

Somerville Project – Competent Person's Report

Report Prepared for:

Coal of Africa Limited & Peel Hunt LLP



PEEL HUNT

Report Prepared by:
Gemecs (Pty) Ltd
Sentinel House
37 Walter Sisulu Street
Middelburg
Republic of South Africa

Tel : +27 13 243 0869

Fax : +27 11 388 5243

www.gemecs.co.za

Report Author:

A handwritten signature in black ink, appearing to read 'NJ Denner', with a horizontal line underneath.

NJ Denner
Project Consultant
Pr. Sci. Nat. 400060/98

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Table of Contents

EXECUTIVE SUMMARY	5
1. QUALIFICATIONS OF CONSULTANT	7
2. INTRODUCTION	8
3. LOCALITY	9
4. TENURE.....	10
5. GEOLOGY.....	11
5.1 Regional Geology of Tuli Coalfield	11
5.2 Local Geology	15
5.3 Current Mining Operations in the Tuli area.....	17
6. BOREHOLE AND COAL QUALITY SUMMARY	18
6.1 Somerville Resource Area.....	18
7. Exploration and data.....	24
7.1 Historical Exploration.....	24
7.2 Data verification.....	24
8. COAL RESOURCE ESTIMATES.....	24
8.1 Previous Resource Estimations.....	24
8.2 Site Visits.....	24
8.3 Coal Resource Reporting Code and Categorization.....	24
8.4 Coal Resource Statement	26
8.5 External Influences on Resources	27
8.6 Operational Influences on Resources	27
9. INTERPRETATION AND CONCLUSIONS	28
APPENDIX A	30
APPENDIX B	31

List of Tables

Table 1. Somerville Project – Summary of coal resources by status	6
Table 2. Somerville project farm portions mineral rights summary.....	10
Table 3. Borehole collar elevations, depth and thickness & floor elevations of the Coal Zone for borehole intersections on Somerville 9MS	20
Table 4. Interpreted details of the Coal Zone units for borehole intersections on Somerville 9MS	20
Table 5. Summary of raw coal analytical data for individual sub-zones of the Coal Zone for boreholes on Somerville 9MS	21
Table 6. Composite analytical data – ash content (Raw coal) for the individual units of the Coal Zone from boreholes on Somerville 9MS	22
Table 7. Ratio of coal to non-coal plies within the Coal Zone from borehole intersection thickness on Somerville 9MS	22
Table 8. Coal resource classification according to borehole density.....	25
Table 9. Somerville Project – Summary of coal resources by status	26
Table 10. Gross in situ coal resources for the Somerville area per farm.....	27
Table 11. Raw coal qualities (air dried) for the Somerville area per farm.....	27

List of Figures

Figure 1. Locality of the Somerville block properties.....	9
Figure 2. Location of the Somerville block properties in relation to proclaimed reserves	10
Figure 3. Plan indicating the relevant farms of the Somerville project.....	11
Figure 4. Location of the Tuli coalfield in South Africa	12
Figure 5. Typical borehole stratigraphic column and coal zone profile for the Somerville properties.....	14
Figure 6. Zonation of coal zones in the Limpopo coalfield	15
Figure 7. Geological map showing the outline of the Somerville properties	16
Figure 8: Map showing the Vele project in relation to the Mapungubwe National Park	17
Figure 9. Geological map with borehole positions	19
Figure 10. General relationship between Coal Resources and Coal Reserves.....	25

EXECUTIVE SUMMARY

This report replaces any previous resource reports for the Somerville Project. Gemecs has been engaged by Coal of Africa Limited (the “Client”) to update the Competent Person’s Report for the Somerville project in accordance with the AIM rules and guidelines as set out by the AIM Note for Mining, Oil and Gas Companies. This report is addressed to the Client and its Nominated Adviser, Peel Hunt LLP. Gemecs understands that this report will be included as part of an AIM admission document to be published by the Client (the “Admission Document”). For the purposes of the AIM rules for Companies, Gemecs is responsible for this report as part of the Admission Document and declares that it has taken all reasonable care to ensure that the information contained in this report is, to the best of its knowledge, in accordance with the facts and contains no omission likely to affect its import. Gemecs consents to the inclusion of this report, and reference to any part of this report, in the Admission Document

The Somerville project is currently owned by Universal Coal plc. The potential of certain properties (Bono Lithihi holdings) in the Limpopo Coalfields, Tuli block in South Africa was investigated.

This report describes the properties in terms of general geological considerations and available historical exploration data. Limited pertinent exploration data for this area was available which is considered inadequate for a proper evaluation of the areas concerned.

The coal deposit of this area is contained within a coal zone, consisting of layers (‘plies’) of good quality coal, intercalated with non-coal material (mudstones). The coal portion of these zones is generally of good quality but often comprises only a relatively small portion of the total thickness.

In the Tuli Block the bottom part of the coal zone appears to contain the better proportion of coal to mudstone, but indicated washed coal yields are anticipated to be low. The remoteness of the Tuli Coalfield, together with the inferred absence of any significant areas which may be amenable to opencast exploitation, tends to limit the potential of this area. This is however based on very limited information, and does not rule out the possibility of potential opencast and/or underground resources on the unexplored properties.

The indicated metallurgical (coking) potential of the lower density coal fractions generated from the coal deposits of this area is a positive factor in favour of further exploration.

Gross in situ coal resources for the Somerville area is estimated at **274.0 million tonnes**. In situ tonnes after geological loss amount to **192.0 million tonnes**. Coal resources are classified as an Inferred coal resource. The stated resources are for properties with historic drillhole information only and substantial additional upside remains in untested areas.

Table 1. Somerville Project – Summary of coal resources by status

Summary of resources by status					
Coal	Gross in situ tonnes		Mineable in situ tonnes		
Category	Gross in situ tonnes	Net Attributable	Mineable in situ tonnes	Net Attributable	Operator
	Tonnes (Mt)	Tonnes (Mt)	Tonnes (Mt)	Tonnes (Mt)	
Measured	0.00	0.00	0.00	0.00	
Indicated	0.0	0.0	0.0	0.0	
Inferred	274.0	137.0	0.0	0.0	
Total	274.0	137.0	0.0	0.0	Universal Coal Development II (Pty) Ltd

1. QUALIFICATIONS OF CONSULTANT

Gemecs (Pty) Ltd (“Gemecs”) is a medium-sized geological company which renders geological and mining consulting services to the mining industry. Its consultants have the required experience in preparing competent persons', technical advisors' and evaluation reports for mining and exploration companies.

Input is provided in terms of the JORC (Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 Edition) and supported by the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves, 2003 Edition.

Independence is assured by the fact that, neither the Competent Person, nor any of the Competent Person’s directors, staff and associates involved in this report, hold any interest in the value of the “Client” or its subsidiary or associated companies, and do not have any interest in Universal and are independent of either Company’s directors, senior management and advisers. Gemecs will receive a fee for the preparation of this report in accordance with normal professional consulting practice. This fee is not contingent on Admission or the outcome of this report and Gemecs receive no other benefit for the preparation of this report.

The information in this report that relates to Coal Resources for the Somerville project is based on a resource estimate completed by Mr Nico Denner who is employed by Gemecs (Pty) Ltd. Mr Denner, Pr.Sci.Nat, B.Sc Hons (Geology), FGSSA, SEG, is a geologist with 20 years’ experience in the South African mining industry and sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr Denner is a Member of South African Council for Natural Scientific Professions (Membership No. 400060/98) and consents to the inclusion of this information in the form and context in which it appears in this report. The author states that this report complies with the guidelines as stipulated in the JORC code, 2012 Edition and coal resources are reported in accordance with the JORC code.

Gemecs places reliance on Universal Coal plc that all legal information provided to Gemecs at the time of writing is both valid and accurate for the purpose of compiling this report, including tenure and Mineral Right status.

