

# DOTCOM TRADING 278 CK 2008/008384/23 t/a Petrorex

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# Feasibility reports

# for the development of a service station

on a portion on the

remainder of the farm Rita 668 - LT,

Tzaneen Area, Limpopo Province.



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FEASIBILITY REPORT FOR THF PROPOSED SERVICE STATION DEVELOPMENT ON THE PROPOSED PORTION ON THE REMAINDER OF THE FARM RITA 668-LT, AT MAAKE PLAZA SHOPPING CENTRE, TZANEEN AREA, LIMPOPO PROVINCE - JANUARY 2009 - OCTOBER 2009 REVISED 1.

## 1. INTRODUCTION.

Petrorex was instructed by Mc Cormick Property Development cc to investigate the feasibility of the development of a service station on the above- mentioned property

## 2. LOCATION.

The Greater Tzaneen Municipality (GTM) is located in the eastern part of the Limpopo Province and forms part of the Mopani District Municipality.

The GTM encompasses the following proclaimed towns:

- Tzaneen
- Nkowankowa
- Lenyenye
- · Letsitele
- Haenertsburg

Tzaneen Town is situated roughly in the centre of the municipal area at the convergence of major arterial routes. This town has by far the highest concentration of business, industrial, social, financial, recreational and infrastructural facilities and services within the municipal area.

There are 125 rural villages forming part of the GTM area. These villages are clustered mainly in the south-eastern and north-western areas of the GTM, and nearly 80% of the GTM population lives in the rural villages

Nkowankowa, situated some 13 km east of Tzaneen and north of the Provincial Road P 17/3 is the largest proclaimed town within the municipal area (862 ha) with the highest number of stands (5250).

Lenyenye situated 10 km further east of Nkowankowa on the southern side of the same arterial, extends over roughly 230 ha and has 2519 stands, which makes it the smallest of the three major proclaimed towns, but also the most compact in terms of settlement density.

The proposed development property (hereinafter referred as: "The Site") is situated approximately 25km south-east of Tzaneen CBD and about 10 km northwest of intersection with the R36 Letsitele / Lydenburg road.

The Site is positioned on the south-eastern corner at the T- junction of the R36 (the main road connecting Tzaneen with Lydenburg and Hoedspruit) and the D4075, which leads from the main road into Rita Village / Maake, The Site is positioned adjacent to the Taxi facility and forms part of the Maake Plaza Shopping Centre development that can be described as a regional shopping centre.

See Annexure A for the location and photographs of The Site.

#### 3. ACCESS.

The two major roads R36 /P17-3 and, D4075 facilitates the distribution of traffic within the rural district area and between rural towns, Tzaneen, Hoedspruit and Lydenburg. They also fulfill the function of serving a variety of land uses in the immediate business node area.

Although the Maake plaza shopping centre has a entrance from the R36 /P17-3, the road and access alignment is of such a nature that the Site's visibility is obscured by the shopping centre buildings itself.

Access to the Site will mainly be from the road D4075, the entrance road to Rita Village / Maake via the main entrance to the shopping centre and Taxi rank.

Refer to Annexure B for a proposed access design.

#### 4. TRADING AREA.

Taking into consideration the accessibility, visibility and convenient location of the site, the trading area in which the service station is going to operate, could be broken down into.

• The primary market from where the customers are expected consists out of transient and commuter trade on road R36 / P17 -3 and road D4075. These commuters originate from the primary catchment area that includes the towns of Tzaneen / Letsitele / Lydenburg. The secondary catchment area includes the towns of Nkowankowa / Lenyenye / Ka – Mohlabo / Ka – Xipala / Ka – Xikwambana and Rita Village / Maake.

 The secondary market consists of traffic -Primary trips - generated by the planned adjacent retail centre. These are referred to as new trips, or trips generated by the retail and commercial centre. The visit to the centre or development is the primary reason for the trip.

Refer to Annexure A for photographs and information of the proposed site.

## 5. COMPETITION SITES.

The major competition sites are located in trading area alongside road R36 / P17 - 3.

Competitor site number 1 Ramalema (Poo ke Nna filling station) is a non - branded service station and is currently the first service stations on the left-hand side, on road R36, when entering the local trading are from an eastern direction towards Tzaneen. This site is approximately 100 metres west of the site, directly across the road D4075. Although this competitor site is easily accessible manoeuvrability is restricted due to the forecourt layout accommodating the pumps. Taking into consideration the frequency of use the pump configuration seems to be inadequate that leads to congestion on site. This competition site does not represent an oil company's latest brand manifestation. Although its accessibility is from the D4075 entrance road it has no visibility from the main road R36, due to its location in a ditch as well as the absence of a main identification pylon sign and canopy. The access road to this site consists of tar it is covered with gravel and the area surrounding the pumps is paved.

