APPENDIX 16A

COAL BANK SAMPLE

COAL:GASCOIGNE WOOD (SELBY) GRADE:SINGLES SEAM:BARNSLEY

BCC COAL RANK CODE:N/A ECE / ISO CLASSIFICATION:N/A

PROXIMATE ANALYSIS (% a.d.)	
Moisture	3.8
Ash	20.4
Volatile matter	28.3
Fixed carbon	47.5
Volatile matter (dmmf)	38.7
CAKING PROPERTIES	
Swelling Index	2.5
Gray-King Coke Type	C
CALORIFIC VALUE	
kJ / kg (daf)	33800
ASH FUSION RANGE (°C) *	
Deformation temp.	1180
Hemisphere temp.	1350
Flow temp.	1380

ULTIMATE ANALYSIS (%)	
Carbon (dmmf)	84.5
Hydrogen (dmmf)	4.9
Oxygen (dmmf)	7.7
Nitrogen (dmmf)	1.83
Organic sulphur (db)	0.76
Sulphate as S (db)	<0.1
Pyritic sulphur as S (db)	0.56
Chlorine (db)	0.39
Carbon dioxide (db)	0.55
Mineral matter (db)	24.05
MACERAL ANALYSIS (% by volume , mmf)	
Vitrinite	82
Exinite	9
Inertinite	9

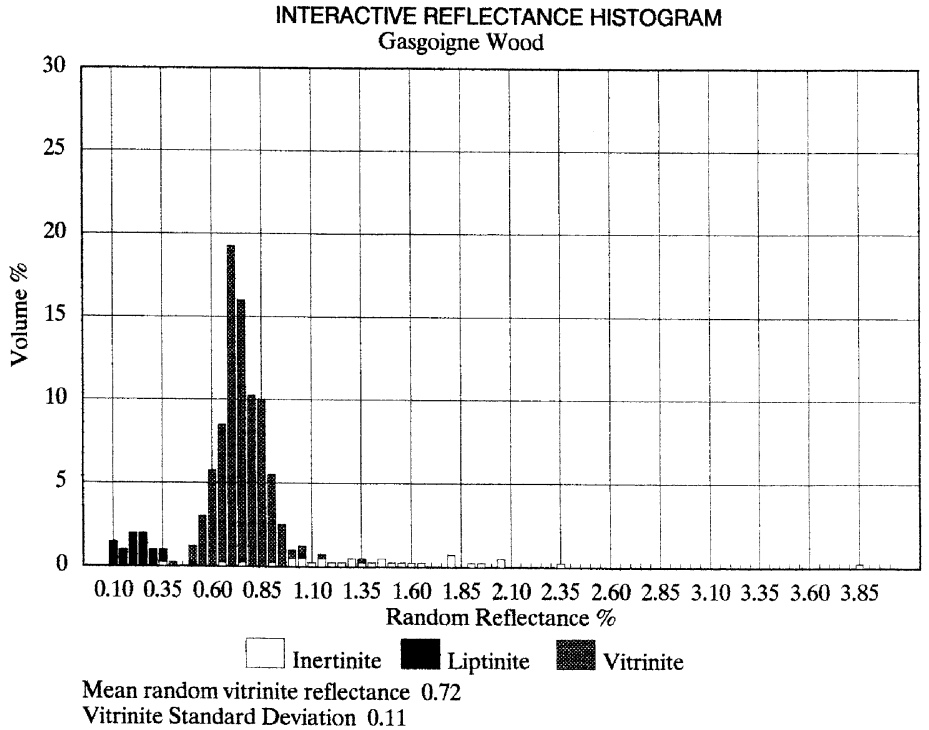
ASH ANALYSIS (% on ash)	
Na_2O	1.6
K_2O	4.0
CaO	2.5
MgO	1.6
Fe_2O_3	7.2
Al_2O_3	24.9
SiO_2	55.4
SO_3	2.1
TiO_2	0.9
Mn_3O_4	<0.1
P_2O_5	0.2

