# INDEPENDENT TECHNICAL STATEMENT FOR COAL OF AFRICA as at 18th September 2011

 Key Features Mooiplaats Colliery Makhado Project

**Woestalleen Complex Vele Colliery** 

 Voorburg Project **Mount Stuart Project Jutland Project** 



### **KEY FEATURES**

Company:

Commodity:

Mineral Assets:

Location:

Competent Persons

Effective Date:

Purpose:

Resource/Reserve Reporting Code:

Coal of Africa Limited (CoAL).

Glossarv

Thermal and coking coal.

Three operating coal mines and seven exploration projects, at various stages of development from early reconnaissance to advanced exploration (Figure 1). The projects are held under various New Order Mining Rights (NOMR), and New Order Prospecting Rights (NOPR) (Table 1 and Figure 1).

Located in the Mpumalanga and Limpopo Provinces of South Africa, within four different coalfields, namely Witbank, Ermelo, Soutpansberg and Limpopo (Figure 2).

Mrs Catherine Telfer (B.Sc. Hons. (Geol.), (DMS) Dip Bus Man Pr. Sci. Nat., FGSSA, MAusIMM, M.Inst.D). Mr Godknows Njowa (M.Sc. (Min. Eng), MRM, B.Sc. Hons. (Min. Eng), Grad CIS, MSAIMM, Pr Eng, MIAS).

This Technical Statement was prepared by Ms C Telfer and Mr G Njowa who both have relevant and appropriate experience and independence to appraise the coal assets. Both Ms C Telfer and Mr G Njowa are considered "Competent Persons", and each have more than five years relevant experience in the assessment and

evaluation of the types of coal exploration and mining properties discussed in this Technical Statement. 30th June 2011 for Mooiplaats Colliery and Woestalleen Complex.

31st August 2011 for Vele, Makhado, Voorburg, Mt Stuart and Jutland.

This Technical Statement represents a summary of the principal coal assets of CoAL, with particular reference to their declared Coal Resources and Coal Reserves. The Coal Resources and Coal Reserves have been independently prepared and signed off by Venmyn Rand (Pty) Ltd's (Venmyn) Competent Persons. Venmyn has provided their consent for this Technical Statement to be issued into the public domain by CoAL.

All Coal Resources and Coal Reserves are defined in accordance with the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, the Australasian Institute of Geoscientists and Minerals Council of Australia, (JORC Code).

Venmyn has independently assessed the Coal Reserves and Coal Resources of certain mineral assets discussed in this Technical Statement, and these have been accumulated into the total Coal Resource and Coal Reserves per project in Tables 2 and 3.

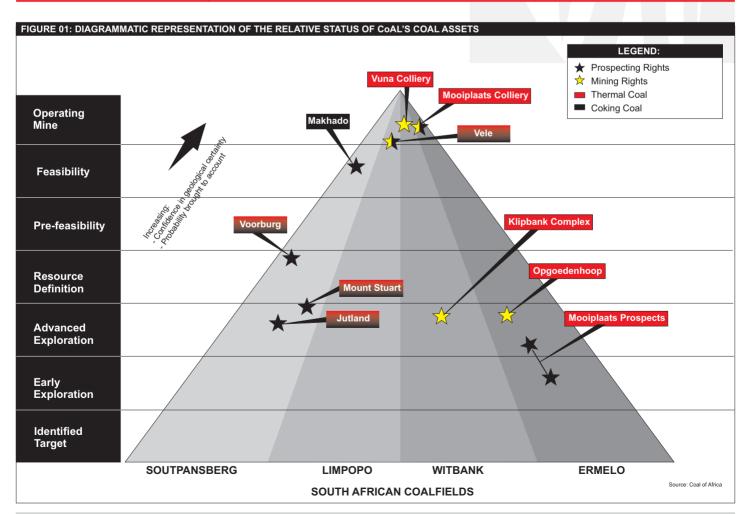
















TABLE 1: SUMMARY OF MINERAL ASSETS REPORTED IN THE TECHNICAL STATEMENT

COAL FIELD	COAL TYPE	PROJECT NAME	NO. OF FARMS CURRENTLY HELD	DEVELOPMENT STATUS	NEW ORDER LICENCE TYPE	TOTAL LICENCE AREA (Ha)	JORC COMPLIANT RESOURCES	JORC COMPLIANT RESERVES	
		Mooiplaats Colliery	3	Operating Mine	Mining/ Prospecting	4,607	✓	✓	
Ermelo	Thermal	Mooiplaats Prospects §	4	Early - Advanced Exploration	Prospecting	11,206			
	mermai	Opgoedenhoop* §	1	Advanced Exploration	Mining	573			
Witbank		Vuna*	1	Operating Mine	Mining	797	✓	✓	
		Klipbank Complex* §	2	Advanced Exploration	Mining	1,442			
		Hartogshoop* §	1	Mined Out	Mining	39			
Limpopo	Coking & Thermal	Vele	5	Construction	Mining	10,756	✓	✓	
Soutpansberg	g Col	Coking	Makhado	6	Feasibility	Prospecting	8,190	✓	
	Coking	Makhado Extension	2	Early Exploration	Prospecting	2,131			
	Coking &	Jutland	4	Exploration	Prospecting	5,059			
out	Thermal	Mount Stuart	7	Exploration	Prospecting	9,131	✓		
Sc	mermai	Voorburg	3	Advanced Exploration	Prospecting	6,063	✓		
		GRAND TOTAL	39	<u> </u>		59,993			

#### Notes:

- Projects that are excluded from detailed reporting are due to them currently being considered subeconomic. These projects are not material in the estimation of the resources and have not been valued.
- Acquired through the acquisition of NuCoal Mining (Pty) Ltd in January 2010.





# INDEPENDENT TECHNICAL STATEMENT FOR **COAL OF AFRICA**

as at 18th September 2011

TABLE 2: COAL RESERVES OF COAL'S PRINCIPAL MINERAL ASSETS

PROJECT NAME	RESERVE CATEGORY	MINEABLE TONNES IN SITU (MTIS)	RoM TONNAGE (t)	SALEABLE PRIMARY PRODUCT (t)	SALEABLE SECONDARY PRODUCT (t)	COAL ATTRIBUTABLE %
Mooiplaats	Proven	31,590,200	18,656,800	9,433,300	779,900	100%
Vuna	Flovell	6,155,700	6,547,400	3,381,600	2,101,200	*100%
TOTAL/WT. AVE PROVEN		37,745,900	25,204,200	12,814,900	2,881,100	100%
Vele	Probable	332,709,000	299,391,000	92,387,000	0	100%
TOTAL/WT. AV	E PROBABLE	332,709,000	299,391,000	92,387,000	0	100%
GRAND TOTA	AL RESERVES	370,454,900	324,595,200	105,201,900	2,881,100	100%

#### Notes:

TABLE 3: COAL RESOURCES OF COAL'S PRINCIPAL MINERAL ASSETS (INCLUSIVE OF RESERVES)

PROJECT NAME	RESOURCE CATEGORY	GROSS TONNES IN SITU (GTIS)	TOTAL TONNES IN SITU (TTIS)	MINEABLE TONNES IN SITU (MTIS)	COAL ATTRIBUTABLE %
Mooiplaats		73,995,856	70,296,063	48,330,100	100%
Vuna		6,820,858	6,479,815	6,155,700	*100%
Vele	Measured	158,035,063	142,231,557	94,241,400	100%
Makhado		445,025,424	400,522,882	301,223,500	100%
Voorburg		94,952,819	85,457,537	83,748,100	100%
TOTAL/WT. AV	E MEASURED	778,830,020	704,987,854	533,698,800	100%
Mooiplaats		13,234,655	11,249,457	2,260,000	100%
Vele	Indicated	426,854,188	362,826,060	200,298,000	100%
Makhado	maicaled	328,176,038	278,949,632	99,615,000	100%
Voorburg		104,230,533	88,595,953	84,903,000	100%
TOTAL/WT. AVE INDICATED		872,495,414	741,621,102	387,076,000	100%
Mooiplaats	Mooiplaats		4,073,742	170,000	100%
Vele		218,931,575	175,145,260	75,090,000	100%
Makhado	Inferred	106,533,360	85,226,688	10,318,000	100%
Voorburg		18,595,607	14,876,486	13,160,000	100%
Mount Stuart		407,162,828	325,730,262	55,460,000	100%
TOTAL/WT. A	VE INFERRED	756,315,548	605,052,438	154,198,000	100%
GRAND TOTAL	RESOURCES	2,407,640,982	2,051,661,394	1,074,972,800	100%

# Notes:

<sup>\*</sup> CoAL have a 49% legal interest but a 100% economic interest in Vuna through a management and sale agreement.







<sup>\*</sup> CoAL have a 49% legal interest but a 100% economic interest in Vuna through a management and sale agreement.



### **MOOIPLAATS COLLIERY**

CoAL acquired its interest in Mooiplaats Mining (Pty) Ltd (Mooiplaats Mining), the sole owner of the Mooiplaats Colliery, in 2007. Mooiplaats Colliery is located in the Gert Sibande District in the Mpumalanga Province of South Africa. The nearest town is Ermelo, 17km northwest of the mine. The mine is located adjacent to Eskom Holdings Limited's (Eskom's) Camden Power Station (Figure 3).

The average saleable tonnes produced at Mooiplaats is measured at 84,000tpm (July 2010 - June 2011) and this has included coal sourced from neighbouring collieries which Mooiplaats previously toll treated. Mining is currently being carried out in the north (Northern Block or Colliery). This mine is also intended to develop a Southern Block later in the Life of Mine (LOM).

Five major coal seams are present within the Mooiplaats Colliery area. However, due to either limited thickness, or unattractive quality the A, C, D and E Seams, are not considered to be of economic significance. The B Seam, in the section of the Ermelo Coalfield relevant to the Mooiplaats operations, can be split into Upper and Lower sub-seams. The B Upper Seam represents the primary mining target while the B Lower Seam is too thin to warrant serious consideration for underground exploitation.

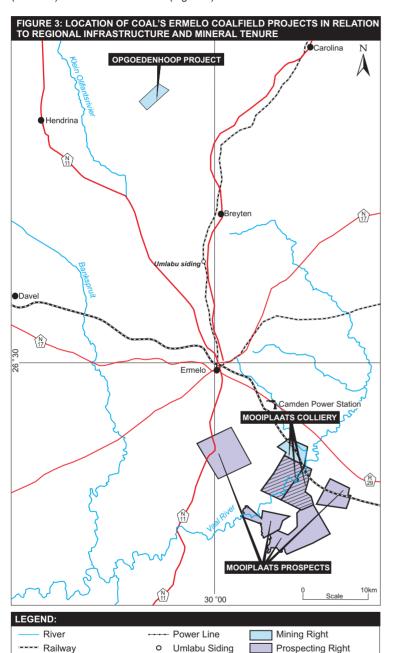
Prior to CoAL's involvement and acquisition of Mooiplaats Colliery, historical drilling was undertaken in and around Mooiplaats dating back to 1965. The majority of the drilling in the area, however, was carried out by Goldfields Mining and Development Ltd and Ingwe Coal Corporation (Ingwe) during the 1970s and 1980s. Atotal of 944 boreholes were drilled adjacent to and to the north and east of Mooiplaats Colliery at the now defunct and mined out Usutu Colliery. The historical borehole database was obtained by CoAL in electronic format from Ingwe via Optimum Coal Holdings.

Extensive exploration has been carried out at Mooiplaats since CoAL became involved in the project in 2007. A total of 581 boreholes have been drilled using either percussion or diamond drilling techniques in and around Mooiplaats Colliery. All diamond drilling programmes were carried out with the purpose of defining Measured Coal Resources and, as a result, the collar positions were located less than 250m apart.

All historical and recent exploration data, as well as recent production data has been used in the estimation of the resources and reserves of the Mooiplaats Colliery. The summary table of the independently declared resource and reserve estimates for Mooiplaats are shown in Table 4 and Table 5, respectively. The location of the resources and reserves are presented in Figure 4 and Figure 5, respectively.

Due to the fact that the B Upper Seam is relatively deep; ranging from 80m to 140m, only underground mining methods are suitable for extracting the coal. Mechanised bord and pillar mining methods, which have proven successful over many years, are being employed at Mooiplaats Colliery.

Four sections are currently in operation at Mooiplaats. An additional section (Section 5) is expected to be introduced in October 2011. The Mooiplaats Colliery is still in the ramp-up phase. It is anticipated that the mining operations will be at a steady state of 120,000tpm by January 2012. The graph showing the historical mining production rates by section is presented in Figure 6.



The Mooiplaats Colliery is comprised of eight farm portions on three farms (Mooiplaats 290IT, Klipbank 295IT and Adrianople 296IT). These are held under a NOMR and two NOPRs in the name of Langcarel (Pty) Ltd (Langcarel), which is 100% owned by Mooiplaats Mining.

Power Station

The Mooiplaats Colliery is an underground bituminous coal mining operation, situated in the Ermelo Coalfield, which mines the B Upper Seam at an average rate of 60,000tpm of coal (July 2010 - June 2011). The raw coal is processed in the Colliery's two 200tph modular washing plants to produce an export product and a locally sold thermal product.



Richard's Bay Coal Line



Mining Right Application

# as at 18<sup>th</sup> September 2011



# **MOOIPLAATS COLLIERY**

FIXED SULPH. MOIST.

