

707



MOUNT KLAPPAN
COAL PROJECT
LOST - FOX AREA
GEOLOGICAL REPORT
1985

APPENDIX IV

DIAMOND DRILL HOLE COAL QUALITY

VOLUME I

KPNLRDDH 85001 TO KPNLRDDH 85011

VOLUME II

KPNLRDDH 85012 TO KPNLRDDH 85020

VOLUME III

KPNLRDDH 85021 TO KPNLRDDH 85034

GULF CANADA LIMITED

COAL DIVISION

MOUNT KLAPPAN COAL PROJECT
LOST - FOX AREA
GEOLOGICAL REPORT
1985

APPENDIX IV

DIAMOND DRILL HOLE COAL QUALITY
VOLUME I

KPNLRDDH 85001

TO

KPNLRDDH 85020

707



GULF CANADA LIMITED
COAL DIVISION

APPENDIX IV

Lost-Fox Area

1985 Diamond Drill Hole Coal Quality Data

CONFIDENTIAL DATA HAS BEEN REMOVED

----- GULF CANADA RESOURCES INC. -----

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85001

DATE - 01/09/86

- HISTORY -

START DATE - 03/05/85

END DATE - 03/11/85

CONTRACTOR - J.T. THOMAS

GEOLOGIST - M. BARKER

OPERATOR - GCRI

SURVEYOR - MWG & ASS.

REMARKS - SITE P

- LOCATION -

PROVINCE - BC

ELEVATION - 1480.40

LICENCE/LEASE NUMBER - 7169

ZONE - 9

NORTHING - 6345720.00

EASTING - 507254.75

LATITUDE - 571523

LONGITUDE - 1285247

- ORIENTATION -

LENGTH - 233.28

CORE SIZE - 0.0

CEMENT -

PLUG -

PIEZ -

INCLINATION - 90.0

AZIMUTH - 0.0

CASING DEPTH (M) - 6.97

AQUIFER DEPTHS (M) - 0.00

0.00

LOST CIRC. DEPTHS (M) - 0.00

0.00

*** NOTE *** 0 INDICATES NO VALUE

GULF CANADA RESOURCES INC. - COAL DIVISION
 06/JAN/86 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL - ROCK
DDH85001		7251	22.00	22.10	100.00		0.062			0.000- 0.062
	J	7252	22.10	22.68	100.00	0.356				0.356- 0.000
		7253	22.68	23.38	100.00		0.423			0.000- 0.423
		7254	118.90	119.13	100.00		0.230			0.000- 0.230
	I	7255	119.13	120.53	100.00	1.360	0.040			1.360- 0.040
	I	7256	120.53	121.65	100.00	0.170	0.949			0.170- 0.949
	I	7257	121.65	123.51	100.00	1.848	0.010			1.848- 0.010
		7258	123.51	123.95	100.00		0.439			0.000- 0.439
		7259	157.16	158.65	100.00	0.009	1.400			0.009- 1.400
	H	7260	158.65	159.09	100.00	0.225	0.187			0.225- 0.187
	H	7261	159.09	160.98	88.36	1.352	0.183	0.167	0.037	1.519- 0.220
		7262	160.98	162.11	100.00		1.016			0.000- 1.016
		7263	213.77	214.70	75.27		0.700		0.230	0.000- 0.930
	G	7264	214.70	215.64	96.81	0.820	0.090	0.030		0.850- 0.090
		7265	215.64	217.58	100.00		1.939			0.000- 1.939
	PHANTOM	7266	175.78	176.00	100.00	0.220				0.220- 0.000

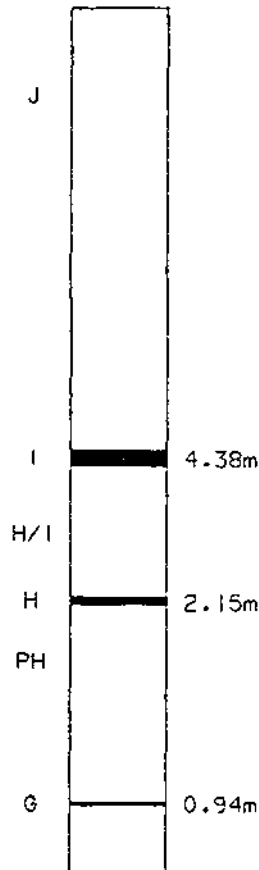
GULF CANADA RESOURCES INC. - COAL DIVISION
 06/JAN/86 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL-ROCK
DDH85001												
	I	1	7255	7257	119.13	123.51	100.00	3.38	1.00	0.00	0.00	3.38- 1.00
	H	2	7260	7261	158.65	160.98	90.55	1.71	0.40	0.18	0.04	1.89- 0.44
	G	3	7264	7264	214.70	215.64	96.80	0.82	0.09	0.03	0.00	0.85- 0.09
	J	7252	7252	7252	22.10	22.68	100.00	0.58	0.00	0.00	0.00	0.58- 0.00
	PHANTOM	7266	7266	7266	175.78	176.00	100.00	0.22	0.00	0.00	0.00	0.22- 0.00

MT. KLAPPAN COAL PROPERTY

1985 DIAMOND DRILL HOLES DDH85001

SEAM TRUE SEAM THICKNESS
 (COAL & ROCK)



NOTE: SCHEMATIC PROFILE.
NO THICKNESSES SHOWN
FOR SEAMS CONTAINING
LESS THAN 50cm COAL.

SCALE: 1:2000

GULF CANADA RESOURCES INC.
15/01/86



**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85001

=====

SAMPLE ID	07266	DATA TYPE (REAL,BORO,AVER,CALC)	REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 25/06/85	
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)	AD

NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	---.---	TOTAL SULPHUR %	---.---
SURFACE MOISTURE %	---.---	PHOSPHOROUS %	---.---
TOTAL MOISTURE %	2.20	CHLORINE (PPM)	---.---
EQUILIBRIUM MOISTURE %	---.---	SPECIFIC GRAVITY	---.---
RESIDUAL MOISTURE %	1.19	FSI	---.---
ASH %	31.01	HGI	---.---
VOLATILE MATTER %	---.---	CO2 %	---.---
FIXED CARBON %	---.---		
GROSS CALORIFIC VALUE (MJ/KG)	---.---		
NET CALORIFIC VALUE (MJ/KG)	---.---		

----- GULF CANADA RESOURCES INC. -----

- DATA SOURCE SUMMARY -

DATA SOURCE - KPMLRDDH85002

DATE - 01/09/86

- HISTORY -

START DATE - 03/09/85

END DATE - 03/14/85

CONTRACTOR - J.T. THOMAS

GEOLOGIST - M. BARKER

OPERATOR - GCRI

SURVEYOR - MWG & ASS.

REMARKS - TWISTED RODS OFF AT 102.0M BEGAN HOLE AGAIN AS DDH
85004 IN SAME LOCATION, INCLINATION 85 DEGREES, CO
RE LOSS DETERMINED FROM BOX MARKERS AND DRILLERS D
EPTH INDICATORS

- LOCATION -

PROVINCE - BC

ELEVATION - 1836.40

LICENCE/LEASE NUMBER - 7152

ZONE - 9

NORTHING - 6344198.00

EASTING - 505875.06

LATITUDE - 571434

LONGITUDE - 1285410

- ORIENTATION -

LENGTH - 102.97

INCLINATION - 90.0

AZIMUTH - 0.0

CORE SIZE - 0.0

CEMENT -

PLUG -

PIEZ -

CASING DEPTH (M) - 6.10

AQUIFER DEPTHS (M) - 0.00

0.00

LOST CIRC. DEPTHS (M) - 0.00

0.00

*** NOTE *** 0 INDICATES NO VALUE



GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL
						COAL	ROCK	COAL	ROCK	COAL - ROCK

DDH85002		7267	59.18	59.45	100.00		0.270			0.000- 0.270
	I	7268	59.45	60.26	86.42	0.550	0.150	0.110		0.660- 0.150
	I	7269	60.26	62.68	90.50	2.110	0.080	0.230		2.340- 0.080
		7270	62.68	63.29	100.00		0.610			0.000- 0.610
		7271	100.04	101.62	100.00		1.580			0.000- 1.580
	H	7272	101.62	102.97	100.00	1.090	0.260			1.090- 0.260

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL-ROCK
DDH85002												
	I	4	7268	7269	59.45	62.68	89.47	2.66	0.23	0.34	0.00	3.00- 0.23
	H	61	7272	7272	101.62	102.97	100.00	1.09	0.26	0.00	0.00	1.09- 0.26

COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES

----- GULF CANADA RESOURCES INC. -----

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85003

DATE - 01/09/86

- HISTORY -

START DATE - 03/14/85
END DATE - 03/17/85

CONTRACTOR - J.T. THOMAS
GEOLOGIST - E. LEGRESLEY

OPERATOR - GCRI
SURVEYOR - MWG & ASS.

REMARKS - SITE J

- LOCATION -

PROVINCE - BC
ELEVATION - 1798.10

ZONE - 9
NORTHING - 6344438.00
EASTING - 506328.25

LICENCE/LEASE NUMBER - 7151

LATITUDE - 571442
LONGITUDE - 1285343

- ORIENTATION -

LENGTH - 176.64

INCLINATION - 70.0
AZIMUTH - 45.0

CORE SIZE - 0.0

CEMENT -
PLUG -
PIEZ -

CASING DEPTH (M) - 15.55
AQUIFER DEPTHS (M) - 0.00
0.00
LOST CIRC. DEPTHS (M) - 0.00
0.00

*** NOTE *** 0 INDICATES NO VALUE

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
						COAL	ROCK	COAL	ROCK	COAL	ROCK

DDHB5003		7276	35.21	35.71	100.00		0.383			0.000	0.383
	M	7277	35.71	36.81	81.82	0.630	0.061	0.153		0.783	0.061
	M	7278	36.81	38.07	86.51	0.468	0.369	0.077	0.054	0.545	0.423
	M	7279	38.07	41.05	81.88	1.592	0.275	0.245	0.169	1.837	0.444
	M	7280	41.05	42.63	100.00	0.744	0.467			0.744	0.467
		7281	42.63	42.95	100.00		0.245			0.000	0.245
		7282	99.93	100.20	100.00		0.213			0.000	0.213
	N OVERTURNED	7283	100.20	101.35	100.00	0.409	0.495			0.409	0.495
	N OVERTURNED	7284	101.35	102.39	100.00	0.759	0.055			0.759	0.055
		7285	102.39	102.69	100.00		0.234			0.000	0.234
		7286	169.18	170.59	100.00		1.178			0.000	1.178
	N UPRIGHT	7287	170.59	172.29	86.47	0.887	0.355	0.194		1.081	0.355
		7288	172.29	172.49	100.00		0.170			0.000	0.170

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL-ROCK

DDH85003												
M		5	7277	7278	35.71	38.07	84.32	1.43	0.56	0.30	0.07	1.73- 0.63
M		6	7279	7280	38.07	42.63	88.15	3.05	0.97	0.32	0.22	3.37- 1.19
N OVERTURNED		7	7283	7284	100.20	102.39	100.00	1.49	0.70	0.00	0.00	1.49- 0.70
N UPRIGHT		8	7287	7287	170.59	172.29	86.47	1.05	0.42	0.23	0.00	1.28- 0.42

COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES

===== GULF CANADA RESOURCES INC. =====

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85004

DATE - 01/09/86

- HISTORY -

START DATE - 03/13/85

END DATE - 03/19/85

CONTRACTOR - J.T. THOMAS

OPERATOR - GCR1

GEOLOGIST - M. BARKER

SURVEYOR - MWG & ASS.

REMARKS - SAME LOCATION AS DDH85002 WHICH TWISTED OFF AT 102
METERS, SITE F

- LOCATION -

PROVINCE - BC

ZONE - 9

ELEVATION - 1836.40

NORTHING - 6344198.00

EASTING - 505875.06

LICENCE/LEASE NUMBER - 7152

LATITUDE - 571434

LONGITUDE - 1285410

- ORIENTATION -

LENGTH - 252.77

INCLINATION - 85.0

AZIMUTH - 225.0

CORE SIZE - 0.0

CEMENT -

CASING DEPTH (M) - 18.29

PLUG -

AQUIFER DEPTHS (M) - 0.00

PIEZ -

0.00

LOST CIRC. DEPTHS (M) - 0.00

0.00

*** NOTE *** 0 INDICATES NO VALUE

=====

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
						COAL	ROCK	COAL	ROCK	COAL	ROCK
DDH85004		7289	58.81	59.02	100.00		0.210			0.000-	0.210
	I	7290	59.02	61.34	50.43	1.140	0.030	1.150		2.290-	0.030
	I	7291	61.34	62.72	84.06	0.960	0.200	0.220		1.180-	0.200
		7292	62.72	64.25	100.00		1.530			0.000-	1.530
		7294	100.24	101.65	100.00		1.396			0.000-	1.396
	H	7295	101.65	102.66	85.15	0.853		0.149		1.002-	0.000
	H	7296	102.66	103.84	64.41	0.387	0.368	0.208	0.208	0.595-	0.576
	H	7297	103.84	105.64	85.00	1.462	0.060	0.139	0.129	1.601-	0.189
		7298	105.64	106.06	100.00		0.419			0.000-	0.419
		7299	160.09	160.32	100.00		0.229			0.000-	0.229
	G	7300	160.32	161.69	86.13	0.932	0.238		0.188	0.932-	0.426
	G	7301	161.69	162.44	100.00	0.030	0.709			0.030-	0.709
	G	7302	162.44	163.78	100.00	1.135	0.176			1.135-	0.176
	G	7303	163.78	165.35	87.90	0.337	0.993		0.182	0.337-	1.175
		7304	165.35	165.75	100.00		0.381			0.000-	0.381
		7305	203.02	204.19	100.00		1.152			0.000-	1.152
	F	7306	204.19	205.02	73.49	0.591	0.010	0.217		0.808-	0.010
	F	7307	205.02	206.57	100.00	0.918	0.611			0.918-	0.611
		7308	206.57	207.13	100.00		0.552			0.000-	0.552
		7342	223.32	223.68	100.00		0.310			0.000-	0.310
	E	7343	223.68	226.75	86.32	1.835	0.105	0.206	0.087	2.041-	0.192
		7345	236.94	237.89	100.00		0.545			0.000-	0.545
	E(REPEAT)	7346	237.89	239.64	54.86	0.260	0.034	0.178	0.029	0.438-	0.063
		7347	239.64	241.39	100.00		0.875			0.000-	0.875

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL-ROCK
DDH85004												
	I	0	7290	7291	59.02	62.72	62.97	2.10	0.23	1.37	0.00	3.47- 0.23
	H	9	7295	7295	101.65	102.66	85.14	0.86	0.00	0.15	0.00	1.01- 0.00
	H	10	7296	7296	102.66	103.84	64.40	0.39	0.37	0.21	0.21	0.60- 0.58
	H	11	7297	7297	103.84	105.64	85.00	1.47	0.06	0.14	0.13	1.61- 0.19
	G	12	7300	7303	160.32	165.35	92.44	2.48	2.17	0.00	0.38	2.48- 2.55
	F	13	7306	7307	204.19	206.57	90.75	1.53	0.63	0.22	0.00	1.75- 0.63
	E	14	7343	7343	223.68	226.75	86.31	2.51	0.14	0.30	0.12	2.81- 0.26
	E (REPEAT)	15	7346	7346	237.89	239.64	54.85	0.86	0.10	0.69	0.10	1.55- 0.20

**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

GULF CANADA RESOURCES INC.

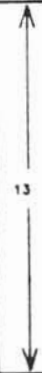
SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DDH85004 SEAM : F INTERVAL(M) : 203.02 - 207.13 ELEVATION(M) : 1836.4
 GEOLOGIST : M. BARKER SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.						
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	FAV/VAL W/RE	
	203.02	↑		1.15	100.0	7305										
	204.19															
	205.02															
	206.57															
	207.13	↓		0.46	100.0	7308										



13

1.73 / 0.82
2.35

2.89 42.15 5.87 48.09 1.07 18.09

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL - ROCK
DDHB5005		7314	51.13	51.60	100.00		0.338			0.000- 0.338
	O	7315	51.60	52.33	53.42	0.094	0.150	0.156	0.070	0.250- 0.220
	O	7316	52.33	53.25	93.48	0.800		0.056		0.856- 0.000
		7317	53.25	53.65	100.00		0.333			0.000- 0.333
		7318	98.01	98.55	100.00		0.431			0.000- 0.431
	N UPPER	7319	98.55	99.65	62.73	0.044		0.128		0.172- 0.000
		7320	99.65	99.90	100.00		0.129			0.000- 0.129
		7321	105.92	106.13	100.00		0.105			0.000- 0.105
	N LOWER	7322	106.13	108.28	100.00	1.023	0.206			1.023- 0.206
	N LOWER	7323	108.28	110.71	97.12	0.375	1.304	0.047		0.422- 1.304
	N LOWER	7324	110.71	111.87	100.00	0.981				0.981- 0.000
	N LOWER	7325	111.87	112.12	100.00		0.004			0.000- 0.004
		7327	210.42	210.91	100.00		0.460			0.000- 0.460
	M	7328	210.91	214.17	89.57	1.888	0.745		0.300	1.888- 1.045
		7329	214.17	214.42	100.00		0.223			0.000- 0.223
		7348	255.19	255.98	100.00		0.747			0.000- 0.747
	L	7349	255.98	256.63	100.00	0.406	0.208			0.406- 0.208
		7350	256.63	257.00	100.00		0.349			0.000- 0.349
	K/L	7362	310.83	310.97	100.00	0.127				0.127- 0.000
	K/L	7363	310.97	311.56	100.00	0.497	0.036			0.497- 0.036
		7364	311.56	311.88	100.00		0.291			0.000- 0.291
		7365	315.82	316.12	100.00		0.276			0.000- 0.276
	K	7366	316.12	318.54	100.00	2.196	0.036			2.196- 0.036
	K	7367	318.54	319.17	100.00	0.009	0.573			0.009- 0.573
	K	7369	319.17	319.48	100.00	0.287				0.287- 0.000
		7370	319.48	320.83	100.00		1.254			0.000- 1.254
		7371	320.83	320.99	100.00		0.149			0.000- 0.149
	K	7372	320.99	321.62	100.00	0.467	0.121			0.467- 0.121

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 2
 TRUE THICKNESS
 KLAPPAN PROJECT

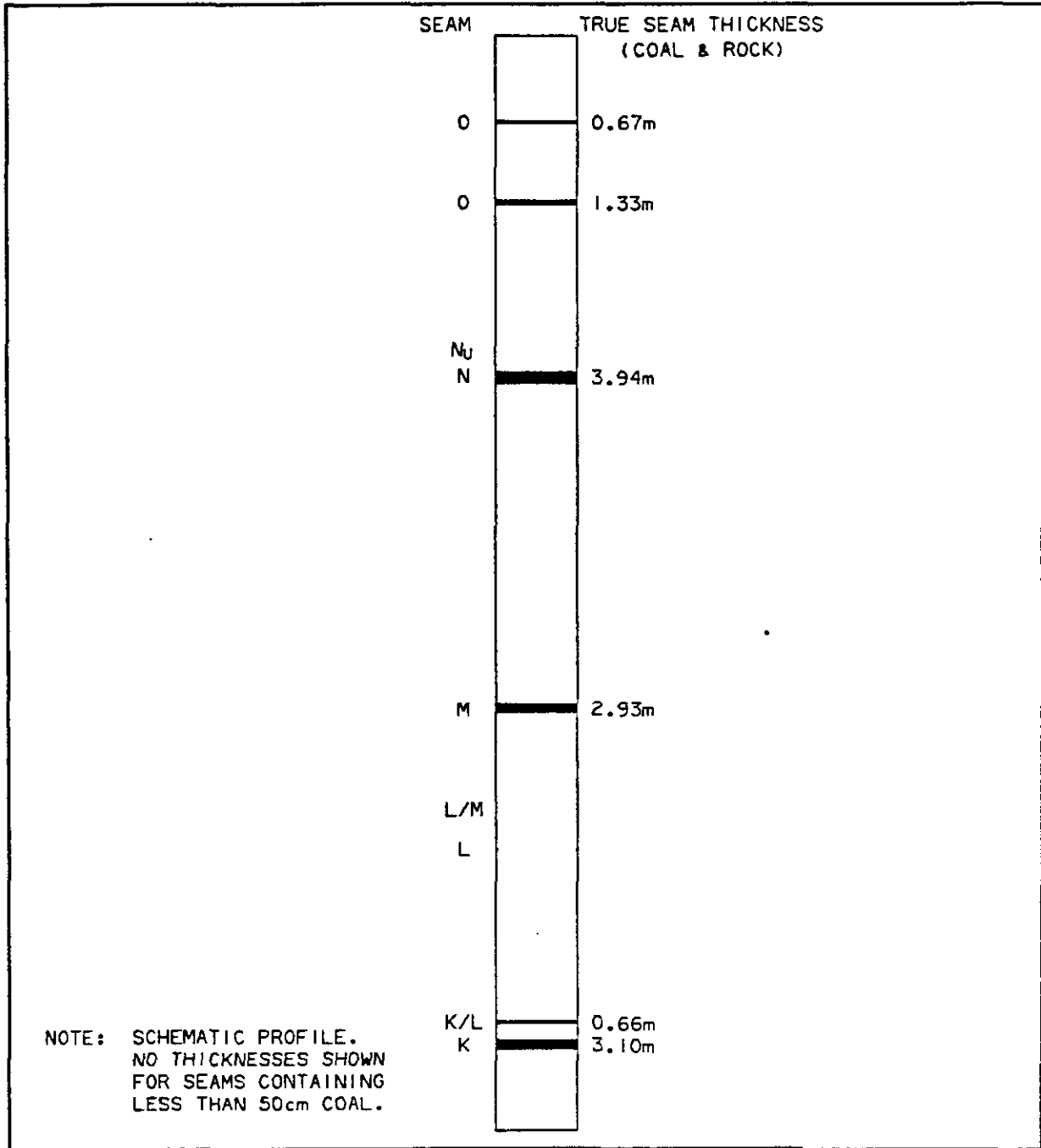
DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
						COAL	ROCK	COAL	ROCK	COAL	ROCK
	K	7373	321.62	322.20	100.00		0.541			0.000	0.541
		7374	243.32	243.46	100.00	0.010	0.128			0.010	0.128
	L/M	7375	243.46	243.86	100.00	0.316	0.079			0.316	0.079
	L/M	7376	243.86	244.07	100.00		0.207			0.000	0.207
		7540	26.65	26.90	100.00		0.067			0.000	0.067
	D OVERTURNED	7541	26.90	30.13	100.00	0.642	0.030			0.642	0.030
	D OVERTURNED	7542	30.13	31.24	100.00		0.380			0.000	0.380

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL-ROCK

DDH85005												
O		16	7315	7316	51.60	53.25	75.75	1.04	0.21	0.32	0.08	1.36- 0.29
N UPPER		17	7319	7319	98.55	99.65	62.72	0.69	0.00	0.41	0.00	1.10- 0.00
N LOWER		18	7322	7324	106.13	111.87	98.78	3.49	2.18	0.07	0.00	3.56- 2.18
M		19	7328	7328	210.91	214.17	89.57	2.09	0.83	0.00	0.34	2.09- 1.17
L		20	7349	7349	255.98	256.63	100.00	0.43	0.22	0.00	0.00	0.43- 0.22
K		21	7366	7369	316.12	319.48	100.00	2.70	0.66	0.00	0.00	2.70- 0.66
O OVERTURNED		63	7541	7541	26.90	30.13	100.00	3.19	0.04	0.00	0.00	3.19- 0.04
K/L		7362	7362	7362	310.83	310.97	100.00	0.14	0.00	0.00	0.00	0.14- 0.00
K/L		7363	7363	7363	310.97	311.56	100.00	0.55	0.04	0.00	0.00	0.55- 0.04
L/M		7375	7375	7375	243.46	243.86	100.00	0.32	0.08	0.00	0.00	0.32- 0.08

MT. KLAPPAN COAL PROPERTY
1985 DIAMOND DRILL HOLES
DDH85005



SCALE: 1:2000

GULF CANADA RESOURCES INC.
15/01/86



**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DDH85005 SEAM : O OVERTURNED INTERVAL(M) : 26.90 - 30.13 ELEVATION(M) : 1758.0
 GEOLOGIST : E. LEGRESLEY SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID			COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	CAL. VAL MJ/KG	
	26.90	↑ ↓	0.24													
	30.13	↓	0.40		100.0	7541	83	0.84 / 0.82 0.87	0.76	26.70	5.80	86.74	0.54	25.39	—	

CRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85005

SAMPLE ID 07362 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 25/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	---.---	TOTAL SULPHUR %	---.---
SURFACE MOISTURE %	---.---	PHOSPHOROUS %	---.---
TOTAL MOISTURE %	2.23	CHLORINE (PPM)	---.---
EQUILIBRIUM MOISTURE %	---.---	SPECIFIC GRAVITY	---.---
RESIDUAL MOISTURE %	1.63	FSI	---.---
ASH %	71.91	HGI	---.---
VOLATILE MATTER %	---.---	CO2 %	---.---
FIXED CARBON %	---.---		
GROSS CALORIFIC VALUE (MJ/KG)	---.---		
NET CALORIFIC VALUE (MJ/KG)	---.---		

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85005

=====

SAMPLE ID	7364	DATA TYPE (REAL,BORO,AVER,CALC)	REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 25/06/85	
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)	AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)		ASTM	

TOP SIZE (MM)	-----		
SURFACE MOISTURE %	-----	TOTAL SULPHUR %	-----
TOTAL MOISTURE %	2.78	PHOSPHOROUS %	-----
EQUILIBRIUM MOISTURE %	-----	CHLORINE (PPM)	-----
		SPECIFIC GRAVITY	-----
RESIDUAL MOISTURE %	2.02	FSI	-----
ASH %	63.16	HGI	-----
VOLATILE MATTER %	-----	CO2 %	-----
FIXED CARBON %	-----		
GROSS CALORIFIC VALUE (MJ/KG)	-----		
NET CALORIFIC VALUE (MJ/KG)	-----		

===== GULF CANADA RESOURCES INC. =====

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85006

DATE - 01/09/86

- HISTORY -

START DATE - 03/19/85
END DATE - 03/24/85

CONTRACTOR - J.T. THOMAS
GEOLOGIST - M. BARKER

OPERATOR - GCRI
SURVEYOR - MWG & ASS.

REMARKS - SITE H

- LOCATION -

PROVINCE - BC
ELEVATION - 1764.90

ZONE - 9
NORTHING - 6343993.00
EASTING - 506101.00

LICENCE/LEASE NUMBER - 7151

LATITUDE - 571427
LONGITUDE - 1285356

- ORIENTATION -

LENGTH - 262.45

INCLINATION - 90.0
AZIMUTH - 0.0

CORE SIZE - 0.0

CEMENT -
PLUG -
PIEZ -

CASING DEPTH (M) - 6.10
AQUIFER DEPTHS (M) - 0.00
0.00
LOST CIRC. DEPTHS (M) - 0.00
0.00

*** NOTE *** 0 INDICATES NO VALUE

=====

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
						COAL	ROCK	COAL	ROCK	COAL	ROCK

DDH85006		7330	81.64	81.93	100.00		0.286			0.000	0.286
	G	7331	81.93	83.42	74.50	0.857	0.236	0.375		1.232	0.236
	G	7332	83.42	84.51	100.00		1.074			0.000	1.074
	G	7333	84.51	85.47	75.00	0.680	0.030	0.236		0.916	0.030
	G	7334	85.47	88.08	87.74	0.373	1.879	0.314		0.687	1.879
		7335	88.08	88.20	100.00		0.118			0.000	0.118
		7336	153.13	153.47	100.00		0.335			0.000	0.335
	F	7337	153.47	156.65	76.10	1.555	0.807	0.388	0.348	1.943	1.155
		7338	156.65	157.02	100.00		0.356			0.000	0.356
		7339	176.29	178.13	100.00		1.824			0.000	1.824
	E	7340	178.13	179.04	84.62	0.477	0.289	0.140		0.617	0.289
		7341	179.04	179.29	100.00		0.249			0.000	0.249
		7351	22.67	23.32	100.00		0.648			0.000	0.648
	H	7352	23.32	26.09	50.54	1.088	0.309	1.046	0.319	2.134	0.628
		7353	26.09	26.61	100.00		0.518			0.000	0.518

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL-ROCK
DDH85006												
	H	22	7352	7352	23.32	26.09	50.54	1.09	0.31	1.05	0.32	2.14- 0.63
	G	23	7331	7333	81.93	85.47	82.48	1.56	1.36	0.62	0.00	2.18- 1.36
	G	24	7334	7334	85.47	88.08	87.73	0.38	1.91	0.32	0.00	0.70- 1.91
	F	25	7337	7337	153.47	156.65	76.10	1.59	0.83	0.40	0.36	1.99- 1.19
	E	26	7340	7340	178.13	179.04	86.81	0.48	0.31	0.12	0.00	0.60- 0.31

**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

- DATA SOURCE SUMMARY -

DATA SOURCE - KPDLRDDH85007

DATE - 01/09/86

- HISTORY -

START DATE - 03/24/85
END DATE - 03/26/85

CONTRACTOR - J.T. THOMAS
GEOLOGIST - E. LEGRESLEY

OPERATOR - GCRI
SURVEYOR - MWG & ASS.

REMARKS - HOLE ABANDONED AT 101.00 M. NOT GEOPHYSICALLY LOGGED, SEE DDH85009 FOR RE-DRILL AT 65 DEGREE INCLINATION, SITE 1

- LOCATION -

PROVINCE - BC
ELEVATION - 1761.90

ZONE - 9
NORTHING - 6344168.00
EASTING - 506330.37

LICENCE/LEASE NUMBER - 7151

LATITUDE - 571433
LONGITUDE - 1285342

- ORIENTATION -

LENGTH - 102.39
CORE SIZE - 0.0

INCLINATION - 60.0
AZIMUTH - 45.0

CEMENT -
PLUG -
PIEZ -

CASING DEPTH (M) - 6.09
AQUIFER DEPTHS (M) - 0.00
0.00
LOST CIRC. DEPTHS (M) - 0.00
0.00

*** NOTE *** 0 INDICATES NO VALUE

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL - ROCK
DDH85007	I	7354	95.50	102.30	82.79	3.633	0.346	0.827		3.633- 1.173

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL-ROCK
DDH85007	I	27	7354	7354	95.50	102.30	82.79	5.14	0.49	0.00	1.17	5.14- 1.66

COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES

KPNLRDDH85008

----- GULF CANADA RESOURCES INC. -----

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85008

DATE - 01/09/86

- HISTORY -

START DATE - 03/25/85

END DATE - 03/26/85

CONTRACTOR - J.T. THOMAS

GEOLOGIST - K. JENNER

OPERATOR - GCRI

SURVEYOR - MWG & ASS.

REMARKS - SITE Q

- LOCATION -

PROVINCE - BC

ELEVATION - 1732.10

LICENCE/LEASE NUMBER - 7151

ZONE - 9

NORTHING - 6343920.00

EASTING - 506349.56

LATITUDE - 571425

LONGITUDE - 1285341

- ORIENTATION -

LENGTH - 152.98

CORE SIZE - 0.0

CEMENT -

PLUG -

PIEZ -

INCLINATION - 60.0

AZIMUTH - 225.0

CASING DEPTH (M) - 7.00

AQUIFER DEPTHS (M) - 0.00

0.00

LOST CIRC. DEPTHS (M) - 0.00

0.00

*** NOTE *** 0 INDICATES NO VALUE



GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
						COAL	ROCK	COAL	ROCK	COAL	ROCK

DDH85008		7355	47.82	48.00	100.00		0.100			0.000	0.100
	G LOWER	7356	48.00	48.73	50.68	0.212		0.205		0.417	0.000
	G LOWER	7357	48.73	49.16	41.86		0.105	0.148		0.148	0.105
		7358	49.16	49.28	100.00		0.072			0.000	0.072
		7359	80.28	80.87	100.00		0.488			0.000	0.488
	F	7360	80.87	81.71	100.00	0.633	0.031			0.633	0.031
		7361	81.71	81.88	100.00		0.130			0.000	0.130

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL-ROCK
DDHB5008	G LOWER	28	7356	7357	48.00	49.16	47.41	0.37	0.18	0.61	0.00	0.98 - 0.18
	F	29	7360	7360	80.87	81.71	100.00	0.80	0.04	0.00	0.00	0.80 - 0.04

**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

GULF CANADA RESOURCES INC.

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

SEAM DETAIL

DATA SOURCE: KPM LR DDH65008 SEAM : G-LOWER INTERVAL(M) : 47.82 - 49.28 ELEVATION(M) : 1732.1
 GEOLOGIST : K. JENNER SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH	COAL SEAM LOG	INTERVAL METERS		X REC.	SAMPLE ID			COAL/ROCK TOTAL		COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	BAI YAL WJ/KG			
	47.82		8.19	8.89	100.0	7358												
	48.00		(0.21)	50.8	7358			0.57 / 0.11	1.08	29.82	9.84	59.58	0.95	23.08				
	48.73		8.11	(8.15)	41.5	7357		0.67										
	49.28		8.27		100.0	7358												

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- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85009

DATE - 01/09/86

- HISTORY -

START DATE - 03/26/85
END DATE - 03/30/85

CONTRACTOR - J.T. THOMAS
GEOLOGIST - E. LEGRESLEY

OPERATOR - GCRI
SURVEYOR - MWG & ASS.

REMARKS - SITE 1, DDH85007 RE-DRILLED AT A 65 DEGREE INCLINATION

- LOCATION -

PROVINCE - BC
ELEVATION - 1761.90

ZONE - 9
NORTHING - 6344168.00
EASTING - 506330.37

LICENCE/LEASE NUMBER - 7151

LATITUDE - 571433
LONGITUDE - 1285342

- ORIENTATION -

LENGTH - 343.72

INCLINATION - 65.0
AZIMUTH - 45.0

CORE SIZE - 0.0

CEMENT -
PLUG -
PIEZ -

CASING DEPTH (M) - 7.32
AQUIFER DEPTHS (M) - 0.00
0.00
LOST CIRC. DEPTHS (M) - 0.00
0.00

*** NOTE *** 0 INDICATES NO VALUE

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL - ROCK
DDH85009		7451	102.02	102.85	100.00		0.522			0.000- 0.522
	I	7452	102.85	106.22	72.40	1.260		0.483		1.743- 0.000
	I	7453	106.22	111.00	68.41	1.615	0.556	0.917	0.068	2.532- 0.624
		7454	111.00	111.11	100.00		0.075			0.000- 0.075
	L	7455	241.14	242.16	82.35	0.248	0.363	0.052	0.079	0.300- 0.442
	J	7456	166.20	166.23	100.00	0.020				0.020- 0.000
		7457	204.19	204.40	100.00		0.130			0.000- 0.130
	K	7458	204.40	205.37	87.63	0.497	0.024	0.077		0.574- 0.024
	K	7459	205.37	206.79	83.80	0.282	0.463	0.106	0.038	0.388- 0.501
	K	7460	206.79	209.51	86.03	1.482	0.043	0.259		1.741- 0.043
		7461	209.51	209.96	100.00		0.344			0.000- 0.344
	L	7462	242.16	246.55	96.58	1.639	1.157	0.098		1.737- 1.157
	L	7463	246.55	247.93	85.51	0.582	0.129	0.115		0.697- 0.129
		7464	321.77	322.62	100.00		0.015			0.000- 0.015
	M	7465	322.62	328.06	83.64	1.413	0.718	0.678		2.091- 0.718
		7466	328.06	329.96	100.00		1.722			0.000- 1.722

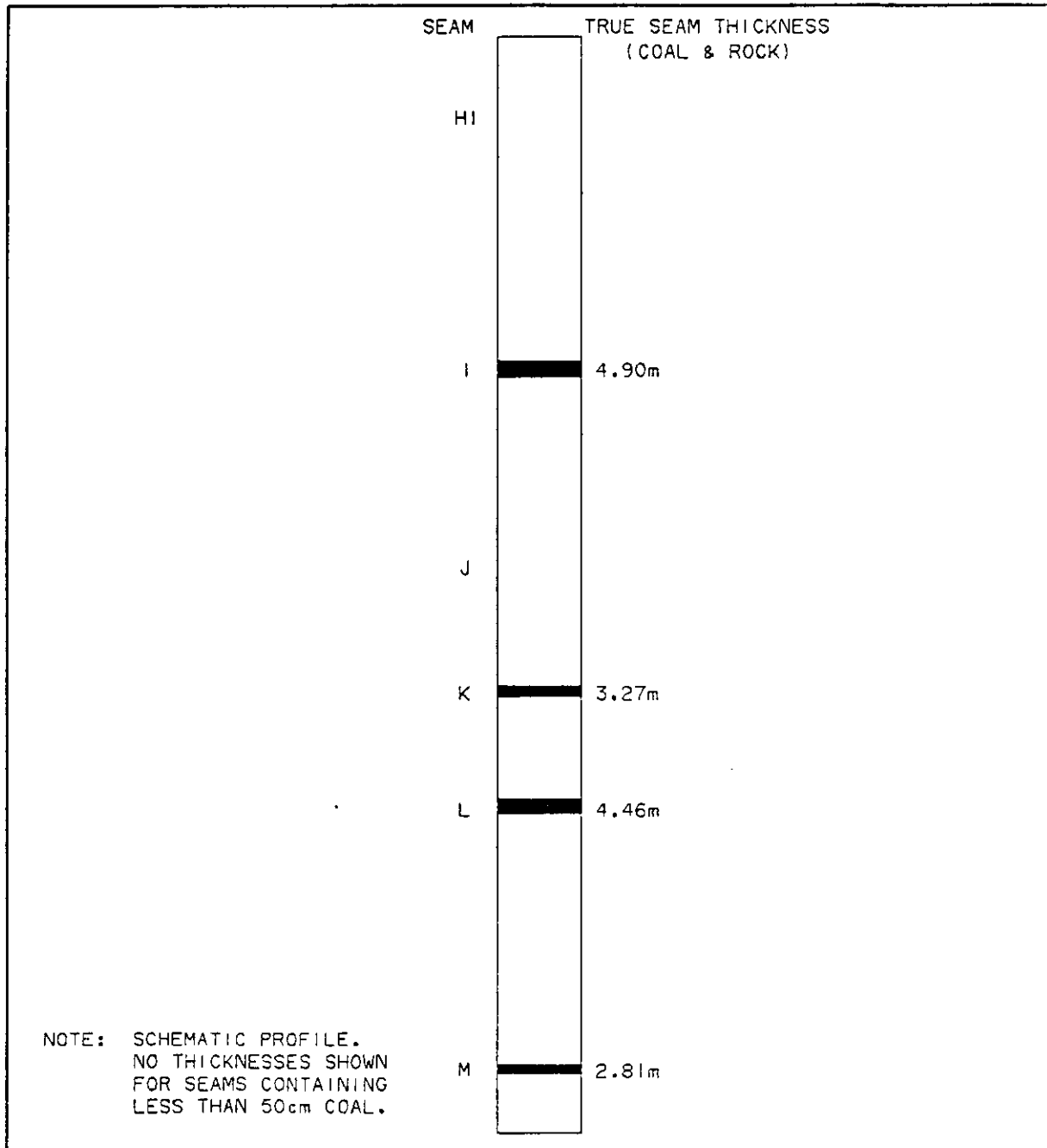
GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL-ROCK

DDH85009												
I		0	7452	7453	102.85	111.00	70.06	4.87	0.84	2.33	0.11	7.20- 0.95
K		30	7458	7460	204.40	209.51	85.71	3.53	0.85	0.67	0.06	4.20- 0.91
L		31	7455	7463	241.14	247.93	92.19	3.79	2.47	0.42	0.11	4.21- 2.58
M		32	7465	7465	322.62	328.06	83.63	2.91	1.64	0.89	0.00	3.80- 1.64
J		7456	7456	7456	166.20	166.23	100.00	0.03	0.00	0.00	0.00	0.03- 0.00

MT. KLAPPAN COAL PROPERTY

1985 DIAMOND DRILL HOLES
DDH85009



SCALE: 1:2000

GULF CANADA RESOURCES INC.
15/01/86



**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

ICRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85009

SAMPLE ID 7456 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 25/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	---	TOTAL SULPHUR %	---
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	2.39	CHLORINE (PPM)	---
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	---
RESIDUAL MOISTURE %	1.32	FSI	---
ASH %	37.92	HGI	---
VOLATILE MATTER %	---	CO2 %	---
FIXED CARBON %	---		
GROSS CALORIFIC VALUE (MJ/KG)	---		
NET CALORIFIC VALUE (MJ/KG)	---		

GULF CANADA RESOURCES INC.

