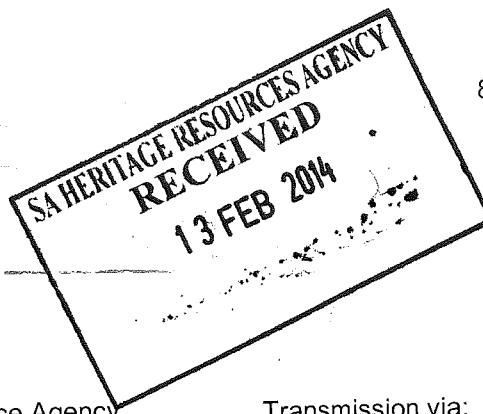


UMVOTO

Earth • Water • Science • Life



Case 1261

8 Beach Road Muizenberg 7945
P.O. Box 61 Muizenberg 7950
Tel: +27 21 709 6700
Fax: +27 86 685 5725
E-mail: amanzi@umvoto.com
Website: www.umvoto.com

South African Heritage and Resource Agency
P. O. Box 4637
Cape Town
8000

Transmission via:

Registered Post

Your Ref.: N/A

Our Ref.: 820/02/01/2014

Date: 07/02/2014

Re: Mine Permit Application: Portion 1 of the Farm Van Nels Dam #104

To whom it may concern

Application is in process by Corpco 2240 CC T/A Amatye Apehzu, to the Department of Mineral Resources (DMR), for a Mining Permit on Portion 1 of the Van Nels Dam 104 farm. The target mineral of the proposed mining operation will be Jasper Gemstone on a mine area of 3.5 hectares over an intended period of 2 years.

Umvoto Africa (Pty) Ltd. has been appointed as lead consultant to head the study on an Environmental Impact Assessment which is required as due process for the application in terms of section 27 of the 'Mineral and Petroleum Resources Development Act', 2002 (Act No. 28 of 2002).

Relevant details on the proposed application are attached with this correspondence in the Background Information Document (BID) and serve to inform the Interested And Affected Parties & Communities at a preliminary level. Further and more detailed information will become apparent in the Environmental Impact Assessment once comments from IAP's have been returned and specialist report prepared.

As part of the application procedure, Umvoto Africa are requesting feedback and comment from all Interested and Affected Parties and Communities with a view to informing the EIA process.

Written comments, via email or post may be submitted to the following address before 10 March 2014.

Umvoto Africa (Pty) Ltd
PO Box 61,
Muizenberg
7950

Submit all correspondence to Mr. Paul Lee, Senior Environmental Scientist, Umvoto Africa,
paul@umvoto.com

As applications are working according to a time schedule we will appreciate your earliest response to our comments.

Yours truly,

A handwritten signature in cursive script, appearing to read "Paul Lee".

Paul A. Lee Bsc (Hons)
Environmental Scientist
SACNASP Reg: 400124/09

SABS

ISO 9001

Umvoto Africa (Pty) Ltd.
Registration Number: 2001\013609\07

Directors: E R Hay, C J H Hartnady
Associates: K Riemann, R Wonnacott

UMVOTO

UMVOTO

earth • water • science • life

8 Beach Road, Muizenberg (Corner Beach & Maynard Rd)
P.O Box 61, Muizenberg, Cape Town.
South Africa. 7945.

Tel.: +27 21 709 6700

Fax: +27 86 524 0001

Cell: 083 520 9303

Email: paul@umvoto.com

Website: www.umvoto.com

Attention:

Transmission via: Registered Post

Our Ref.: 820/02/01/2014
Date: 31/01/2014

CORPCLO 2240 CC Farm Van Nels Dam 104

MINING PERMIT APPLICATION

BACKGROUND INFORMATION DOCUMENT

Dear Sir/Madam

Umvoto Africa (Pty) Ltd has been appointed as lead consultant to head the application for a mining permit to mine quartz (in the form of jasper) on Portion 1 of the Van Nels Dam Farm No.104, in Siyancuma Local Municipality (LM), Pixley ka Seme District Municipality, Northern Cape. The mining duration will be for a period of 2 years. In terms of Section 27 of the Mineral and Petroleum Resources Development Act (No. 28 of 2002) the applicant, CORPCLO 2240 CC trading as Amatye Apehzu, is required to undertake an Environmental Impact Assessment (EIA) for submission to the Department of Mineral Resources (DMR).