ASH (%)

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1.66 1.54 1.54

63.45 54.46 57.78

23.75 16.83 VOL. (%)

27.26

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			0/0	GROSS	GEOL.	TOTAL	MINEABLE	5	HUV	5	FIXED	TSIOM HE IIIS	TSION
SEAM	CATEGORY	COAL TYPE	or U/G	TONNES IN SITU (GTIS)	LOSSES (%)	TONNES IN SITU (TTIS)	TONNES IN SITU (MTIS)	(MJ/kg)	(%)	(%)	CARBON (%)	(%)	(%)
		Anthracitic		12,416,531	%9	11,795,704	3,997,900	22.36	28.76	8.50	89.69	2.59	3.20
BU	Measured	Lean Bituminous	g/N	35,599,550	%9	33,819,573	22,787,200	23.30	24.67	15.94	90.99	2.53	3.24
		Bituminous		25,979,775	%9	24,680,786	21,545,000	25.12	18.76	24.81	52.88	2.13	3.54
	TOTAL / AVE MEAS!	ASURED RESOURCES	SES	73,995,856	%9	70,296,063	48,330,100	24.03	22.38	19.28	54.94	2.36	3.37
		Anthracitic		3,032,096	15%	2,577,282	391,000	21.23	27.82	7.28	59.89	1.47	3.15
BU	Indicated	Lean Bituminous	n/g	8,155,657	15%	6,932,308	499,000	21.97	26.29	16.23	53.73	2.75	3.19
		Bituminous		2,046,902	15%	1,739,867	1,370,000	25.20	18.62	26.41	51.63	2.25	3.56
	TOTAL / AVE IN	TOTAL / AVE INDICATED RESOURCES	RCES	13,234,655	15%	11,249,457	2,260,000	23.80	16.12	20.85	53.52	2.23	3.41
		Anthracitic		574,672	70%	459,738	0						
BU	Inferred	Lean Bituminous	n/g	4,070,746	70%	3,256,597	0						
		Bituminous		446,760	70%	357,408	170,000	25.50	18.22	26.93	51.20	2.38	3.59
	TOTAL / AVE II	TOTAL / AVE INFERRED RESOURCES	RCES	5,092,178	70%	4,073,742	170,000	25.50	18.22	26.93	51.20	2.38	3.59
GRAND	TOTAL / AVE M	<b>GRAND TOTAL / AVE MOOIPLAATS COLLIERY</b>	-IERY	92,322,689	%2	85,619,262	50,760,100	24.03	22.34	19.38	54.86	2.35	3.37

TABLE 5: MOOIPLAATS COLLIERY COAL RESERVE STATEMENT (30TH JUNE 2011)

Rounding down of tonnages to 100t; 1,000t and 10,000t for Measured, Indicated and Inferred, respectively.

MTIS - At minimum seam thickness cutoff of 1.4m for mining. GTIS & TTIS - At minimum seam thickness cutoff of 0.5m.

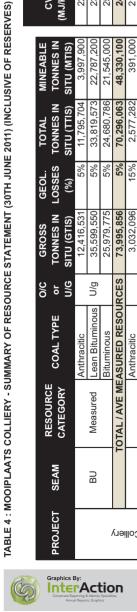
Weighted average qualities calculated on MTIS.

MINEABLE	) 0/C	O/C	O/C
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18,613,800	6/O	ر ر ر	Bituminous 0/9
31,590,200		TOTAL / AVE CoAL FARMS	
1Y 31,590,200			GRAND TOTAL / AVE MOOIPLAATS COLLIERY

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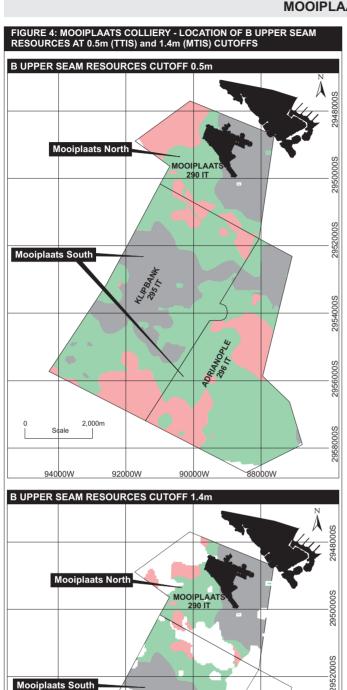
				၁/၀	GROSS	GEOL.	TOTAL	É
PROJECT	SEAM	RESOURCE	COAL TYPE	o	TONNES IN	LOSSES	<b>TONNES IN</b>	ᅙ
		CAIEGORY		D/C	SITU (GTIS)	(%)	SITU (TTIS)	SIT
			Anthracitic		12,416,531	%9	11,795,704	(,)
	BU	Measured	Lean Bituminous	g/N	35,599,550	%9	33,819,573	72
,			Bituminous		25,979,775	%9	24,680,786	21
іегу	L	TOTAL / AVE ME	<b>FOTAL / AVE MEASURED RESOURCES</b>	RCES	73,995,856	2%	70,296,063	48
100			Anthracitic		3,032,096	15%	2,577,282	
) sį	BU	Indicated	Lean Bituminous	g/N	8,155,657	15%	6,932,308	
laa'			Bituminous		2,046,902	15%	1,739,867	
dio		TOTAL / AVE IN	TOTAL / AVE INDICATED RESOURCES	IRCES	13,234,655	15%	11,249,457	7
οM			Anthracitic		574,672	70%	459,738	
	BU	Inferred	Lean Bituminous	g/N	4,070,746	70%	3,256,597	
			Bituminous		446,760	70%	357,408	
		TOTAL / AVE IN	TOTAL / AVE INFERRED RESOURCES	IRCES	5,092,178	70%	4,073,742	
	GRAND	TOTAL / AVE M	GRAND TOTAL / AVE MOOIPLAATS COLLIERY	LIERY	92,322,689	%2	85,619,262	95
Notes								

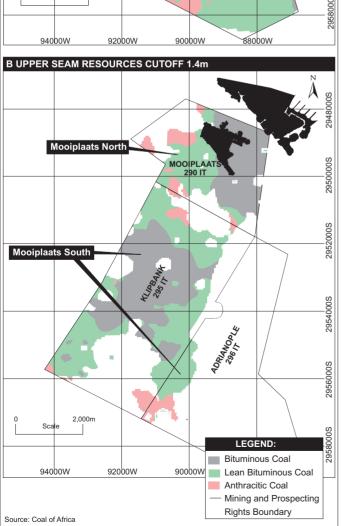


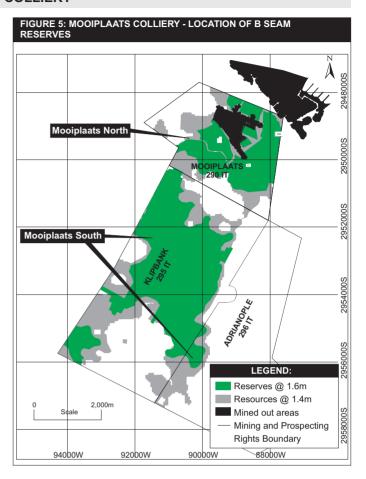




### **MOOIPLAATS COLLIERY**







The Mooiplaats Colliery incorporates an operating coal processing plant. The original design criteria for the processing plant required that it produce a primary export product with a heat generating capacity of 6,000kcal and a secondary product to meet an Eskom specification of CV>20MJ/kg, ash<30% and volatiles>20%. Primary yields were expected to be between 55-65% and secondary yields to be 10-11% of the RoM. The graph showing the historical saleable tonnes production rates by product is presented in Figure 7.

The most critical environmental issues and risks faced by Mooiplaats Colliery extend to ground and surface water quality and access to process water quantity (given Mooiplaats' reliance on availability of water from Usutu boreholes).

The previous Coal Resource Statement for the Mooiplaats Colliery was prepared and independently signed off by The Mineral Corporation (TMC) in September 2010. The Competent Person responsible for signing off the Coal Resource Statement was Mr M Stewartson (Pr.Sci.Nat. Reg. No.: 400119/93). For the purposes of complete reporting, the summary of differences between the September 2010 Coal Resource statement for Mooiplaats Colliery and the Venmyn Coal Resource Statement, as at 30th June 2011, is shown in Table 6.

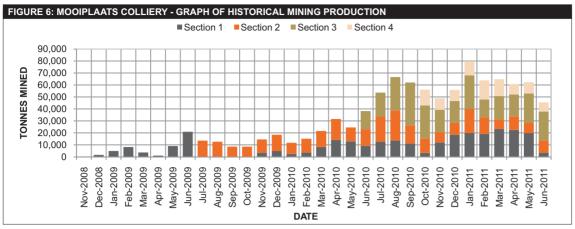
While Mooiplaats represents a relatively small scale operation, it is an important cash flow generator for CoAL during the development and construction of the larger Vele and Makhado projects.







#### **MOOIPLAATS COLLIERY**



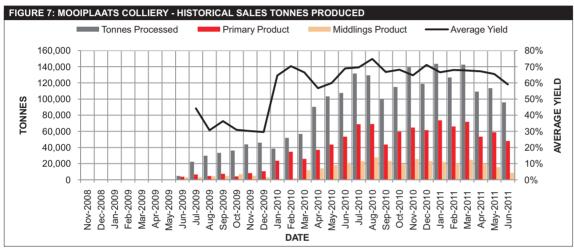


TABLE 6: MOOIPLAATS COLLIERY - DIFFERENCES BETWEEN PREVIOUS COAL RESOURCE STATEMENT AND CURRENT COAL RESOURCE STATEMENT

						20	10	20	11	DIFFE	RENCES	
PROJECT	CEAM	RESOURCE	FARM OR BLOCK	COAL TYPE	O/C or	GTIS	MTIS	GTIS	MTIS	GTIS	MTIS	COMMENTS
PROJECT	SEAW	CATEGORY	PARIN OR BLOCK	COALTIFE	U/G	(Mt)	(Mt)	(Mt)	(Mt)	(Mt)	(Mt)	COMMENTS
			Mooiplaats 290IT	Anthracitic		1.541	1.464	1.691	1.526	0.150	0.062	
			(North)	Lean Bituminous	U/g	6.153	5.846	5.969	5.387	-0.184	-0.459	
			( /	Bituminous		11.049	10.497	9.521	8.593	-1.528	-1.905	Decrease of 0.6Mt due to mining
		Measured	TOT	AL / AVE NORTH	BLOCK	18.743	17.807	17.181	15.506	-1.562	-2.301	depletions. Remaining decrease
		Measured	Klipbank 295IT &	Anthracitic		2.516	2.390	2.739	2.472	0.223	0.082	due to strict application of JORO
			Adrianople 296IT	Lean Bituminous	U/g	18.784	17.845	19.280	17.400	0.496	-0.445	classification distances.
			(South)	Bituminous		14.166	13.458	14.352	12.953	0.186	-0.506	classification distances.
			TOTA	AL / AVE SOUTH	BLOCK	35.466	33.693	36.371	32.824	0.905	-0.869	
2			TOTAL / AVE M	EASURED RESO	URCES	54.209	51.500	53.552	48.330	-0.657	-3.170	
Colliery			Mooiplaats 290IT	Anthracitic		0.000	0.000	0.484	0.391	0.484	0.391	
ŏ			(North)	Lean Bituminous	U/g	0.000	0.000	0.116	0.093	0.116	0.093	Classification strictly according
Mooiplaats	BU		( /	Bituminous		0.000	0.000	0.031	0.025	0.031	0.025	to JORC distances resulted in
		Indicated	TOTA	L / AVE NORTH	BLOCK	0.000	0.000	0.631	0.509	0.631	0.509	increase of Indicated resources
		maioatod	Klipbank 295IT &	Anthracitic		0.000	0.000	0.000	0.000	0.000		at the expense of Measured
			Adrianople 296IT	Lean Bituminous	U/g	0.021	0.019	0.503	0.406	0.482	0.387	resources. Also increase in
			( /	Bituminous		0.765	0.689	1.666	1.345	0.901		Indicated due to upgrading of
			TOTAL / AVE SOUTH BLOCK		0.786	0.708	2.169	1.751	1.383	1.043	Inferred through 2011 drilling.	
				NDICATED RESC	URCES	0.786	0.708	2.800	2.260	2.014	1.552	
		Inferred	Klipbank 295IT &	Anthracitic		0.000	0.000	0.000	0.000	0.000	0.000	Additional 2011 drilling in areas
			Adrianople 296IT	Lean Bituminous	U/g	0.004	0.003	0.000	0.000	-0.004	-0.003	of widely spaced drilling has
		illionou		Bituminous		1.251	1.064	0.228	0.170	-1.023	-0.894	resulted in the upgrading of
			TOT	AL / AVE SOUTH	BLOCK	1.255	1.067	0.228	0.170	-1.027	-0.897	Inferred resources.
			TOTAL / AVE	INFERRED RESC	URCES	1.255	1.067	0.228	0.170	-1.027	-0.897	inicited recourses.
		GRA	ND TOTAL / AVE N	IOOIPLAATS CO	LLIERY	56.250	53.275	56.580	50.760	0.330	-2.515	1% -5%

Notes

GTIS - At minimum seam thickness cutoff of 1.4m.

MTIS - At minimum seam thickness cutoff of 1.4m







Within the Woestalleen Complex area, CoAL has NOMRs grouped together into three projects, namely the Vuna Colliery and the Hartogshoop and Klipbank projects. Only the Vuna Colliery is considered a material coal asset for the purposes of this document. CoAL and Venmyn do not consider the Hartogshoop or Klipbank projects as material as they are both effectively mined out, with all remaining coal uneconomical to mine. The Woestalleen Complex also includes three coal processing plants (Woestalleen Plant) which process all of the run of mine (RoM) coal from the Vuna Colliery.

CoAL has a 49% interest in Vuna Mining Enterprises (Pty) Ltd (VME), which holds the Vuna Colliery NOMR. CoAL also has control of the operation of the Colliery through a management and sale agreement with VME.

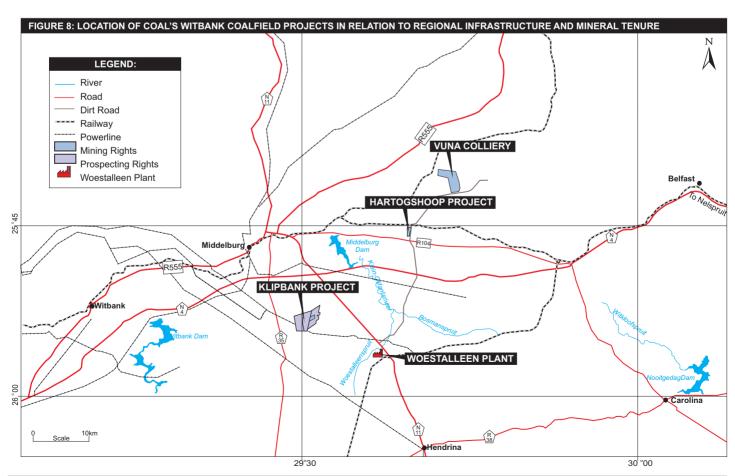
The Vuna Colliery is located in the Steve Tshwete District in the Mpumalanga Province of South Africa (Figure 8). The nearest town is Middelburg, 24km west of the mine. The Colliery is comprised of two portions (portions 2 and 5) on the farm Zonnebloem 396JS situated to the east northeast of Middelburg, Mpumalanga Province, all held under a NOMR in the name of VME.