COAL DIVISION
MOUNT KLAPPAN PROJECT

SEAM DETAIL

TRUE THICKNESS

DATA SOURCE: KPM LR 00H65009 SEAM : L INTERVAL(M) : 241.14 - 247.93 ELEVATION(M) : 1761.9
 GEOLOGIST : E. LEGRESLEY SCALE: DATE : DEC '9/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	HEAT VAL MJ/28		
	241.14			0.18	82.3	7460											
	242.16			0.22													
				0.26													
				0.25													
				0.31	86.8	7462	31	2.73 / 1.73	2.04	47.09	8.96	48.82	0.82	16.52			
				0.17				4.48									
				0.48													
	246.55			0.19													
				0.30	88.1	7463											
	247.93																

4.48

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===== GULF CANADA RESOURCES INC. =====

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85010

DATE - 01/09/86

- HISTORY -

START DATE - 03/27/85

END DATE - 03/30/85

CONTRACTOR - J.T. THOMAS

GEOLOGIST - K. JENNER

OPERATOR - GCRI

SURVEYOR - MWG & ASS.

REMARKS - SITE L

- LOCATION -

PROVINCE - BC

ELEVATION - 1752.70

LICENCE/LEASE NUMBER - 7151

ZONE - 9

NORTHING - 6344570.00

EASTING - 506920.87

LATITUDE - 571446

LONGITUDE - 1285307

- ORIENTATION -

LENGTH - 231.80

INCLINATION - 90.0

AZIMUTH - 0.0

CORE SIZE - 0.0

CEMENT -

PLUG -

PIEZ -

CASING DEPTH (M) - 6.10

AQUIFER DEPTHS (M) - 0.00

0.00

LOST CIRC. DEPTHS (M) - 0.00

0.00

*** NOTE *** 0 INDICATES NO VALUE

=====

17/DEC/85

GULF CANADA RESOURCES INC. - COAL DIVISION
 SIMPLE SAMPLE SUMMARY
 TRUE THICKNESS
 KLAPPAN PROJECT

PAGE 1

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL - ROCK
DDH85010		7377	129.43	130.04	100.00		0.597			0.000- 0.597
	O	7378	130.04	132.07	85.71	0.510	1.199	0.284		0.794- 1.199
	O	7379	132.07	134.76	86.62	1.701	0.553	0.107	0.243	1.808- 0.796
	O	7380	134.76	135.90	86.84	0.219	0.697	0.136		0.355- 0.697
		7381	135.90	136.34	77.27		0.305		0.090	0.000- 0.395
		7382	158.78	159.22	45.45		0.193		0.231	0.000- 0.424
	N	7383	159.22	161.13	79.06	1.194	0.236		0.380	1.194- 0.616
		7384	161.13	161.82	100.00	0.019	0.627			0.019- 0.627
		7386	222.11	222.56	100.00		0.307			0.000- 0.307
	M	7387	222.56	225.95	71.98	1.449	0.243	0.519	0.140	1.968- 0.383
	M	7388	225.95	227.08	100.00	0.092	0.706			0.092- 0.706
	M	7389	227.08	228.22	84.21	0.633	0.050	0.128		0.761- 0.050
		7390	228.22	228.58	100.00		0.258			0.000- 0.258
	P	7400	73.40	73.62	100.00	0.219				0.219- 0.000

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL-ROCK
DDH85010												
O		33	7378	7378	130.04	132.07	85.71	0.52	1.22	0.29	0.00	0.81- 1.22
O		34	7379	7379	132.07	134.76	86.61	1.76	0.57	0.11	0.25	1.87- 0.82
O		35	7380	7380	134.76	135.90	86.84	0.24	0.75	0.15	0.00	0.39- 0.75
N		36	7383	7383	159.22	161.13	79.05	1.26	0.25	0.00	0.40	1.26- 0.65
M		37	7387	7389	222.55	228.22	80.03	3.11	1.42	0.93	0.20	4.04- 1.62
P		7400	7400	7400	73.40	73.62	100.00	0.22	0.00	0.00	0.00	0.22- 0.00

COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPM LR DDH85010 SEAM : P INTERVAL(M) : 73.40 - 73.62 ELEVATION(M) : 1752.7
 GEOLOGIST : K JENNER SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID			COAL/ROCK TOTAL	COAL QUALITY A.D.B.					
			ROCK	COAL		SIMP	COMP	COMPOS		MINING SECTION	RES MOIST	ASH	VM	FC	TS
	73.40		0.22	100.0	7400	7400	0.22 / 0.00		1.83	26.97	—	—	—	—	—
	73.62							0.22							

22

GCRI COAL DIVISION HEAD PROJ KFN BLK LR DS DDH85010

SAMPLE ID 7400 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 25/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	---	TOTAL SULPHUR %	---
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	4.74	CHLORINE (PPM)	---
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	---
RESIDUAL MOISTURE %	1.83	FSI	---
ASH %	26.97	HGI	---
VOLATILE MATTER %	---	CO2 %	---
FIXED CARBON %	---		
GROSS CALORIFIC VALUE (MJ/KG)	---		
NET CALORIFIC VALUE (MJ/KG)	---		

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPM LR 00H85010 SEAM : 0 INTERVAL(M) : 129.43 - 136.34 ELEVATION(M) : 1752.7
 GEOLOGIST : K. JENNER SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE ID			COAL/ROCK TOTAL		COAL QUALITY A.D.B.						
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	CAL. VAL		
	129.43	↑	0.68		100.0	7377											
	130.04		(0.27)														
			0.25														
			0.57		88.8	7378	33	0.79 / 1.20		1.77	44.82	8.00	44.31	0.51	19.84		
			0.18														
			0.18														
			0.13														
	132.07		0.17														
			0.11														
			0.17														
			0.29														
			0.29		86.8	7379	34	1.81 / 8.80		2.58	30.27	7.63	66.53	0.56	22.94		
			0.41														
			0.12														
			0.32														
	134.78		0.56		87.1	7380	38	0.36 / 0.70		1.71	83.81	8.05	28.83	1.22	11.14		
			0.20														
			0.27		77.1	7381											
	135.90																
	136.34	↓															

2.03

2.69

1.14

===== GULF CANADA RESOURCES INC. =====

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85011

DATE - 01/09/86

- HISTORY -

START DATE - 03/31/85
END DATE - 04/02/85

CONTRACTOR - J.T. THOMAS
GEOLOGIST - M. BARKER

OPERATOR - GCR1
SURVEYOR - MWG & ASS.

REMARKS - SITE 0

- LOCATION -

PROVINCE - BC
ELEVATION - 1625.70

ZONE - 9
NORTHING - 6344833.00
EASTING - 507124.50

LICENCE/LEASE NUMBER - 7151

LATITUDE - 571454
LONGITUDE - 1285255

- ORIENTATION -

LENGTH - 162.50

INCLINATION - 75.0
AZIMUTH - 45.0

CORE SIZE - 0.0

CEMENT -
PLUG -
PIEZ -

CASING DEPTH (M) - 16.15
AQUIFER DEPTHS (M) - 0.00
0.00
LOST CIRC. DEPTHS (M) - 0.00
0.00

*** NOTE *** 0 INDICATES NO VALUE

=====

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL	TOTAL ROCK
DDH85011		7391	35.84	36.49	100.00		0.532			0.000	0.532
	K	7392	36.49	38.87	85.29	0.882	0.830	0.251	0.043	1.133	0.873
	K	7393	38.87	40.55	97.62	1.036	0.394	0.034		1.070	0.394
	K	7394	40.55	42.02	100.00		1.310			0.000	1.310
	K	7395	42.02	42.68	100.00	0.506	0.090			0.506	0.090
		7396	42.68	42.74	100.00		0.055			0.000	0.055
		7397	101.42	101.44	100.00		0.019			0.000	0.019
	I	7398	101.44	103.34	76.32	0.986	0.350	0.230	0.185	1.216	0.535
		7954	26.53	27.95	100.00		1.287			0.000	1.287

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL-ROCK
DDH85011												
	K	38	7392	7393	36.49	40.55	90.39	2.24	1.43	0.34	0.05	2.58 - 1.48
	I	39	7398	7398	101.44	103.34	76.31	1.07	0.38	0.25	0.20	1.32 - 0.58

COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR 00H85011 SEAM : K INTERVAL(M) : 35.84 - 42.74 ELEVATION(M) : 1825.7
 GEOLOGIST : W BARKER SCALE: DATE : DEC '9/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	BAL YAL MJ/EG		
	35.84	↑		0.83	100.0	7391											
	36.49			0.27													
				0.17													
				0.31													
				(0.18)	85.3	7392											
				0.25													
				0.16													
				0.20													
				0.21													
	38.87			0.22													
				0.14													
				0.12													
				0.67	87.7	7393											
				0.18													
	40.55			0.24													
				0.38													
				0.92	100.0	7394											
	42.02			0.13													
				0.35	100.0	7395											
	42.98																
		↓															

38
38
3.47

17/DEC/85 GULF CANADA RESOURCES INC. - COAL DIVISION
 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
						COAL	ROCK	COAL	ROCK	COAL	ROCK
DDH85012		7467	23.15	23.24	100.00		0.078			0.000	0.078
	L	7468	23.24	24.84	35.00	0.481		0.892		1.373	0.000
		7470	49.82	50.16	100.00	0.019	0.311			0.019	0.311
	K/L	7471	50.16	51.69	75.16	0.780	0.342	0.372		1.152	0.342
		7472	51.69	52.12	41.86		0.177		0.245	0.000	0.422
		7473	69.66	69.89	100.00		0.221			0.000	0.221
	K	7474	69.89	71.73	81.52	1.292	0.122	0.323		1.615	0.122
	K	7475	71.73	73.09	96.32	0.094	1.138		0.047	0.094	1.185
	K	7476	73.09	73.63	100.00	0.357	0.150			0.357	0.150
		7477	73.63	74.40	100.00		0.725			0.000	0.725
	K (REPEAT)	7478	151.37	151.54	100.00		0.145			0.000	0.145
	K (REPEAT)	7479	151.54	153.01	100.00	0.587	0.637			0.587	0.637
	K (REPEAT)	7480	153.01	153.56	100.00		0.409			0.000	0.409
		7481	204.86	205.78	100.00		0.870			0.000	0.870
	I	7482	205.78	206.33	87.27	0.453		0.066		0.519	0.000
	I	7483	206.33	207.27	81.91	0.009	0.716		0.160	0.009	0.876
	I	7484	207.27	209.20	100.00	1.528	0.281			1.528	0.281
		7485	209.20	210.57	100.00		1.276			0.000	1.276

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL-ROCK

DDH85012												
	L	40	7468	7468	23.24	24.84	35.00	0.56	0.00	1.04	0.00	1.60- 0.00
	K/L	41	7471	7471	50.16	51.69	75.16	0.80	0.35	0.38	0.00	1.18- 0.35
	K	42	7474	7474	69.89	71.73	81.52	1.37	0.13	0.34	0.00	1.71- 0.13
	K	43	7475	7476	71.73	73.63	97.36	0.48	1.37	0.00	0.05	0.48- 1.42
	K (REPEAT)	44	7479	7479	151.54	153.01	100.00	0.70	0.77	0.00	0.00	0.70- 0.77
	I	45	7482	7482	205.78	206.33	87.27	0.48	0.00	0.07	0.00	0.55- 0.00
	I	46	7483	7483	206.33	207.27	81.91	0.01	0.76	0.00	0.17	0.01- 0.93
	I	47	7484	7484	207.27	209.20	100.00	1.63	0.30	0.00	0.00	1.63- 0.30

**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPM LR DDH85012 SEAM : K (REPEAT) INTERVAL(M) : 151.37 - 153.56 ELEVATION(M) : 1866.4
 GEOLOGIST : E. LEGRESLEY SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID			COAL/ROCK TOTAL	COAL QUALITY A.D.B.								
			ROCK	COAL		SIMP	COMP	COMPOS		MINING SECTION	RES MOIST	ASH	VM	FC	TS	HEAT VAL		
	151.37																	
	151.54		8.18	8.18	100.0	7478												
	153.01																	
	153.56		0.41		100.0	7480												

↑
44
↓

0.39 / 0.84
1.22

1.22

0.78 34.04 8.53 35.84 0.40 21.28

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85013

DATE - 01/09/86

- HISTORY -

START DATE - 04/03/85
END DATE - 04/07/85

CONTRACTOR - J.T. THOMAS
GEOLOGIST - M. BARKER

OPERATOR - GCRI
SURVEYOR - MWG & ASS.

REMARKS - SITE E

- LOCATION -

PROVINCE - BC
ELEVATION - 1643.90

ZONE - 9
NORTHING - 6344850.00
EASTING - 506377.50

LICENCE/LEASE NUMBER - 7151

LATITUDE - 571455
LONGITUDE - 1285340

- ORIENTATION -

LENGTH - 278.99

INCLINATION - 75.0
AZIMUTH - 10.0

CORE SIZE - 0.0

CEMENT -
PLUG -
PIEZ -

CASING DEPTH (M) - 20.73
AQUIFER DEPTHS (M) - 0.00
0.00
LOST CIRC. DEPTHS (M) - 0.00
0.00

*** NOTE *** 0 INDICATES NO VALUE

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL - ROCK

DDH85013										
		7486	21.89	22.90	100.00		0.984			0.000- 0.984
	K	7487	22.90	23.91	100.00	0.681	0.302			0.681- 0.302
		7488	23.91	24.49	100.00		0.565			0.000- 0.565
		7489	91.10	91.24	100.00		0.137			0.000- 0.137
	I	7490	91.24	94.62	73.08	2.093	0.323	0.842	0.049	2.935- 0.372
	I	7491	94.62	95.18	100.00	0.108	0.441			0.108- 0.441
	I	7492	95.18	97.53	84.26	1.924	0.020	0.363		2.287- 0.020
	H	7493	146.55	149.17	100.00	1.178	1.418			1.178- 1.418
	H	7494	149.17	150.96	93.85	1.356	0.307	0.069	0.040	1.425- 0.347
		7495	150.96	151.14	100.00		0.178			0.000- 0.178
	PHANTOM	7496	176.56	176.65	100.00	0.089				0.089- 0.000
	G UPPER	7497	185.65	185.90	100.00	0.222				0.222- 0.000
		7498	210.90	211.17	100.00		0.268			0.000- 0.268
	G LOWER	7499	211.17	211.82	96.92	0.558	0.070		0.020	0.558- 0.090
	G LOWER	7500	211.82	215.32	88.57	0.338	2.735		0.396	0.338- 3.131
		7501	235.25	235.70	100.00		0.424			0.000- 0.424
	F/G	7502	235.70	236.11	100.00	0.178	0.207			0.178- 0.207
		7503	236.11	238.36	100.00	0.047	2.055			0.047- 2.055
		7504	240.28	242.26	85.86		1.556		0.266	0.000- 1.822
	F/G	7505	242.26	242.59	96.97	0.174	0.135		0.010	0.174- 0.145
	F/G	7506	242.59	242.78	100.00	0.010	0.175			0.010- 0.175
		7507	270.98	271.23	100.00		0.248			0.000- 0.248
	F	7508	271.23	272.18	100.00	0.864	0.079			0.864- 0.079
	F	7509	272.18	273.20	100.00		1.006			0.000- 1.006
	F	7510	273.20	275.51	96.10	1.710	0.459	0.088		1.798- 0.459

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL-ROCK

DDH85013												
I		48	7490	7492	91.24	97.53	79.65	4.21	0.80	1.23	0.05	5.44- 0.85
H		49	7493	7494	146.55	150.96	97.87	1.65	1.58	0.07	0.00	1.72- 1.58
F		50	7508	7508	271.23	272.18	100.00	0.87	0.08	0.00	0.00	0.87- 0.08
F		51	7509	7509	272.18	273.20	100.00	0.00	1.02	0.00	0.00	0.00- 1.02
F		52	7510	7510	273.20	275.51	96.10	1.75	0.47	0.09	0.00	1.84- 0.47
K		62	7487	7487	22.90	23.91	100.00	0.70	0.31	0.00	0.00	0.70- 0.31
PHANTOM		7496	7496	7496	176.56	176.65	100.00	0.09	0.00	0.00	0.00	0.09- 0.00
G UPPER		7497	7497	7497	185.65	185.90	100.00	0.25	0.00	0.00	0.00	0.25- 0.00
G LOWER		7499	7499	7499	211.17	211.82	96.92	0.56	0.07	0.00	0.02	0.56- 0.09
F/G		7502	7502	7502	235.70	236.11	100.00	0.19	0.22	0.00	0.00	0.19- 0.22
F/G		7505	7505	7505	242.26	242.59	96.96	0.18	0.14	0.00	0.01	0.18- 0.15

**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DDH85013 SEAM : PHANTOM INTERVAL(M) : 178.56 - 178.65 ELEVATION(M) : 1843.5
 GEOLOGIST : M BARKER SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.					
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	KAL VAL MJ/KG
	178.56 178.65		0.09	100.0	7.88	D.08 / D.08	0.08	1.18	44.68						

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85013

=====

SAMPLE ID	7496	DATA TYPE (REAL,BORO,AVER,CALC)	REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 25/06/85	
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)	AD

NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	-----	TOTAL SULPHUR %	-----
SURFACE MOISTURE %	-----	PHOSPHOROUS %	-----
TOTAL MOISTURE %	-----	CHLORINE (PPM)	-----
EQUILIBRIUM MOISTURE %	-----	SPECIFIC GRAVITY	-----
RESIDUAL MOISTURE %	1.29	FSI	-----
ASH %	46.69	HGI	-----
VOLATILE MATTER %	-----	CO2 %	-----
FIXED CARBON %	-----		

GROSS CALORIFIC VALUE (MJ/KG) -----
NET CALORIFIC VALUE (MJ/KG) -----

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DDH85013 SEAM : G UPPER INTERVAL(M) : 185.81 - 185.90 ELEVATION(M) : 1643.9
 GEOLOGIST : M. BARKER SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.					
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	CAL VAL No/EE
	185.81						7487	0.22 / 0.00		1.32	34.48	—	—	—	—

CRICRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85013

SAMPLE ID 7497 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 25/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) ---
SURFACE MOISTURE % ---
TOTAL MOISTURE % 3.83
EQUILIBRIUM MOISTURE % ---
RESIDUAL MOISTURE % 1.32
ASH % 34.48
VOLATILE MATTER % ---
FIXED CARBON % ---
TOTAL SULPHUR % ---
PHOSPHOROUS % ---
CHLORINE (PPM) ---
SPECIFIC GRAVITY ---
FSI ---
HGI ---
CO2 % ---

GROSS CALORIFIC VALUE (MJ/KG) ---
NET CALORIFIC VALUE (MJ/KG) ---

===== GULF CANADA RESOURCES INC. =====

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85014

DATE - 01/09/86

- HISTORY -

START DATE - 04/06/85

END DATE - 04/10/85

CONTRACTOR - J.T. THOMAS

GEOLOGIST - M. BARKER

OPERATOR - GCRI

SURVEYOR - MWG & ASS.

REMARKS - SITE A

- LOCATION -

PROVINCE - BC

ELEVATION - 1605.40

LICENCE/LEASE NUMBER - 7152

ZONE - 9

NORTHING - 6344886.00

EASTING - 505606.69

LATITUDE - 571456

LONGITUDE - 1285426

- ORIENTATION -

LENGTH - 253.94

INCLINATION - 70.0

AZIMUTH - 20.0

CORE SIZE - 0.0

CEMENT -

PLUG -

PIEZ -

CASING DEPTH (M) - 18.90

AQUIFER DEPTHS (M) - 0.00

0.00

LOST CIRC. DEPTHS (M) - 0.00

0.00

*** NOTE *** 0 INDICATES NO VALUE

=====

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
						COAL	ROCK	COAL	ROCK	COAL	ROCK

DDH85014		7511	101.66	102.59	100.00		0.841			0.000-	0.841
	I	7512	102.59	108.37	78.89	4.086	0.222	1.151		5.237-	0.222
		7513	108.37	108.73	100.00		0.351			0.000-	0.351
		7514	155.10	155.53	100.00		0.417			0.000-	0.417
	H	7515	155.53	156.16	100.00	0.428	0.185			0.428-	0.185
	H	7516	156.16	157.20	78.85	0.234	0.568		0.215	0.234-	0.783
	H	7517	157.20	157.67	91.49	0.344	0.078	0.039		0.383-	0.078
		7518	157.67	159.07	100.00		1.382			0.000-	1.382
		7519	246.54	247.19	100.00		0.607			0.000-	0.607
	F	7520	247.19	248.32	81.42	0.700	0.158	0.196		0.896-	0.158
	F	7521	248.32	249.32	95.00	0.627	0.261		0.047	0.627-	0.308
	F	7522	249.32	250.10	84.62	0.586	0.027	0.112		0.698-	0.027
		7523	250.10	250.55	100.00		0.420			0.000-	0.420

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL-ROCK
DDH85014												
	I	53	7512	7512	102.59	108.37	78.89	4.32	0.24	1.22	0.00	5.54- 0.24
	H	54	7515	7517	155.53	157.67	87.85	1.03	0.85	0.04	0.22	1.07- 1.07
	F	55	7520	7522	247.19	250.10	86.94	2.05	0.48	0.33	0.05	2.38- 0.53

**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPH LR DDH85014 SEAM: 1 INTERVAL(M): 101.68 - 108.73 ELEVATION(M): 1805.4
 GEOLOGIST: W. BARKER SCALE: DATE: DEC 19/85 DRAWING NO.:

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	BAI YAL MJ/TS		
	101.68	↑		0.84	100.0	7811											
	102.59	X		(0.41)													
		▨		0.84													
		▨		0.94													
		▨		0.52	78.8	7812	33	8.24 / 0.32 8.46		0.87	18.28	8.94	78.83	0.43	29.38		
		X		(0.18)													
		▨		0.83													
		X		(0.58)													
		▨		0.80													
	108.37	▨		0.35	100.0	7513											
	108.73	↓															

5-96

GULF CANADA RESOURCES INC.

COAL DIVISION
MOUNT KLAPPAN PROJECT

SEAM DETAIL

TRUE THICKNESS

DATA SOURCE: KPN LR DDH85014 SEAM: F INTERVAL(M): 246.54 - 250.55 ELEVATION(M): 1605.4
 GEOLOGIST: M. BARKER SCALE: DATE: DEC 19/85 DRAWING NO.:

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	HEAT VAL	NUMBER	
	246.54	↑	0.61		100.0	7818											
	247.19			0.42													
	248.32			0.38	80.0	7521	58	2.22 / 0.49	1.23	30.66	8.58	58.33	0.47	21.68			
	249.32			0.24													
	250.10			0.61	84.8	7522											
	250.55	↓	0.42		100.0	7523											

2.71

KPNLRDDH85015

===== GULF CANADA RESOURCES INC. =====

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85015

DATE - 01/09/86

- HISTORY -

START DATE - 04/08/85
END DATE - 04/10/85

CONTRACTOR - J.T. THOMAS
GEOLOGIST - M. BARKER

OPERATOR - GCRI
SURVEYOR - MWG & ASS.

REMARKS - SITE C1

- LOCATION -

PROVINCE - BC
ELEVATION - 1669.40

ZONE - 9
NORTHING - 6344509.00
EASTING - 505423.00

LICENCE/LEASE NUMBER - 7152

LATITUDE - 571444
LONGITUDE - 1285437

- ORIENTATION -

LENGTH - 197.80

INCLINATION - 65.0
AZIMUTH - 45.0

CORE SIZE - 0.0

CEMENT -
PLUG -
PIEZ -

CASING DEPTH (M) - 15.80
AQUIFER DEPTHS (M) - 0.00
0.00
LOST CIRC. DEPTHS (M) - 0.00
0.00

*** NOTE *** 0 INDICATES NO VALUE

=====

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
						COAL	ROCK	COAL	ROCK	COAL	ROCK

DDH85015		7469	185.47	185.62	100.00	0.147				0.147	0.000
		7524	31.47	32.54	100.00		0.688			0.000	0.688
	E	7525	32.54	34.89	83.40	0.745	0.084	0.102	0.015	0.847	0.099
		7526	34.89	36.40	100.00		0.731			0.000	0.731
		7527	77.52	78.00	100.00		0.203			0.000	0.203
	F	7528	78.00	80.13	90.14	1.004	0.400	0.158		1.162	0.400
	F	7529	80.13	82.28	87.44	0.635	0.406	0.125		0.760	0.406
		7530	82.28	83.00	100.00		0.360			0.000	0.360
		7531	156.73	157.52	100.00		0.655			0.000	0.655
	G	7532	157.52	160.92	87.94	0.255	0.177	0.045	0.085	0.300	0.262
	G	7533	160.92	164.29	70.33	0.209	1.216	0.371	0.209	0.580	1.425
	G	7534	164.29	166.01	79.07	0.707		0.152		0.859	0.000
		7535	166.01	166.56	61.82		0.201		0.109	0.000	0.310
		7536	176.01	176.39	100.00		0.374			0.000	0.374
	G	7537	176.39	177.38	100.00	0.976				0.976	0.000
	G	7538	177.38	177.71	100.00	0.207	0.118			0.207	0.118
		7539	177.71	178.76	74.29		0.768	0.266		0.000	1.034

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL-ROCK

DDH85015												
	E	56	7525	7525	32.54	34.89	87.65	1.69	0.37	0.16	0.13	1.85- 0.50
	F	57	7528	7529	78.00	82.28	88.78	2.84	0.96	0.48	0.00	3.32- 0.96
	G	58	7532	7532	157.52	160.92	94.11	2.14	1.06	0.20	0.00	2.34- 1.06
	G	59	7533	7534	160.92	166.01	73.28	1.68	2.05	0.96	0.40	2.64- 2.45
	G	60	7537	7538	176.39	177.71	100.00	1.20	0.12	0.00	0.00	1.20- 0.12
	G	7469	7469	7469	185.47	185.62	100.00	0.15	0.00	0.00	0.00	0.15- 0.00

**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DDH85015 SEAM : G INTERVAL(M) : 178.01 - 178.76 ELEVATION(M) : 1869.4
 GEOLOGIST : M BARKER SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		X REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	SALTYAL Mg/EE		
		↑															
	178.01		0.37		100.0		7538										
	178.39			0.98	100.0		7537										
	177.38		0.18		100.0		7538					1.34	41.27	8.74	51.85	3.73	18.12
	177.71		(0.27)														
	178.76		0.73			74.3	7539										
		↓															

60
↑
↓

1.18 / 0.12
1.30

1.32

GCRI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85015		
=====		=====							
SAMPLE ID	7469	DATA TYPE (REAL,BORO,AVER,CALC)						REAL	
SPLIT SAMPLE ID	HD1	DATE ANALYSED 25/06/85							
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)						AD	
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)		ASTM							
TOP SIZE (MM)		---							
SURFACE MOISTURE %		---			TOTAL SULPHUR %		---		
TOTAL MOISTURE %		2.56			PHOSPHOROUS %		---		
EQUILIBRIUM MOISTURE %		---			CHLORINE (PPM)		---		
					SPECIFIC GRAVITY		---		
RESIDUAL MOISTURE %		1.31			FSI		---		
ASH %		44.10			HGI		---		
VOLATILE MATTER %		---			CO2 %		---		
FIXED CARBON %		---					---		
GROSS CALORIFIC VALUE (MJ/KG)		---							
NET CALORIFIC VALUE (MJ/KG)		---							

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85016

DATE - 01/09/86

- HISTORY -

START DATE - 07/15/85
END DATE - 07/20/85

CONTRACTOR - J T THOMAS
GEOLOGIST - VANDENBUSSCH

OPERATOR - GCRI
SURVEYOR - MWG & ASS

REMARKS -

- LOCATION -

PROVINCE - BC
ELEVATION - 1633.75

ZONE - 9
NORTHING - 6344868.00
EASTING - 505928.44

LICENCE/LEASE NUMBER - 7152

LATITUDE - 571456
LONGITUDE - 1285406

- ORIENTATION -

LENGTH - 324.22

INCLINATION - 75.0
AZIMUTH - 10.0

CORE SIZE - 0.0

CEMENT -
PLUG -
PIEZ -

CASING DEPTH (M) - 5.18
AQUIFER DEPTHS (M) - 0.00
0.00
LOST CIRC. DEPTHS (M) - 0.00
0.00

*** NOTE *** 0 INDICATES NO VALUE

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
						COAL	ROCK	COAL	ROCK	COAL	ROCK

DDH85016		6485	79.01	80.80	100.00		1.765			0.000-	1.765
	I	6486	80.80	82.64	80.43	1.432	0.030	0.355		1.787-	0.030
	I	6487	82.64	83.61	100.00	0.593	0.366			0.593-	0.366
	I	6488	83.61	86.41	100.00	2.731	0.040			2.731-	0.040
		6489	86.41	87.02	100.00	0.010	0.594			0.010-	0.594
		6490	126.79	127.12	100.00		0.309			0.000-	0.309
	H	6491	127.12	129.52	100.00	1.632	0.617			1.632-	0.617
	H	6492	129.52	132.47	100.00	1.518	1.246			1.518-	1.246
	H	6493	132.47	134.33	91.40	1.422	0.168	0.150		1.422-	0.318
		6494	134.33	134.54	100.00		0.196			0.000-	0.196
		6495	141.65	141.86	100.00		0.168			0.000-	0.168
	PHANTOM	6496	141.86	142.93	98.13	0.462	0.388	0.016		0.478-	0.388
	PHANTOM	6497	142.93	144.38	100.00	0.275	0.924			0.275-	0.924
		6498	144.38	145.14	100.00		0.641			0.000-	0.641
		6499	182.44	182.72	100.00		0.247			0.000-	0.247
	G LOWER ?	6500	182.72	183.64	28.26	0.225		0.561		0.786-	0.000
		6501	183.64	184.19	100.00		0.450			0.000-	0.450
		6502	204.53	205.20	100.00		0.569			0.000-	0.569
	F	6503	205.20	206.12	100.00	0.732	0.070			0.732-	0.070
	F	6504	206.12	207.59	85.03	1.037	0.091	0.201		1.037-	0.292
		6505	207.59	209.22	100.00		1.530			0.000-	1.530
		6506	230.63	231.45	100.00		0.780			0.000-	0.780
	E	6507	231.45	232.70	91.20	1.075	0.010	0.057	0.048	1.132-	0.058
	E	6508	232.70	233.78	100.00	0.989	0.038			0.989-	0.038
		6509	233.78	234.54	100.00		0.723			0.000-	0.723
		6510	261.14	261.44	100.00		0.284			0.000-	0.284
	D	6511	261.44	263.00	94.87	0.236	1.171	0.076		0.236-	1.247
	D	6512	263.00	265.51	100.00	2.298	0.116			2.298-	0.116

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 2
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL - ROCK
		6513	265.51	267.07	100.00		1.514			0.000- 1.514
		6514	285.49	285.71	100.00		0.202			0.000- 0.202
	C	6515	285.71	286.08	100.00	0.341				0.341- 0.000
		6516	286.08	286.99	100.00		0.838			0.000- 0.838

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

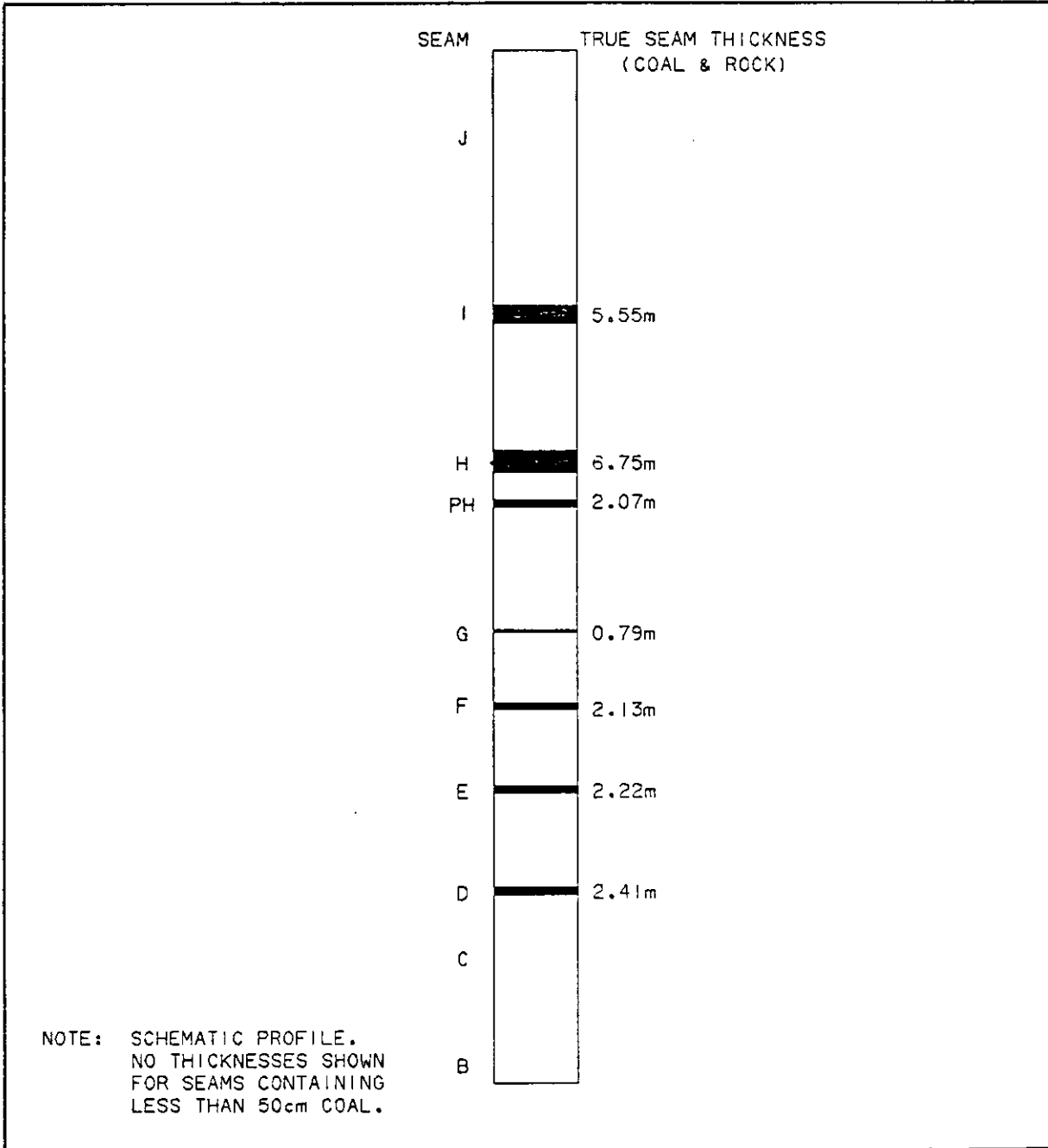
DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	ROCK	MISSING COAL	ROCK	TOTAL COAL-ROCK

DDH85016												
	I	64	6486	6488	80.80	86.41	93.58	4.81	0.44	0.36	0.00	5.17- 0.44
	H	65	6491	6493	127.12	134.33	97.78	4.88	2.17	0.00	0.16	4.88- 2.33
	PHANTOM	66	6496	6497	141.86	144.38	99.20	0.90	1.60	0.02	0.00	0.92- 1.60
	F	67	6503	6504	205.20	207.59	90.79	1.99	0.18	0.00	0.22	1.99- 0.40
	E	68	6507	6508	231.45	233.78	95.27	2.17	0.05	0.06	0.05	2.23- 0.10
	D	69	6512	6512	263.00	265.51	100.00	2.39	0.12	0.00	0.00	2.39- 0.12
	G LOWER ?	6500	6500	6500	182.72	183.64	28.26	0.26	0.00	0.66	0.00	0.92- 0.00
	C	6515	6515	6515	285.71	286.08	100.00	0.37	0.00	0.00	0.00	0.37- 0.00

MT. KLAPPAN COAL PROPERTY

1985 DIAMOND DRILL HOLES

DDH85016



SCALE: 1:2000

GULF CANADA RESOURCES INC.
15/01/96



**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

GULF CANADA RESOURCES INC.

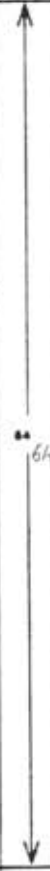
SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DDH85018 SEAM : 1 INTERVAL(M) : 80.80 - 86.41 ELEVATION(M) : 1633.8
 GEOLOGIST : VANDENBUSSCH SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID			COAL/ROCK TOTAL		COAL QUALITY A.D.B.						
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	KAL VAL MJ/TS		
	80.80	↑		(0.38)													
				0.87	80.3	8488											
				0.48													
	82.64			0.23													
				0.17	100.0	8487											
	83.81			0.17													
				1.02					5.11 / 0.44	1.75	24.56	7.12	86.58	0.37	25.23		
				1.71	100.0	8488			5.55								
	86.41	↓															



GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPM LR DDH85016 SEAM: H INTERVAL(M) : 127.12 - 134.33 ELEVATION(M) : 1833.8
 GEOLOGIST : VANDENBUSSCH SCALE: DATE : DEC '9/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH	COAL SEAM LOG	INTERVAL		X REC.	SAMPLE ID			COAL QUALITY A.D.B.									
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	HEAT VAL			
	127.12	↑		0.57														
				0.37														
				0.22	100.0	8481												
				0.30														
				0.18														
	129.52			0.28														
				0.19														
				0.18														
				0.18														
				0.26														
				0.28														
				0.30	100.0	8492				4.87 / 2.18	1.47	40.87	8.46	49.18	0.38	16.87		
				0.17						8.78								
				0.32														
				0.19														
				0.41														
	132.47			0.51														
				0.18														
				(0.18)														
				0.51	81.4	8483												
				0.18														
	134.33	↓																



6.75

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPH LR DDH85018 SEAM : 0 INTERVAL(M) : 281.44 - 285.51 ELEVATION(M) : 1833.8
 GEOLOGIST : VANDENBUSSCH SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	HEAT VAL MJ/kg		
	281.44	↑		0.21													
				0.27													
				0.18	84.8	8611											
				0.70													
	283.00			0.65													
				0.28													
				0.91	100.0	8512	88	2.38 / 0.12	2.41	0.81	33.33	7.96	86.30	0.35	21.71		
				0.45													
	285.51	↓															

2.41

===== GULF CANADA RESOURCES INC. =====

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85017

DATE - 01/09/86

- HISTORY -

START DATE - 07/17/85
END DATE - 07/21/85

CONTRACTOR - J T THOMAS
GEOLOGIST - BARKER

OPERATOR - GCRI
SURVEYOR - MWG & ASS

REMARKS -

- LOCATION -

PROVINCE - BC
ELEVATION - 1635.01
LICENCE/LEASE NUMBER - 7151

ZONE - 9
NORTHING - 6344834.00
EASTING - 506805.00

LATITUDE - 571454
LONGITUDE - 1285314

- ORIENTATION -

LENGTH - 274.72
CORE SIZE - 0.0

INCLINATION - 75.0
AZIMUTH - 360.0

CEMENT -
PLUG -
PIEZ -

CASING DEPTH (M) - 16.76
AQUIFER DEPTHS (M) - 0.00
0.00
LOST CIRC. DEPTHS (M) - 0.00
0.00

*** NOTE *** 0 INDICATES NO VALUE



GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL - ROCK
DDH85017										
	I	6451	101.36	104.58	80.12	2.199	0.301		0.621	2.199- 0.922
	I	6452	104.58	106.87	100.00	2.207	0.040			2.207- 0.040
	H	6453	152.36	154.01	89.70	1.418	0.039	0.168		1.586- 0.039
	H	6454	154.01	154.35	100.00	0.010	0.325			0.010- 0.325
	H	6455	154.35	155.53	100.00	0.936	0.227			0.936- 0.227
	H	6456	155.53	157.10	89.81	1.262	0.129		0.158	1.262- 0.287
	PHANTOM	6457	184.56	185.83	74.02	0.304	0.617	0.167	0.157	0.471- 0.774
	PHANTOM	6458	185.83	186.92	100.00		1.069			0.000- 1.069
	PHANTOM	6459	186.92	187.31	100.00	0.382				0.382- 0.000
	PHANTOM	6460	187.31	188.18	100.00	0.226	0.628			0.226- 0.628
	PHANTOM	6461	188.18	189.06	100.00	0.470	0.393			0.470- 0.393
		6462	100.42	101.36	100.00		0.904			0.000- 0.904
		6463	106.87	107.33	100.00		0.453			0.000- 0.453
		6464	151.15	152.36	100.00		1.192			0.000- 1.192
		6465	157.10	157.91	88.89		0.709		0.089	0.000- 0.798
		6466	183.44	184.56	100.00		1.098			0.000- 1.098
		6467	189.06	189.41	100.00		0.343			0.000- 0.343
		6468	203.02	204.72	100.00		1.617			0.000- 1.617
	G UPPER	6469	204.72	205.74	88.24	0.583	0.307		0.118	0.583- 0.425
	G UPPER	6470	205.74	205.99	100.00		0.249			0.000- 0.249
	G UPPER	6471	207.83	208.08	100.00		0.249			0.000- 0.249
	G UPPER	6472	208.08	208.53	100.00	0.379	0.070			0.379- 0.070
		6473	208.53	208.98	100.00		0.448			0.000- 0.448
		6474	219.95	221.21	100.00		1.214			0.000- 1.214
	G LOWER	6475	221.21	221.59	100.00	0.344	0.019			0.344- 0.019
	G LOWER	6476	221.59	222.23	42.19	0.019	0.238	0.351		0.370- 0.238
		6477	241.10	241.48	100.00		0.369			0.000- 0.369
	F	6478	241.48	243.47	92.46	1.564	0.224		0.146	1.564- 0.370

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 2
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE.	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
						COAL	ROCK	COAL	ROCK	COAL	ROCK
		6479	243.47	244.47	100.00		0.977			0.000	0.977
		6480	259.81	261.48	100.00		1.592			0.000	1.592
	E	6481	261.48	263.92	94.67	2.146	0.067	0.125		2.271	0.067
	E	6482	263.92	264.99	89.72	0.029	0.894	0.106		0.135	0.894
	E	6483	264.99	265.51	86.54	0.405	0.029		0.067	0.405	0.096
		6484	265.51	265.91	100.00		0.386			0.000	0.386

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL-ROCK

DDH85017												
	I	70	6451	6452	101.36	106.87	88.38	4.52	0.35	0.00	0.64	4.52- 0.99
	H	71	6453	6456	152.36	157.10	93.03	3.68	0.73	0.17	0.16	3.85- 0.89
	F	72	6478	6478	241.48	243.47	92.46	1.61	0.23	0.00	0.15	1.61- 0.38
	E	73	6481	6481	261.48	263.92	94.67	2.24	0.07	0.13	0.00	2.37- 0.07
	E	74	6482	6483	263.92	265.51	88.67	0.45	0.96	0.11	0.07	0.56- 1.03
	PHANTOM	6457	6457	6457	184.56	185.83	74.01	0.31	0.63	0.17	0.16	0.48- 0.79
	PHANTOM	6458	6458	6458	185.83	186.92	100.00	0.00	1.09	0.00	0.00	0.00- 1.09
	PHANTOM	6459	6459	6459	186.92	187.31	100.00	0.39	0.00	0.00	0.00	0.39- 0.00
	PHANTOM	6460	6460	6460	187.31	188.18	100.00	0.23	0.64	0.00	0.00	0.23- 0.64
	PHANTOM	6461	6461	6461	188.18	189.06	100.00	0.48	0.40	0.00	0.00	0.48- 0.40
	G UPPER	6469	6469	6469	204.72	205.74	88.23	0.59	0.31	0.00	0.12	0.59- 0.43
	G UPPER	6470	6470	6470	205.74	205.99	100.00	0.00	0.25	0.00	0.00	0.00- 0.25
	G UPPER	6471	6471	6471	207.83	208.08	100.00	0.00	0.25	0.00	0.00	0.00- 0.25
	G UPPER	6472	6472	6472	208.08	208.53	100.00	0.38	0.07	0.00	0.00	0.38- 0.07
	G LOWER	6475	6475	6475	221.21	221.59	100.00	0.36	0.02	0.00	0.00	0.36- 0.02
	G LOWER	6476	6476	6476	221.59	222.23	42.18	0.02	0.25	0.37	0.00	0.39- 0.25

**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

GULF CANADA RESOURCES INC.

