# MILLENIUM HERITAGE GROUP (Pty) Ltd

PHASE 1

## ARCHAEOLOGICAL IMPACT ASSESSMENT RELATING TO THE PROPOSED PROSPECTING RIGHTS ON A PORTION OF PORTION L3 (SWARTKOPPES) 39 AND A PORTION OF REMAINDER PELLA MISSION 39 WITHIN THE NAMAQUALAND DISTRICT OF THE NORTHERN CAPE PROVINCE, SOUTH AFRICA

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## EXECUTIVE SUMMARY

This report provides the results of an archaeological impact assessment study for the proposed prospecting rights on the portion of portion L3 of the farm Swartkoppes 39 and a portion of remainder Pella Mission 39, Namaqualand District, Northern Cape Province. The study area is located roughly 9.70 kilometers south of Pella Central Business District. Very little is known of the archaeology of the area, however prior desktop study of the region has confirmed the distributions of both middle and later Stone Age artefacts commonly recorded around the Pans and calcrete deposits. The current setup of these farms are characterized by mountain range toward the north and further south of the proposed study area with some isolated rocky outcrop hills. The lower lying area is dominated by shallow and deep sands with dry non-perennial streams. Several scattered settlement occur in the vicinity. Large section of land has been disturbed by previous mineral mining activities characterized by open excavations, soil mound and overburden rocks stork pilled in close proximity of the mine. The vast land is still covered by grassland with scatted dwarf shrubs. Dense grass cover bushes were noted alongside the dry drainage system. The land is still used as livestock grazing area by the local communities.

Ndi Geological Consultants requested Millennium Heritage Group (Pty) Ltd, an independent heritage consulting company to assess the heritage sensitivity of area proposed for prospecting rights. A multi-stepped methodology was used to address the terms of reference. To begin with, a desktop study was carried out to identify any known heritage sites and their significance. This involved consulting contract archaeology reports filed on SAHRIS, research reports and academic publications. Finally, the study was

guided by the National Heritage Resources Act of 1999 and SAHRA Minimum Standards for impact assessment. Desktop study was followed by fieldwork however, the size of the area meant that we were unable to conduct a detailed foot survey and we had to target specific areas which we considered more likely to contain archaeological sites. We are confident that we covered the most sensitive areas of the farms. One of the major limitations is that the mountain range is characterized by steep rocky outcrop therefore a systematic sampling approach was developed resulting in the selection of areas close to rocky out crop hills and deep sand deposits suitable for both sand and granite mineral prospecting activities. Systematic foot surveys were performed around areas targeted for development. In addition, desktop studies indicated that archaeological sites are mostly located on ridges and river valleys. Based on this study, the following conclusions were reached:

- The proposed Selimanite and Quartz prospecting activities are scheduled to take place on the lower lying area of the farm that encompasses previously disturbed areas.

  The surveys of the top soil show no other evidence of archaeological materials remains, capped or distributed as surface scatters on the landscape. There is no indication of graves or burial sites. There are no primary or secondary effect at all that are important to scientist or the general public that will be impacted in terms of generally protected heritage resources.

  - ❖ Should chance finds be recovered in the process of sand mining activities, work must be stopped immediately. A report must be made to the nearest heritage authority. Based on this assessment we recommend to the Provincial

Heritage Resource Agency or South African Heritage Resource Agency to approve the project as planned.

ACKNOWLEDGEMENTS:

CLIENT NAME: HLE Services and Supplies (PTY) LTD

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## 1. INTRODUCTION

HLE Services and Supplies (Pty) Ltd commissioned studies for the proposed Selimenite and quartz prospecting rights on the portion of portion L3 of the farm Swartkoppes 39 and a portion of remainder Pella Mission 39, Namaqualand District, Northern Cape Province. The study area is located roughly 9.70 kilometers south of Pella Central Business District.

To ensure that the proposed development meets the environmental requirements in line with the National Environmental Management Act 107 of 1998 as amended in 2010, they appointed Ndi Geological Services as an Independent Environmental Assessment Practitioner, who then appointed Millennium Heritage Group (PTY) LTD to undertake archaeological impact assessment of the proposed project.

The proposed activities are listed Activity No 20 as described in Government gazette Notice1, GNR 983 promulgated on 4 December 2014 of the Regulation compiled in terms of section 24(5) read with section 44 of the National Environmental Management Act (Act 107 of 1998) that Rednaks have applied for prospecting rights in terms of regulation 2(2) of the MPRDA, ACT 28 of 2002. The proposed activities form part of the development process, where application for Environmental Assessment Authorization must be completed. As part of the Environmental Management Plan process, a NEMA application form was submitted to the relevant Department of Minerals Resource. Archaeological Impact Assessment (AIA) report form part of a series of appendices prepared for a EMP pursued in accordance with the National Environmental Management Act,1998 (Act No. 107 of 1998) and the National Heritage Resources Act 25 of 1999.

