

BACKGROUND INFORMATION DOCUMENT: RONDAWEL KAOLIN MINE SOUTH WEST OF GARIES, NC PROVINCE

Prepared for

Upload to SAHRIS

On behalf of

Mr K Van Zyl

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Prepared by

Dave Halkett

ACO Associates cc

Physical: Unit D17, Prime Park, 21 Mocke Rd, Diep River

Postal: 8 Jacobs Ladder St James, 7945

david.halkett@aco-associates.com

Tel: 021 7064104

Cell: 0731418606

Fax to e-mail: 086 603 7195

ACO Comments on the project:

A case was uploaded to SAHRIS for the original proposal to mine Kaolin on the site on 31-10-2014 (NC30/5/1/3/2/10423MP). It appears that no final comment/decision was issued. There has now been a request to expand the kaolin mining marginally and ACO Associates has been tasked with making the application and to assess the possible impacts on Heritage resources. The project is outlined below as copied from the "Revised Final Rehabilitation, decommissioning and mine closure plan". The full document has been uploaded to SAHRIS. There appears to have been mining at the site since at least 2003 based on the historical Google Earth imagery.

Although the area of activity is relatively small, it is larger than 5000m² and thus must be assessed in terms of S38(1)(c)(i) of the NHRA of 1999.

The project information was emailed to the Palaeontologist Dr John Almond in order that he could comment on the need for a Palaeontological assessment. He responded thus: *"...I'm pretty sure this project has no palaeontological heritage implications. Kaolin probably derived from weathered granite-gneiss. Small footprint. No major water courses nearby. No PIA necessary, in my view."*

Although there are no obvious heritage indicators visible on the aerial photographs, it is possible that archaeological resources may be present. We recommend that a brief site inspection be undertaken in order to assess the site and activities. There does not appear to be any historical built environment at the mining site

1.3 Context of the Rondawel Mining operation

1.3.1 Mining Permit

This final rehabilitation, decommissioning and mine closure plan that include the environmental risk assessment is applicable to the mining permit issued to Rondawel Kaolien CC (Reg. No. 2002/016403/23) with reference NC30/5/1/3/2/10423MP.

The mining area consists of a 5Ha portion of Portion 1 of the farm Rondawel 638 situated in the Namakwa District Municipality and Kamiesberg local authority of the Namaqualand administrative district of the Northern Cape. The farm is registered in the name of Adriaan Allettus Nieuwoudt (Id 4505085037087) one of the members of Rondawel Kaolien CC by virtue of title deed T30303/2003. The area is situated along the secondary road between Garies and Groenrivier 40Km from Garies with an approximate locality Latitude S30.78464° and Longitude E17.79455° (Diagram 1).

1.3.2 Project Description

Mining will be in the form of an opencast mine and Kaolin (clay) are mined from a burrow pit. Processing will be in the form of screening making use of a static screening plant still under review and development as part of an application for a patent right. The project can be divided in three phases as follows:

- Construction, including the planning and implementation phases, creation of infrastructure, mine or pit footprint, access ramps and haul roads, waste, residue and product stockpiles, handling areas, water reticulation and electrical power;
- Operation, including daily activities, mine development and expansion;
- Decommissioning and Closure, including scaling down of activities ahead of temporary or permanent closure, cessation of mining or production, implementation of rehabilitation programme, monitoring and maintenance for prescribed period after cessation of operations; and closure, including completion of rehabilitation goals, application for closure, transfer of liability to the State and agreed post-closure monitoring or maintenance.

a) Construction phase

Due to the small scale of operations no permanent infrastructure will be developed and only existing farm tracks will be used. Upgrading of the existing tracks will be done as part of the

construction phase. The infrastructure area (refer section 1.3.4) will only consist mobile containers and temporary logistical facilities including fuel supply and temporary waste storage facilities that form part of farm improvement. The workshop at the adjacent company headquarters will be utilized during this operation.

b) Operational phase

Due to the unconsolidated nature of the ore the burrow pit is mined as a truck-and-shovel operation. The Kaolin is loaded with a 25 ton excavator on haul trucks to be either backfilled (the pit operates a rollover backfill operation) or transport to the product drying area. No ripping and dozing are necessary and no explosives are used.