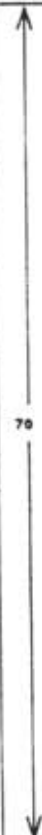
SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DDH85017 SEAM : 1 INTERVAL(M) : 101.36 - 106.87 ELEVATION(M) : 1635.0
 GEOLOGIST : BARKER SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID			COAL/ROCK TOTAL		COAL QUALITY A.D.B.									
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	CAL YAL W/ER					
		↑																		
	101.36	(0.18)		0.18																
		(0.28)		0.28																
		(0.89)		0.89	80.1	8401														
		(0.80)		0.80																
		(0.35)		0.35																
	104.58			0.23																
				0.53																
				0.80	100.0	8482														
				0.84																
	106.87	↓																		



70 4.41 / 0.98

5.37

5.37

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85017

=====

SAMPLE ID	6458	DATA TYPE (REAL,BORO,AVER,CALC)	REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 02/11/85	
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)	AD

NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	---	TOTAL SULPHUR %	---
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	1.64	CHLORINE (PPM)	---
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	---
RESIDUAL MOISTURE %	0.73	FSI	---
ASH %	90.47	HGI	---
VOLATILE MATTER %	---	CO2 %	---
FIXED CARBON %	---		

GROSS CALORIFIC VALUE (MJ/KG)	---
NET CALORIFIC VALUE (MJ/KG)	---

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85017

SAMPLE ID 6459 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 02/11/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	---	TOTAL SULPHUR %	---
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	3.75	CHLORINE (PPM)	---
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	---
RESIDUAL MOISTURE %	1.17	F81	---
ASH %	28.20	HGI	---
VOLATILE MATTER %	---	CO2 %	---
FIXED CARBON %	---		
GROSS CALORIFIC VALUE (MJ/KG)	---		
NET CALORIFIC VALUE (MJ/KG)	---		

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH65017

=====

SAMPLE ID	6460	DATA TYPE (REAL,BORO,AVER,CALC)	REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 02/11/85	
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)	AD

NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	-----	TOTAL SULPHUR %	-----
SURFACE MOISTURE %	-----	PHOSPHOROUS %	-----
TOTAL MOISTURE %	1.48	CHLORINE (PPM)	-----
EQUILIBRIUM MOISTURE %	-----	SPECIFIC GRAVITY	-----
RESIDUAL MOISTURE %	0.62	FSI	-----
ASH %	86.09	HGI	-----
VOLATILE MATTER %	-----	CO2 %	-----
FIXED CARBON %	-----		
GROSS CALORIFIC VALUE (MJ/KG)	-----		
NET CALORIFIC VALUE (MJ/KG)	-----		

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85017

=====

SAMPLE ID	6461	DATA TYPE (REAL,BORO,AVER,CALC)	REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 02/11/85	
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)	AD

NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	-----	TOTAL SULPHUR %	-----
SURFACE MOISTURE %	-----	PHOSPHOROUS %	-----
TOTAL MOISTURE %	2.87	CHLORINE (PPM)	-----
EQUILIBRIUM MOISTURE %	-----	SPECIFIC GRAVITY	-----
RESIDUAL MOISTURE %	0.88	FSI	-----
ASH %	67.11	HGI	-----
VOLATILE MATTER %	-----	CO2 %	-----
FIXED CARBON %	-----		
GROSS CALORIFIC VALUE (MJ/KG)	-----		
NET CALORIFIC VALUE (MJ/KG)	-----		

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DDM8507 SEAM : GUPPER INTERVAL(M) : 204.72 - 208.53 ELEVATION(M) : 1635.0
 GEOLOGIST : BARKER SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID			COAL/ROCK TOTAL		COAL QUALITY A.D.B.						
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	CAL VAL MA/LS		
	204.72	↑		0.23													
		(0.19)			88.3	8468	8468	0.58/0.43		1.02	88.88						
		0.18						1.01									
	205.74																
	205.99				100.0	8470	8470	0.00/0.28									
			1.48														
					91.3	0											
	207.83																
	208.08		0.30		100.0	8471	8471	0.00/0.25									
	208.53				100.0	8472	8472	0.38/0.07		1.13	48.88						
								0.45									

1.01

1.43

GCRI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85017	
=====								
SAMPLE ID	6469	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 02/11/85				AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)				ASTM				
TOP SIZE (MM)		----						
SURFACE MOISTURE %		----			TOTAL SULPHUR %		----	
TOTAL MOISTURE %		4.12			PHOSPHOROUS %		----	
EQUILIBRIUM MOISTURE %		----			CHLORINE (PPM)		----	
					SPECIFIC GRAVITY		----	
RESIDUAL MOISTURE %		1.02			FSI		----	
ASH %		56.59			HGI		----	
VOLATILE MATTER %		----			CO2 %		----	
FIXED CARBON %		----						
GROSS CALORIFIC VALUE (MJ/KG)		----						
NET CALORIFIC VALUE (MJ/KG)		----						

GCRI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85017	
=====								
SAMPLE ID	6472	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 02/11/85				AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)				ASTM				
TOP SIZE (MM)		----						
SURFACE MOISTURE %		----			TOTAL SULPHUR %		----	
TOTAL MOISTURE %		3.67			PHOSPHOROUS %		----	
EQUILIBRIUM MOISTURE %		0.00			CHLORINE (PPM)		----	
					SPECIFIC GRAVITY		----	
RESIDUAL MOISTURE %		1.13			FSI		----	
ASH %		46.82			HGI		----	
VOLATILE MATTER %		----			CO2 %		----	
FIXED CARBON %		----						
GROSS CALORIFIC VALUE (MJ/KG)		----						
NET CALORIFIC VALUE (MJ/KG)		----						

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DDH8507 SEAM: E INTERVAL(M): 281.48 - 285.51 ELEVATION(M): 1835.0
 GEOLOGIST: BARKER SCALE: DATE: DEC 19/85 DRAWING NO.:

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		X REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	HEAT VAL		
	281.48	↑		1.12													
			0.88	0.36	84.7	8481	73	2.37 / 0.07		3.36	16.36	6.17	73.14	0.48	27.66		
			(0.12)														
				0.64													
	283.92		0.49														
			(0.11)		89.7	8482											
				0.40			74	0.54 / 0.98		1.28	88.98	6.81	23.13	1.99			
	284.99		0.16					1.63									
			0.25	0.31	86.8	8483											
	285.51	↓															

2-39

X

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85018

DATE - 01/09/86

- HISTORY -

START DATE - 07/21/85
END DATE - 07/24/85

CONTRACTOR - J T THOMAS
GEOLOGIST - BARKER

OPERATOR - GCR
SURVEYOR - MWG & ASS

REMARKS -

- LOCATION -

PROVINCE - BC
ELEVATION - 1592.70
LICENCE/LEASE NUMBER - 7152

ZONE - 9
NORTHING - 6344973.00
EASTING - 505469.87
LATITUDE - 571459
LONGITUDE - 1285434

- ORIENTATION -

LENGTH - 274.75
CORE SIZE - 0.0

INCLINATION - 60.0
AZIMUTH - 10.0

CEMENT -
PLUG -
PIEZ -

CASING DEPTH (M) - 3.08
AQUIFER DEPTHS (M) - 0.00
0.00
LOST CIRC. DEPTHS (M) - 0.00
0.00

*** NOTE *** 0 INDICATES NO VALUE

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL - ROCK
DDH85018										
		6542	67.91	69.08	100.00		1.113			0.000- 1.113
	I	6543	69.08	70.30	72.13	0.796	0.058	0.327		1.123- 0.058
	I	6544	70.30	71.75	87.59	1.241	0.010	0.176		1.417- 0.010
		6545	71.75	72.07	100.00		0.317			0.000- 0.317
		6546	108.28	109.90	100.00		1.560			0.000- 1.560
	H	6547	109.90	111.29	100.00	1.282	0.038			1.282- 0.038
	H	6548	111.29	112.58	100.00	0.869	0.337			0.869- 0.337
	H	6549	112.58	113.78	100.00	1.084	0.018			1.084- 0.018
		6550	113.78	114.19	100.00		0.373			0.000- 0.373
		6551	211.70	212.26	100.00		0.547			0.000- 0.547
	F	6552	212.26	214.03	100.00	1.522	0.194			1.522- 0.194
	F	6553	214.03	218.60	86.43	2.982	0.740	0.389	0.192	3.371- 0.932
		6554	218.80	219.85	100.00		0.954			0.000- 0.954
		6555	238.06	238.76	100.00		0.639			0.000- 0.639
	E	6556	238.76	239.00	75.00	0.165		0.055		0.220- 0.000
		6557	239.00	239.33	100.00		0.304			0.000- 0.304
		6558	260.22	260.40	100.00		0.127			0.000- 0.127
	D	6559	260.40	261.79	88.49	0.559	0.312	0.113		0.672- 0.312
	D	6560	261.79	263.07	57.03	0.509	0.007	0.389		0.898- 0.007
		6561	263.07	263.32	100.00		0.177			0.000- 0.177

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL-ROCK
DDH85018												
I		75	6543	6544	69.08	71.75	80.52	2.08	0.07	0.52	0.00	2.60- 0.07
H		76	6547	6549	109.90	113.78	100.00	3.46	0.42	0.00	0.00	3.46- 0.42
F		77	6552	6553	212.26	218.60	90.22	4.74	0.98	0.42	0.20	5.16- 1.18
D		78	6559	6560	260.40	263.07	73.40	1.51	0.45	0.71	0.00	2.22- 0.45
E		6556	6556	6556	238.76	239.00	75.00	0.18	0.00	0.06	0.00	0.24- 0.00

COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES

GULF CANADA RESOURCES INC.

COAL DIVISION MOUNT KLAPPAN PROJECT

TRUE THICKNESS

SEAM DETAIL

DATA SOURCE: KPN LR DDH85018 SEAM: 1 INTERVAL(M) : 69.08 - 71.75 ELEVATION(M) : 1592.7
 GEOLOGIST : BARKER SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID			COAL QUALITY A.D.B.									
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	CA/VOL M/88			
		↑																
	69.08	X		(0.33)														
		X		0.21	72.3	8543												
		X		0.58														
	70.30	X		(0.18)				75	2.54 / 0.07		0.85	18.47	7.28	72.38	0.42	27.85		
		X		1.20	87.7	8544			2.81									
	71.75	↓																

2.51

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPH LR 00H85018 SEAM : 0 INTERVAL(M) : 260.40 - 263.07 ELEVATION(M) : 1592 "

GEOLOGIST : BARKER SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		X REC.	SAMPLE ID			COAL/ROCK TOTAL		COAL QUALITY A.D.B.						
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	HEAT VAL MJ/KG		
	260.40	↑		(0.11)													
				0.38													
			0.28		48.5	6899											
				0.25													
	261.79						78	1.57 / 0.33		0.98	81.96	7.09	28.97	0.62	10.26		
				0.41				1.88									
				(0.39)	57.0	6899											
	263.07	↓		0.11													

1089

- DATA SOURCE SUMMARY -

DATA SOURCE - KPnlRDDH85019

DATE - 01/09/86

- HISTORY -

START DATE - 07/21/85

END DATE - 07/23/85

CONTRACTOR - J T THOMAS

GEOLOGIST - BUHAY

OPERATOR - GCRI

SURVEYOR - MWG & ASS

REMARKS -

- LOCATION -

PROVINCE - BC

ELEVATION - 1573.54

LICENCE/LEASE NUMBER - 7169

ZONE - 9

NORTHING - 6345160.00

EASTING - 506845.00

LATITUDE - 571505

LONGITUDE - 1285312

- ORIENTATION -

LENGTH - 155.99

CORE SIZE - 0.0

CEMENT -

PLUG -

PIEZ -

INCLINATION - 75.0

AZIMUTH - 360.0

CASING DEPTH (M) - 9.10

AQUIFER DEPTHS (M) - 0.00

0.00

LOST CIRC. DEPTHS (M) - 0.00

0.00

*** NOTE *** 0 INDICATES NO VALUE

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
						COAL	ROCK	COAL	ROCK	COAL	ROCK
DDH85019		6517	25.37	26.21	100.00		0.832			0.000	0.832
	G UPPER	6518	26.21	27.51	70.00	0.526	0.378		0.387	0.526	0.765
		6519	27.51	27.74	100.00		0.229			0.000	0.229
		6520	27.74	30.50	99.64		2.739		0.010	0.000	2.749
	G LOWER	6521	30.50	31.26	67.11	0.070	0.440		0.249	0.070	0.689
	G LOWER	6522	31.26	31.78	100.00	0.450	0.070			0.450	0.070
		6523	31.78	31.86	100.00		0.080			0.000	0.080
		6524	45.91	46.16	100.00		0.247			0.000	0.247
	F/G	6525	46.16	46.68	69.23	0.355		0.158		0.513	0.000
		6526	46.68	47.28	100.00		0.590			0.000	0.590
		6527	62.83	63.14	100.00		0.306			0.000	0.306
	F	6528	63.14	63.67	100.00	0.473	0.049			0.473	0.049
	F	6529	63.67	65.65	95.45		1.840		0.087	0.000	1.927
	F	6530	65.65	66.19	72.22	0.288	0.086		0.143	0.288	0.229
	F	6531	66.19	70.20	85.04	3.125	0.018	0.203	0.347	3.328	0.365
		6532	70.20	71.20	100.00		0.872			0.000	0.872
		6533	86.50	87.36	100.00		0.700			0.000	0.700
	E	6534	87.36	87.78	100.00	0.329				0.329	0.000
		6535	87.78	88.44	100.00		0.498			0.000	0.498
		6536	121.13	121.53	100.00		0.272			0.000	0.272
	D	6537	121.53	122.29	97.37	0.355	0.066		0.012	0.355	0.078
		6538	122.29	122.50	100.00		0.098			0.000	0.098
		6539	137.26	139.06	100.00		1.445			0.000	1.445
	C	6540	139.06	139.69	87.30	0.290	0.154	0.065		0.355	0.154
		6541	139.69	140.77	100.00		0.877			0.000	0.877

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED		MISSING		TOTAL	
								COAL	ROCK	COAL	ROCK	COAL	ROCK

DDHB5019													
F		79	6530	6531	65.65	70.20	83.51	3.69	0.11	0.22	0.53	3.91	0.64
G LOWER		110	6521	6522	30.50	31.78	80.46	0.52	0.51	0.00	0.25	0.52	0.76
G UPPER		6518	6518	6518	26.21	27.51	70.00	0.53	0.38	0.00	0.39	0.53	0.77
G LOWER		6522	6522	6522	31.26	31.78	100.00	0.45	0.07	0.00	0.00	0.45	0.07
F/G		6525	6525	6525	46.16	46.68	69.23	0.36	0.00	0.16	0.00	0.52	0.00
E		6534	6534	6534	87.36	87.78	100.00	0.42	0.00	0.00	0.00	0.42	0.00
D		6537	6537	6537	121.53	122.29	97.36	0.63	0.11	0.00	0.02	0.63	0.13
C		6540	6540	6540	139.06	139.69	87.30	0.36	0.19	0.08	0.00	0.44	0.19

COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DDH85019 SEAM : G LOWER INTERVAL(M) : 30.50 - 31.78 ELEVATION(M) : 1573.5
 GEOLOGIST : BUHAY SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP. 1 2 3 4 5 6	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.								
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	CAL. VAL Mj/Kg			
	30.50	↑	(0.25)				↑											
			0.27		67.2	6521	↑											
	31.26		0.13				110	0.52 / 0.76		1.32	52.65	6.45	39.58	0.28				
			0.42		100.0	6522	↕	1.28										
	31.78	↓	0.37				↕	0.52										

.52

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DDH85019 SEAM : F/G INTERVAL(M) : 46.16 - 46.68 ELEVATION(M) : 1573.5
 GEOLOGIST : BUHAY SCALE: 1:40 DATE : FEB 01/86 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	CAL. VAL MJ/KG		
1 2 3 4 5 6		↑															
	46.16	█		0.25			6525	0.51 / 0.00		0.93	52.99	8.85	37.23	1.17	—	—	
	46.68	█		(0.16) 0.16	69.2	6525	0.51										
		↓															

.51

GULF CANADA RESOURCES INC.

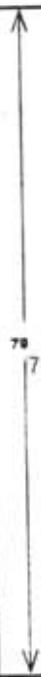
SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR DD-85019 SEAM: F INTERVAL(M): 63.14 - 70.20 ELEVATION(M): 1573.5
 GEOLOGIST: BUHAY SCALE: DATE: JAN 07/85 DRAWING NO.:

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID			COAL/ROCK TOTAL		COAL QUALITY A.D.B.									
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	CAL VAL MJ/KG					
	63.14			0.18																
	63.67			0.30	100.0	8528														
				1.29		8529														
				0.31																
				0.24																
	65.65			0.18		8530														
				0.18																
				0.28	72.3															
	66.19			(0.14)																
				1.87																
				(0.20)																
				0.24	85.1	8531														
				(0.35)																
				1.22																
	70.20																			



9021

79 3.62 / 0.59 0.82 38.60 4.60 33.58 0.88 20.01

79 4.21

GULF CANADA RESOURCES INC.

COAL DIVISION

MOUNT KLAPPAN PROJECT

TRUE THICKNESS

SEAM DETAIL

DATA SOURCE: KPH LR 00H85019 SEAM: E INTERVAL(M): 87.36 - 87.78 ELEVATION(M): 1573.5
 GEOLOGIST: BUNAY SCALE: - DATE: DEC 19/85 DRAWING NO.:

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		X REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.								
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	BAL. VAL MJ/28			
	87.36	↑																
	87.78	↓		0.33	100.0	6834	6834	0.33 / 0.00	0.50	6.88	24.03	4.72	68.40	8.47	—	—		

GULF CANADA RESOURCES INC.

SEAM DETAIL

**COAL DIVISION
MOUNT KLAPPAN PROJECT**

TRUE THICKNESS

DATA SOURCE: KPM LR 00H85019 SEAM : 0 INTERVAL(M) : 121.53 - 122.29 ELEVATION(M) : 1573.5
 GEOLOGIST : BUHAY SCALE: - DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METERS	COAL SEAM LOG	INTERVAL METERS		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MO:ST	ASH	VM	FC	TS	REAL VAL #1/78	REAL VAL #2/78	
	121.53	↑		0.12													
	122.29	↓		0.24	37.3	86.37	86.37	8.38/ 0.08	0.43	0.84	49.88	7.37	42.13	0.34	—	—	

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----- GULF CANADA RESOURCES INC. -----

- DATA SOURCE SUMMARY -

DATA SOURCE - KPNLRDDH85020

DATE - 01/09/86

- HISTORY -

START DATE - 07/24/85

END DATE - 07/26/85

CONTRACTOR - J T THOMAS

GEOLOGIST - SAVOIE

OPERATOR - GCRI

SURVEYOR - MWG & ASS

REMARKS -

- LOCATION -

PROVINCE - BC

ELEVATION - 1820.10

LICENCE/LEASE NUMBER - 7152

ZONE - 9

NORTHING - 6344003.00

EASTING - 505449.56

LATITUDE - 571428

LONGITUDE - 1285435

- ORIENTATION -

LENGTH - 162.16

CORE SIZE - 0.0

CEMENT -

PLUG -

PIEZ -

INCLINATION - 75.0

AZIMUTH - 225.0

CASING DEPTH (M) - 4.57

AQUIFER DEPTHS (M) - 0.00

0.00

LOST CIRC. DEPTHS (M) - 0.00

0.00

*** NOTE *** 0 INDICATES NO VALUE

GULF CANADA RESOURCES INC. - COAL DIVISION
 17/DEC/85 SIMPLE SAMPLE SUMMARY PAGE 1
 TRUE THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL - ROCK

DDH85020		6652	53.69	53.87	100.00		0.172			0.000- 0.172
	E	6653	53.87	55.83	69.90	1.326		0.580		1.906- 0.000
		6654	55.83	56.12	100.00		0.287			0.000- 0.287
		6655	90.33	91.92	100.00		1.377			0.000- 1.377
	D	6656	91.92	92.67	76.00	0.398	0.074	0.146		0.544- 0.074
	D	6657	92.67	93.25	100.00		0.464			0.000- 0.464
	D	6658	93.25	94.32	93.46		0.766		0.056	0.000- 0.822
	D	6659	94.32	98.12	95.00	1.441	1.737	0.107	0.064	1.548- 1.801
	D	6660	98.12	100.35	100.00	0.789	0.109			0.789- 0.109
	D	6661	100.35	101.82	68.71	0.157	0.136		0.210	0.157- 0.346
	D	6662	101.82	104.21	100.00	1.274	0.046			1.274- 0.046
	D	6663	104.21	106.40	100.00	1.294	0.721			1.294- 0.721
		6664	106.40	107.76	100.00		1.218			0.000- 1.218
	C	6665	148.51	148.72	100.00	0.014	0.129			0.014- 0.129
	C	6666	148.72	150.41	95.27	0.965	0.168	0.055		1.020- 0.168
	C	6667	150.41	150.66	100.00		0.181			0.000- 0.181
	C	6668	151.37	152.19	75.61		0.465		0.152	0.000- 0.617
	C	6669	152.19	153.84	82.42	0.561	0.495	0.078	0.149	0.639- 0.644
		6670	153.84	154.14	100.00		0.239			0.000- 0.239

GULF CANADA RESOURCES INC. - COAL DIVISION
 18/DEC/85 COMPOSITE SAMPLE SUMMARY PAGE 1
 APPARENT THICKNESS
 KLAPPAN PROJECT

DATA SOURCE	SEAM	COMP ID	SAMPLE FROM	SAMPLE TO	DEPTH FROM	DEPTH TO	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK	TOTAL COAL-ROCK

DDH85020												
E		80	6653	6653	53.87	55.83	69.89	1.37	0.00	0.59	0.00	1.96- 0.00
D		81	6660	6663	98.12	106.40	94.44	6.16	1.66	0.00	0.46	6.16- 2.12
C		82	6666	6666	148.72	150.41	95.26	1.37	0.24	0.08	0.00	1.45- 0.24
D		6656	6656	6656	91.92	92.67	76.00	0.48	0.09	0.18	0.00	0.66- 0.09
D		6657	6657	6657	92.67	93.25	100.00	0.00	0.58	0.00	0.00	0.00- 0.58
D		6658	6658	6658	93.25	94.32	93.45	0.00	1.00	0.00	0.07	0.00- 1.07
D		6659	6659	6659	94.32	98.12	95.00	1.64	1.97	0.12	0.07	1.76- 2.04
C		6667	6667	6667	150.41	150.66	100.00	0.00	0.25	0.00	0.00	0.00- 0.25
C		6668	6668	6668	151.37	152.19	75.60	0.00	0.62	0.00	0.20	0.00- 0.82
C		6669	6669	6669	152.19	153.84	82.42	0.72	0.64	0.10	0.19	0.82- 0.83

**COAL SEAM DATA SHEETS
AND
COAL QUALITY ANALYSES**

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR ODH85020 SEAM: E INTERVAL(M) : 53.87 - 55.83 ELEVATION(M) : 1820.1
 GEOLOGIST : SAVOIE SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH METRES	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID			COAL/ROCK TOTAL	COAL QUALITY A.D.B.								
			ROCK	COAL		SIMP	COMP	COMPOS		MINING SECTION	RES MOIST	ASH	VM	FC	TS	HEAT VAL MJ/EG		
		↑																
	53.87	[Coal Log Pattern]		1.33		89.6	8853	80	1.81 / 0.08 1.81		1.18	15.88	5.88	77.07	0.48	29.15		
	55.83	[X Pattern]		(0.58)														
		↓																

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1091

GULF CANADA RESOURCES INC.

SEAM DETAIL

COAL DIVISION
MOUNT KLAPPAN PROJECT

TRUE THICKNESS

DATA SOURCE: KPN LR 00H85020 SEAM : 0 INTERVAL(M) : 98.12 - 106.40 ELEVATION(M) : 1820.1
 GEOLOGIST : SAVOIE SCALE: DATE : DEC 19/85 DRAWING NO. :

SEAM COMP.	DRILL DEPTH	COAL SEAM LOG	INTERVAL METRES		% REC.	SAMPLE ID		COAL/ROCK TOTAL		COAL QUALITY A.D.B.							
			ROCK	COAL		SIMP	COMP	COMPOS	MINING SECTION	RES MOIST	ASH	VM	FC	TS	CAL. VAL Wt/Kg		
	98.12	↑		0.42													
	100.35			0.19	100.0	8860											
	101.82			0.28	56.3	8861											
	104.21			0.66	100.0	8862			81	3.81 / 1.22	9.88	38.47	7.06	33.32	0.32	19.72	
				0.37					81	4.74							
				0.46													
				0.37	100.0	8863											
				0.21													
	106.40	↓		0.45													

4-74

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85020

SAMPLE ID Q6659 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 10/10/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	----*--	TOTAL SULPHUR %	----*--
SURFACE MOISTURE %	----*--	PHOSPHOROUS %	----*--
TOTAL MOISTURE %	3.23	CHLORINE (PPM)	----*--
EQUILIBRIUM MOISTURE %	----*--	SPECIFIC GRAVITY	----*--
RESIDUAL MOISTURE %	0.74	FSI	----*--
ASH %	67.74	HGI	----*--
VOLATILE MATTER %	----*--	CO2 %	----*--
FIXED CARBON %	----*--		
GROSS CALORIFIC VALUE (MJ/KG)	----*--		
NET CALORIFIC VALUE (MJ/KG)	----*--		

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85020

=====

SAMPLE ID	06669	DATA TYPE (REAL,BORO,AVER,CALC)	REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 10/10/85	
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)	AD

NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	-----	TOTAL SULPHUR %	-----
SURFACE MOISTURE %	-----	PHOSPHOROUS %	-----
TOTAL MOISTURE %	15.02	CHLORINE (PPM)	-----
EQUILIBRIUM MOISTURE %	-----	SPECIFIC GRAVITY	-----
RESIDUAL MOISTURE %	0.76	FSI	-----
ASH %	45.03	HGI	-----
VOLATILE MATTER %	-----	CO2 %	-----
FIXED CARBON %	-----		-----

GROSS CALORIFIC VALUE (MJ/KG) -----
NET CALORIFIC VALUE (MJ/KG) -----

MOUNT KLAPPAN COAL PROJECT
LOST - FOX AREA
GEOLOGICAL REPORT
1985

APPENDIX IV

DIAMOND DRILL HOLE COAL QUALITY

CONFIDENTIAL COAL
QUALITY DATA
KPNLRDDH 85001
TO
KPNLRDDH 85016

707



GULF CANADA LIMITED
COAL DIVISION

KPNLRDDH85001

CONFIDENTIAL

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH65001
 =====
 SAMPLE ID 1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 15/05/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 3.16
 EQUILIBRIUM MOISTURE % ---
 RESIDUAL MOISTURE % 0.95
 ASH % 20.85
 VOLATILE MATTER % 6.35
 FIXED CARBON % 71.85

 TOTAL SULPHUR % 0.38
 PHOSPHOROUS % ---
 CHLORINE (PPM) 00168
 SPECIFIC GRAVITY 1.54
 FSI ---
 HGI 48.0
 CO2 % 1.24

 GROSS CALORIFIC VALUE (MJ/KG) 27.12
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH65001
 =====
 SAMPLE ID 1 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 28/05/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 23.61 --- --- --- --- --- ---
 5.00 12.00 12.70 --- --- --- --- --- ---
 12.00 6.00 11.03 --- --- --- --- --- ---
 6.00 1.00 29.69 --- --- --- --- --- ---
 1.00 0.50 7.85 --- --- --- --- --- ---
 0.50 0.15 8.22 --- --- --- --- --- ---
 0.15 0.00 6.90 --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH65001
 =====
 SAMPLE ID 1
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 17/05/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 0.95
 CARBON % 70.66
 HYDROGEN % 2.19
 SULPHUR % 0.38
 NITROGEN % 0.85
 ASH % 20.85
 OXYGEN % 4.12

GORI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85001	
<hr/>								
SAMPLE ID	1	DATA TYPE (REAL,BORO,AVER,CALC)					REAL	
LIT SAMPLE ID	HD1	DATE ANALYSED 15/05/85						
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)					AD	
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)								ASTM
TOP SIZE (MM)		50.00						
SURFACE MOISTURE %		---			TOTAL SULPHUR %		0.38	
TOTAL MOISTURE %		3.16			PHOSPHOROUS %		---	
EQUILIBRIUM MOISTURE %		---			CHLORINE (PPM)		00168	
					SPECIFIC GRAVITY		1.54	
RESIDUAL MOISTURE %		0.95			FSI		---	
ASH %		20.85			HGI		48.0	
VOLATILE MATTER %		6.35			CO2 %		1.24	
FIXED CARBON %		71.85						
GROSS CALORIFIC VALUE (MJ/KG)		27.12						

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlR0DH85001 SEAM - 1

SAMPLE ID - 1

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 47.34				ASH % -		CUM.				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.68	3.40	6.68	3.40	93.32	27.45							0.37	0.37
1.45	32.01	6.88	38.69	6.28	61.31	38.19							0.78	0.71
1.50	17.09	11.92	55.78	8.01	44.22	48.34							0.59	0.67
1.60	10.15	20.72	65.93	9.96	34.07	56.57							0.46	0.64
1.70	5.76	26.52	71.69	11.29	28.31	62.69							0.61	0.64
1.80	2.99	36.01	74.68	12.28	25.32	65.84							0.75	0.64
2.00	5.90	51.18	80.58	15.13	19.42	70.29							0.72	0.65
2.60	19.42	70.29	100.00	25.84									1.23	0.76

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 37.54				ASH % -		CUM.				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	16.55	2.07	16.55	2.07	83.45	15.75							0.38	0.38
1.45	37.46	4.67	54.01	3.87	45.99	24.77							0.45	0.43
1.50	17.37	9.15	71.38	5.16	28.62	34.25							0.46	0.44
1.60	11.74	15.36	83.12	6.60	16.88	47.39							0.71	0.47
1.70	4.62	22.18	87.74	7.42	12.26	56.90							1.50	0.53
1.80	2.39	28.71	90.13	7.98	9.87	63.72							1.62	0.56
2.00	2.60	39.90	92.73	8.88	7.27	72.24							1.52	0.58
2.60	7.27	72.24	100.00	13.48									1.58	0.66

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPDLRDDH85001 SEAM - I

SAMPLE ID - 1

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % -				8.22 ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	16.61	2.85	16.61	2.85	83.39	16.32							0.83	0.83
1.45	28.33	3.22	44.94	3.08	55.06	23.06							1.22	1.08
1.50	17.78	6.68	62.72	4.10	37.28	30.87							1.61	1.23
1.60	14.48	12.50	77.20	5.68	22.80	42.54							1.97	1.37
1.70	6.72	17.96	83.92	6.66	16.08	52.81							1.35	1.37
1.80	4.14	24.37	88.06	7.49	11.94	62.67							1.48	1.37
2.00	3.48	36.29	91.54	8.59	8.46	73.52							1.60	1.38
2.60	8.46	73.52	100.00	14.08									1.76	1.41

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % -				6.90 ASH % -		15.67				
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	15.67	100.00	15.67									0.89	0.89

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85001 SEAM - H

SAMPLE ID - 2

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -					3.45 ASH % -			
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM. C.V.		CUM.		CUM.	CUM.	CUM.	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	17.10	3.92	17.10	3.92	82.90	38.02							0.93	0.93
1.45	14.03	4.17	31.13	4.03	68.87	44.92							0.68	0.82
1.50	12.83	6.42	43.96	4.73	56.04	53.73							1.10	0.90
1.60	10.44	11.21	54.40	5.97	45.60	63.47							1.48	1.01
1.70	4.72	19.24	59.12	7.03	40.88	68.57							1.36	1.04
1.80	2.57	27.93	61.69	7.90	38.31	71.30							1.10	1.04
2.00	4.87	37.46	66.56	10.07	33.44	76.23							1.39	1.07
2.60	33.44	76.23	100.00	32.19									1.88	1.34

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -					2.23 ASH % -			
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM. C.V.		CUM.		CUM.	CUM.	CUM.	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	32.83	100.00	32.83									0.99	0.99

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85001 SEAM - H

SAMPLE ID - 2

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 74.91 ASH % -								
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM. C.V. CUM.		CUM.	CUM.	CUM.	CUM.			
	WT% ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	3.99 4.57	3.99	4.57	96.01	33.78								0.56	0.56
1.45	5.03 6.43	9.02	5.61	90.98	35.29								0.60	0.58
1.50	20.36 10.25	29.38	8.82	70.62	42.51								0.61	0.60
1.60	19.76 18.06	49.14	12.54	50.86	52.01								0.64	0.62
1.70	12.92 29.26	62.06	16.02	37.94	59.75								0.74	0.64
1.80	4.53 41.30	66.59	17.74	33.41	62.26								1.26	0.68
2.00	11.69 43.39	78.28	21.57	21.72	72.41								0.83	0.71
2.60	21.72 72.41	100.00	32.61										1.45	0.87

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 19.41 ASH % -								
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM. C.V. CUM.		CUM.	CUM.	CUM.	CUM.			
	WT% ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	14.58 2.37	14.58	2.37	85.42	31.77								0.64	0.54
1.45	26.28 6.23	40.86	4.85	59.14	43.12								0.48	0.50
1.50	13.70 14.03	54.56	7.16	45.44	51.90								0.65	0.54
1.60	9.95 17.45	64.51	8.74	35.49	61.55								0.52	0.54
1.70	3.75 25.57	68.26	9.67	31.74	65.80								1.04	0.56
1.80	1.75 32.14	70.01	10.23	29.99	67.77								1.51	0.59
2.00	3.95 40.07	73.96	11.82	26.04	71.97								1.61	0.64
2.60	26.04 71.97	100.00	27.49										1.82	0.95

<u>GORI COAL DIVISION</u>	<u>HEAD</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85001</u>		
SAMPLE ID	3	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 15/05/85							
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)					AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)		ASTM							
TOP SIZE (MM)		50.00							
SURFACE MOISTURE %		---			TOTAL SULPHUR %		0.37		
TOTAL MOISTURE %		3.39			PHOSPHOROUS %		---		
EQUILIBRIUM MOISTURE %		---			CHLORINE (PPM)		00304		
					SPECIFIC GRAVITY		1.75		
RESIDUAL MOISTURE %		0.96			FSI		---		
ASH %		39.68			HGI		81.0		
VOLATILE MATTER %		8.05			CO2 %		1.60		
FIXED CARBON %		51.31							
GROSS CALORIFIC VALUE (MJ/KG)		19.01							
NET CALORIFIC VALUE (MJ/KG)		---							

<u>GORI COAL DIVISION</u>	<u>SIZE</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85001</u>		
SAMPLE ID	3	DATA TYPE (REAL,BORO,AVER,CALC)					CALC		
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 28/05/85							
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS		
FROM (MM) TO (MM)				(MJ/KG)					
50.00 25.00	23.06	---	---	---	---	---	---	---	
25.00 12.00	14.11	---	---	---	---	---	---	---	
12.00 6.00	11.38	---	---	---	---	---	---	---	
6.00 1.00	30.74	---	---	---	---	---	---	---	
1.00 0.50	7.95	---	---	---	---	---	---	---	
0.50 0.15	7.72	---	---	---	---	---	---	---	
0.15 0.00	5.04	---	---	---	---	---	---	---	

<u>GORI COAL DIVISION</u>	<u>ULTIMATE</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85001</u>		
SAMPLE ID	3	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED 15/05/85							
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)					AD		
WATER	%	0.96							
CARBON	%	52.82							
HYDROGEN	%	1.86							
SULPHUR	%	0.37							
NITROGEN	%	0.67							
ASH	%	39.68							
OXYGEN	%	3.64							

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85001 SEAM - G

SAMPLE ID - 3

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		RELATIVE WEIGHT % - 48.54 ASH % -									
	ELEMENTAL	CUM. FLOATS	CUM. WT%	SINKS ASH%	CUM. FSI	C.V. (MJ/KG)	CUM. S	ASH % VOL.	CUM. VOL.	CUM. MOIST		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	S	S	VOL.	VOL.	MOIST	MOIST
1.40	2.10	4.09	2.10	4.09	97.90	53.34					0.67	0.67
1.45	2.14	7.84	4.24	6.98	95.76	54.36					0.54	0.60
1.50	2.98	12.97	7.22	8.87	92.78	55.69					0.64	0.62
1.60	10.73	21.60	17.95	16.48	82.05	60.14					0.63	0.63
1.70	18.06	33.10	36.01	24.81	63.99	67.78					0.72	0.67
1.80	6.25	38.91	42.26	26.90	57.74	70.90					1.10	0.74
2.00	15.15	47.07	57.41	32.22	42.59	79.38					1.11	0.83
2.60	42.59	79.38	100.00	52.31							1.64	1.18

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		RELATIVE WEIGHT % - 38.69 ASH % -									
	ELEMENTAL	CUM. FLOATS	CUM. WT%	SINKS ASH%	CUM. FSI	C.V. (MJ/KG)	CUM. S	ASH % VOL.	CUM. VOL.	CUM. MOIST		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	S	S	VOL.	VOL.	MOIST	MOIST
1.40	4.13	2.18	4.13	2.18	95.87	33.02					0.65	0.65
1.45	7.10	5.40	11.23	4.22	88.77	35.23					0.61	0.62
1.50	14.48	11.16	25.71	8.13	74.29	39.92					0.66	0.64
1.60	24.35	17.49	50.06	12.68	49.94	50.86					0.81	0.73
1.70	11.93	24.56	61.99	14.97	38.01	59.12					1.25	0.83
1.80	5.76	29.24	67.75	16.18	32.25	64.45					2.80	0.99
2.00	10.81	39.75	78.56	19.42	21.44	76.91					1.86	1.11
2.60	21.44	76.91	100.00	31.75							1.12	1.11