*Test atmosphere: reducing (50% CO_2 / 50% H_2)

This analysis is typical of this specially selected sample, but there may be slight variations between the data given above and that of the actual sample supplied.

ad: as analysed
db: dry basis
daf: dry , ash free
dmmf: dry , mineral matter free
mmf: mineral matter free

APPENDIX 16B



Mean random vitrinite reflectance 0.72
Vitrinite Standard Deviation 0.11

APPENDIX 17A

COAL BANK SAMPLE

COAL: KOONFONTEINE

GRADE: SMALLS

BCC COAL RANK CODE: N/A

PROXIMATE ANALYSIS (% a.d.)	
Loss on Ignition (db)	86.1
Moisture	3.8
Ash	13.4
Volatile matter	26.0
Fixed carbon	56.8
Volatile matter (dmmf)	32.2
HARDGROVE INDEX	50
CAKING PROPERTIES	
Swelling Index	0.5
Gray-King Coke Type	B
MACERAL ANALYSIS (% by volume, mmf)	
Vitrinite	39.4
Liptinite	1.80
Inertinite	58.8
Mean Random Vitrinite Reflectance	0.73
Vitrinite Reflectance Standard Deviation	0.13

ULTIMATE ANALYSIS (%)	
Carbon (dmmf)	84.53
Hydrogen (dmmf)	5.20
Oxygen (dmmf)	8.8
Total Nitrogen (dmmf)	2.07
Total Sulphur (db)	0.55
Chloride (db)	0.01
Mineral matter (db)	16.01
Carbon dioxide (db)	1.06
Forms of Sulphur	
Organic Sulphur (db)	0.31
Sulphate as S (db)	0.05
Pyritic Sulphur as S (db)	0.19
Forms of Nitrogen*	
Pyridinic Nitrogen (%)	27(24)
Pyrollic Nitrogen (%)	56(54)
Quaternary Nitrogen (%)	17(22)
CALORIFIC VALUE	
kJ / kg (db)	28358
kJ / kg (daf)	32965

ASH ANALYSIS (% on ash)	
Na2O	0.4
K2O	<0.5
CaO	7.2
MgO	2.2
Fe2O3	3.0
Al2O3	34.0
SiO2	43.7
TiO2	1.7
SO3	6.3
P2O5	1.0
Mn3O4	<0.1

KEY	
ad:	as analysed
db:	dry basis
daf:	dry, ash free
dmmf:	dry, mineral matter free
mmf:	mineral matter free

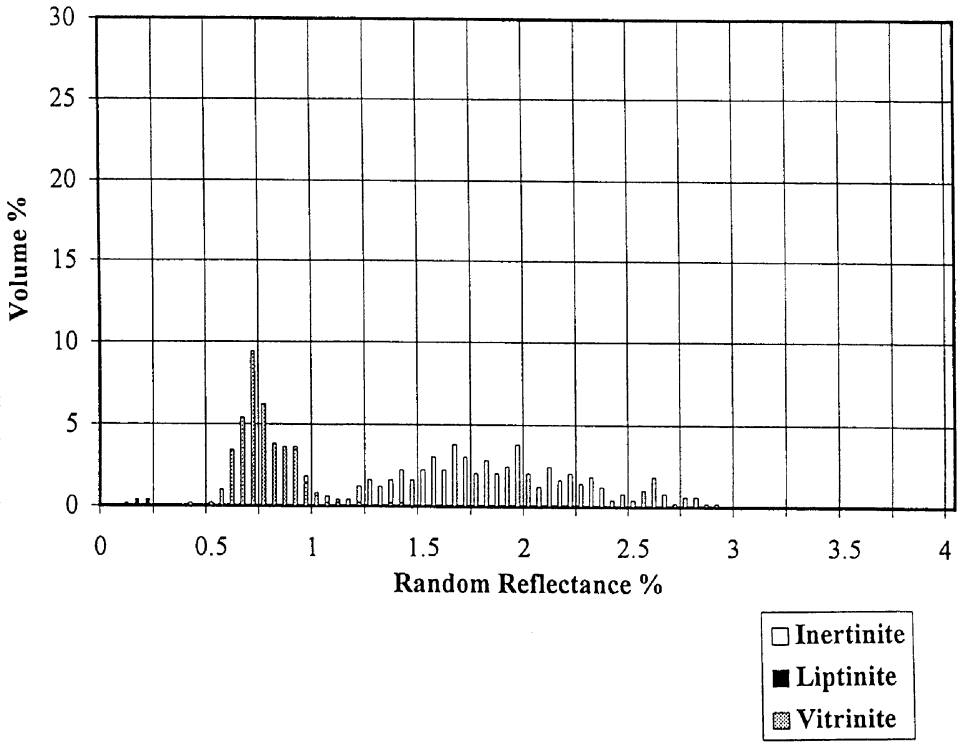
ASH FUSION RANGE (Deg.C)	
Reducing atmosphere (50% CO2 / 50% H2)	
Deformation temp.	1390
Hemisphere temp.	1480
Flow temp	>1500
Oxidising atmosphere	
Deformation temp.	1460
Hemisphere temp.	1500
Flow temp	>1500