List of Abbreviations

DMR	-	Department of Mineral Resources
EIA	-	environmental impact assessment
EMP	-	environmental management plan
ha	-	hectare
IAPs	-	interested and affected parties
km	-	kilometre
km ²	-	square kilometre
LM	-	Local Municipality
m	-	metre
mm	-	millimetre
Ma	-	millions of years
MAP	-	mean annual precipitation
mamsl	-	metres above mean sea level
No.	-	number
N8	-	national road

1. LOCATION

The proposed mining permit area is 3.5 ha in size and within Portion 1 of Van Nels Dam Farm No. 104, which is in the Siyancuma LM (Northern Cape). The mine is situated 153 km west of the Kimberley and ~40 km west of Griekwastad, which is the nearest town to the farm (see **Figure 1**). Access to the mine is over the Van Nels Dam Farm, following a turn off from the N8 (see **Figure 1**).

2. MINING PROCESS

The jasper reefs will be mined as a series of open cast trenches contained within the 3.50 ha boundary of the mine permit zone. Trenches may vary in size and number, dependent on the nature of the reef. The approximate dimensions of a single trench is 10 m x 5 m surface footprint, with a depth of 3 m to 5 m. Excavation will be undertaken using light machinery in the form of a back actor digger loader, tractor trailer and manual mining methods. Environmental impact is predictably minimal, and will be scattered and confined to excavation pits only. Backfilling and rehabilitation of trenches will take place concurrently with extraction, thereby mitigating the environmental impact. Handling of the material is a dry process, and no water is required for processing. Winnings (ore) typically constitute 5 to 10% of total extract volume. Unused material (tailings) will be returned to the excavation trench, which will be top-soiled, profiled, re-seeded and allowed to naturally re-vegetate.