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDHB5001 SEAM - G

SAMPLE ID - 3

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % -				7.72 ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. C.V.	CUM. C.V.	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%									
1.40	1.61	1.81	1.61	1.81	98.39	29.40							0.96	0.96
1.45	9.76	3.11	11.37	2.93	88.63	32.30							1.18	1.15
1.50	8.96	5.91	20.33	4.24	79.67	35.27							1.26	1.20
1.60	22.13	11.13	42.46	7.83	57.54	44.55							1.10	1.15
1.70	14.59	17.00	57.05	10.18	42.95	53.91							1.43	1.22
1.80	9.76	25.30	66.81	12.39	33.19	62.32							1.77	1.30
2.00	12.10	34.16	78.91	15.72	21.09	78.48							1.60	1.35
2.60	21.09	78.48	100.00	28.96									1.93	1.47

ANALYSIS TYPE - FROTH														
FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % -				5.05 ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. C.V.	CUM. C.V.	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%									
240.00	*****	33.13	100.00	33.13									0.93	0.93

KPNLRDDH85002

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85002 SEAM - I

SAMPLE ID - 4

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 70.78 ASH % -								
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	CUM.	MOIST	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	5.30	2.62	5.30	2.62	94.70	15.38							0.42	0.42
1.45	43.39	4.69	48.69	4.46	51.31	24.41							0.92	0.87
1.50	24.87	9.39	73.56	6.13	26.44	38.55							1.10	0.94
1.60	14.44	15.45	88.00	7.66	12.00	66.34							0.88	0.93
1.70	0.87	27.11	88.87	7.85	11.13	69.41							0.64	0.93
1.80	1.53	38.27	90.40	8.36	9.60	74.37							1.46	0.94
2.00	1.36	47.72	91.76	8.95	8.24	78.77							0.87	0.94
2.60	8.24	78.77	100.00	14.70									1.83	1.01

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 23.37 ASH % -								
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	CUM.	MOIST	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	13.19	2.50	13.19	2.50	86.81	17.25							0.31	0.31
1.45	50.23	4.94	63.42	4.43	36.58	34.16							0.48	0.44
1.50	10.52	9.83	73.94	5.20	26.06	43.98							0.44	0.44
1.60	9.36	15.47	83.30	6.35	16.70	59.96							0.65	0.47
1.70	3.15	24.05	86.45	7.00	13.55	68.30							0.83	0.48
1.80	1.40	30.27	87.85	7.37	12.15	72.68							1.65	0.50
2.00	2.05	43.10	89.90	8.18	10.10	78.69							1.70	0.53
2.60	10.10	78.69	100.00	15.31									1.61	0.64

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85002 SEAM - I

SAMPLE ID - 4

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.15		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -		3.25 ASH % -		CUM. C.V.	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	ELEMENTAL	WT%			ASH%	WT%	ASH%	FSI						
1.40	8.73	2.87	8.73	2.87	91.27	27.86							0.90	0.90
1.45	32.75	3.17	41.48	3.11	58.52	41.68							0.68	0.73
1.50	9.01	6.68	50.49	3.74	49.51	48.05							0.97	0.77
1.60	10.92	10.43	61.41	4.93	38.59	58.70							1.08	0.82
1.70	6.09	16.56	67.50	5.98	32.50	66.59							1.87	0.92
1.80	2.92	23.77	70.42	6.72	29.58	70.82							1.57	0.95
2.00	5.05	34.77	75.47	8.60	24.53	78.24							1.85	1.01
2.60	24.53	78.24	100.00	25.68									1.34	1.09

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X 0.00		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -		2.60 ASH % -		CUM. C.V.	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	ELEMENTAL	WT%			ASH%	WT%	ASH%	FSI						
240.00	*****	31.21	100.00	31.21									1.06	1.06

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85002
 =====

SAMPLE ID 61
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 25/04/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1240.0
 SOFTENING TEMP.(C) 1317.2
 HEMISPHERICAL TEMP.(C) 1367.2
 FLUID TEMP.(C) 1439.4

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1212.2
 SOFTENING TEMP.(C) 1289.4
 HEMISPHERICAL TEMP.(C) 1322.8
 FLUID TEMP.(C) 1395.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85002
 =====

SAMPLE ID 61
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 29/04/85

SILICON DIOXIDE %	(SI02)	58.26
ALUMINIUM OXIDE %	(AL2O3)	21.67
FERRIC OXIDE %	(FE2O3)	3.61
TITANIUM DIOXIDE %	(TI02)	1.06
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.30
CALCIUM OXIDE %	(CAO)	4.34
MAGNESIUM OXIDE %	(MGO)	2.56
SULPHUR TRIOXIDE %	(SO3)	2.29
SODIUM OXIDE %	(NA2O)	1.83
POTASSIUM OXIDE %	(K2O)	1.64

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85002
 =====

SAMPLE ID 61
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 24/04/85

PYRITE	%	44.29
SULPHATE	%	0.00
ORGANIC	%	55.71

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85002 SEAM - H

SAMPLE ID - 61

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT															
FRACTION SIZE(MM)		0.50 X 0.15		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				2.22 ASH % -	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MDIST	MOIST
1.40	3.24	3.06	3.24	3.06	96.76	38.39								2.12	2.12
1.45	8.49	3.41	11.73	3.31	88.27	41.75								0.79	1.16
1.50	5.46	5.52	17.19	4.01	82.81	44.14								1.07	1.13
1.60	13.65	10.60	30.84	6.93	69.16	50.76								1.43	1.26
1.70	12.54	16.23	43.38	9.62	56.62	58.41								2.56	1.64
1.80	11.43	23.10	54.81	12.43	45.19	67.34								1.71	1.65
2.00	10.62	39.48	65.43	16.82	34.57	75.90								1.85	1.68
2.60	34.57	75.90	100.00	37.24										1.75	1.71

ANALYSIS TYPE - FROTH															
FRACTION SIZE(MM)		0.15 X 0.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				3.14 ASH % - 28.60	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	28.60	100.00	28.60										1.01	1.01

KPNLRDDH85003


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GCRI COAL DIVISION  HEAD      PROJ  KPN      BLK  LR      DS  DDH85003
=====
SAMPLE ID              6      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED 03/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %            ---
TOTAL MOISTURE %              4.56
EQUILIBRIUM MOISTURE %       ---
RESIDUAL MOISTURE %           3.08
ASH %                         39.62
VOLATILE MATTER %             7.68
FIXED CARBON %                49.62

TOTAL SULPHUR %                0.47
PHOSPHOROUS %                  ---
CHLORINE (PPM)                 00152
SPECIFIC GRAVITY                1.74
FSI                             ---
HGI                             69.0
CO2 %                           2.65

GROSS CALORIFIC VALUE (MJ/KG)  19.72
NET CALORIFIC VALUE (MJ/KG)   ---

```

```

GCRI COAL DIVISION  SIZE      PROJ  KPN      BLK  LR      DS  DDH85003
=====
SAMPLE ID              6      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID      SZ1      DATE ANALYSED 25/06/85
FRACTION SIZE        WT%      ASH%      FSI      CAL      RM      VM      TS
FROM (MM) TO (MM)   (MJ/KG)
50.00 25.00 45.48 --- --- --- --- --- ---
25.00 12.00 17.49 --- --- --- --- --- ---
12.00 6.00 10.56 --- --- --- --- --- ---
6.00 1.00 13.19 --- --- --- --- --- ---
1.00 0.50 4.92 --- --- --- --- --- ---
0.50 0.15 5.01 --- --- --- --- --- ---
0.15 0.00 3.35 --- --- --- --- --- ---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN      BLK  LR      DS  DDH85003
=====
SAMPLE ID              6
SAMPLE PRODUCT ID     SP1      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      UL1      DATE ANALYSED 03/06/85
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %                3.08
CARBON %               52.39
HYDROGEN %             1.63
SULPHUR %              0.47
NITROGEN %             0.77
ASH %                  39.62
OXYGEN %               2.04

```

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85003 SEAM - M

SAMPLE ID - 5

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT										
FRACTION SIZE(MM)		50.00 X 6.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 68.48 ASH % -		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S
1.45	0.28	2.90	0.28	2.90	99.72	63.40				
1.50	0.41	10.15	0.69	7.21	99.31	63.61				
1.60	0.98	27.40	1.67	19.06	98.33	63.98				
1.70	9.20	30.25	10.87	28.53	89.13	67.46				
1.80	10.74	37.09	21.61	32.78	78.39	71.62				
2.00	14.93	50.10	36.54	39.86	63.46	76.68				
2.60	63.46	76.68	100.00	63.23						

ANALYSIS TYPE - FLOAT										
FRACTION SIZE(MM)		6.00 X 0.50		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 23.43 ASH % -		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S
1.40	3.79	3.17	3.79	3.17	96.21	55.88				
1.45	7.72	3.44	11.51	3.35	88.49	60.46				
1.50	3.11	9.03	14.62	4.56	85.38	62.33				
1.60	6.01	17.62	20.63	8.36	79.37	65.71				
1.70	6.08	27.22	26.71	12.66	73.29	68.91				
1.80	7.12	35.71	33.83	17.51	66.17	72.48				
2.00	12.29	47.89	46.12	25.60	53.88	78.09				
2.60	53.88	78.09	100.00	53.88						

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85003 SEAM - M

SAMPLE ID - 5

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT																		
FRACTION SIZE(MM)	0.50 X		0.15		RELATIVE WEIGHT % -					4.95 ASH % -								
SG-TME	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. WT%	SINKS	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM. C.V.	S	VOL.	VOL.	MOIST	MOIST
1.40	8.49	2.60	8.49	2.60	91.51	42.73											1.06	1.06
1.45	14.77	2.81	23.26	2.73	76.74	50.42											0.82	0.91
1.50	11.42	4.27	34.68	3.24	65.32	58.48											0.86	0.89
1.60	6.68	9.79	41.36	4.30	58.64	64.03											0.92	0.90
1.70	4.51	19.45	45.87	5.79	54.13	67.74											1.05	0.91
1.80	4.05	29.28	49.92	7.69	50.08	70.86											1.19	0.93
2.00	5.56	39.59	55.48	10.89	44.52	74.76											1.49	0.99
2.60	44.52	74.76	100.00	39.32													1.88	1.39

ANALYSIS TYPE - FROTH																		
FRACTION SIZE(MM)	0.15 X		0.00		RELATIVE WEIGHT % -					3.14 ASH % - 44.51								
SG-TME	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. WT%	SINKS	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM. C.V.	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	44.51	100.00	44.51													3.35	3.35

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85003 SEAM - M

SAMPLE ID - 6

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 73.53				ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.38	1.67	1.38	1.67	98.62	41.00							1.13	1.13
1.45	3.71	6.43	5.09	5.14	94.91	42.35							1.36	1.30
1.50	2.67	10.95	7.76	7.14	92.24	43.26							1.25	1.28
1.60	25.19	21.49	32.95	18.11	67.05	51.43							1.50	1.45
1.70	11.00	29.17	43.95	20.88	56.05	55.80							1.40	1.44
1.80	15.48	39.56	59.43	25.74	40.57	62.00							1.03	1.33
2.00	10.71	44.55	70.14	28.62	29.86	68.26							1.92	1.42
2.60	29.86	68.26	100.00	40.45									1.46	1.43

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 18.10				ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	3.96	3.02	3.96	3.02	96.04	33.06							1.26	1.26
1.45	17.97	3.86	21.93	3.71	78.07	39.78							1.28	1.28
1.50	12.46	9.97	34.39	5.98	65.61	45.44							1.19	1.25
1.60	17.05	16.72	51.44	9.54	48.56	55.53							1.35	1.28
1.70	7.98	26.13	59.42	11.77	40.58	61.31							1.88	1.36
1.80	6.06	34.01	65.48	13.82	34.52	66.10							1.25	1.35
2.00	7.90	45.49	73.38	17.23	26.62	72.22							1.58	1.37
2.60	26.62	72.22	100.00	31.87									1.61	1.44

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85003 SEAM - N OVERTURNED SAMPLE ID - 7 WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.15		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			5.31 ASH % -		CUM. MOIST	CUM. MOIST		
	WT%	ASH%			CUM.	C.V.	CUM.	CUM.	CUM.				
SG-TME	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	3.09	3.89	3.09	3.89	96.91							1.00	1.00
1.45	15.75	4.42	18.84	4.33	81.16							1.08	1.07
1.50	6.30	9.02	25.14	5.51	74.86							1.48	1.17
1.60	13.65	12.88	38.79	8.10	61.21							1.17	1.17
1.70	7.04	18.62	45.83	9.72	54.17							1.01	1.15
1.80	4.06	38.21	49.89	12.04	50.11							1.15	1.15
2.00	11.60	44.05	61.49	18.08	38.51							1.13	1.14
2.60	38.51	56.80	100.00	32.99								1.88	1.43

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X 0.00		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			3.29 ASH % -		CUM. MOIST	CUM. MOIST		
	WT%	ASH%			CUM.	C.V.	CUM.	CUM.					
SG-TME	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	42.09	100.00	42.09								1.26	1.26

```

GCRI COAL DIVISION  HEAD      PROJ  KPN    BLK  LR    DS  DDH85003
=====
SAMPLE ID              7      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1     DATE ANALYSED  15/05/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---.---
TOTAL MOISTURE %             5.43
EQUILIBRIUM MOISTURE %      ---.---
RESIDUAL MOISTURE %          1.24
ASH %                        38.07
VOLATILE MATTER %           6.17
FIXED CARBON %              54.52

TOTAL SULPHUR %              2.18
PHOSPHOROUS %               ---.---
CHLORINE (PPM)              00216
SPECIFIC GRAVITY            1.77
FSI                           ---.---
HGI                          59.0
CO2 %                        1.04

GROSS CALORIFIC VALUE (MJ/KG) 20.27
NET CALORIFIC VALUE (MJ/KG)  ---.---

```

```

GCRI COAL DIVISION  SIZE      PROJ  KPN    BLK  LR    DS  DDH85003
=====
SAMPLE ID              7      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID      SZ1     DATE ANALYSED  28/05/85
FRACTION SIZE        WT%    ASH%    FSI    CAL    RM    VM    TS
FROM (MM) TO (MM)
50.00  25.00  37.94  ---.---  ---.---  ---.---  ---.---  ---.---
25.00  12.00  14.57  ---.---  ---.---  ---.---  ---.---  ---.---
12.00   6.00   9.59   ---.---  ---.---  ---.---  ---.---  ---.---
6.00   1.00  23.77  ---.---  ---.---  ---.---  ---.---  ---.---
1.00   0.50   5.54   ---.---  ---.---  ---.---  ---.---  ---.---
0.50   0.15   5.30   ---.---  ---.---  ---.---  ---.---  ---.---
0.15   0.00   3.29   ---.---  ---.---  ---.---  ---.---  ---.---
---.---  ---.---  ---.---  ---.---  ---.---  ---.---  ---.---  ---.---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN    BLK  LR    DS  DDH85003
=====
SAMPLE ID              7
SAMPLE PRODUCT ID     SP1     DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      UL1     DATE ANALYSED  17/05/85
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

```

```

WATER      %      1.24
CARBON     %      52.98
HYDROGEN   %      1.94
SULPHUR    %      2.18
NITROGEN   %      0.68
ASH        %      38.07
OXYGEN     %      2.91

```


GCRI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85003
SAMPLE ID	8	DATA TYPE (REAL,BORO,AVER,CALC)					REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 22/04/85					
ANALYSIS BASIS TYPE (AD,DB,AR,EM)							AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)							ASTM
TOP SIZE (MM)	50.00						
SURFACE MOISTURE %	---						TOTAL SULPHUR % 1.84
TOTAL MOISTURE %	5.50						PHOSPHOROUS % ---
EQUILIBRIUM MOISTURE %	---						CHLORINE (PPM) 00080
RESIDUAL MOISTURE %	1.17						SPECIFIC GRAVITY 1.72
ASH %	36.93						FSI ---
VOLATILE MATTER %	6.75						HGI 82.0
FIXED CARBON %	55.15						CO2 % 1.08
GROSS CALORIFIC VALUE (MJ/KG)	20.73						
NET CALORIFIC VALUE (MJ/KG)	---						

GCRI COAL DIVISION	SIZE	PROJ	KPN	BLK	LR	DS	DDH85003
SAMPLE ID	8	DATA TYPE (REAL,BORO,AVER,CALC)					CALC
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 15/04/85					
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS
FROM (MM) TO (MM)				(MJ/KG)			
50.00 25.00	35.09	---	---	---	---	---	---
25.00 12.00	18.19	---	---	---	---	---	---
12.00 6.00	8.88	---	---	---	---	---	---
6.00 1.00	22.92	---	---	---	---	---	---
1.00 0.50	5.91	---	---	---	---	---	---
0.50 0.15	5.51	---	---	---	---	---	---
0.15 0.00	3.50	---	---	---	---	---	---

GCRI COAL DIVISION	ULTIMATE	PROJ	KPN	BLK	LR	DS	DDH85003
SAMPLE ID	8	DATA TYPE (REAL,BORO,AVER,CALC)					REAL
SAMPLE PRODUCT ID	SP1	DATE ANALYSED 24/04/85					
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)					AD
WATER	%	1.17					
CARBON	%	54.09					
HYDROGEN	%	1.83					
SULPHUR	%	1.84					
NITROGEN	%	0.71					
ASH	%	36.93					
OXYGEN	%	3.43					

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85003 SEAM - N UPRIGHT

SAMPLE ID - 8

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	50.00 X 6.00		RELATIVE WEIGHT % - 62.17 ASH % -				CUM.		CUM.		CUM.				
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.	CUM.	CUM.				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.24	2.72	0.24	2.72	99.76	46.92								0.56	0.56
1.45	1.76	7.53	2.00	6.95	98.00	47.63								0.68	0.67
1.50	8.38	13.30	10.38	12.08	89.62	50.84								0.64	0.64
1.60	20.74	19.88	31.12	17.28	68.88	60.16								0.69	0.67
1.70	12.37	30.52	43.49	21.04	56.51	66.65								0.80	0.71
1.80	4.94	40.01	48.43	22.98	51.57	69.20								1.03	0.74
2.00	11.51	47.72	59.94	27.73	40.06	75.37								1.42	0.87
2.60	40.06	75.37	100.00	46.81										1.56	1.15

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	6.00 X 0.50		RELATIVE WEIGHT % - 28.83 ASH % -				CUM.		CUM.		CUM.				
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.	CUM.	CUM.				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	11.42	2.26	11.42	2.26	88.58	24.86								0.63	0.63
1.45	23.31	6.16	34.73	4.88	65.27	31.54								0.66	0.65
1.50	15.14	11.61	49.87	6.92	50.13	37.56								0.86	0.71
1.60	16.68	18.03	66.55	9.71	33.45	47.29								1.07	0.80
1.70	9.89	24.75	76.44	11.65	23.56	56.75								1.45	0.89
1.80	4.68	31.00	81.12	12.77	18.88	63.14								2.00	0.95
2.00	5.76	42.75	86.88	14.76	13.12	72.09								2.11	1.03
2.60	13.12	72.09	100.00	22.28										1.77	1.13

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNI RRDH85003 SEAM - N UPRIGHT

SAMPLE ID - 8

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 5.51 ASH % -				CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	17.43	2.30	17.43	2.30	82.57	21.88										0.96	0.96
1.45	22.66	4.13	40.09	3.33	59.91	28.60										1.16	1.07
1.50	10.80	8.04	50.89	4.33	49.11	33.12										1.92	1.25
1.60	12.95	11.89	63.84	5.87	36.16	40.73										2.20	1.44
1.70	10.96	19.43	74.80	7.85	25.20	49.99										2.44	1.59
1.80	7.31	24.13	82.11	9.30	17.89	60.55										2.17	1.64
2.00	5.45	36.41	87.56	10.99	12.44	71.13										2.34	1.69
2.60	12.44	71.13	100.00	18.47												1.81	1.70

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 3.49 ASH % - 23.23				CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	23.23	100.00	23.23												0.90	0.90

KPNLRDDH85004


```

GCRI COAL DIVISION  HEAD      PROJ  KPN    BLK  LR    DS  DDH85004
=====
SAMPLE ID              9      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED 05/07/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GDST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---
TOTAL MOISTURE %             5.11
EQUILIBRIUM MOISTURE %      ---
RESIDUAL MOISTURE %          1.48
ASH %                        22.19
VOLATILE MATTER %           6.22
FIXED CARBON %              70.11

TOTAL SULPHUR %              0.82
PHOSPHOROUS %               ---
CHLORINE (PPM)              00650
SPECIFIC GRAVITY             1.54
FSI                           ---
HGI                           45.0
CO2 %                         0.81

GROSS CALORIFIC VALUE (MJ/KG) 26.70
NET CALORIFIC VALUE (MJ/KG)  ---

```

```

GCRI COAL DIVISION  SIZE      PROJ  KPN    BLK  LR    DS  DDH85004
=====
SAMPLE ID              9      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      SZ1      DATE ANALYSED 05/07/85
FRACTION SIZE        WTX%   ASH%   FSI    CAL    RM    VM    TS
FROM (MM) TO (MM)   (MJ/KG)
50.00 25.00 35.61  ---  ---  ---  ---  ---
25.00 12.00 15.44  ---  ---  ---  ---  ---
12.00  6.00 12.05  ---  ---  ---  ---  ---
 6.00  1.00 26.33  ---  ---  ---  ---  ---
 1.00  0.50  4.59  ---  ---  ---  ---  ---
 0.50  0.15  3.94  ---  ---  ---  ---  ---
 0.15  0.00  2.04  ---  ---  ---  ---  ---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN    BLK  LR    DS  DDH85004
=====
SAMPLE ID              9      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID     SP1      DATE ANALYSED 05/07/85
SPLIT SAMPLE ID      UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %                1.48
CARBON %               69.38
HYDROGEN %             2.01
SULPHUR %              0.82
NITROGEN %             0.67
ASH %                  22.19
OXYGEN %               3.45

```


GORI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85004

SAMPLE ID 10 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 05/07/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 5.21
 EQUILIBRIUM MOISTURE % ---

RESIDUAL MOISTURE % 1.57
 ASH % 53.55
 VOLATILE MATTER % 8.49
 FIXED CARBON % 36.39

GROSS CALORIFIC VALUE (MJ/KG) 13.63
 NET CALORIFIC VALUE (MJ/KG) ---

TOTAL SULPHUR % 0.27
 PHOSPHOROUS % ---
 CHLORINE (PPM) 00780
 SPECIFIC GRAVITY 1.96
 FSI ---
 HGI 71.0
 CO2 % 1.16

GORI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85004

SAMPLE ID 10 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 05/07/85

FRACTION SIZE	WT%	ASH%	FSI	CAL (MJ/KG)	RM	VM	TS
FROM (MM) TO (MM)							
50.00 25.00	36.94	---	---	---	---	---	---
25.00 12.00	14.21	---	---	---	---	---	---
12.00 6.00	10.50	---	---	---	---	---	---
6.00 1.00	20.65	---	---	---	---	---	---
1.00 0.50	5.51	---	---	---	---	---	---
0.50 0.15	6.80	---	---	---	---	---	---
0.15 0.00	5.39	---	---	---	---	---	---

GORI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85004

SAMPLE ID 10
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 05/07/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	1.57
CARBON	%	38.02
HYDROGEN	%	1.92
SULPHUR	%	0.27
NITROGEN	%	0.51
ASH	%	53.55
OXYGEN	%	4.16

GCR1 COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85004

SAMPLE ID 10
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 05/07/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1311.0
SOFTENING TEMP.(C) 1336.0
HEMISPHERICAL TEMP.(C) 1374.0
FLUID TEMP.(C) 1437.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1300.0
SOFTENING TEMP.(C) 1327.0
HEMISPHERICAL TEMP.(C) 1363.0
FLUID TEMP.(C) 1425.0

GCR1 COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85004

SAMPLE ID 10
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 05/07/85

SILICON DIOXIDE %	(SI02)	62.59
ALUMINIUM OXIDE %	(AL2O3)	19.72
FERRIC OXIDE %	(FE2O3)	4.48
TITANIUM DIOXIDE %	(TI02)	0.89
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.15
CALCIUM OXIDE %	(CAO)	4.56
MAGNESIUM OXIDE %	(MGO)	3.40
SULPHUR TRIOXIDE %	(SO3)	1.29
SODIUM OXIDE %	(NA2O)	1.54
POTASSIUM OXIDE %	(K2O)	1.24

GCR1 COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85004

SAMPLE ID 10
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 05/07/85

PYRITE	%	0.07
SULPHATE	%	0.00
ORGANIC	%	0.93

GORI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85004
 =====
 SAMPLE ID 11 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 05/07/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 4.46
 EQUILIBRIUM MOISTURE % ---
 RESIDUAL MOISTURE % 1.33
 ASH % 21.17
 VOLATILE MATTER % 8.18
 FIXED CARBON % 69.32

 TOTAL SULPHUR % 0.38
 PHOSPHOROUS % ---
 CHLORINE (PPM) 00690
 SPECIFIC GRAVITY 1.53
 FSI ---
 HGI 46.0
 CO2 % 0.99

 GROSS CALORIFIC VALUE (MJ/KG) 25.89
 NET CALORIFIC VALUE (MJ/KG) ---

GORI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85004
 =====
 SAMPLE ID 11 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 05/07/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 44.85 --- --- --- --- --- ---
 25.00 12.00 13.99 --- --- --- --- --- ---
 12.00 6.00 8.53 --- --- --- --- --- ---
 6.00 1.00 20.58 --- --- --- --- --- ---
 1.00 0.50 4.74 --- --- --- --- --- ---
 0.50 0.15 4.64 --- --- --- --- --- ---
 0.15 0.00 2.67 --- --- --- --- --- ---

GORI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85004
 =====
 SAMPLE ID 11
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 05/07/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.33
 CARBON % 70.55
 HYDROGEN % 2.05
 SULPHUR % 0.38
 NITROGEN % 0.68
 ASH % 21.17
 OXYGEN % 3.84

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlRDDH85004 SEAM - H

SAMPLE ID - 9

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 63.10							ASH % -	
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	CUM.	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	5.11	2.33	5.11	2.33	94.89	22.78							0.74	0.74
1.45	26.60	7.92	31.71	7.02	68.29	28.57							0.78	0.77
1.50	7.25	13.36	38.96	8.20	61.04	30.38							0.90	0.80
1.60	36.21	22.81	75.17	15.24	24.83	41.41							0.87	0.83
1.70	9.22	32.44	84.39	17.12	15.61	46.72							0.91	0.84
1.80	8.56	40.83	92.95	19.30	7.05	53.86							1.34	0.89
2.00	4.64	47.32	97.59	20.63	2.41	66.46							1.08	0.90
2.60	2.41	66.46	100.00	21.74									0.99	0.90

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 30.92							ASH % -	
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	CUM.	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	22.26	1.73	22.26	1.73	77.74	23.56							0.77	0.77
1.45	26.96	5.91	49.22	4.02	50.78	32.93							0.81	0.79
1.50	15.22	12.11	64.44	5.93	35.56	41.84							0.92	0.82
1.60	13.10	19.18	77.54	8.17	22.46	55.06							0.97	0.85
1.70	5.02	27.73	82.56	9.36	17.44	62.93							1.07	0.86
1.80	2.50	37.23	85.06	10.18	14.94	67.23							1.24	0.87
2.00	3.23	47.55	88.29	11.54	11.71	72.66							1.53	0.90
2.60	11.71	72.66	100.00	18.70									1.14	0.92

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlRDDH85004 SEAM - H

SAMPLE ID - 9

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % -				3.94 ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	7.13	2.14	7.13	2.14	92.87	29.70							1.09	1.09
1.45	27.17	3.01	34.30	2.83	65.70	40.74							1.07	1.07
1.50	13.10	7.75	47.40	4.19	52.60	48.95							1.25	1.12
1.60	13.06	15.26	60.46	6.58	39.54	60.08							1.62	1.23
1.70	3.98	21.70	64.44	7.51	35.56	64.38							1.12	1.22
1.80	5.01	28.11	69.45	9.00	30.55	70.32							1.83	1.27
2.00	5.44	40.94	74.89	11.32	25.11	76.69							1.29	1.27
2.60	25.11	76.69	100.00	27.73									1.52	1.33

ANALYSIS TYPE - FROTH														
FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % -				2.04 ASH % -		41.35				
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
240.00	****	41.35	100.00	41.35									1.38	1.38

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85004 SEAM - H

SAMPLE ID - 10

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 61.65 ASH % -									
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	CUM.	CUM.			
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.12	1.75	0.12	1.75	99.88	66.27								0.61	0.61
1.45	0.34	5.75	0.46	4.71	99.54	66.48								0.64	0.63
1.50	0.94	10.81	1.40	8.80	98.60	67.01								0.74	0.70
1.60	5.17	22.03	6.57	19.21	93.43	69.50								0.54	0.58
1.70	4.50	30.75	11.07	23.90	88.93	71.46								0.56	0.57
1.80	17.38	41.70	28.45	34.77	71.55	78.69								0.75	0.68
2.00	7.32	54.05	35.77	38.72	64.23	81.50								1.14	0.77
2.60	64.23	81.50	100.00	66.20										1.11	0.99

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 26.16 ASH % -									
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	CUM.	CUM.			
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	3.47	1.32	3.47	1.32	96.53	43.48								0.66	0.66
1.45	9.39	4.39	12.86	3.56	87.14	47.69								0.33	0.42
1.50	8.07	9.73	20.93	5.94	79.07	51.56								0.72	0.54
1.60	13.50	18.34	34.43	10.80	65.57	58.40								0.80	0.64
1.70	11.32	27.68	45.75	14.98	54.25	64.81								0.89	0.70
1.80	7.49	36.00	53.24	17.94	46.76	69.43								1.26	0.78
2.00	9.70	46.22	62.94	22.29	37.06	75.50								1.75	0.93
2.60	37.06	75.50	100.00	42.01										1.13	1.00

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85004 SEAM - H

SAMPLE ID - 10

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				6.80 ASH % -					
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	CUM.	S	VOL.	CUM.	CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	S	VOL.	VOL.	MOIST	MOIST
1.40	2.46	2.26	2.46	2.26	97.54	30.65									1.00	1.00
1.45	15.07	2.78	17.53	2.71	82.47	35.74									0.92	0.93
1.50	18.29	5.65	35.82	4.21	64.18	44.31									0.99	0.96
1.60	13.76	14.03	49.58	6.94	50.42	52.58									1.24	1.04
1.70	8.87	20.65	58.45	9.02	41.55	59.39									1.57	1.12
1.80	6.24	28.03	64.69	10.85	35.31	64.93									1.39	1.15
2.00	9.02	39.35	73.71	14.34	26.29	73.71									1.02	1.13
2.60	26.29	73.71	100.00	29.95											1.93	1.34

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				5.39 ASH % - 31.75					
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	CUM.	S	VOL.	CUM.	CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	31.75	100.00	31.75											1.27	1.27

```

GCRI COAL DIVISION  HEAD      PROJ KPN      BLK LR      DS  DDH85004
=====
SAMPLE ID              12      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED  03/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---
TOTAL MOISTURE %             2.92
EQUILIBRIUM MOISTURE %      ---

RESIDUAL MOISTURE %          2.10
ASH %                        51.96
VOLATILE MATTER %           6.07
FIXED CARBON %              39.87

TOTAL SULPHUR %              0.47
PHOSPHOROUS %               ---
CHLORINE (PPM)              00160
SPECIFIC GRAVITY            1.82
FSI                          ---
HGI                          58.0
CO2 %                        1.89

GROSS CALORIFIC VALUE (MJ/KG) 14.30
NET CALORIFIC VALUE (MJ/KG)  ---

```

```

GCRI COAL DIVISION  SIZE      PROJ KPN      BLK LR      DS  DDH85004
=====
SAMPLE ID              12      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID      SZ1      DATE ANALYSED  25/06/85
FRACTION SIZE        WT%      ASH%      FSI      CAL      RM      VM      TS
FROM (MM) TO (MM)   (MJ/KG)
50.00  25.00    66.93    ---     ---     ---     ---     ---
25.00  12.00    13.47    ---     ---     ---     ---     ---
12.00   6.00     5.04     ---     ---     ---     ---     ---
 6.00   1.00     9.76     ---     ---     ---     ---     ---
 1.00   0.50     2.08     ---     ---     ---     ---     ---
 0.50   0.15     1.80     ---     ---     ---     ---     ---
 0.15   0.00     0.92     ---     ---     ---     ---     ---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ KPN      BLK LR      DS  DDH85004
=====
SAMPLE ID              12
SAMPLE PRODUCT ID     SP1      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      UL1      DATE ANALYSED  03/06/85
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %                2.10
CARBON %               40.96
HYDROGEN %             1.63
SULPHUR %              0.47
NITROGEN %             0.52
ASH %                  51.96
OXYGEN %               2.36

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85004

SAMPLE ID ___12
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1311.0
 SOFTENING TEMP.(C) 1352.0
 HEMISPHERICAL TEMP.(C) 1398.0
 FLUID TEMP.(C) 1437.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1254.0
 SOFTENING TEMP.(C) 1267.0
 HEMISPHERICAL TEMP.(C) 1348.0
 FLUID TEMP.(C) 1423.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85004

SAMPLE ID ___12
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	63.14
ALUMINIUM OXIDE %	(AL2O3)	20.10
FERRIC OXIDE %	(FE2O3)	5.00
TITANIUM DIOXIDE %	(TI02)	1.03
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.15
CALCIUM OXIDE %	(CAO)	1.85
MAGNESIUM OXIDE %	(MGO)	2.39
SULPHUR TRIOXIDE %	(SO3)	2.53
SODIUM OXIDE %	(NA2O)	1.51
POTASSIUM OXIDE %	(K2O)	2.19

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85004

SAMPLE ID ___12
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	29.38
SULPHATE	%	0.00
ORGANIC	%	70.62

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85004 SEAM - G

SAMPLE ID - 12

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT															
FRACTION SIZE(MM)		50.00 X 6.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 85.44 ASH % -				CUM. C.V. CUM.		CUM. CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.45	0.35	5.92	0.35	5.92	99.65	53.65								0.67	0.67
1.50	0.61	8.63	0.96	7.64	99.04	53.93								0.70	0.69
1.60	13.68	18.87	14.64	18.13	85.36	59.55								0.64	0.64
1.70	14.07	22.82	28.71	20.43	71.29	66.79								0.95	0.79
1.80	15.20	38.02	43.91	26.52	56.09	74.59								1.10	0.90
2.00	8.65	49.37	52.56	30.28	47.44	79.19								0.87	0.89
2.60	47.44	79.19	100.00	53.48										0.81	0.85

ANALYSIS TYPE - FLOAT															
FRACTION SIZE(MM)		6.00 X 0.50		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 11.84 ASH % -				CUM. C.V. CUM.		CUM. CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	13.97	3.45	13.97	3.45	86.03	40.11								0.57	0.57
1.45	18.50	6.62	32.47	5.26	67.53	49.28								0.58	0.58
1.50	2.72	10.82	35.19	5.69	64.81	50.90								0.72	0.59
1.60	11.06	17.14	46.25	8.43	53.75	57.84								0.71	0.62
1.70	7.07	25.63	53.32	10.71	46.68	62.72								0.84	0.65
1.80	7.16	33.06	60.48	13.35	39.52	68.10								1.27	0.72
2.00	11.48	44.62	71.96	18.34	28.04	77.71								1.61	0.86
2.60	28.04	77.71	100.00	34.99										1.32	0.99

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85004 SEAM - G

SAMPLE ID - 12

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.15		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			1.80 ASH % -		CUM. MOIST	CUM. MOIST		
	ELEMENTAL				CUM.	CUM. C.V.	CUM.	CUM.	CUM.				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI FSI (MJ/KG) C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	4.99	4.07	4.99	4.07	95.01	39.33						0.88	0.88
1.45	22.66	5.30	27.65	5.08	72.35	49.99						0.84	0.85
1.50	7.35	9.73	35.00	6.05	65.00	54.54						0.91	0.86
1.60	9.72	12.80	44.72	7.52	55.28	61.88						1.26	0.95
1.70	4.09	21.21	48.81	8.67	51.19	65.13						1.61	1.00
1.80	5.42	29.28	54.23	10.73	45.77	69.38						1.13	1.02
2.00	10.82	40.76	65.05	15.72	34.95	78.24						1.51	1.10
2.60	34.95	78.24	100.00	37.57								1.55	1.26

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X 0.00		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			0.92 ASH % - 48.75		CUM. MOIST	CUM. MOIST		
	ELEMENTAL				CUM.	CUM. C.V.	CUM.	CUM.	CUM.				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI FSI (MJ/KG) C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	48.75	100.00	48.75								1.24	1.24

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85004

SAMPLE ID 13
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1308.0
 SOFTENING TEMP.(C) 1366.0
 HEMISPHERICAL TEMP.(C) 1379.0
 FLUID TEMP.(C) 1434.0

INITIAL TEMP.(C) 1251.0
 SOFTENING TEMP.(C) 1308.0
 HEMISPHERICAL TEMP.(C) 1333.0
 FLUID TEMP.(C) 1428.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85004

SAMPLE ID 13
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	58.04
ALUMINIUM OXIDE %	(AL2O3)	22.81
FERRIC OXIDE %	(FE2O3)	6.72
TITANIUM DIOXIDE %	(TI02)	1.19
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.53
CALCIUM OXIDE %	(CAO)	1.73
MAGNESIUM OXIDE %	(MGO)	2.37
SULPHUR TRIOXIDE %	(SO3)	2.40
SODIUM OXIDE %	(NA2O)	1.81
POTASSIUM OXIDE %	(K2O)	2.13

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85004

SAMPLE ID 13
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	83.18
SULPHATE	%	0.00
ORGANIC	%	16.82

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85004 SEAM - F

SAMPLE ID - 13

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.15		RELATIVE WEIGHT % -				3.86 ASH % -								
	ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V. CUM.		CUM. CUM.		CUM.				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VDL.	VDL.	MOIST	MOIST
1.40	2.79	4.26	2.79	4.26	97.21	28.68								1.22	1.22
1.45	13.94	5.20	16.73	5.04	83.27	32.61								1.10	1.12
1.50	14.24	5.65	30.97	5.32	69.03	38.17								1.18	1.15
1.60	14.69	10.69	45.66	7.05	54.34	45.60								1.49	1.26
1.70	10.57	17.14	56.23	8.95	43.77	52.47								1.52	1.31
1.80	6.94	23.85	63.17	10.58	36.83	57.87								1.81	1.36
2.00	13.63	35.77	76.80	15.05	23.20	70.85								1.91	1.46
2.60	23.20	70.85	100.00	28.00										1.45	1.46

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X 0.00		RELATIVE WEIGHT % -				2.33 ASH % - 34.86								
	ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V. CUM.		CUM. CUM.		CUM.				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VDL.	VDL.	MOIST	MOIST
240.00	*****	34.86	100.00	34.86										2.60	2.60

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH65004
 =====
 SAMPLE ID 14 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 22/04/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) -----
 SURFACE MOISTURE % ----- TOTAL SULPHUR % 0.46
 TOTAL MOISTURE % 11.62 PHOSPHOROUS % -----
 EQUILIBRIUM MOISTURE % ----- CHLORINE (PPM) 02304
 RESIDUAL MOISTURE % 1.00 SPECIFIC GRAVITY 1.51
 ASH % 13.76 FSI -----
 VOLATILE MATTER % 6.68 HGI 59.0
 FIXED CARBON % 78.56 CO2 % 1.64

 GROSS CALORIFIC VALUE (MJ/KG) 29.56
 NET CALORIFIC VALUE (MJ/KG) -----

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH65004
 =====
 SAMPLE ID 14 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 15/04/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 11.41 -----
 25.00 12.00 4.57 -----
 12.00 6.00 3.14 -----
 6.00 1.00 37.38 -----
 1.00 0.50 18.81 -----
 0.50 0.15 16.20 -----
 0.15 0.00 8.49 -----

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH65004
 =====
 SAMPLE ID 14
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 24/04/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.00
 CARBON % 80.11
 HYDROGEN % 2.89
 SULPHUR % 0.46
 NITROGEN % 0.82
 ASH % 13.76
 OXYGEN % 0.96

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85004
=====

SAMPLE ID 14
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 25/04/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1295.0
SOFTENING TEMP.(C) 1322.8
HEMISPHERICAL TEMP.(C) 1353.3
FLUID TEMP.(C) 1395.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1267.8
SOFTENING TEMP.(C) 1281.1
HEMISPHERICAL TEMP.(C) 1300.6
FLUID TEMP.(C) 1378.3

