Sunflowers, cotton, maize and peanuts are cultivated in the Warmbaths – Nylstroom area. Nylstroom is also known for its table grape crops. Tropical fruit, such as bananas, litchis, pineapples, mangoes and papaws, as well as a variety of nuts, are grown in the Tzaneen and Louis Trichardt areas. Zebediela, one of the largest citrus estates in the country, is situated south of Polokwane while the largest tomato farm in South Africa lies between Tzaneen and Louis Trichardt.

Limpopo Province is situated in a dry savannah sub-region, characterized by open grasslands with scattered trees and bushes. Elevation varies between 600 m and about 900 m above mean sea level (amsl). Along the northern edge of the Bushveld, the plains rise to a series of high plateaus and low mountain ranges, which form the southern edge of the Limpopo River Valley. These mountains include the Waterberg and in the far north, the Soutpansberg Mountains. The Soutpansberg range reaches an elevation of 1,700 m amsl before dropping off into the Limpopo River Valley and the border between South Africa and Zimbabwe. To the east, we have the high grounds of the Drakensberg. Therefore, the change in topography (altitude and relief) gives rise to varied climatic characteristics.

However, climatically, Limpopo Province is characterized by very hot summers and mild winters. Based on the foregoing, one can identify four climatological regions in the province, namely:

- *The arid far Northern;*
- *The arid to semi-arid – the Northern;*
- *The semi-arid – the Highveld; and*
- *The sub-humid – the Lowveld.*

Broadly, the province has a sub-tropical type of climate. Generally summers have a high number of sunshine hours with the occasional afternoon thunderstorms. Winters throughout the province are dry, mild and mostly frost- free. Hence, winters are usually characterized by pleasant weather during the day although early mornings and nights can be cool to chilly. The province receives 90% of its total annual rainfall during the summer period i.e. from October to March. Hail occurs periodically, rarely more than three days per year. The direction of wind changes from primarily easterly in the summer to westerly in the winter. However, cold fronts are mostly characterized by winds from the South.

RAINFALL

Most of the rain falls in the summer months between October and March. The average annual rainfall in the Province ranges between 300-400 and 600 mm. However, the mountain zone has an annual rainfall of about 2,000 mm and the dry Lowveld in the Kruger National Park about 400 mm. About 90% of the rain falls during the summer months. The Soutpansberg Mountains and the Drakensberg receive quite high amounts of rainfall. For example Levubu-Citimba station records an average rainfall of about 1329 mm.

Around the Waterberg mountain ranges near Thabazimbi, summers are hot but the area does not suffer from the stifling humidity so typical of the eastern Lowveld. The area is situated in the summer rainfall region and rainfall occurs in the form of heavy thunderstorms or soft rain. Winter is moderate with frost occurring in the low-lying regions only. Mornings and nights can be cold, but day temperatures are pleasant. The rainfall in this area is between 500 – 700 mm per annum.

GROUNDWATER RESOURCES

Groundwater, despite its relatively small contribution to bulk water supply (13%), represents an important and strategic water resource in South Africa. Owing to the lack of perennial streams in the semi-desert to desert parts, two thirds of South Africa's surface area is largely dependent on groundwater. Although irrigation is the largest user, the supply to more than 300 towns and smaller settlements is also extremely important. Of the irrigatable land in South Africa, 24% is irrigated using groundwater supplies while surface water irrigates 76% (Dennis & Nell, 2002). Statistics from the Directorate of Water Services and Planning of the Department of Water Affairs and Forestry (DWAF) reports that 52.6 percent of the population of the Limpopo Province is totally reliant on groundwater for domestic use.