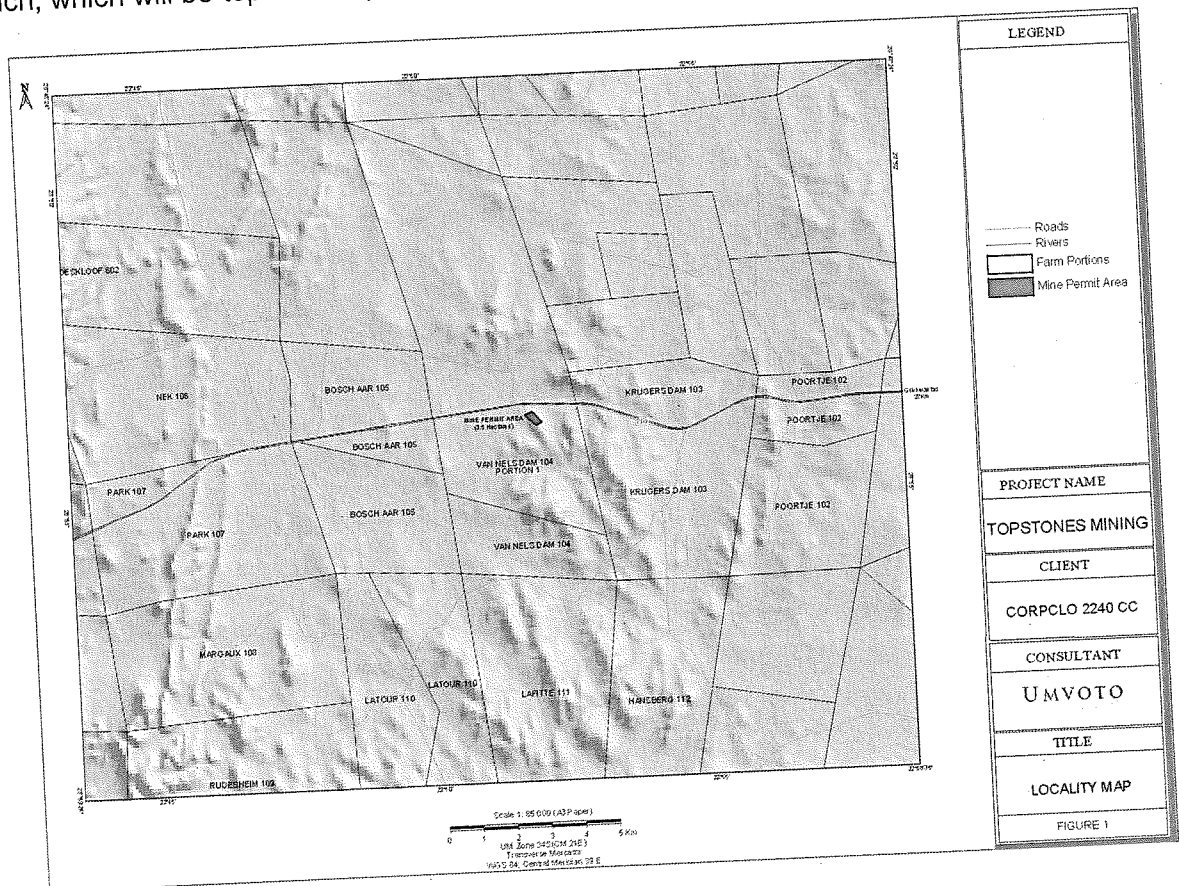


Figure 1 Location of the proposed mining permit area.

3. TOPOGRAPHY & DRAINAGE

A typical Griqualand landscape is present in the vicinity of the proposed mine permit area, characterised by low undulating hills and open veld with grassland cover. This landscape is interspersed with inclusions of aeolian, iron-rich sand, which form the extreme southwards extension of the Kalahari system. The landscape has an altitude of ~1200 mamsl, with the land gently dipping in easterly direction. Non-perennial drainage flows to the southeast.

4. SOIL

The top soil horizon is generally composed of red aeolian sand of Tertiary to Recent age. The reddish colour is indicative of high FeO₂ (iron oxide) content, which is likely weathered from older iron-rich rocks. Lower soil horizons consist of structure-less clays and sandy soils, interspersed with a hardened, silcrete/calcrete layer. The area has very thin soil profiles generally, with the exception of riverine environments outside of the mining area. According to the soil inventory database of the Institute for Soil, Climate and Water (Agricultural Research Council, 2006), soil class S2 and S17 dominate the proposed mining area (see **Figure 2**). S17 soil class has the following physical properties – restricted soil depth, excessive or imperfect drainage, and high erodability. The physical properties of the S2 soil class include – restricted soil depth, excessive drainage, high erodability and low natural fertility.