Competition site number 2 Lenyene is a Total service station and is located approximately 1.9 km west from the proposed site on a secondary access road towards the residential area surrounding the Maake Plaza Shopping centre. This competition site is a very small site and is only accessible from a secondary road originating in a southern direction from the main road R36. The accessibility is inadequate and on site manoeuvrability is restricted due to the forecourt layout accommodating the pumps and filler points. The total layout is limited due to its positioning of the forecourt in relation to the buildings. This filling station doesn't represent its companies latest brand manifestation. It is not visible from the main road and there is no indication of its presents from the main road. The entire forecourt activity is blocked in an event when deliveries of fuel and stock take place. Its location is inconvenient for motorists travelling on the R36 as well as the D4075 to divert from there original course to fill up and to continue to there respective destinations.

Competition site number 3 is a Tepco site this competition site, location is also alongside the R36 northern boundary approximately 3.6 kilometres west from the Site. This competitor site is not easily accessible and it is inconvenient located at an intersection towards a residential area, the access roads are not properly laid out and tared or paved. This filling station doesn't represent its companies latest brand manifestation and is in a very dilapidated stage. It's above ground tanks as well as

the forecourt pump layout and all the adjacent structures contributes to the congestion on site.

Competition site number 4 the Engen service station in Ka-Mohlaba is located approximately 9.7 km northwest from the proposed site. This competition site is not directly accessible or even visible from the main road R36. It accessibility is also restricted from an entrance road towards the residential area to the north of the main road R36. This site does not represent its company's latest brand.

Competition site number 5 is a Bp site Ofoclaco. This competition site located approximately 11.75 km southeast from the proposed site on the northern boundary of the main road R36. This site is accessible from the main road which also serves as an entrance road to an adjacent line shops and Diesel depot area; it has no visibility at all. Apart from an obscured road sign indicating the service station's existence its entrance road is concealed among trees and no canopy or pumps are visible from the main road. This filling station doesn't represent its companies latest brand manifestation.

Competition site number 6 is a Caltex site - Gulube Filling Station- located approximately 3.6 km west of the proposed site and is not directly accessible from the adjacent R36. The site's visibility from the adjacent main road is nonexistent and there is no indication of the sites location by means of main identification pylon or advertising boards.

The Competition site Yamorna Service Station, supplied by Sasol, is the first site alongside the northern boundary of the R36 at Tzaneen. R36 main road diverts into several by-pass roads all the way through town. This competition site is approximately 18.3 kilometres from the proposed Site. The first competition site alongside the southern boundary of the main road R36 at the entrance of Tzaneen is Bp Abor Park. This competition site is approximately 22.8 kilometres from the proposed site. The competition sites in Tzaneen itself are within the radius of 25 kilometres from the proposed site.

See Annexure C for photographs and information of the competition sites.

## 6. NEED.

The site, due to its location and ancillary regional retail facility do satisfy the needs and requirements of both the commuter and transient trade as well as the traffic generated from the adjacent shopping centre to ensure a concurrent and full time support of the service station facility. The Taxi rank would also benefit from this development. The usage of fuel facilities is the only method to ensure financial benefit towards the oil companies and the operator of the service station facility.

From a safety and convenience point of view the site does satisfy the following requirements for service stations:

- ✓ Strategic location
- ✓ Visibility
- ✓ Accessibility
- ✓ Access gradient
- ✓ Sight distance
- ✓ Stopping sight distance
- √ Access spacing

Among complying with the basic requirements the application site also enjoying very specific and desirable special advantages such as,

- The Site is strategic positioned along the R36 / P17 3 road, after a main intersection / downstream with accesses according to sound road planning principals, via the entrance roads towards the adjacent Maake Plaza shopping centre. This is highly desirable since right turn movements are prevented on the adjacent main road.
- The convenience and safety factors of vehicles travelling on the D4075 at lower speed differentials are highly advantageous and desirable.
- The proposed site do offer the highest convenience for drivers when filling up with fuel as the proposed layout and the availability of the access points do not encourage motorist travelling towards surrounding towns, to make special trips to the service station itself.
- The proposed location as well as taking into consideration the stop sight distances is ideal, the proposed service station site size is adequate to accommodate a modern type of service station. It is convenient and safe and will not cause for inconvenient diversions, creating additional conflicting turning movements and thus negatively affecting road safety.
- The fact that the canopy and pump island layout is directly behind the ingress point will not cause traffic conflict points and will allow for proper and safe circulation between motorists and heavy vehicles, inclusive of the fuel delivery vehicle, on the forecourt itself as well as entering and exiting the site.
- A newly and modern designed facility with sufficient product type distribution on the forecourt as well as in the shop will complement the newly developed shopping centre services offered.