To comply with relevant legislations, the applicant HLE Services and Supplies (Pty) Ltd requires information on the heritage resources that occur within or near the proposed site and their heritage significance. The objective of the study is to document the presence of archaeological and historical sites of significance to inform and provide guidance on the proposed mineral prospecting. Apart from contributing towards the preservation of the heritage resources, the studies provides information and awareness of the types of archaeological and heritage sites that occur within the proposed study area. The document enables the developer to align their functions and responsibilities to advance mineral prospecting activities and at the same time minimizing potential impact on archaeological and heritage sites. Heritage Impact Assessment is conducted in line with the National Heritage Resources Act of 1999 (Act No. 25 of 1999). The Act protects heritage resources through formal and general protection. The Act provides that certain developmental activities require consents from relevant heritage resources authorities. In addition to heritage legislations, the South African Heritage Resources Agency (SAHRA) has developed minimum standards used in impact assessment, while these local standards, are operational they area strengthened by the International Council of Monuments and Sites (ICOMOS) published guideline for assessing impacts. The Burra Charter of 1999, requires a cautious approach to the management of sites; it sets out firmly that the cultural significance of heritage places must guide all decisions.

The National Heritage Resources Act (NHRA - Act No. 25 of 1999) protects all structures and features older than 60 years (Section, 34), archaeological sites and materials (Section 35) and graves and burial sites (Section, 36). To comply with the legislation, the applicant requires information on the heritage resources, that occur in the area proposed for

development and their significance. This will enable the Applicant to take pro-active measures to limit the adverse effects that the development could have on such heritage resources.

## 2. RELEVANT LEGISLATION

Two sets of legislation are relevant for the purposes of this study in as far as they contain provisions for the protection of tangible and intangible heritage resources including burials and burial grounds.

### 2.1. The National Heritage Resource Act (25 of 1999)

This Act established the South African Heritage Resource Agency (SAHRA) as the prime custodian of the heritage resources and makes provision for the undertaking of heritage resources impact assessment for various categories of development as determined by section 38. It also provides for the grading of heritage resources (Section, 7) and the implementation of a three-tier level of responsibly and functions from heritage resources to be undertaken by the State, Provincial and Local authorities, depending on the grade of heritage resources (Section, 8)

In terms of the National Heritage Resource Act 25, (1999) the following is of relevance:

Historical remains

Section 34 (1) No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant Provincial Heritage Resources Authority.

Archaeological remains

Section 35(3) Any person who discovers archaeological and paleontological materials and meteorites during development or agricultural activity must immediately report the find to the responsible heritage resource authority or the nearest local authority or museum.

Section 35(4) No person may, without a permit issued by the responsible heritage resources authority-

- destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site or any meteorite;
- destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological material or object or any meteorite;
- trade in, sell for private gain, export or attempt to export from republic any category of archaeological or paleontological material or object or any meteorite; or
- bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment which assist with the detection or recovery of metal or archaeological material or object or such equipment for the recovery of meteorites.

Section 35(5) When the responsible heritage resource authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any

archaeological or paleontological site is underway, and where no application for a permit has been submitted and no heritage resource management procedures in terms of section 38 has been followed, it may

- serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order
- carry out an investigation for obtaining information on whether an archaeological or paleontological site exists and whether mitigation is necessary;
- if mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph (a) to apply for a permit as required in subsection (4); and
- recover the cost of such investigation from the owner or occupier of the land on which it is believed an archaeological or paleontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks of the order being served.

**Subsection 35(6)** the responsible heritage resource authority may, after consultation with the owner of the land on which an archaeological or paleontological site or meteorite is situated; serve a notice on the owner or any other controlling authority, to prevent activities within a specified distance from such site or meteorite.

**Burial grounds and graves**

**Section 36 (3)** No person may, without a permit issued by SAHRA or a provincial heritage resources authority:

**(i)** destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

**(ii)** bring onto or use at a burial ground or grave any excavation equipment, or any equipment which assists in detection or recovery of metals.

**Subsection 36 (6)** Subject to the provision of any person who during development or any other activity discover the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resource authority which must, in co-operation with the South African Police service and in accordance with regulation of the responsible heritage resource authority-

(I) carry out an investigation for obtaining information on whether such grave is protected in terms of this act or is of significance to any community; and

if such grave is protected or is of significance, assist any person who or community which is a direct descendant to decide for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangement as it deems fit.

**Cultural Resource Management**

Section **38(1)** Subject to the provisions of subsection (7), (8) and (9), any person who intends to undertake a development*…

- must at the very earliest stages of initiating such development notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

**development** means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including:

(i) Construction, alteration, demolition, removal or change of use of a place or a structure at a place;

(ii) Any change to the natural or existing condition or topography of land, and

(iii) Any removal or destruction of trees, or removal of vegetation or topsoil;

**place** means a site, area or region, a building or other structure

**structure** means any building, works, device or other facility made by people and which is fixed to the ground.

## 2.2. The Human Tissue Act (65 of 1983)

This act protects graves younger than 60 years, these falls under the jurisdiction of the National Department of Health and the Provincial Health Department. Approval for the exhumation and reburial must be obtained from the relevant provincial MEC as well as relevant Local Authorities.

## 3. TERMS OF REFERENCE

The terms of reference for the study were to undertake a Heritage Impact Assessment for the proposed sand and granite prospecting rights and submit a specialist report, which addresses the following:

- Executive summary
- Scope of work undertaken
- Methodology used to obtain supporting information
- Overview of relevant legislation
- Results of all investigations
- Interpretation of information
- Assessment of impact
- Recommendation on effective management measures
- References

## 4. TERMINOLOGY

The Heritage Impact Assessment (HIA) referred to in the title of this report includes a survey of heritage resources as outlined in the National Heritage Resources Act,1999(Act No25 of 1999) Heritage resources, (Cultural resources) include all human-made phenomena and intangible products that are result of the human mind. Natural, technological or industrial features may also be part of heritage resources, as places that have made an outstanding contribution to the cultures, traditions and lifestyle of the people or groups of people of South Africa.