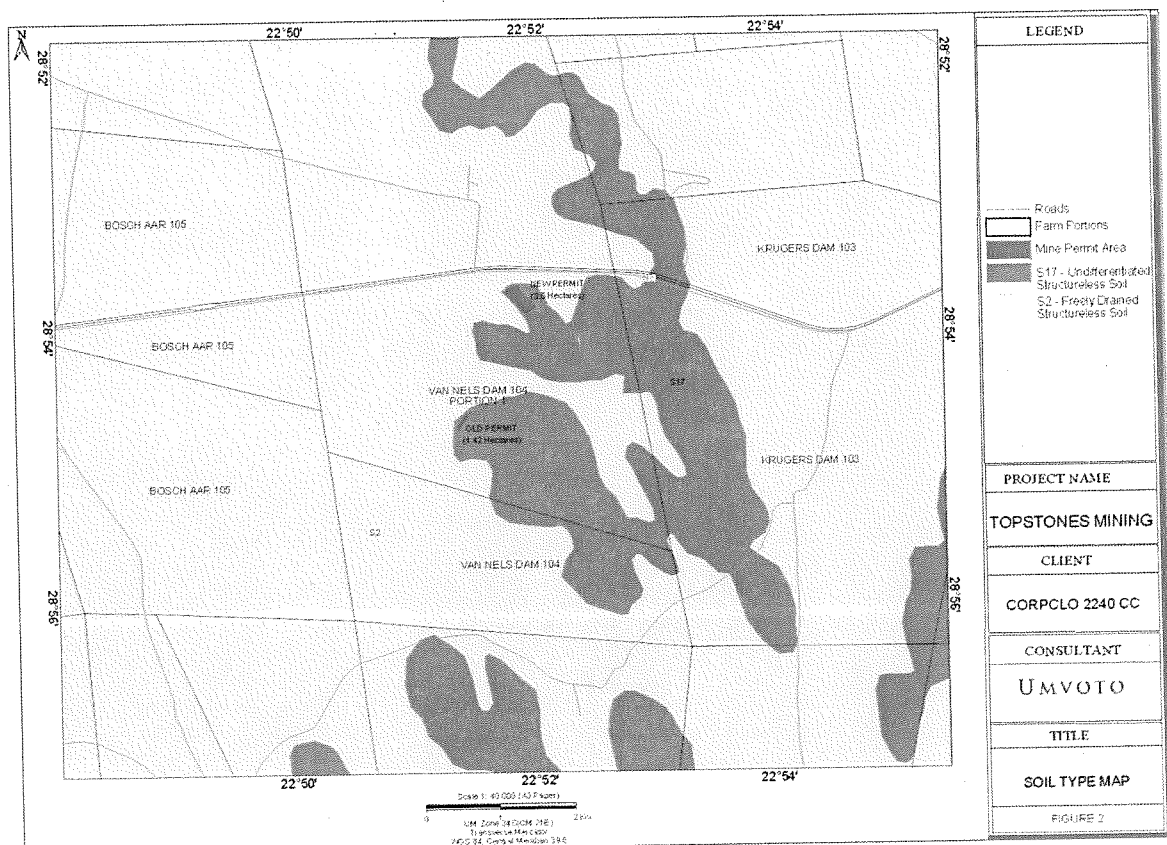


Figure 2 Soil type map of the proposed mining permit area.

5. GEOLOGY

The Griqualand West basin of the Transvaal Supergroup (see **Figure 3** and **Table 1**), is dominated by the Neoproterozoic to Palaeoproterozoic (~2600-2200 Ma) Postmasburg Group (western analogue of the Pretoria Group) (Eriksson et al., 2006). The diamictites (i.e. conglomerates) of the Makganyene Formation form the basal units of the Postmasburg Group, which are overlain by the 1000 m thick, greyish-green coloured basaltic-andesitic lavas of the Ongeluk Formation (Eriksson et al., 2006). The Ongeluk Formation is in turn overlain by the jaspillites (i.e. iron-rich chert, which hosts red jasper ore bodies) and "inferred volcanic-exhalative" manganese deposits of the Hotazel Formation (Eriksson et al., 2006). The stromatolitic dolomites of the Moodraai Formation complete the stratigraphic succession of the Postmasburg Group. Red aeolian sands of Tertiary to Recent age (~65-0 Ma; see **Section 4** above) unconformably overlie the older Transvaal Supergroup rocks.

The proposed mining permit area is situated within the Ongeluk Formation, according to the 2822 Postmasburg 1:250 000 geological map. Jasper deposits within the mining areas are either a result of iron-rich chert layers present between lava flows within the Ongeluk Formation, or within unmapped Hotazel Formation in the permit area.