This analysis is typical of the selected sample but there may be slight variations between the data given and that of actual samples supplied.

* It is generally accepted that <10% of coal-N is bound in amino groups and that the inclusion of amino-N tends to make the fit worse when resolving N 1s spectra. Where two sets of "Forms of Nitrogen" values have been given (the second set in brackets), the spectral curve fitting is inconclusive.

APPENDIX 17B

INTERACTIVE REFLECTANCE HISTOGRAM
KOONFONTEINE COAL



APPENDIX 18A

COAL BANK SAMPLE

COAL:THORESBY

GRADE:SINGLES

SEAM:PARKGATE

BCC COAL RANK CODE:502

ECE / ISO CLASSIFICATION:634

PROXIMATE ANALYSIS (% a.d.)	
Moisture	5.6
Ash	4.9
Volatile matter	34.2
Fixed carbon	55.3
Volatile matter (dmmf)	38.7
HARDGROVE INDEX	46
CAKING PROPERTIES	
Swelling Index	5.5
Gray-King Coke Type	G5
CALORIFIC VALUE	
kJ / kg (daf)	34680
ASH FUSION RANGE (°C) *	
Deformation temp.	1060
Hemisphere temp.	1090
Flow temp.	1220

ULTIMATE ANALYSIS (%)	
Carbon (dmmf)	84.3
Hydrogen (dmmf)	4.6
Oxygen (dmmf)	7.9
Nitrogen (dmmf)	1.83
Organic sulphur (db)	1.12
Sulphate as S (db)	<0.1
Pyritic sulphur as S (db)	0.91
Chlorine (db)	0.67
Carbon dioxide (db)	0.10
Mineral matter (db)	6.48
MACERAL ANALYSIS (% by volume , mmf)	
Vitrinite	82
Exinite	7
Inertinite	11

