ dating (if any);
Test hole excavation during Phase 1 investigation;
Extensive sampling via collection to facilitate spatial patterning during Phase 2 investigation,
with possibly more extensive excavation.

Site #	Location	Granatina	Granularis	Argenvillei	Barbara	Choromitilis	Whelk	quartz	silcrete	ccs	manports/ grindstones	Ceramics	Oes	Crayfish	Bone	Features
BR001	dune top deflation	xx	xx	xx	x							x				
BR001a	dune top deflation	xx	xx	xx	x											
BR001b	dune top deflation	xx	xx	xx	x											
BR001c	dune top deflation	xx	xx	xx	x											
BR001d	dune top deflation	xx	xx	xx	x											
BR002	dune top deflation	x	x	xx			x			x*			x			
BR003	dune top deflation	x	x	xx			x						x			
BR004	dune top deflation	x	x	xx												
BR005	dune top deflation	xx	xx	xxx					x	x			x			spatial patterning
BR006	dune top deflation	xx	xx	xxx					x		x	xr	x			
BR007	dune top deflation	xx	xx	x												
BR008	dune lee deflation	x	x	x				x		xx			x			
BR009	dune top deflation	xx	xx	xx				xxx			xx		xb	x	x	whale bone hut?
BR010	dune top deflation	xx	xx	xx			x			xx*	x		xx			
BR010a	dune top deflation	xx	xx	xx						xx			xx			
BR011	dune top deflation	xx	xx	xx				x	x	xxx*b			x	x		
BR012	dune lee deflation	x	x	x												
BR013	dune top deflation	x	x							x			x			
BR014	dune top deflation	xx	xx	x				x		xx	x		x	x		
BR015	open plain	x	x	x									x			
BR016	open plain							xx		xx						
BR017	number skipped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BR018	deflation/pan	x	x	x				xxx		xx	x		x	x		
BR019	deflation/pan								x		x		xx			
BR020	deflation/pan							xxx	x						x	
BR021	dune top deflation	x	x	x				x			x		x	x		
BR022	dune top deflation	x	x	x				x		x	x					
BR023	deflation	x	x	x				x					xd			
BR024	dune top deflation	x	x	x	x		x									
BR025	dune top deflation	x	x					x					x	x		
BR026	dune lee deflation	x	x								x					
BR027	dune top	xx	xx	xx	x			x			x					
BR028	dune top	xx	xx	xx	x			xx			x			x	x	some whale bone
BR029	active dune area	xx	xx	xxx				xxx		xxx*			xxd	xx	x	
BR030	dune lee deflation	xx	xx	xxx				x			x	x				
BR031	dune lee deflation	xx	xx	x				x					x			
BR032	dune lee deflation	x	x	xxx				x		x		x	x	x		
BR033	dune lee deflation	x	x	x				x		x			x	x		
BR034	dune lee deflation	x	x	xx		x					x					
BR035	dune lee deflation	x	x			x	x	x		x*			xx			
BR036	dune lee deflation	xx	xx	xx		x		x		x			x	x		
BR037	dune lee deflation	x	x	xxx				xx								19 th C colonial ceramic
BR038	dune lee deflation	x	x	xxx				x		x	xxx					
BR039	dune lee deflation	x	x	x				x		xx	xxx	xlg/d	x			
BR040	dune top	xx	xx	xx				x		x*			x			
BR041	open plain	xx	xx	xx				x					x			
BR041a	open plain	xx	xx	xx												
BR041b	open plain	xx	xx	xx												
BR041c	open plain	xx	xx	xx												
BR041d	open plain	xx	xx	xx												
BR041e	open plain	xx	xx	xx												
BR041f	open plain	xx	xx	xx												
BR041g	open plain	xx	xx	xx												
BR042	dune top deflation	x														
BR043	dune top deflation	x	x					x		x*	x		x			
BR044	dune top deflation	x	x					x		x						
BR045	dune top deflation	xx	xx	x				x		x						
BR046	deflation	x	x					x								
BR047	deflation	x	x	x								x				
BR048	deflation	x	x	x				x				x	x			
BR049	deflation			x				x								
BR050	deflation	x	x	x												
BR051	deflation	x	x	x			x	x		x						
BR052	deflation	x		xx			x	x		x						
BR053	deflation/pan							x	x		x					