The term 'pre – historical' refers to the time before any historical documents were written or any written language developed in a area or region of the world. The historical period

and historical remains refer, for the project area, to the first appearance or use of 'modern' Western writing brought South Africa by the first colonist who settled in the Cape in the early 1652 and brought to the other different part of South Africa in the early 1800.

The term 'relatively recent past' refers to the 20th century. Remains from this period are not necessarily older than sixty years and therefore may not qualify as archaeological or historical remains. Some of these remains, however, may be close to sixty years of age and may soon, qualify as heritage resources.

It is not always possible, based on the observation alone, to distinguish clearly between archaeological remains and historical remains or between historical remains and remains from the relatively recent past. Although certain criteria may help to make this distinction possible, these criteria are not always present, or when they are present, they are not always clear enough to interpret with great accuracy. Criteria such as square floors plans (a historical feature) may serve as a guideline. However circular and square floors may occur together on the same site.

The 'term sensitive remains' is sometimes used to distiquished graves and cemeteries as well as ideologically significant features such as holy mountains, initiation sites or other sacred places. Graves are not necessarily heritage resources if they date from the recent past and do not have head stones that are older than sixty years. The distinction between 'formal' and 'informal' graves in most instances also refers to graveyards that were used by colonists and by indigenous people. This distinction may be important as different cultural groups may uphold different traditions and values regarding their ancestors. These

values should be recognized and honored whenever graveyards are exhumed and relocated.

The term 'Stone Age' refers to the prehistoric past, although Late Stone Age people lived in South Africa well into the historical period. The Stone Age is divided into an Early Stone Age (3Million years to 150 000 thousand years ago) the Middle Stone Age (150 000 years ago to 40 years ago) and the Late Stone Age (40 000 years to 200 years ago).
The term 'Early Iron Age' and Late Iron Age respectively refers to the periods between the first and second millenniums AD.

The 'Late Iron Age' refers to the period between the 17th and the 19th centuries and therefore includes the historical period.
Mining heritage sites refers to old, abandoned mining activities, underground or on the surface, which may date from the pre-historical, historical or relatively recent past.
The term 'study area' or 'project area' refers to the area where the developers wants to focus its development activities (refer to plan)

Phase I studies refer to survey using various sources of data in order to establish the presence of all possible types of heritage resources in a given area.
Phase II studies includes in-depth cultural heritage studies such as archaeological mapping, excavating and sometimes laboratory work. Phase II work may include documenting of rock art, engravings or historical sites and dwellings; the sampling of archaeological sites or shipwrecks; extended excavation of archaeological sites; the

exhumation of bodies and the relocation of grave yards, etc. Phase II work may require the input of specialist and require the co-operation and the approval of SAHRA.

## 5. METHODOLOGY

*Source of information*

### *i. Desktop studies*

A desktop study was performed to gain information on the heritage resources in the area. The Namaqualand is world renowned region that host middle and Late Stone Age sites. Generally, the archaeology of human occupation within the study area stretches from the Early Stone Age up to the recent past (Walker, Chazan & Morris 2013, Calabrese, 1996; Huffman, 2007). These sites represent a succession of Stone Age industries that were recorded alongside perennial and non-perennial streams and pans. Large quantities of stone tools have been recorded some extracted, together with the landscape are generally intact, but are vulnerable to development pressures such as mineral prospecting and mining activities. The expectation from this desktop study is that it is highly possible to record heritage belonging to early and later periods as well as historical home steads.

### *ii. Field surveys*

To identify sites on the ground and to assess their significance, a dedicated field visit was performed to the site of the proposed development. The fieldwork was performed by Mr. Mathoho Eric and Ndi Mofokeng on the 09 July 2018. The fieldwork followed systematic inspections of predetermined linear transects which resulted in the maximum coverage of the entire site. The sampling method selected was the stratified random technique. The proposed sites for prospecting were taken as strata with random field walking around

them. Standard archaeological observation practices were followed; visual inspection was supplemented by relevant written source, and oral communications with local communities from the surrounding area. Identified sites were recorded by hand held GPS and plotted on 1:50 000 topographical maps. Archaeological/historical material and the general condition of the terrain were photographed with a Canon 1000D Camera.

### *Assumption and Limitations*

It must be pointed out that heritage resources can be found in the unexpected places, it must also be borne in mind that survey may not detect all the heritage resources in each project area. While some remains may simply be missed during surveys (observation) others may occur below the surface of the earth and may be exposed once development (such as the construction of the proposed facilities) commences. Part of the area was not investigated because it was not accessible. Notwithstanding these limitations, great effort was invested in surveying areas that could be yield archaeological material remains, such as drainage area, pans and bottom section of the slopes.

## 6. ASSESSMENTS CRITERIA

This section describes the evaluation criteria used for determining the significance of archaeological and heritage sites. The significance of archaeological and heritage sites was determined based on the following criteria:

- The unique nature of a site.
- The amount/depth of the archaeological deposit and the range of features (stone walls, activity areas etc.).

- The wider historic, archaeological and geographic context of the site.
- The preservation condition and integrity of the site.
- The potential to answer present research questions.