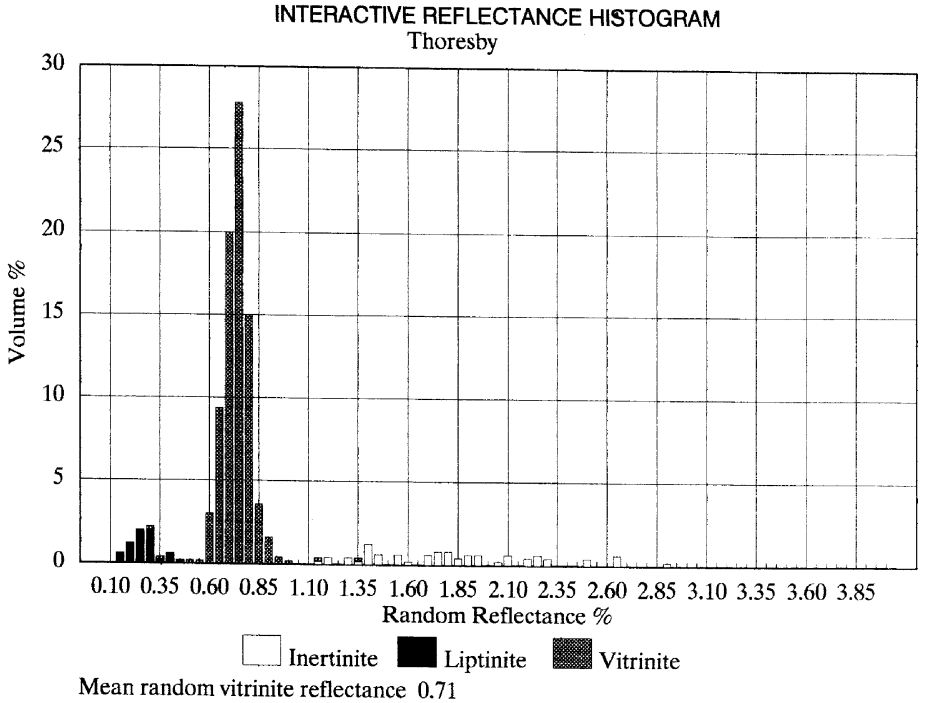
ASH ANALYSIS (% on ash)	
Na_2O	5.9
K_2O	1.4
CaO	3.3
MgO	0.7
Fe_2O_3	26.3
Al_2O_3	23.8
SiO_2	34.3
SO_3	3.1
TiO_2	0.9
Mn_3O_4	<0.2
P_2O_5	<0.2

*Test atmosphere: reducing (50% CO_2 / 50% H_2)

This analysis is typical of this specially selected sample, but there may be slight variations between the data given above and that of the actual sample supplied.

ad: as analysed
db: dry basis
daf: dry , ash free
dmmf: dry , mineral matter free
mmf: mineral matter free

APPENDIX 18B



Mean random vitrinite reflectance 0.71
Vitrinite Standard Deviation 0.08

APPENDIX 19A

COAL BANK SAMPLE

COAL: HUNTER VALLEY

GRADE: SMALLS

BCC COAL RANK CODE: N/A

PROXIMATE ANALYSIS (% a.d.)		ULTIMATE ANALYSIS (%)		ASH ANALYSIS (% on ash)			
Loss on Ignition (db)	87.7	Carbon (dmmf)	84.19	Na2O	0.3		
Moisture	3.2	Hydrogen (dmmf)	5.49	K2O	1.4	**ASH FUSION RANGE**	
Ash	11.9	Oxygen (dmmf)	9.2	CaO	0.6	**(Deg.C)**	
Volatile matter	30.4	Total Nitrogen (dmmf)	1.86	MgO	0.6	Reducing atmosphere	
Fixed carbon	54.5	Total Sulphur (db)	0.45	Fe2O3	8.1	(50% CO2 / 50% H2)	
Volatile matter (dmmf)	36.3	Chlorine (db)	0.03	Al2O3	15.8	Deformation temp.	1120
		Mineral matter (db)	13.49	SiO2	71.8	Hemisphere temp.	1310
HARDGROVE INDEX	53	Carbon dioxide (db)	0.13	TiO2	0.7	Flow temp	1340
		Forms of Sulphur		SO3	0.5		
CAKING PROPERTIES		Organic Sulphur (db)	0.41	P2O5	<0.1	Oxidising atmosphere	
Swelling Index	1	Sulphate as S (db)	0.01	Mn3O4	<0.1		
Gray-King Coke Type	C	Pyritic Sulphur as S (db)	0.03			Deformation temp.	>1500
		Forms of Nitrogen*				Hemisphere temp.	>1500
MACERAL ANALYSIS		Pyridinic Nitrogen (%)	30			Flow temp	>1500
(% by volume, mmf)		Pyrollic Nitrogen (%)	48	**KEY**			
Vitrinite	74.0	Quaternary Nitrogen (%)	22	ad:	as analysed		
Liptinite	2.60			db:	dry basis		
Inertinite	23.4	**CALORIFIC VALUE**		daf:	dry, ash free		
Mean Random Vitrinite Reflectance	0.71	**kJ / kg (db)**	29460	dmmf:	dry, mineral matter free		
Vitrinite Reflectance Standard Deviation	0.11	**kJ / kg (daf)**	33720	mmf:	mineral matter free		