Mining starts with the removal of the top layer of overburden and low grade ore about 50% of the deposit. Due to the presence of an existing mined out trench overburden and low grade product are backfilled immediately and no new overburden stockpiles will be created. A rollover backfill operation will be applied during future mining operations and all existing overburden and topsoil stockpiles will be backfilled as part of annual rehabilitation during the next reporting period.

The ore is transported by haul trucks to the drying area where the ore are spread out to be pulverize by driving over it with a tractor and disk plough. The ore is then fed by conveyor into the processing plant that pulverises and screen the product to the required particle size, the normal particle size for kaolin is two micrometers. Filler grade is used, among other applications, in the manufacture of paper, paint, adhesives, rubber and pesticides.

Kaolin is inert and non-toxic, which makes it suitable for a range of different applications. In fact, kaolin is used in the making of medicine pills.

The burrow pit will be mined in blocks of ± 1 Ha with a maximum depth of 5 meter (refer section 1.3.4). As part of the operational phase training of personnel in the implementation of the EMP will be done and the implementation of the environmental awareness plan as part of the EMP will be an ongoing process.

c) Decommissioning phase

The decommissioning phase at the end of the life of the mine will consist of implementing this final rehabilitation, decommissioning and closure plan

1.3.3 Mine design map

The location of the different elements will be discussed in the next sections:

1.3.4 Project layout

a) Infrastructure (Refer Diagram 3)

- Access and service roads
 - The secondary public road system provide excellent access to the mine HQ. The turn-off from the Garies - Groenrivier road to the mine 40km outside of Garies (Diagram 1);
 - Access from the HQ to the mine workings is via existing farm tracks;
 - Existing tracks will be used as haul roads and will only be upgraded to facilitate haul trucks by applying dust suppression and/or hardening compound such as Macadamite if needed;
 - The service roads will remain as part of farm improvement and the mine is only responsible for the maintenance of the road;
- Services and associated infrastructure
 - Potable water for the two employees at the mine is obtained from collection of rainwater from the carport roof;
 - No process water is used during mining or processing operations;

- Storage consisting of two 5 000 liter plastic tank that form part of farm infrastructure and can be re-used on another location;
- Electrical supply are generated by a mobile genset to be supplied with generator bay and spill prevention measures.

- Accommodation and Logistics

- Upgrading of infrastructure and accommodation are still in progress;
- Only one Wendy house and a caravan will be available on site for the two personnel employed at the mine;
- Other infrastructure include a carport and container for storage of plastic sheets used to cover the product stockpiles to protect it from moisture;
- The screening and milling operation is contained within a makeshift structure;
- No steel or reinforced concrete buildings and structures are present on the mining area that will require demolition;
- Workshops and secure storage infrastructure is available as part of the farm infrastructure that also doubled up as company HQ;

- Waste management facilities

- Upgrading of waste management facilities are still in progress;
- Temporary waste storage areas were developed as part of the farm infrastructure;
- Petrochemical and hazardous waste including contaminated/used spares, filters and used oil are collected and stored in special containers with spill containment measures for disposal at a registered disposal site;
- Domestic waste are collected in plastic containers and transported weekly to the company HQ refuse site;
- A small salvage yard is provided for temporary storage of scrap prior to movement to the company HQ;

- Oil/grease/diesel management systems

- Fuel storage with bund wall is provided as part of existing farm infrastructure;
- The cement structures for the fuel supply including service apron/wash bay will remain as part of farm improvement and the mine will only be responsible for maintenance and waste management;

b) Burrow pit and waste dumps (Refer Diagram 3);