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85004
=====

SAMPLE ID 14
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	43.33
ALUMINIUM OXIDE %	(AL2O3)	20.79
FERRIC OXIDE %	(FE2O3)	5.79
TITANIUM DIOXIDE %	(TI02)	0.91
PHOSPHOROUS PENTOXIDE %	(P2O5)	2.80
CALCIUM OXIDE %	(CAO)	13.60
MAGNESIUM OXIDE %	(MGO)	5.80
SULPHUR TRIOXIDE %	(SO3)	4.41
SODIUM OXIDE %	(NA2O)	1.91
POTASSIUM OXIDE %	(K2O)	0.95

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlR0DH85004 SEAM - E

SAMPLE ID - 14

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	50.00 X 6.00		RELATIVE WEIGHT % - 19.12 ASH % -				CUM. ASH % -		CUM. MOIST						
	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. C.V.	CUM. S	CUM. S	VOL.	VOL.	MOIST	MOIST					
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	7.23	9.49	7.23	9.49	92.77	28.92								1.19	1.19
1.45	1.21	10.60	8.44	9.65	91.56	29.17								0.87	1.14
1.50	27.56	11.04	36.00	10.71	64.00	36.97								1.67	1.55
1.60	22.78	15.26	58.78	12.48	41.22	48.97								1.56	1.55
1.70	5.10	29.95	63.88	13.87	36.12	51.65								1.51	1.55
1.80	4.87	42.04	68.75	15.87	31.25	53.15								1.65	1.56
2.00	13.24	46.11	81.99	20.75	18.01	58.33								1.26	1.51
2.60	18.01	58.33	100.00	27.52										0.83	1.39

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	6.00 X 0.50		RELATIVE WEIGHT % - 56.18 ASH % -				CUM. ASH % -		CUM. MOIST						
	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. C.V.	CUM. S	CUM. S	VOL.	VOL.	MOIST	MOIST					
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	5.35	2.57	5.35	2.57	94.65	11.97								0.68	0.68
1.45	20.28	2.92	25.63	2.85	74.37	14.43								0.75	0.74
1.50	38.69	6.65	64.32	5.13	35.68	22.87								0.88	0.82
1.60	17.75	12.97	82.07	6.83	17.93	32.68								1.25	0.91
1.70	8.27	19.56	90.34	7.99	9.66	43.90								1.05	0.93
1.80	2.46	26.75	92.80	8.49	7.20	49.76								1.63	0.95
2.00	2.94	38.18	95.74	9.40	4.26	57.76								1.51	0.96
2.60	4.26	57.76	100.00	11.46										1.10	0.97

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WASHABILITY REPORT 2

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DATA SOURCE - KPNI RDDH85004 SEAM - E

SAMPLE ID - 14

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT																			
FRACTION SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % - 16.20 ASH % -													
SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM. C.V.	S	CUM. VOL.	CUM. VOL.	MOIST	MOIST
1.40	2.61	2.34		2.61	2.34		97.39	10.34										1.02	1.02
1.45	21.11	2.72		23.72	2.68		76.28	12.45										1.19	1.17
1.50	25.33	4.49		49.05	3.61		50.95	16.41										1.59	1.39
1.60	25.54	8.53		74.59	5.30		25.41	24.32										1.29	1.35
1.70	11.30	13.16		85.89	6.33		14.11	33.26										2.11	1.45
1.80	6.42	19.40		92.31	7.24		7.69	44.84										1.90	1.48
2.00	2.94	30.39		95.25	7.96		4.75	53.78										1.95	1.50
2.60	4.75	53.78		100.00	10.13													2.04	1.52

ANALYSIS TYPE - FROTH																			
FRACTION SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % - 8.50 ASH % - 15.40													
SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM. C.V.	S	CUM. VOL.	CUM. VOL.	MOIST	MOIST
240.00	*****	15.40		100.00	15.40													0.78	0.78

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85004

SAMPLE ID 15
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 25/04/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1322.8
SOFTENING TEMP.(C) 1345.0
HEMISPHERICAL TEMP.(C) 1378.3
FLUID TEMP.(C) 1439.4

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1278.3
SOFTENING TEMP.(C) 1300.6
HEMISPHERICAL TEMP.(C) 1322.8
FLUID TEMP.(C) 1428.3

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85004

SAMPLE ID 15
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 29/04/85

SILICON DIOXIDE %	(SI02)	65.40
ALUMINIUM OXIDE %	(AL2O3)	15.12
FERRIC OXIDE %	(FE2O3)	3.70
TITANIUM DIOXIDE %	(TI02)	0.63
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.93
CALCIUM OXIDE %	(CAO)	5.74
MAGNESIUM OXIDE %	(MGO)	3.45
SULPHUR TRIOXIDE %	(SO3)	2.37
SODIUM OXIDE %	(NA2O)	1.12
POTASSIUM OXIDE %	(K2O)	0.89

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlRBDH85004 SEAM - E (REPEAT)

SAMPLE ID - 15

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		50.00 X 6.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 41.94				ASH % -		CUM. MOIST	
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V.	CUM. S	CUM. S	VOL.	VOL.	MOIST	MOIST
1.45	0.97	4.74		0.97	4.74	99.03	38.08							0.65	0.65
1.50	5.66	9.52		6.63	8.82	93.37	39.81							0.82	0.80
1.60	14.58	13.40		21.21	11.97	78.79	44.70							0.89	0.86
1.70	18.04	28.99		39.25	19.79	60.75	49.36							0.69	0.78
1.80	11.80	36.73		51.05	23.71	48.95	52.40							0.55	0.73
2.00	37.98	46.98		89.03	33.64	10.97	71.18							0.58	0.67
2.60	10.97	71.18		100.00	37.75									0.80	0.68

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X 0.50		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 42.96				ASH % -		CUM. MOIST	
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V.	CUM. S	CUM. S	VOL.	VOL.	MOIST	MOIST
1.45	25.73	3.30		25.73	3.30	74.27	24.87							0.62	0.62
1.50	15.99	7.00		41.72	4.72	58.28	29.77							0.68	0.64
1.60	15.17	11.72		56.89	6.59	43.11	36.12							0.76	0.67
1.70	10.37	19.60		67.26	8.59	32.74	41.36							1.05	0.73
1.80	11.94	26.59		79.20	11.31	20.80	49.84							1.51	0.85
2.00	10.67	39.92		89.87	14.70	10.13	60.28							1.71	0.95
2.60	10.13	60.28		100.00	19.32									1.37	0.99

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDHB5004 SEAM - E (REPEAT)

SAMPLE ID - 15

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	0.50 X 0.15		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				9.15 ASH % -		CUM.	
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.97	2.49	0.97	2.49	99.03	16.94									0.95	0.95
1.45	22.82	2.72	23.79	2.71	76.21	21.19									1.06	1.06
1.50	23.12	5.10	46.91	3.89	53.09	28.20									1.28	1.17
1.60	19.81	10.66	66.72	5.90	33.28	38.65									2.64	1.60
1.70	10.56	19.99	77.28	7.82	22.72	47.32									2.14	1.68
1.80	6.36	24.73	83.64	9.11	16.36	56.10									1.86	1.69
2.00	6.08	38.01	89.72	11.07	10.28	66.80									1.37	1.67
2.60	10.28	66.80	100.00	16.80											1.33	1.63

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	0.15 X 0.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				5.95 ASH % - 23.10		CUM.	
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	23.10	100.00	23.10											0.89	0.89

KPNLRDDH85005

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85005

SAMPLE ID 63
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED ___/___/___

OXIDIZING ATMOSPHERE

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1345.0
 SOFTENING TEMP.(C) 1403.0
 HEMISPHERICAL TEMP.(C) 1426.0
 FLUID TEMP.(C) 1454.0

INITIAL TEMP.(C) 1289.0
 SOFTENING TEMP.(C) 1378.0
 HEMISPHERICAL TEMP.(C) 1420.0
 FLUID TEMP.(C) 1454.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85005

SAMPLE ID 63
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 13/05/85

SILICON DIOXIDE %	(SI02)	67.75
ALUMINIUM OXIDE %	(AL2O3)	12.44
FERRIC OXIDE %	(FE2O3)	2.60
TITANIUM DIOXIDE %	(TI02)	0.64
PHOSPHOROUS PENTOXIDE %	(P2O5)	2.94
CALCIUM OXIDE %	(CAO)	5.78
MAGNESIUM OXIDE %	(MGO)	3.10
SULPHUR TRIOXIDE %	(SO3)	2.93
SODIUM OXIDE %	(NA2O)	0.70
POTASSIUM OXIDE %	(K2O)	1.00

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85005

SAMPLE ID 63
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 15/05/85

PYRITE	%	16.70
SULPHATE	%	1.90
ORGANIC	%	81.50

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDHB5005 SEAM - 0 OVERTURNED SAMPLE ID - 63 WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		RELATIVE WEIGHT % - 52.26				ASH % -		CUM.						
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.99	7.90	1.99	7.90	98.01	38.04								0.89	0.89
1.45	13.20	9.87	15.19	9.61	84.81	42.42								0.85	0.86
1.50	8.14	13.21	23.33	10.87	76.67	45.53								0.88	0.86
1.60	10.81	21.26	34.14	14.16	65.86	49.51								0.68	0.81
1.70	16.77	30.15	50.91	19.43	49.09	56.12								0.76	0.79
1.80	5.61	40.59	56.52	21.53	43.48	58.13								0.86	0.80
2.00	24.61	51.63	81.13	30.66	18.87	66.60								0.82	0.80
2.60	18.87	66.60	100.00	37.44										0.74	0.79

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		RELATIVE WEIGHT % - 32.82				ASH % -		CUM.						
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	28.14	2.57	28.14	2.57	71.86	21.07								0.60	0.60
1.45	23.80	6.90	51.94	4.55	48.06	28.08								0.79	0.69
1.50	12.65	11.64	64.59	5.94	35.41	33.95								0.80	0.71
1.60	14.22	17.25	78.81	7.98	21.19	45.16								0.89	0.74
1.70	6.88	26.07	85.69	9.43	14.31	54.34								1.17	0.78
1.80	2.99	35.28	88.68	10.31	11.32	59.38								1.65	0.81
2.00	3.90	45.11	92.58	11.77	7.42	66.88								1.74	0.85
2.60	7.42	66.88	100.00	15.86										1.39	0.89

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85005 SEAM - 0 OVERTURNED SAMPLE ID - 63 WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	0.50 X 0.15		RELATIVE WEIGHT % -				9.01 ASH % -								
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	39.74	3.04	39.74	3.04	60.26	17.12								0.89	0.89
1.45	27.56	6.19	67.30	4.33	32.70	26.32								1.23	1.03
1.50	8.30	8.22	75.60	4.76	24.40	32.48								1.48	1.08
1.60	9.48	12.78	85.08	5.65	14.92	45.00								1.99	1.18
1.70	5.04	20.14	90.12	6.46	9.88	57.68								1.11	1.18
1.80	1.88	29.03	92.00	6.92	8.00	64.41								1.83	1.19
2.00	2.38	41.70	94.38	7.80	5.62	74.03								1.69	1.20
2.60	5.62	74.03	100.00	11.52										1.37	1.21

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	0.15 X 0.00		RELATIVE WEIGHT % -				5.91 ASH % -								
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	16.69	100.00	16.69										0.79	0.79

<u>GRI COAL DIVISION</u>	<u>HEAD</u>	<u>PROJ</u>	<u>KFN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85005</u>		
SAMPLE ID	16	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 03/06/85							
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)					AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM									
TOP SIZE (MM)		50.00							
SURFACE MOISTURE %		---				TOTAL SULPHUR %	0.93		
TOTAL MOISTURE %		4.02				PHOSPHOROUS %	---		
EQUILIBRIUM MOISTURE %		---				CHLORINE (PPM)	00128		
						SPECIFIC GRAVITY	1.69		
RESIDUAL MOISTURE %		2.32				FSI	---		
ASH %		39.02				HGI	61.0		
VOLATILE MATTER %		5.31				CO2 %	1.19		
FIXED CARBON %		53.35							
GROSS CALORIFIC VALUE (MJ/KG)		20.08							
NET CALORIFIC VALUE (MJ/KG)		---							

<u>GRI COAL DIVISION</u>	<u>SIZE</u>	<u>PROJ</u>	<u>KFN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85005</u>		
SAMPLE ID	16	DATA TYPE (REAL,BORO,AVER,CALC)					CALC		
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 25/06/85							
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS		
FROM (MM) TO (MM)				(MJ/KG)					
50.00 25.00	37.13	---	---	---	---	---	---	---	
25.00 12.00	16.67	---	---	---	---	---	---	---	
12.00 6.00	9.45	---	---	---	---	---	---	---	
6.00 1.00	20.59	---	---	---	---	---	---	---	
1.00 0.50	5.55	---	---	---	---	---	---	---	
0.50 0.15	6.25	---	---	---	---	---	---	---	
0.15 0.00	4.36	---	---	---	---	---	---	---	

<u>GRI COAL DIVISION</u>	<u>ULTIMATE</u>	<u>PROJ</u>	<u>KFN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85005</u>		
SAMPLE ID	16	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED 03/06/85							
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)					AD		
WATER	%	2.32							
CARBON	%	52.85							
HYDROGEN	%	1.57							
SULPHUR	%	0.93							
NITROGEN	%	0.74							
ASH	%	39.02							
OXYGEN	%	2.57							

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85005

SAMPLE ID 16
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

REDUCING ATMOSPHERE

INITIAL TEMP.(C)	1311.0	INITIAL TEMP.(C)	1259.0
SOFTENING TEMP.(C)	1355.0	SOFTENING TEMP.(C)	1331.0
HEMISPHERICAL TEMP.(C)	1379.0	HEMISPHERICAL TEMP.(C)	1355.0
FLUID TEMP.(C)	1409.0	FLUID TEMP.(C)	1401.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85005

SAMPLE ID 16
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	69.20
ALUMINIUM OXIDE %	(AL2O3)	15.25
FERRIC OXIDE %	(FE2O3)	3.56
TITANIUM DIOXIDE %	(TI02)	0.71
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.76
CALCIUM OXIDE %	(CAO)	2.07
MAGNESIUM OXIDE %	(MGO)	3.03
SULPHUR TRIOXIDE %	(SO3)	3.02
SODIUM OXIDE %	(NA2O)	1.13
POTASSIUM OXIDE %	(K2O)	1.45

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85005

SAMPLE ID 16
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/05/85

PYRITE	%	55.00
SULPHATE	%	2.00
ORGANIC	%	43.00

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85005 SEAM - 0

SAMPLE ID - 16

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 63.25				ASH % -			
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST
1.40	0.22	3.27	0.22	3.27	99.78	46.97						0.73	0.73
1.45	1.58	8.40	1.80	7.77	98.20	47.60						1.05	1.01
1.50	7.84	10.89	9.64	10.31	90.36	50.78						0.82	0.86
1.60	18.25	19.45	27.89	16.29	72.11	58.71						0.71	0.76
1.70	4.85	24.43	32.74	17.50	67.26	61.18						0.88	0.78
1.80	10.66	40.18	43.40	23.07	56.60	65.14						1.00	0.83
2.00	24.73	55.26	68.13	34.75	31.87	72.80						0.91	0.86
2.60	31.87	72.80	100.00	46.88								0.95	0.89

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		8.00 X		0.50		RELATIVE WEIGHT % - 26.14				ASH % -			
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST
1.40	17.01	3.03	17.01	3.03	82.99	33.68						0.87	0.87
1.45	19.13	5.69	36.14	4.44	63.86	42.06						0.70	0.78
1.50	12.33	10.09	48.47	5.88	51.53	49.71						0.90	0.81
1.60	12.39	16.85	60.86	8.11	39.14	60.11						1.05	0.86
1.70	5.31	26.99	66.17	9.63	33.83	65.31						1.14	0.88
1.80	3.83	35.10	70.00	11.02	30.00	69.17						1.64	0.92
2.00	6.91	48.05	76.91	14.35	23.09	75.49						1.56	0.98
2.60	23.09	75.49	100.00	28.46								1.78	1.17

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85005 SEAM - 0

SAMPLE ID - 16

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				6.25 ASH % -		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	17.13	3.91	17.13	3.91	82.87	24.59										0.98	0.98
1.45	37.59	4.16	54.72	4.08	45.28	41.55										0.97	0.97
1.50	8.51	8.88	63.23	4.73	36.77	49.11										1.10	0.99
1.60	9.53	13.53	72.76	5.88	27.24	61.56										1.31	1.03
1.70	3.76	20.89	76.52	6.62	23.48	68.07										1.90	1.07
1.80	2.27	28.71	78.79	7.25	21.21	72.29										1.12	1.08
2.00	2.78	41.10	81.57	8.41	18.43	76.99										1.36	1.09
2.60	18.43	76.99	100.00	21.05												1.82	1.22

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				4.36 ASH % -		28.77		CUM.	
	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	
240.00	*****	28.77	100.00	28.77												2.82	2.82	

```

GCRI COAL DIVISION  HEAD      PROJ  KPN      BLK  LR      DS  DDH85005
=====
SAMPLE ID              17      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED  15/05/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           5.67
TOTAL MOISTURE %             5.67
EQUILIBRIUM MOISTURE %      5.67
RESIDUAL MOISTURE %         1.66
ASH %                        22.17
VOLATILE MATTER %           6.07
FIXED CARBON %              70.10

TOTAL SULPHUR %              3.84
PHOSPHOROUS %               0.00
CHLORINE (PPM)              00320
SPECIFIC GRAVITY            1.59
FSI                          1.59
HGI                          89.0
CO2 %                        1.50

GROSS CALORIFIC VALUE (MJ/KG) 26.61
NET CALORIFIC VALUE (MJ/KG)  26.61

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GCRI COAL DIVISION  SIZE      PROJ  KPN      BLK  LR      DS  DDH85005
=====
SAMPLE ID              17      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      SZ1      DATE ANALYSED  14/05/85
FRACTION SIZE        WT%    ASH%    FSI    CAL    RM    VM    TS
FROM (MM) TO (MM)
50.00  25.00  16.51  ---  ---  ---  ---  ---
25.00  12.00  10.74  ---  ---  ---  ---  ---
12.00   6.00   7.30   ---  ---  ---  ---  ---
 6.00   1.00  34.23  ---  ---  ---  ---  ---
 1.00   0.50  10.48  ---  ---  ---  ---  ---
 0.50   0.15  11.50  ---  ---  ---  ---  ---
 0.15   0.00   9.24   ---  ---  ---  ---  ---
-----

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN      BLK  LR      DS  DDH85005
=====
SAMPLE ID              17      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID     SP1      DATE ANALYSED  17/05/85
SPLIT SAMPLE ID      UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %                1.66
CARBON %               85.79
HYDROGEN %             2.16
SULPHUR %              3.84
NITROGEN %             0.82
ASH %                  22.17
OXYGEN %               3.56

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85005

SAMPLE ID 17
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED ___/___/___

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1237.0
 SOFTENING TEMP.(C) 1309.0
 HEMISPHERICAL TEMP.(C) 1323.0
 FLUID TEMP.(C) 1364.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1134.0
 SOFTENING TEMP.(C) 1154.0
 HEMISPHERICAL TEMP.(C) 1168.0
 FLUID TEMP.(C) 1234.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85005

SAMPLE ID 17
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 13/05/85

SILICON DIOXIDE %	(SI02)	45.09
ALUMINIUM OXIDE %	(AL2O3)	18.04
FERRIC OXIDE %	(FE2O3)	16.89
TITANIUM DIOXIDE %	(TI02)	1.12
PHOSPHOROUS PENTOXIDE %	(P2O5)	2.47
CALCIUM OXIDE %	(CAO)	6.25
MAGNESIUM OXIDE %	(MGO)	2.72
SULPHUR TRIOXIDE %	(SO3)	5.02
SODIUM OXIDE %	(NA2O)	1.28
POTASSIUM OXIDE %	(K2O)	0.90

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85005

SAMPLE ID 17
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 15/05/85

PYRITE	%	75.30
SULPHATE	%	2.60
ORGANIC	%	22.10

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85005 SEAM - N UPPER

SAMPLE ID - 17

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 34.55				ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	4.90	7.18	4.90	7.18	95.10	24.43							1.38	1.38
1.45	2.79	13.89	7.69	9.61	92.31	24.74							1.16	1.30
1.50	12.51	15.05	20.20	12.98	79.80	26.26							1.63	1.50
1.60	40.31	20.86	60.51	18.23	39.49	31.78							1.42	1.45
1.70	21.50	25.09	82.01	20.03	17.99	39.78							1.71	1.52
1.80	7.63	32.25	89.64	21.07	10.36	45.32							1.41	1.51
2.00	3.71	37.55	93.35	21.72	6.65	49.66							1.41	1.50
2.60	6.65	49.66	100.00	23.58									1.34	1.49

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 44.71				ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	1.31	3.64	1.31	3.64	98.69	22.15							0.92	0.92
1.45	3.65	5.68	4.96	5.14	95.04	22.79							0.87	0.88
1.50	8.57	11.28	13.53	9.03	86.47	23.93							1.00	0.96
1.60	38.07	16.88	51.60	14.82	48.40	29.47							1.67	1.48
1.70	23.45	21.88	75.05	17.03	24.95	36.61							1.80	1.58
1.80	10.35	25.84	85.40	18.10	14.60	44.24							1.52	1.57
2.00	6.57	34.69	91.97	19.28	8.03	52.05							1.05	1.54
2.60	8.03	52.05	100.00	21.91									1.55	1.54

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPDLRDDH85005 SEAM - N UPPER

SAMPLE ID - 17

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT																				
FRACTION SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -						11.50 ASH % -								
SG-TME	ELEMENTAL	WT%	ASH%	CUM.	FLOATS	WT%	ASH%	CUM.	SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM.	ASH %	CUM.	MOIST	CUM.
1.40	4.99	3.51		4.99	3.51	95.01	17.27												0.94	0.94
1.45	16.37	4.81		21.36	4.51	78.64	19.87												1.08	1.05
1.50	9.15	8.64		30.51	5.75	69.49	21.35												1.28	1.12
1.60	31.51	13.70		62.02	9.79	37.98	27.69												1.93	1.53
1.70	15.85	19.70		77.87	11.80	22.13	33.41												1.92	1.61
1.80	11.16	21.86		89.03	13.07	10.97	45.17												1.44	1.59
2.00	5.36	31.56		94.39	14.12	5.61	58.17												1.76	1.60
2.60	5.61	58.17		100.00	16.59														1.73	1.61

ANALYSIS TYPE - FROTH																				
FRACTION SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -						9.24 ASH % -								
SG-TME	ELEMENTAL	WT%	ASH%	CUM.	FLOATS	WT%	ASH%	CUM.	SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM.	ASH %	CUM.	MOIST	CUM.
240.00	*****	16.37		100.00	16.37														0.81	0.81

GORI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85005
 =====
 SAMPLE ID 18 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 03/06/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 4.28 TOTAL SULPHUR % 2.85
 EQUILIBRIUM MOISTURE % --- PHOSPHOROUS % ---
 RESIDUAL MOISTURE % 1.92 CHLORINE (PPM) 00216
 ASH % 40.71 SPECIFIC GRAVITY 1.74
 VOLATILE MATTER % 8.89 FSI ---
 FIXED CARBON % 48.48 HGI 95.0
 CO2 % 4.09

 GROSS CALORIFIC VALUE (MJ/KG) 18.56
 NET CALORIFIC VALUE (MJ/KG) ---

GORI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85005
 =====
 SAMPLE ID 18 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 25/06/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TB
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 16.67 --- --- --- --- --- ---
 25.00 12.00 14.26 --- --- --- --- --- ---
 12.00 6.00 12.58 --- --- --- --- --- ---
 6.00 1.00 29.44 --- --- --- --- --- ---
 1.00 0.50 8.13 --- --- --- --- --- ---
 0.50 0.15 10.17 --- --- --- --- --- ---
 0.15 0.00 8.75 --- --- --- --- --- ---
 --- --- --- --- --- --- --- --- ---

GORI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85005
 =====
 SAMPLE ID 18
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 03/06/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.92
 CARBON % 47.67
 HYDROGEN % 1.68
 SULPHUR % 2.85
 NITROGEN % 0.62
 ASH % 40.71
 OXYGEN % 4.55

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85005
 =====

SAMPLE ID 18
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1275.0
 SOFTENING TEMP.(C) 1322.0
 HEMISPHERICAL TEMP.(C) 1336.0
 FLUID TEMP.(C) 1368.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1224.0
 SOFTENING TEMP.(C) 1254.0
 HEMISPHERICAL TEMP.(C) 1281.0
 FLUID TEMP.(C) 1360.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85005
 =====

SAMPLE ID 18
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SiO2)	49.49
ALUMINIUM OXIDE %	(Al2O3)	19.07
FERRIC OXIDE %	(Fe2O3)	9.34
TITANIUM DIOXIDE %	(TiO2)	0.94
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.68
CALCIUM OXIDE %	(CaO)	6.39
MAGNESIUM OXIDE %	(MgO)	3.48
SULPHUR TRIOXIDE %	(SO3)	7.66
SODIUM OXIDE %	(Na2O)	1.60
POTASSIUM OXIDE %	(K2O)	1.26

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85005
 =====

SAMPLE ID 18
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	76.29
SULPHATE	%	2.06
ORGANIC	%	21.65

COMBUSTIBLE	%	-----
UNCOMBUSTIBLE	%	-----

TOTAL 100.00

 TRANS-CODE 3 -----

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPMLR0DDH85005 SEAM - N LOWER

SAMPLE ID - 18

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 43.51				ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	0.04	5.55	0.04	5.55	99.96	48.02							0.80	0.80
1.45	0.75	9.87	0.79	9.65	99.21	48.31							1.14	1.12
1.50	2.02	10.85	2.81	10.51	97.19	49.09							1.38	1.31
1.60	11.66	16.21	14.47	15.10	85.53	53.57							1.83	1.73
1.70	14.87	25.70	29.34	20.47	70.66	59.44							1.62	1.67
1.80	8.88	31.08	38.22	22.94	61.78	63.51							1.92	1.73
2.00	16.37	46.54	54.59	30.02	45.41	69.63							1.56	1.68
2.60	45.41	69.63	100.00	48.00									0.86	1.31

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 37.57				ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	0.44	2.53	0.44	2.53	99.56	36.84							0.92	0.92
1.45	2.47	7.59	2.91	6.82	97.09	37.59							1.00	0.99
1.50	5.55	9.77	8.46	8.76	91.54	39.27							1.42	1.27
1.60	14.70	14.60	23.16	12.47	76.84	43.99							1.51	1.42
1.70	13.50	19.96	36.66	15.23	63.34	49.11							1.08	1.30
1.80	18.22	26.13	54.88	18.85	45.12	58.40							1.81	1.47
2.00	16.89	39.72	71.77	23.76	28.23	69.57							1.29	1.43
2.60	28.23	69.57	100.00	36.69									1.33	1.40

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85005 SEAM - N LOWER

SAMPLE ID - 18

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----														
FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % -				10.17 ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	5.08	4.78	5.08	4.78	94.92	27.82							0.92	0.92
1.45	9.41	5.04	14.49	4.95	85.51	30.33							1.07	1.02
1.50	8.57	7.98	23.06	6.08	76.94	32.82							1.12	1.06
1.60	19.78	13.08	42.84	9.31	57.16	39.65							1.49	1.26
1.70	14.79	19.94	57.63	12.04	42.37	46.53							1.69	1.37
1.80	11.90	24.74	69.53	14.21	30.47	55.04							1.95	1.47
2.00	13.62	36.53	83.15	17.87	16.85	70.00							1.57	1.48
2.60	16.85	70.00	100.00	26.65									1.09	1.42

----- ANALYSIS TYPE - FROTH -----														
FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % -				8.75 ASH % -		21.02				
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
240.00	*****	21.02	100.00	21.02									2.19	2.19

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85005

SAMPLE ID 19 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 22/04/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) ---
 SURFACE MOISTURE % 3.01 TOTAL SULPHUR % 0.33
 TOTAL MOISTURE % 3.01 PHOSPHOROUS % ---
 EQUILIBRIUM MOISTURE % --- CHLORINE (PPM) 00010
 RESIDUAL MOISTURE % 1.07 FSI ---
 ASH % 51.84 HGI 87.0
 VOLATILE MATTER % 9.05 CO2 % 4.07
 FIXED CARBON % 38.04
 GROSS CALORIFIC VALUE (MJ/KG) 14.14
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85005

SAMPLE ID 19 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 15/04/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 40.29 --- --- --- --- --- ---
 25.00 12.00 17.24 --- --- --- --- --- ---
 12.00 6.00 7.92 --- --- --- --- --- ---
 6.00 1.00 18.96 --- --- --- --- --- ---
 1.00 0.50 5.39 --- --- --- --- --- ---
 0.50 0.15 5.71 --- --- --- --- --- ---
 0.15 0.00 4.49 --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85005

SAMPLE ID 19
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 24/04/85
 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 1.07
 CARBON % 40.33
 HYDROGEN % 1.48
 SULPHUR % 0.33
 NITROGEN % 0.58
 ASH % 51.84
 OXYGEN % 4.37

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85005
 =====

SAMPLE ID 19
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 25/04/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1296.7
 SOFTENING TEMP.(C) 1328.3
 HEMISPHERICAL TEMP.(C) 1350.6
 FLUID TEMP.(C) 1378.3

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1206.7
 SOFTENING TEMP.(C) 1223.3
 HEMISPHERICAL TEMP.(C) 1245.6
 FLUID TEMP.(C) 1347.8

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85005
 =====

SAMPLE ID 19
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 29/04/85

SILICON DIOXIDE %	(SI02)	58.82
ALUMINIUM OXIDE %	(AL2O3)	18.14
FERRIC OXIDE %	(FE2O3)	7.07
TITANIUM DIOXIDE %	(TI02)	0.72
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.26
CALCIUM OXIDE %	(CAO)	4.73
MAGNESIUM OXIDE %	(MGO)	4.35
SULPHUR TRIOXIDE %	(SO3)	1.46
SODIUM OXIDE %	(NA2O)	1.72
POTASSIUM OXIDE %	(K2O)	1.49

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85005 SEAM - M

SAMPLE ID - 19

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		RELATIVE WEIGHT % - 65.45 ASH % -												
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.	CUM.					
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.07	2.61	0.07	2.61	99.93	61.37								0.67	0.67
1.45	0.96	5.72	0.43	5.21	99.57	61.57								0.61	0.62
1.50	0.40	10.63	0.83	7.82	99.17	61.78								0.61	0.62
1.60	7.92	21.27	8.75	19.99	91.25	65.30								0.52	0.53
1.70	13.54	30.47	22.29	26.36	77.71	71.36								0.55	0.54
1.80	9.13	34.90	31.42	28.84	68.58	76.22								0.62	0.56
2.00	14.62	47.24	46.04	34.68	53.96	84.07								0.98	0.70
2.60	53.96	84.07	100.00	61.33										0.89	0.80

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		RELATIVE WEIGHT % - 24.35 ASH % -												
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.	CUM.					
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.60	2.47	6.60	2.47	93.40	43.63								0.36	0.36
1.45	4.94	4.40	11.54	3.30	88.46	45.82								0.41	0.38
1.50	6.18	7.19	17.72	4.65	82.28	48.72								0.53	0.43
1.60	10.54	13.64	28.26	8.01	71.74	53.88								0.90	0.61
1.70	8.48	22.31	36.74	11.31	63.26	58.11								1.04	0.71
1.80	9.18	30.35	45.92	15.11	54.08	62.82								1.16	0.80
2.00	14.59	42.00	60.51	21.60	39.49	70.51								1.58	0.99
2.60	39.49	70.51	100.00	40.91										1.63	1.24

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85005 SEAM - M

SAMPLE ID - 19

WASHABILITY ID - WA1

FRACTION SIZE(MM)		ANALYSIS TYPE - FLOAT		0.50 X		0.15		RELATIVE WEIGHT % -				5.71 ASH % -						
SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	CUM. FSI	C.V. FSI	CUM. C.V.	S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST
1.40	8.89	2.34		8.89	2.34		91.11	35.20									0.75	0.75
1.45	5.21	2.60		14.10	2.44		85.90	37.17									0.86	0.79
1.50	10.42	5.28		24.52	3.64		75.48	41.58									1.18	0.96
1.60	17.78	8.47		42.30	5.67		57.70	51.78									1.73	1.28
1.70	8.85	15.66		51.15	7.40		48.85	58.32									1.20	1.27
1.80	6.38	22.97		57.53	9.13		42.47	63.63									1.11	1.25
2.00	9.95	36.28		67.48	13.13		32.52	72.00									1.32	1.26
2.60	32.52	72.00		100.00	32.28												1.97	1.49

FRACTION SIZE(MM)		ANALYSIS TYPE - FROTH		0.15 X		0.00		RELATIVE WEIGHT % -				4.49 ASH % - 29.78						
SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	CUM. FSI	C.V. FSI	CUM. C.V.	S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST
240.00	*****	29.78		100.00	29.78												0.89	0.88

GORI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85005		
=====									
SAMPLE ID	20	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 15/05/85							
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)					AD		
NAME OF STANDARD (ASTM,JIS,DIN,B5,AS,GOST,ISO)		ASTM							
TOP SIZE (MM)		50.00							
SURFACE MOISTURE %		---			TOTAL SULPHUR %		1.36		
TOTAL MOISTURE %		8.70			PHOSPHOROUS %		---		
EQUILIBRIUM MOISTURE %		---			CHLORINE (PPM)		00312		
					SPECIFIC GRAVITY		1.70		
RESIDUAL MOISTURE %		0.86			FSI		---		
ASH %		34.45			HGI		79.0		
VOLATILE MATTER %		6.05			CO2 %		1.97		
FIXED CARBON %		58.64							
GROSS CALORIFIC VALUE (MJ/KG)		21.67							
NET CALORIFIC VALUE (MJ/KG)		---							

GORI COAL DIVISION	SIZE	PROJ	KPN	BLK	LR	DS	DDH85005		
=====									
SAMPLE ID	20	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 14/05/85							
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS		
FROM (MM) TO (MM)				(MJ/KG)					
50.00 25.00	11.30	---	---	---	---	---	---	---	
25.00 12.00	9.80	---	---	---	---	---	---	---	
12.00 6.00	8.19	---	---	---	---	---	---	---	
6.00 1.00	36.32	---	---	---	---	---	---	---	
1.00 0.50	12.52	---	---	---	---	---	---	---	
0.50 0.15	12.69	---	---	---	---	---	---	---	
0.15 0.00	9.18	---	---	---	---	---	---	---	
-----	---	---	---	---	---	---	---	---	

GORI COAL DIVISION	ULTIMATE	PROJ	KPN	BLK	LR	DS	DDH85005		
=====									
SAMPLE ID	20	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED 17/05/85							
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)					AD		
WATER	%	0.86							
CARBON	%	57.42							
HYDROGEN	%	1.75							
SULPHUR	%	1.36							
NITROGEN	%	0.69							
ASH	%	34.45							
OXYGEN	%	3.47							

GRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85005
 =====

SAMPLE ID 20
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED ___/___/___

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1309.0
 SOFTENING TEMP.(C) 1323.0
 HEMISPHERICAL TEMP.(C) 1356.0
 FLUID TEMP.(C) 1389.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1234.0
 SOFTENING TEMP.(C) 1270.0
 HEMISPHERICAL TEMP.(C) 1289.0
 FLUID TEMP.(C) 1373.0

GRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85005
 =====

SAMPLE ID 20
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 13/05/85

SILICON DIOXIDE %	(SI02)	54.89
ALUMINIUM OXIDE %	(AL2O3)	20.19
FERRIC OXIDE %	(FE2O3)	5.85
TITANIUM DIOXIDE %	(TI02)	1.27
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.87
CALCIUM OXIDE %	(CAO)	5.63
MAGNESIUM OXIDE %	(MGO)	2.22
SULPHUR TRIOXIDE %	(SO3)	3.99
SODIUM OXIDE %	(NA2O)	2.10
POTASSIUM OXIDE %	(K2O)	1.94

GRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85005
 =====

SAMPLE ID 20
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 15/05/85

PYRITE	%	64.00
SULPHATE	%	0.70
ORGANIC	%	35.30

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH05005 SEAM - L

SAMPLE ID - 20

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SG-TME	SIZE(MM)		0.50 X 0.15		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -			12.69 ASH % -		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	WT%	ASH%	CUM. FLOATS WT%	ASH%			CUM. FSI	C.V. FSI (MJ/KG)	CUM. C.V.	S	S				
1.40	7.44	3.84	7.44	3.84	92.56	21.41								1.05	1.05
1.45	13.97	3.98	21.41	3.93	78.59	24.51								0.95	0.98
1.50	11.54	6.19	32.95	4.72	67.05	27.66								1.54	1.18
1.60	21.15	10.90	54.10	7.14	45.90	35.38								1.99	1.50
1.70	17.00	16.14	71.10	9.29	28.90	46.70								1.15	1.41
1.80	9.11	23.00	80.21	10.85	19.79	57.61								1.98	1.48
2.00	7.83	33.33	88.04	12.85	11.96	73.50								1.31	1.46
2.60	11.96	73.50	100.00	20.10										1.45	1.46

ANALYSIS TYPE - FROTH

FRACTION SG-TME	SIZE(MM)		0.15 X 0.00		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -			9.18 ASH % -		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	WT%	ASH%	CUM. FLOATS WT%	ASH%			CUM. FSI	C.V. FSI (MJ/KG)	CUM. C.V.	S	S				
240.00	****	21.09	100.00	21.09										0.67	0.67

```

GCRI COAL DIVISION  HEAD  PROJ  KPN  BLK  LR  DS  DDH85005
=====
SAMPLE ID          21      DATA TYPE (REAL,BORD,AVER,CALC)  REAL
SPLIT SAMPLE ID   HD1      DATE ANALYSED 03/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)          50.00
SURFACE MOISTURE %    ---
TOTAL MOISTURE %      4.12
EQUILIBRIUM MOISTURE % ---
RESIDUAL MOISTURE %   2.65
ASH %                 22.46
VOLATILE MATTER %     5.73
FIXED CARBON %       69.16

TOTAL SULPHUR %       0.50
PHOSPHOROUS %        ---
CHLORINE (PPM)       00168
SPECIFIC GRAVITY     1.54
FSI                   ---
HGI                   47.0
CO2 %                 1.19

