New Hope Corporation

Testing and Analysis of Rosevale coal to liquids samples RV005LC

REPORT NO.: 21008973

REPORT TO: Danique Bax
New Hope Group
3/22Magnolia Drive
Brookwater
QLD 4300

SAMPLED BY: Client

PURCHASE ORDER: 8200901

DATED REPORTED: 26 July 2011

Greg Van Gestel
Laboratory Manager
ALS Coal Division - Richlands

ANALYSIS AND TESTING REPORT

NEW HOPE CORPORATION

Sample Details	Sample: RVS001 Hole: RV005LC From: 8.860 m To: 8.980 m Mass: 2.48 kg	Sample: RVS002 Hole: RV005LC From: 8.980 m To: 9.160 m Mass: 4.39 kg	Sample: RVS003 Hole: RV005LC From: 11.040 m To: 11.480 m Mass: 13.92 kg
PROXIMATE ANALYSIS			
Air Dried Moisture %	15.0	14.4	23.6
Ash %	34.7	47.0	38.7
Volatile Matter %	29.1	23.6	34.3
Fixed Carbon %	21.2	15.0	3.4
Free Moisture % (a.r.)	40.0	31.3	23.9
Total Moisture % (a.r.)	50.5	42.7	44.6
Total Sulfur %	0.30	0.22	0.24
CALORIFIC VALUE (AD)			
Calorific Value MJ/kg	12.65	8.92	9.06
Calorific Value kcal/kg	3020	2132	2164
Relative Density	1.63	1.75	1.58

All results reported to air dried basis unless noted
a.r. = as received basis

Sample Details	Sample: RVS004 Hole: RV005LC From: 13.030 m To: 13.530 m Mass: 16.83 kg	Sample: RVS005 Hole: RV005LC From: 13.530 m To: 14.020 m Mass: 15.71 kg	Sample: RVS006 Hole: RV005LC From: 14.020 m To: 14.240 m Mass: 5.42 kg
PROXIMATE ANALYSIS			
Air Dried Moisture %	19.8	18.0	10.9
Ash %	45.0	40.9	53.4
Volatile Matter %	28.0	29.8	24.0
Fixed Carbon %	7.2	11.3	11.7
Free Moisture % (a.r.)	25.5	30.6	32.5
Total Moisture % (a.r.)	43.7	44.8	40.9
Total Sulfur %	0.25	0.31	0.24
CALORIFIC VALUE (AD)			
Calorific Value MJ/kg	7.76	9.67	7.48
Calorific Value kcal/kg	1852	2308	1786
Relative Density	1.67	1.64	1.84

All results reported to air dried basis unless noted
a.r. = as received basis

ANALYSIS AND TESTING REPORT

NEW HOPE CORPORATION

Sample Details	Sample: RVS007 Hole: RV005LC From: 14.240 m To: 14.680 m Mass: 13.18 kg	Sample: RVS008 Hole: RV005LC From: 14.680 m To: 15.130 m Mass: 13.23 kg	Sample: RVS009 Hole: RV005LC From: 15.800 m To: 16.370 m Mass: 17.73 kg
PROXIMATE ANALYSIS			
Air Dried Moisture %	15.1	13.2	14.1
Ash %	47.3	48.9	49.2
Volatile Matter %	24.1	24.0	22.8
Fixed Carbon %	13.5	13.9	13.9
Free Moisture % (a.r.)	30.1	33.4	31.0
Total Moisture % (a.r.)	42.1	43.6	44.4
Total Sulfur %	0.25	0.29	0.30
CALORIFIC VALUE (AD)			
Calorific Value MJ/kg	8.19	8.34	8.75
Calorific Value kcal/kg	1956	1992	2090
Relative Density	1.74	1.78	1.75

All results reported to air dried basis unless noted
a.r. = as received basis

Sample Details	Sample: RVS010 Hole: RV005LC From: 16.370 m To: 16.970 m Mass: 17.49 kg	Sample: RVS011 Hole: RV005LC From: 16.970 m To: 17.330 m Mass: 9.42 kg	Sample: RVS012 Hole: RV005LC From: 17.330 m To: 17.820 m Mass: 12.13 kg
PROXIMATE ANALYSIS			
Air Dried Moisture %	17.6	17.2	18.4
Ash %	39.8	37.6	27.6
Volatile Matter %	29.3	31.9	36.1
Fixed Carbon %	13.3	13.3	17.9
Free Moisture % (a.r.)	30.1	29.9	35.9
Total Moisture % (a.r.)	44.5	43.8	49.0
Total Sulfur %	0.34	0.34	0.40
CALORIFIC VALUE (AD)			
Calorific Value MJ/kg	10.20	10.91	13.99
Calorific Value kcal/kg	2436	2606	3340
Relative Density	1.66	1.64	1.53