Each and every logical requirement of the proposed service station focussed on the convenience and safety of the motoring public this is what is needed and this is what the proposed service station development provide and it is therefore the ideal site.

The availability of the proposed site development is very important that it does provide for the requirements of convenience and safety, diversion is inconvenient, causes many additional conflict turning movements and thus negatively affect road safety. Diversion also often causes inconvenience to other legitimate uses, which are served by the diversion route.

A need for the establishment of a shopping centre development resulted from the continuous and escalating growth rate of the GTM broader area over the past decade. The growth in the population and the economy had to manifest itself in the spatial continuum, which in a free-market society manifested in a natural demand and supply conditions. The development of a service station is a common spin-off from such a shopping centre development satisfying the needs of the motorists.

## 7. FEASIBILITY.

The next question is to determine if the proposed service station will be viable and sustainable. The viability must be determined both from the point of view of the operator / dealer who would be involved in the day to day running of the service station as well as from the point of a developer / investor / oil company transaction.

A traffic count was conducted by Petrorex at the intersection of road D4075 and road R36 / P17 - 3 on Thursday the 11<sup>th</sup> December 2008. This 12 hour count was then converted into an Annual Average Daily Traffic Count (AADT).

Table 1

Time	Light	Taxis	Heavy	Total
	vehicles		vehicles	
06.00-07.00	406	152	43	601
07.00-08.00	561	225	64	850
08.00-09.00	381	102	24	507
09.00-10.00	503	145	52	700
10.00-11.00	534	128	38	700
11.00-12.00	513	118	48	679
12.00-13.00	514	110	64	688
13.00-14.00	583	89	49	721
14.00-15.00	533	131	57	721
15.00-16.00	587	139	47	773
16.00-17.00	588	161	49	798
17.00-18.00	626	129	51	806
12 Hr Total	6,329	1,629	586	8,544
24 Hr Total	7,595	1,955	703	10,253
% OF TOTAL	74.08%	19.07%	6.86%	

The following assumptions applied when this volume projection was done:

- The Site will be operated by an average dealer with average effort.
- Visibility from both directions remains unobstructed.
- No other service station development takes place in the trading area during the projected period.

The Traffic Analysis Method was utilised as the applicable approach to determine the potential volume of sales by means of splitting the market, into transient trade and generated traffic by the planned adjacent shopping centre. The support from the newly retail development was taken into consideration as primary trips in the trading area.

The basic formula used in the calculation of the anticipation of fuel sales is  $:= N \times P \times L \times D$ 

Where N is: Number of vehicles passing the site during a 24 hour period. Number

of vehicles generated as primary trips from the adjacent retail facility.

Where P is: The percentage of those vehicles calculated in N likely to support the

proposed site.

Where L is: The amount of liters likely to be purchase by the vehicles calculated in

N and P.

Where D is: The number of days per month in which the calculated support is expected.

Based on the above method we were satisfied that a reasoned and dependable projection of fuel sales in liters per month at the application service station site would be,

Table 2.

	AVERAGE	
YEAR	L.P.M	
1	262 302	
<b>2</b> 278 040		
3	294 722	

The conclusion is that the volume projections, done by Petrorex, of the proposed service station clearly indicates that the projected level of sales can be realised.

Refer to Annexure D for the detail traffic counts, volume projections and financial analysis.

## 8. DESIRABILITY

All the above factors show that the proposed site will be highly desirable. A further desirable factor is also that it provides a much needed proper and safe, retail and commercial shopping centre facility, secure, and well lighted, with ablution and refreshment facilities.

An Taxi holding area; an area usually off-street, where taxis hold before proceeding to loading points and can either be included or be separated from a terminal facility, is part of the Shopping Centre development and is adjacent to the planned service station area.

The table below lists the needs of the different groups of the community, the passengers, operators and the community at large.

Table 3.