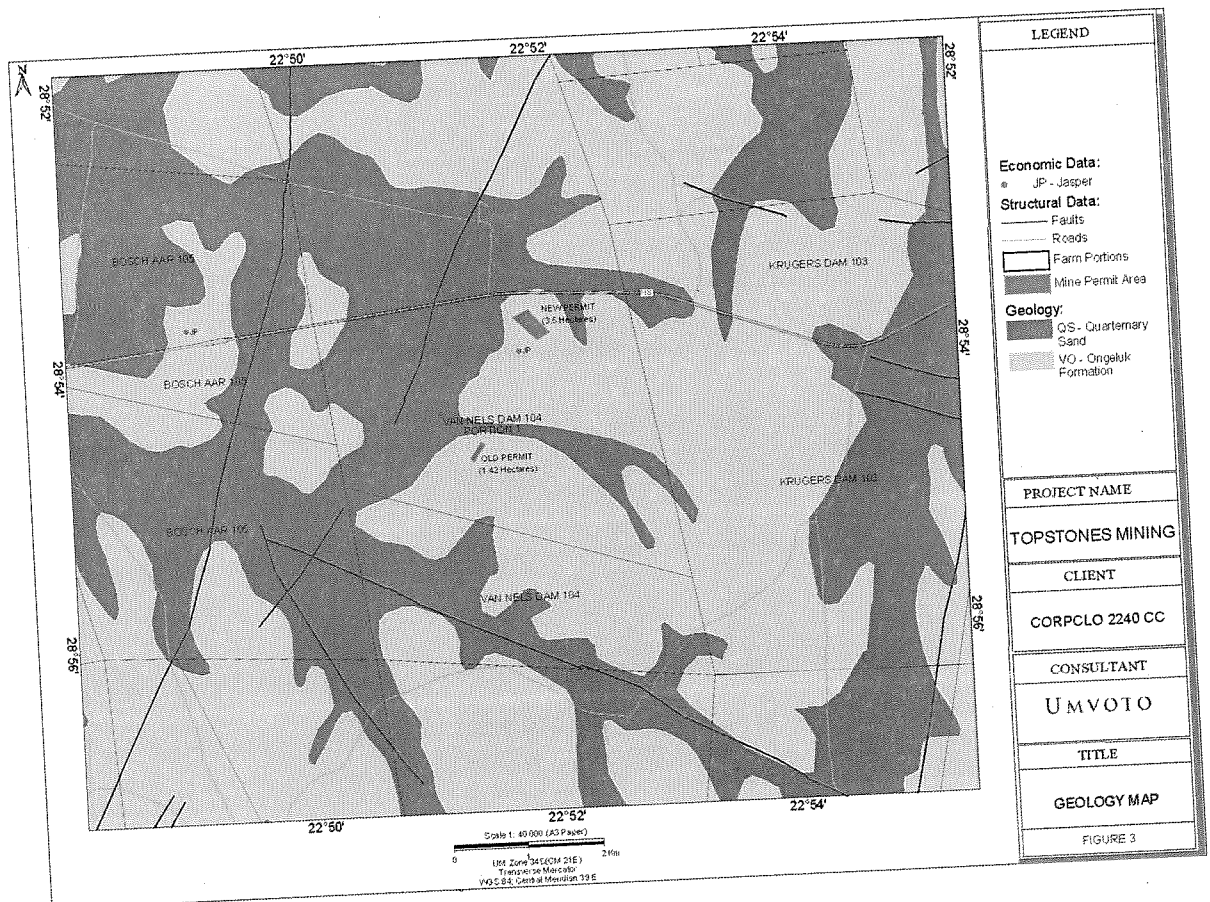


Figure 3

Geology map of the proposed mining permit area (from the 2822 Postmasburg 1:250 000 geological map).

Table 1 Stratigraphy of the Postmasburg Group, Transvaal Supergroup. The highlighted Ongeluk Formation is the stratigraphic unit where the mine permit area is situated within.

STATIGRAPHY		
SUPERGROUP	GROUP	FORMATION
TRANSVAAL SUPERGROUP	POSTMASBURG GROUP	MOOIDRAAI FORMATION
		HOTAZEL FORMATION
		ONGELUK FORMATION
		MAKGANYENE FORMATION

6. CLIMATE

Griekwastad lies within a summer/autumn rainfall area, with predominantly dry winters. The mean annual precipitation (MAP) is 371 mm. The region receives the lowest rainfall in June and July, and the highest in February and March (see **Figure 4**). The average maximum temperatures for Griekwastad range from 16.7°C in June to 32°C in January, and the average minimum temperatures range from 0°C in June to 18°C in January (VisitQuick, 2014).