Groundwater use in the four catchment management areas of the Limpopo Province *presented (Table 1.0) is shown below.*

USE	Water Management Areas								LIMPOPO PROVINCE	
	Limpopo		Letaba/levubu		Olifants		Crocodile (West)/Marico			
	M m^3	%	M m^3	%	M m^3	%	M m^3	%	M m^3	%
Irrigation	131.0	63.0	9.0	15.7	79.0	69.3	56.0	67.5	**275.0**	59.5
Livestock	3.0	1.4	0.2	0.3	2.0	1.8	3.0	3.6	**8.2**	1.8
Rural communities	53.0	25.5	38.0	66.4	20.0	17.5	6.0	7.2	**117.0**	25.3
Municipalities	12.0	5.8	8.0	14.0	2.0	1.8	8.0	9.6	**30.0**	6.5
Mining	9.0	4.3	2.0	3.5	11.0	9.6	10.0	12.0	**32.0**	6.9
TOTAL	**208.0**	100.0	**57.2**	100.0	**114.0**	100.0	**83.0**	100.0	**462.2**	100

Source: W.H. du Toit (2002)

REPLENISHMENT

A comparison of recharge and usage of groundwater in the study area and it can be seen that the use is less than the recharge. The groundwater balance is in excess of 60% in all the water management areas in the Limpopo Province. It is highest (81%) in the Letaba/Levubu Catchment area and lowest (64%) in the Crocodile (west) & Marico.

Groundwater Use Versus Recharge in the four catchment management areas of the Limpopo Province *presented (Table 2.0) is shown below.*

Catchment Management Area	Estimated Recharge	*Total Use*		Groundwater Balance	
	(10^6 m^3/a)	(M m^3/a)	(%)	(M m^3/a)	(%)
Limpopo	702.0	208.0	28.0	503.0	72.0
Letaba & Levubu	291.0	57.2	19.0	236.0	81.0
Olifants	303.0	114.0	34.0	200.0	66.0
Crocodile (West) & Marico	137.0	83.0	53.0	64.0	64.0
Total for the province	**1433.0**	**462.2**	**32.0**	**971.0**	**68.0**

Source: W.H. du Toit (2002)

1.6 Project Location and Description.

The location of the project is relative to main infrastructure and sits within close proximity of existing coking coal projects. There are existing railway sidings at Waterpoort, Mopane and Musina linking the area to the ports of Durban, Richards Bay and Matola in Mozambique.

The TSHIPISE 2 project lies 42km from the town of Mopane (*Fig 1.3*). Currently, TRANSNET (South Africa's Coal Freight agency) is conducting an engineering conceptual study via engineering consultancy HATCH, to upgrade the existing rail sidings at all 3 towns.

All projects have direct access to fully tarred roads, roads capable of linking coal haulage vehicles to any part of South Africa. Currently Exxaro truck coking coal approximately 140km from their Tshikondeni colliery to Musina for rail transport to Mittal's Vanderbijlpark steelworks outside Johannesburg.

In South Africa, prospecting right boundaries are defined by farm boundaries, which can be clustered together to form a single prospecting right area wherever contiguous.