PASSENGER	OPERATOR	COMMUNITY
Availability of facility	Availability of facility	Environmental impact
Walking distance	Passenger attraction	Traffic congestion
Security	Capacity	Economic efficiency
Ancillary facilities	Safety	Social issues
Ancillary facilities	Satety	Social issues

Comfort	Ancillary facilities	Job creating
Convenience	Cost	
Other transport	Accessibility	
Mode	Control services	

The objectives, according to the identified needs, that should be addressed are:

- √ Improve operational efficiency
- ✓ Promote the use of Taxi's
- ✓ Reduce congestion
- ✓ Minimise conflicts with vehicle movements in the trading area.
- ✓ Reduce littering
- ✓ Use space efficiently
- ✓ Provide safety and comfort
- ✓ Promote retail business in the trading area
- ✓ Provide adequate facilities
- ✓ Minimise conflicts between pedestrians and vehicles.

The Taxis from the trading area operate according to informal rules laid down by the operators of the Associations.

This type of facility will fulfil the needs of the passengers. Passengers board, and transfer between different vehicles and the proposed site will provide for the convenience and safety of passengers. This is achieved by minimising their walking distance and the passenger-vehicle conflicts.

The proposed site facilities would attract different number of Taxis to the area and influence to a greater or lesser degree the operation of the adjacent road systems. A most important objective in the planning of the proposed site is to minimise conflict between Taxi and other automobile traffic movements of visitors to the adjacent shopping centre as well as to the service station facility.

Taxi facilities often become an attraction point for informal business activities or a meeting place for people. Potential noise, littering and crime at Taxi facilities have an impact on the life of the visitors to the shopping centre as well as those visiting the service station.

#### 9. ECONOMICAL IMPACT

In considering the possible impact on the environment of the proliferation of a filling station as well as the possible impact on existing filling stations the following must be taken under consideration:

- The target market and its needs. Fulfilling the needs of the targeted community / market.
- Economical impact on the sustainability of existing filling stations

The anticipated cumulative effect of the proliferation of filling stations, especially the negative economical impact due to overtrading, has recently become a sensitive and debatable subject. This threat, however, is addressed in this report on the basis of market sharing of the proposed service station with the existing filling stations in the GTM area.

The volume of fuel sales projection based on the commuter and transient trade, passing the proposed site on road R36 / P17 -3 as well as road D4075, as well as the volume of fuel sales generated by the Maake Plaza Shopping centre, can be seen as the volume likely to have an influence on the competitor sites in the trading area of the GTM area.

Taking into consideration that there is a 50% change for those motorist to fill up at a service station near work or a 50% change to fill up at a service station near home the volumes generated from routes 1 to 6 will be shared with the competitor sites in the local trading area as well as in Tzaneen.

The determined potential volume of fuel sales, of the proposed site to be shared with the competition sites in the local trading area was calculated at 65%.

This calculated potential share volume was then divided by the percentage share held by each identified filling station in local trading area combined fuel volume sales. The share holding of each filling station site in local trading area can be considered as an indicator of the overall market supply and demand as well as preference of support by the motorist.

The economical effect on a filling station can not only be contributed to the anticipated volume fuel sales loss in isolation. Due to the beneficial role of the additional profit centers such as convenient stores (inclusive of the permissible special promotional benefits) as well as car wash facilities it attracts significant additional customers, other than fuel customers.

The two main expense items are the rent and wages. The operational rental per month is normally based on a fixed rental component based on the floor areas of the filling station as well as a turn-over / gross profit percentage share to be paid to the

oil company. The operator therefore has the benefit to pay a lesser amount of rental should the sales of these departments decline. Due to the fact that most of the competition sites in the local trading area can not be considered as a franchise site none of these high rentals and fees would be applicable. The owners from these non-franchises none tied – Dealer owned sites, also benefit from the fact that they buy their fuel at an extra discount from other wholesalers.

Taking into consideration the newly announced increase in wages as well as the Dealers' margin, determined by the DME, it has become imperative for all Dealers to revise their wage bill and time-schedule to their own financial advantage. This action lead to an actual increase in newly appointed staff instead of paying expensive overtime. It is therefore that the so called amount of attendants ratio influenced by the fuel sales is not the only factor to be taken into consideration to determine the possible job loss scenario to take place should another service station infiltrate the market area.