All results reported to air dried basis unless noted
a.r. = as received basis

ANALYSIS AND TESTING REPORT

NEW HOPE CORPORATION

Sample Details	Sample: RVS013 Hole: RV005LC From: 17.820 m To: 18.250 m Mass: 11.55 kg	Sample: RVS014 Hole: RV005LC From: 18.250 m To: 18.740 m Mass: 14.34 kg	Sample: RVS015 Hole: RV005LC From: 18.740 m To: 19.190 m Mass: 11.35 kg
PROXIMATE ANALYSIS			
Air Dried Moisture %	23.6	12.8	19.6
Ash %	21.9	44.9	23.0
Volatile Matter %	35.8	25.9	34.8
Fixed Carbon %	18.7	16.4	22.6
Free Moisture % (a.r.)	33.8	33.2	36.1
Total Moisture % (a.r.)	51.4	42.4	49.8
Total Sulfur %	0.38	0.32	0.35
CALORIFIC VALUE (AD)			
Calorific Value MJ/kg	14.09	9.76	15.45
Calorific Value kcal/kg	3366	2330	3690
Relative Density	1.47	1.75	1.51

All results reported to air dried basis unless noted
a.r. = as received basis

Sample Details	Sample: RVS016 Hole: RV005LC From: 19.190 m To: 19.950 m Mass: 22.62 kg	Sample: RVS017 Hole: RV005LC From: 21.810 m To: 21.950 m Mass: 5.05 kg	Sample: RVS018 Hole: RV005LC From: 21.950 m To: 22.310 m Mass: 13.32 kg
PROXIMATE ANALYSIS			
Air Dried Moisture %	17.1	16.7	6.3
Ash %	39.3	37.3	66.2
Volatile Matter %	25.9	30.3	20.5
Fixed Carbon %	17.7	15.7	7.0
Free Moisture % (a.r.)	31.0	31.3	27.4
Total Moisture % (a.r.)	44.6	44.8	32.9
Total Sulfur %	0.27	0.28	0.14
CALORIFIC VALUE (AD)			
Calorific Value MJ/kg	10.42	11.80	4.87
Calorific Value kcal/kg	2490	2818	1162
Relative Density	1.66	1.60	2.08

All results reported to air dried basis unless noted
a.r. = as received basis

ANALYSIS AND TESTING REPORT

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Sample Details	Sample: RVS019 Hole: RV005LC From: 22.310 m To: 22.360 m Mass: 1.27 kg	Sample: RVS020 Hole: RV005LC From: 22.500 m To: 22.830 m Mass: 8.14 kg	Sample: RVS021 Hole: RV005LC From: 22.830 m To: 23.000 m Mass: 6.79 kg
PROXIMATE ANALYSIS			
Air Dried Moisture %	17.7	18.2	11.4
Ash %	32.3	31.1	56.4
Volatile Matter %	31.5	31.6	23.0
Fixed Carbon %	18.5	19.1	9.2
Free Moisture % (a.r.)	34.5	35.4	28.6
Total Moisture % (a.r.)	47.8	48.6	38.0
Total Sulfur %	0.35	0.32	0.16
CALORIFIC VALUE (AD)			
Calorific Value MJ/kg	12.63	12.93	6.41
Calorific Value kcal/kg	3018	3090	1532
Relative Density	1.58	1.56	1.88