The Vuna Colliery is an opencast bituminous coal mining operation situated in the Witbank Coalfield which mines the No.1 and No.2 seams at a combined average rate of ~255,000tpm (over the year to the 30th June 2011). The raw coal is transported approximately 37km to CoAL's Woestalleen Plant where it is washed, along with other external sources of coal, to produce an average of 190,000tpm saleable product in the form of export and locally sold thermal coal.

Both the No.1 and No.2 seams are developed on the Vuna Colliery property and are separated by a shale / siltstone parting with an average thickness of 0.46m. The No.2 Seam is the most extensively occurring seam in the Coal Resource area. The occurrence of both coal seams has been affected and limited by weathering, especially where the Selons River passes through the centre of the property. This, along with a palaeo-topographic high in the same area where the seams are not developed, has effectively separated the Vuna Colliery into two areas - the Northern and Southern Blocks. Dolerite is present in the southwestern corner of the Southern Block, where it has affected the quality of the No.1 Seam. There is no apparent displacement of the coal seams on either side of the dyke. Thin dolerite stringers are present within the coal in this area.

Prior to CoAL's involvement in the Vuna Colliery, historical drilling was undertaken by Anglo Coal SA Limited (Anglo Coal) and Shell Coal South Africa (Pty) Limited (Shell) on portions 2 and 5 of Zonnebloem 396JS. An electronic database of these exploration boreholes was obtained from the Council for Geoscience (CGS) by GeoCoal Services (GeoCoal). In 2006, GeoCoal assessed the historical data relating to 38 boreholes and prepared an associated report. In 2007, GeoCoal prepared a further report on 53 boreholes which included a Coal Resource Statement and an exploration programme and associated budget. It is unknown whether the boreholes proposed by GeoCoal in 2007 were ever drilled.

In 2007, NuCoal, which is now owned by CoAL, became involved in the Vuna Colliery. The company drilled an initial exploration programme between 2007 and 2008 with the purpose of defining Measured Coal Resources. A total of 157 diamond core holes were drilled. During 2008, NuCoal carried out a further drilling programme comprising 32 diamond core holes.









These holes were also drilled to prove Measured Coal Resources and were spaced at distances of less than 200m apart. No historical mining took place on this property prior to NuCoal opening up the boxcut in 2008.

CoAL has drilled a total of 93 holes on portions 2 and 5 of Zonnebloem 396JS since it became involved in the project (through NuCoal) in 2009 as a series of three drilling campaigns, two diamond core programmes and one percussion programme. All diamond drilling programmes were carried out with the purpose of defining Measured Coal Resources and the collar positions were located less than 200m apart.

All historical and recent exploration data, as well as recent production data has been used in the estimation of the resources and reserves of the Vuna Colliery. The summary of the independently declared resource and reserve estimates for Vuna are shown in Table 7 and Table 8, respectively. The location of the resources and reserves are presented in Figure 9 and Figure 10, respectively.

Mining of the No.1 and No.2 seams is carried out using opencast methods at Vuna Colliery, as a result of the relatively thick seams situated at shallow depths, which combine to form a favourable stripping ratio. Mining is carried out using conventional opencast rollover methods.

Mining commenced at Vuna Colliery in August 2008 with the opening of the first boxcut (Boxcut 1) in the West Pit or West Block. Vuna Colliery has produced an average RoM coal tonnage of approximately 255,000tpm for the 12 months to 30th June 2011 (Figure 11). A further two boxcuts were opened in the East Pit, namely East 1 and East 2, with mining commencing in the latter in May 2011. May 2011 was a record month, with more than 370,000t trucked to Woestalleen Plant. This tonnage included 334,362t of RoM from the remaining tonnes in the West Pit as well as the commencement of mining in the East 2 Pit.

The LOM plan indicates that the mine will continue to produce RoM coal from the East and East 2 Pits at rate of 133,000tpm RoM coal each. The East Pit is expected to be mined out by April 2012 and the East 2 Pit by September 2012.

CoAL is currently awaiting approval of the EMP for the North Block and permission, in accordance with the National Environmental Management Act (NEMA), to build a crossing over the stream that bisects the NOMR. Once this permission is obtained, the stream crossing will be built over an estimated period of two months. The first North Pit boxcut will be into coal within the following month. The plan is to open two boxcuts into the North Block in order to produce the required monthly RoM tonnage. The aim is to be able to supply up to 310,000tpm to the Woestalleen Plant from both the east and the north

The Vuna Colliery produces RoM coal only, which is then transported by truck, over a distance of 37km, to the Woestalleen Plant. This facility has been operational for over 30 years and has a capacity to treat 350,000tpm of RoM coal

The Woestalleen Plant has produced an average of 190,000tpm of saleable coal in the 12 months to 30th June 2011 (Figure 12). The plant treats Vuna Colliery's RoM coal and also has spare capacity to treat coal from other operations to meet its capacity of 350,000tpm. CoAL plans to increase the mining production rate from the opencast operation to meet the target of 310,000tpm. The balance of 40,000tpm will be sourced from other operations.

The most critical environmental issues and risks faced by Vuna Colliery and the Woestalleen Plant extend to ground and surface water quality.

The previous Coal Resource Statement for Vuna Colliery was prepared and independently signed off by Caracle Creek International Consulting (Pty) Ltd (CCIC) in its report of June 2010.

TABLE 7: VUNA COLLIERY - SUMMARY OF RESOURCE STATEMENT (30TH JUNE 2011) (INCLUSIVE OF RESERVES)

PROJECT	RESOURCE CATEGORY	COAL SEAM	O/C or U/G	GROSS TONNES IN SITU (GTIS)	GEOL. LOSSES (%)	TOTAL TONNES IN SITU (TTIS)	MINEABLE TONNES IN SITU (MTIS)
Vuna	Measured	No.1	O/c	2,441,431	5%	2,319,359	2,203,300
Colliery	Measureu	No.2	U/C	4,379,427	5%	4,160,456	3,952,400
Colliery	TOTAL	/ AVE MEA	SURED	6,820,858	5%	6,479,815	6,155,700
GRAND	TOTAL / AVE	VUNA CO	LLIERY	6,820,858	5%	6,479,815	6,155,700

	AIR	DRIED	RAW QUAL	ITIES	
CV (MJ/kg)	ASH (%)	VOL. (%)	FIXED CARBON (%)	SULPH. (%)	MOIST. (%)
21.78	27.66	24.36	44.29	0.66	3.67
21.87	24.79	22.94	48.02	0.82	4.23
21.84	25.82	23.45	46.69	0.76	4.03
21.84	25.82	23.45	46.69	0.76	4.03

#### Notes:

GTIS - At minimum seam thickness cutoff of 0.5m.

Rounding down of tonnages to 100t, 1,000t and 10,000t for Measured, Indicated and Inferred, respectively.

Weighted average qualities calculated on MTIS.

TABLE 8: VUNA COLLIERY COAL RESERVE STATEMENT (30TH JUNE 2011)

PROJECT	RESERVE CATEGORY	COAL SEAM	O/C or U/G	MINEABLE IN SITU RESERVE	ROM TONNAGE	PRIMARY PRODUCT SALEABLE TONNES	SECONDARY PRODUCT SALEABLE TONNES
Vuna	Proven	No.1	O/c	2,203,300	2,335,900	975,900	900,800
Collierv	Proveir	No.2	0/0	3,952,400	4,211,500	2,405,700	1,200,400
Colliery		TO	TAL / AVE	6,155,700	6,547,400	3,381,600	2,101,200
GRA	ND TOTAL / A	VE VUNA (	COLLIERY	6,155,700	6,547,400	3,381,600	2,101,200

PRIMA	RY PRO	DUCT Q	UALITIES (	@ CV=27.	2MJ/kg
CV (MJ/kg)	ASH (%)	VOL. (%)	FIXED CARBON (%)	SULPH. (%)	MOIST. (%)
27.20	13.46	30.33	52.18	0.35	4.04
27.20	11.79	27.28	56.36	0.43	4.56
27.20	12.27	28.16	55.15	0.41	4.41
27.20	12.27	28.16	55.15	0.41	4.41

#### Notes:

Rounding down of tonnages to 100t, 1,000t and 10,000t for Measured, Indicated and Inferred, respectively.

Weighted average qualities calculated on Primary Product Saleable Tonnes.

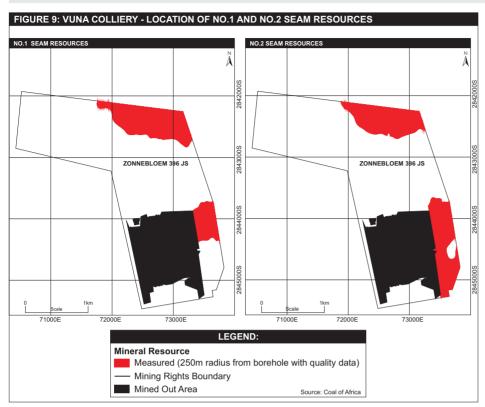
All tonnage information has been rounded to reflect the relative uncertainty in the estimates; there may, therefore, be small differences in the totals

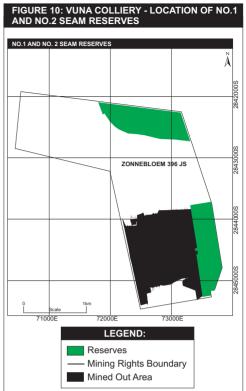


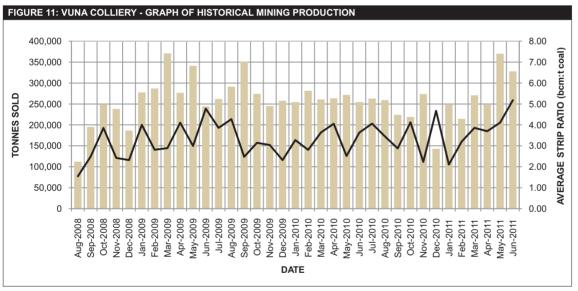


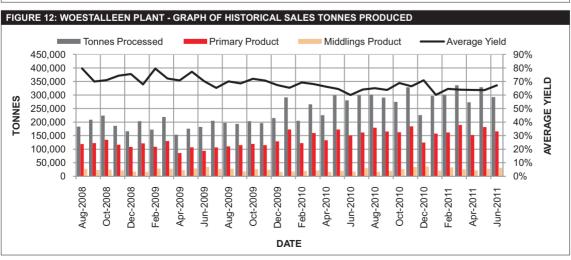


















According to CCIC, the Coal Resource Statement is correct as of 31st January 2010. The Competent Person responsible for signing off the Coal Resource Statement was Mr J Hancox (Pr.Sci.Nat., Reg. No. 400224/04). For the purposes of complete reporting the differences between the Coal Resource Statements of 31st January 2010 and 30th June 2011 are presented in Table 9. The Coal Resources have reduced by 42% primarily as a result of the mining of 4.39Mt during this 17 month period in the South Block. A marginal increase is present in the North Block due to the recent borehole drilling results.

Like Mooiplaats, Vuna represents a relatively small scale operation. However, it is similarly an important cash flow generator for CoAL during the development and construction of the larger Vele and Makhado projects.

TABLE 9: VUNA COLLIERY - DIFFERENCES BETWEEN PREVIOUS COAL RESOURCE STATEMENT AND CURRENT COAL RESOURCE STATEMENT

					20	10	20	11	DIFFE	RENCES		
PROJECT	RESOURCE CATEGORY	FARM OR BLOCK	COAL SEAM	O/C or U/G	GTIS (Mt)	MTIS (Mt)	GTIS (Mt)	MTIS (Mt)	GTIS (Mt)	MTIS (Mt)	СОММЕ	ENTS
		North	No.1	O/c	3.543	3.189	1.833	1.654	N/A	N/A	Increased by	9% due to
<u>&gt;</u>		NOILII	No.2	õ	3.343	5.103	2.046	1.846	N/A	N/A	additional drilli	
Colliery	Measured	TOTAL /	AVE NORT	H BLOCK	3.543	3.189	3.879	3.501	0.336	0.312	auditional uniii	ng.
	Measured	South	No.1	O/c	8.230	7.407	0.608	0.549	N/A	N/A	Decrease of	4 30Mt duo
Vuna		South	No.2	0/0	0.230	7.407	2.334	2.106	N/A	N/A	to mining deple	
>		TOTAL /	AVE SOUT	H BLOCK	8.230	7.407	2.942	2.655	-5.288	-4.752	to mining depic	elions.
	TOTAL /	AVE MEAS	URED RES	SOURCES	11.773	10.595	6.821	6.156	-4.952	-4.440		
	GRAND	TOTAL / A	VE VUNA C	OLLIERY	11.773	10.595	6.821	6.156	-4.952	-4.440	-42%	-42%

Notes:

GTIS - At minimum seam thickness cutoff of 0.5m.







#### **VELE COLLIERY**

CoAL has acquired a 100% interest in Limpopo Coal Company (Pty) Ltd (Limpopo Coal), the sole owner of the Vele Colliery NOMR. CoAL has also acquired a 100% interest in Silkwood Trading 14 (Pty) Ltd, the sole owner of an adjacent NOPR.

The Vele Colliery is situated in the magisterial district of Musina in the Limpopo Province of South Africa (Figure 13). The project area is bounded in the north by the Limpopo River, which defines the international border with Zimbabwe. The easternmost boundary of the Mapungubwe National Park (Mapungubwe) is situated approximately 5km to the west of the western most boundary of the Vele Colliery area. The Mapungubwe World Heritage Site (Mapungubwe Hill) is situated approximately 20km to the west of the western most boundary of the Vele Colliery area. The nearest town is Musina, situated approximately 40km to the southeast of the Vele Colliery area.

A NOMR has been granted over 8,662.7ha of the greater part of the Vele Colliery area, over the farms Bergen Op Zoom 124MS, Semple 155MS, portions 3, 4, 5, 6, 13, 14 and the remaining extent of Overvlakte 125MS and Voorspoed 836MS. The remainder of the Project area is held under a NOPR over the farm Alyth 837MS.

The Vele Colliery is an advanced development project, which aims to develop an initial opencast mine producing approximately 1Mtpa of coking coal, potentially ramping up to approximately 4Mtpa of saleable coking coal with the subsequent development of an underground mine.