GROSS CALORIFIC VALUE (MJ/KG)  25.93
NET CALORIFIC VALUE (MJ/KG)  ---

```

```

GCRI COAL DIVISION  SIZE  PROJ  KPN  BLK  LR  DS  DDH85005
=====
SAMPLE ID          21      DATA TYPE (REAL,BORD,AVER,CALC)  CALC
SPLIT SAMPLE ID   SZ1      DATE ANALYSED 25/06/85
FRACTION SIZE     WT%   ASH%   FSI   CAL   RM   VM   TS
FROM (MM) TO (MM) (MJ/KG)
50.00 25.00 45.76 --- --- --- --- --- ---
25.00 12.00 16.30 --- --- --- --- --- ---
12.00 6.00 9.73 --- --- --- --- --- ---
6.00 1.00 18.82 --- --- --- --- --- ---
1.00 0.50 3.70 --- --- --- --- --- ---
0.50 0.15 3.51 --- --- --- --- --- ---
0.15 0.00 2.18 --- --- --- --- --- ---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN  BLK  LR  DS  DDH85005
=====
SAMPLE ID          21      DATA TYPE (REAL,BORD,AVER,CALC)  REAL
SAMPLE PRODUCT ID  SP1      DATE ANALYSED 03/06/85
SPLIT SAMPLE ID   UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %             2.65
CARBON %            68.08
HYDROGEN %          2.26
SULPHUR %           0.50
NITROGEN %          0.57
ASH %               22.46
OXYGEN %            3.48

```

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85005

SAMPLE ID 21
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1377.0
SOFTENING TEMP.(C) 1387.0
HEMISPHERICAL TEMP.(C) 1396.0
FLUID TEMP.(C) 1423.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1355.0
SOFTENING TEMP.(C) 1360.0
HEMISPHERICAL TEMP.(C) 1371.0
FLUID TEMP.(C) 1417.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85005

SAMPLE ID 21
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	50.07
ALUMINIUM OXIDE %	(AL2O3)	25.45
FERRIC OXIDE %	(FE2O3)	4.44
TITANIUM DIOXIDE %	(TI02)	1.40
PHOSPHOROUS PENTOXIDE %	(P2O5)	2.46
CALCIUM OXIDE %	(CAO)	4.78
MAGNESIUM OXIDE %	(MGO)	2.63
SULPHUR TRIOXIDE %	(SO3)	4.31
SODIUM OXIDE %	(NA2O)	2.46
POTASSIUM OXIDE %	(K2O)	1.87

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85005

SAMPLE ID 21
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	10.00
SULPHATE	%	0.00
ORGANIC	%	90.00

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85005 SEAM - K

SAMPLE ID - 21

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X		6.00		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % - 71.79 ASH % -				CUM. VOL.	CUM. MOIST			
	ELEMENTAL		FLOATS				CUM.	C.V.	CUM.	ASH %			CUM.		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	3.68	4.43	3.68	4.43	96.32	26.28								0.53	0.53
1.45	11.19	7.87	14.87	7.02	85.13	28.70								0.69	0.65
1.50	28.23	11.83	43.10	10.17	56.90	37.07								0.68	0.67
1.60	25.61	20.24	68.71	13.92	31.29	50.85								0.69	0.68
1.70	8.07	28.20	76.78	15.42	23.22	58.72								0.97	0.71
1.80	8.40	39.40	85.18	17.79	14.82	69.68								1.05	0.74
2.00	3.21	49.48	88.39	18.94	11.61	75.26								1.00	0.75
2.60	11.61	75.26	100.00	25.48										1.84	0.88

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X		0.50		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % - 22.52 ASH % -				CUM. VOL.	CUM. MOIST			
	ELEMENTAL		FLOATS				CUM.	C.V.	CUM.	ASH %			CUM.		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	33.33	4.23	33.33	4.23	66.67	27.28								0.71	0.71
1.45	11.92	7.50	45.25	5.09	54.75	31.58								0.70	0.71
1.50	10.07	10.92	55.32	6.15	44.68	36.24								0.74	0.71
1.60	16.89	16.67	72.21	8.61	27.79	48.13								0.77	0.73
1.70	8.36	24.69	80.57	10.28	19.43	58.22								1.03	0.76
1.80	4.27	30.82	84.84	11.31	15.16	65.93								1.37	0.79
2.00	4.54	42.95	89.38	12.92	10.62	75.76								1.37	0.82
2.60	10.62	75.76	100.00	19.59										1.84	0.93

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85005 SEAM - K

SAMPLE ID - 21

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			3.51 ASH % -		CUM.	
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	15.42	3.43	15.42	3.43	84.58	22.29								1.04	1.04
1.45	25.54	4.76	40.96	4.26	59.04	29.87								1.79	1.51
1.50	7.88	7.22	48.84	4.74	51.16	33.36								1.60	1.52
1.60	15.74	10.72	64.58	6.20	35.42	43.42								1.45	1.50
1.70	9.51	16.36	74.09	7.50	25.91	53.36								1.36	1.49
1.80	5.71	23.11	79.80	8.62	20.20	61.91								1.37	1.48
2.00	5.92	36.45	85.72	10.54	14.28	72.46								1.37	1.47
2.60	14.28	72.46	100.00	19.38										1.84	1.52

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			2.18 ASH % -		24.24	
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	24.24	100.00	24.24										1.78	1.78

KPNLRDDH85006

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 22 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 16/05/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 10.20
 EQUILIBRIUM MOISTURE % ---
 RESIDUAL MOISTURE % 1.15
 ASH % 40.46
 VOLATILE MATTER % 7.56
 FIXED CARBON % 50.83

 TOTAL SULPHUR % 0.32
 PHOSPHOROUS % ---
 CHLORINE (PPM) 00432
 SPECIFIC GRAVITY 1.68
 FSI ---
 HGI 64.0
 CO2 % 2.12

 GROSS CALORIFIC VALUE (MJ/KG) 19.16
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 22 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 21/05/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 15.75 --- --- --- --- --- ---
 25.00 12.00 12.51 --- --- --- --- --- ---
 12.00 6.00 11.22 --- --- --- --- --- ---
 6.00 1.00 34.93 --- --- --- --- --- ---
 1.00 0.50 9.71 --- --- --- --- --- ---
 0.50 0.15 9.73 --- --- --- --- --- ---
 0.15 0.00 6.15 --- --- --- --- --- ---
 --- --- --- --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 22
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 21/05/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.15
 CARBON % 53.08
 HYDROGEN % 1.80
 SULPHUR % 0.32
 NITROGEN % 0.57
 ASH % 40.46
 OXYGEN % 2.62

GRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85006
 =====

SAMPLE ID 22
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 21/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1245.0
 SOFTENING TEMP.(C) 1360.0
 HEMISPHERICAL TEMP.(C) 1415.0
 FLUID TEMP.(C) 1448.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1213.0
 SOFTENING TEMP.(C) 1333.0
 HEMISPHERICAL TEMP.(C) 1366.0
 FLUID TEMP.(C) 1448.0

GRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85006
 =====

SAMPLE ID 22
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 21/05/85

SILICON DIOXIDE %	(SI02)	60.30
ALUMINIUM OXIDE %	(AL2O3)	22.50
FERRIC OXIDE %	(FE2O3)	3.80
TITANIUM DIOXIDE %	(TI02)	1.49
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.15
CALCIUM OXIDE %	(CAO)	2.78
MAGNESIUM OXIDE %	(MGO)	2.37
SULPHUR TRIOXIDE %	(SO3)	2.52
SODIUM OXIDE %	(NA2O)	2.00
POTASSIUM OXIDE %	(K2O)	0.91

GRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85006
 =====

SAMPLE ID 22
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 21/05/85

PYRITE	%	9.40
SULPHATE	%	0.00
ORGANIC	%	90.60

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlRDDH85006 SEAM - H

SAMPLE ID - 22

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 39.47				ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	1.88	7.90	1.88	7.90	98.12	53.87							0.80	0.80
1.45	3.59	12.39	5.47	10.85	94.53	55.45							0.80	0.80
1.50	5.52	12.88	10.99	11.87	89.01	58.09							0.84	0.82
1.60	8.91	19.02	19.90	15.07	80.10	62.43							0.74	0.78
1.70	7.82	30.25	27.72	19.35	72.28	65.91							0.84	0.80
1.80	7.09	39.07	34.81	23.37	65.19	68.83							0.88	0.82
2.00	5.05	46.72	39.86	26.33	60.14	70.69							0.91	0.83
2.60	60.14	70.69	100.00	53.01									1.83	1.43

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 44.65				ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	3.29	6.79	3.29	6.79	96.71	32.51							0.62	0.62
1.45	20.90	7.11	24.19	7.07	75.81	39.51							0.64	0.64
1.50	13.60	8.35	37.79	7.53	62.21	46.32							0.70	0.66
1.60	13.62	15.50	51.41	9.64	48.59	54.96							0.81	0.70
1.70	5.23	20.77	56.64	10.67	43.36	59.08							1.22	0.75
1.80	7.38	26.53	64.02	12.50	35.98	65.76							1.55	0.84
2.00	7.59	38.42	71.61	15.24	28.39	73.07							1.49	0.91
2.60	28.39	73.07	100.00	31.66									1.49	1.07


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GORI COAL DIVISION  HEAD      PROJ  KPN    BLK  LR    DS  DDH85006
=====
SAMPLE ID           24        DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID    HD1        DATE ANALYSED 03/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           3.74
TOTAL MOISTURE %             3.74
EQUILIBRIUM MOISTURE %      3.74
RESIDUAL MOISTURE %         2.18
ASH %                        67.74
VOLATILE MATTER %           6.34
FIXED CARBON %              23.74

TOTAL SULPHUR %              0.22
PHOSPHOROUS %               0.00
CHLORINE (PPM)              00152
SPECIFIC GRAVITY            1.96
FSI                          0.00
HGI                          59.0
CO2 %                        1.51

GROSS CALORIFIC VALUE (MJ/KG)  8.11
NET CALORIFIC VALUE (MJ/KG)  7.11

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GORI COAL DIVISION  SIZE      PROJ  KPN    BLK  LR    DS  DDH85006
=====
SAMPLE ID           24        DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID    SZ1        DATE ANALYSED 25/06/85
FRACTION SIZE      WTX%    ASH%    FSI    CAL    RM    VM    TS
FROM (MM) TO (MM) (MJ/KG)
50.00 25.00 62.55  0.00  0.00  0.00  0.00  0.00
25.00 12.00 19.08  0.00  0.00  0.00  0.00  0.00
12.00 6.00  7.10  0.00  0.00  0.00  0.00  0.00
6.00  1.00  8.27  0.00  0.00  0.00  0.00  0.00
1.00  0.50  1.32  0.00  0.00  0.00  0.00  0.00
0.50  0.15  1.09  0.00  0.00  0.00  0.00  0.00
0.15  0.00  0.59  0.00  0.00  0.00  0.00  0.00
-----

```

```

GORI COAL DIVISION  ULTIMATE  PROJ  KPN    BLK  LR    DS  DDH85006
=====
SAMPLE ID           24        DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID   SP1        DATE ANALYSED 03/06/85
SPLIT SAMPLE ID     UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %                2.18
CARBON %               25.61
HYDROGEN %             1.60
SULPHUR %              0.22
NITROGEN %             0.57
ASH %                  67.74
OXYGEN %               2.08

```

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85006

SAMPLE ID 24
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1378.0
SOFTENING TEMP.(C) 1448.0
HEMISPHERICAL TEMP.(C) 1448.0
FLUID TEMP.(C) 1448.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1308.0
SOFTENING TEMP.(C) 1390.0
HEMISPHERICAL TEMP.(C) 1425.0
FLUID TEMP.(C) 1448.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85006

SAMPLE ID 24
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	59.08
ALUMINIUM OXIDE %	(AL2O3)	23.10
FERRIC OXIDE %	(FE2O3)	5.39
TITANIUM DIOXIDE %	(TI02)	1.40
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.08
CALCIUM OXIDE %	(CAO)	0.69
MAGNESIUM OXIDE %	(MGO)	2.19
SULPHUR TRIOXIDE %	(SO3)	2.44
SODIUM OXIDE %	(NA2O)	2.00
POTASSIUM OXIDE %	(K2O)	1.99

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85006

SAMPLE ID 24
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	22.73
SULPHATE	%	0.00
ORGANIC	%	77.27

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 23 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 03/06/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 3.27 TOTAL SULPHUR % 0.36
 EQUILIBRIUM MOISTURE % --- PHOSPHOROUS % ---
 RESIDUAL MOISTURE % 1.72 CHLORINE (PPM) 60312
 ASH % 56.33 SPECIFIC GRAVITY 1.24
 VOLATILE MATTER % 5.92 FSI ---
 FIXED CARBON % 36.03 HGI 50.0
 CO2 % 1.72

 GROSS CALORIFIC VALUE (MJ/KG) 12.05
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 23 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 25/06/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 63.68 --- --- --- --- --- ---
 25.00 12.00 12.74 --- --- --- --- --- ---
 12.00 6.00 6.18 --- --- --- --- --- ---
 6.00 1.00 11.49 --- --- --- --- --- ---
 1.00 0.50 2.48 --- --- --- --- --- ---
 0.50 0.15 2.19 --- --- --- --- --- ---
 0.15 0.00 1.24 --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 23
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 03/06/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.72
 CARBON % 34.93
 HYDROGEN % 1.60
 SULPHUR % 0.36
 NITROGEN % 0.58
 ASH % 56.33
 OXYGEN % 4.48

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85006

SAMPLE ID 23
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1333.0
 SOFTENING TEMP.(C) 1379.0
 HEMISPHERICAL TEMP.(C) 1398.0
 FLUID TEMP.(C) 1442.0

INITIAL TEMP.(C) 1265.0
 SOFTENING TEMP.(C) 1322.0
 HEMISPHERICAL TEMP.(C) 1341.0
 FLUID TEMP.(C) 1431.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85006

SAMPLE ID 23
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SiO2)	65.10
ALUMINIUM OXIDE %	(AL2O3)	18.63
FERRIC OXIDE %	(FE2O3)	5.95
TITANIUM DIOXIDE %	(TiO2)	1.02
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.24
CALCIUM OXIDE %	(CAO)	1.17
MAGNESIUM OXIDE %	(MGO)	2.31
SULPHUR TRIOXIDE %	(SO3)	1.32
SODIUM OXIDE %	(NA2O)	1.19
POTASSIUM OXIDE %	(K2O)	2.45

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85006

SAMPLE ID 23
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	36.11
SULPHATE	%	0.00
ORGANIC	%	63.89

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlRDDH85006 SEAM - G

SAMPLE ID - 23

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)		50.00 X 6.00		CUM.	SINKS	RELATIVE WEIGHT % - 82.59				ASH % -		CUM.	CUM.	
	SG-TME	ELEMENTAL	WT%	ASH%			CUM. FLOATS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.			S
1.45	1.44	7.71	1.44	7.71	98.56	62.31								1.14	1.14
1.50	2.57	9.76	4.01	9.02	95.99	63.71								1.18	1.17
1.60	10.02	16.14	14.03	14.11	85.97	69.26								1.02	1.06
1.70	5.30	28.33	19.33	18.01	80.67	71.95								1.28	1.12
1.80	12.23	40.86	31.56	26.86	68.44	77.50								1.42	1.24
2.00	9.70	51.18	41.26	32.58	58.74	81.85								1.12	1.21
2.60	58.74	81.85	100.00	61.52										1.31	1.27

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)		6.00 X 0.50		CUM.	SINKS	RELATIVE WEIGHT % - 13.98				ASH % -		CUM.	CUM.	
	SG-TME	ELEMENTAL	WT%	ASH%			CUM. FLOATS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.			S
1.40	0.74	1.19	0.74	1.19	99.26	24.66								1.27	1.27
1.45	36.38	3.67	37.12	3.62	62.88	36.80								1.34	1.34
1.50	16.51	8.09	53.63	5.00	46.37	47.03								1.20	1.30
1.60	12.12	15.44	65.75	6.92	34.25	58.21								1.22	1.28
1.70	7.11	24.62	72.86	8.65	27.14	67.01								1.38	1.29
1.80	3.31	32.21	76.17	9.67	23.83	71.84								1.70	1.31
2.00	4.62	42.02	80.79	11.52	19.21	79.01								1.70	1.33
2.60	19.21	79.01	100.00	24.49										1.53	1.37

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNI RDDH85006 SEAM - G

SAMPLE ID - 23

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % -				2.19 ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.72	2.98	1.72	2.98	98.28	27.00							1.05	1.05
1.45	35.79	3.61	37.51	3.58	62.49	40.40							1.24	1.23
1.50	11.29	6.11	48.80	4.17	51.20	47.96							1.64	1.33
1.60	10.88	11.97	59.68	5.59	40.32	57.67							1.55	1.37
1.70	6.25	19.88	65.93	6.94	34.07	64.61							1.14	1.35
1.80	3.94	27.24	69.87	8.09	30.13	69.49							1.61	1.36
2.00	5.55	36.77	75.42	10.20	24.58	76.88							1.93	1.40
2.60	24.58	76.88	100.00	26.59									1.55	1.44

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % -				1.24 ASH % -		34.26				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	34.26	100.00	34.26									2.03	2.03

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPMLRDDH85006 SEAM - G

SAMPLE ID - 23

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT											
FRACTION SIZE(MM)		50.00 X 6.35		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 85.29		ASH % - 64.85	
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V. CUM.	CUM. S	CUM. S
								FSI (MJ/KG)	C.V.		
1.30	0.23	3.25	0.23	3.25	99.77	64.99					
1.35	0.20	8.16	0.43	5.53	99.57	65.10					
1.40	0.22	9.17	0.65	6.76	99.35	65.23					
1.45	0.22	9.38	0.87	7.43	99.13	65.35					
1.50	1.63	9.99	2.50	9.10	97.50	66.28					
1.55	3.59	14.96	6.09	12.55	93.91	68.24					
1.60	3.92	20.58	10.01	15.70	89.99	70.31					
1.65	2.68	25.29	12.69	17.72	87.31	71.70					
1.70	2.67	31.63	15.36	20.14	84.64	72.96					
1.80	8.10	40.65	23.46	27.22	76.54	76.38					
1.90	5.83	46.17	29.29	30.99	70.71	78.87					
2.60	70.71	78.87	100.00	64.85							

ANALYSIS TYPE - FLOAT											
FRACTION SIZE(MM)		6.35 X 0.50		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 12.05		ASH % - 35.71	
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V. CUM.	CUM. S	CUM. S
								FSI (MJ/KG)	C.V.		
1.30	0.35	0.28	0.35	0.28	99.65	35.84					
1.35	0.24	1.22	0.59	0.66	99.41	35.92					
1.40	0.22	3.14	0.81	1.34	99.19	35.99					
1.45	26.50	4.07	27.31	3.99	72.69	47.63					
1.50	12.17	8.34	39.48	5.33	60.52	55.53					
1.55	5.92	14.03	45.40	6.46	54.60	60.03					
1.60	4.67	18.99	50.07	7.63	49.93	63.87					
1.65	3.49	24.09	53.56	8.71	46.44	66.86					
1.70	2.92	27.95	56.48	9.70	43.52	69.47					
1.80	3.89	31.88	60.37	11.13	39.63	73.16					
1.90	3.44	38.17	63.81	12.59	36.19	76.49					
2.60	36.19	76.49	100.00	35.71							

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85006 SEAM - G

SAMPLE ID - 24

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 88.73 ASH % -								
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.						
1.45	0.19	5.01	0.19	5.01	99.81	68.95							1.05	1.05
1.50	0.51	11.34	0.70	9.62	99.30	69.25							1.04	1.04
1.60	4.51	22.51	5.21	20.78	94.79	71.47							1.30	1.27
1.70	5.41	28.57	10.62	24.75	89.38	74.07							1.14	1.20
1.80	3.18	39.64	13.80	28.18	86.20	75.34							1.27	1.22
2.00	16.45	49.73	30.25	39.90	69.75	81.38							1.14	1.18
2.60	69.75	81.38	100.00	68.83									1.79	1.60

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 9.58 ASH % -								
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.						
1.40	0.95	1.53	0.95	1.53	99.05	57.16							1.06	1.06
1.45	8.08	7.27	9.03	6.67	90.97	61.59							1.02	1.02
1.50	4.08	10.07	13.11	7.73	86.89	64.01							1.01	1.02
1.60	7.72	18.43	20.83	11.69	79.17	68.45							0.98	1.01
1.70	5.12	29.08	25.95	15.12	74.05	71.18							1.27	1.06
1.80	4.98	31.46	30.93	17.75	69.07	74.04							1.53	1.13
2.00	12.35	43.22	43.28	25.02	56.72	80.75							1.08	1.12
2.60	56.72	80.75	100.00	56.63									1.45	1.31

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85006 SEAM - G

SAMPLE ID - 24

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	0.50 X 0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				1.09 ASH % -		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.81	2.42	0.81	2.42	99.19	59.54								0.94	0.94
1.45	7.73	3.15	8.54	3.08	91.46	64.30								0.87	0.88
1.50	4.49	6.29	13.03	4.19	86.97	67.30								0.88	0.88
1.60	6.38	13.15	19.41	7.13	80.59	71.58								1.03	0.93
1.70	4.22	23.13	23.63	9.99	76.37	74.26								1.19	0.97
1.80	3.59	29.69	27.22	12.59	72.78	76.46								1.37	1.03
2.00	7.37	40.15	34.59	18.46	65.41	80.55								1.58	1.14
2.60	65.41	80.55	100.00	59.07										1.16	1.15

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	0.15 X 0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				0.60 ASH % - 68.61		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	68.61	100.00	68.61										2.20	2.20

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 25 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 22/04/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) -----
 SURFACE MOISTURE % ----- TOTAL SULPHUR % 0.67
 TOTAL MOISTURE % 3.40 PHOSPHOROUS % -----
 EQUILIBRIUM MOISTURE % ----- CHLORINE (PPM) 00015
 RESIDUAL MOISTURE % 1.22 FSI -----
 ASH % 35.67 HGI 78.0
 VOLATILE MATTER % 7.37 CO2 % 2.30
 FIXED CARBON % 55.74

 GROSS CALORIFIC VALUE (MJ/KG) 20.78
 NET CALORIFIC VALUE (MJ/KG) -----

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 25 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 15/04/85
 FRACTION SIZE WTX ASH% FSI CAL RM VM TE
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 38.49 -----
 25.00 12.00 15.17 -----
 12.00 6.00 8.26 -----
 6.00 1.00 23.53 -----
 1.00 0.50 5.77 -----
 0.50 0.15 5.22 -----
 0.15 0.00 3.56 -----

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 25
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 24/04/84

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.22
 CARBON % 55.79
 HYDROGEN % 1.56
 SULPHUR % 0.67
 NITROGEN % 0.67
 ASH % 35.67
 OXYGEN % 4.42

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85006
=====

SAMPLE ID 25
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 25/04/85

OXIDIZING ATMOSPHERE

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1317.2
SOFTENING TEMP.(C) 1345.0
HEMISPHERICAL TEMP.(C) 1372.8
FLUID TEMP.(C) 1422.8

INITIAL TEMP.(C) 1212.2
SOFTENING TEMP.(C) 1234.4
HEMISPHERICAL TEMP.(C) 1300.6
FLUID TEMP.(C) 1389.4

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85006
=====

SAMPLE ID 25
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 29/04/85

SILICON DIOXIDE %	(SI02)	52.40
ALUMINIUM OXIDE %	(AL2O3)	21.29
FERRIC OXIDE %	(FE2O3)	9.67
TITANIUM DIOXIDE %	(TI02)	0.91
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.68
CALCIUM OXIDE %	(CAO)	2.97
MAGNESIUM OXIDE %	(MGO)	4.49
SULPHUR TRIOXIDE %	(SO3)	1.61
SODIUM OXIDE %	(NA2O)	1.64
POTASSIUM OXIDE %	(K2O)	1.96

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85006 SEAM - F

SAMPLE ID - 25

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 61.92				ASH % -				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM. C.V.		CUM.	S	CUM.	CUM.	CUM.		
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.05	2.12	0.05	2.12	99.95	40.76							0.62	0.62
1.45	2.26	5.07	2.31	5.01	97.69	41.59							0.68	0.68
1.50	6.29	9.76	8.60	8.48	91.40	43.78							0.81	0.77
1.60	17.33	15.49	25.93	13.17	74.07	50.40							0.74	0.75
1.70	11.31	28.18	37.24	17.73	62.76	54.40							1.00	0.83
1.80	16.87	35.11	54.11	23.15	45.89	61.49							1.14	0.92
2.00	14.18	50.29	68.29	28.78	31.71	66.50							1.35	1.01
2.60	31.71	66.50	100.00	40.74									1.42	1.14

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 29.29				ASH % -				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM. C.V.		CUM.	S	CUM.	CUM.	CUM.		
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.27	0.89	0.27	0.89	99.73	21.49							0.78	0.78
1.45	27.54	3.90	27.81	3.87	72.19	28.20							0.69	0.69
1.50	11.20	7.87	39.01	5.02	60.99	31.93							0.74	0.70
1.60	21.60	13.09	60.61	7.90	39.39	42.27							0.84	0.75
1.70	11.23	22.50	71.84	10.18	28.16	50.15							1.09	0.81
1.80	9.08	31.63	80.92	12.59	19.08	58.96							2.30	0.97
2.00	6.89	42.83	87.81	14.96	12.19	68.08							2.24	1.07
2.60	12.19	68.08	100.00	21.43									1.75	1.16

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85006 SEAM - F

SAMPLE ID - 25

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SG-TME	SIZE(MM) ELEMENTAL		0.50 X CUM. FLOATS		0.15 CUM. SINKS		RELATIVE WEIGHT % -				5.22 ASH % -		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	16.43	3.41	16.43	3.41	83.57	27.14								1.05	1.05
1.45	14.46	3.81	30.89	3.60	69.11	32.02								1.08	1.06
1.50	8.66	5.46	39.55	4.01	60.45	35.83								1.11	1.07
1.60	17.65	11.16	57.20	6.21	42.80	46.00								1.45	1.19
1.70	11.08	18.85	68.28	8.26	31.72	55.49								2.41	1.39
1.80	6.29	25.75	74.57	9.74	25.43	62.84								3.27	1.55
2.00	8.22	42.37	82.79	12.98	17.21	72.62								2.96	1.69
2.60	17.21	72.62	100.00	23.24										1.52	1.66

----- ANALYSIS TYPE - FROTH -----

FRACTION SG-TME	SIZE(MM) ELEMENTAL		0.15 X CUM. FLOATS		0.00 CUM. SINKS		RELATIVE WEIGHT % -				3.57 ASH % -		19.70 CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	19.70	100.00	19.70										0.93	0.93

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 26 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 22/04/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) ----
 SURFACE MOISTURE % 5.45 TOTAL SULPHUR % 0.52
 TOTAL MOISTURE % 5.45 PHOSPHOROUS % 0.0010
 EQUILIBRIUM MOISTURE % ---- CHLORINE (PPM) 1.53
 RESIDUAL MOISTURE % 1.15 SPECIFIC GRAVITY 1.53
 ASH % 15.72 FSI ----
 VOLATILE MATTER % 6.39 HGI 50.0
 FIXED CARBON % 76.74 CO2 % 1.51

 GROSS CALORIFIC VALUE (MJ/KG) 28.80
 NET CALORIFIC VALUE (MJ/KG) ----

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 26 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 15/04/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 24.58 ----
 25.00 12.00 11.19 ----
 12.00 6.00 9.12 ----
 6.00 1.00 31.20 ----
 1.00 0.50 9.05 ----
 0.50 0.15 9.37 ----
 0.15 0.00 5.49 ----

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85006
 =====
 SAMPLE ID 26
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 24/04/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.15
 CARBON % 77.07
 HYDROGEN % 2.56
 SULPHUR % 0.52
 NITROGEN % 0.77
 ASH % 15.72
 OXYGEN % 2.21

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85006 SEAM - E

SAMPLE ID - 26

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -					9.37 ASH % -					
	SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. WT%	SINKS	ASH%	CUM. FSI	C.V. (MJ/KG)	CUM. S	CUM. S	VOL. VOL.	CUM. MOIST	CUM. MOIST
1.45	15.94	2.21	15.94	2.21	84.06	17.74									1.01	1.01	
1.50	33.52	5.74	49.46	4.60	50.54	25.71									0.97	0.98	
1.60	19.72	12.24	69.18	6.78	30.82	34.32									1.37	1.09	
1.70	12.09	17.99	81.27	8.45	18.73	44.87									2.09	1.24	
1.80	6.71	24.88	87.98	9.70	12.02	56.02									1.87	1.29	
2.00	2.78	40.01	90.76	10.63	9.24	60.84									1.59	1.30	
2.60	9.24	60.84	100.00	15.27											1.17	1.29	

----- ANALYSIS TYPE - FROTH -----

FRACTION	SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -					5.50 ASH % -		20.32			
	SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. WT%	SINKS	ASH%	CUM. FSI	C.V. (MJ/KG)	CUM. S	CUM. S	VOL. VOL.	CUM. MOIST	CUM. MOIST
240.00	*****	20.32	100.00	20.32											0.85	0.85	

KPNLRDDH85007

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85007

SAMPLE ID 27
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORD,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 25/04/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1320.0
SOFTENING TEMP.(C) 1322.8
HEMISPHERICAL TEMP.(C) 1353.3
FLUID TEMP.(C) 1389.4

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1231.7
SOFTENING TEMP.(C) 1248.3
HEMISPHERICAL TEMP.(C) 1259.4
FLUID TEMP.(C) 1356.1

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85007

SAMPLE ID 27
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORD,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 29/04/85

SILICON DIOXIDE %	(SiO2)	42.86
ALUMINIUM OXIDE %	(AL2O3)	20.66
FERRIC OXIDE %	(FE2O3)	11.78
TITANIUM DIOXIDE %	(TiO2)	0.91
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.16
CALCIUM OXIDE %	(CAO)	7.75
MAGNESIUM OXIDE %	(MGO)	5.80
SULPHUR TRIOXIDE %	(SO3)	4.02
SODIUM OXIDE %	(NA2O)	1.72
POTASSIUM OXIDE %	(K2O)	1.00

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85007 SEAM - I

SAMPLE ID - 27

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 58.70 ASH % -							
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST
1.38	0.01	0.50	0.01	0.50	99.99	16.96							
1.40	9.27	2.78	9.28	2.78	90.72	18.41						0.46	0.46
1.45	39.84	5.00	49.12	4.58	50.88	28.92						0.50	0.49
1.50	21.89	9.46	71.01	6.08	28.99	43.61						0.61	0.53
1.60	7.40	19.38	78.41	7.34	21.59	51.91						0.83	0.56
1.70	4.66	27.48	83.07	8.47	16.93	58.63						0.60	0.56
1.80	2.58	38.06	85.65	9.36	14.35	62.33						0.84	0.57
2.00	1.68	50.00	87.33	10.14	12.67	63.97						1.13	0.58
2.60	12.68	63.93	100.01	16.96								0.88	0.62

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 32.43 ASH % -							
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST
1.38	0.01	0.50	0.01	0.50	99.99	18.13							
1.40	5.27	2.07	5.28	2.07	94.72	19.03						0.45	0.45
1.45	51.39	4.29	56.67	4.08	43.33	36.51						0.57	0.56
1.50	13.17	9.22	69.84	5.05	30.16	48.42						0.81	0.61
1.60	7.66	16.37	77.50	6.17	22.50	59.34						1.20	0.66
1.70	3.64	25.00	81.14	7.02	18.86	65.96						1.17	0.69
1.80	1.94	30.42	83.08	7.56	16.92	70.04						2.06	0.72
2.00	1.91	43.80	84.99	8.38	15.01	73.38						1.87	0.75
2.60	15.02	73.34	100.01	18.13								1.57	0.87

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85007 SEAM - I

SAMPLE ID - 27

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X 0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			5.28 ASH % -			
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V. (MJ/KG)	CUM. S	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST
1.38	0.01	0.50	0.01	0.50	99.99	26.51								
1.40	23.58	4.45	23.59	4.45	76.41	33.32							1.20	1.20
1.45	8.23	5.79	31.82	4.80	68.18	36.64							1.59	1.30
1.50	17.63	7.54	49.45	5.77	50.55	46.79							1.57	1.40
1.60	7.83	12.80	57.28	6.73	42.72	53.02							2.66	1.57
1.70	11.29	17.58	68.57	8.52	31.43	65.75							3.72	1.92
1.80	4.18	27.01	72.75	9.58	27.25	71.69							3.46	2.01
2.00	3.92	38.43	76.67	11.06	23.33	77.28							2.33	2.03
2.60	23.34	77.26	100.01	26.51									1.93	2.01

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X 0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			3.59 ASH % - 30.85			
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V. (MJ/KG)	CUM. S	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST
240.00	*****	30.85	100.00	30.85									1.05	1.05

KPNLRDDH85008

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85008
 =====

SAMPLE ID 28
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 25/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1171.0
 SOFTENING TEMP.(C) 1256.0
 HEMISPHERICAL TEMP.(C) 1284.0
 FLUID TEMP.(C) 1338.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1125.0
 SOFTENING TEMP.(C) 1215.0
 HEMISPHERICAL TEMP.(C) 1224.0
 FLUID TEMP.(C) 1278.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85008
 =====

SAMPLE ID 28
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 25/05/85

SILICON DIOXIDE %	(SI02)	53.48
ALUMINIUM OXIDE %	(AL2O3)	9.45
FERRIC OXIDE %	(FE2O3)	8.38
TITANIUM DIOXIDE %	(TI02)	0.71
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.09
CALCIUM OXIDE %	(CAO)	12.95
MAGNESIUM OXIDE %	(MGO)	5.72
SULPHUR TRIOXIDE %	(SO3)	4.60
SODIUM OXIDE %	(NA2O)	1.56
POTASSIUM OXIDE %	(K2O)	0.75

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85008
 =====

SAMPLE ID 28
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 25/05/85

PYRITE	%	55.80
SULPHATE	%	1.10
ORGANIC	%	43.10

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85008 SEAM - G LOWER

SAMPLE ID - 28

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----															
FRACTION SIZE(MM) 50.00 X 6.00				RELATIVE WEIGHT % - 38.45 ASH % -											
ELEMENTAL				CUM. FLOATS		CUM. SINKS		CUM. C.V.		CUM.		CUM.		CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.60	9.27	28.42	9.27	28.42	90.73	42.84								1.07	1.07
1.70	19.00	30.81	28.27	30.03	71.73	46.02								0.87	0.94
1.80	12.06	38.29	40.33	32.50	59.67	47.59								0.83	0.90
2.00	43.67	44.99	84.00	38.99	16.00	54.68								0.78	0.84
2.60	16.00	54.68	100.00	41.50										0.65	0.81

----- ANALYSIS TYPE - FLOAT -----															
FRACTION SIZE(MM) 6.00 X 0.50				RELATIVE WEIGHT % - 38.95 ASH % -											
ELEMENTAL				CUM. FLOATS		CUM. SINKS		CUM. C.V.		CUM.		CUM.		CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	7.61	3.67	7.61	3.67	92.39	29.10								1.16	1.16
1.45	19.59	3.86	27.20	3.81	72.80	35.89								0.88	0.96
1.50	7.54	7.83	34.74	4.68	65.26	39.13								0.85	0.93
1.60	9.96	15.34	44.70	7.06	55.30	43.42								0.82	0.91
1.70	11.57	24.97	56.27	10.74	43.73	48.30								0.85	0.90
1.80	11.85	34.30	68.12	14.84	31.88	53.50								0.86	0.89
2.00	14.38	44.32	82.50	19.98	17.50	61.04								0.82	0.88
2.60	17.50	61.04	100.00	27.16										0.68	0.84

<u>GCRI COAL DIVISION</u>		<u>HEAD</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85008</u>
SAMPLE ID		29	DATA TYPE (REAL,BORO,AVER,CALC)				REAL	
SPLIT SAMPLE ID		HD1	DATE ANALYSED 22/04/85					
			ANALYSIS BASIS TYPE (AD,DB,AR,EM)				AD	
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)			ASTM					
TOP SIZE (MM)			50.00					
SURFACE MOISTURE %			---				TOTAL SULPHUR %	3.00
TOTAL MOISTURE %			3.98				PHOSPHOROUS %	---
EQUILIBRIUM MOISTURE %			---				CHLORINE (PPM)	00240
RESIDUAL MOISTURE %			1.67				SPECIFIC GRAVITY	1.75
ASH %			39.46				FSI	---
VOLATILE MATTER %			8.36				HGI	63.0
FIXED CARBON %			50.51				CO2 %	3.52
GROSS CALORIFIC VALUE (MJ/KG)			18.92					
NET CALORIFIC VALUE (MJ/KG)			---					

<u>GCRI COAL DIVISION</u>		<u>SIZE</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85008</u>
SAMPLE ID		29	DATA TYPE (REAL,BORO,AVER,CALC)				CALC	
LIT SAMPLE ID		SZ1	DATE ANALYSED 15/04/85					
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS	
FROM (MM) TO (MM)				(MJ/KG)				
50.00	25.00	49.38	---	---	---	---	---	
25.00	12.00	13.73	---	---	---	---	---	
12.00	6.00	6.64	---	---	---	---	---	
6.00	1.00	17.92	---	---	---	---	---	
1.00	0.50	4.84	---	---	---	---	---	
0.50	0.15	4.63	---	---	---	---	---	
0.15	0.00	2.86	---	---	---	---	---	
---	---	---	---	---	---	---	---	

<u>GCRI COAL DIVISION</u>		<u>ULTIMATE</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85008</u>
SAMPLE ID		29	DATA TYPE (REAL,BORO,AVER,CALC)				REAL	
SAMPLE PRODUCT ID		SP1	DATE ANALYSED 24/04/85					
SPLIT SAMPLE ID		UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)				DB	
WATER	%	---						
CARBON	%	52.61						
HYDROGEN	%	1.65						
SULPHUR	%	3.05						
NITROGEN	%	0.52						
ASH	%	40.13						
OXYGEN	%	2.04						

GRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85008
 =====

SAMPLE ID 29
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 25/04/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1328.3
 SOFTENING TEMP.(C) 1356.1
 HEMISPHERICAL TEMP.(C) 1381.1
 FLUID TEMP.(C) 1433.9

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1234.4
 SOFTENING TEMP.(C) 1289.4
 HEMISPHERICAL TEMP.(C) 1300.6
 FLUID TEMP.(C) 1411.7

GRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85008
 =====

SAMPLE ID 29
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 29/04/85

SILICON DIOXIDE %	(SI02)	49.58
ALUMINIUM OXIDE %	(AL2O3)	16.25
FERRIC OXIDE %	(FE2O3)	13.21
TITANIUM DIOXIDE %	(TI02)	0.63
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.64
CALCIUM OXIDE %	(CAO)	7.03
MAGNESIUM OXIDE %	(MGO)	4.40
SULPHUR TRIOXIDE %	(S03)	4.79
SODIUM OXIDE %	(NA2O)	1.11
POTASSIUM OXIDE %	(K2O)	1.21

GRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85008
 =====

SAMPLE ID 29
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 24/04/85

PYRITE	%	84.33
SULPHATE	%	0.33
ORGANIC	%	15.34

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85008 SEAM - F

SAMPLE ID - 29

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM) 50.00 X 6.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 69.76			ASH % -		CUM.		
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.04	2.63	0.04	2.63	99.96	43.75									0.41	0.41
1.45	0.40	4.85	0.44	4.65	99.56	43.90									0.41	0.41
1.50	0.26	8.68	0.70	6.15	99.30	44.00									0.63	0.49
1.60	4.50	20.80	5.20	18.83	94.80	45.10									0.76	0.72
1.70	14.77	31.99	19.97	28.56	80.03	47.52									0.49	0.55
1.80	31.10	40.05	51.07	35.56	48.93	52.26									1.02	0.84
2.00	24.08	43.48	75.15	38.10	24.85	60.77									1.20	0.95
2.60	24.85	60.77	100.00	43.73											0.93	0.95

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM) 6.00 X 0.50		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 22.77			ASH % -		CUM.		
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	3.34	1.70	3.34	1.70	96.66	33.30									0.47	0.47
1.45	12.77	3.70	16.11	3.29	83.89	37.80									0.59	0.57
1.50	7.10	8.43	23.21	4.86	76.79	40.52									0.57	0.57
1.60	17.32	17.01	40.53	10.05	59.47	47.37									0.73	0.64
1.70	12.28	24.80	52.81	13.48	47.19	53.24									0.87	0.69
1.80	5.52	34.01	58.33	15.42	41.67	55.79									1.29	0.75
2.00	15.98	43.42	74.31	21.44	25.69	63.48									1.22	0.85
2.60	25.69	63.48	100.00	32.24											1.26	0.95

KPNLRDDH85009

```

GORI COAL DIVISION  HEAD  PROJ  KPN  BLK  LR  DS  DDH85009
=====
SAMPLE ID          30      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   HD1     DATE ANALYSED 25/05/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)          50.00
SURFACE MOISTURE %     ---.---
TOTAL MOISTURE %       3.31
EQUILIBRIUM MOISTURE % ---.---

RESIDUAL MOISTURE %    1.70
ASH %                  31.53
VOLATILE MATTER %      7.65
FIXED CARBON %         59.12

TOTAL SULPHUR %       0.45
PHOSPHOROUS %        ---.---
CHLORINE (PPM)        00150
SPECIFIC GRAVITY      1.60
FSI                    ---.---
HGI                    51.0
CO2 %                  2.80

GROSS CALORIFIC VALUE (MJ/KG)  22.57
NET CALORIFIC VALUE (MJ/KG)  ---.---

```

```

GORI COAL DIVISION  SIZE  PROJ  KPN  BLK  LR  DS  DDH85009
=====
SAMPLE ID          30      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID   SZ1     DATE ANALYSED 05/06/85
FRACTION SIZE     WT%   ASH%   FSI   CAL   RM   VM   TS
FROM (MM) TO (MM) (MJ/KG)
50.00 25.00 48.28 ---.--- ---.--- ---.--- ---.--- ---.---
25.00 12.00 17.72 ---.--- ---.--- ---.--- ---.--- ---.---
12.00 6.00 9.08 ---.--- ---.--- ---.--- ---.--- ---.---
6.00 1.00 17.66 ---.--- ---.--- ---.--- ---.--- ---.---
1.00 0.50 3.13 ---.--- ---.--- ---.--- ---.--- ---.---
0.50 0.15 2.61 ---.--- ---.--- ---.--- ---.--- ---.---
0.15 0.00 1.52 ---.--- ---.--- ---.--- ---.--- ---.---

```

```

GORI COAL DIVISION  ULTIMATE  PROJ  KPN  BLK  LR  DS  DDH85009
=====
SAMPLE ID          30
SAMPLE PRODUCT ID  SP1      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   UL1     DATE ANALYSED 25/05/85

ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %          1.70
CARBON %         61.75
HYDROGEN %       2.15
SULPHUR %        0.45
NITROGEN %       0.77
ASH %            31.53
OXYGEN %         1.65