All results reported to air dried basis unless noted
a.r. = as received basis

Sample Details	Sample: RVS022 Hole: RV005LC From: 23.000 m To: 23.550 m Mass: 14.14 kg	Sample: RVS023 Hole: RV005LC From: 23.550 m To: 24.150 m Mass: 14.84 kg	Sample: RVS024 Hole: RV005LC From: 24.150 m To: 24.700 m Mass: 14.42 kg
PROXIMATE ANALYSIS			
Air Dried Moisture %	20.0	20.5	18.7
Ash %	27.0	22.1	27.1
Volatile Matter %	35.0	36.6	36.0
Fixed Carbon %	18.0	20.8	18.2
Free Moisture % (a.r.)	34.0	36.7	34.3
Total Moisture % (a.r.)	48.7	50.7	48.3
Total Sulfur %	0.30	0.29	0.30
CALORIFIC VALUE (AD)			
Calorific Value MJ/kg	13.79	14.96	14.05
Calorific Value kcal/kg	3294	3572	3356
Relative Density	1.51	1.49	1.53

All results reported to air dried basis unless noted
a.r. = as received basis

ANALYSIS AND TESTING REPORT

NEW HOPE CORPORATION

Sample Details	Sample: RVS025 Hole: RV005LC From: 24.700 m To: 25.280 m Mass: 16.11 kg	Sample: RVS026 Hole: RV005LC From: 25.280 m To: 25.620 m Mass: 15.46 kg	Sample: RVS027 Hole: RV005LC From: 25.620 m To: 26.340 m Mass: 13.24 kg
PROXIMATE ANALYSIS			
Air Dried Moisture %	20.1	12.5	16.9
Ash %	30.3	42.9	31.3
Volatile Matter %	31.3	28.5	32.6
Fixed Carbon %	18.3	16.1	19.2
Free Moisture % (a.r.)	32.0	33.2	35.2
Total Moisture % (a.r.)	47.3	42.9	47.2
Total Sulfur %	0.25	0.23	0.29
CALORIFIC VALUE (AD)			
Calorific Value MJ/kg	12.61	10.86	13.05
Calorific Value kcal/kg	3010	2594	3118
Relative Density	1.56	1.72	1.60

All results reported to air dried basis unless noted
a.r. = as received basis

Sample Details	Sample: RVS028 Hole: RV005LC From: 28.380 m To: 28.740 m Mass: 9.99 kg	Sample: RVS029 Hole: RV005LC From: 29.160 m To: 29.760 m Mass: 17.04 kg	Sample: RVS030 Hole: RV005LC From: 29.760 m To: 30.410 m Mass: 20.60 kg
PROXIMATE ANALYSIS			
Air Dried Moisture %	13.3	17.2	14.2
Ash %	48.2	39.6	46.8
Volatile Matter %	25.5	27.6	24.3
Fixed Carbon %	13.0	15.6	14.7
Free Moisture % (a.r.)	30.1	31.2	32.1
Total Moisture % (a.r.)	41.5	44.3	43.1
Total Sulfur %	0.29	0.29	0.27
CALORIFIC VALUE (AD)			
Calorific Value MJ/kg	8.76	10.60	9.04
Calorific Value kcal/kg	2092	2532	2158
Relative Density	1.79	1.67	1.78

All results reported to air dried basis unless noted
a.r. = as received basis

ANALYSIS AND TESTING REPORT

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Sample Details	Sample: RVS031 Hole: RV005LC From: 30.410 m To: 30.710 m Mass: 9.48 kg	Sample: RVS032 Hole: RV005LC From: 36.540 m To: 37.190 m Mass: 16.87 kg	
PROXIMATE ANALYSIS			
Air Dried Moisture %	10.2	17.0	
Ash %	60.2	30.2	
Volatile Matter %	20.8	30.7	
Fixed Carbon %	8.8	22.1	
Free Moisture % (a.r.)	27.8	35.5	
Total Moisture % (a.r.)	35.8	48.2	
Total Sulfur %	0.18	0.40	
CALORIFIC VALUE (AD)			
Calorific Value MJ/kg	5.79	13.88	
Calorific Value kcal/kg	1384	3314	
Relative Density	1.94	1.63	