### *6.1 Site Significance*

The site significance classification standards as prescribed in the guidelines and endorsed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region, were used in determining the site significance for this report.

The classification index is represented in the Table below that show grading and rating systems of heritage resources in South Africa.

| FIELD RATING | GRADE | SIGNIFICANCE | RECOMMENDED MITIGATION |
|---|---|---|---|
| National Significance (NS) | Grade 1 | - | Conservation; National Site nomination |
| Provincial Significance (PS) | Grade 2 | - | Conservation; Provincial Site nomination |
| Local Significance (LS) | Grade 3A | High Significance | Conservation; Mitigation not advised |
| Local Significance (LS) | Grade 3B | High Significance | Mitigation (Part of site should be retained) |
| Generally Protected A (GP.A) | Grade 4A | High / Medium Significance | Mitigation before destruction |

| | | | |
|---|---|---|---|
| Generally Protected B (GP.B) | Grade 4B | Medium Significance | Recording before destruction |
| Generally Protected C (GP.C) | Grade 4C | Low Significance | Destruction |

### *6.2 Impact Rating*

**VERY HIGH**

These impacts would be considered by society as constituting a major and usually permanent change to the (natural and/or cultural) environment, and usually result in severe or very severe effects, or beneficial or very beneficial effects.

**Example:** The loss of a species would be viewed by informed society as being of VERY HIGH significance.

**Example:** The establishment of a large amount of infrastructure in a rural area, which previously had very few services, would be regarded by the affected parties as resulting in benefits with VERY HIGH significance.

**HIGH**

These impacts will usually result in long term effects on the social and /or natural environment. Impacts rated as HIGH will need to be considered by society as constituting an important and usually long-term change to the (natural and/or social) environment. Society would probably view these impacts in a serious light.

**Example:** The loss of a diverse vegetation type, which is common elsewhere, would have a significance rating of HIGH over the long term, as the area could be rehabilitated.

**Example:** The change to soil conditions will impact the natural system, and the impact on affected parties (e.g. farmers) would be HIGH.

MODERATE

These impacts will usually result in medium- to long-term effects on the social and/or natural environment. Impacts rated as MODERATE will need to be considered by the public or the specialist as constituting a unimportant and usually short-term change to the (natural and/or social) environment. These impacts are real, but not substantial.

**Example:** The loss of a sparse, open vegetation type of low diversity may be regarded as MODERATELY significant.

**Example:** The provision of a clinic in a rural area would result in a benefit of MODERATE significance.

LOW

These impacts will usually result in medium to short term effects on the social and/or natural environment. Impacts rated as LOW will need to be considered by society as constituting an important and usually medium-term change to the (natural and/or social) environment. These impacts are not substantial and are likely to have little real effect.

**Example:** The temporary changes in the water table of a wetland habitat, as these systems are adapted to fluctuating water levels.

**Example:** The increased earning potential of people employed because of a development would only result in benefits of LOW significance to people living some distance away.

NO SIGNIFICANCE

There are no primary or secondary effects at all that are important to scientists or the public.

**Example:** A change to the geology of a certain formation may be regarded as severe from a geological perspective, but is of NO SIGNIFICANCE in the overall context.

### *6.3 Certainty*

*DEFINITE:* More than 90% sure of a fact. Substantial supportive data exist to verify the assessment.

*PROBABLE:* Over 70% sure of a fact, or of the likelihood of an impact occurring.

*POSSIBLE:* Only over 40% sure of a fact, or of the likelihood of an impact occurring.

*UNSURE:* Less than 40% sure of a fact, or of the likelihood of an impact occurring.

### *6.4 Duration*

*SHORT TERM :* 0 – 5 years

*MEDIUM:* 6 – 20 years

*LONG TERM:* more than 20 years

*DEMOLISHED:* site will be demolished or is already demolished

### *6.5 Mitigation*

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be classified as follows:

- ✓ **A** – No further action necessary
- ✓ **B** – Mapping of the site and controlled sampling required

- ✓ **C** – Preserve site, or extensive data collection and mapping required; and
- ✓ **D** – Preserve site

## *7. Historical background a brief synthesis of the archaeology and heritage of the study area.*

### The Stone Age Periods

Conventionally speaking, the Stone Age period has been divided into the Early Stone Age (ESA) (3.5 million and 250 000 BP), the Middle Stone Age (MSA) (250 000 – 25000 BP) and the Later Stone Age (25000 – 2000 BP) (Phillipson 2005). Early Stone Age stone tool assemblages are made up of the earlier Oldowan and later Acheulian types. The Oldowan tools were very crude and were used for chopping and butchering. These were replaced by Acheulian ESA tools dominated by hand axes and cleavers which are remarkably standardized (Wadley, 2007; Sharon, 2009). Evidence presented from Sterkfontein, Swartkrans and Makapansgat caves shows that the first tool making hominids belong to either an early species of the Homo or an immediate ancestor which is yet to be discovered here in South Africa (Phillipson 2005; Esterhuysen, 2007). Both the Oldwan and Acheulian industries are well represented in the archaeology of Northern Cape South Africa (Kuman et al. 2005; Sumner and Kuman 2014).