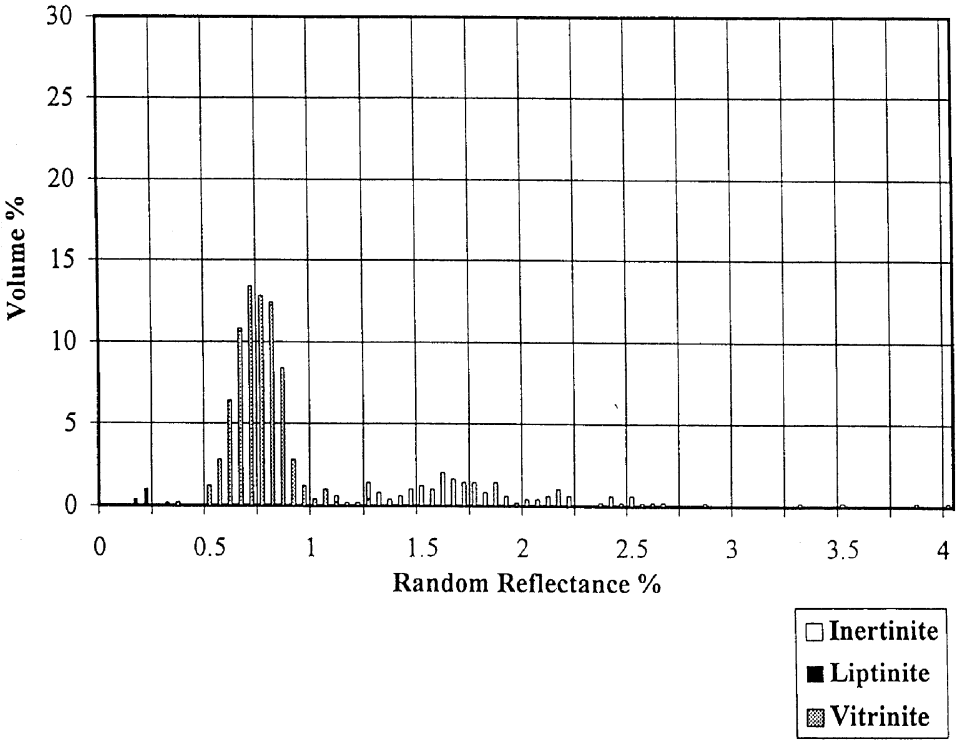
This analysis is typical of the selected sample but there may be slight variations between the data given and that of actual samples supplied.

* It is generally accepted that <10% of coal-N is bound in amino groups and that the inclusion of amino-N tends to make the fit worse when resolving N 1s spectra.

Where two sets of "Forms of Nitrogen" values have been given (the second set in brackets), the spectral curve fitting is inconclusive.