All results reported to air dried basis unless noted
a.r. = as received basis

ACCREDITED TESTS

HARD COAL TEST	ABBREVIATION	STANDARD /REFERENCE
Abrasion Index	AI	AS1038.19
Adiabatic Self Heating		AL035 (In-House)
Ash	A	AS1038.3
Ash Fusibility		AS1038.15
Carbon		AS1038.6.4
Carbonate Carbon	C_m	AS1038.23
Chlorine	Cl	AS1038.8
Crucible Swelling Number	CSN	AS1038.12.1
Dilatometer		AS 1038.12.3
Fixed Carbon	FC	AS1038.3
Float/Sink Analysis	F/S	AS4156.1
Forms of Sulfur	FOS [S_o, S_p, S_s]	AS1038.11
Gieseler		AS1038.12.4.1
Gray King Coke Type	GKCT	AS1038.12.2
Hardgrove Grindability Index	HGI	AS1038.20
Hydrogen	H	AS1038.6.4
Moisture (residual)	M_r	AS1038.3
Moisture Holding Capacity	MHC	AS1038.17
Nitrogen	N	AS1038.6.4
Oxygen	O	AS1038.16
Phosphorus	P	BS1016.14
Relative Density	RD	AS1038.21.1.1
Relative Ignition Temperature	RIT	AL030 (In-House)
Size Analysis		AS3881
Gross Calorific Value	q	AS1038.5
Total Moisture	M	AS1038.1
Total Sulfur	S	AS1038.6.3.3
Volatile Matter	VM	AS1038.3
Ash Analysis		AL044 (In-House) *
COKE TEST	**ABBREVIATION**	**STANDARD /REFERENCE**
Proximate Analysis		AS 1038.4

Note(s):

1. Acceptance and reporting of results is in accordance with AS1038.16

2. Sampling by ACIRL is in accordance with the following AS2617 (seams, insitu);
   AS4264.1 Sampling Procedures ;
   AS4264.4 Determination of Precision and Bias

3. All analyses reported to Air-Dried Basis unless otherwise indicated.

*4. Ash Analysis performed at ACIRL Maitland laboratory (accreditation held).

   Based on AS1038.14.2, variation ICP instead of flame for species excitation.

NON ACCREDITED TEST

The following tests are not covered in by the scope of accreditation relating to the laboratories technical accreditation.

TEST	STANDARD/REFERENCE
Drop Shatter	AS2519
Durham Cone	AS1038.25
Froth Flotation	AS4156.2 and Client Specific Procedures
Mineral Matter	AS1038.22
Pre- Treatment	AS2519
Roadway Dusts	QLD Department of Mines and Energy – Quality of incompatible dust, sampling and analysis of roadway dust in underground coal mine – Coal Mining Safety and Health Act 1999 Recognised Standard – No. 05, July 2003
Roga Index	ISO335
Caking Index	ISO15585
Sapozhnikov	Journal of Mine Metals and Fuels India Oct 1978
Size Adjustment	AS2519

APPENDIX I

CLIENT INSTRUCTIONS

New Hope Group

memo

To: Daniel Caldwell - ACIRL

Copy:		**Our Ref:**	
From:	Danique Bax	**Date:**	23 March 2011
Re:	Coal to Liquids Analysis Instructions - Stage 1-3 for Rosevale		

Hi Daniel

Firstly, I must apologise for something – the purchase order numbers that I provided for the York Plains samples are incorrect. I accidentally gave you the purchase requisition number, which in not the purchase order number. The Rosevale purchase order numbers provided below have been double-checked, and are correct. For the York Plains, please use the following purchase order numbers:

York Plains Stage 1 – 8200862
York Plains Stage 2 – 5202778
York Plains Stage 3 – 5202778

Once again, I apologise for the confusion with this. The purchase order number for the Rosevale and York Plains Stage 2 & 3 analysis is the same. The Stage 1 analysis purchase order differs between the two projects.

Please perform the following analyses on the samples from Rosevale, Tasmania. The program of works has not changed between Rosevale and York Plains for these CTL samples.

Stage 1

IMPORTANT: This analysis is for New Hope Exploration, and is to be invoiced separately from the Stage 2 analysis, using Purchase Order number 8200901.

- Proximate Analysis (Moisture, Ash, Volatile Matter, Fixed Carbon)
- RD
- Specific Energy
- Total Moisture
- Total Sulfur
- Calorific Value

Please report these values and await confirmation and further instructions before proceeding with Stage 2 analysis.

Stage 2

IMPORTANT: This analysis is for Coal to Liquids, and is to be invoiced separately from the Stage 1 analysis, using Purchase Order number 5202778.