In this scenario the influence of the volume loss of each competitor service station's performance were allocated as mentioned above. The two competition sites, namely the Ofcolaco Bp, would be highest negatively influenced by 53 kilolitres followed by the Engen site in Ka – Mohlaba 33 kilolitres, Total Lenyene 32 kilolitres and the non-branded site by 31 kilolitres. The average volume loss of the competition sites in the local trading area would be 19 kilolitres per site. The identified competitor sites will clearly not suffer a significant fuel sales volume loss and will still be viable and sustainable after the operation of the proposed service station development.

The proposed service / filling station carry no significant threat to the economical sustainability of the competitor service station sites in identified local trading area.

See Annexure D volume projection for the detail analysis of the potential volume to existing service stations in the local trading area.

## 10. THE OIL COMPANY TRANSACTION

The following transaction is applicable:

"Company L site "

This is a situation where the Landlord lets the property to the Oil Company. The Oil Company could do the development of the facility or the Landlord/Developer himself, provided the development is done to the Oil Company's specifications. Whichever of the two options here mentioned is taken; it will have an effect on the rental amount payable by the Oil Company.

For example, if the developer is responsible for the construction of the building and forecourt the Oil Company will only pay for the equipment. The Oil Company would then pay a higher amount rental per month. Should the Oil Company be responsible for the construction of the whole property the monthly rental amount would be less. The Oil Company can again sub-let the business to a tenant/operator of its choice.

## 11. THE SERVICE STATION DEVELOPMENT ASSESSMENT

There are various factors, which arise when an assessment on service station development is done. It is assumed that the property has the correct attached rights, proper accessibility and the capability of being used for future income and amenities, which is likely to be produced.

The improvements on a service station site are specifically designed and built to sell fuel and allied products. Therefore an investor's primary interest in a service station is its income stream and desirable return on his equity.

The purpose of the assessment is to act as a guideline to enable the role players such as the investor and financial institutions to make decisions as to the financial viability of this development.

For an analysis of the Service Station Development Assessment Approach, refer to Annexure D.

## 12. CONCLUSION.

Petrorex is the opinion that this volume is sufficient to sustain a viable service station development on this property.

The volume loss of the existing service stations will not result in their closure due to a detrimental economical loss and even in the instance whereby they will ultimately be force to reduce expenses inclusive of their wage bill resulting into job losses these job losses could be accommodated by the proposed site.

Should you have any more queries do not hesitate to contact the Author	r.
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Regards: For Petrorex

Hannes Pieterse

Cell number: 082 440 7969

2009 /01/23.

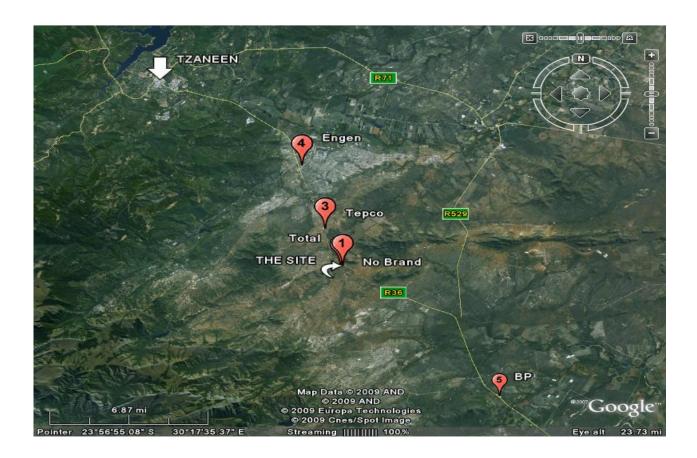
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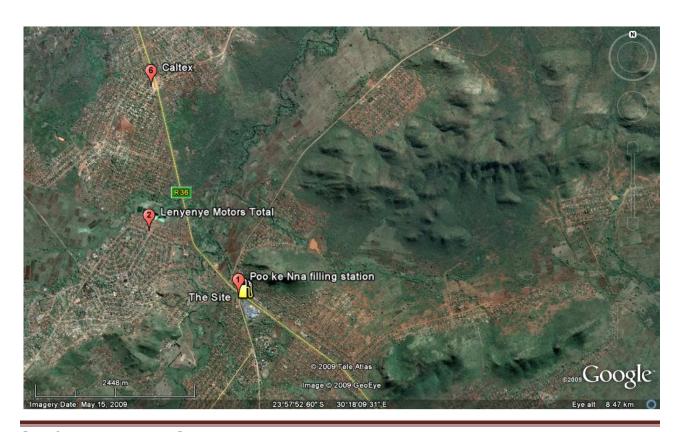
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- D. Traffic count / Financial Analysis.