APPENDIX 19B

INTERACTIVE REFLECTANCE HISTOGRAM
HUNTER VALLEY COAL



APPENDIX 20A

COAL BANK SAMPLE

COAL:ELLINGTON GRADE:SINGLES SEAM:

BCC COAL RANK CODE:702 ECE / ISO CLASSIFICATION:732

PROXIMATE ANALYSIS (% a.d.)	
Moisture	5.9
Ash	3.2
Volatile matter	34.0
Fixed carbon	56.9
Volatile matter (dmmf)	37.6
CAKING PROPERTIES	
Swelling Index	5.5
Gray-King Coke Type	G
CALORIFIC VALUE	
kJ / kg (daf)	34400
ASH FUSION RANGE (°C) *	
Deformation temp.	>1500
Hemisphere temp.	>1500
Flow temp.	>1500

ULTIMATE ANALYSIS (%)	
Carbon (dmmf)	83.7
Hydrogen (dmmf)	5.3
Oxygen (dmmf)	8.0
Nitrogen (dmmf)	1.99
Organic sulphur (db)	0.79
Sulphate as S (db)	0.00
Pyritic sulphur as S (db)	0.09
Chlorine (db)	0.08
Carbon dioxide (db)	0.06
Mineral matter (db)	3.89
MACERAL ANALYSIS (% by volume , mmf)	
Vitrinite	76
Exinite	6
Inertinite	17

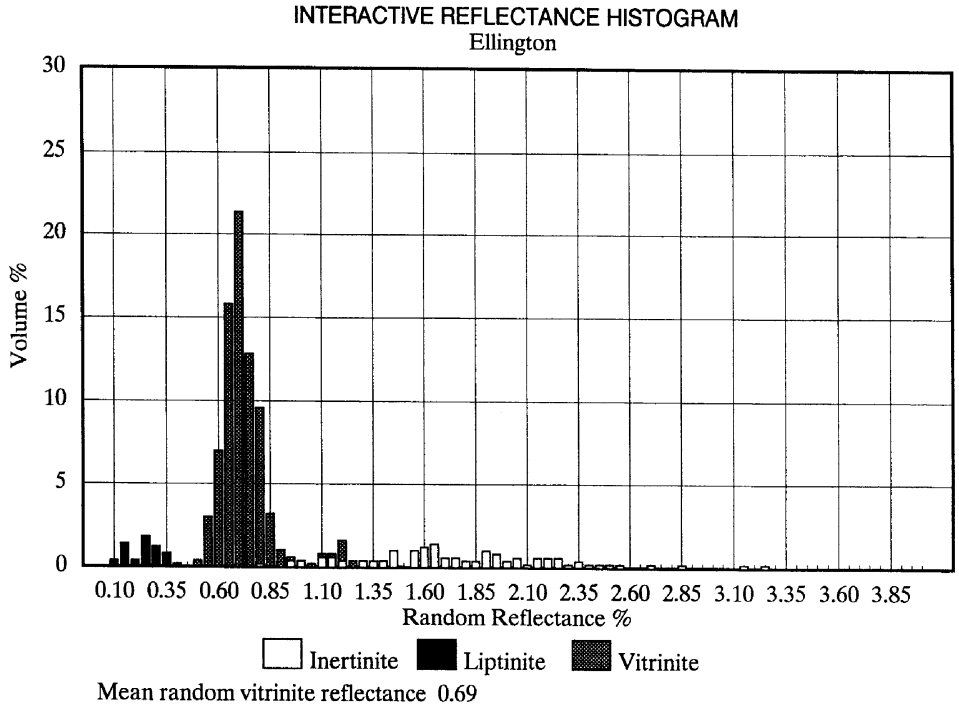
ASH ANALYSIS (% on ash)	
Na_2O	0.7
K_2O	0.8
CaO	3.6
MgO	1.3
Fe_2O_3	6.5
Al_2O_3	34.1
SiO_2	47.8
SO_3	2.0
TiO_2	1.2
Mn_3O_4	<0.1
P_2O_5	0.4

*Test atmosphere: reducing (50% CO_2 / 50% H_2)

This analysis is typical of this specially selected sample, but there may be slight variations between the data given above and that of the actual sample supplied.

ad: as analysed
db: dry basis
daf: dry , ash free
dmmf: dry , mineral matter free
mmf: mineral matter free

APPENDIX 20B



Mean random vitrinite reflectance 0.69
Vitrinite Standard Deviation 0.11