2. INTRODUCTION

Gemecs has been engaged by Coal of Africa Limited (the “Client”) to update the Coal Resource Report for the Somerville project. This report is an update of the 2013 report, and no changes were made to the reported resource estimations as previously reported for Universal Coal.

This coalfield has seen relatively little development to date and presents a potential for future exploitation, particularly in view of the relatively high value of the coking coal fractions commonly contained within the coal zones of these localities.

A portfolio of coal Prospecting Rights in the Limpopo Province of South Africa, held by the Bono Lithihi Investments Group and covering a total of 6 properties with coal potential (farms), forms the basis of this CPR evaluation.

Gemecs has reviewed, processed, evaluated and summarised the available geological borehole data pertaining to the properties and investigated other matters related to the potential for mining in the areas concerned.

Borehole and coal sampling/analytical data was available for only one farm of the Tuli Block properties (Somerville 9MS), located at the southern end of the ‘block’.

In view of the above, Gemecs is satisfied that the Tuli area under consideration is prospective and warrants further investigation.

3. LOCALITY

The Somerville areas are located within the Limpopo Coalfield, Locally known as the Tuli Coalfield, and located to the west of the town of Musina and north of Alldays in the Limpopo province, South Africa. It is located on the northern border of the Republic of South Africa where it borders Botswana. The R521 road from Alldays, which runs northwards to Pontdrift at the Botswana border, crosses this area. These properties are situated some 40-50km north of Alldays, 85-95km west of Musina/Beit Bridge and up to 15km south from the Limpopo River. The properties are accessed from the R521 road and by a relatively sparse network of all-weather secondary roads as well as farm tracks, which branch off the R521 from Alldays. The nearest settlement of significance is Bridgewater, about 15km to the south. Refer to Figure 1 below.

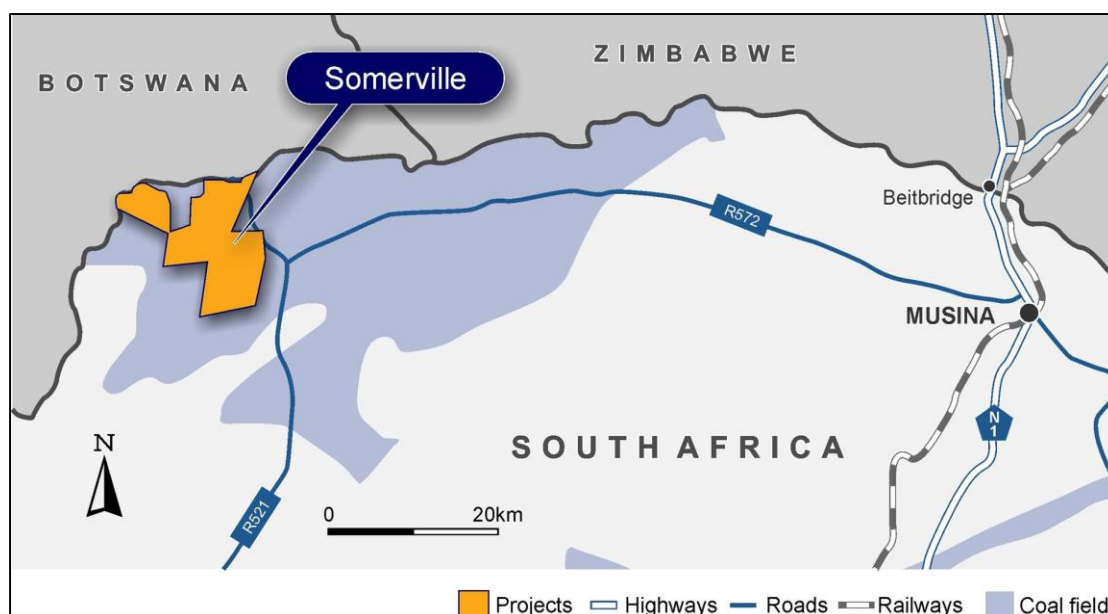


Figure 1. Locality of the Somerville block properties

The Somerville project area is made up of 6 farms (Ratho 1 MS, Montrow 6 MS, Pontdrift 12 MS, Parma 40 MS, Somerville 9 MS & Princess Royal 10 MS) in a semi-contiguous area. These properties are considered to be prospective for coal deposits. Another property, further to the south-east within the Limpopo Coalfield (Patricia 65 MS), does not include coal rights and is therefore not considered further herein. The remaining property (Monmouth 294 MS) is located near Alldays, outside the limits of Karoo formations and therefore has no coal potential.

It would appear that these properties are located within the proclaimed reserves and buffer areas according to the Department of Environmental affairs official website and database. The link to the site is listed here for reference: <http://arcg.is/1Tncuwt>. Any mining activities

will require an Environmental Authorisation and this may be difficult to secure in reserves and buffer zones around Mapungubwe. A map showing the proclaimed areas in green, with farm localities marked, is presented below in Figure 2.

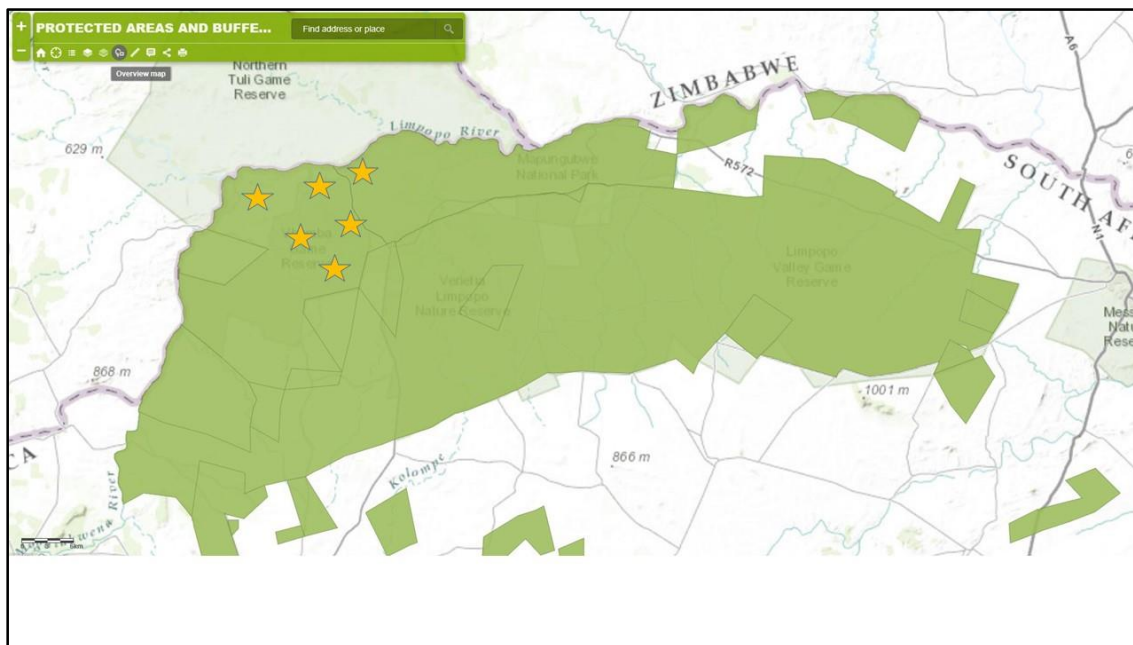


Figure 2. Location of the Somerville block properties in relation to proclaimed reserves

4. TENURE

The Somerville project area is held under a new order prospecting right together with the Berenice Project, LP30/5/1/1/2/376PR. The prospecting right renewal was granted on 20 March 2013, and is valid for a further 3 years. Somerville Project is 50.0% owned by Universal Coal Development II (Pty) Ltd a subsidiary of Universal Coal. A summary of the mineral rights for these properties are presented below in Table 2 and Figure 3.