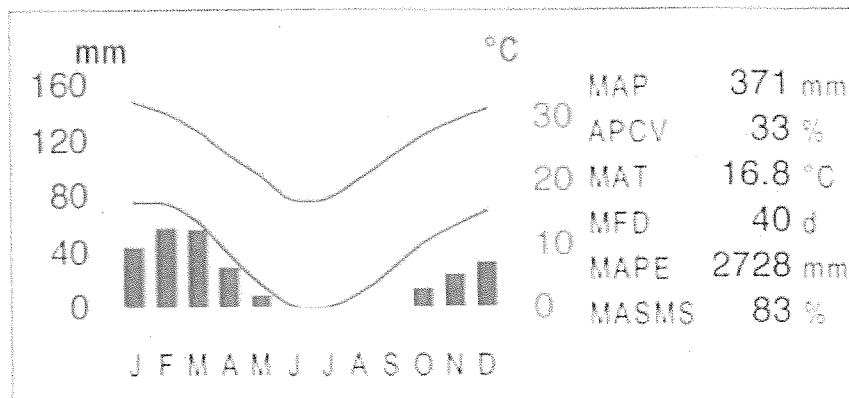


Figure 4 Climatic diagram of the Griekwastad area. Blue bars show the median monthly precipitation, while the upper and lower red lines show the mean daily maximum and minimum temperature respectively (Mucina and Rutherford, 2006).

7. BIODIVERSITY – FLORA AND FAUNA

The vegetation within the proposed mining permit area is dominated by Kuruman Mountain Bushveld (classification type SVk 10, common on higher slopes) and Olifantshoek Plains Thornveld (classification type SVk13, common on lower slopes) (see **Figure 5**).

Olifantshoek Plains Thornveld is described as “very wide diverse vegetation on plains with open tree and shrub layers”; and the Kuruman Mountain Bushveld is described as “open shrubveld with *Lebeckia macrantha* prominent in places” (Ladislav and Rutherford, 2006).