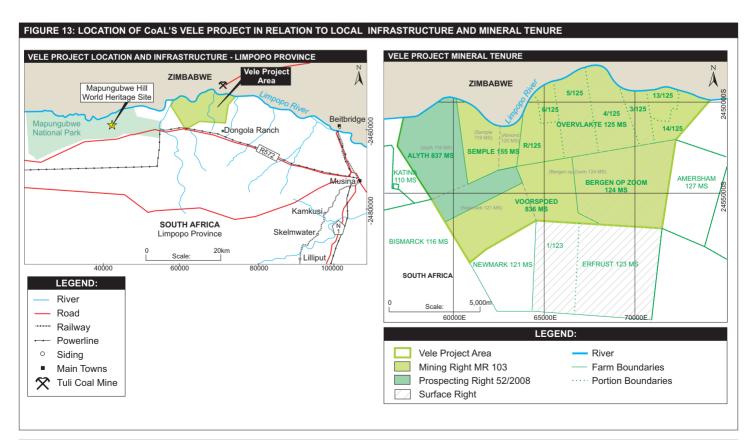
The Vele Colliery falls within the Limpopo Coalfield (which forms part of the greater Tuli Coalfield). The Main Coal Zone is present in the Madzaringwe Formation, which is approximately 15m thick. The Main Coal Zone comprises interlaminated carbonaceous shales, mudstones and coal plies.

The Top, Middle and Bottom seams are the three main coal zones that have been recognised within the Vele Colliery area. The Top and Bottom seams can be further differentiated into Top Lower, Top Middle and Top Upper, Bottom Lower and Bottom Upper. The Top Middle and Top Upper Seams are not considered economic.

Individual sub-seams can be correlated over the entire area. Correlation is aided by a distinctly bioturbated marker between the Bottom and Middle seams. The Bottom Seam lies directly over the glacial Dwyka-aged sediments or granite-gneiss basement. The coal seams generally dip gently at not more than 2°N, but this can increase to 10°N near faults. A series of dolerite dykes trend east-west over the project and the largest is over 15m thick. The dykes do not appear to have caused any displacement but have devolatolised the coal in their vicinity.

The existence of coal in the Vele Colliery area has been known since the early 1900s; however, no large-scale exploration occurred until Southern Sphere Mining and Development Company Limited (Southern Sphere), a division of BHP-Utah Mining, undertook an exploration programme in the late 1970s and early 1980s. This exploration included core and percussion borehole drilling, geophysical down-hole logging, surface magnetic and gravity surveys.

During the period 1979 to 1983, Southern Sphere drilled a total of 61 boreholes on the farms Overvlakte 125MS and Almond 120MS. In 1984. Southern Sphere drilled 36 Large Diameter Drilling (LDD) holes at three sites corresponding to its initial pilot holes, SL18, SL31 and SL32 on the farm Overvlakte 125MS, portion 5. This coal was processed at the-then Iscor Ltd (Iscor) in Pretoria for washing and coking testing. These results are not available, but old Southern Sphere reports suggest that the results were "conclusive and encouraging". There are no records of any further exploration within the Vele Colliery area subsequent to the Southern Sphere programme and prior to the work undertaken by CoAL.







# INDEPENDENT TECHNICAL STATEMENT FOR **COAL OF AFRICA**

as at 18th September 2011



# **VELE COLLIERY**

CoAL contracted MSA GeoServices (Pty) Ltd (MSA) to undertake a programme of exploration drilling between January and June 2008, and a total of 73 boreholes were completed.

Subsequent to the MSA programme, CoAL drilled a further 115 diamond core vertical boreholes, five inclined boreholes to test fault geometries. nine boreholes for water and 31 LDD boreholes for bulk sampling purposes. To-date a total of 188 diamond core boreholes and 31 LDD holes have been completed by CoAL. Aerial magnetic and radiometric surveys have also been undertaken.

All historical and recent exploration data has been used in the estimation of the resources and reserves of the Vele Colliery. The summary table of the independently declared resource and reserve estimates for Vele are shown in Table 10 and Table 11, respectively. The location of the resources and reserves are presented in Figure 14 and Figure 15, respectively.

		AIR DRIE	D RAW	AIR DRIED RAW QUALITIES		
YIELD	S	ASH	VOL.	FIXED	SULPH.	MOIST.
(%)	(MJ/kg)	(%)	(%)	(%)	(%)	(%)
	11.78	58.99	17.77	21.32	2.14	1.92
	18.54	41.13	24.58	32.60	3.02	1.69
	14.10	52.09	19.94	26.29	1.61	1.69
	16.63	45.46	22.59	30.48	1.70	1.46
	15.91	47.47	21.85	29.10	1.82	1.56
	11.92	58.21	17.98	21.89	2.45	1.93
	18.51	41.05	24.55	32.68	2.96	1.72
	15.58	48.22	21.76	28.45	1.67	1.58
	17.23	43.75	23.03	31.77	1.46	1.44
	16.57	45.60	22.45	30.42	1.67	1.52
	11.69	58.84	17.97	21.32	2.65	1.87
	17.81	42.57	24.05	31.64	2.33	1.72
	16.21	46.49	22.54	29.42	1.87	1.56
	16.95	44.39	22.88	31.25	1.52	1.46
	15.72	47.82	21.83	28.74	1.91	1.60
	15.77	47.78	21.74	28.85	1.90	1.63
	15.42	48.47	21.54	28.48	1.68	1.49
	15.63	48.04	21.66	28.71	1.82	1.57

	Bottom Lower	85,831,759	10%	77,248,583	62,402,600	16.63	45.4
TOTAL / AVE	TOTAL / AVE MEASURED RESOURCES	158,035,063	10%	142,231,557	94,241,400	15.91	47.4
	Top Lower	72,022,653	15%	61,219,255	20,091,000	11.92	58.2
potocipal	Middle	42,397,071	15%	36,037,510	11,662,000	18.51	41.0
IIIIIIII	Bottom Upper	102,442,104	15%	87,075,788	25,010,000	15.58	48.2
	Bottom Lower	209,992,360	15%	178,493,506	143,535,000	17.23	43.7
TOTAL / AVE	TOTAL / AVE INDICATED RESOURCES	426,854,188	15%	362,826,060	200,298,000	16.57	45.6
	Top Lower	57,308,561	20%	45,846,849	16,920,000	11.69	58.8
7040	Middle	28,333,157	70%	22,666,526	7,380,000	17.81	42.5
	Bottom Upper	57,411,178	20%	45,928,942	12,520,000	16.21	46.4
	Bottom Lower	75,878,679	20%	60,702,943	38,270,000	16.95	44.3
TOTAL / AV	TOTAL / AVE INFERRED RESOURCES	218,931,575	70%	175,145,260	75,090,000	15.72	47.8
GRANI	GRAND TOTAL / AVE OPENCAST	N/A		A/N	229,641,800	15.77	47.7
GRAND TO	GRAND TOTAL / AVE UNDERGROUND	N/A		N/A	139,987,600	15.42	48.4
GRAND TO	GRAND TOTAL / AVE VELE PROJECT	803,820,826	15%	680,202,877	369,629,400	15.63	48.0

TABLE 11 : VELE COLLIERY COAL RESERVE STATEMENT (31ST AUGUST 2011)

MTIS - At minimum seam thickness of 1.4m and maximum seam thickness cutoff of 4.5m for underground mining, and only Bottom Lower Seam considered for underground mining.

PRIME PRODUCT QUALITIES	PRIME PRO	2	DOC	T QUALITII	S	
	c۸	ASH	VOL.	FIXED	SULPH.	MOIST.
É_	(MJ/kg)	(%)	(%)	CARBON (%)	(%)	(%)
	34.79	29.84	1.79	1.09	1.46	52.20
	34.69	29.97	1.73	1.02	1.54	52.58
	33.26	29.45	1.80	0.98	1.45	52.41
	34.02	29.91	1.71	1.15	1.85	53.51
	34.27	29.86	1.74	1.08	1.63	52.85
	33.19	30.16	1.71	0.96	1.77	54.87
	34.16	28.62	1.71	1.16	1.96	49.74
	34.85	29.64	1.63	1.14	1.81	51.52
	34.21	29.56	1.67	1.09	1.83	52.09
	34.25	29.77	1.72	1.08	1.69	52.62

O.IECT ARFA	RESERVE	0/C or 11/G	MINEABLE TONNES IN	ROM	SALEABLE	
· -	CATEGORY		SITU (MTIS)	TONNAGE	PRODUCT	
			31,339,000	33,279,000	9,983,000	_
	Orohob lo	Ç	67,895,000	72,098,000	21,629,000	
	Tionable	5	25,062,000	26,613,000	7,984,000	
			76,870,000	81,629,000	24,488,000	
	AVE OPENCA	TOTAL / AVE OPENCAST RESERVES	201,166,000	213,619,000	64,084,000	
_			38,335,000	24,996,000	8,248,000	
_	Probable	6/N	30,317,000	19,768,000	6,523,000	
_			62,891,000	41,008,000	13,532,000	
	UNDERGRO	TOTAL / AVE UNDERGROUND RESERVES	131,543,000	85,772,000	28,303,000	
	OTAL / AVE \	GRAND TOTAL / AVE VELE COLLIERY	332,709,000	299,391,000	92,387,000	

he declared coal reserves is based on the measured and indicated mineral resources only

All tonnage information has been rounded to reflect the relative uncertainty in the estimates; there may, therefore, be small differences in the totals.



TABLE 10 : VELE COLLIERY - SUMMARY OF RESOURCE STATEMENT (31ST AUGUST 2011) (INCLUSIVE OF RESERVES)

12,847,808 36,736,504

40,818,338 14,275,342

Bottom Upper Fop Lower Middle

Measured

Vele Project

ONNES

**CONNES** 

SEAM

RESOURCE CATEGORY



5

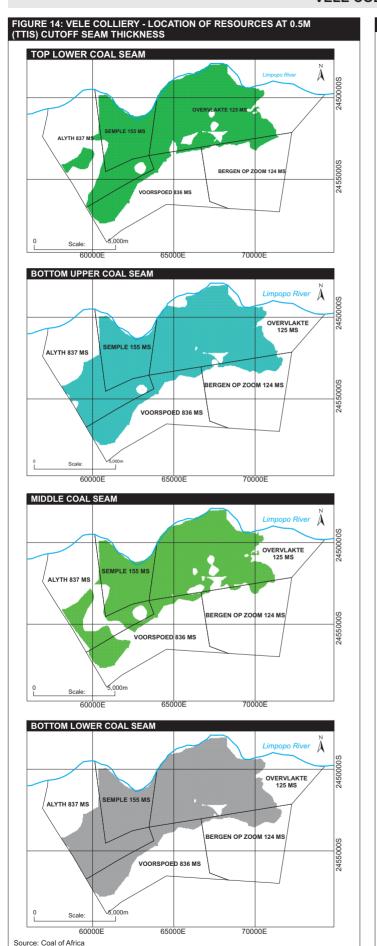
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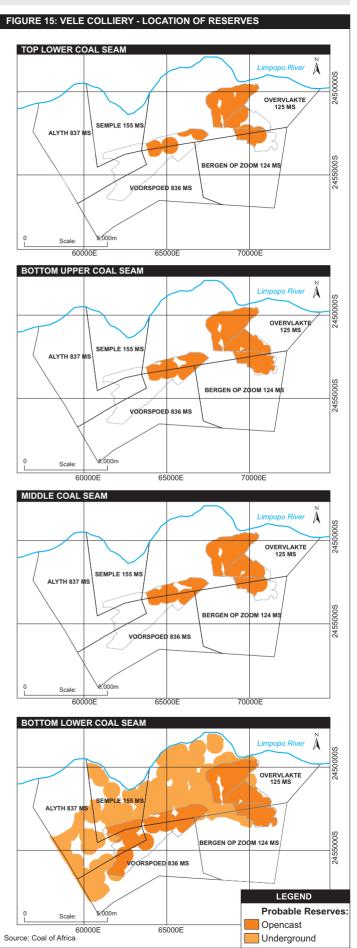
GTIS & TTIS - At minimum seam thickness cutoff of 0.5m.

Notes



### **VELE COLLIERY**











#### **VELE COLLIERY**

No mining has taken place at the Vele Colliery. However, a Conceptual Study was completed by GRD Minproc in 2009. It is anticipated that the Vele Colliery will initially mine coal by opencast methods to produce coking coal for the metallurgical industry. At a later stage, with the addition of underground production, it may be possible to produce a middlings product for power generation in addition to the coking coal.

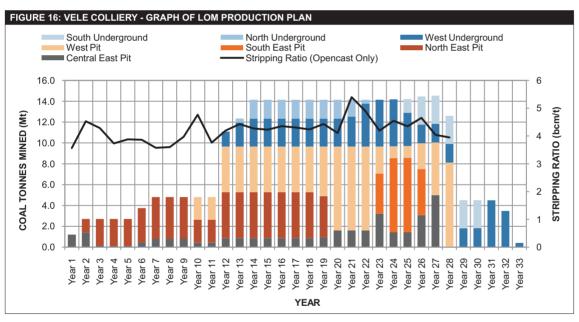
Given the absence of secured offtake agreements for the product at the final production rate, scheduling issues with respect to the supply of electricity and the installation of the rail link between Musina and the Vele Colliery, a phased project development approach is envisaged for the Vele Colliery. The initial phase will comprise restricted opencast mining of the East Pit only. Should market conditions prove favourable, then the subsequent phase may comprise expanded operations including underground development.

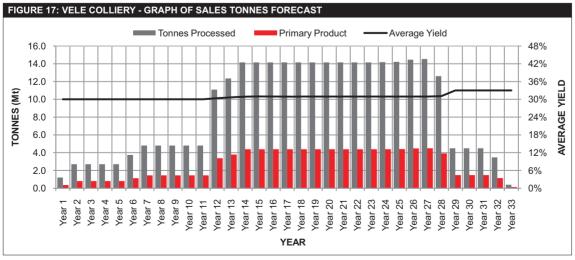
Underground mining would only target the Lower Seam, using a bordand-pillar mining pattern. Underground mining has only been considered suitable in those areas where the depth of the roof of the Lower Seam generally exceeds 60m depth due to the weak coal strength and poor overburden stability.

It is important to note that the LOM schedule includes Inferred Coal Resources (~35Mt) and a small portion of unclassified blocks, in addition to the Coal Reserve blocks (Figure 16). This is due to the fact that, as a consequence of mining the Coal Reserve blocks, some of these blocks have to be mined to access the next Reserve block. However, most of these mining blocks have been scheduled towards the end of mine life.

The coal will initially be processed at the temporary modular plant that has been erected on-site and is ready for commissioning. It is anticipated that after five years, should market conditions prove favourable, production would ramp up to accommodate the permanent plant (Figure 17).