Table 2. Somerville project farm portions mineral rights summary

FARM NAME	SIZE (ha)	Prospect Permit Number	Holder	Interest	Expiry date
RATHO 1 MS	2 012	LP30/5/1/1/2/376PR	Universal Coal Development II (Pty) Ltd	50.0%	19-03-2016
PARMA 40 MS	2 165				
PONT DRIFT 12 MS	1 251				
PRINCESS ROYAL 10 MS	1 579				
MONTROW 6 MS	2 563				
SOMERVILLE 9 MS	3 319				
Total	12 889				

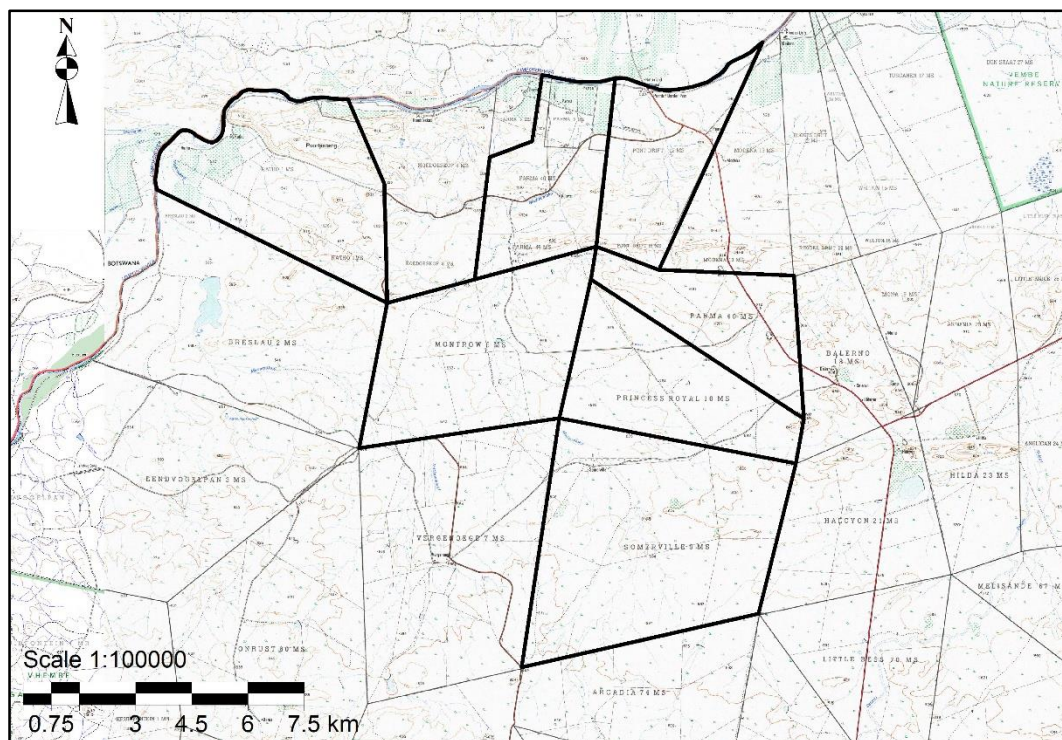


Figure 3. Plan indicating the relevant farms of the Somerville project

5. GEOLOGY

5.1 Regional Geology of Tuli Coalfield

The Tuli Coalfield is situated in the northernmost extremity of the Limpopo Province of South Africa, west of the town of Musina (Messina) (Figure 4). The coal is contained in a basinal structure of Karoo rocks (the Limpopo Basin Coal Province) which straddles the boundaries of the RSA, Botswana and Zimbabwe.

The Tuli Coalfield, which is also referred to as the Mapungubwe Coalfield, occurs in a rather arid and sparsely inhabited territory remote from any industrial activity. The coalfield topography is rather flat to gently undulating with a gentle northward slope towards the broad Limpopo valley. The coal-bearing formations of the Limpopo Basin were first described by Trevor and Mellor (1908) following geological reconnaissance of the region in 1907, but the presence of coal remained undetected for many years. The coal seams tend to sub-outcrop under a thick layer of superficial deposits and the presence of coal was first detected in water boreholes. The coal zone is estimated to be up to 15m thick, consisting of up to 22 thin coal bands alternating with mudstone to form composite 'seams'. The coal is not exposed and has not been exploited to date.



Figure 4. Location of the Tuli coalfield in South Africa

In South Africa the deposits have an overall dip of 1 to 3° to the north-west, due in part to tectonic dip of the strata (1 to 2°), and in part to downthrow along faults, which tends to parallel the long axis of the basin.

In common with the smaller Limnic Karoo basins located outside of the main Karoo basin to the south, this basin is fault-controlled, the deposition of the Karoo sediments seemingly having occurred concurrently with the movement on the pre-existing faults. This has resulted

in a truncated lithological sequence which is substantially different to that in the main Karoo Basin.

The coal seams are developed within coal/mudstone ‘zones’ and are overlain by strong, compact mudstones with minor sandstone beds. Weathering of the mudstones reaches to depths of 20 to 30m.

The extent of the basin of Karoo rocks south of the Limpopo River is defined by an erosional boundary. From this limit, both the pre-Karoo surface and the Karoo strata dip at a shallow angle of up to 2° towards the north and north-west, however, some of the apparent dip could be due to minor faulting. No evidence of major faulting is indicated by the available exploration results. A number of significant dykes, up to 20m wide, strike East-West across the area and are usually manifested on surface by low ridges of indurated sandstone. Several smaller dykes, with similar orientation, are indicated by magnetometric work. The orientation of the bottom coal zone is expected to reflect the pre-Karoo Basement topography to a large extent, since the base of this coal zone occurs mainly within 5 to 15m of the basement surface.

The coal-bearing zone is located at depths of less than 50m along the southern margin of the basin, but increases to over 300m deep towards the Limpopo River valley.

The Coal Zone is present throughout the Karoo basinal trough south of the Limpopo River, but shows more restricted development in the extreme west and along its extension into Botswana. The area where indicated exploitable coal seams occur is generally considered to be restricted to the south-eastern part of the Ecca Group sediments within the Karoo trough.

The coal-bearing zone in the latter area occurs at depths ranging from 20m in the south to 200m or more in the north with the average depth of the coal being about 110m. The Coal Zone is approximately 10m thick, consisting of interbedded coal and carbonaceous shale/mudstones, typical of the Volksrust Formation coal deposits as encountered elsewhere in the region. In the potentially exploitable coal zone area, three stratigraphic units can be recognised in the Middle Eccca Formation, known as Top, Middle and Bottom Coal Units (‘seams’). A typical borehole stratigraphic column and Coal Zone profile (showing identified “plies” or units) is shown in Figure 5.

The coal-bearing units within this coalfield are, in general, comprised as follows:

- Top: 2m to 3m thick, containing 55% to 65% coal, but rather variable and impersistent in nature;

- Middle: 3m to 5.5m thick, containing 20% to 45% coal;
- Bottom: 1.5m to 3.5m thick, containing 65% to 80% coal.

This Zonation is illustrated in the figure below (Figure 5):

Two exploitable coal ‘sections’ between 1 & 3m thick are contained within the 10m wide ‘coal zone’. These ‘sections’ are contained in the Basal unit and the Upper unit of the Coal zone, the Middle Unit being mostly of shale/mudstone.

The relatively flat-lying seams are conducive to exploitation by opencast and underground mining methods.