Table 2: Summary of site content (contd on next page)

Site #	Location	Granatina	Granularis	Argenvillei	Barbara	Choromitilis	Whelk	quartz	silcrete	ccs	manuports/ grindstones	Ceramics	Oes	Crayfish	Bone	Features
BR054	deflation	x	x								x					
BR055	deflation	x	x								x					
BR056	dune top deflation	x	x	x		x		xxx		xxx*	x		x	x		
BR057	dune top deflation	x	x							x						
BR058	dune top deflation	x	x	x				x		x*						
BR059	dune top deflation	x	x	x				x		x	x	xx	xb/p		x	
BR060	dune top deflation	x	x	x	x		x	xx		x	x					
BR061	dune top deflation	x	x	xxx	x		x	x		x						
BR062	quartz outcrop							xxxx	x							
BR063	dune top	x	x													
BR064	dune top deflation	x	x	x				x					x			
BR065	dune top deflation	x	x					x			x		xx			

Stone: * - formal tools present

OES: b – bead/s d – decorated b/p – bead or pendant

Ceramic: lg – lug d – decorated r – rim

x xx xxx relative quantities

Table 2 (contd): Summary of site content

The numbers of sites reduces markedly as one moves away from the shore and onto the high areas adjacent to the Kleinsee-Koingnaas road.

3.3 Content and mitigation

A large number of the sites contain minor amounts of archaeological data, and it is very likely that more such sites will be found if a comprehensive survey of Brazil is undertaken.

Mitigation will only be need to be applied to sites which will be directly impacted by mining or related activity (pipelines, buildings, roads, spoil heaps etc). Three levels of mitigation are indicated on Table 2. These mitigation steps take into account the relative significance of the sites on a regional and local scale. The levels of mitigation are explained below.

3.3.1 Level 1 mitigation:

Recover marine shell for dating if it is present (more than one sample if multiple shell piles);

Document the site content in a 2x1 meter area (more than one sample if piles contain different species). Collect beads, ceramics, any other specials;

Draw a rough plan of the site indicating north, locations of aspects of the site, and locations from which samples were recovered.

Duration of process: approximately 2 hours

3.3.2 Level 2 mitigation:

Recover marine shell for dating if it is present (more than one sample if multiple shell piles);

Document the site content by increasing the sample size in multiples of 2x1 meter areas (more than one sample if piles contain different species). Collect beads, ceramics, any other specials including formal tools;

Draw a rough plan of the site indicating north, locations of aspects of the site, and locations from which samples were recovered.

Duration of process: approximately 3-4 hours

3.3.3 Level 3 mitigation:

Extensive documentation by means of excavation and collection, and recording of spatial patterning.

Duration of process: approximately 1-2 days

4. CONCLUSIONS

This initial assessment has shown that a variety of archaeological sites exist throughout the property known as Brazil. The numbers of sites decrease noticeably with distance from the coast. The range of heritage resources includes pre-colonial sites, primarily shell middens, and much older artefact scatters probably dating from the ESA. This has not been a comprehensive survey and it is quite clear that many more sites exist on the property.

5. RECOMMENDATIONS

5.1 Areas that will be impacted by mining and/or related activities should be preceded by comprehensive heritage impact assessments (Phase 1). If valuable material is found it may be necessary to undertake mitigation (as indicated) as a separate stage of work (Phase 2).

5.2 Archaeological sites are protected under the South African Heritage Resources Act of 1999.

6. STUDY TEAM

Fieldwork

Dave Halkett

Report

Herman Bruwer

Dave Halkett

7. REFERENCES

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