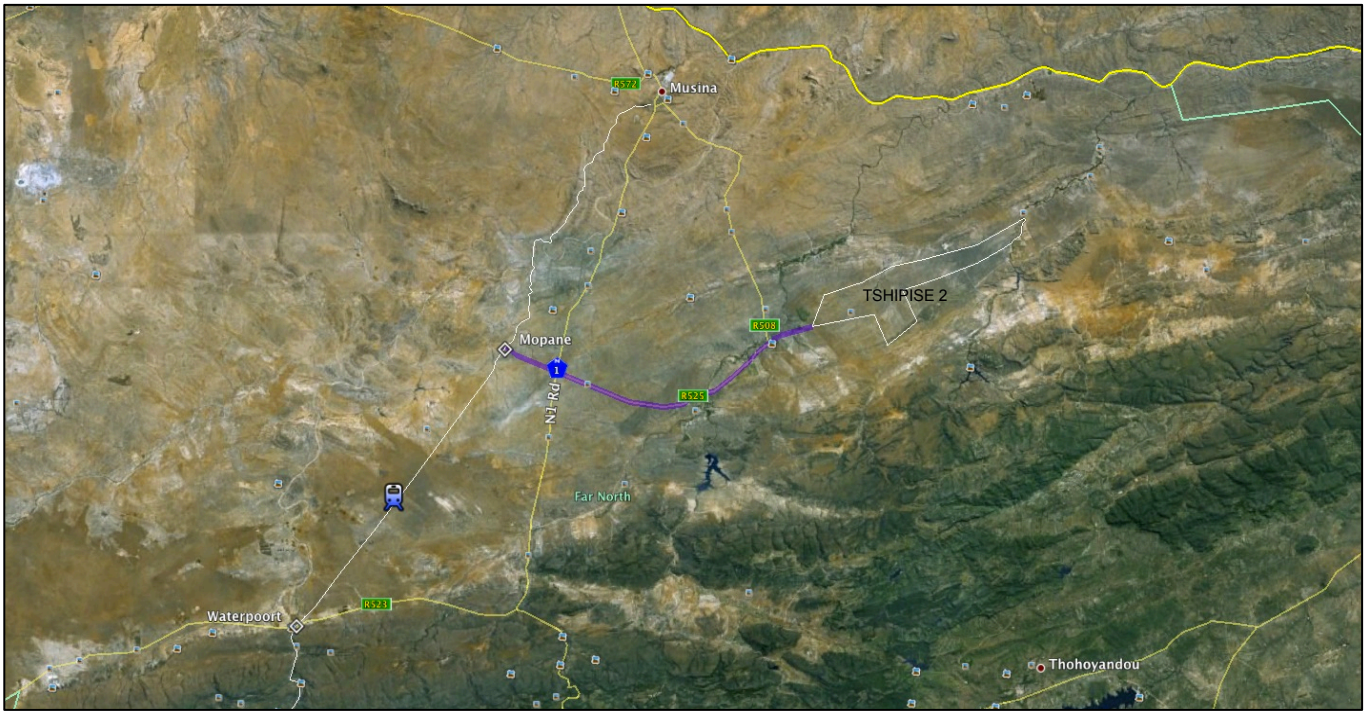


Fig 1.3 – Project Locations to Rail.

2.0 PROJECT DATA

2.1 Data Management and Database.

Up to date Signet has not drilled boreholes on any of the properties and therefore there is no database to account for.

2.2 Geological Data.

For the purpose of this report the author has used and relied upon publicly available information from the exploration companies in the region as well as published data from the Geological Survey and other organisations. The there is no borehole information available for the Tshipise 2 Project area.

Historically boreholes were drilled in the adjacent block and area, from these boreholes there is enough lithological data available to infer coking coal occurrences for the project area. Therefore, any reference to potential coking coal resources and qualities is inferred information based on what is available for the region. Illustrated in (*Fig 1.4)* is a schematic and interpretation of the coal zones based on the one borehole on the farm David, while (*Fig 1.5)* illustrates the general geology for the project area.

The license area is in a Karoo filled graben structure between two fault lines in the north and south. On the adjacent farm David, there is a historic ISCOR borehole that intersected three coal seams. It is postulated that those same seams might be shallower in the license area due to uplift during faulting.

From the other projects in the region one has learned that the coal occurs in the lower Ecca Formation. In the Tshipise Sector of the coalfield, as well as parts of the eastern sector, the "coal measures" occur at depth below a relatively complete sequence of Karoo strata and in many places the coal zone is located at more than 300 m below surface at these localities. In *(Fig 1.6)* the Karoo Supergroup lithology is illustrated for the project area that clearly indicates the coal bearing zones occurring at depth below the full package of overlying sediment capped by the basaltic formation of the Letaba Formation.

In the project area the farms are located in a graben structure bordered by the Large Tshipise fault to the north and the Small Tshipise fault in the south. The full Karoo sequence has filled this graben with the final capping of the Letaba Formation, which consists of basaltic volcanic rocks. In (*Fig 1.7)* is a schematic illustration of the graben fill as postulated for the project area.