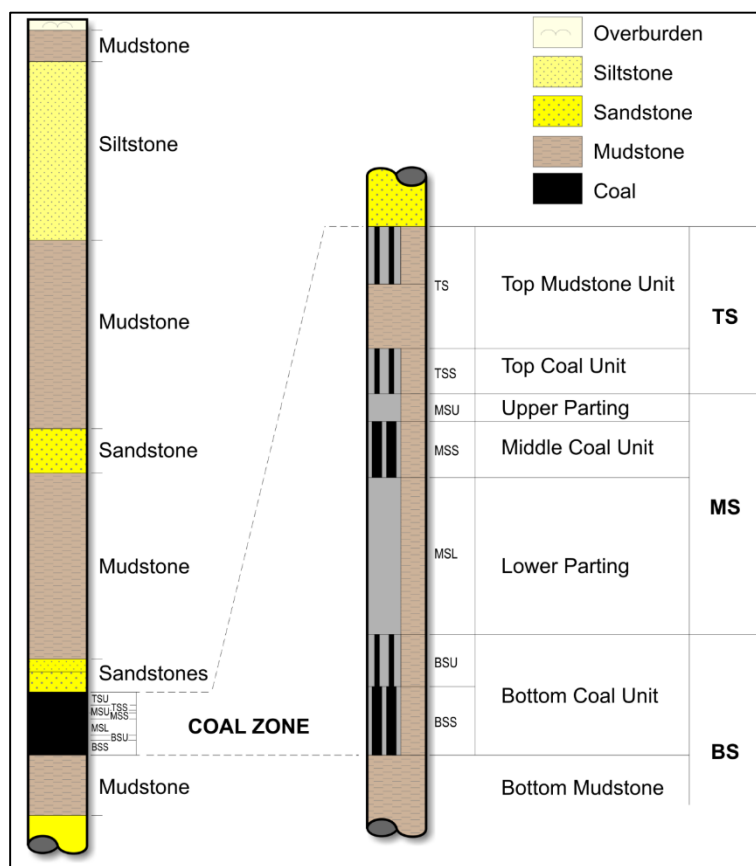


Figure 5. Typical borehole stratigraphic column and coal zone profile for the Somerville properties

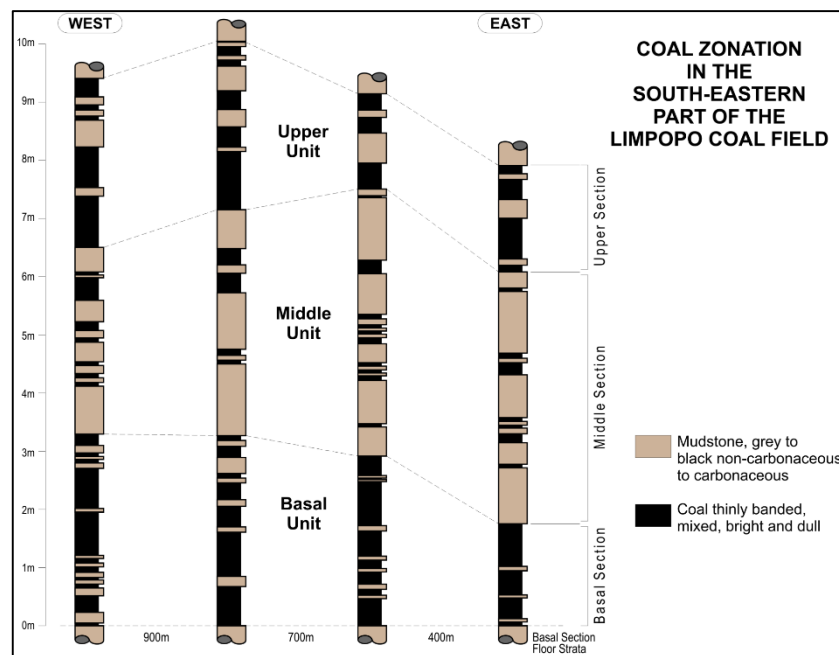


Figure 6. Zonation of coal zones in the Limpopo coalfield

The principal coal development of economic importance is contained in the Basal Section. In a few cases the entire Basal Unit is mineable but usually only a portion forms the “mineable selection” and is referred to as the ‘Basal Seam’, located mostly at the very bottom of the Basal Unit. It has an average thickness of 1.6m and consists of thinly banded, mixed, bright and dull coal with numerous thin mudstone partings. The partings are generally lensoidal, erratic and laterally impersistent.

The ‘Upper Seam’ or potentially workable portion of the Upper Unit/section is confined to the central part of the anticipated potentially mineable area. The physical characteristics of the seam, including the roof conditions, resemble those of the Basal Seam except that the selection width is somewhat narrower with an average of just 1.2m.

Since the coal is interbedded with thin mudstone/shale bands it can be separated by washing at a high relative density. The coal has to be crushed to a small size to liberate the vitrinite from the finely disseminated mineral matter. Beneficiation and coking tests have confirmed that the clean coal is of high quality and has potential for producing a reasonable quality coke product.

5.2 Local Geology

The Somerville properties, super-imposed on the regional geological map of the area, are illustrated in Figure 7 overleaf. It may be envisaged that at the northern-eastern edge of

the Tuli Block properties (e.g. Farm Pontdrift 12MS) the depth to the coal zone may be of the order of 350m (assuming an average dip of 1.5°) and therefore the southern portion (and possibly also the western margins e.g. Farm Ratho 1MS) of this ‘block’ are envisaged as having the greater potential for potentially exploitable coal. This view is borne out by reference to the geological map of the area, which indicates the presence of Stormberg series (K4) strata as bedrock in some places towards the boundary between RSA & Botswana in the north. This is presumably why no known prospecting has previously been undertaken further to the north and north-west of Somerville farm.

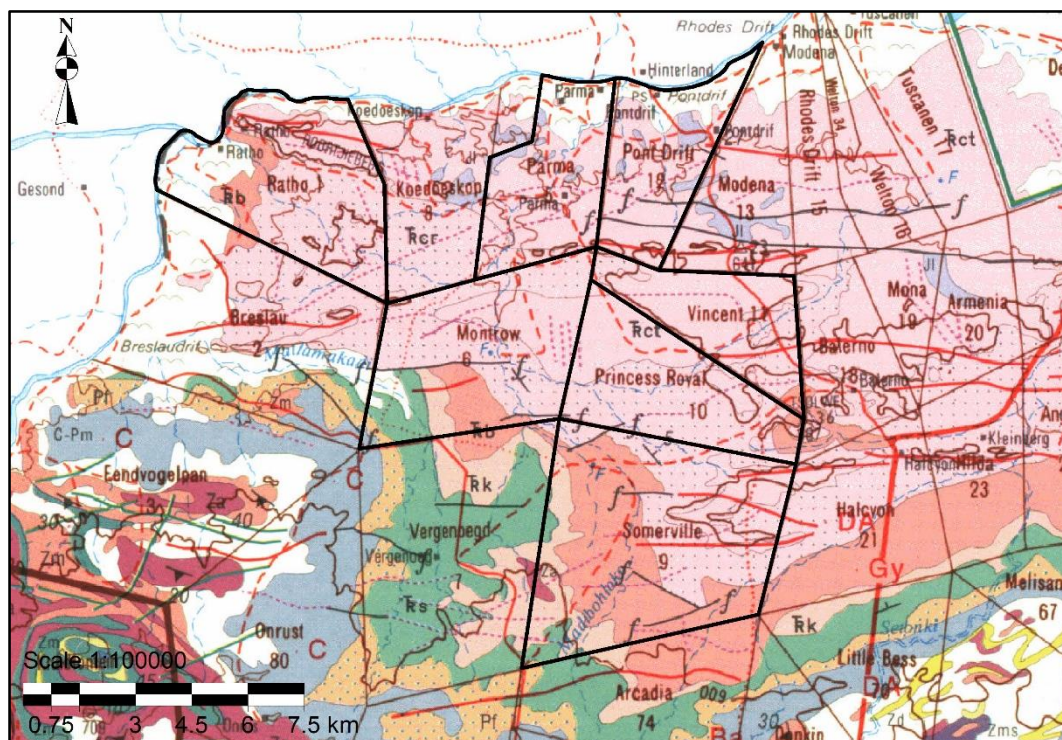


Figure 7. Geological map showing the outline of the Somerville properties

It is clear from the foregoing that the potential for opencastable coal in this area is likely to be very limited (current indications suggest that this would be restricted to a zone in the south-western corner of the Somerville property). The remainder of any mineable coal deposits are thus likely only be amenable to underground exploitation. Underground recovery of coal from the Limpopo coalfield-type deposits is likely to be difficult and expensive and would not be able to compete with opencast-type operations.