The current base case production plan is to produce a 12% ash coking coal product and no middlings. The different options on producing a high quality coking coal and a suitable export quality thermal coal or domestic thermal coal will be evaluated in the first six to eight months of production. This period would, therefore, constitute a trial mining phase, aimed at understanding the quality and properties of the coal and to optimise the coal extraction of this









# INDEPENDENT TECHNICAL STATEMENT FOR COAL OF AFRICA

as at 18th September 2011



### **VELE COLLIERY**

No offtake agreements or contracts are in place for the Vele coal currently; however, ArcelorMittal South Africa Ltd (ArcelorMittal) has signed a Memorandum of Understanding with CoAL, which could result in an offtake agreement. It is anticipated that any coking coal not sold to ArcelorMittal, will be exported through the port of Maputo in Mozambique (approximately 750km from Vele). When a market is developed for the middling products, this material will conceivably be exported or sold domestically in part or in its entirety via road and rail. Until such time as a market is developed for the middlings, these will be disposed of in the open pit.

The most critical environmental risk faced by the Vele Colliery relate to the impact of mining on the outstanding universal value of the Mapungubwe World Heritage Site. A further concern extends to the long-term impacts on ground water quality. As a consequence of an appeal of the issued integrated WUL, CoAL has stopped all activities requiring the use of water at the Vele Project. The appeal automatically suspends the WUL, but CoAL has made representations to the Minister of Water Affairs to lift the suspension, which she is authorised to do.

The previous Coal Resource Statement for the Vele Colliery was prepared and independently signed off by TMC in September 2010. The Competent Person responsible for signing off the Coal Resource Statement is Mr M Stewartson (Pr.Sci.Nat. Reg. No.: 400119/93).

For the purposes of complete reporting, the summary of differences between the September 2010 and June 2011 Coal Resource Statements is shown in Table 12

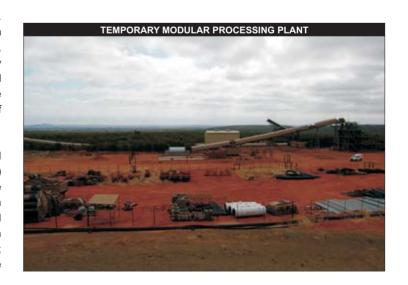
Since no mining or additional exploration has taken place since September 2010, the current Coal Resource Statement is expected to be very similar to that of TMC's in September 2010. It is noted that the GTIS estimates are indeed very similar, and the minor differences noted between the Coal Resource Statements are most likely due to the slightly modified Coal Resource boundaries as a result of better sub-crop definition subsequent to the September 2011 modelling and Coal Resource estimation. These differences are not considered, by Venmyn, as material.

There are, however, significant differences between the MTIS estimates. The lower current estimates for MTIS are a result of the application of a minimum and maximum mining height of 1.4m and 4.5m, respectively, applied to the underground Coal Resources, and consideration of only the Bottom Lower Seam for underground mining. No underground Coal Resources for any of the other seams have been considered in the current MTIS estimates. In 2010, TMC reported MTIS in consideration of all seams, even at underground depths.

In Table 12, a comparison is made between TMC's MTIS estimates and comparable tonnages (for all seams, and without applying any cutoffs) from the current model, in order to demonstrate that, on a comparable basis, the differences are in fact significantly less than is apparent when comparing TMC's and Venmyn's MTIS estimates. It is noted that TMC did calculate 'Selected Resources' amounting to 466.1MTIS, presumably in consideration of only the Bottom Lower Seam for underground mining; however, the detailed Coal Resource Statement and cutoffs used were not documented.

The Vele Colliery represents an important developmental project for CoAL, and may become the company's first mine to produce a coking coal product. Due to the history of this project, and the environmental and heritage-related sensitivities associated with the project, the development of Vele will have to set new examples in environmental management and control to reduce impacts to a minimum.











# **VELE COLLIERY**

			. 4	2010		2011		DIFFE	DIFFERENCES	
			GROSS	MINEABLE	GROSS	TMC	MINEABLE	GROSS	MINEABLE	
PPOIECT		MEAM	TONNES	TONNES IN	TONNES	COMPARABLE	TONNES IN	TONNES	TONNES IN	WE NOT CO
2	CATEGORY		(GTIS)	SITU (MTIS)	(GTIS)	TONNES IN	(MTIS)	(GTIS)	(MTIS)	
			(Mt)	(IMIC)	(Mt)	9110	(Mt)**	(Mt)	(Mt)	
		Top Lower	18.603	16.743	17.110	15.093	8.379	-1.493	-8.364	-8.364 Decrease of 13.4Mt GTIS due to refined geological model. Decrease of
		Middle	16.140	14.527	14.275	12.922	7.220	-1.865	-7.307	-7.307 70.7Mt MTISdue to the application of 0.5m cutoff, maximumminingheight
	Measured	Bottom Upper	44.553	40.097	40.818	31.137	16.240	-3.735	-23.858	of 4.5m for underground mining and only Bottom Lower Seam considered
		Bottom Lower	92.127	82.914	85.832	69.329	62.403	-6.295	-20.511	-20.511 for underground mining. There is only a 25.8Mt difference between the
	TOTAL / AVE MEA	TOTAL / AVE MEASURED RESOURCES	171.423	154.281	158.035	128.482	94.241	-13.388	-60.040	-60.040 2010 MTIS and the TMC Comparable Tonnes for 2011.
10		Top Lower	74.969	63.724	72.023	59.113	20.091	-2.946	-43.633	-43.633 Decrease of 26.1Mt GTIS due to refined geological model. Decrease of
əjo	7	Middle	49.144	41.772	42.397	36.592	11.662	-6.747	-30.110	-30.110 219.1MtMTISdue to the application of 0.5m cutoff, maximumminingheight
Pr	Haicated	Bottom Upper	107.973	91.777	102.442	88.249	25.010	-5.531	-66.767	-66.767 of 4.5m for underground mining and only Bottom Lower Seam considered
əjə		Bottom Lower	220.849	187.721	209.992	178.959	143.535	-10.857	-44.186	-44.186 for underground mining. There is only a 22.1Mt difference between the
٨	TOTAL / AVE INDI	TOTAL / AVE INDICATED RESOURCES	452.935	384.994	426.854	362.912	200.298	-26.081	-184.696	-184.696 2010 MTIS and the TMC Comparable Tonnes for 2011.
		Top Lower	58.317	46.654	57.309	41.948	16.920	-1.008	-29.734	-29.734 Increase of 29.8Mt GTIS due to refined geological model. Decrease of
	Correction	Middle	33.597	26.878	28.333	19.511	7.380	-5.264	-19.498	-19.498 84.7Mt MTISdue to the application of 0.5m cutoff, maximumminingheight
	ם ביי	Bottom Upper	45.362	36.289	57.411	37.440	12.520	12.049	-23.769	-23.769 of 4.5m for underground mining and only Bottom Lower Seam considered
		Bottom Lower	51.834	41.467	75.879	39.480	38.270	24.045	-3.197	-3.197 for underground mining. There is only a 12.9Mt difference between the
	TOTAL / AVE INFL	TOTAL / AVE INFERRED RESOURCES	189.110	151.288	218.932	138.380	75.090	29.822	-76.198	-76.198 2010 MTIS and the TMC Comparable Tonnes for 2011.
	GRAND TOT	GRAND TOTAL / AVE OPENCAST	332.767	285.632	N/A	250.867	229.642	N/A	-55.990	N/A20%
	GRAND TOTAL / A	GRAND TOTAL / AVE UNDERGROUND	480.701	404.931	N/A	378.907	139.988	N/A	-264.943	%9 <del>-</del> N/N
	GRAND TOTAL / .	GRAND TOTAL / AVE VELE PROJECT	813.468	690.563	803.821	629.774	369.629	-9.647	-320.934	-1%
Noto:										

Noto:

\* All seams not at opencastable depths were considered as underground resources by TMC in the reporting of MTIS.

\*\* Only the Bottom Lower Seam was considered, by Venmyn, for the underground resources in the reporting of MTIS. In addition a minimum and maximum seam height of 1.4m and 4.5m, respectively were applied. of a number of additional modifying factors. These tonnages are not MTIS tonnes.

TMC did report Total Selected Resources of 466.111Mt MTIS in its September 2011 report, presumably considering only Bottom Lower for underground mining; however, no additional losses were applied.



TABLE 12: VELE COLLIERY - DIFFERENCES BETWEEN PREVIOUS COAL RESOURCE STATEMENT AND CURRENT COAL RESOURCE STATEMENT





CoAL is the 100% owner of the Makhado Project, which is currently CoAL's anchor project and most advanced development project in the Soutpansberg Coalfield area, within which CoAL has consolidated a significant portfolio of mineral licences prospective for coal (Figure 18).

The Makhado Project is situated in the magisterial district of Vhembe, in the Limpopo Province of South Africa (Figure 18). The nearest town is Louis Trichardt, situated approximately 35km to the south of the Makhado Project area. The town of Musina is located approximately 50km north of the Makhado Project area. The village of Mudimele is located within the Makhado Project area on the farm Fripp 645MS (Figure 19).

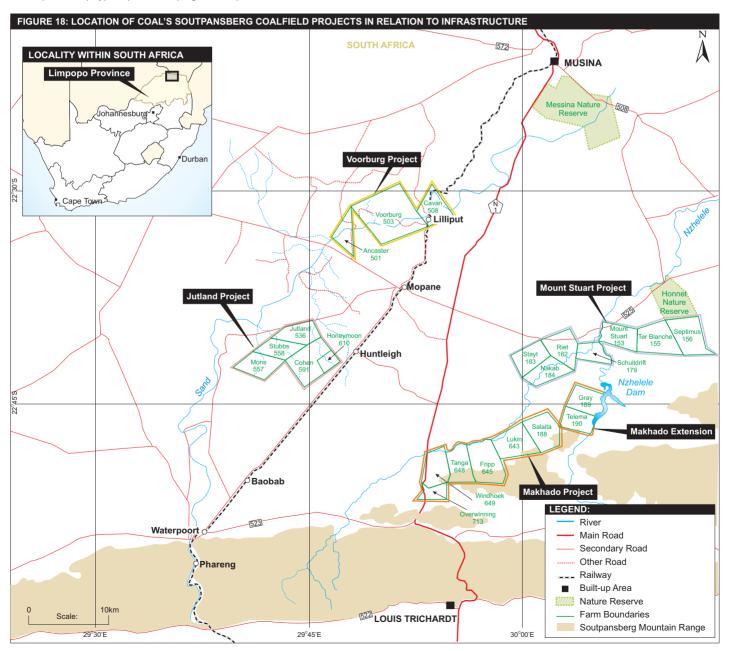
CoAL holds a NOPR over the farms Fripp 645MS and Tanga 648MS. In addition, CoAL holds NOPRs on the farms Overwinning 719MS, Windhoek 649MS and Lukin 643MS by virtue of an Exchange of Prospecting Rights Agreement between CoAL, Regulus Investment (Pty) Ltd (Regulus), Chapudi Coal (Pty) Ltd (Chapudi Coal) and Kwezi Mining and Exploration (Pty) Ltd (Farm Swap Agreement).

The agreement also transferred the NOPRs on the farms Salaita 188MT, Gray 189MT and Telema 190MS to CoAL's wholly owned subsidiary Regulus.

The Department of Mineral Resources (DMR) accepted a NOMR application by CoAL on the farms Windhoek 649 MS, Tanga 648 MS, Fripp 645 MS, Lukin 643 MS and Salaita 188 MT (the Makhado Project) on the 25th of February 2011. The right is expected to be granted by July 2012, pending the outcome of the review of the Environmental Impact Assessment (EIA) and scoping report that were submitted by CoAL shortly after the application.

The greater Soutpansberg Coalfield has been named under three subdivisions:-

- the Mopane Coalfield between the towns of Mopane and Waterpoort in the west:
- the Tshipise Coalfield stretching east of Mopane in the area of the town of Tshipise; and
- the Pafuri Coalfield terminating at the northern limit of the Kruger National Park in the east.









The region is faulted, becoming more severe in the east, and has throws of between 60m and 200m, leading to the formation of horst and graben structures. A further subordinate set of faults orientated at right angles to that mentioned above, subdivides the eastern portion of the coalfield region into a set of irregular blocks.

The Makhado Project area is located in the Mopane Sector of the Soutpansberg Coalfield. Within the Makhado Project area, a number of seams occur within a 30m to 40m thick carbonaceous zone of the Madzaringwe Formation. Six potential mining horizons (seams) have been identified by CoAL and named Upper Seam, Middle Upper Seam, Middle Lower Seam, Bottom Upper Seam, Bottom Middle Seam and Bottom Lower Seam. The Bottom Middle Seam usually comprises predominantly mudstone and for this reason it has not been included in the resource base, however in certain areas it is sufficiently coaly to be considered a potential mining target.

The Soutpansberg Coalfield was extensively explored by Iscor in the 1970s and 1980s. The full Iscor dataset, containing information from approximately 1,250 boreholes, was purchased by CoAL in 2007 from Exxaro Resources Ltd (Exxaro). A total of 316 diamond core boreholes have been drilled by Iscor within the Makhado Project area. No historical mining has taken place within the Makhado Project area, however a bulk sample pit (box cut) was excavated on the farm Fripp 645MS by Iscor during its exploration programme. The results of the testwork that Iscor may have conducted is not available.

potential open pit areas.

Recent exploration has been conducted within the Makhado Project area by both Rio Tinto Limited (Rio Tinto) and CoAL. Data from six boreholes drilled

and, where the sill cuts through the Coal Zone, the seams have been burnt.

The frequency of dolerite dykes is unknown; however examination of

aeromagnetic data suggests there are relatively few magnetic dykes within the

over the Makhado Project area, by Rio Tinto, were provided to CoAL as part of the Farm Swap Agreement. These boreholes were all cored boreholes. Exploration drilling by CoAL commenced in 2007 on the farm Fripp 645MS. To-date, CoAL has drilled a total of 214 boreholes within the Makhado Project area. Of this, 172 boreholes were diamond core boreholes. In addition, 24 LDD boreholes, 13 open-hole or percussion holes and 5 geotechnical holes were drilled by CoAL. Aerial magnetic and radiometric surveys have also been undertaken. Between August 2010 and April 2011, CoAL excavated a box cut on the farm Tanga 648MS in order to extract a bulk sample. This bulk sample was required to confirm the coal and coking product properties used in the feasibility study, and to test various processing options for the coal. A 10% ash product has been tested in the pilot coking ovens of ArcelorMittal at their Newcastle and Vanderbijlpark plants, the initial results of which indicate good coking potential.