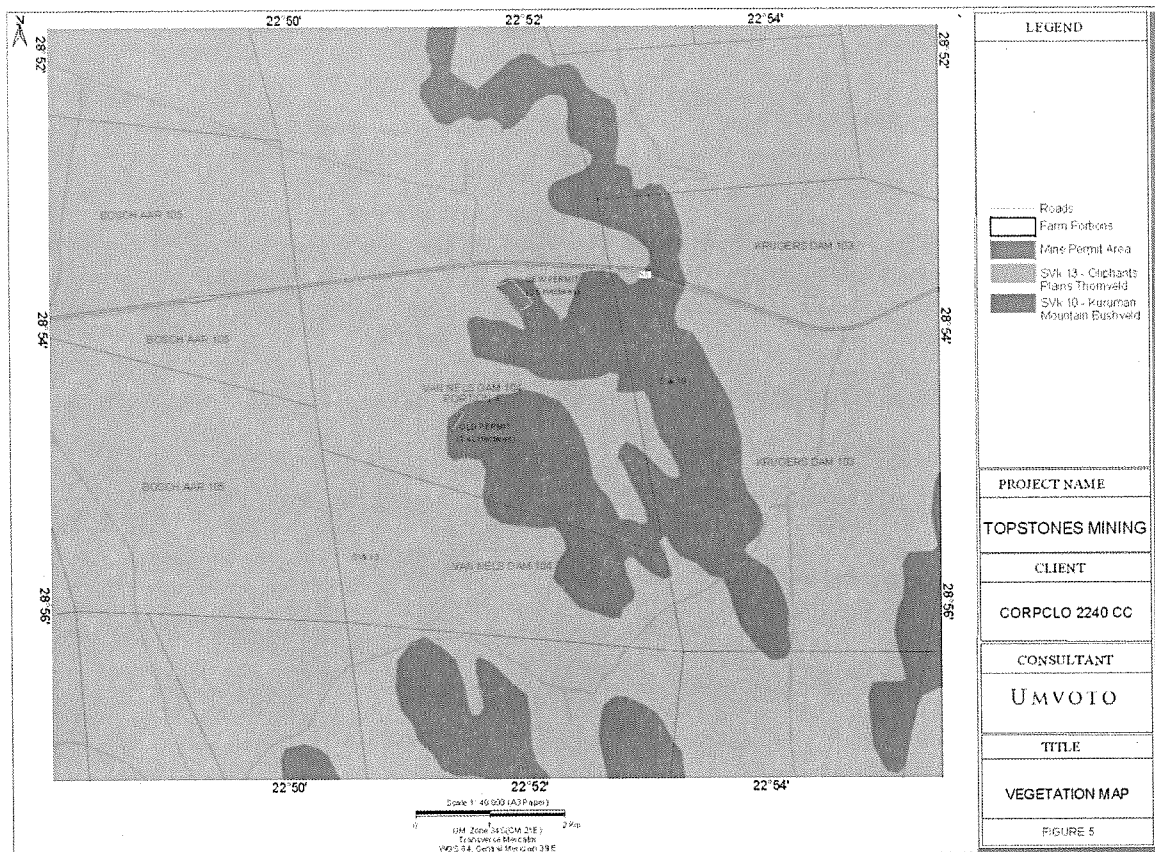


Figure 5 Vegetation type map of the proposed mining permit area.

Site observations show abundant grass cover of low nutritional value, interspersed with scattered individual trees and larger bushes. Exceptions occur towards dry streambeds, where larger clusters of *Acacia karoo* are present. Dominant flora species listings will be made available in the Environmental Management Report (EMP). Endangered, rare or Red Data List species may be present on site. If so, this will be verified by a specialist report in the EMP and appropriate action, in line with the Northern Cape Nature Conservation Act (No. 9 of 2009), will be undertaken.

The area is currently used for the grazing of domesticated livestock, including sheep, cattle and goats. Natural indigenous fauna still remnant to the region are free roaming (i.e. not habitat-bound) and could be present, but not dependent, on the precise proposed mine permit area.

8. SOCIO-ECONOMIC ENVIRONMENT

The Siyancuma LM includes the towns of Douglas, Campbell and Griekwastad (see **Figure 6**). While Siyancuma LM's main towns have adequate road linkages with the Northern Cape's capital Kimberley, Griekwastad in particular is strategically situated on the main road (N8) linking Kimberley and Upington. Siyancuma LM's land surface area is 9 285 km², and the LM has a population of 35 809 people. The 2011 population census showed the population of Griekwastad to be 6 428, with a land surface area of 77.736 km² (SA Explorer, 2011). The LM urbanisation rate is 40%, with the majority of the population living in rural areas (Atkinson and Marais, 2007).

Employment statistics of the region are shown in **Table 2** and **Table 3** below. The backbone of the economy is based on cattle farming, paving stone quarrying, and the mining of diamonds, manganese and lime (Atkinson and Marais, 2007).