In view of the uncertainty as to coal depth along the western part of the Somerville block properties (where areas of more recent geological ‘cover’ obscure parts of the bedrock geology) due to lack of detailed structural knowledge, the possibility of locating other areas of

relatively shallow coal cannot be excluded. In this regard prospecting at selected sites on the farms Ratho 1MS & Montrow 8MS will be necessary to investigate this issue.

In the light of available geological data and with reference to known and inferred geological trends, the Somerville block properties do not appear particularly attractive for exploitation. This situation is exasperated by the infrastructural and other constraints applicable to this area. However, since it is unclear as to what extent the available geological data and information reflect the actual geological conditions in the block as a whole, this area warrants further attention.

5.3 Current Mining Operations in the Tuli area

Certain areas in the southern and north-eastern parts of the Tuli coalfield have been investigated of late in terms of definition of potential opencastable deposits. Coal of Africa Ltd (CoAL) operates a mine in the Overvlakte-Semple area which adjoins the Limpopo River in the north-eastern part of the coalfield. It is part of the same coalfield, and is located 50km to the east of Somerville (Figure 8).

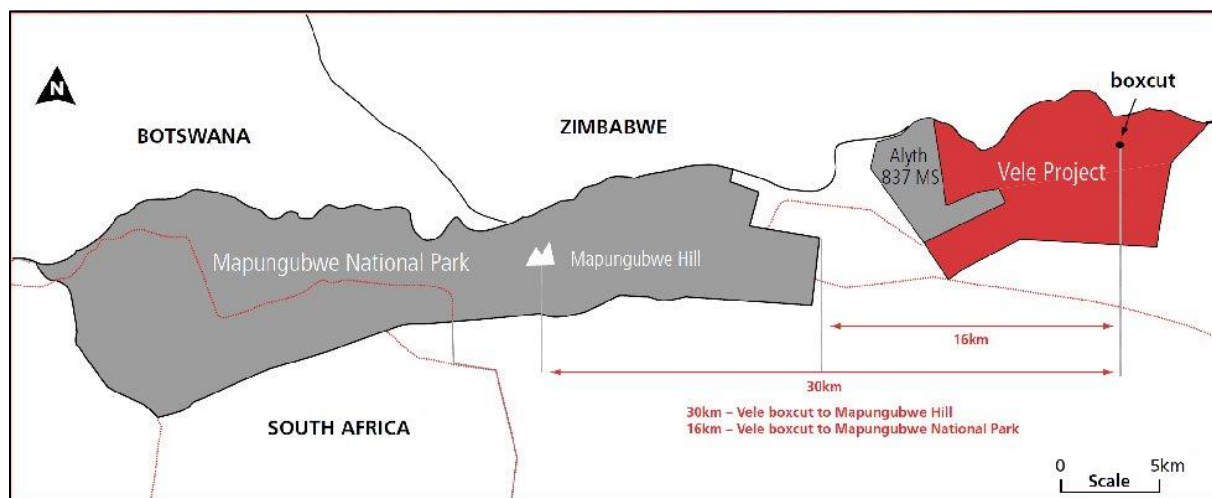


Figure 8: Map showing the Vele project in relation to the Mapungubwe National Park

A New order Mining Right and EMP were executed in March 2010 and mining commenced mid-2010. This operation is located a short distance to the east of the Mapungubwe National Park. Electricity is supplied by ESKOM and water use from host properties was transferred to the mining operation. Initially the coal is transported by road to a railway loading point some 40km distant pending the projected construction of a direct railway spur to the mine. Engagement with Transnet freight rail to create capacity for domestic and export capacity is ongoing. A mineable in situ coal resource of 362.5Mt is reported by CoAL. Resources

amenable to both opencast and underground exploitation occur on the property. Dual production of semi-soft coking and thermal coal ‘middlings’ is envisaged. Vele plant is designed to process the discard from a primary wash for coking coal to provide a thermal coal (export PS or ESKOM “Middlings”). Production of thermal coal commenced in January 2012. Extensive product testing, to confirm the quality of the coking coal, is underway. The De-watering of ultra-fine coal is planned using filter presses, thus removing the need for slurry ponds. Vele’s target production is 2.7Mtpa run-of-mine (ROM) and approximately 1.0Mtpa saleable product.

6. BOREHOLE AND COAL QUALITY SUMMARY

6.1 Somerville Resource Area

The Somerville resource area has only 6 boreholes available for modelling and geological interpretation. The borehole positions relative to the farm portions and geological map are indicated in Figure 9.

All these boreholes except AA145 intersected coal. These coal units were correlated and roof, floor and thickness models were created for each coal zone. With a single exception only raw coal values for CV and ash were available and quality models were created for each of these values.

Based on the available information it would appear that a single “Main Coal Zone” is developed in the boreholes on the Somerville property. This probably represents a close association of the Top, Middle and Bottom Zones, as encountered elsewhere in the vicinity. The “coal zone” ranges from 3.8 to 11.0m in the borehole intersections (5 intersections). One borehole did not intersect coal, but is believed either to be too shallow or to have intersected basement rock due to local uplift or a palæo-“high” feature (lithological description is indecisive).

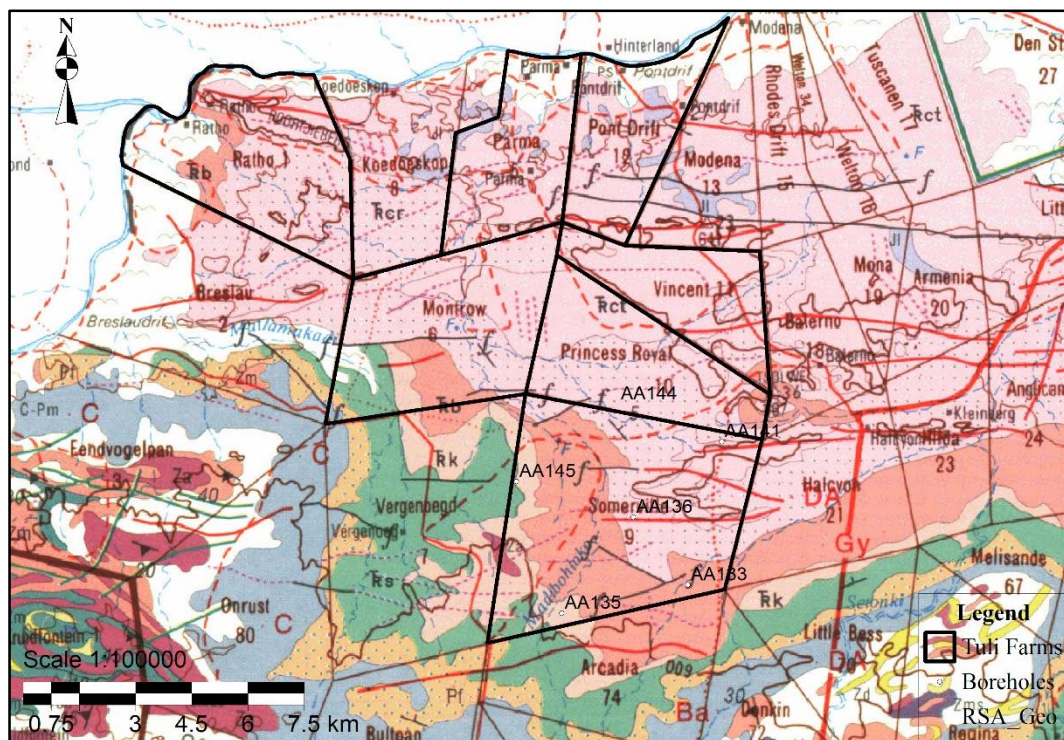


Figure 9. Geological map with borehole positions

The presence of coal underlying the Somerville property may thus be considered as having been demonstrated by drilling, however, insufficient analytical data (lack of washed coal analyses) precludes the evaluation of the potential of the deposit for exploitation.