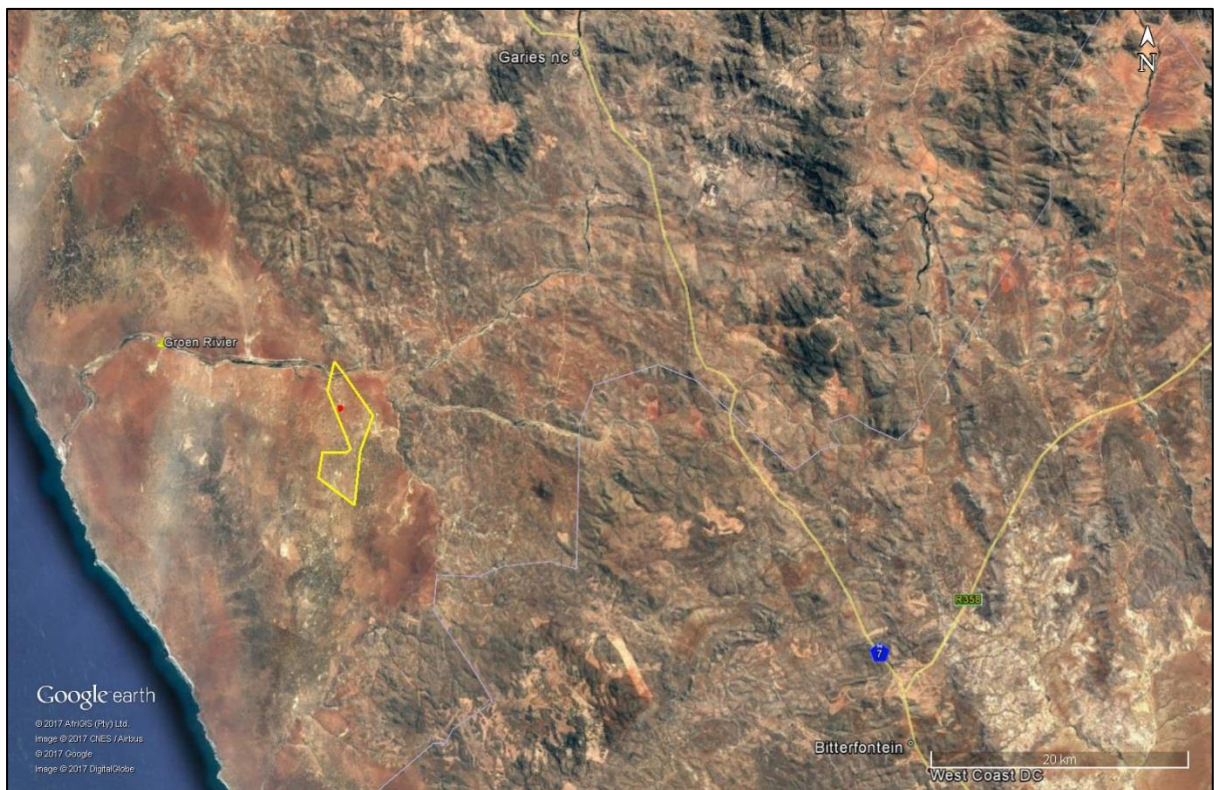
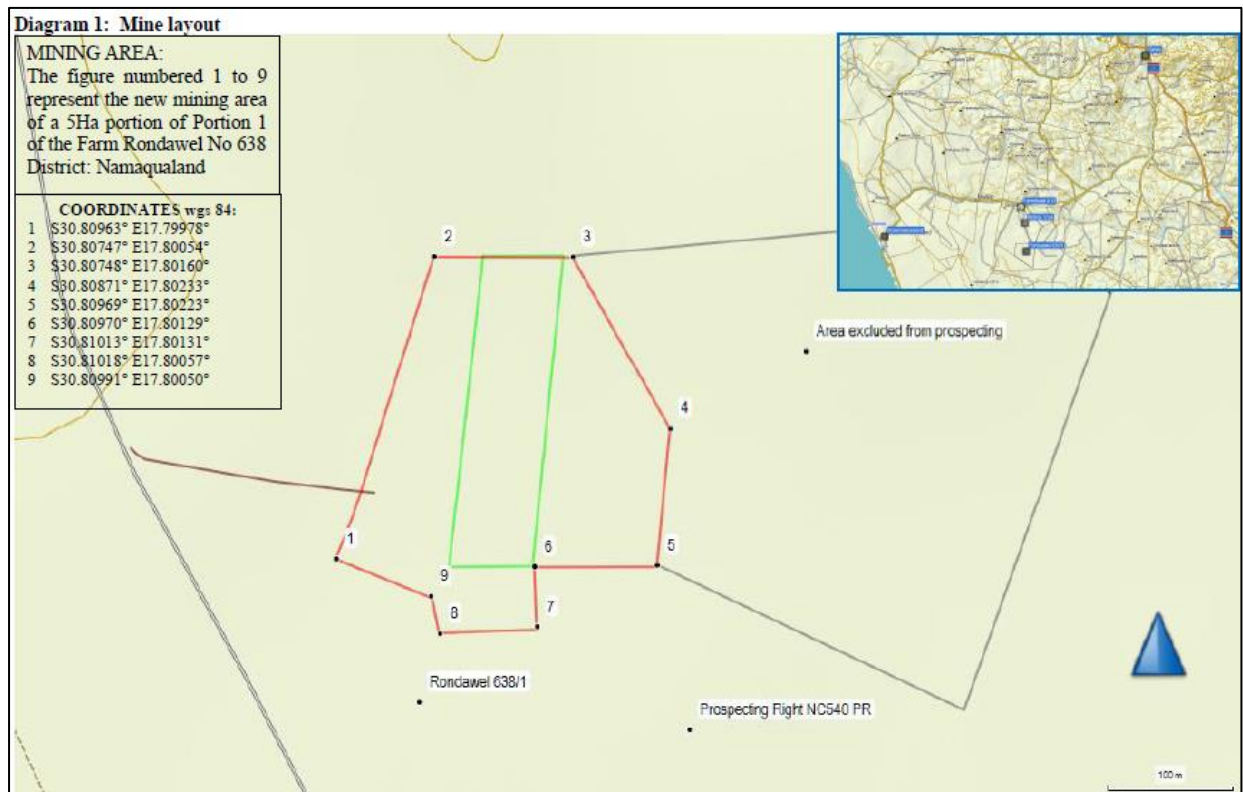
- Excavations