All historical and recent exploration data has been used in the estimation of the resources of the Makhado Project. The summary table of the independently declared resource estimate for the Makhado Project is shown in Table 13. The location of the resources are presented in Figure 20.

FIGURE 19: LOCATION OF COAL'S MAKHADO PROJECT IN RELATION TO LOCAL INFRASTRUCTURE AND MINERAL TENURE Makhado Extension LUKIN Built-up Area Mining Rights Application Main Road Prospecting Rights CoAL Surface Rights Other Road Dam

It is important to note that while the coal units are referred to as "seams" they are effectively selected, potential mining horizons within the coal bearing-package. As such, they may be subject to future re-evaluation and re-selection, resulting in changes to the stated resources.

All seams comprise interbanded carbonaceous mudstones and coal. The coal component is usually bright and brittle and contains a high proportion of vitrinite. The seams dip northwards at approximately 12°. A major fault trending northwest-southeast has been identified on the farm Lukin 643 MS. It has displaced the Coal Zone and offset the sub-crop. Major faults also mark the western and eastern limits of the resource area along strike. The frequency of smaller scale faulting is not well understood. Drilling indicates that a dolerite sill up to 50m in thickness, transgresses from a position above the Coal Zone on the farms Tanga 648MS and Lukin 643MS to a stratigraphic level below the Coal Zone on the farm Fripp 645MS. Coal in proximity to the sill has been devolatolised No commercial mining has taken place at the Makhado Project. However, a Definitive Feasibility Study (DFS) is currently being conducted on the Makhado Project in order to define the planned mining and processing methodologies and schedules for the Makhado Project. The DFS is expected to be completed by end 2011.

The DFS is being undertaken in consideration of an opencast mining operation utilising a conventional truck and shovel fleet and a conventional processing plant producing a 10% ash coal product (with no middlings product) as the base case plan.

The resource has been divided into three separate pit areas namely the West Pit, the Central Pit and the East Pit. The East and Central pits are separated by a fault with a displacement of approximately 50m. The Central and West pits are separated by an area of sterilised coal associated with the village of Mudimele.







						AIR DR	IED WAS	HED QU	AIR DRIED WASHED QUALITIES @ RD=1.40	® RD=1.40	
	GROSS	GEOL.	TOTAL	MINEABLE	YIELD	S	ASH	VOL	FIXED	SULPH, MOIST	MOIST
SEAM	TONNES IN SITU (GTIS)	LOSSES (%)	TONNES IN SITU (TTIS)	TONNES IN SITU (MTIS)	(%)	(MJ/kg)	(%)	(%)	CARBON (%)	(%)	(%)
Upper	52,253,761	10%	47,028,385	37,389,800	11.84	31.11	10.70	30.25	(2.1)	1.15	0.74
Middle Upper	108,673,067	10%	97,805,760	70,329,100	16.64	31.36	10.04	30.26		1.28	0.64
Middle Lower	56,142,465	10%	50,528,219	40,805,700	25.75	31.32	10.29	30.01		1.19	09.0
Bottom Upper	107,886,857	10%	97,098,171	71,016,000	27.04	31.86	8.87	29.77		0.93	0.64
Bottom Lower	120,069,274	10%	108,062,347	81,682,900	17.42	31.77	9.20	29.87		96.0	0.63
EDRESOURCES	445,025,424	10%	400,522,882	301,223,500	19.94	31.55	9.65	30.00		1.08	0.65
Upper	48,970,815	15%	41,625,193	17,992,000	10.17	31.47	9.93	29.48		1.13	0.59
Middle Upper	76,370,479	15%	64,914,907	18,944,000	15.08	31.54	9.70	29.92		1.20	0.55
Middle Lower	34,267,583	15%	29,127,446	12,295,000	24.55	31.35	10.19	28.98		1.19	0.58
Bottom Upper	81,777,834	15%	69,511,159	22,534,000	26.04	31.88	8.80	29.23		0.95	0.62
Bottom Lower	86,789,327	15%	73,770,928	27,850,000	16.83	31.86	9.00	29.81		1.02	09.0
EDRESOURCES	328,176,038	15%	278,949,632	99,615,000	18.33	31.67	9.40	29.54		1.08	0.59
Upper	36,304,391	20%	29,043,513	2,840,000	12.17	31.57	9.74	29.02		1.10	0.49
Middle Upper	20,372,039	20%	16,297,631	94,000	15.38	31.90	8.92	30.34		1.17	0.46
Middle Lower	7,144,079	70%	5,715,263	800,000	42.18	31.28	10.39	27.49		1.33	0.94
Bottom Upper	19,621,457	70%	15,697,166	1,904,000	36.14	31.99	8.64	28.63		1.17	0.72
Bottom Lower	23,091,394	20%	18,473,115	4,680,000	18.87	32.25	8.02	30.54		1.50	0.75
ED RESOURCES	106,533,360	70%	85,226,688	10,318,000	21.99	31.94	8.80	29.53		1.31	0.69
AVE OPENCAST	879,734,822	13%	764,699,202	411,156,500	19.60	31.59	9.57	29.88		1.09	0.63

OTAL/AVEMEASUREDRESOUR

Measured

RESOURCE CATEGORY

OTAL / AVE INDICATED RESOUR

Indicated

Makhado Project Area

Inferred

TOTAL / AVE INFERRED RESOUR

**GRAND TOTAL / AVE OPE** 

GTIS & TTIS - At minimum seam thickness cutoff of 0.5m.

MTIS - At maximum opencast mining depth of 200m. No underground mining considered. Excludes all coal with volatiles <20%. Rounding down of tonnages to 100t; 1,000t and 10,000t for Measured, Indicated and Inferred, respectively. Weighted average qualities calculated on MTIS.

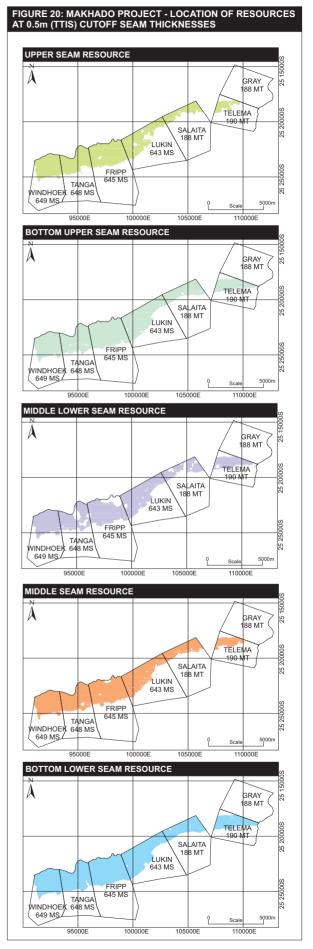




TABLE 13: MAKHADO PROJECT - SUMMARY OF RESOURCE STATEMENT (31ST AUGUST 2011)



# INDEPENDENT TECHNICAL STATEMENT FOR **COAL OF AFRICA**

as at 18th September 2011



#### **MAKHADO PROJECT**

The viability of underground mining opportunities have yet to be thoroughly investigated. A road and rib pillar mining method has been considered during the course of the DFS to exploit the deep, high yielding, coal seams to the north of the mining area to improve the overall product yield. This is the portion of the resource below the 180m depth. This study was conducted at a conceptual level only. The method was also considered to improve the overall yield during the latter part of the life of mine when the West Pit will be exploited. This is considered upside potential or a 'blue sky' opportunity only.

The actual start-up dates for operations is subject to the successful completion of the DFS as well as, inter alia, the granting of the NOMR as well as other statutory requirements and the purchase of certain surface rights.

Since the mine design and scheduling study has not been completed, no production schedules can be presented at this stage. A plant design can only be finalised once the mine planning and scheduling study has been completed.

Indications from resource drilling and sampling, as well as from initial results from the bulk sampling exercise, are that the Makhado product will be a semi-hard coking coal, based on current geological data and plant assumptions. No off-take agreements or contracts are in place for the Makhado coal currently, however ArcelorMittal has signed a Memorandum of Understanding with CoAL, which could result in an offtake agreement. It is anticipated that any coking coal not sold to ArcelorMittal, will be exported through the port of Maputo in Mozambique.

The most critical environmental issues faced by the proposed Makhado Project extend to biodiversity, ground water and social issues that result from the proposed mine and its associated activities.

The previous Mineral Resource Statement for the Makhado Project was prepared and independently signed off by TMC in September 2010. The Competent Person responsible for signing off the Coal Resource Statement is Mr M Stewartson (Pr.Sci.Nat.). For the purposes of complete reporting, the summary of differences between September 2010 and June 2011 Resource Statements is shown in Table 14. Since no mining or significant additional exploration (apart from the bulk sample) has taken place since September 2010, the current Coal Resource Statement is expected to be very similar to that of TMC in September 2010, specifically in terms of volumes and tonnages. However, there are, in fact, significant increases in the resources reported in the current Resource Statement.

In terms of GTIS, TMC only considered opencastable resources to a maximum depth of 140m. This resulted in its calculation of 323.6Mt GTIS. In the Executive Summary of the TMC report, TMC states that, in consideration of all coal, delimited only by farm boundaries, a total of 918Mt GTIS can be calculated. This latter figure is more comparable with Venmyn's GTIS estimate of 879.7Mt GTIS, which was based on all coal greater than 0.5m in thickness.

In terms of MTIS, TMC discounted its opencastable GTIS estimates for geological and modelling losses only. Venmyn considered all coal to a maximum depth of 200m as opencastable, and discounted the GTIS further by removing all coal with volatiles <20% and applying mining layout losses of 2% to calculate MTIS.

The increase in the maximum opencastable depth from 140m to 200m, accounts for the majority of the 42% increase in MTIS.

In addition to the above, Venmyn has assumed a maximum depth of oxidation of 18m, based on observations within the Tanga boxcut. TMC assumed a maximum depth of oxidation of 30m.

The Makhado Project represents CoAL's flagship project within the greater Soutpansberg Coalfield area, and is set to become CoAL's most important coal producer. Along with Vele, the Makhado Project is set to make CoAL a significant global coking coal producer.







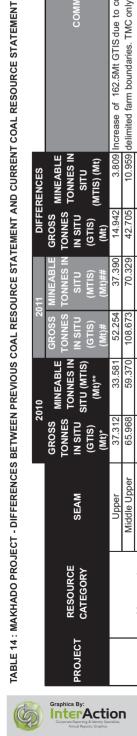




			2	2010	2	2011	DIFFE	DIFFERENCES	
			GROSS TONNES	MINEABLE	GROSS	MINEABLE TONNES IN	GROSS TONNES	MINEABLE	
ROJECT		SEAM	IN SITU	I ONNES IN	IN SITU	SITU	IN SITU	I ONNES IN	COMMENTS
	CALEGORY		(GTIS)	(Mt)**	(GTIS)	(MTIS)	(GTIS)	(MTIS) (Mt)	
		Upper	37.312	33.581	52.254	37.390	14.942	3.809	3.809 Increase of 162.5Mt GTIS due to consideration of total resource area,
		Middle Upper	65.968	59.370	108.673	70.329	42.705	10.959	10.959 delimited farm boundaries. TMC only considered opencastable resources
	Measured	Middle Lower	38.253	34.427	56.142	40.806	17.889	6.379	6.379 to a depth of 140m depth for GTIS. In addition TMCassumed a depth of
		Bottom Upper	66.459	59.811	107.887	71.016	41.428	11.205	11.205 oxidation of 30m. By contrast Venmyn have assumed a depth of
		Bottom Lower	74.448	67.003	120.069	81.683	45.621	14.680	14.680 oxidation of 18m (as defined in bulk sample pit) and have not applied a
88	TOTAL / AVE MEAS	<b>FOTAL / AVE MEASURED RESOURCES</b>	282.440	254.192	445.025	301.224	162.585	47.032	47.032 depth limit on the reporting of GTIS.
элΑ		Upper	8.248	7.011	48.971	17.992	40.723	10.981	10.981 Increase of 291.5Mt GTIS due to consideration of total resource area,
toe		Middle Upper	4.116	3.499	76.370	18.944	72.254	15.445	15.445 delimited farm boundaries. TMC only considered opencastable resources
ion	Indicated	Middle Lower	3.175	2.700	34.268	12.295	31.093	9.595	9.595 to a depth of 140m depth for GTIS.In addition TMCassumed a depth of
<b>님</b> 이		Bottom Upper	7.330	6.230	81.778	22.534	74.448	16.304	16.304 oxidation of 30m. By contrast Venmyn have assumed a depth of
per		Bottom Lower	13.855	11.778	86.789	27.850	72.934	16.072	16.072 oxidation of 18m (as defined in bulk sample pit) and have not applied a
skl	TOTAL / AVE INDIC	TOTAL / AVE INDICATED RESOURCES	36.724	31.218	328.176	99.615	291.452	68.397	68.397 depth limit on the reporting of GTIS.
M		Upper	0.021	0.018	36.304	2.840	36.283	2.822	2.822 Increase of 102.1Mt GTIS due to consideration of total resource area,
		Middle Upper	0.004	0.003	20.372	0.094	20.368	0.091	0.091 deliminated farm boundaries. TMC only considered opencastable
	Inferred	Middle Lower	0.027	0.022	7.144	008'0	7.117	0.778	0.778 resources to a depth of 140m depth for GTIS. In addition TMC assumed a
		Bottom Upper	0.410	0.327	19.621	1.904	19.211	1.577	1.577 depth of oxidation of 30m. By contrast venmyn have assumed a depth of
		Bottom Lower	4.012	3.211	23.091	4.680	19.079	1.469	1.469 oxidation of 18m (as defined in bulk sample pit) and have not applied a
	TOTAL / AVE INFE	TOTAL / AVE INFERRED RESOURCES	4.474	3.581	106.533	10.318	102.059	6.737	6.737 depth limit on the reporting of GTIS.
	GRAND TOTA	GRAND TOTAL / AVE OPENCAST	323.638	288.991	879.735	411.157	556.097	122.166	172% 42%
.000									

\* TMC only considered opencastable resources to a maximum depth of 140m and assumed a depth of oxidation of 30m in reporting GTIS.

## Venmyn discounted its GTIS in consideration of underground resources to a maximum depth of 200m, removing all coal with volatiles <20%, and applied mining layout losses of 2%. \*\* TMC discounted its GTIS for geological and modelling losses to calculate MTIS.
# Venmyn considered all coal within the farm boundaries for the calculation of GTIS and assumed a depth of oxidation of 18m (based on actual results from the bulk sample pit).