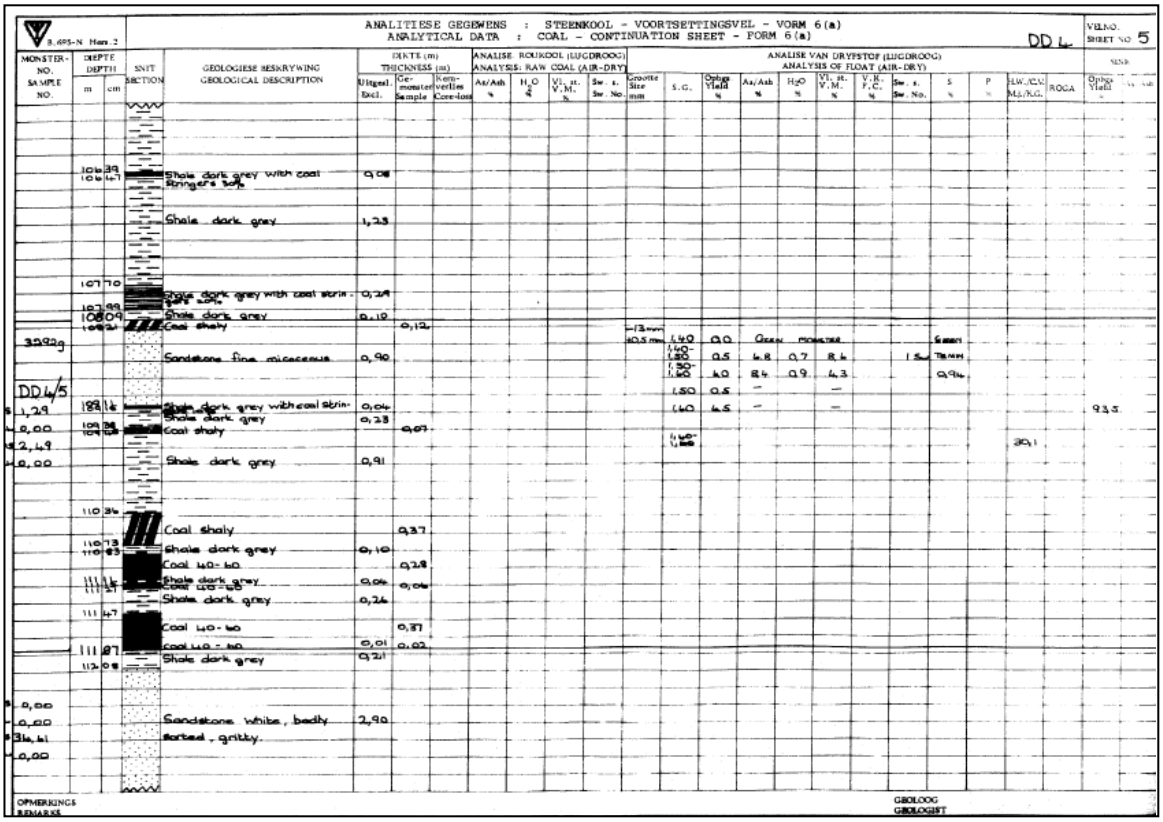


Fig 1.4 - Coal Zone in Borehole DD4 on the Neighbouring Farm

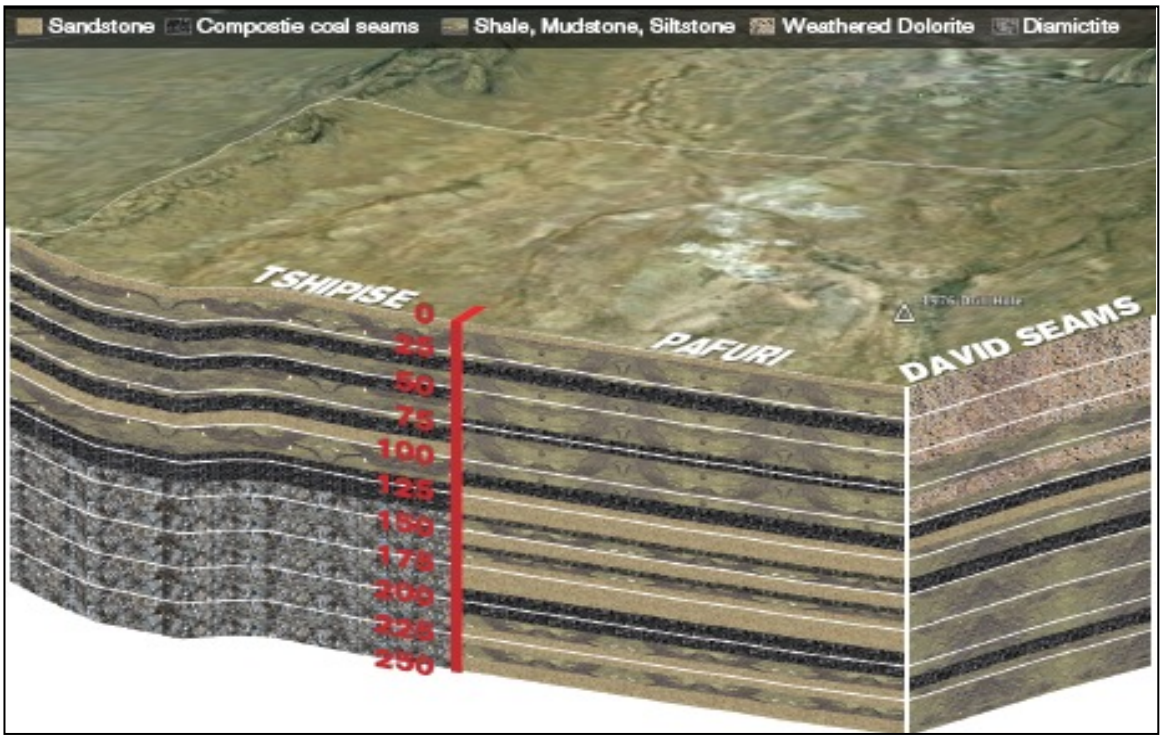


Fig 1.5 – General geology of the project area.