Interpretation based on the data available suggests an overall dip of the strata from south-west towards the north-east across the farm Somerville, which tends to conform to the anticipated local strike direction, but is non-concordant with the coalfield regional trend of south-east to north-west. However, the picture may well be complicated by faulting. There would appear to be a general decrease in the “coal zone” thickness down-dip on the property (this conclusion could be influenced by the nature of the available data).

A summary of the borehole data pertaining to drilling on the farm Somerville 9MS is provided in the following tables:

Table 3. Borehole collar elevations, depth and thickness & floor elevations of the Coal Zone for borehole intersections on Somerville 9MS

Borehole #	Collar Elevation (m) (amsl)	Depth to top of “Coal Zone” (m)	Coal Zone thickness (m)	Depth to base of “Coal Zone” (m)	Elevation of base of “Coal Zone” (m)	Remarks
AA133	588.7	97.8	9.21	107.0	482	
AA135	599.0	29.1	9.98	39.0	560	Potential opencast.
AA136	578.2	77.6	8.99	86.6	492	
AA141	600.0	195.8	3.76	199.6	400	
AA144	544.6	114.2	10.97	125.2	419	
AA145	580.0	-	-	-	-	No coal /?too shallow

A simplified summary of the principal Coal Zone units is indicated in the following table.

Table 4. Interpreted details of the Coal Zone units for borehole intersections on Somerville 9MS

Borehole #	TOTAL ‘COAL ZONE’ THICKNESS (m)	TOP MUDSTONE UNIT (m)	TOP ‘COAL’ UNIT (m)	UPPER PARTING UNIT (m)	MIDDLE ‘COAL’ UNIT (m)	LOWER PARTING UNIT (m)	BOTTOM ‘COAL’ UNIT (m)	BOTTOM MUDSTONE UNIT (m)
AA133	9.21	1.86	0.69	0.44	0.85	2.40	0.81	2.16
AA135	9.98	2.25	0.43	0.81	0.41	3.25	2.42 (1)	0.41
AA136	8.99	1.47	0.62	0.52	0.61	1.75	3.00 (2)	1.02
AA141	3.76 (3)	?? (4)	0.64	2.28	0.08	0.20	0.56	0.00
AA144	10.97	0.19	1.51	2.41	0.67	2.79	1.03	2.37

- (1) Split Coal unit - Includes 1.03m “parting” material.
- (2) Split Coal unit - Includes 0.99m “parting” material.
- (3) Correlation of Units questionable.
- (4) Dolerite in “roof” of seam, upper part of Coal measures burnt.

Table 5. Summary of raw coal analytical data for individual sub-zones of the Coal Zone for boreholes on Somerville 9MS

Borehole Number	COAL ZONE	ASH (%)	CV (MJ/kg).	REMARKS
AA133	TS	71.9	6.0	
	MS	70.9	6.7	Incomplete CV data
	BS	53.4	13.8	Incomplete CV data
AA135	TS	78.4	3.6	
	MS	76.3	4.4	
	BS	59.1	11.2	Incomplete CV data
AA136	TS	69.4	7.2	
	MS	76.4	4.3	
	BS	53.3	13.8	Incomplete CV data
AA141	TS	70.1	6.6	Heat affected coal due to dolerite intrusion.
	MS	78.7	3.5	
	BS	80.0	3.0	
AA144	TS	78.1	3.7	
	MS	75.4	4.9	
	BS	54.7	13.2	
SUMMARY (TOTAL ‘COAL ZONE’)	<i>Data points</i>	<i>15</i>	<i>15</i>	
	<i>Minimum</i>	<i>53.3</i>	<i>3.0</i>	
	<i>Average</i>	<i>68.9</i>	<i>7.4</i>	
	<i>Maximum</i>	<i>80.0</i>	<i>13.8</i>	

Codes: TS = TOP ‘COAL’ ZONE; MS = MIDDLE ‘COAL’ ZONE; BS = BOTTOM ‘COAL’ ZONE

NB: Available analytical data for the above boreholes are restricted to Raw Coal values as scheduled on a spreadsheet obtained from Council for Geosciences. This schedule is somewhat unusual in that the lower quality “plies” generally have full proximate analyses, whilst some of the indicated better quality “plies” only have Ash content values. This appears to indicate that washed coal analyses may have been undertaken on the coal “plies” but not reported.

It is clear from Table 5 above that the total coal zone is of a very low quality. It would appear that the best quality material is located in the ‘Bottom Coal Zone’, an observation which is consistent with the known situation in this general area. Excluding the borehole intersection which is heat-affected, the average ash content of the ‘Bottom Coal Zone’ (inclusive of mudstone partings) is 55%, with a heat value of 13MJ/kg compared to the Total “Coal Zone” averages of 69% Ash & 7.4MJ/kg CV. The ‘target’ horizon for investigation is therefore the ‘Bottom Coal Zone’.

Table 6. Composite analytical data – ash content (Raw coal) for the individual units of the Coal Zone from boreholes on Somerville 9MS

Coal unit	Average Total Sampled thickness (m)	B/H: AA133 Ash (%)	B/H: AA135 Ash (%)	B/H: AA136 Ash (%)	B/H: AA141 Ash (%)	B/H: AA144 Ash (%)	Average Total Ash Content (%)
TSU	1.86	75.4	80.0	80.0	**	**	78.5
TSS	0.51	63.0	70.1	44.4	70.1	63.0	62.1
MSU	1.29	80.0	80.0	80.0	80.0	77.4	79.5
MSS	0.52	40.7	39.7	63.0	39.7	49.7	46.6
MSL	2.08	80.0	80.0	80.0	80.0	80.0	80.0
BSU	1.08	80.0	68.1	80.0	**	**	76.0
BSS	1.12	38.5	37.0	41.7	80.0	42.3	47.9
BSL	1.27	**	80.0	52.6	**	60.6	64.4

** = Unit not recorded in borehole intersection.

EXPLANATION OF CODES:

TSU = TOP MUDSTONE UNIT

TSS = TOP ‘COAL’ UNIT

MSU = UPPER PARTING

MSS = MIDDLE ‘COAL’ UNIT

MSL = LOWER PARTING

BSU = BOTTOM ‘COAL’ UNIT (Upper Split)

BSS = BOTTOM ‘COAL’ UNIT (Lower split)

BSL = BOTTOM MUDSTONE UNIT

NB: Due to missing analytical data for some samples, composites for other analytical values (e.g. CV, Volatiles, etc.), could not be generated.

80% ash content ascribed to unsampled mudstone units.

Table 7. Ratio of coal to non-coal plies within the Coal Zone from borehole intersection thickness on Somerville 9MS

Borehole #	Total Coal Zone thickness (m)	Thickness of Coal “Plies” in Zone (m)	Thickness of Non-Coal “plies” in Zone (m)	Proportion of Coal thickness in Coal Zone
AA133	9.21	2.35	6.86	26%
AA135	9.98	2.23	7.75	22%
AA136	8.99	3.24	5.75	36%
AA141	3.76	1.28	2.48	34%
AA144	10.97	3.21	7.76	29%

From the above tabulation which is based on the available geological sample descriptions, it may be concluded that the percentage of coal within the coal zone is likely to range between 20 & 35%, on a thickness of intersection basis. This equates to an estimated average volumetric relationship of the order of 1 part coal to 3 parts mudstone.