# **ANNEXURE A**

Location and Photographs of the Site.





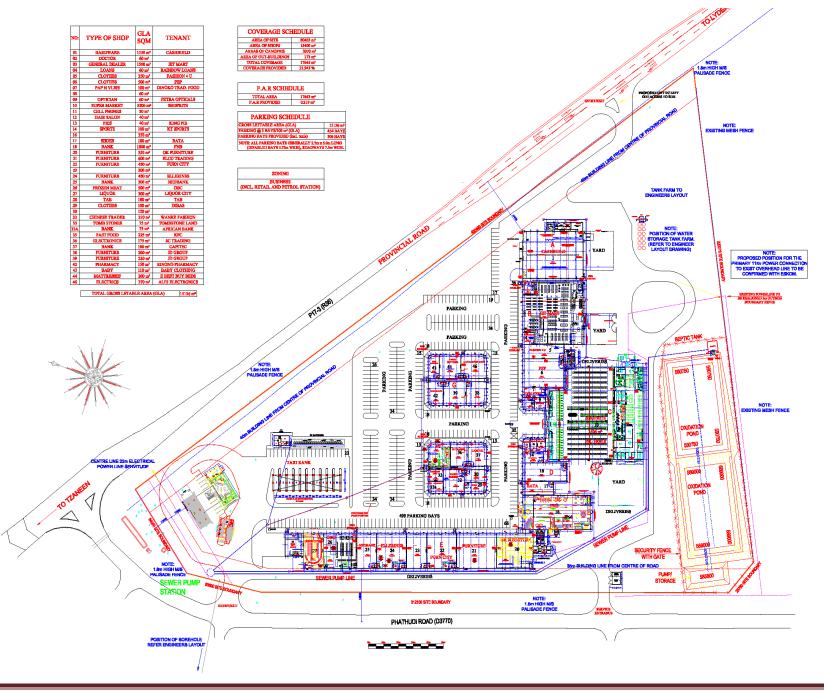


(Picture above) As seen from the T junction R36 (Tzaneen / Lydenburg road) towards Maake Plaza shopping centre / Rita Village road D4075. (Picture below) As seen from Rita Village road at the main entrance road towards Maake Plaza Shopping Centre.



# **ANNEXURE B**

Site diagram and proposed access.



# **ANNEXURE C.**

**Competitor Service Stations information.** 

1. Ramalema. No - Brand.



## VOLUMES / PM

OIL COMPANY		MARKET
PETROL	DIESEL	
220	15	235

## **PUMPS**

LRP	1 Double
UNLEADED / LRP	3 Double
DIESEL	1 Single
PARAFFIN	1 Single

## **DIVERSIFICATION**

Carwash / ATM / Telephones / Lotto / Gas..

2. Lenyene. Total.



## VOLUMES / PM

OIL COMPANY		MARKET
PETROL	DIESEL	
230	18	248

# **PUMPS**

LRP/ UNLEADED	3 Double	
DIESEL	1 Single	
PARAFFIN	1 Single	

## DIVERSIFICATION

24 Hours service / ATM / Telephones.

# 3. Mohlaba crossings

Tepco.



## VOLUMES / PM

OIL COMPANY		MARKET
PETROL DIESEL		
150	9	159

# **PUMPS**

LRP	1 Single, 1 Double
UNLEADED	1 Single
DIESEL	3 Single
PARAFFIN	1 Single

# DIVERSIFICATION

24 Hours service / ATM / Shop.

4. Ka-Mohlaba. Engen.



# VOLUMES / PM

OIL COMPANY		MARKET
PETROL	DIESEL	
235	20	255

## **PUMPS**

UNLEADED	4 Double
UNLEADED / LRP	2 Double
DIESEL	2 Single
PARAFFIN	1 Single

## **DIVERSIFICATION**

Telephones / 24 hour service / Adjacent to the Shopping Centre.

5. Ofcolaco Bp.



VOLUMES / PM

OIL COMPANY		MARKET
PETROL	DIESEL	
260	150	410

## **PUMPS**

LRF	2 Double
DIESEL	1 Single
UNLEADED	1 Single, 1 Double
PARAFFIN	1 Single

## **DIVERSIFICATION**

24 Hours Service / Shop / ATM / Workshop / Adjacent to Butchery, Bottle store & take-aways.

# **ANNEXURE D.**

**Traffic Count** 

Financial Analysis.