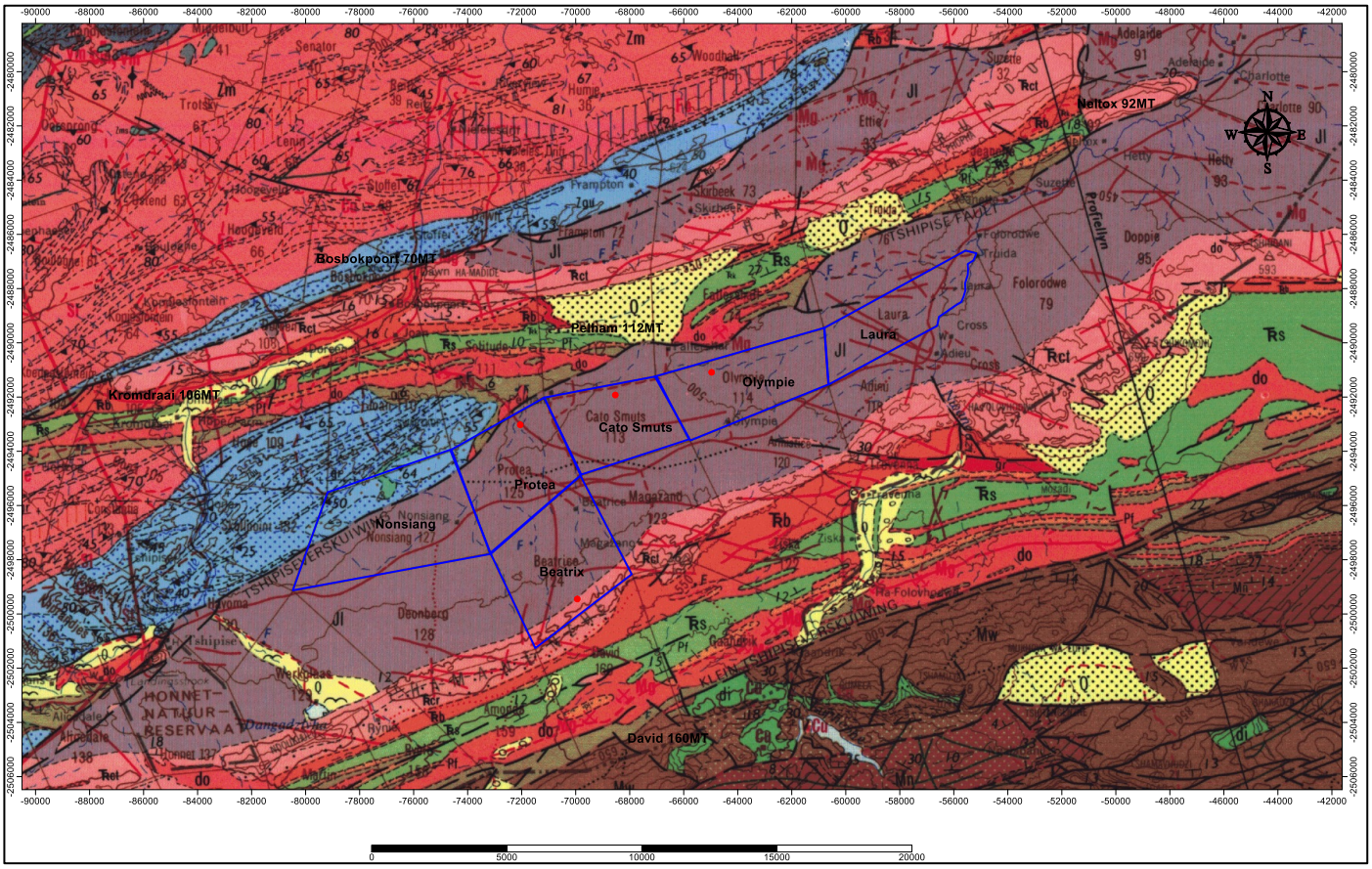


Fig 1.6 - The Karoo Supergroup of the Tshipise 2 Project.