Estimated mass relationships between coal and non-coal “plies” are indicated as being of the following order (% coal within sub-zone interval):

- TOP COAL SUB-ZONE – 8-18%
- MIDDLE COAL SUB ZONE – 7-15%
- BOTTOM COAL SUB-ZONE – 20-46%

It must be emphasised that care should be exercised in utilising these indicated figures, since they are based on somewhat subjective lithological interpretations of third-party data and unconfirmed assumed densities for the coal and non-coal “plies”.

Information from historical exploration a short distance to the south-east of the Somerville block properties has indicated an average yield of the order of 24% at wash RD 1.42 for the bottom section of the coal zone (Bottom Coal unit), with a heat value of 30MJ/kg, indicating that the coking coal yield may be variable in the area or that the Somerville property coal may be somewhat inferior to that of the area as a whole. Since this conclusion is based on scant evidence, however, it would require verification by future drilling with proper sampling and full washability analyses.

The presence of dolerite in one borehole intersection (B/H AA141-total 15m of dolerite above coal zone) indicates that dolerite intrusives may have affected the coal deposits in some parts of the area. Available information suggests that this occurrence may indicate that this borehole is located close to a dolerite dyke. Since the envisaged level of dolerite activity in this area is anticipated to be of relatively low intensity, this has been interpreted as a localised effect; however, areas of heat-affected coal within the ‘block’ cannot be discounted.

In the absence of specific data to the contrary, it may be assumed that a similar distribution of coal deposits to that detected on Somerville could be present throughout the rest of the properties.

The general trend is of increasing depth to the coal horizons as one moves north-eastwards across this part of the coalfield, due mainly to the regional dip into the depositional basin. The shallowest coal is anticipated along the southern boundary of the block as evidenced by boreholes on farm Somerville 9MS (e.g. BH AA135 = 29m to top of coal zone). The depth to the coal in this particular locality is less than may be envisaged based on the general geology and anticipated trends for the area. It is possible that the Somerville deposit is located in an

up-faulted area, which could enhance the possibility for potentially opencast or shallow underground exploitation.

7. EXPLORATION AND DATA

7.1 Historical Exploration

The only known exploration drilling was undertaken by Anglo American Corporation of South Africa during 1969. A total of 6 boreholes were drilled on the farm Somerville 9MS.

7.2 Data verification

Borehole data for the historical exploration drilling were sourced from the Council for Geoscience. It consist of 3 Excel spread sheet files including the borehole headers, lithologies and analyses. These where all electronically converted from copies of borehole logs from Anglo American by the Counsel for Geoscience. Gemecs did not have access to the originals, nor any copies of the original logs for validation, and assumed these electronic datasets to be correct.

8. COAL RESOURCE ESTIMATES

8.1 Previous Resource Estimations

No known previous coal resource estimations are known to exist for these properties.

8.2 Site Visits

No site visit was done by the author to the project area. The results and report is purely based on a desktop study as was the original scope of work of this project as was completed during 2013. It includes all available borehole information and coal analytical data that was provided by Universal Coal.

8.3 Coal Resource Reporting Code and Categorization

Coal quantity and quality estimates are reported according to the guidelines of the JORC code.

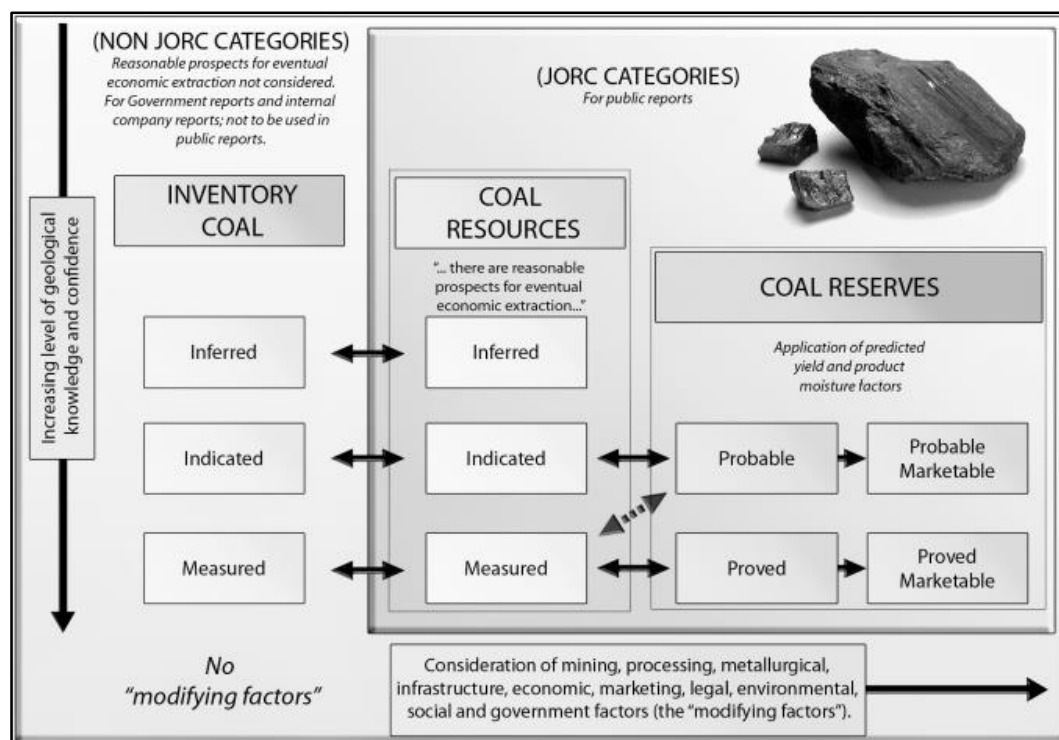


Figure 10. General relationship between Coal Resources and Coal Reserves

In addition to the JORC guidelines, the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Reserves 2003 Edition were used to classify and report coal resources. Coal resource classes are based purely on borehole spacing as illustrated below in Table 8. Inferred coal resources are classified up to a drill grid of 4000m between points with sampling information. At the time of the desktop study it was prior to the release of the updated 2012 JORC code and supporting coal guidelines, therefore the classification is still based on only the borehole spacing and local geological interpretation.

Table 8. Coal resource classification according to borehole density

DRILL GRID (m)	AREA (ha)	DRILLHOLES PER 100ha	RESOURCE CLASS
500 x 500	25	4	Measured
1000 x 1000	100	1	Indicated
4000 x 4000	1600	0.06	Inferred

Due to limited borehole and sampling information, only part of the drilled properties could be classified as inferred resources. The remainder of the farm portions have coal potential, but drilling is needed to confirm the presence of coal seams and related coal qualities. No accurate tonnage estimation and resource classification can be made without borehole or other point observations.

In situ coal resources were reported for each coal zone excluding the mudstone partings. No minimum coal thickness or quality cut offs were applied at this stage, as more detailed correlation and associated sampling has to be done in order to define resource selections.

Geological losses are applied as follows to the project area.

- Inferred Coal Resources 30%

8.4 Coal Resource Statement

Coal resources are reported for coal zones excluding mudstone partings. Coal resources are only reported for farms and areas covered by the influence of the exploration drilling, and all resources are classified as inferred coal resources. No changes are reported compared to previous coal resource statements. Gross in situ coal resources (excluding major mudstone partings) for the Somerville resource area amount to **274.0 million tonnes**. In situ tonnes after geological loss amount to **192.0 million tonnes** for the Somerville area. The stated resources are for properties with historic drillhole information only and substantial additional upside remains in untested areas.

Net attributable tonnes based on the 50% interest held by Universal Coal Development II is stated at **137.0 million tonnes**.

A summary table of resources by status with net attributable tonnes is presented below in Table 9.