#### **VOORBURG PROJECT**

The Voorburg Project comprises three farms over which CoAL has a 100% attributable interest. The Project is at an advanced exploration stage, with quantified coal resources.

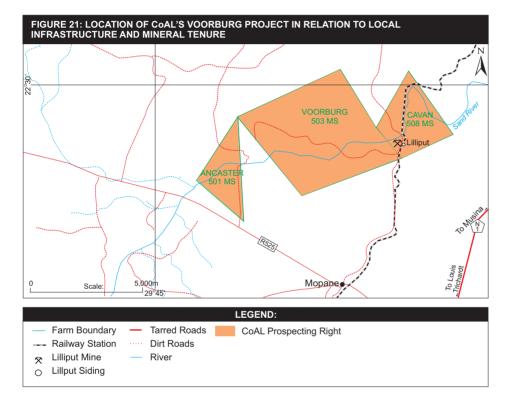
The Voorburg Project is situated in the magisterial district of Vhembe, in the Limpopo Province of South Africa. The nearest town is Musina. situated approximately 35km to the northeast of the Voorburg Project area (Figure 21).

The Voorburg Project is situated within the Sand River Coalfield subdivision of the greater Soutpansberg Coalfield and represents an isolated and upfaulted block of Karoo age sediments, which lies approximately 10km to the north of the remainder of the Soutpansberg Coalfield.

Historical underground mining from the Lilliput Colliery was carried out on the farm Cavan 508MS between 1911 and 1918. The coal was supplied to the smelter at Messina Copper Mine. According to historical records, a total of 14,488t of coal were mined from an inclined shaft sunk into the small flat topped hill situated a few hundred metres west of the Lilliput Siding.

CoAL obtained NOPRs over the Voorburg Project farms in 2006 and proceeded to drill ten diamond boreholes between 2009 and 2010 on the farm Voorburg 503MS.

The Iscor historical and recent CoAL exploration data has been used in the estimation of the resources for the Voorburg Project. The summary table of the independently declared resource estimate for the Voorberg Project is shown in Table 15. The location of the resources are presented in Figure 22.



In the mid 1970s, so called "reserves" were put forward for the Voorburg Project by Iscor and Rapbern. However, no previous Coal Resource Statements have been prepared using modern 3D modelling methods and classification schemes, such as JORC or SAMREC. As a result of this no comparative table of previous and current Coal Resources is presented.

Due to the stage of development of the Voorburg Project, no investigations have been carried out on the mining of the deposit. However, upon considering the depth from surface of the coal zones, mining is expected to be via opencast methods.

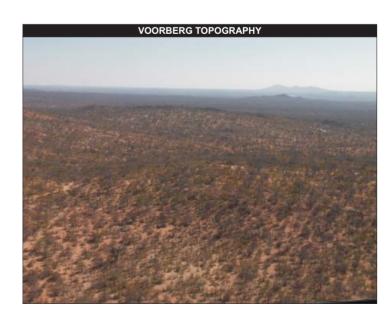
The coking potential of Voorburg is good and the project has the potential to produce a semi-hard coking coal.

The Voorburg Project represents a highly prospective coking coal project, with the potential to contribute significant additional coking coal production from the region.

CoAL holds a NOPR on the farms Ancaster 501MS and Cavan 508MS, as well as a right on Voorburg 503MS that was originally held by Motjoli Resources (Pty) Ltd (Motjoli).

The Voorburg Project represents an isolated and upfaulted block of Karoo age sediments, which lies approximately 10km to the north of the main Soutpansberg Coalfield. The coal bearing sediments occur as alternating mudstone laminae and coal bands within the Upper Ecca or Mikabeni Formation. According to CoAL, the coal horizons are divided into five potentially-economic seams, namely the Upper, Middle, Middle Lower and Bottom Upper and Bottom Lower Seams.

The earliest known exploration on the Voorburg Project was undertaken on Cavan 508MS by Rapbern Exploration (Pty) Ltd in the early 1970s. A total of seven holes were drilled, six of which were sampled and sent for analysis. During 1976, Iscor drilled 39 diamond boreholes on the farms in the area.









### **VOORBURG PROJECT**

				AIR DR	IED WAS	SHED QU	AIR DRIED WASHED QUALITIES @ RD=1.40	® RD=1.40	
OL.	TOTAL	MINEABLE	YIELD	S	ASH	VOL	FIXED	SULPH.	MOIST.
SSES (%)	SITU (TTIS)	SITU (MTIS)	(%)	(MJ/kg)	(%)	(%)	CAKBON (%)	(%)	(%)
10%	14,688,916	14,395,100	19.64		10.04	32.57	56.75	1.15	0.64
10%	19,459,499	19,070,300	28.46		11.57	32.81	52.05	1.24	0.57
10%	11,169,121	10,945,700	34.65		12.07	32.33	54.89	1.18	0.72
10%	15,381,869	15,074,100	30.53		11.37	31.91	25.99	1.09	0.72
10%	24,758,132	24,262,900	26.76		10.81	31.47	56.37	66'0	0.71
10%	85,457,537	83,748,100	27.63		11.12	32.15	55.87	1.12	0.67
15%	20,108,935	19,512,000	17.00		9:99	32.50	56.74	1.14	0.80
15%	21,278,472	20,470,000	27.57		11.45	32.44	55.40	1.27	0.71
15%	13,280,453	12,669,000	31.76		12.07	31.39	55.78	1.14	0.77
15%	13,455,734	12,864,000	30.66		11.41	31.30	56.53	1.02	0.75
15%	20,472,361	19,388,000	25.99		10.19	29.66	55.45	98'0	0.70
15%	88,595,953	84,903,000	25.87		10.91	31.49	55.95	1.09	0.74
20%	3,862,383	3,210,000	19.31		10.32	32.47	56.47	1.10	0.79
20%	4,480,710	4,180,000	25.87		11.00	32.94	55.53	1.13	0.53
20%	3,285,431	2,840,000	32.21		12.55	32.99	54.08	1.32	0.43
20%	1,263,718	1,140,000	32.08		11.01	30.65	57.59	0.91	09'0
20%	1,984,244	1,790,000	28.53		9.97	30.63	29.09	08'0	0.58
20%	14,876,486	13,160,000	26.54		11.03	32.32	56.11	1.10	0.58
13%	188,929,976	181,811,100	26.73		11.01	31.86	55.93	1.10	0.70

25,033,496 15,624,062

15,830,275 24,085,130

Bottom Upper

Middle Lower

Indicated

Voorburg Project Area

Middle

Upper

23,657,570

5,600,887

1,579,647 2,480,305 18,595,607

**Bottom Upper** 

Middle Lower Bottom Lower

Inferred

Upper Middle

104,230,533 4,827,979

Bottom Lower
OTAL / AVE INDICATED RESOURCES

Notes:
GTIS & TTIS - At minimum seam thickness cutoff of 0.5m.
MTIS - At maximum opencast mining depth of 200m. No underground mining considered. Excludes all coal with volatiles <20%.

217.778.959

TOTAL / AVE INFERRED RESOURCES
GRAND TOTAL / AVE COAL'S VOORBURG PROJECT

Rounding down of tonnages to 100t; 1,000t and 10,000t for Measured, Indicated and Inferred, respectively. Weighted average qualities calculated on MTIS.

Graphics By:
InterAction

TONNES IN SITU (GTIS)

SEAM

RESOURCE CATEGORY

PROJECT

16,321,018

Upper

Middle

21,621,666 12,410,134

17,090,965

**Bottom Upper** 

Middle Lower

Measured

27,509,036 **94,952,819** 

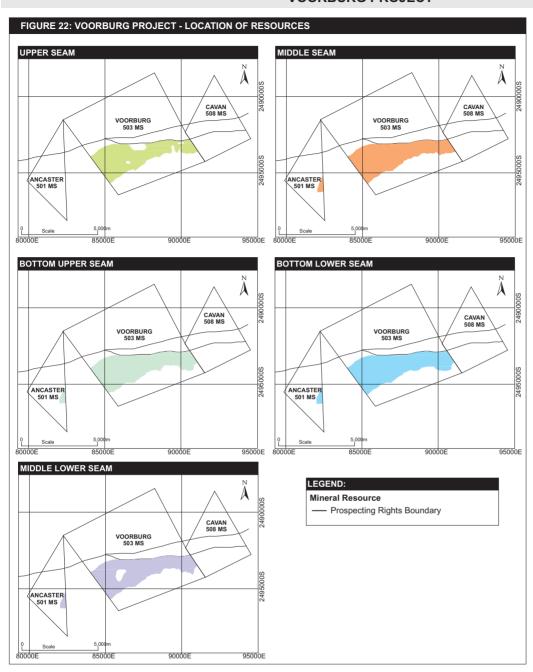
Bottom Lower
TOTAL/AVEMEASUREDRESOURCES

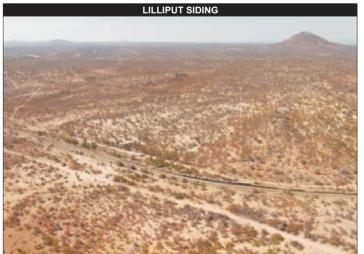
TABLE 15: VOORBURG PROJECT - SUMMARY OF RESOURCE STATEMENT (31ST AUGUST 2011)

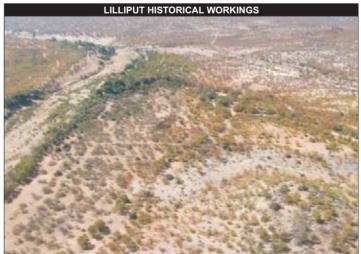




# **VOORBURG PROJECT**













### **MOUNT STUART PROJECT**

CoAL is the 100% owner of the Mount Stuart Project, which is an advanced exploration project containing potential coking coal resources.

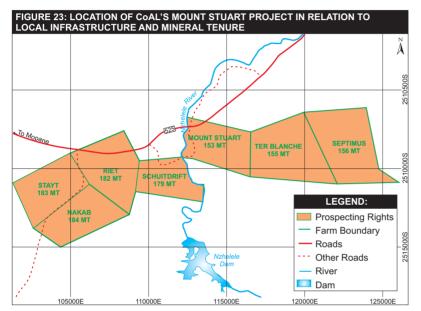
The Mount Stuart Project is situated in the magisterial district of Vhembe, in the Limpopo Province of South Africa (Figure 23). The nearest town is Musina, situated approximately 35km to the north of the Mount Stuart Project area. The Mount Stuart Project comprises seven farms namely, Stayt 183MT, Nakab 184MT, Riet 182MT, Schuitdrift 179MT, Mount Stuart 153MT, Ter Blanche 155MT and Septimus 156MT, held under three NOPRs.

Due to the stage of development of the Mount Stuart Project, no detailed investigations have been carried out on the potential mining of the deposit. However, upon considering the depth from surface of the coal zones, mining is expected to be mostly opencast, with limited additional underground potential based on current geological data and plant assumptions.

The Mount Stuart coal is most likely to yield coking coal product. Indications are that the Mount Stuart product will be a hard coking coal, with RoVmax of

> There are no known previous resource estimates for the Mount Stuart Project.

> The Mount Stuart Project represents a highly prospective coking coal project, with the potential to contribute significant additional coking coal production from the region.

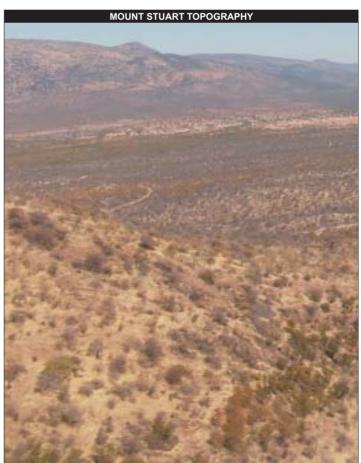


The Mount Stuart Project is situated within the Tshipise North Coalfield subdivision of the greater Soutpansberg Coalfield, and represents an isolated and upfaulted block of Karoo age sediments, which lies approximately 6km to the north of the Mopane Basin in which the Makhado Project occurs.

The Soutpansberg Coalfield was extensively explored by Iscor in the 1970s and 1980s. Iscor drilled a total of 258 boreholes, excluding a number of borehole deflections over the Mount Stuart Project area. This included four boreholes on the farm Nakab 184MT, 63 boreholes on the farm Mount Stuart 153MT, 143 boreholes on Ter Blanche 155MT and 28 boreholes on the farm Septimus 156MT. No historical mining has taken place within the Mount Stuart Project area.

Limited recent exploration has been conducted, within the Mount Stuart Project area, by both Rio Tinto and CoAL. Data from nine boreholes drilled over the Mount Stuart Project area, by Rio Tinto, were acquired by CoAL in 2010. Seven of these boreholes (over Nakab 184MT, Schuitdrift 179MT, Mount Stuart 153MT and Ter Blanche 155MT) were diamond core boreholes, while two (over Nakab 184MT) were percussion boreholes. Limited exploration drilling by CoAL commenced in 2009 on the farm Riet 182MT. Only seven boreholes have been drilled by CoAL todate. No LDD or bulk sampling has been conducted by either Rio Tinto or CoAL over the Mount Stuart Project area.