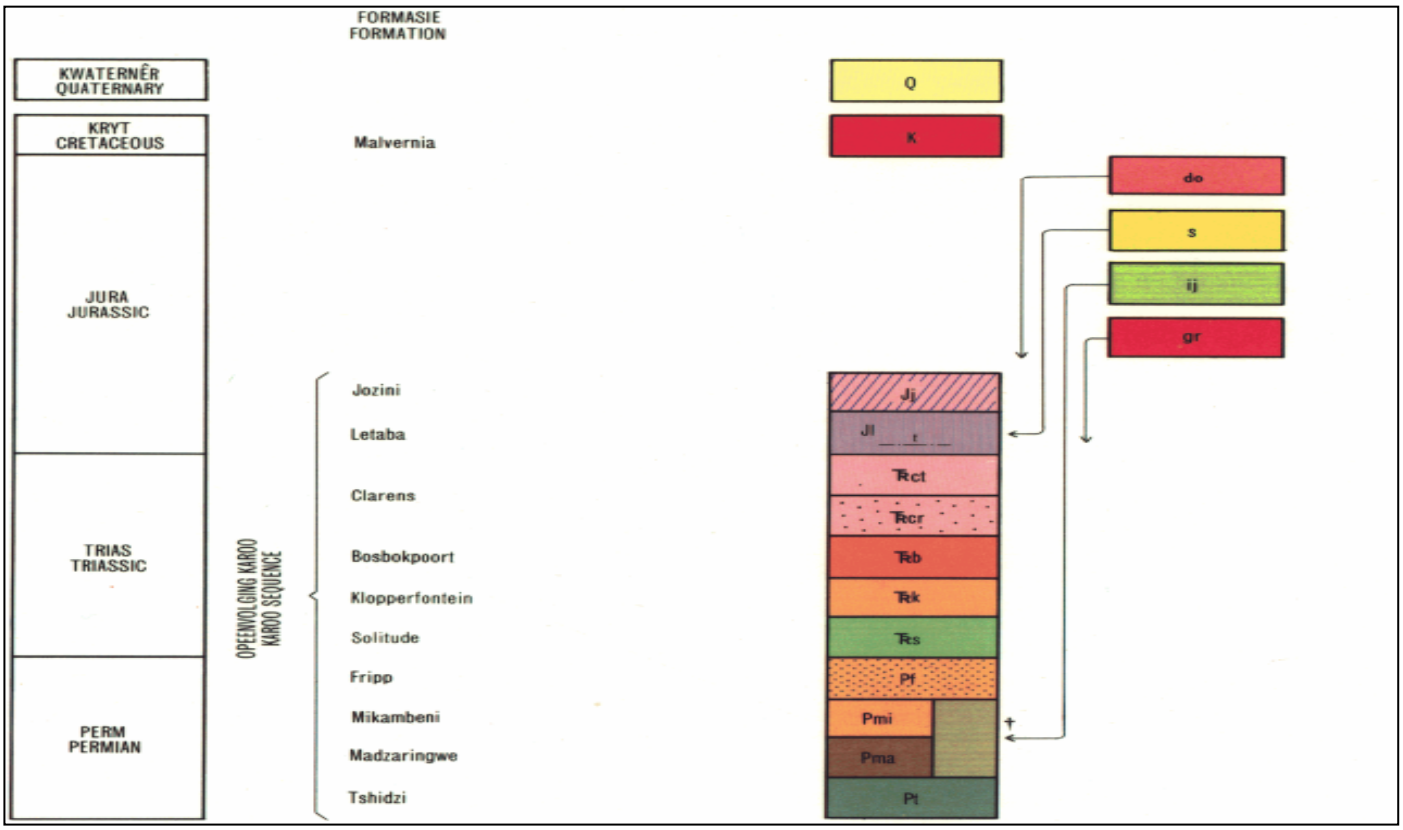


Fig 1.7 - Legend (Fig 1.6).

2.3 General Data

The South African Iron and Steel Industrial Corporation (ISCOR) extensively explored the Soutpansberg Coalfield in the 1970s and 1980s.

The Soutpansberg Coalfield is known as the best hard coking coalfield in South Africa. The lower sulphur values make it a better area for coking coal than the Natal coalfields. The only current coking coal producer in South Africa is the Tshikondeni Colliery (located within this coalfield).

2.3.1 Coal of Africa Limited (CoAL)

Coal of Africa (JSE, AIM and ASX listed), is an emerging developer and producer of high-quality thermal and coking coal. Based in South Africa, they have two operating collieries and three projects in early operations and development – Vele, Makhado and Mt Stuart.

- **Vele**

Ownership: 100%

Location: South Africa Limpopo province, 48km west of Musina.

Infrastructure: Electricity supply secured from Eskom. Host properties have existing water use rights, which have been transferred to the mining operation. Accessible via existing tarred road network; initially the coal will be transported by truck to a rail siding (approximately 40km from Vele), until rail links have been completed.

Resource: 369.93 million mineable tonnes in situ (MTIS) as classified under JORC.

Mining method: Both opencast and underground workings suitable for modular staged development.

Product: Blended semi soft coking coal (Phase 1 to deliver 1Mtpa).

Permit status: New Order Mining Right approved and Environmental Management Plan (EMP) executed in March 2010. Integrated Water Use Licence granted in May 2011.

Latest developments: Phase 1 of the project is fully funded from existing cash reserves. Letter of Intent with ArcelorMittal SA to take up to 5Mtpa from Vele to supply steelworks at Vanderbijlpark. MCC has been selected to conduct opencast mining operations and Minopex to operate the coal washing plant.