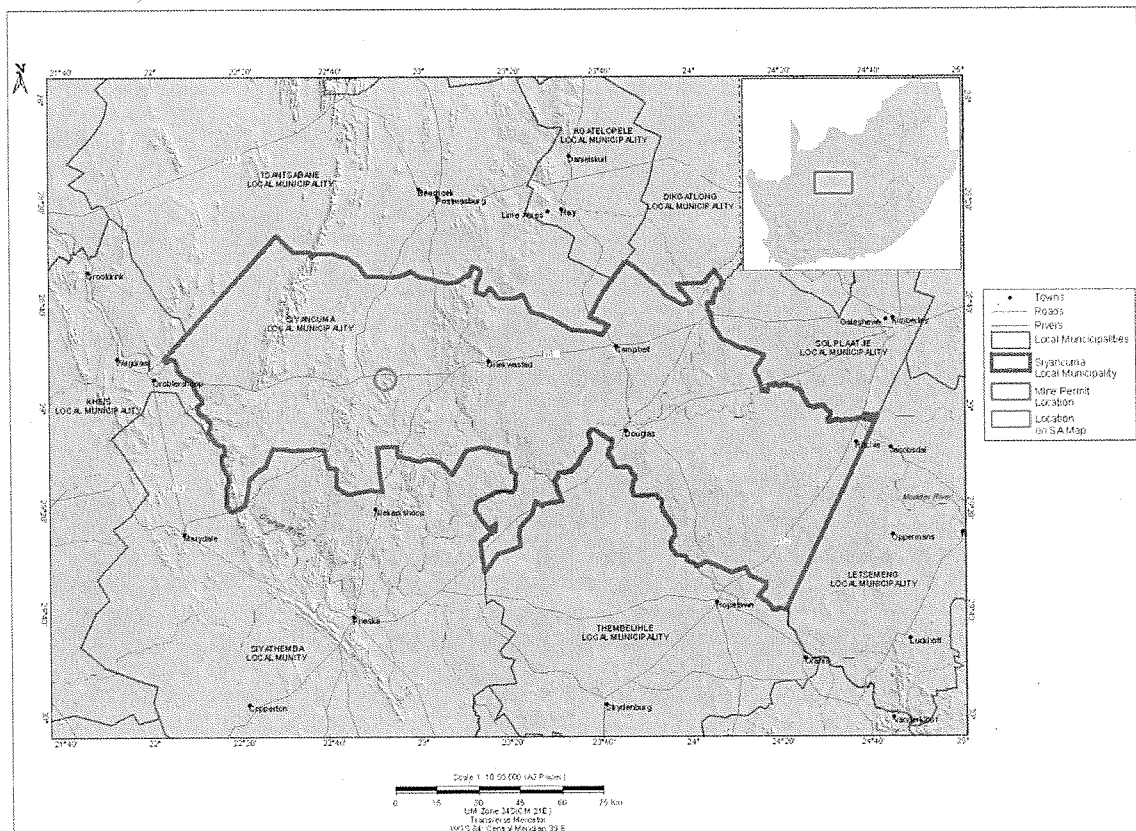


Figure 6 Siyancuma Local Municipality boundary, with major towns.

Table 2 Employment profile of Siyancuma Local Municipality (from Atkinson and Marais, 2007).

Population	Employment Status	Number of people
35 809	Employed	8 353
	Unemployed	3 212
	Not economically active	24 244

Table 3 Economic activities occurring within Siyancuma Local Municipality, and the number of people employed in each activity sector (Atkinson and Marais, 2007).

Economic Activities	People Employed
Agriculture	2918
Community & Personal Services	964
Trade	593
Mining	332
Manufacturing	301
Business	242
Construction	240
Transport	199
Other	2564

9. PROPOSAL

CORPCLO 2240 CC will be applying for a mine permit that is valid for a period of 2 years, with an option to renew annually for a further three years. The mine would potentially provide employment for 10 to 15 unskilled and semi-skilled workers, who will be recruited from within the local community over the 5 years period. Appropriate and required rehabilitation of the mined area will be outlined in the EMP which will be sent to the DMR and will be available for public review and comment.

10. PROCESS AND PROCEDURE FOR IAP CONSULTATION

Interested and affected parties (IAPs) and communities are requested to consider and comment on the proposed mining activities, and use this document as a relevant background support document. Comments are to be sent to Umvoto Africa (Pty) Ltd for consideration and inclusion in the EMP. Replies and comments are to be sent to Umvoto Africa Senior Environmental Scientist Paul Lee, and are to be received by no later than Monday 10th March 2014.

11. REFERENCES

Agricultural Research Council (ARC) (2006). Land types of South Africa 1:250 000 Digital Map and soil inventory databases. ARC - Institute for Soil, Climate and Water, Pretoria.

Atkinson, D. and Marais, L. (2007). District Socio-Economic Profile and Development Plans. The Arid Areas Programme, Volume 1. Centre for Development Support, University of the Free State, 50 pp.

Department of Mines. (1977). 2822 Postmasburg 1:250 000 Geological Series map. Department of Mines, Pretoria.

Eriksson, P. G., Altermann, W. and Hartzler, F. J. (2006). The Transvaal Supergroup and its Precursors. In: Johnson, M. R., Anhaeusser, C. R., Thomas R. J., (Eds.), The Geology of South Africa, Geological Society of South Africa/Council for Geoscience, Pretoria, 237-260 pp.

Mucina, L. and Rutherford, M. C. (2006). The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia* 19. Pretoria: South African National Biodiversity Institute, 520-522 pp.

SA Explorer (2011). Griekwastad climate (online) Available: http://www.saexplorer.co.za/south-africa/climate/griekwastad_climate.asp (Accessed: 16 January 2014).

VisitQuick (2014). Griekwastad climate (online) Available: <http://za.visitquick.com/en/weather/climate/south-africa/griekwastad> (Accessed: 28 January 2014).