The Middle Stone Age dates to between 250 000 ago and 25 000 years ago. In general, Middle Stone Age tools are characterized by a size reduction in tools such as hand axes, cleavers, and flake and blade industries. The period is marked by the emergence of modern humans and was accompanied by change in technology, behavior, physical appearance, art, and symbolism (Phillipson 2005). A variety of MSA tools includes blades,

flakes, scraper and pointed tools that may have been hafted onto shafts or handles and used as pear heads. Surface scatters of these flake and blade industries occur widespread across southern Africa (Klein 2000; Thompson & Marean, 2008).

Recent excavation at pans in the northern cape province this includes research at Rooidam 11 and the Bundu farm have been used to extrapolate information on the typological definition, age and the ecological contexts. The assemblages contain biface as well as blades prepared core and Lavallois unifacial points (Beaumont &Vogel 2006) Residue analyses on some of the stone tools indicate that these tools were certainly used as spear heads (Wadley, 2007). From about 25 000 BP, stone tool assemblages generally attributed to the Later Stone Age emerged. This period is marked by a reduction in stone tool sizes. Typical stone tools include microliths and bladelets. Later Stone Age stone tools were recovered throughout the Northern Cape Province (Forsman 2011). This period is also associated with the development of rock art whose distribution is known across southern Africa (Deacon and Deacon 1999; Phillipson 2005). Records of images on small boulders dominated by concentric circles surrounded by U- shapes, Eiland and Rhinoceros has been georeferenced in the region (Lewis- Williams & Blundell 1998).

### The historical Periods

Historical archaeology could be associated with the unwelcome political authority at the Cape which drive Dutch farmers in search of greener pastures outside the British sovereignty (Parkington et al, 2008). This period is associated with the last 500 years when European settlers and colonialism entered into southern Africa. Movement into the interior was closely linked with the change from farming to stock farming. The movement

of Dutch into the interior got underway when Wilhelm Adrien van der Stel began to issue free grazing permits in 1703. The exoduses went hand in hand with hunting expeditions into the interior which not only provided the farmers with meat, but also enable them to learn more about the resources of the hinterland. British government made its laws which undermine the freedom of the Boers. The mounting conflict between African and white stock farmers played the dominant part. This led to the general dissatisfaction and a feeling of insecurity among the Afrikaner. The frontier wars of 1834/35 caused the frontier farmers to suffer heavy losses. To aggravate matters, land prices rose sharply during the 1820 and 1830 and drought was a serious problem. These conditions threatened the pastoral lifestyle. There was no land for the younger generations. They opted to migration in search of land and grazing in the interior.

During the great trek into the interior they were already acquainted with conditions of the interior and with the main trek routes. They got available information from travelers, hunters and missionaries' documents. During the great trek Dutch came into contact with African tribes for example the Korana pastoralist and the San communities. It is these contacts that brought with it genocidal attacks on the San Communities in the region. The San communities specifically the Xam! Language speaker who inhabited the Karoo region responded to whites' invasion. They armed themselves and resisted against whites inventions. However the San lost their land in this conflict as long as their language they ended up being incorporated into the colonial society. Some of them were employed within the farms working for whites as shepherds, laborers and domestic workers (Parkington et al, 2008). Many of these farms have been in the ownership of Dutch families for

generations. As a result, they possess a large corpus of information with regarding to the area and its history.

## 8. SITE LOCATION AND PROJECT DESCRIPTION

The proposed study area is situated on the portion of portion L3 of the farm Swartkoppes 39 and a portion of remainder Pella Mission 39, Namaqualand District, Northern Cape Province. The study area is located roughly 9.70 kilometers south of Pella Central Business District. Situated at the following GPS co-ordinates (GPS S29°.06. 08.01 "& E 19°.07.40.06").

The landscape feature of the study area is slightly flat to undulating ridge that encompasses prominent mountains with isolated rocky out crop hills with sparse under growth dominated by (*Aristida, Eragrostis and stipagrostis*) grass species (Mucina & Rutherford 2006). The general vegetation is dominated by shrub land with both succulent and non-succulent elements. The site geology and soils are dominated by high grade metamorphic rocks on a broad alluvial plain that consist of clastic sediments with sections where volcanic intrusive rocks are common. The lower lying plains are characterized by shallow and deep sand deposits. Powerlines and gravel access roads, dry non- perennial streams transverse the area. Few recent past, isolated settlement occur on the property. The entire site is currently used as livestock grazing site by the local people. Large section of land surface has been disturbed by previous mining activities well represented by open excavations with the depth of more than 40meters. Tons of sand and overburden rocks were excavated and stockpiled in close proximity of the mine. Some isolated borrow pits

where gravel materials were extracted possibly for road upgrade purposes where noted alongside the main access tarred road leading to Pella area.

The proposed development entails:

- ✓ Prospecting of Selimanite and Quartz stones.

**Figure 1:** View of the study rea toward Pella area

**Figure 2:** Sand stock pilled on the property

**Figure 3:** An old Aloe dichotoma plant noted on the property

**Figure 4:** Surface disturbances, previous mining activities

## 9. ASSESSMENT OF SITES AND FINDS

This section contains the results of the heritage sites/finds assessment. The phase 1 heritage scoping assessment program as required in terms of the Section 38 of the National Heritage Resource Act (Act 25 of 1999) done for the proposed mineral prospecting. The study has revealed that the area is not rich in heritage resources; meaning that the proposed prospecting activities is generally acceptable. There are no primary or secondary effect at all that are important to scientist or the general public that will be impacted in terms of generally protected heritage.