- **Makhado**

Ownership: 100% interest; Exxaro has 30% buy-in option;

Location: South Africa Limpopo province, north of the Soutpansberg, 65km southwest of Musina.

Infrastructure: Electricity supply is in the process of being secured from existing Eskom infrastructure. Makhado is close to the railway line which runs from Musina, and which is an important link to the Richard's Bay Coal Terminal.

Resource: 947Mt.

Mining method: Opencast.

Product: Hard coking coal (5Mtpa at steady state).

Permit status: Application for new order mining right has been submitted. Good progress with environmental scoping report, Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP).

Latest developments: Discussions have started with the parties associated for the infrastructure upgrade to ship through Maputo (Matola). Following lab and processing analysis of the bulk sample the coal has been provided to ArcelorMittal SA to test in their coking ovens, the results of which will facilitate the finalisation of the terms and conditions of the off-take agreement.

"The detailed testing of the Makhado Project bulk sample by AMSA at the Vanderbijlpark and Newcastle plants in South Africa are complete and the final results from further tests undertaken at its Newcastle plant in South Africa have been received by the company. Coal samples have been prepared based on a 10%, 11% and 12% ash levels to accommodate a range of tests at different ash levels.

The outcome of the individual and blended tests performed by AMSA and additional independent analysis, confirmed that the 10% ash product performs well relative to other hard coking coals.

The results are in line with the initial technical assessment and confirm the expected performance of the coke derived from the coal.