```

GCR1 COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85009
 =====

SAMPLE ID 30
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 25/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1281.0
 SOFTENING TEMP.(C) 1306.0
 HEMISPHERICAL TEMP.(C) 1338.0
 FLUID TEMP.(C) 1368.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1204.0
 SOFTENING TEMP.(C) 1215.0
 HEMISPHERICAL TEMP.(C) 1258.0
 FLUID TEMP.(C) 1355.0

GCR1 COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85009
 =====

SAMPLE ID 30
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 25/05/85

SILICON DIOXIDE %	(SI02)	50.86
ALUMINIUM OXIDE %	(AL2O3)	21.79
FERRIC OXIDE %	(FE2O3)	9.18
TITANIUM DIOXIDE %	(TI02)	1.39
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.08
CALCIUM OXIDE %	(CAO)	3.53
MAGNESIUM OXIDE %	(MGO)	4.34
SULPHUR TRIOXIDE %	(SO3)	1.98
SODIUM OXIDE %	(NA2O)	1.83
POTASSIUM OXIDE %	(K2O)	1.67

GCR1 COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85009
 =====

SAMPLE ID 30
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 25/05/85

PYRITE	%	11.10
SULPHATE	%	0.00
ORGANIC	%	88.90

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85009 SEAM - K

SAMPLE ID - 30

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 75.08 ASH % -								
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. FSI	CUM. C.V.	S	CUM. S	CUM. VOL.	CUM. VOL.	MOIST	CUM. MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%							
1.40	1.07	3.09	1.07	3.09	98.93	33.99					0.96	0.96
1.45	4.92	5.86	5.99	5.37	94.01	35.46					0.87	0.89
1.50	27.28	10.99	33.27	9.98	66.73	45.46					1.06	1.03
1.60	19.78	18.83	53.05	13.28	46.95	56.68					0.98	1.01
1.70	5.37	26.48	58.42	14.49	41.58	60.59					1.20	1.03
1.80	5.08	36.55	63.50	16.26	36.50	63.93					1.24	1.04
2.00	8.21	41.33	71.71	19.13	28.29	70.49					1.21	1.06
2.60	28.29	70.49	100.00	33.66							1.47	1.18

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 20.79 ASH % -								
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. FSI	CUM. C.V.	S	CUM. S	CUM. VOL.	CUM. VOL.	MOIST	CUM. MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%							
1.40	40.04	7.71	40.04	7.71	59.96	31.20					1.05	1.05
1.45	6.95	8.79	46.99	7.87	53.01	34.14					0.92	1.03
1.50	11.10	11.30	58.09	8.53	41.91	40.19					1.04	1.03
1.60	12.28	17.75	70.37	10.13	29.63	49.49					1.03	1.03
1.70	7.51	27.60	77.88	11.82	22.12	56.92					1.46	1.07
1.80	4.05	33.96	81.93	12.91	18.07	62.06					1.57	1.10
2.00	6.37	44.27	88.30	15.18	11.70	71.75					1.49	1.13
2.60	11.70	71.75	100.00	21.79							1.35	1.15

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRBDH85009 SEAM - K

SAMPLE ID - 30

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	0.50 X		0.15		CUM. SINKS		RELATIVE WEIGHT % -				2.61 ASH % -				
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	CUM.	CUM.	VOL.	VOL.	CUM.
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	14.58	4.77	14.58	4.77	85.42	26.85								1.27	1.27
1.45	5.51	4.96	20.09	4.82	79.91	28.36								1.63	1.37
1.50	22.71	5.20	42.80	5.02	57.20	37.55								1.17	1.26
1.60	10.56	6.87	53.36	5.39	46.64	44.50								1.45	1.30
1.70	12.65	13.51	66.01	6.94	33.99	56.03								1.22	1.28
1.80	7.50	19.08	73.51	8.18	26.49	66.49								1.56	1.31
2.00	6.53	39.38	80.04	10.73	19.96	75.36								1.52	1.33
2.60	19.96	75.36	100.00	23.63										1.38	1.34

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	0.15 X		0.00		CUM. SINKS		RELATIVE WEIGHT % -				1.52 ASH % -				
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	CUM.	CUM.	VOL.	VOL.	CUM.
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	31.76	100.00	31.76										1.19	1.19

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85009
 =====
 SAMPLE ID 31 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 25/05/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 4.85
 EQUILIBRIUM MOISTURE % ---

 RESIDUAL MOISTURE % 2.04
 ASH % 47.09
 VOLATILE MATTER % 6.95
 FIXED CARBON % 43.92

 GROSS CALORIFIC VALUE (MJ/KG) 16.52
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85009
 =====
 SAMPLE ID 31 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 05/06/85
 FRACTION SIZE WTX% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 65.23 --- --- --- --- --- ---
 25.00 12.00 12.27 --- --- --- --- --- ---
 12.00 6.00 5.76 --- --- --- --- --- ---
 6.00 1.00 11.50 --- --- --- --- --- ---
 1.00 0.50 2.35 --- --- --- --- --- ---
 0.50 0.15 1.97 --- --- --- --- --- ---
 0.15 0.00 0.92 --- --- --- --- --- ---
 --- --- --- --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85009
 =====
 SAMPLE ID 31
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 25/05/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 2.04
 CARBON % 44.07
 HYDROGEN % 1.64
 SULPHUR % 0.52
 NITROGEN % 0.68
 ASH % 47.09
 OXYGEN % 3.96

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85009
 =====

SAMPLE ID 31
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 25/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1322.0
 SOFTENING TEMP.(C) 1371.0
 HEMISPHERICAL TEMP.(C) 1420.0
 FLUID TEMP.(C) 1448.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1232.0
 SOFTENING TEMP.(C) 1256.0
 HEMISPHERICAL TEMP.(C) 1366.0
 FLUID TEMP.(C) 1448.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85009
 =====

SAMPLE ID 31
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 25/05/85

SILICON DIOXIDE %	(SI02)	58.78
ALUMINIUM OXIDE %	(AL2O3)	22.55
FERRIC OXIDE %	(FE2O3)	4.98
TITANIUM DIOXIDE %	(TI02)	1.28
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.22
CALCIUM OXIDE %	(CAO)	2.13
MAGNESIUM OXIDE %	(MGO)	2.36
SULPHUR TRIOXIDE %	(SO3)	1.47
SODIUM OXIDE %	(NA2O)	2.05
POTASSIUM OXIDE %	(K2O)	2.03

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85009
 =====

SAMPLE ID 31
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 25/05/85

PYRITE	%	28.90
SULPHATE	%	0.00
ORGANIC	%	71.10

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85009 SEAM - L

SAMPLE ID - 31

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----														
FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % -				1.97 ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	20.34	4.30	20.34	4.30	79.66	33.03							0.65	0.65
1.45	26.09	4.35	46.43	4.33	53.57	47.00							0.63	0.64
1.50	7.57	8.30	54.00	4.88	46.00	53.37							0.90	0.68
1.60	6.63	15.69	60.63	6.07	39.37	59.72							1.15	0.73
1.70	4.80	25.32	65.43	7.48	34.57	64.49							1.32	0.77
1.80	4.06	32.45	69.49	8.94	30.51	68.76							1.40	0.81
2.00	8.01	42.62	77.50	12.42	22.50	78.06							1.84	0.91
2.60	22.50	78.06	100.00	27.19									1.53	1.05

----- ANALYSIS TYPE - FROTH -----														
FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % -				0.93 ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	MOIST	MOIST		
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
240.00	*****	38.11	100.00	38.11									1.22	1.22

```

GCRI COAL DIVISION  HEAD  PROJ  KPN  BLK  LR  DS  DDH85009
=====
SAMPLE ID          32      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   HD1      DATE ANALYSED 16/05/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)          50.00
SURFACE MOISTURE %     ---
TOTAL MOISTURE %       5.30
EQUILIBRIUM MOISTURE % ---
RESIDUAL MOISTURE %    0.84
ASH %                  33.63
VOLATILE MATTER %      10.03
FIXED CARBON %         55.50

TOTAL SULPHUR %        0.78
PHOSPHOROUS %         ---
CHLORINE (PPM)        00400
SPECIFIC GRAVITY      1.62
FSI                    ---
HGI                    58.0
CO2 %                  4.36

GROSS CALORIFIC VALUE (MJ/KG)  21.82
NET CALORIFIC VALUE (MJ/KG)   ---

```

```

GCRI COAL DIVISION  SIZE  PROJ  KPN  BLK  LR  DS  DDH85009
=====
SAMPLE ID          32      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID   SZ1      DATE ANALYSED 05/06/85
FRACTION SIZE     WTY%  ASH%  FSI  CAL  RM  VM  TS
FROM (MM) TO (MM) (MJ/KG)
50.00  25.00  28.26  ---  ---  ---  ---  ---
25.00  12.00  14.90  ---  ---  ---  ---  ---
12.00   6.00  10.32  ---  ---  ---  ---  ---
 6.00   1.00  26.03  ---  ---  ---  ---  ---
 1.00   0.50   7.95  ---  ---  ---  ---  ---
 0.50   0.15   7.93  ---  ---  ---  ---  ---
 0.15   0.00   4.61  ---  ---  ---  ---  ---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN  BLK  LR  DS  DDH85009
=====
SAMPLE ID          32      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID  SP1      DATE ANALYSED 21/05/85
SPLIT SAMPLE ID   UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %          0.84
CARBON %         58.15
HYDROGEN %       2.49
SULPHUR %        0.78
NITROGEN %       0.68
ASH %            33.63
OXYGEN %         3.43

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85009
 =====

SAMPLE ID 32
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 21/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1199.0
 SOFTENING TEMP.(C) 1256.0
 HEMISPHERICAL TEMP.(C) 1273.0
 FLUID TEMP.(C) 1371.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1196.0
 SOFTENING TEMP.(C) 1210.0
 HEMISPHERICAL TEMP.(C) 1224.0
 FLUID TEMP.(C) 1319.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85009
 =====

SAMPLE ID 32
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 21/05/85

SILICON DIOXIDE %	(SI02)	50.08
ALUMINIUM OXIDE %	(AL2O3)	17.85
FERRIC OXIDE %	(FE2O3)	10.33
TITANIUM DIOXIDE %	(TI02)	0.89
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.56
CALCIUM OXIDE %	(CAO)	7.25
MAGNESIUM OXIDE %	(MGO)	4.66
SULPHUR TRIOXIDE %	(SO3)	5.55
SODIUM OXIDE %	(NA2O)	1.32
POTASSIUM OXIDE %	(K2O)	1.39

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85009
 =====

SAMPLE ID 32
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 21/05/85

PYRITE	%	74.40
SULPHATE	%	0.00
ORGANIC	%	25.60

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85009 SEAM - M

SAMPLE ID - 32

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 53.48				ASH % -		CUM.		
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.
1.40	0.18	2.16	0.18	2.16	99.82	39.50					1.08	1.08
1.45	0.98	3.14	1.16	2.99	98.84	39.86					0.85	0.89
1.50	4.50	9.92	5.66	8.50	94.34	41.29					0.78	0.80
1.60	15.34	17.73	21.00	15.24	79.00	45.87					0.81	0.81
1.70	17.46	28.70	38.46	21.35	61.54	50.74					0.78	0.80
1.80	11.02	31.87	49.48	23.69	50.52	54.85					1.00	0.84
2.00	17.67	39.80	67.15	27.93	32.85	62.95					1.15	0.92
2.60	32.85	62.95	100.00	39.44							0.94	0.93

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 33.98				ASH % -		CUM.		
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.
1.40	0.96	1.51	0.96	1.51	99.04	26.30					0.98	0.98
1.45	9.94	2.96	10.90	2.83	89.10	28.90					0.69	0.72
1.50	9.99	7.59	20.89	5.11	79.11	31.59					0.78	0.75
1.60	24.83	14.81	45.72	10.38	54.28	39.27					1.00	0.88
1.70	13.83	22.31	59.55	13.15	40.45	45.06					1.63	1.06
1.80	15.47	28.87	75.02	16.39	24.98	55.09					1.03	1.05
2.00	11.75	39.65	86.77	19.54	13.23	68.81					1.98	1.18
2.60	13.23	68.81	100.00	26.06							1.57	1.23

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDHB5009 SEAM - M

SAMPLE ID - 32

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X 0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				7.93 ASH % -		CUM.		
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.53	2.73		6.53	2.73	93.47	19.07								0.83	0.83
1.45	23.67	4.00		30.20	3.73	69.80	24.18								0.95	0.92
1.50	13.52	6.88		43.72	4.70	56.28	28.33								0.86	0.90
1.60	17.02	11.98		60.74	6.74	39.26	35.42								1.62	1.10
1.70	12.30	18.48		73.04	8.72	26.96	43.15								1.28	1.13
1.80	10.31	24.90		83.35	10.72	16.65	54.45								1.26	1.15
2.00	7.52	36.90		90.87	12.89	9.13	68.91								1.61	1.19
2.60	9.13	68.91		100.00	18.00										1.30	1.20

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X 0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				4.61 ASH % -		CUM.		
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	20.32		100.00	20.32										1.24	1.24

KPNLRDDH85010

```

GCRI COAL DIVISION  HEAD  PROJ  KPN  BLK  LR  DS  DDH85010
=====
SAMPLE ID              33      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED  25/05/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---.---
TOTAL MOISTURE %             3.86
EQUILIBRIUM MOISTURE %      ---.---
RESIDUAL MOISTURE %          1.77
ASH %                        44.92
VOLATILE MATTER %           9.00
FIXED CARBON %              44.31

TOTAL SULPHUR %              0.51
PHOSPHOROUS %               ---.---
CHLORINE (PPM)              00208
SPECIFIC GRAVITY            1.75
FSI                          ---.---
HGI                          23.0
CO2 %                        4.07

GROSS CALORIFIC VALUE (MJ/KG) 16.84
NET CALORIFIC VALUE (MJ/KG)  ---.---

```

```

GCRI COAL DIVISION  SIZE  PROJ  KPN  BLK  LR  DS  DDH85010
=====
SAMPLE ID              33      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID      SZ1      DATE ANALYSED  05/06/85
FRACTION SIZE        WT%   ASH%   FSI   CAL   RM   VM   TB
FROM (MM) TO (MM)   (MJ/KG)
50.00  25.00  49.00  ---.---  ---.---  ---.---  ---.---  ---.---
25.00  12.00  14.04  ---.---  ---.---  ---.---  ---.---  ---.---
12.00   6.00   7.39  ---.---  ---.---  ---.---  ---.---  ---.---
 6.00   1.00  17.68  ---.---  ---.---  ---.---  ---.---  ---.---
 1.00   0.50   4.52  ---.---  ---.---  ---.---  ---.---  ---.---
 0.50   0.15   4.08  ---.---  ---.---  ---.---  ---.---  ---.---
 0.15   0.00   3.29  ---.---  ---.---  ---.---  ---.---  ---.---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN  BLK  LR  DS  DDH85010
=====
SAMPLE ID              33      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID     SP1      DATE ANALYSED  25/05/85
SPLIT SAMPLE ID      UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %                1.77
CARBON %               46.44
HYDROGEN %             1.87
SULPHUR %              0.51
NITROGEN %            0.66
ASH %                  44.92
OXYGEN %               3.83

```


GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH55010
 =====
 SAMPLE ID 34 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 25/05/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 3.23
 EQUILIBRIUM MOISTURE % ---
 RESIDUAL MOISTURE % 2.58
 ASH % 30.27
 VOLATILE MATTER % 7.63
 FIXED CARBON % 59.52

 TOTAL SULPHUR % 0.59
 PHOSPHOROUS % ---
 CHLORINE (PPM) 00136
 SPECIFIC GRAVITY 1.56
 FSI ---
 HGI 51.0
 CO2 % 2.53

 GROSS CALORIFIC VALUE (MJ/KG) 22.94
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH55010
 =====
 SAMPLE ID 34 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 05/06/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 (FROM (MM) TO (MM)) (MJ/KG)
 50.00 25.00 70.87 --- --- --- --- --- ---
 25.00 12.00 11.67 --- --- --- --- --- ---
 12.00 6.00 5.40 --- --- --- --- --- ---
 6.00 1.00 0.40 --- --- --- --- --- ---
 1.00 0.50 1.56 --- --- --- --- --- ---
 0.50 0.15 1.40 --- --- --- --- --- ---
 0.15 0.00 0.70 --- --- --- --- --- ---
 --- --- --- --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH55010
 =====
 SAMPLE ID 34
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 25/05/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 2.58
 CARBON % 62.03
 HYDROGEN % 1.95
 SULPHUR % 0.59
 NITROGEN % 0.87
 ASH % 30.27
 OXYGEN % 1.71

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85010

SAMPLE ID 34
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 25/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1281.0
 SOFTENING TEMP.(C) 1300.0
 HEMISPHERICAL TEMP.(C) 1344.0
 FLUID TEMP.(C) 1366.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1215.0
 SOFTENING TEMP.(C) 1245.0
 HEMISPHERICAL TEMP.(C) 1278.0
 FLUID TEMP.(C) 1355.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85010

SAMPLE ID 34
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 25/05/85

SILICON DIOXIDE %	(SI02)	56.20
ALUMINIUM OXIDE %	(AL2O3)	18.20
FERRIC OXIDE %	(FE2O3)	6.61
TITANIUM DIOXIDE %	(TI02)	1.13
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.80
CALCIUM OXIDE %	(CAO)	4.97
MAGNESIUM OXIDE %	(MGO)	3.53
SULPHUR TRIOXIDE %	(SO3)	3.47
SODIUM OXIDE %	(NA2O)	1.60
POTASSIUM OXIDE %	(K2O)	1.27

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85010

SAMPLE ID 34
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 25/05/85

PYRITE	%	27.10
SULPHATE	%	0.00
ORGANIC	%	72.90

<u>GCRI COAL DIVISION</u>		<u>HEAD</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85010</u>	
SAMPLE ID	35								
SPLIT SAMPLE ID	HD1								
			DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
			DATE ANALYSED 25/05/85						
			ANALYSIS BASIS TYPE (AD,DB,AR,EM)				AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)			ASTM						
TOP SIZE (MM)			50.00						
SURFACE MOISTURE %			---				TOTAL SULPHUR %	1.22	
TOTAL MOISTURE %			2.03				PHOSPHOROUS %	---	
EQUILIBRIUM MOISTURE %			---				CHLORINE (PPM)	00008	
RESIDUAL MOISTURE %			1.71				SPECIFIC GRAVITY	1.25	
ASH %			63.61				FSI	---	
VOLATILE MATTER %			8.05				HGI	60.0	
FIXED CARBON %			26.63				CO2 %	3.49	
GROSS CALORIFIC VALUE (MJ/KG)			11.14						
NET CALORIFIC VALUE (MJ/KG)			---						

<u>GCRI COAL DIVISION</u>		<u>SIZE</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85010</u>	
SAMPLE ID	35								
SPLIT SAMPLE ID	SZ1								
			DATA TYPE (REAL,BORO,AVER,CALC)				CALC		
			DATE ANALYSED 05/06/85						
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS		
FROM (MM) TO (MM)				(MJ/KG)					
50.00	25.00	63.54	---	---	---	---	---	---	
25.00	12.00	17.94	---	---	---	---	---	---	
12.00	6.00	6.39	---	---	---	---	---	---	
6.00	1.00	8.05	---	---	---	---	---	---	
1.00	0.50	1.71	---	---	---	---	---	---	
0.50	0.15	1.62	---	---	---	---	---	---	
0.15	0.00	0.75	---	---	---	---	---	---	
---	---	---	---	---	---	---	---	---	

<u>GCRI COAL DIVISION</u>		<u>ULTIMATE</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85010</u>	
SAMPLE ID	35								
SAMPLE PRODUCT ID	SP1								
SPLIT SAMPLE ID	UL1								
			DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
			DATE ANALYSED 25/05/85						
			ANALYSIS BASIS TYPE (DAF,DB,AD)				AD		
WATER	%	1.71							
CARBON	%	30.01							
HYDROGEN	%	1.80							
SULPHUR	%	1.22							
NITROGEN	%	0.49							
ASH	%	63.61							
OXYGEN	%	1.16							

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85010 SEAM - 0

SAMPLE ID - 33

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	0.50 X		0.15		CUM. SINKS		RELATIVE WEIGHT % -			4.08 ASH % -		CUM.		
	ELEMENTAL	CUM.	FLOATS	CUM.	WT%	ASH%	CUM.	C.V.	CUM.	CUM.	ASH %	CUM.	MOIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST
1.40	4.19	4.18	4.19	4.18	95.81	44.22								
1.45	11.15	4.52	15.34	4.43	84.66	49.45								
1.50	5.17	8.60	20.51	5.48	79.49	52.10								
1.60	7.42	14.26	27.93	7.81	72.07	56.00								
1.70	5.98	23.77	33.91	10.63	66.09	58.92								
1.80	5.77	25.68	39.68	12.82	60.32	62.09								
2.00	17.41	44.14	57.09	22.37	42.91	69.38								
2.60	42.91	69.38	100.00	42.54										

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	0.15 X		0.00		CUM. SINKS		RELATIVE WEIGHT % -			3.29 ASH % -		CUM.		
	ELEMENTAL	CUM.	FLOATS	CUM.	WT%	ASH%	CUM.	C.V.	CUM.	CUM.	ASH %	CUM.	MOIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST
240.00	*****	43.32	100.00	43.32									1.39	1.39

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85010 SEAM - 0

SAMPLE ID - 34

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT															
FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 87.94								ASH % -	
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	CUM.	CUM.	CUM.	
WT%	WT%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	
1.40	0.87	3.10	0.87	3.10	99.13	32.75							0.95	0.95	
1.45	2.52	10.68	3.39	8.73	96.61	33.33							0.98	0.97	
1.50	15.16	13.44	18.55	12.58	81.45	37.03							0.96	0.96	
1.60	25.97	19.61	44.52	16.68	55.48	45.19							1.08	1.03	
1.70	21.77	29.92	66.29	21.03	33.71	55.05							1.11	1.06	
1.80	5.24	33.89	71.53	21.97	28.47	58.94							1.03	1.05	
2.00	15.68	46.23	87.21	26.33	12.79	74.52							1.08	1.06	
2.60	12.79	74.52	100.00	32.50									0.90	1.04	

ANALYSIS TYPE - FLOAT															
FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 9.96								ASH % -	
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	CUM.	CUM.	CUM.	
WT%	WT%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	
1.40	30.10	3.04	30.10	3.04	69.90	31.98							0.55	0.55	
1.45	18.91	7.05	49.01	4.59	50.99	41.22							0.69	0.60	
1.50	9.33	11.83	58.34	5.75	41.66	47.81							0.82	0.64	
1.60	9.99	18.98	68.33	7.68	31.67	56.90							0.73	0.65	
1.70	5.92	27.49	74.25	9.26	25.75	63.66							1.05	0.68	
1.80	3.97	35.09	78.22	10.57	21.78	68.87							1.29	0.71	
2.00	4.40	46.32	82.62	12.47	17.38	74.58							1.34	0.75	
2.60	17.38	74.58	100.00	23.27									1.55	0.89	

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85010 SEAM - 0

SAMPLE ID - 34

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -					1.40 ASH % -			
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM. C.V.		CUM.		CUM.	CUM.	CUM.		
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	20.41	3.11	20.41	3.11	79.59	32.19							1.45	1.45
1.45	25.34	4.08	45.75	3.65	54.25	45.32							1.46	1.46
1.50	7.28	9.16	53.03	4.40	46.97	50.92							1.80	1.50
1.60	9.71	14.25	62.74	5.93	37.26	60.48							1.95	1.57
1.70	4.10	23.68	66.84	7.02	33.16	65.03							1.30	1.56
1.80	4.17	30.94	71.01	8.42	28.99	69.93							1.08	1.53
2.00	5.39	38.91	76.40	10.57	23.60	77.02							1.39	1.52
2.60	23.60	77.02	100.00	26.25									1.18	1.44

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -					0.70 ASH % -			
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM. C.V.		CUM.		CUM.	CUM.	CUM.		
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	38.79	100.00	38.79									1.43	1.43

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DATA SOURCE - KPNLRDDH85010 SEAM - 0

SAMPLE ID - 35

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	0.50 X 0.15		RELATIVE WEIGHT % -				1.62 ASH % -		CUM.						
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	4.61	3.47	4.61	3.47	95.39	40.90								0.97	0.97
1.45	24.21	4.34	28.82	4.20	71.18	53.34								1.21	1.17
1.50	5.13	9.60	33.95	6.02	66.05	56.73								1.33	1.20
1.60	9.34	13.72	43.29	6.89	56.71	63.82								1.73	1.31
1.70	5.66	22.52	48.95	8.70	51.05	68.40								1.73	1.36
1.80	4.87	37.16	53.82	11.28	46.18	71.69								1.24	1.35
2.00	9.61	42.73	63.43	16.04	36.57	79.30								1.82	1.42
2.60	36.57	79.30	100.00	39.18										1.26	1.36

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	0.15 X 0.00		RELATIVE WEIGHT % -				0.75 ASH % -		CUM.						
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	46.91	100.00	46.91										1.30	1.30


```

GCRI COAL DIVISION  HEAD      PROJ  KPN      BLK  LR      DS  DDH85010
=====
SAMPLE ID              36      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED   16/05/85
                        ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---.---
TOTAL MOISTURE %             3.58
EQUILIBRIUM MOISTURE %      ---.---

RESIDUAL MOISTURE %          1.00
ASH %                        33.87
VOLATILE MATTER %           7.17
FIXED CARBON %              57.96

TOTAL SULPHUR %              0.39
PHOSPHOROUS %               ---.---
CHLORINE (PPM)              01024
SPECIFIC GRAVITY            1.61
FSI                          ---.---
HGI                          58.0
CO2 %                        1.50

GROSS CALORIFIC VALUE (MJ/KG)  22.25
NET CALORIFIC VALUE (MJ/KG)  ---.---

```

```

GCRI COAL DIVISION  SIZE      PROJ  KPN      BLK  LR      DS  DDH85010
=====
SAMPLE ID              36      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID      SZ1      DATE ANALYSED   05/06/85
FRACTION SIZE        WT%      ASH%      FSI      CAL      RM      VM      TS
FROM (MM) TO (MM)   (MJ/KG)
50.00  25.00    36.88    ---.---    ---.---    ---.---    ---.---    ---.---
25.00  12.00    19.47    ---.---    ---.---    ---.---    ---.---    ---.---
12.00   6.00    11.08    ---.---    ---.---    ---.---    ---.---    ---.---
6.00   1.00    21.31    ---.---    ---.---    ---.---    ---.---    ---.---
1.00   0.50     4.77    ---.---    ---.---    ---.---    ---.---    ---.---
0.50   0.15     4.15    ---.---    ---.---    ---.---    ---.---    ---.---
0.15   0.00     2.34    ---.---    ---.---    ---.---    ---.---    ---.---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN      BLK  LR      DS  DDH85010
=====
SAMPLE ID              36      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID     SP1      DATE ANALYSED   21/05/85
SPLIT SAMPLE ID      UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %                1.00
CARBON %               59.71
HYDROGEN %             2.23
SULPHUR %              0.39
NITROGEN %            0.78
ASH %                  33.87
OXYGEN %               2.02

```

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85010
 =====

SAMPLE ID 36
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 21/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1229.0
 SOFTENING TEMP.(C) 1316.0
 HEMISPHERICAL TEMP.(C) 1371.0
 FLUID TEMP.(C) 1409.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1207.0
 SOFTENING TEMP.(C) 1297.0
 HEMISPHERICAL TEMP.(C) 1319.0
 FLUID TEMP.(C) 1399.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85010
 =====

SAMPLE ID 36
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 21/05/85

SILICON DIOXIDE %	(SI02)	53.30
ALUMINIUM OXIDE %	(AL2O3)	23.92
FERRIC OXIDE %	(FE2O3)	5.14
TITANIUM DIOXIDE %	(TI02)	1.75
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.28
CALCIUM OXIDE %	(CAO)	4.16
MAGNESIUM OXIDE %	(MGO)	2.03
SULPHUR TRIOXIDE %	(SO3)	2.81
SODIUM OXIDE %	(NA2O)	2.75
POTASSIUM OXIDE %	(K2O)	1.35

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85010
 =====

SAMPLE ID 36
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 21/05/85

PYRITE	%	2.60
SULPHATE	%	0.00
ORGANIC	%	97.40

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DATA SOURCE - KPRLRDDH85010 SEAM - N

SAMPLE ID - 36

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 67.43				ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
	WT%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	2.00	7.85		2.00	7.85	98.00							0.68	0.68
1.45	4.98	8.84		6.98	8.56	93.02							0.69	0.69
1.50	15.38	14.96		22.36	12.96	77.64							0.93	0.85
1.60	17.16	22.22		39.52	16.98	60.48							0.80	0.83
1.70	11.47	32.27		50.99	20.42	49.01							1.12	0.90
1.80	8.52	36.80		59.51	22.77	40.49							0.97	0.91
2.00	17.80	49.25		77.31	28.86	22.69							0.94	0.91
2.60	22.69	74.08		100.00	39.12								1.75	1.10

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 26.08				ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
	WT%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	18.93	3.41		18.93	3.41	81.07							0.66	0.66
1.45	16.53	7.58		35.46	5.35	64.54							0.79	0.72
1.50	12.73	13.10		48.19	7.40	51.81							0.81	0.74
1.60	15.18	20.46		63.37	10.53	36.63							0.83	0.76
1.70	9.28	29.02		72.65	12.89	27.35							1.29	0.83
1.80	5.83	36.25		78.48	14.63	21.52							1.69	0.90
2.00	7.69	46.90		86.17	17.51	13.83							1.90	0.99
2.60	13.83	73.60		100.00	25.26								1.73	1.09

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85010 SEAM - N

SAMPLE ID - 36

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	0.50 X		0.15		CUM. SINKS		RELATIVE WEIGHT % -				4.15 ASH % -		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	CUM.	CUM.	MOIST	MOIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	23.17	3.35	23.17	3.35	76.83	28.03								0.88	0.88
1.45	21.72	6.19	44.89	4.72	55.11	36.64								0.90	0.89
1.50	10.36	13.23	55.25	6.32	44.75	42.06								1.05	0.92
1.60	9.14	14.53	64.39	7.48	35.61	49.13								1.21	0.96
1.70	7.30	19.83	71.69	8.74	28.31	56.69								1.71	1.04
1.80	4.63	27.79	76.32	9.90	23.68	62.33								1.01	1.04
2.00	7.27	35.35	83.59	12.11	16.41	74.29								1.31	1.06
2.60	16.41	74.29	100.00	22.31										1.36	1.11

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	0.15 X		0.00		CUM. SINKS		RELATIVE WEIGHT % -				2.34 ASH % -		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	CUM.	CUM.	MOIST	MOIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	29.04	100.00	29.04										1.22	1.22

GORI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85010
 =====
 SAMPLE ID 37 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 03/06/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00 TOTAL SULPHUR % 0.40
 SURFACE MOISTURE % --- PHOSPHOROUS % ---
 TOTAL MOISTURE % 2.81 CHLORINE (PPM) 00100
 EQUILIBRIUM MOISTURE % --- SPECIFIC GRAVITY 1.71

 RESIDUAL MOISTURE % 2.26 FSI ---
 ASH % 38.23 HGI 51.0
 VOLATILE MATTER % 7.10 CO2 % 3.14
 FIXED CARBON % 52.41

 GROSS CALORIFIC VALUE (MJ/KG) 19.93
 NET CALORIFIC VALUE (MJ/KG) ---

GORI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85010
 =====
 SAMPLE ID 37 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 25/06/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 34.95 --- --- --- --- --- ---
 25.00 12.00 12.19 --- --- --- --- --- ---
 12.00 6.00 8.33 --- --- --- --- --- ---
 6.00 1.00 25.03 --- --- --- --- --- ---
 1.00 0.50 7.31 --- --- --- --- --- ---
 0.50 0.15 7.25 --- --- --- --- --- ---
 0.15 0.00 4.94 --- --- --- --- --- ---
 --- --- --- --- --- --- --- --- ---

GORI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85010
 =====
 SAMPLE ID 37
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 03/06/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 2.26
 CARBON % 53.55
 HYDROGEN % 1.49
 SULPHUR % 0.40
 NITROGEN % 0.71
 ASH % 38.23
 OXYGEN % 3.36

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85010

SAMPLE ID 37
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE *****	REDUCING ATMOSPHERE *****
INITIAL TEMP.(C) 1300.0	INITIAL TEMP.(C) 1199.0
SOFTENING TEMP.(C) 1333.0	SOFTENING TEMP.(C) 1204.0
HEMISPHERICAL TEMP.(C) 1366.0	HEMISPHERICAL TEMP.(C) 1254.0
FLUID TEMP.(C) 1385.0	FLUID TEMP.(C) 1377.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85010

SAMPLE ID 37
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	59.32
ALUMINIUM OXIDE %	(AL2O3)	19.17
FERRIC OXIDE %	(FE2O3)	7.04
TITANIUM DIOXIDE %	(TI02)	1.01
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.37
CALCIUM OXIDE %	(CAO)	3.23
MAGNESIUM OXIDE %	(MGO)	2.74
SULPHUR TRIOXIDE %	(SO3)	3.82
SODIUM OXIDE %	(NA2O)	1.61
POTASSIUM OXIDE %	(K2O)	1.64

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85010

SAMPLE ID 37
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	15.00
SULPHATE	%	0.00
ORGANIC	%	85.00

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85010 SEAM - M

SAMPLE ID - 37

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 55.47					ASH % -			
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.		CUM.	CUM.		CUM.	CUM.
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.45	2.08	0.45	2.08	99.55	52.89							1.02	1.02
1.45	2.20	4.83	2.65	4.36	97.35	53.98							0.95	0.96
1.50	4.66	11.61	7.31	8.98	92.69	56.11							1.00	0.99
1.60	19.05	18.35	26.36	15.75	73.64	65.87							0.92	0.94
1.70	12.72	28.64	39.08	19.95	60.92	73.65							1.02	0.96
1.80	7.62	36.70	46.70	22.68	53.30	78.93							0.84	0.94
2.00	7.35	42.99	54.05	25.44	45.95	84.68							0.81	0.93
2.60	45.95	84.68	100.00	52.66									1.06	0.99

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 32.34					ASH % -			
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.		CUM.	CUM.		CUM.	CUM.
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	17.46	3.49	17.46	3.49	82.54	23.47							0.93	0.93
1.45	18.06	6.22	35.52	4.88	64.48	28.30							0.91	0.92
1.50	17.41	11.16	52.93	6.94	47.07	34.64							0.91	0.92
1.60	16.02	17.19	68.95	9.32	31.05	43.65							0.97	0.93
1.70	11.05	24.31	80.00	11.39	20.00	54.33							1.55	1.01
1.80	5.08	32.85	85.08	12.68	14.92	61.64							1.53	1.05
2.00	5.37	43.61	90.45	14.51	9.55	71.78							1.61	1.08
2.60	9.55	71.78	100.00	19.98									1.20	1.09

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85010 SEAM - M

SAMPLE ID - 37

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	ELEMENTAL		0.50 X 0.15 CUM. FLOATS		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -				7.25 ASH % -		CUM. MOIST	CUM. MOIST
	WT%	ASH%	WT%	ASH%			CUM. FSI	C.V. (MJ/KG)	CUM. S	CUM. S	VOL.	VOL.		
1.40	24.42	3.20	24.42	3.20	75.58	17.64							1.09	1.09
1.45	25.32	3.33	49.74	3.27	50.26	24.85							0.96	1.02
1.50	12.13	7.68	61.87	4.13	38.13	30.31							1.36	1.09
1.60	13.27	11.83	75.14	5.49	24.86	40.18							1.60	1.18
1.70	9.10	20.38	84.24	7.10	15.76	51.61							2.16	1.29
1.80	4.47	27.44	88.71	8.12	11.29	61.17							2.18	1.33
2.00	3.67	37.53	92.38	9.29	7.62	72.56							2.13	1.36
2.60	7.62	72.56	100.00	14.11									1.18	1.35

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	ELEMENTAL		0.15 X 0.00 CUM. FLOATS		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -				4.94 ASH % - 17.78		CUM. MOIST	CUM. MOIST
	WT%	ASH%	WT%	ASH%			CUM. FSI	C.V. (MJ/KG)	CUM. S	CUM. S	VOL.	VOL.		
240.00	*****	17.78	100.00	17.78									1.82	1.82

KPNLRDDH85011

GORI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85011
 =====
 SAMPLE ID 38 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 16/05/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00 TOTAL SULPHUR % 0.41
 SURFACE MOISTURE % --- PHOSPHOROUS % ---
 TOTAL MOISTURE % 4.77 CHLORINE (PPM) 86290
 EQUILIBRIUM MOISTURE % --- SPECIFIC GRAVITY 1.58

 RESIDUAL MOISTURE % 1.03 FSI ---
 ASH % 27.81 HGI 51.0
 VOLATILE MATTER % 9.07 CO2 % 0.73
 FIXED CARBON % 63.09

 GROSS CALORIFIC VALUE (MJ/KG) 24.18
 NET CALORIFIC VALUE (MJ/KG) ---

GORI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85011
 =====
 SAMPLE ID 38 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 21/05/85
 FRACTION SIZE WTX% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 44.68 --- --- --- --- --- ---
 25.00 12.00 16.72 --- --- --- --- --- ---
 12.00 6.00 8.66 --- --- --- --- --- ---
 6.00 1.00 18.03 --- --- --- --- --- ---
 1.00 0.50 4.49 --- --- --- --- --- ---
 0.50 0.15 4.37 --- --- --- --- --- ---
 0.15 0.00 3.05 --- --- --- --- --- ---
 --- --- --- --- --- --- --- --- ---

GORI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85011
 =====
 SAMPLE ID 38
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 21/05/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.03
 CARBON % 64.55
 HYDROGEN % 2.66
 SULPHUR % 0.41
 NITROGEN % 0.82
 ASH % 27.81
 OXYGEN % 3.32

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85011

SAMPLE ID 38
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 21/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1300.0
SOFTENING TEMP.(C) 1311.0
HEMISPHERICAL TEMP.(C) 1357.0
FLUID TEMP.(C) 1379.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1240.0
SOFTENING TEMP.(C) 1254.0
HEMISPHERICAL TEMP.(C) 1267.0
FLUID TEMP.(C) 1333.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85011

SAMPLE ID 38
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 21/05/85

SILICON DIOXIDE %	(SI02)	53.31
ALUMINIUM OXIDE %	(AL2O3)	22.13
FERRIC OXIDE %	(FE2O3)	6.94
TITANIUM DIOXIDE %	(TI02)	1.50
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.92
CALCIUM OXIDE %	(CAO)	4.85
MAGNESIUM OXIDE %	(MGO)	2.33
SULPHUR TRIOXIDE %	(SO3)	4.12
SODIUM OXIDE %	(NA2O)	2.15
POTASSIUM OXIDE %	(K2O)	1.25

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85011

SAMPLE ID 38
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 21/05/85

PYRITE	%	4.90
SULPHATE	%	0.00
ORGANIC	%	95.10

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85011 SEAM - K

SAMPLE ID - 38

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -				4.37 ASH % -									
SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM. C.V.	S	VOL.	VOL.	MOIST	MOIST
1.40	12.65	2.50		12.65	2.50		87.35	20.60										0.92	0.92
1.45	26.25	3.68		38.90	3.30		61.10	27.87										1.22	1.12
1.50	13.90	8.60		52.80	4.69		47.20	33.54										1.42	1.20
1.60	16.94	13.73		69.74	6.89		30.26	44.63										1.91	1.37
1.70	9.24	21.75		78.98	8.63		21.02	54.69										1.86	1.43
1.80	4.68	27.89		83.66	9.70		16.34	62.37										1.78	1.45
2.00	4.60	40.10		88.26	11.29		11.74	71.09										1.34	1.44
2.60	11.74	71.09		100.00	18.31													1.42	1.44

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -				3.05 ASH % -									
SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM. C.V.	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	21.87		100.00	21.87													1.13	1.13

GORI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85011
 =====
 SAMPLE ID 39 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 16/05/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 7.00
 EQUILIBRIUM MOISTURE % ---
 RESIDUAL MOISTURE % 1.08
 ASH % 33.01
 VOLATILE MATTER % 7.52
 FIXED CARBON % 58.39

 TOTAL SULPHUR % 0.31
 PHOSPHOROUS % ---
 CHLORINE (PPM) 00320
 SPECIFIC GRAVITY 1.61
 FSI ---
 HGI 68.0
 CO2 % 2.20

 GROSS CALORIFIC VALUE (MJ/KG) 21.90
 NET CALORIFIC VALUE (MJ/KG) ---

GORI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85011
 =====
 SAMPLE ID 39 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 05/06/85
 FRACTION SIZE WTX% ASH% FSI CAL RM VM TS
 (FROM (MM) TO (MM)) (MJ/KG)
 50.00 25.00 23.93 --- --- --- --- --- ---
 25.00 12.00 15.87 --- --- --- --- --- ---
 12.00 6.00 9.03 --- --- --- --- --- ---
 6.00 1.00 29.75 --- --- --- --- --- ---
 1.00 0.50 8.53 --- --- --- --- --- ---
 0.50 0.15 7.69 --- --- --- --- --- ---
 0.15 0.00 5.20 --- --- --- --- --- ---
 --- --- --- --- --- --- --- --- ---

GORI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85011
 =====
 SAMPLE ID 39
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 21/05/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.08
 CARBON % 58.22
 HYDROGEN % 2.01
 SULPHUR % 0.31
 NITROGEN % 0.71
 ASH % 33.01
 OXYGEN % 4.66

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH55011
 =====

SAMPLE ID 39
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 21/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1311.0
 SOFTENING TEMP.(C) 1333.0
 HEMISPHERICAL TEMP.(C) 1374.0
 FLUID TEMP.(C) 1448.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1207.0
 SOFTENING TEMP.(C) 1297.0
 HEMISPHERICAL TEMP.(C) 1319.0
 FLUID TEMP.(C) 1448.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH55011
 =====

SAMPLE ID 39
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 21/05/85

SILICON DIOXIDE %	(SI02)	57.20
ALUMINIUM OXIDE %	(AL2O3)	22.88
FERRIC OXIDE %	(FE2O3)	5.23
TITANIUM DIOXIDE %	(TI02)	1.13
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.21
CALCIUM OXIDE %	(CAO)	2.21
MAGNESIUM OXIDE %	(MGO)	3.25
SULPHUR TRIOXIDE %	(SO3)	2.33
SODIUM OXIDE %	(NA2O)	2.14
POTASSIUM OXIDE %	(K2O)	1.64

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH55011
 =====

SAMPLE ID 39
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 21/05/85

PYRITE	%	3.20
SULPHATE	%	0.00
ORGANIC	%	96.80

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85011 SEAM - I

SAMPLE ID - 39

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLDAT -----

FRACTION SIZE(MM)		0.50 X 0.15		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				7.69 ASH % -		CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	16.11	3.30	16.11	3.30	83.89	17.42										0.88	0.88
1.45	17.04	3.61	33.15	3.46	66.85	20.94										1.06	0.97
1.50	17.09	8.30	50.24	5.11	49.76	25.29										1.87	1.28
1.60	15.85	10.84	66.09	6.48	33.91	32.04										1.81	1.41
1.70	17.47	17.20	83.56	8.72	16.44	47.81										1.03	1.33
1.80	5.49	23.22	89.05	9.62	10.95	60.14										1.94	1.36
2.00	3.87	36.76	92.92	10.75	7.08	72.92										1.83	1.38
2.60	7.08	72.92	100.00	15.15												1.81	1.41

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X 0.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				5.20 ASH % -		CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	19.10	100.00	19.10												1.23	1.23

KPNLRDDH85012

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 40 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 03/06/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 5.99 TOTAL SULPHUR % 0.48
 EQUILIBRIUM MOISTURE % --- PHOSPHOROUS % ---
 RESIDUAL MOISTURE % 1.20 CHLORINE (PPM) 00050
 ASH % 26.63 SPECIFIC GRAVITY 1.61
 VOLATILE MATTER % 7.53 FSI ---
 FIXED CARBON % 64.64 HGI 62.0
 CO2 % 0.87

 GROSS CALORIFIC VALUE (MJ/KG) 24.62
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 40 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 03/06/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 27.40 --- --- --- --- --- ---
 25.00 12.00 12.59 --- --- --- --- --- ---
 12.00 6.00 9.95 --- --- --- --- --- ---
 6.00 1.00 26.44 --- --- --- --- --- ---
 1.00 0.50 7.48 --- --- --- --- --- ---
 0.50 0.15 8.71 --- --- --- --- --- ---
 0.15 0.00 7.43 13.46 --- --- 1.25 --- ---
 --- --- --- --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 40
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 03/06/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.20
 CARBON % 64.25
 HYDROGEN % 1.74
 SULPHUR % 0.48
 NITROGEN % 0.79
 ASH % 26.63
 OXYGEN % 4.91

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85012 SEAM - L

SAMPLE ID - 40

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		RELATIVE WEIGHT % - 49.94				ASH % -		CUM.						
	ELEMENTAL		CUM. FLDATS		CUM. SINKS		CUM. C.V.		CUM. MOIST						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.17	4.76	0.17	4.76	99.83	30.93								0.81	0.81
1.45	2.32	15.79	2.49	15.04	97.51	31.29								0.96	0.95
1.50	11.50	16.58	13.99	16.31	86.01	33.26								0.88	0.89
1.60	23.02	25.92	37.01	22.29	62.99	35.95								0.78	0.82
1.70	18.63	27.20	55.64	23.93	44.36	39.62								0.64	0.76
1.80	21.53	30.44	77.17	25.75	22.83	48.27								0.58	0.71
2.00	13.71	41.33	90.88	28.10	9.12	58.71								0.78	0.72
2.60	9.12	58.71	100.00	30.89										0.95	0.74

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		RELATIVE WEIGHT % - 33.92				ASH % -		CUM.						
	ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V.		CUM. MOIST						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.93	4.76	6.93	4.76	93.07	23.40								0.86	0.86
1.45	13.31	6.95	20.24	6.20	79.76	26.15								0.85	0.85
1.50	20.36	15.00	40.60	10.61	59.40	29.97								0.74	0.80
1.60	29.74	17.00	70.34	13.31	29.66	42.97								0.98	0.87
1.70	10.50	23.17	80.84	14.59	19.16	53.82								1.28	0.93
1.80	4.96	31.43	85.80	15.57	14.20	61.64								1.33	0.95
2.00	4.22	42.03	90.02	16.81	9.98	69.93								1.50	0.98
2.60	9.98	69.93	100.00	22.11										0.95	0.97

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 41 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 16/05/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 4.73
 EQUILIBRIUM MOISTURE % ---
 RESIDUAL MOISTURE % 1.01
 ASH % 35.06
 VOLATILE MATTER % 7.96
 FIXED CARBON % 55.97

 TOTAL SULPHUR % 0.43
 PHOSPHOROUS % ---
 CHLORINE (PPM) 60824
 SPECIFIC GRAVITY 1.64
 FSI ---
 HGI 63.0
 CO2 % 2.81

 GROSS CALORIFIC VALUE (MJ/KG) 21.02
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 41 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 05/06/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 (MM) TO (MM) (MJ/KG)
 50.00 25.00 33.43 --- --- --- --- --- ---
 25.00 12.00 16.40 --- --- --- --- --- ---
 12.00 6.00 10.98 --- --- --- --- --- ---
 6.00 1.00 24.58 --- --- --- --- --- ---
 1.00 0.50 5.70 --- --- --- --- --- ---
 0.50 0.15 5.39 --- --- --- --- --- ---
 0.15 0.00 3.52 --- --- --- --- --- ---
 --- --- --- --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 41
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 21/05/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.01
 CARBON % 56.02
 HYDROGEN % 1.91
 SULPHUR % 0.43
 NITROGEN % 0.78
 ASH % 35.06
 OXYGEN % 4.79

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 41
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORD,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 21/05/85

OXIDIZING ATMOSPHERE *****		REDUCING ATMOSPHERE *****	
INITIAL TEMP.(C)	1344.0	INITIAL TEMP.(C)	1257.0
SOFTENING TEMP.(C)	1355.0	SOFTENING TEMP.(C)	1300.0
HEMISPHERICAL TEMP.(C)	1377.0	HEMISPHERICAL TEMP.(C)	1319.0
FLUID TEMP.(C)	1448.0	FLUID TEMP.(C)	1407.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 41
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORD,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 21/05/85

SILICON DIOXIDE %	(SiO2)	54.53
ALUMINIUM OXIDE %	(AL2O3)	23.56
FERRIC OXIDE %	(FE2O3)	6.44
TITANIUM DIOXIDE %	(TiO2)	1.49
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.16
CALCIUM OXIDE %	(CAO)	2.99
MAGNESIUM OXIDE %	(MGO)	2.37
SULPHUR TRIOXIDE %	(SO3)	2.75
SODIUM OXIDE %	(NA2O)	2.18
POTASSIUM OXIDE %	(K2O)	2.21

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 41
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORD,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 21/05/85

PYRITE	%	11.60
SULPHATE	%	0.00
ORGANIC	%	88.40

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPMLRDDH85012 SEAM - K/L

SAMPLE ID - 41

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	50.00 X 6.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			60.80 ASH % -				
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.37	5.37	1.37	5.37	98.63	41.22									0.93	0.93
1.45	1.63	10.15	3.00	7.97	97.00	41.75									0.87	0.90
1.50	7.48	13.84	10.48	12.16	89.52	44.08									0.79	0.82
1.60	15.94	22.60	26.42	18.46	73.58	48.73									1.04	0.95
1.70	23.45	31.48	49.87	24.58	50.13	56.80									1.18	1.06
1.80	12.91	39.42	62.78	27.63	37.22	62.83									1.20	1.09
2.00	7.97	44.41	70.75	29.52	29.25	67.85									1.12	1.09
2.60	29.25	67.85	100.00	40.73											1.16	1.11

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	6.00 X 0.50		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			30.29 ASH % -				
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	17.52	6.41	17.52	6.41	82.48	28.85									0.85	0.85
1.45	7.68	7.87	25.20	6.85	74.80	31.00									0.70	0.80
1.50	11.13	11.95	36.33	8.42	63.67	34.33									0.95	0.85
1.60	24.27	20.98	60.60	13.45	39.40	42.56									0.99	0.91
1.70	16.71	27.66	77.31	16.52	22.69	53.53									1.86	1.11
1.80	5.74	36.30	83.05	17.89	16.95	59.36									1.89	1.17
2.00	6.92	46.25	89.97	20.07	10.03	68.41									1.08	1.16
2.60	10.03	68.41	100.00	24.92											1.36	1.18

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85012 SEAM - K/L

SAMPLE ID - 41

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X 0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				5.39 ASH % -		CUM.		
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	24.57	3.58		24.57	3.58	75.43	26.35								0.87	0.87
1.45	15.97	5.10		40.54	4.18	59.46	32.06								0.70	0.80
1.50	6.07	5.77		46.61	4.39	53.39	35.05								1.25	0.86
1.60	8.73	12.26		55.34	5.63	44.66	39.50								1.55	0.97
1.70	9.83	17.41		65.17	7.41	34.83	45.74								1.86	1.10
1.80	10.54	25.28		75.71	9.89	24.29	54.61								1.47	1.16
2.00	10.97	34.44		86.68	13.00	13.32	71.23								1.69	1.22
2.60	13.32	71.23		100.00	20.76										1.60	1.27

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X 0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				3.52 ASH % -		CUM.		
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	25.68		100.00	25.68										1.18	1.18