- Mining will be in the form of a roll over operation and mining blocks will be restricted to 0.5 Ha and maximum 10 meter deep;
- High wall will be developed in benches not exceeding 3 m high;
- Only one TLB for loading and movement of ore are used on a permanent basis;
- Large scale excavations and ore stockpiling is done with a 25 ton excavator and one ADT that is on site on an ad hoc basis;

- Residue deposits overburden and spoils

- Overburden and low grade ore about 50% of the deposit placed in temporary stockpiles adjacent to the original excavation is still in the process of being backfilled;
- No new overburden dumps will be created as operations will follow a cut and fill approach in future.
- No spoils are generated at the processing plant;
- Product stockpiles form part of the drying area that also serve as a dispatch yard;

- Surface disturbance (compacted areas)
- The movement area also serves as general laydown area and parking for stationary vehicles;
- Parking areas to be provided with drip trays for stationary equipment;



Broad regional location of farm (yellow) and mining area (red)

Diagram 2: Mine locality in relation to prospecting operation company HQ and access

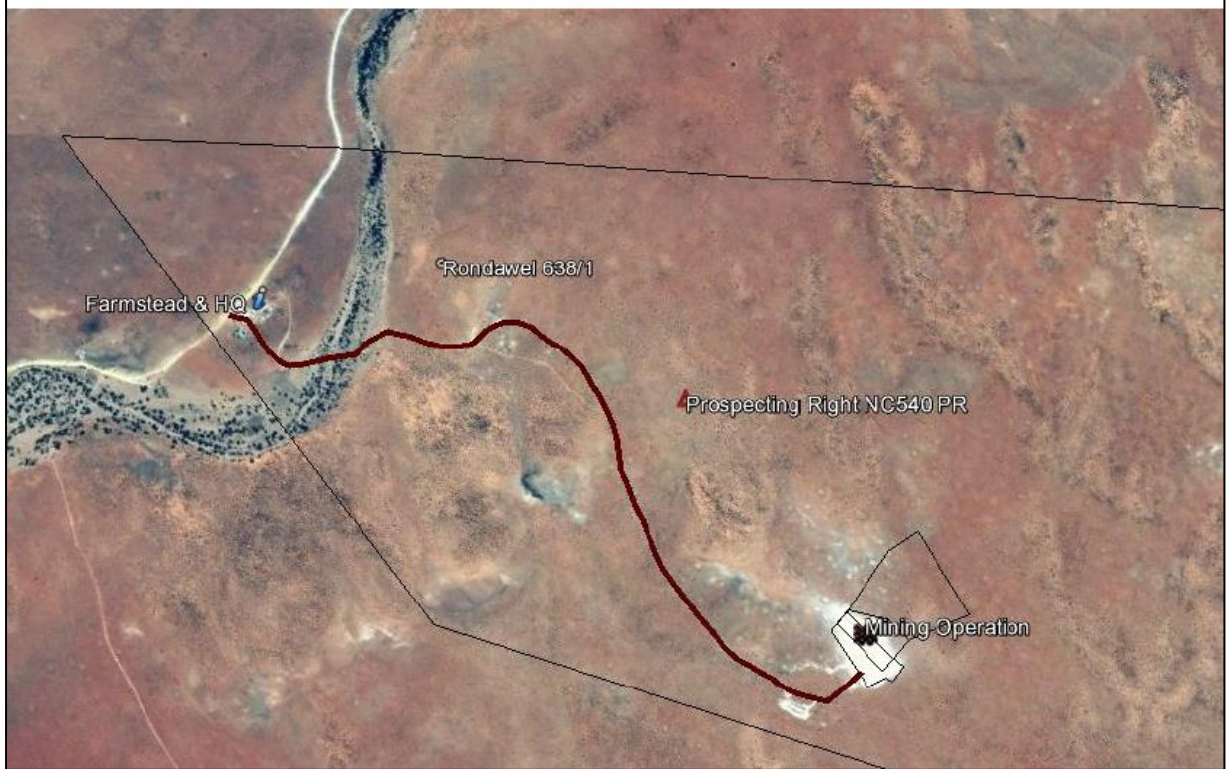
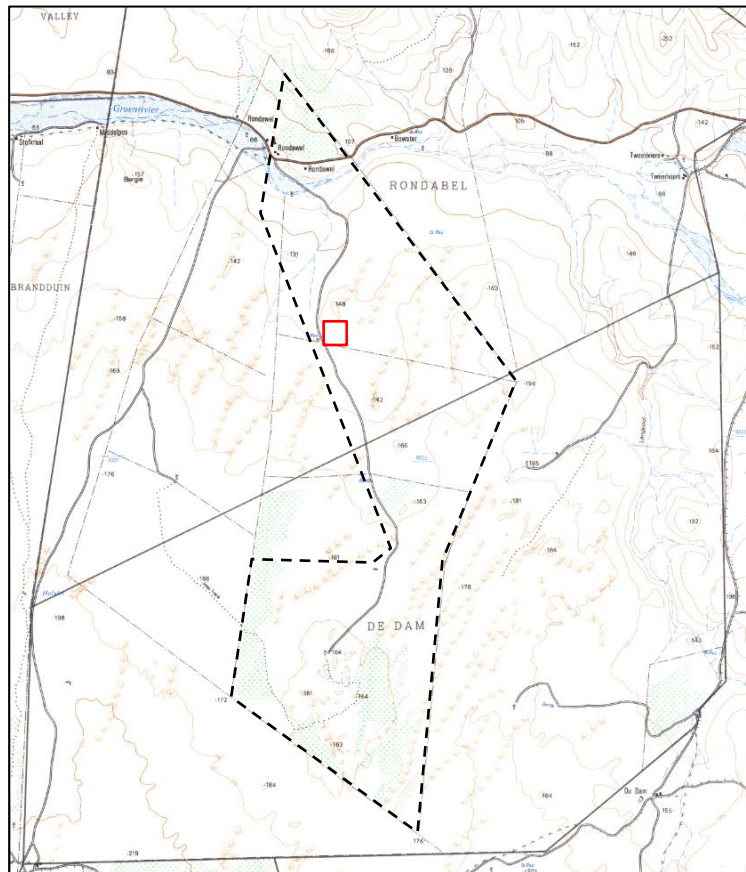


Diagram 3: Mine layout according to new footprint indicating logistical area and active mining area





Ref: 3017DD Kotzesrus (1970) Dept of Surveys and Mapping. Approximate shape of Ptn 1 Rondawel 638 indicated by black dashed polygon. The base map is out of date!