*In addition various independent tests have been commissioned for corroboration of the AMSA results. The independent analysis of the Makhado bulk sample, by an international specialist consulting firm specializing in the analysis of the application of specialist coals in the iron and steel industry globally, further confirms that Makhado coal will be classified as a hard coking coal. The individual and blended test results confirm the coal's higher than average fluidity, dilation and high vitrinite content will more than likely be regarded as the strongest characteristics of this coal. This will to a large extent balance the lower maximum reflectance and volatiles for potential customers. The coking strength reaction results compares favourably with the minimum criteria for hard coking coal." – **CoAL's DIRECTORS' REPORT FOR THE HALF YEAR ENDED 31 DECEMBER 2011***

VALUES	**MIDDLE LOWER**	**BOTTOM UPPER**
CV	31.09	30.81
IM	0.9	1.5
ASH	12.1	11.9
VM	30.3	29.2
FC	56.7	57.4
S	1.24	0.83
FSI	9	9
Roga	91	89
VITRINITE	82.6	77.9
RoV Max	1.01	1.01
Fluidity (MAX) ddpm	488	485
Fluidity (SOLIDIFICATION) ddpm	14,277	5,493
YIELD	36.9	31.5

Table 3.0 – Coal of Africa's Project "Makhado" Coal Qualities.

- **Mount Stuart**

CoAL's Mount Stuart coking coal project is close to Tshipise 2 and consists of the farms Ter Blanche, Septimus, Schuitdrift, Riet, Stayt and Nakab. The project was extensively drilled in the 1980s by ISCOR. This database has been acquired and is currently being reviewed. The historic data indicates a substantial area of open pitable coal with a slight dip to the North. The indicative quality data is similar to the Makhado project but the coking coal yields appear to be higher. The company intends to undertake an extensive drilling program to validate the historic data.

2.3.2 Rio Tinto – Chapudi Project

In November 2010, Coal of Africa Limited (CoAL) announced a $75-million agreement to buy the Chapudi coal project in South Africa from Rio Tinto and its joint-venture partner Kwezi Mining. The coal assets, which are adjacent to CoAL's Makhado project, comprise an interbedded thermal and coking coal deposit.

The acquisition of the Chapudi coal project provided CoAL with an additional one billion tons of a JORC compliant resource, of which 90 million tons is in the measured category, 220 million tons in the indicated category and 730 million tons in the inferred category. Rio Tinto started exploration in 2003 with the drilling of about 1 700 meters covering 100 boreholes. The reflectance of the coal is 0.75 – 0.9% and has a vitrinite content of 75 – 90 %.

Under the terms of the agreement, CoAL would pay $45 million upfront cash consideration once the sale has been completed (expected in April 2012). A further $30 million deferred cash payment would be made on either the granting of a new order mining right for any farm or a combination of the farms which form part of the Rio coal assets, or after 24 months from the fulfillment of the conditions precedent.

The acquisition was part of a complex transaction that was started in 8th July 2008. CoAL announced that, together with its wholly owned subsidiary Regulus Investment (Proprietary) Limited, it had entered into an Exchange of Prospecting Rights Agreement with Kwezi Mining and Exploration (Proprietary) Limited and Chapudi Coal (Proprietary) Limited, joint venture companies held by the Rio Tinto Group and the Kwezi Group of South Africa. Pursuant to the Agreement:

1. Chapudi and Kwezi will grant access to and cede to CoAL ownership in certain prospecting rights and interests over certain project areas that are contiguous to CoAL's Makhado hard coking coal project located in the Limpopo Province;

2. In return for the prospecting rights and interests over the Farms that will be ceded to CoAL as described in section 1 above, the CoAL will cede to Chapudi prospecting rights and interests over certain other Farms, also located in the Limpopo Province.

2.3.3 Universal Coal

Universal Coal (ASX listed), has over 1.93 billion tonnes (Gross *in-situ* before losses) of JORC-compliant coal resources across five projects in South Africa; two highly prospective coking coal assets (Berenice-Cygnus and Donkin-Somerville) and three, low-cost, high-margin steam coal projects in the Witbank coalfield (Kangala, Roodekop and Brakfontein).

The Berenice Coking Coal Project is located within the Mopane sector of the Soutpansberg coalfield, which is situated north of the Soutpansberg mountain range in South Africa's Limpopo province.