## 10. CONCLUSION AND RECOMMENDATIONS

In conclusion, and within limitations, the study established that there are heritage site dating to the historical era that qualifies to be protected in term of Section 34 (1) of the National Heritage resources Act 25 of 1999.

The study reached the following conclusions:

- The proposed Selimanite and Quartz prospecting activities are scheduled to take place on the lower lying area of the farm that encompasses previously disturbed areas. The surveys of the top soil show no other evidence of archaeological materials remains, capped or distributed as surface scatters on the landscape. There is no indication of graves or burial sites.
- Should chance finds be recovered in the process of sand mining activities, work must be stopped immediately. A report must be made to the nearest heritage authority. Based on this assessment we recommend to the Provincial Heritage Resource Agency or South African Heritage Resource Agency to approve the project as planned.

## 11. GOOGLE EARTH AND TOPOGRAPHICAL MAPS

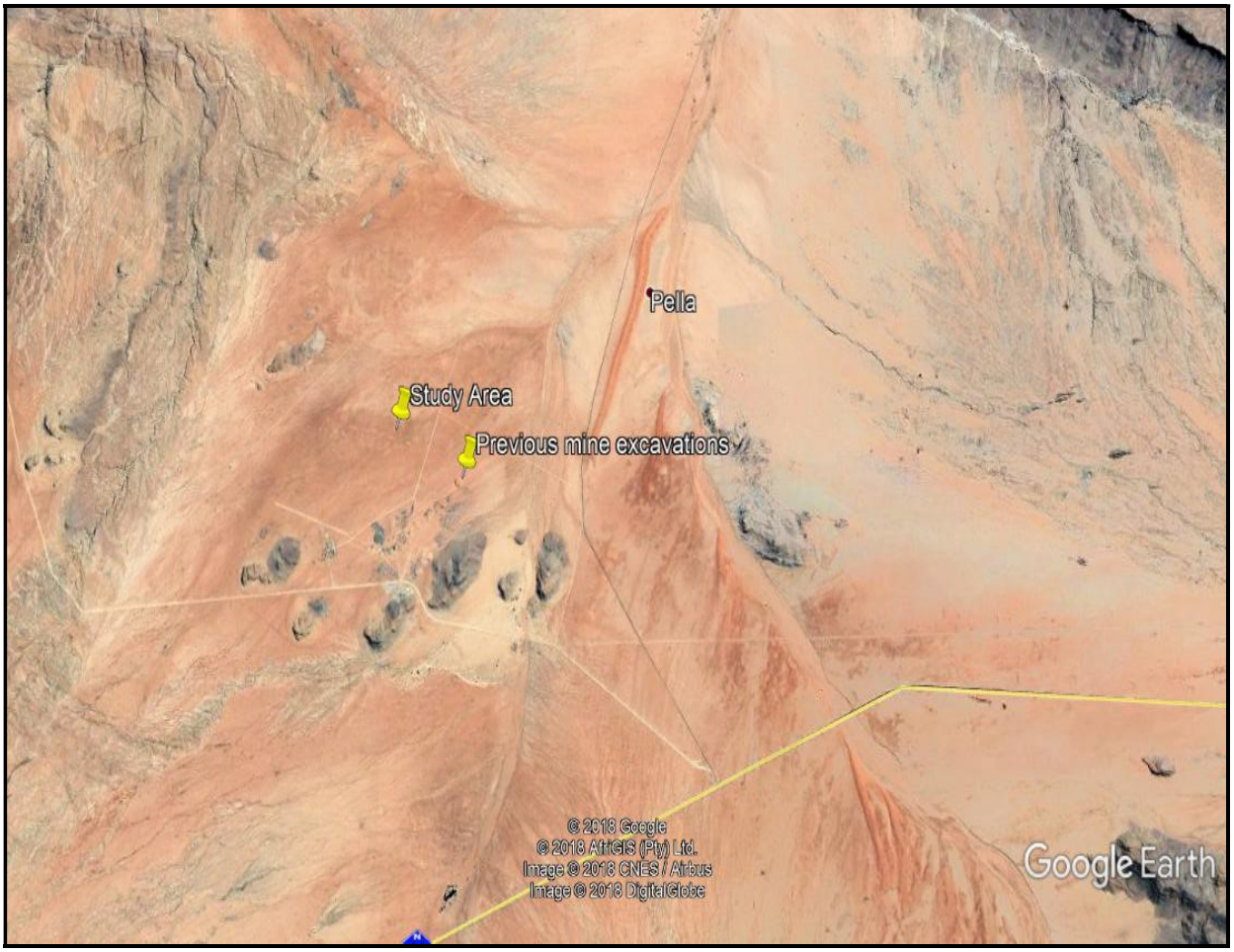
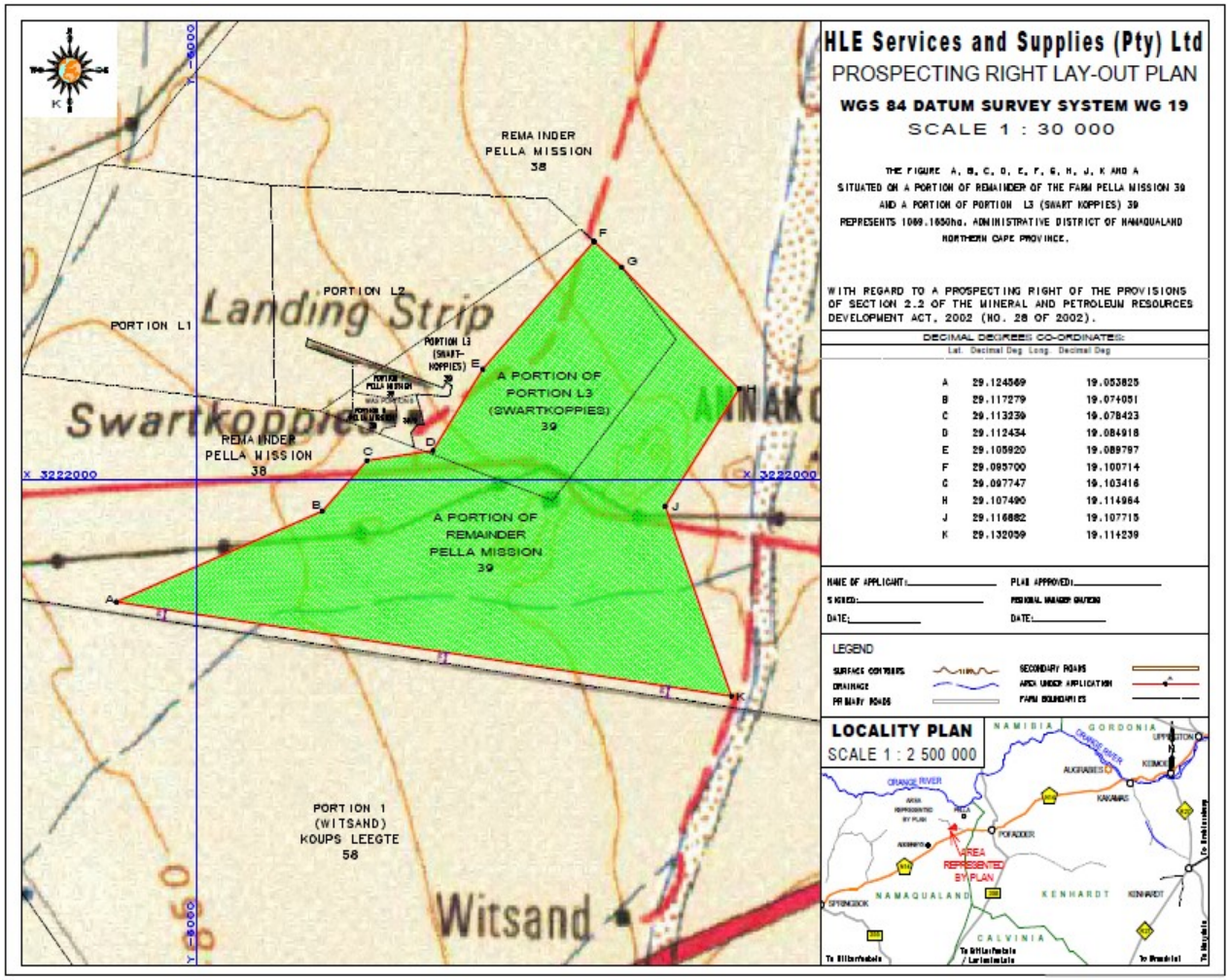