Please crush the full sample to -6mm, before performing the following:

- Proximate Analysis (Moisture, Ash, Volatile Matter, Fixed Carbon)
- RD
- Total Sulfur

- Calorific Value
- Ultimate Analysis
- Petrographic (Maceral) Analysis

Stage 3

IMPORTANT: This analysis is for Coal to Liquids, and is to be invoiced on the same purchase order as Stage 2 analysis, (Purchase Order number 5202778).

Washability Analysis (on cut points 1.45, 1.50, 1.55, 1.60, 1.65) – standard ash/yield

The remaining -6mm crushed sample will then be freighted under the instruction of Rob Neale. 150kg of each bulk sample will be required for further Coal to Liquids analysis.

If you have any problems, or questions, please don't hesitate to contact me.

Regards,

Danique Bax

Hole Number	RV005LC
Area	Rosevale, Tasmania 8-inch
Geologist	Andew Basson
Date Sampled	15/03/2011 - 18/03/2011
Sent to	ACIRL
Address	1 Acirl St, Riverview, QLD, 4305
Comment	

Hole	SampNumb	From	To	Thick	Seam1	Lithology	Stage1 Instructions
RV005LC	RVS001	8.86	8.98	0.13		COAL 100%	Proceed
RV005LC	RVS002	8.98	9.16	0.18		LIGNEOUS CLAY 100%	Proceed
RV005LC	RVS003	11.04	11.48	0.44		COAL 100%	Proceed
RV005LC	RVS004	13.03	13.53	0.50		COAL 100%	Proceed
RV005LC	RVS005	13.53	14.02	0.49		COAL 100%	Proceed
RV005LC	RVS006	14.02	14.24	0.22		COAL 50%, LIGNEOUS CLAY 50%	Proceed
RV005LC	RVS007	14.24	14.68	0.44		COAL 100%	Proceed
RV005LC	RVS008	14.68	15.13	0.45		COAL 100%	Proceed
RV005LC	RVS009	15.80	16.37	0.57		COAL 100%	Proceed
RV005LC	RVS010	16.37	16.97	0.60		COAL 100%	Proceed
RV005LC	RVS011	16.97	17.33	0.36		COAL 89%, SIDERITE 11%	Proceed
RV005LC	RVS012	17.33	17.82	0.49		COAL 100%	Proceed
RV005LC	RVS013	17.82	18.25	0.43		COAL 100%	Proceed
RV005LC	RVS014	18.25	18.74	0.49		COAL 100%	Proceed
RV005LC	RVS015	18.74	19.19	0.45		COAL 100%	Proceed
RV005LC	RVS016	19.19	19.95	0.76		COAL 82%, LIGNEOUS CLAY 18%	Proceed
RV005LC	RVS017	21.81	21.95	0.14		COAL 100%	Proceed
RV005LC	RVS018	21.95	22.31	0.36		CLAY 36%, LIGNEOUS CLAY 64%	Proceed
RV005LC	RVS019	22.31	22.36	0.05		COAL 100%	Proceed
RV005LC	RVS020	22.50	22.83	0.33		COAL 100%	Proceed
RV005LC	RVS021	22.83	23.00	0.17		CLAY 100%	Proceed
RV005LC	RVS022	23.00	23.55	0.55		COAL 89%, LIGNEOUS CLAY 11%	Proceed
RV005LC	RVS023	23.55	24.15	0.60		COAL 100%	Proceed
RV005LC	RVS024	24.15	24.70	0.55		COAL 91%, LIGNEOUS CLAY 9%	Proceed
RV005LC	RVS025	24.70	25.28	0.58		COAL 95%, LIGNEOUS CLAY 5%	Proceed
RV005LC	RVS026	25.28	25.62	0.34		COAL 79%, LIGNEOUS CLAY 21%	Proceed
RV005LC	RVS027	25.62	26.34	0.72		COAL 100%	Proceed
RV005LC	RVS028	28.38	28.74	0.36		COAL 100%	Proceed
RV005LC	RVS029	29.16	29.76	0.60		COAL 88%, LIGNEOUS CLAY 12%	Proceed
RV005LC	RVS030	29.76	30.41	0.65		COAL 100%	Proceed
RV005LC	RVS031	30.41	30.71	0.30		COAL 100%	Proceed
RV005LC	RVS032	36.54	37.19	0.65		COAL 100%	Proceed

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