All historical and recent exploration data has been used in the estimation of the resources of the Mount Stuart Project. The summary table of the independently declared resource estimate for the Mount Stuart Project is shown in Table 16. The location of the resources are presented in Figure 24









# **MOUNT STUART PROJECT**

		AIR DI	RIED WA	AIR DRIED WASHED QUALITIES @ RD=1.40	ALITIES @	RD=1.40	
BLE S IN	YIELD (%)	CV (MJ/kg)	ASH (%)	VOL. (%)	FIXED	SULPH. (%)	MOIST. (%)
000,0	2.02		8.86	27.85	63.31	1.00	0.44
000,0	16.26		11.63	24.68	62.95	0.98	0.54
000,0	27.78		11.67	24.45	63.17	0.72	0.53
000,0	3.68		9.14	25.61	64.85	0.87	0.47
00000	17.72		11.04	25.07	63.29	18'0	0.52
0,000	17.72		11.04	25.07	63.29	0.87	0.52

		AIR DI	RIED WA	SHED QU	AIR DRIED WASHED QUALITIES @ RD=1.40	RD=1.40	
<u>ا</u> و	YIELD	S	ASH		FIXED	SULPH.	MOIST.
N (S)	(%)	(MJ/kg)	(%)	VOE: (%)	CAKBON (%)	(%)	(%)
000	2.02		8.86	27.85	63.31	1.00	0.44
000	16.26		11.63	24.68	62.95	0.98	0.54
000	27.78		11.67	24.45	63.17	0.72	0.53
000	3.68		9.14	25.61	64.85	0.87	0.47
000	17.72		11.04	25.07	63.29	0.87	0.52
000	17.72		11.04	25.07	63.29	0.87	0.52

	<b>ጀ</b> _	2	9	8	8	2	~
YIELD	(W)	2.02	16.26	27.78	3.68	17.72	17.72
MINEABLE TONNES IN	SITU (MTIS)	6,640,000	20,760,000	21,930,000	6,130,000	55,460,000	55,460,000
TOTAL TONNES IN		48,974,871	91,316,032	92,434,962	93,004,397	325,730,262	325,730,262
GEOL. LOSSES	(%)	20%	20%	70%	20%	70%	70%
GROSS GEOL. TONNES IN LOSSES	SITU (GTIS)	61,218,589	114,145,040	115,543,703	116,255,496	407,162,828	407,162,828
SEAM		Upper	Middle	Bottom Upper	Bottom Lower	AVE INFERRED RESOURCES	IND TOTAL / AVE OPENCAST
OURCE	GORY		70	ם		<b>AVE INFEI</b>	ND TOTA

MOUNT STU 153 MT	ART TER BLANCHE 185 MT	SEPTIMUS 156 MT
11500	00E 1200	000.0
MIDDLE SEAM	1200	125000E
MOUNT STU	ART TER BLANCHE 155 MT	SEPTIMUS 156 MT
		0 Scale 5,000
11500	00E 1200	00E 125000E
MOUNT STU	JART TER BLANCHE	SEPTIMUS 156 MT
		0 Scale 5,000
1150		000E 125000E
MOUNT STU		SEPTIMUS 156 MT

FIGURE 24: MOUNT STUART PROJECT - LOCATION OF RESOURCES

			GROSS	GEOL.	TOTAL	É
ROJECT	CATECORY	SEAM	TONNES IN	LOSSES	<b>TONNES IN</b>	5
	CALEGORY		SITU (GTIS)	(%)	SITU (TTIS)	SIT
es su		Upper	61,218,589	70%	48,974,871	9
sus Are	lo Carodal	Middle	114,145,040	20%	91,316,032	20
	ם ביים	Bottom Upper	115,543,703	70%	92,434,962	21
loui roje		Bottom Lower	116,255,496	20%	93,004,397	9
	TOTAL / AVE INFER	TOTAL / AVE INFERRED RESOURCES	407,162,828	70%	325,730,262	55
	GRAND TOTA	GRAND TOTAL / AVE OPENCAST	407,162,828	70%	325,730,262	55
. 0040						

TABLE 16: MOUNT STUART PROJECT - SUMMARY OF RESOURCE STATEMENT (31ST AUGUST 2011)

Notes

GTIS & TTIS - At minimum seam thickness cutoff of 0.5m.

MTIS - At maximum opencast mining depth of 200m. No underground mining considered. Excludes all coal with volatiles <18%.

Rounding down of tonnages to 10,000t for Inferred Resources. Weighted average qualities calculated on MTIS.



### JUTLAND PROJECT

The Jutland Project, located within the Soutpansberg Coalfield, is an early stage exploration project. There are currently no coal resources associated with the project, but the presence of coal is known.

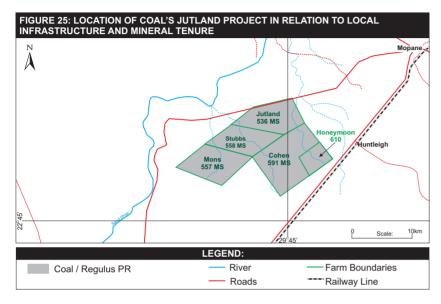
The Jutland Project is situated in the magisterial district of Vhembe, in the Limpopo Province of South Africa (Figure 25). The nearest town is Musina, situated approximately 35km to the northeast of the Jutland Project area.

CoAL have not yet conducted any exploration over the Jutland Project.

Due to the stage of development of the Jutland Project, no recent investigations have been carried out on the mining of the deposit. However, upon considering the depth from surface of the coal zones, any future mining is expected to be a combination of opencast and underground methods. Details on mining methods and recoveries will be investigated during a Pre-Feasibility Study on the project.

The Jutland coal is most likely to yield a coking coal product.

The Jutland Project represents a prospective coking coal project, with the potential to contribute significant additional coking coal production from the region.



CoAL holds an NOPR on the farms Cohen 591MS and Jutland 536MS. In addition, CoAL's wholly owned subsidiary Regulus holds an NOPR on the farms Mons 557MS and Stubbs 558MS.

The Jutland Project is situated within the Mopane Coalfield subdivision of the Soutpansberg Coalfield. The Karoo sediments of the Jutland Project are preserved as a half graben with an unconformable southern contact. While the lower Karoo sediments are not developed, the coal bearing Mikabeni Formation is present throughout. The Jutland Project area contains sub-cropping coal seams that dip towards the north at between approximately 10° - 12°. The coal bearing sediments occur as alternating mudstone laminae and coal bands within the Upper Ecca or Mikabeni Formation. According to CoAL, the coal horizons are divided into five potentially economic seams, namely the Upper, Middle, Middle Lower and Bottom Upper and Bottom Lower seams.

The earliest known exploration on the Jutland Project was undertaken by Trans Natal Coal Mining Corporation (Trans Natal), between 1968 and 1975. During this time 59 boreholes were drilled within the Jutland Project area. Iscor carried out extensive exploration work within the Jutland Project area between 1975 and 1982, including bulk sampling on the farms Jutland 536MS, Stubbs 558MS, Mons 557MS and Cohen 591MS. The target is believed to have been metallurgical coal.

In 1982, Iscor conducted a Pre-Feasibility Study for a proposed mining operation over the farms Mons 557MS. Stubbs 558MS. Jutland 536MS. and Cohen 591MS. This study concluded that approximately 40.7Mt of RoM (25.13Mt of coal) could be economically extracted by underground mining of the No.5 Coal Zone (Middle Lower Seam), using board and pillar methods. Annual production of 2.16Mt of RoM was suggested, for a 20 year LOM (however this could be extended in consideration of the possible exploitation of the No.9 Coal Zone or Bottom Upper Seam). The proposed underground access was via an inclined shaft.









# **GLOSSARY**

TERM	DEFINITION	TERM	DEFINITION
Ash (%)	The solid residue that remains after the complete combustion of coal.	Exploration	Prospecting, sampling, mapping, diamond drilling and other work involved in the search for mineralization.
Assay laboratory	A facility in which the quality of the ores are determined using analytical techniques.	Fault	A fracture in earth materials, along which the opposite sides have been displaced parallel to then plane of the movement.
Audit	Checking mechanisms to verify the voracity of results.	Feasibility study	A definitive engineering estimate of all costs, revenues, equipment requirements and production levels likely to be achieved if a mine is developed. The study is used to define the economic viability of a project and to support the search for project financing.
Box cut	Open cut made through the overburden to expose a portion of the coal seam that provides portal access to a decline to an underground mine.	Fixed Carbon (%)	The organis residue remaining after the volatile matter has been liberated. The % fixed carbon is obtained when the sum of the moisture, ash and volatile matter percentages is subtracted from 100%.
Bulk sample	Large sample which is processed through a small-scale plant, not a laboratory.	Gravity survey	A geophysical study undertaken from the surface or from the air which identifies variations in the density of the earth from surface to depth.
Burnt coal	Coal in contact or close proximity with dolerite intrusions that undergoes chemical change, particularly the loss of volatiles due to heating.	Groundwater	Water found beneath the surface of the land.
Calorific Value (CV)	The heat liberated by the coal's complete combustion with oxygen.	Hydrological	Pertaining to water either above or below the surface
Coal	Carbonaceous sedimentary rock with an ash content of less than 50%.	In situ	In its original place, most often used to refer to the location of the mineral resources.
Coking coal properties	When vitrinite –rich coals of suitable rank are heated in the absence of air, they become plastic, swell due to devolatilisation and reconsolidate to form a porous, coherent, carbon-rich residue called coke. A good coking coal has good thermoplasticity, a high dilation and a high caking or agglutinating power. Four indices are normally used to assess the coking properties of coal: the crucible swelling index/number (or free swelling index), the Roga index, the dilation and the plasticity.	Indicated Coal Resource	That part of a coal resource for which tonnage, densities, shape, physical characteristics, grade and coal quality can be estimated with a moderate level of confidence. It is based on exploration sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are appropriate to confirm physical continuity, while the locations are too widely or inappropriately spaced to confirm coal quality continuity. However, such locations are spaced closely enough for coal quality continuity to be assumed.
Density	Measure of the relative "heaviness" of objects with a constant volume, density = mass/volume	Inferred Coal Resource	That part of a coal resource for which tonnage, grade and coal quality can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified physical continuity with or without coal 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 which is limited or of uncertain quality or reliability.
Deposit	Any sort of earth material that has accumulated through the action of wind, water, ice or other agents	Laser survey	Airborne survey which accurately measures the height of the surface of the earth to produce a detailed digital topographic plan.
Diamond drilling	A drilling method, where the rock is cut with a diamond bit, to extract cores.	Licence, Permit, Lease or other similar entitlement	Any form of licence, permit, lease or other entitlement granted by the relevant Government department in accordance with its mining legislation that confers on the holder certain rights to explore for and/or extract minerals that might be contained in the land, or ownership title that may prove ownership of the minerals
Dilution	Waste which is mixed with ore in the mining process.	Life of Mine - LoM	Expected duration of time that it will take to extract accessible material.
Dip	The angle that a structural surface, i.e. a bedding or fault plane, makes with the horizontal measured perpendicular to the strike of the structure.	Mineable	That portion of a resource for which extraction is technically and economically feasible.
Dolerite	A medium grained igneous rock which is emplaced within the earth's crust in the form of dykes and sills.	Mineral Asset(s)	any right to explore and / or mine which has been granted ("property"), or entity holding such property or the securities of such an entity, including but not limited to all corporeal and incorporeal property, mineral rights, mining titles, mining leases, intellectual property, personal property (including plant equipment and infrastructure), miningand exploration tenures and titles or any other right held or acquired in connection with the finding and removing of minerals and petroleum located in, on or near the earth's crust. Mineral Assets can be classified as Dormant Properties, Exploration Properties, Development Properties, Mining Properties of Defunct Properties.







# **GLOSSARY**

TERM	DEFINITION
Mineralisation	The presence of a target mineral in a mass of host rock.
Moisture Content (Inherent moisture)	Moisture content for purposes of a proximate analysis is derived from the mass loss of air-dried coal when heated to between 105°C and 110°C.
Opencast / Open pit	Surface mining in which the ore is extracted from a pit. The geometry of the pit may vary with the characteristics of the ore body.
Orebody	A continuous well defined mass of material of sufficient ore content to make extraction economically feasible.
Ore Reserve	Is the economically mineable material derived from a Measured and /or Indicated Mineral Resource, It is inclusive of diluting materials and allows for losses that Reserves to denote progressively increasing uncertainty in their recoverability. Proved Reserve can be categorised as Developed or Undeveloped.  JORC prefers the term 'Ore Reserve', although it may b reported as 'Coal Reserve' if preferred by the reporting company, or as 'Mineral Reserve' when reporting to SAMREC standards.
Overburden	The alluvium and rock that must be removed in order to expose an ore deposit.
Prefeasibility Study	Referring to a study of a Mineral asset, in which appropriate assessments have been made of realistically estimated mining, metallurgical, economic, marketing legal, environmental, social, governmental, geological, engineering, operational and all other modifying factors are considered in sufficient detail to demonstrate at the time of reporting that extraction is reasonably justified and the factors are considered in sufficient detail to serve as a reasonable basis for a decision to proceed or not to proceed to a Feasibility Study.
Probable mineral reserve	Is the economically mineable material derived from a Measured and/or Indicated Coal Resource. It is estimated with a lower level of confidence than a Proved Reserve. It is inclusive of diluting materials and allows for losses that may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction is reasonably justified.
Proximate analysis	The determination, by prescribed methods, of moisture, ash, volatile matter and fixed carbon (by difference) contents of air-dried coal.
Rehabilitation	The process of restoring mined land to a condition approximating to a greater or lesser degree its original state. Reclamation standards are determined by the South African Department of Mineral and Energy Affairs and address ground and surface water, topsoil, final slope gradients, waste handling and re-vegetation issues.
R <sub>o</sub> V <sub>max</sub> (%)	Maximum vitrinite reflectance.
Sample	The removal of a small amount of rock pertaining to the deposit which is used to estimate the grade of the deposit and other geological parameters.
Sampling	Taking small pieces of rock at intervals along exposed mineralization for analysis (to determine the mineral content).
Sandstone	A fine to very coarse grained arenaceous sedimentary rock consisting of silicate group minerals e.g. Sand
Seam	An economically viable stratum of coal or mineral
Sedimentary	Formed by the deposition of solid fragmental or chemical material that originates from weathering of rocks and is transported from a source to a site of deposition.

TERM DEFINITION  A fine grained argillaceous sedimentary rock of clays.  Specific gravity Measure of quantity of mass per unit of density.  Steam Coal All non-metallurgical coal.  Stockpile A store of unprocessed ore or marginal grade	
Specific gravity  Measure of quantity of mass per unit o density.  Steam Coal  All non-metallurgical coal.	
Steam Coal  All non-metallurgical coal.	f volume,
Stockpile A store of unprocessed ore or marginal grade	
	material.
Stratigraphic A term describing the sequence in time of bed which can be correlated between different loc	
Strike The direction taken by a structural surface stault plane as it intersects the horizontal.	such as a
Stripping Removal of waste overburden covering the deposit.	ne mineral
Stripping ratio Ratio of ore rock to waste rock.	
The waste products of the processing circ may still contain very small quantities of the mineral.	
Tailings dam  Dams or dumps created from waste mat processed ore after the economically recover or mineral has been extracted.	
Tonnage  Quantities where the tonne is an appropria measure. Typically used to measure quantities material or quantities of ore and waste mate transported or milled.	s of in-situ
Tonne Metric Ton	
Trenching Making elongated open-air excavations purposed of mapping and sampling.	for the
Volatile Matter (%)  The material, other than inherent moisture, driven off when air-dried coal is heated at seven (7) minutes under standard condition absence of air.	900°C for
Waste rock Rock with an insufficient diamond content processing.	to justify
Weathered rock  Rock which has been broken down by the of water and air and which becomes soft partially decomposed.	
Yield The actual quantity of ore realised after the reatment process.	miningand