**Figure 5:** View of the study area adopted from Google earth Program


HLE Services and Supplies (Pty) Ltd
PROSPECTING RIGHT LAY-OUT PLAN
WGS 84 DATUM SURVEY SYSTEM WG 19
SCALE 1 : 30 000
THE FIGURE A, B, C, D, E, F, G, H, J, K AND A
SITUATED ON A PORTION OF REMAINDER OF THE FARM PELLA MISSION 38
AND A PORTION OF PORTION L3 (SWART KOPPIES) 39
REPRESENTS 1069.1650ha. ADMINISTRATIVE DISTRICT OF NAMAQUALAND
NORTHERN CAPE PROVINCE.
WITH REGARD TO A PROSPECTING RIGHT OF THE PROVISIONS
OF SECTION 2.2 OF THE MINERAL AND PETROLEUM RESOURCES
DEVELOPMENT ACT, 2002 (NO. 28 OF 2002).
DECIMAL DEGREES CO-ORDINATES:
Lat. Decimal Deg. Long. Decimal Deg
A 29.124569 19.053825
B 29.117279 19.074051
C 29.113239 19.078423
D 29.112434 19.084918
E 29.105920 19.089797
F 29.095700 19.100714
G 29.097747 19.103416
H 29.107490 19.114964
J 29.116882 19.107715
K 29.132059 19.114239
NAME OF APPLICANT:
SIGNED:
DATE:
PLAN APPROVED:
REGIONAL MANAGER MINERALS
DATE:
LEGEND
SURFACE CONTOURS
DRAINAGE
PRIMARY ROADS
SECONDARY ROADS
AREA UNDER APPLICATION
FARM BOUNDARIES
LOCALITY PLAN
SCALE 1 : 2 500 000
NAMIBIA
GORDONIA
ORANGE RIVER
AUGRABIES
KAKAMAS
KEIMOES
UPINGTON
POFADDER
AREA REPRESENTED BY PLAN
SPRINGBOK
NAMAQUALAND
KENHARDT
CALVINIA
REMAINDER PELLA MISSION 38
PORTION L1
PORTION L2
Landing Strip
PORTION L3 (SWART-KOPPIES) 39
A PORTION OF PORTION L3 (SWARTKOPPIES) 39
Swartkoppies
REMAINDER PELLA MISSION 38
A PORTION OF REMAINDER PELLA MISSION 39
PORTION 1 (WITSAND) KOUPS LEEGTE 58
Witsand
X 3222000
Y 8000
Y 6000
A
B
C
D
E
F
G
H
J
K