Table 9. Somerville Project – Summary of coal resources by status

Summary of resources by status					
Coal	Gross in situ tonnes		Mineable in situ tonnes		
Category	Gross in situ tonnes	Net Attributable	Mineable in situ tonnes	Net Attributable	Operator
	Tonnes (Mt)	Tonnes (Mt)	Tonnes (Mt)	Tonnes (Mt)	
Measured	0.00	0.00	0.00	0.00	
Indicated	0.0	0.0	0.0	0.0	
Inferred	274.0	137.0	0.0	0.0	
Total	274.0	137.0	0.0	0.0	Universal Coal Development II (Pty) Ltd

Coal resource detail per farm, and raw coal qualities are presented in Tables 10 & 11 overleaf. The coal qualities reported are for the sampled coal zones only, and exclude the major

mudstone and non-sampled partings. Due to limited availability of coal washability data, no interpretation was done on any coal products and yields.

Table 10. Gross in situ coal resources for the Somerville area per farm

FARM	AREA (ha)	AVERAGE SEAM THICKNESS (m)			ESTIMATED RD			GROSS TONNES IN SITU (Mt)	GEOLOGICAL LOSS %	TOTAL TONNES IN SITU (Mt)
		TS	MS	BS	TS	MS	BS			
PRINCESS ROYAL 10 MS	1579	0.35	0.84	2.05	2.09	1.89	1.90	73	30%	51
SOMERVILLE 9 MS	3319	0.70	0.61	2.26	2.01	1.87	1.85	202	30%	141
<i>*All Coal classified as Inferred Coal Resource</i>								274	30%	192

Table 11. Raw coal qualities (air dried) for the Somerville area per farm

FARM	RAW COAL QUALITY					
	TS		MS		BS	
	AS	CV	AS	CV	AS	CV
PRINCESS ROYAL 10 MS	66.2	8.1	52.3	13.9	53.6	13.6
SOMERVILLE 9 MS	60.3	10.6	50.3	14.5	49.5	15.3

All qualities are reported on an air dried basis.

AS – Ash (%)

CV – Calorific Value (MJ/kg)

VM – Volatile Matter (%)

IM – Inherent Moisture (%)

FC – Fixed Carbon (%)

TS – Total Sulphur (%)

8.5 External Influences on Resources

In the case of the Somerville block properties, co-location of the surface for some of these properties with a private, but not officially registered, Game Reserve is a potential limiting factor.

8.6 Operational Influences on Resources

Major challenges affecting the potential of the Limpopo Coalfield, from an exploitation viewpoint, include:

- Potential water shortages;
- Insufficiently developed infrastructure and industry;
- Generally fragile environmental factors;

- Challenging mining conditions due to mode of coal occurrence and complex geological factors.

9. INTERPRETATION AND CONCLUSIONS

The coal deposits of the Tuli Coalfield Block, south of Limpopo River, are contained within a coal zone or zones, consisting of layers (‘plies’) of good quality coal, intercalated with non-coal material (mudstones). The coal portion of these zones is generally of good quality but often comprises only a relatively small portion of the total thickness.

Available borehole data is insufficient for a proper evaluation of the potential of all these properties, but available borehole data was used to summarise and report Inferred coal resources where possible.

In the Somerville area a single thick coal zone is developed. Within this zone, a series of lithological units and coal sub-zones can be identified. Three specific coal sub-zones occur, containing “plies” of coal, these being separated by variable thicknesses of mudstone. The bottom part of the coal zone appears to contain the better proportion of coal to mudstone, but indicated washed coal yields are anticipated to be low.

The remoteness of the Limpopo Coalfield, together with the inferred absence of any presently indicated significant areas which may be amenable to opencast exploitation, limits the attractiveness for coal mining development in the area concerned.

In order to effect a proper assessment of the Tuli block area, exploratory drilling will be required. An exploration programme to investigate the nature of occurrence for the coal deposits to the north-west of Somerville farm and to obtain the necessary analytical data to determine viability of exploitation from a point of view of coking propensity (for the lower density coal fractions) and possible “middling’s” steam-raising fractions is necessary.

Any coal producer in the Tuli Block coalfield would necessarily require substantial base-load off-take agreements for markets in relatively close proximity to the coal resource, before the more distant markets could be economically supplied.

South Africa's current electrical power situation and developing demand, together with the increasing global demand for metallurgical quality coal, requires serious strategic re-assessment of coalfields that were previously considered uneconomic for exploitation due to the remoteness of their location. In the current South African context, competing with producers in the Witbank, Highveld and Mpumalanga coalfields is impeded due to

transport costs, for both the domestic industrial market and the export market. However, should a regional demand for such coal be created by power generation and/or industrial (e.g. cement manufacturing, steel manufacture, ferrochrome, brewing, etc.) applications, this coalfield could be seriously considered as feedstock source for such coal.

In the light of the South African Government's infrastructure development plans, which includes substantial foreseen investment in road and rail infrastructure in the Limpopo Province with the aim of spurring economic development in the region, the Somerville properties under consideration warrant further investigation.

APPENDIX A

List of borehole collars

BOREID	Easting	Northing	Elevation	EOH	AZI	DIP	Coordsys
AA133	-16321.44	2471848.15	588.7	115.82	0	-90	LO29_WGS84
AA135	-12971.45	2472598.15	599.0	61.26	0	-90	LO29_WGS84
AA136	-14871.44	2470048.15	578.2	99.36	0	-90	LO29_WGS84
AA141	-17221.44	2468048.16	600.0	231.65	0	-90	LO29_WGS84
AA144	-14471.44	2467048.16	544.6	137.46	0	-90	LO29_WGS84
AA145	-11771.45	2469098.16	580.0	29.26	0	-90	LO29_WGS84

APPENDIX B

Terms and Definitions

- **‘The JORC Code 2012 Edition’**. Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.
- **‘The Coal Guidelines 2014 Edition’**. Australian Guidelines for the Estimation and Classification of Coal resources.
- A **‘Competent Person’** is a minerals industry professional who is a Member or Fellow of the Australasian Institute of Mining and Metallurgy, or of the Australian Institute of Geoscientists, or of a ‘Recognised Professional Organisation’ (RPO), as included in a list available on the JORC and ASX websites. These organisations have enforceable disciplinary process including the powers to suspend or expel a member.
- An **‘Inferred Coal Resource’** is that part of a Coal Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

An Inferred Coal Resource has a lower level of confidence than that applying to an Indicated Coal Resource and must not be converted to a Coal Reserve. It is reasonably expected that the majority of Inferred Coal Resources could be upgraded to Indicated Coal Resources with continued exploration.

- An **‘Indicated Coal Resource’** is that part of a Coal Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to assume geological and grade (or quality) continuity between points of observation where data and samples are gathered.

An Indicated Coal Resource has a lower level of confidence than that applying to a Measured Coal Resource and may only be converted to a Probable Coal Reserve.

- A **‘Measured Coal Resource’** is that part of a Coal Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to confirm geological and grade (or quality) continuity between points of observation where data and samples are gathered.

A Measured Coal Resource has a higher level of confidence than that applying to either an Indicated Coal Resource or an Inferred Coal Resource. It may be converted to a Proved Coal Reserve or under certain circumstances to a Probable Coal Reserve.

- **Geological loss factor**

Discount factor applied in the case of gross in situ tonnage to account for as yet unobserved geological features that can occur between points of observation.

- **Gross in situ coal resource (GTIS)**

Tonnage and coal quality, at specified moisture content, contained in the full coal seam above the minimum thickness cut-off and relevant coal quality cut-off parameters, as defined by the competent person.

NOTE: The seam height does not include any external dilution or contamination material. No loss factors shall be applied to a gross in situ coal resource.

- **Mineable in situ coal resource (MTIS)**

Tonnage and coal quality, at a specified moisture content, contained in the coal seams, or sections of the seams, which are proposed to be mined at the theoretical mining height, excluding dilution and contamination material, with a specific mining method and after the relevant minimum and maximum mineable thickness cut-off and relevant coal quality cut-off parameters have been applied.

NOTE: The geological loss factor is applied to the mineable in situ coal resource tonnage.