## PROFESSIONAL DECLARATION

I, the undersigned Mr. Ndivhuho Eric Mathoho hereby declare that I am a Professional archaeologist accredited with the Association for South African Professional Archaeologists (ASAPA) and that Millennium Heritage Group (Pty) Ltd is an independent Consultants with no association or with no any other interest what so ever with any institution, organization, or whatever and that the remuneration earned from consulting work constitute the basis of company livelihood and income.

Mr. Mathoho Ndivhuho Eric

…….

Archaeologists and Heritage Consultants for Millennium Heritage Group (Pty) Ltd

ASAPA Member

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## Addendum 1: Definitions and Acronyms

**Archaeological** Material remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artefacts, human and hominid remains, and artificial features and structures.

**Chance Finds** Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as water pipeline trench excavations.

**Cultural Heritage Resources** Same as Heritage Resources as defined and used in the South African Heritage Resources Act (Act No. 25 of 1999). Refer to physical cultural properties such as archaeological and paleontological sites; historic and prehistoric places, buildings, structures and material remains; cultural sites such as places of ritual or religious importance and their associated materials; burial sites or *graves* and their associated materials; geological or natural features of cultural importance or scientific significance. Cultural Heritage Resources also include intangible resources such as religion practices, ritual ceremonies, oral histories, memories and indigenous knowledge.

**Cultural Significance** The complexities of what makes a place, materials or intangible resources of value to society or part of, customarily assessed in terms of aesthetic, historical, scientific/research and social values.

**Grave** A place of interment (variably referred to as burial), including the contents, headstone or other marker of such a place, and any other structure on or associated with such place. A grave may occur in isolation or in association with others where upon it is referred to as being situated in a cemetery.

**Historic** Material remains resulting from human activities, which are younger than 100 years, but no longer in use, including artefacts, human remains and artificial features and structures.

***In Situ* material** *Material culture* and surrounding deposits in their original location and context, for example an archaeological site that has not been disturbed by farming.

**Late Iron Age** this period is associated with the development of complex societies and state systems in southern Africa.

**Material culture** Buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

**Site** A distinct spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.

## Acronyms

| | |
|---|---|
| **AIA** | Archaeological Impact Assesment |
| **EIA** | Environmental Impact Assesment |
| **EIA** | Early Iron Age |
| **EMP** | Environmental Management Plan |
| **MHG** | Millenium Heritage Group(PTY) LTD |
| **NEMA** | National Environmental Management Act, 1998 (Act No.107 of 1998) |
| **NHRA** | National Heritage Resources Act, 1999 (Act No.25 of 1999) |
| **SAHRA** | South African Heritage Resources Agency |
| **ESA** | Early Stone Age |
| **MSA** | Middle Stone Age |
| **LSA** | Late Stone Age |
| **IA** | Iron Age |
| **LIA** | Late Iron Age |
| **UNESCO** | United Nations Educational, Scientific and culturural Organization |
| **WHC** | World Heritage Conventions of 1972 |

## ADDENDUM 2: Types and ranges as outlined by the National Heritage Resource Act (Act 25 of 1999)

The National Heritage Act (Act No 25 of 1999, Art 3) outlines the following types and ranges of the heritage resources that qualify as part of the national estate, namely:

(a) Places, buildings structures and equipment of cultural significance;

(b) Places to which oral tradition are attached or which are associated with living heritage;

(c) Historical settlement and townscapes

(d) Landscape and natural features of cultural significance;

(e) Geological sites of scientific or cultural importance

(f) Archaeological and paleontological sites

(g) Graves and burial ground including-

- (I) Ancestral graves
- (II) Royal graves and graves of traditional leaders
- (III) Graves of victim of conflict
- (IV) Graves of individuals designated by the minister by notice in the gazette;
- (V) Historical graves and cemeteries; and
- (VI) Other human remains which are not covered by in terms of the Human Tissue Act,1983(Act No 65 of 1983)

(h) sites of significance relating to the history of slavery in South Africa;

(i ) movable objects, including-

- (I) object recovered from soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens;
- (II) objects to which oral traditions are attached or which are associated with living heritage
- (III) ethnographic art and objects;
- (IV) military objects;
- (V) objects of decorative or fine art;
- (VI) object of scientific or technological interest; and

(VII) books, records, documents, photographs, positive and negatives, graphic, film or video material or sound recording, excluding those that are public records as defined in section1(xiv) of the National Archives of South Africa Act,1996(Act No 43 of 1996).

The National Heritage Resource Act (Act No 25 of 1999,Art 3)also distinguishes nine criteria for places and objects to qualify as 'part of the national estate if they have cultural significance or other special value… these criteria are the following:

(a) its importance in the community, or pattern of South Africa's history;
(b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
(c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
(d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
(e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
(f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
(g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
(h) Its strong or special association with the life or work of a person, group or organization of importance in the history of South Africa
(i) Sites of significance relating to the history of slavery in South Africa.