```

GCRI COAL DIVISION  HEAD  PROJ  KPN  BLK  LR  DS  DDH85012
=====
SAMPLE ID          42      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   HD1      DATE ANALYSED 16/05/85
ANALYSIS BASIS TYPE (AD,DB,AF,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)          50.00
SURFACE MOISTURE %    ---
TOTAL MOISTURE %      8.19
EQUILIBRIUM MOISTURE % ---
RESIDUAL MOISTURE %   1.08
ASH %                 17.27
VOLATILE MATTER %     8.96
FIXED CARBON %        72.69

TOTAL SULPHUR %      0.49
PHOSPHOROUS %       ---
CHLORINE (PPM)      60600
SPECIFIC GRAVITY     1.48
FSI                  ---
HGI                  48.0
CO2 %                2.71

GROSS CALORIFIC VALUE (MJ/KG)  28.64
NET CALORIFIC VALUE (MJ/KG)   ---

```

```

GCRI COAL DIVISION  SIZE  PROJ  KPN  BLK  LR  DS  DDH85012
=====
SAMPLE ID          42      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID   SZ1      DATE ANALYSED 05/06/85
FRACTION SIZE     WT%   ASH%   FSI   CAL   RM   VM   TS
FROM (MM) TO (MM) (MJ/KG)
50.00 25.00 41.67 --- --- --- --- --- ---
25.00 12.00 17.00 --- --- --- --- --- ---
12.00 6.00 9.50 --- --- --- --- --- ---
6.00 1.00 20.67 --- --- --- --- --- ---
1.00 0.50 4.36 --- --- --- --- --- ---
0.50 0.15 4.07 --- --- --- --- --- ---
0.15 0.00 2.73 --- --- --- --- --- ---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN  BLK  LR  DS  DDH85012
=====
SAMPLE ID          42      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID  SP1      DATE ANALYSED 21/05/85
SPLIT SAMPLE ID   UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %          1.08
CARBON %         75.65
HYDROGEN %       2.60
SULPHUR %        0.49
NITROGEN %       0.86
ASH %            17.27
OXYGEN %         2.05

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 42
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 21/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1314.0
 SOFTENING TEMP.(C) 1322.0
 HEMISPHERICAL TEMP.(C) 1349.0
 FLUID TEMP.(C) 1377.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1235.0
 SOFTENING TEMP.(C) 1262.0
 HEMISPHERICAL TEMP.(C) 1278.0
 FLUID TEMP.(C) 1322.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 42
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 21/05/85

SILICON DIOXIDE %	(SI02)	40.90
ALUMINIUM OXIDE %	(AL2O3)	21.75
FERRIC OXIDE %	(FE2O3)	9.16
TITANIUM DIOXIDE %	(TI02)	1.36
PHOSPHOROUS PENTOXIDE %	(P2O5)	2.41
CALCIUM OXIDE %	(CAO)	8.92
MAGNESIUM OXIDE %	(MGO)	3.77
SULPHUR TRIOXIDE %	(SO3)	8.45
SODIUM OXIDE %	(NA2O)	1.85
POTASSIUM OXIDE %	(K2O)	1.22

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 42
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 21/05/85

PYRITE	%	2.00
SULPHATE	%	0.00
ORGANIC	%	98.00

```

GCRI COAL DIVISION  HEAD  PROJ  KFN  BLK  LR  DS  DDH85012
=====
SAMPLE ID           43      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID    HD1      DATE ANALYSED 25/05/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---.---
TOTAL MOISTURE %             5.43
EQUILIBRIUM MOISTURE %      ---.---
RESIDUAL MOISTURE %         1.46
ASH %                        64.70
VOLATILE MATTER %           7.84
FIXED CARBON %              26.00

TOTAL SULPHUR %              0.29
PHOSPHOROUS %               ---.---
CHLORINE (PPM)              00000
SPECIFIC GRAVITY            1.28
FSI                          ---.---
HGI                          59.0
CO2 %                        2.78

GROSS CALORIFIC VALUE (MJ/KG) 10.30
NET CALORIFIC VALUE (MJ/KG)  ---.---

```

```

GCRI COAL DIVISION  SIZE  PROJ  KFN  BLK  LR  DS  DDH85012
=====
SAMPLE ID           43      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID    SZ1      DATE ANALYSED 05/06/85
FRACTION SIZE      WT%   ASH%   FSI   CAL   RM   VM   TS
FROM (MM) TO (MM) (MJ/KG)
50.00 25.00 53.98 ---.--- ---.--- ---.--- ---.--- ---.---
25.00 12.00 17.65 ---.--- ---.--- ---.--- ---.--- ---.---
12.00 6.00 7.43 ---.--- ---.--- ---.--- ---.--- ---.---
6.00 1.00 14.21 ---.--- ---.--- ---.--- ---.--- ---.---
1.00 0.50 2.85 ---.--- ---.--- ---.--- ---.--- ---.---
0.50 0.15 2.51 ---.--- ---.--- ---.--- ---.--- ---.---
0.15 0.00 1.37 ---.--- ---.--- ---.--- ---.--- ---.---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KFN  BLK  LR  DS  DDH85012
=====
SAMPLE ID           43      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID  SP1      DATE ANALYSED 25/05/85
SPLIT SAMPLE ID    UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %              1.46
CARBON %             29.24
HYDROGEN %           1.68
SULPHUR %            0.29
NITROGEN %           0.52
ASH %                64.70
OXYGEN %             2.11

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 43
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 25/05/85

OXIDIZING ATMOSPHERE *****	REDUCING ATMOSPHERE *****
INITIAL TEMP.(C) 1371.0	INITIAL TEMP.(C) 1319.0
SOFTENING TEMP.(C) 1409.0	SOFTENING TEMP.(C) 1366.0
HEMISPHERICAL TEMP.(C) 1420.0	HEMISPHERICAL TEMP.(C) 1398.0
FLUID TEMP.(C) 1448.0	FLUID TEMP.(C) 1448.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 43
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 25/05/85

SILICON DIOXIDE %	(SI02)	61.01
ALUMINIUM OXIDE %	(AL2O3)	21.63
FERRIC OXIDE %	(FE2O3)	5.16
TITANIUM DIOXIDE %	(TI02)	1.16
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.13
CALCIUM OXIDE %	(CAO)	1.32
MAGNESIUM OXIDE %	(MGO)	2.69
SULPHUR TRIOXIDE %	(SO3)	0.89
SODIUM OXIDE %	(NA2O)	1.68
POTASSIUM OXIDE %	(K2O)	1.90

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 43
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 25/05/85

PYRITE	%	24.10
SULPHATE	%	0.00
ORGANIC	%	75.90

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85012 SEAM - K

SAMPLE ID - 42

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	50.00 X		6.00		RELATIVE WEIGHT % -		68.17 ASH % -								
	ELEMENTAL	CUM. FLOATS	CUM. FLOATS	SINKS	CUM. C.V.	CUM. C.V.	CUM. S	CUM. S	VOL.	VOL.					
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	5.08	5.14	5.08	5.14	94.92	20.68								0.69	0.69
1.45	24.61	7.77	29.69	7.32	70.31	25.20								0.64	0.65
1.50	19.72	11.68	49.41	9.06	50.59	30.47								0.74	0.69
1.60	22.44	17.21	71.85	11.61	28.15	41.05								0.85	0.74
1.70	10.03	26.37	81.88	13.41	18.12	49.17								0.91	0.76
1.80	3.71	31.37	85.59	14.19	14.41	53.76								1.24	0.78
2.00	3.47	32.18	89.06	14.89	10.94	60.60								0.75	0.78
2.60	10.94	60.60	100.00	19.89										1.03	0.81

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	6.00 X		0.50		RELATIVE WEIGHT % -		25.03 ASH % -								
	ELEMENTAL	CUM. FLOATS	CUM. FLOATS	SINKS	CUM. C.V.	CUM. C.V.	CUM. S	CUM. S	VOL.	VOL.					
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	36.13	3.50	36.13	3.50	63.87	18.05								0.61	0.61
1.45	30.62	6.97	66.75	5.09	33.25	28.25								0.89	0.74
1.50	1.49	11.37	68.24	5.23	31.76	29.04								0.92	0.74
1.60	15.46	17.13	83.70	7.43	16.30	40.34								1.15	0.82
1.70	6.56	26.84	90.26	8.84	9.74	49.43								1.63	0.88
1.80	1.85	32.57	92.11	9.31	7.89	53.38								1.33	0.89
2.00	1.82	37.30	93.93	9.86	6.07	58.20								1.71	0.90
2.60	6.07	58.20	100.00	12.79										1.35	0.93

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85012 SEAM - K

SAMPLE ID - 42

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. SINKS		RELATIVE WEIGHT % -				4.07 ASH % -				
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	CUM.	CUM.	MOIST	CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	39.74	4.76	39.74	4.76	60.26	20.20								1.24	1.24
1.45	23.51	5.31	63.25	4.96	36.75	29.72								1.53	1.35
1.50	8.54	9.67	71.79	5.52	28.21	35.79								1.39	1.35
1.60	8.41	13.82	80.20	6.39	19.80	45.13								1.77	1.40
1.70	6.78	22.06	86.98	7.62	13.02	57.14								3.48	1.56
1.80	1.31	26.77	88.29	7.90	11.71	60.53								3.44	1.59
2.00	3.17	36.76	91.46	8.90	8.54	69.36								1.52	1.58
2.60	8.54	69.36	100.00	14.06										1.85	1.61

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. SINKS		RELATIVE WEIGHT % -				2.73 ASH % -				
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	CUM.	CUM.	MOIST	CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
240.00	*****	18.67	100.00	18.67										1.10	1.10

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85012 SEAM - K

SAMPLE ID - 43

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 79.07				ASH % -					
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	CUM.	VOL.	VOL.	MOIST	CUM.
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	
1.45	1.11	8.02	1.11	8.02	98.89	73.00								1.23	1.23
1.50	4.11	15.15	5.22	13.63	94.78	75.51								1.05	1.09
1.60	4.21	18.90	9.43	15.98	90.57	78.14								0.96	1.03
1.70	7.25	35.00	16.68	24.25	83.32	81.90								0.86	0.96
1.80	0.48	43.80	17.16	24.80	82.84	82.12								0.96	0.96
2.00	1.42	49.99	18.58	26.72	81.42	82.68								1.09	0.97
2.60	81.42	82.68	100.00	72.28										1.35	1.28

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 17.05				ASH % -					
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	CUM.	VOL.	VOL.	MOIST	CUM.
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	
1.40	13.21	5.81	13.21	5.81	86.79	40.20								0.74	0.74
1.45	15.45	7.41	28.66	6.67	71.34	47.30								0.77	0.76
1.50	8.84	12.48	37.50	8.04	62.50	52.22								1.00	0.81
1.60	13.40	18.84	50.90	10.88	49.10	61.33								1.10	0.89
1.70	7.37	27.73	58.27	13.01	41.73	67.26								1.78	1.00
1.80	6.32	34.61	64.59	15.13	35.41	73.09								1.15	1.02
2.00	5.24	45.58	69.83	17.41	30.17	77.87								1.39	1.04
2.60	30.17	77.87	100.00	35.65										1.23	1.10

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85012 SEAM - K

SAMPLE ID - 43

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	0.50 X		0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				2.51 ASH % -		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	10.82	3.26	10.82	3.26	89.18	35.34										1.09	1.09
1.45	23.72	8.18	34.54	6.64	65.46	45.18										1.28	1.22
1.50	5.85	9.08	40.39	6.99	59.61	48.73										1.49	1.26
1.60	12.30	16.22	52.69	9.15	47.31	57.18										1.00	1.20
1.70	6.08	20.69	58.77	10.34	41.23	62.56										2.17	1.30
1.80	7.83	27.50	66.60	12.36	33.40	70.78										1.78	1.36
2.00	7.46	43.62	74.06	15.51	25.94	78.59										1.85	1.41
2.60	25.94	78.59	100.00	31.87												1.12	1.33

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	0.15 X		0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				1.37 ASH % -		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	37.44	100.00	37.44												1.23	1.23

```

GCRI COAL DIVISION  HEAD  PROJ  KPN  BLK  LR  DS  DDH85012
=====
SAMPLE ID              44      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED  16/05/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           -----
TOTAL MOISTURE %             4.67
EQUILIBRIUM MOISTURE %      -----
RESIDUAL MOISTURE %          0.79
ASH %                        34.04
VOLATILE MATTER %           9.53
FIXED CARBON %              55.64

TOTAL SULPHUR %              0.40
PHOSPHOROUS %               -----
CHLORINE (PPM)              66040
SPECIFIC GRAVITY            1.30
FSI                          -----
HGI                          68.0
CO2 %                        3.84

GROSS CALORIFIC VALUE (MJ/KG)  21.28
NET CALORIFIC VALUE (MJ/KG)  -----

```

```

GCRI COAL DIVISION  SIZE  PROJ  KPN  BLK  LR  DS  DDH85012
=====
SAMPLE ID              44      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID      SZ1      DATE ANALYSED  05/06/85
FRACTION SIZE        WT%   ASH%   FSI   CAL   RM   VM   TS
FROM (MM) TO (MM)   (MJ/KG)
50.00  25.00  27.27  -----  -----  -----  -----  -----
25.00  12.00  18.09  -----  -----  -----  -----  -----
12.00  6.00   10.10  -----  -----  -----  -----  -----
6.00   1.00   28.22  -----  -----  -----  -----  -----
1.00   0.50   7.00   -----  -----  -----  -----  -----
0.50   0.15   5.96   -----  -----  -----  -----  -----
0.15   0.00   3.36   -----  -----  -----  -----  -----
-----  -----  -----  -----  -----  -----  -----  -----

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN  BLK  LR  DS  DDH85012
=====
SAMPLE ID              44      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID     SP1      DATE ANALYSED  21/05/85
SPLIT SAMPLE ID      UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %                0.79
CARBON %               57.48
HYDROGEN %             2.14
SULPHUR %              0.40
NITROGEN %             0.72
ASH %                  34.04
OXYGEN %               4.43

```

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85012 SEAM - K (REPEAT) SAMPLE ID - 44 WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. SINKS		RELATIVE WEIGHT % -		5.96 ASH % -		CUM.		
	ELEMENTAL	CUM.	FLOATS	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	CUM.	VOL.	MOIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	MOIST
1.40	35.67	3.40	35.67	3.40	64.33	21.28						0.76	0.76
1.45	17.21	5.84	52.88	4.19	47.12	26.92						1.07	0.86
1.50	5.37	9.36	58.25	4.67	41.75	29.18						1.45	0.92
1.60	10.50	12.41	68.75	5.85	31.25	34.82						1.32	0.98
1.70	10.13	18.68	78.88	7.50	21.12	42.56						1.60	1.06
1.80	7.88	25.46	86.76	9.13	13.24	52.73						1.83	1.13
2.00	6.47	39.31	93.23	11.23	6.77	65.56						1.84	1.18
2.60	6.77	65.56	100.00	14.90								1.58	1.20

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. SINKS		RELATIVE WEIGHT % -		3.36 ASH % -		CUM.		
	ELEMENTAL	CUM.	FLOATS	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	CUM.	VOL.	MOIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	MOIST
240.00	*****	20.08	100.00	20.08								1.04	1.04

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 44
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 21/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1338.0
 SOFTENING TEMP.(C) 1357.0
 HEMISPHERICAL TEMP.(C) 1374.0
 FLUID TEMP.(C) 1409.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1251.0
 SOFTENING TEMP.(C) 1286.0
 HEMISPHERICAL TEMP.(C) 1297.0
 FLUID TEMP.(C) 1377.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 44
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 21/05/85

SILICON DIOXIDE %	(SI02)	55.38
ALUMINIUM OXIDE %	(AL2O3)	20.08
FERRIC OXIDE %	(FE2O3)	10.11
TITANIUM DIOXIDE %	(TI02)	1.19
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.28
CALCIUM OXIDE %	(CAO)	2.65
MAGNESIUM OXIDE %	(MGO)	3.52
SULPHUR TRIOXIDE %	(SO3)	2.83
SODIUM OXIDE %	(NA2O)	1.73
POTASSIUM OXIDE %	(K2O)	1.81

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 44
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 21/05/85

PYRITE	%	12.50
SULPHATE	%	0.00
ORGANIC	%	87.50


```

GCRI COAL DIVISION  HEAD      PROJ  KPN      BLK  LR      DS  DDH85012
=====
SAMPLE ID              45      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED  03/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)              50.00
SURFACE MOISTURE %         ---
TOTAL MOISTURE %          5.74
EQUILIBRIUM MOISTURE %    ---
RESIDUAL MOISTURE %       2.55
ASH %                     21.06
VOLATILE MATTER %         7.06
FIXED CARBON %           69.33

TOTAL SULPHUR %           0.43
PHOSPHOROUS %            ---
CHLORINE (PPM)           00552
SPECIFIC GRAVITY         1.35
FSI                       ---
HGI                      49.0
CO2 %                    2.49

GROSS CALORIFIC VALUE (MJ/KG)  26.42
NET CALORIFIC VALUE (MJ/KG)  ---

```

```

GCRI COAL DIVISION  SIZE      PROJ  KPN      BLK  LR      DS  DDH85012
=====
SAMPLE ID              45      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID      SZ1      DATE ANALYSED  25/06/85
FRACTION SIZE        WTX%    ASH%    FSI      CAL      RM      VM      TS
FROM (MM) TO (MM)    (MJ/KG)
50.00  25.00  36.82  ---     ---     ---     ---     ---
25.00  12.00  10.03  ---     ---     ---     ---     ---
12.00  6.00    9.78   ---     ---     ---     ---     ---
6.00   1.00    28.65  ---     ---     ---     ---     ---
1.00   0.50    6.13   ---     ---     ---     ---     ---
0.50   0.15    5.41   ---     ---     ---     ---     ---
0.15   0.00    3.18   ---     ---     ---     ---     ---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN      BLK  LR      DS  DDH85012
=====
SAMPLE ID              45      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID     SP1      DATE ANALYSED  03/06/85
SPLIT SAMPLE ID      UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %                2.55
CARBON %               88.78
HYDROGEN %             2.53
SULPHUR %              0.43
NITROGEN %             0.80
ASH %                  21.06
OXYGEN %               3.85

```

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 45
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1333.0
 SOFTENING TEMP.(C) 1363.0
 HEMISPHERICAL TEMP.(C) 1382.0
 FLUID TEMP.(C) 1423.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1278.0
 SOFTENING TEMP.(C) 1311.0
 HEMISPHERICAL TEMP.(C) 1336.0
 FLUID TEMP.(C) 1417.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 45
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	55.00
ALUMINIUM OXIDE %	(AL2O3)	18.29
FERRIC OXIDE %	(FE2O3)	8.19
TITANIUM DIOXIDE %	(TI02)	1.58
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.12
CALCIUM OXIDE %	(CAO)	4.74
MAGNESIUM OXIDE %	(MGO)	3.33
SULPHUR TRIOXIDE %	(S03)	5.79
SODIUM OXIDE %	(NA2O)	1.81
POTASSIUM OXIDE %	(K2O)	0.72

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 45
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	6.98
SULPHATE	%	0.00
ORGANIC	%	93.02

GORI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 46 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 03/06/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 4.59
 EQUILIBRIUM MOISTURE % ---

RESIDUAL MOISTURE % 1.73
 ASH % 59.51
 VOLATILE MATTER % 7.29
 FIXED CARBON % 31.47

GROSS CALORIFIC VALUE (MJ/KG) 11.22
 NET CALORIFIC VALUE (MJ/KG) ---

TOTAL SULPHUR % 0.18
 PHOSPHOROUS % ---
 CHLORINE (PPM) 00088
 SPECIFIC GRAVITY 1.87
 FSI ---
 HGI 8210
 CO2 % 3.12

GORI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 46 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 25/06/85

FRACTION SIZE	WT%	ASH%	FSI	CAL (MJ/KG)	RM	VM	TS
FROM (MM) TO (MM)							
50.00 25.00	58.22	---	---	---	---	---	---
25.00 12.00	15.48	---	---	---	---	---	---
12.00 6.00	7.11	---	---	---	---	---	---
6.00 1.00	10.85	---	---	---	---	---	---
1.00 0.50	3.19	---	---	---	---	---	---
0.50 0.15	3.02	---	---	---	---	---	---
0.15 0.00	2.13	---	---	---	---	---	---

GORI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 46
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 03/06/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	1.73
CARBON	%	31.18
HYDROGEN	%	1.70
SULPHUR	%	0.18
NITROGEN	%	0.59
ASH	%	59.51
OXYGEN	%	5.11

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 46
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1316.0
 SOFTENING TEMP.(C) 1368.0
 HEMISPHERICAL TEMP.(C) 1382.0
 FLUID TEMP.(C) 1448.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1284.0
 SOFTENING TEMP.(C) 1333.0
 HEMISPHERICAL TEMP.(C) 1369.0
 FLUID TEMP.(C) 1448.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 46
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SiO2)	63.03
ALUMINIUM OXIDE %	(AL2O3)	20.83
FERRIC OXIDE %	(FE2O3)	3.35
TITANIUM DIOXIDE %	(TiO2)	1.10
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.06
CALCIUM OXIDE %	(CAO)	2.57
MAGNESIUM OXIDE %	(MGO)	2.32
SULPHUR TRIOXIDE %	(SO3)	1.46
SODIUM OXIDE %	(NA2O)	2.77
POTASSIUM OXIDE %	(K2O)	0.75

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 46
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	16.67
SULPHATE	%	0.00
ORGANIC	%	83.33

GORI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 47 DATA TYPE (REAL,BORD,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 03/06/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % 1.69 TOTAL SULPHUR % 0.34
 TOTAL MOISTURE % 3.32 PHOSPHOROUS % 1.69
 EQUILIBRIUM MOISTURE % 1.69 CHLORINE (PPM) 60152
 RESIDUAL MOISTURE % 1.69 FSI 1.69
 ASH % 35.15 HGI 49.0
 VOLATILE MATTER % 9.67 CO2 % 5.64
 FIXED CARBON % 53.49

 GROSS CALORIFIC VALUE (MJ/KG) 20.42
 NET CALORIFIC VALUE (MJ/KG) 18.88

GORI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 47 DATA TYPE (REAL,BORD,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 25/06/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 25.00 64.16 1.69 1.69 1.69 1.69 1.69
 25.00 12.00 13.59 1.69 1.69 1.69 1.69 1.69
 12.00 6.00 6.77 1.69 1.69 1.69 1.69 1.69
 6.00 1.00 11.16 1.69 1.69 1.69 1.69 1.69
 1.00 0.50 1.84 1.69 1.69 1.69 1.69 1.69
 0.50 0.15 1.58 1.69 1.69 1.69 1.69 1.69
 0.15 0.00 0.90 1.69 1.69 1.69 1.69 1.69

GORI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85012
 =====
 SAMPLE ID 47
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORD,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 03/06/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.69
 CARBON % 55.38
 HYDROGEN % 2.37
 SULPHUR % 0.34
 NITROGEN % 0.62
 ASH % 35.15
 OXYGEN % 4.45

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlR00DH85012 SEAM - I

SAMPLE ID - 46

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. SINKS		RELATIVE WEIGHT % -			3.02 ASH % -		CUM.			
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	4.12	5.74	4.12	5.74	95.88	49.41								0.99	0.99
1.45	10.82	6.25	14.94	6.11	85.06	54.90								0.93	0.95
1.50	5.67	8.26	20.61	6.70	79.39	58.23								0.94	0.94
1.60	9.11	12.58	29.72	8.50	70.28	64.14								1.14	1.00
1.70	6.87	18.18	36.59	10.32	63.41	69.12								1.86	1.17
1.80	9.79	24.16	46.38	13.24	53.62	77.33								1.29	1.19
2.00	5.67	36.60	52.05	15.79	47.95	82.15								1.06	1.18
2.60	47.95	82.15	100.00	47.61										1.44	1.30

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. SINKS		RELATIVE WEIGHT % -			2.13 ASH % -		45.57		CUM.	
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	45.57	100.00	45.57										1.72	1.72

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 47
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

REDUCING ATMOSPHERE

INITIAL TEMP.(C)	1276.0	INITIAL TEMP.(C)	1251.0
SOFTENING TEMP.(C)	1308.0	SOFTENING TEMP.(C)	1265.0
HEMISPHERICAL TEMP.(C)	1322.0	HEMISPHERICAL TEMP.(C)	1284.0
FLUID TEMP.(C)	1376.0	FLUID TEMP.(C)	1365.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 47
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	47.57
ALUMINIUM OXIDE %	(AL2O3)	20.84
FERRIC OXIDE %	(FE2O3)	7.27
TITANIUM DIOXIDE %	(TI02)	1.36
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.56
CALCIUM OXIDE %	(CAO)	9.67
MAGNESIUM OXIDE %	(MGO)	3.94
SULPHUR TRIOXIDE %	(SO3)	3.99
SODIUM OXIDE %	(NA2O)	2.77
POTASSIUM OXIDE %	(K2O)	0.95

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85012
 =====

SAMPLE ID 47
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	14.71
SULPHATE	%	0.00
ORGANIC	%	25.29

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85012 SEAM - 1

SAMPLE ID - 45

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % -				5.41 ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	4.50	3.54	4.50	3.54	95.50	15.91							0.79	0.79
1.45	35.77	3.97	40.27	3.92	59.73	23.06							0.77	0.77
1.50	14.17	8.58	54.44	5.13	45.56	27.56							0.75	0.77
1.60	18.22	12.47	72.66	6.97	27.34	37.62							0.85	0.79
1.70	11.14	19.42	83.80	8.63	16.20	50.13							1.14	0.83
1.80	3.71	25.78	87.51	9.36	12.49	57.36							1.21	0.85
2.00	4.16	33.74	91.67	10.46	8.33	69.16							1.26	0.87
2.60	8.33	69.16	100.00	15.35									1.22	0.90

ANALYSIS TYPE - FROTH														
FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % -				3.18 ASH % -		18.95				
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
240.00	*****	18.95	100.00	18.95									1.76	1.76

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85Q12 SEAM - I

SAMPLE ID - 46

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT															
FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % -						80.81 ASH % -			
ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V.		CUM. C.V.		CUM. S		CUM. VOL.		CUM. MDIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MDIST	MDIST
1.40	1.65	6.85	1.65	6.85	98.35	67.39								0.84	0.84
1.45	1.12	8.14	2.77	7.37	97.23	68.07								0.65	0.76
1.50	1.23	11.10	4.00	8.52	96.00	68.80								0.72	0.75
1.60	2.64	19.07	6.64	12.71	93.36	70.21								0.99	0.85
1.70	7.37	33.53	14.01	23.66	85.99	73.35								1.16	1.01
1.80	10.16	39.78	24.17	30.44	75.83	77.85								0.88	0.96
2.00	7.70	49.19	31.87	34.97	68.13	81.09								0.83	0.93
2.60	68.13	81.09	100.00	66.39										1.26	1.15

ANALYSIS TYPE - FLOAT															
FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % -						14.04 ASH % -			
ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V.		CUM. C.V.		CUM. S		CUM. VOL.		CUM. MDIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MDIST	MDIST
1.40	1.67	2.09	1.67	2.09	98.33	52.68								0.95	0.95
1.45	6.36	4.74	8.03	4.19	91.97	55.99								0.96	0.96
1.50	5.22	10.38	13.25	6.63	86.75	58.74								1.03	0.99
1.60	13.52	22.45	26.77	14.62	73.23	65.44								1.23	1.11
1.70	11.96	26.40	38.73	18.25	61.27	73.06								1.76	1.31
1.80	8.36	34.45	47.09	21.13	52.91	79.16								1.91	1.42
2.00	4.22	45.09	51.31	23.10	48.69	82.11								1.83	1.45
2.60	48.69	82.11	100.00	51.83										1.15	1.30

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85012 SEAM - I

SAMPLE ID - 47

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 84.53 ASH % -								
ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V.		CUM. C.V.		CUM. S		CUM. S		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	
												MOIST	MOIST	
1.40	0.22	2.60	0.22	2.60	99.78	33.46							0.80	0.80
1.45	7.11	8.21	7.33	8.04	92.67	35.40							1.14	1.13
1.50	35.39	12.59	42.72	11.81	57.28	49.50							1.33	1.30
1.60	14.56	17.47	57.28	13.25	42.72	60.41							1.59	1.37
1.70	8.59	27.54	65.87	15.11	34.13	68.69							1.44	1.38
1.80	1.98	29.68	67.85	15.54	32.15	71.09							1.00	1.37
2.00	7.53	47.87	75.38	18.77	24.62	78.19							1.34	1.37
2.60	24.62	78.19	100.00	33.40									1.60	1.42

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 13.00 ASH % -								
ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V.		CUM. C.V.		CUM. S		CUM. S		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	
												MOIST	MOIST	
1.40	14.63	4.36	14.63	4.36	85.37	19.85							1.00	1.00
1.45	32.47	6.19	47.10	5.62	52.90	28.24							1.13	1.09
1.50	13.96	10.11	61.06	6.65	38.94	34.74							1.05	1.08
1.60	17.31	15.11	78.37	8.52	21.63	50.45							1.14	1.09
1.70	6.28	20.25	84.65	9.39	15.35	62.80							1.58	1.13
1.80	2.48	27.12	87.13	9.89	12.87	69.68							1.46	1.14
2.00	2.34	38.04	89.47	10.63	10.53	76.71							1.44	1.15
2.60	10.53	76.71	100.00	17.59									1.84	1.22

KPNLRDDH85013

```

GORI COAL DIVISION  HEAD  PROJ KPN  BLK LR  DS  DDH85013
=====
SAMPLE ID          62      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   HD1     DATE ANALYSED  25/05/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)          50.00
SURFACE MOISTURE %    ---
TOTAL MOISTURE %      10.41
EQUILIBRIUM MOISTURE % ---
RESIDUAL MOISTURE %   2.28
ASH %                 37.60
VOLATILE MATTER %     6.79
FIXED CARBON %        53.33

TOTAL SULPHUR %      0.57
PHOSPHOROUS %       ---
CHLORINE (PPM)      00312
SPECIFIC GRAVITY     1.26
FSI                  ---
HGI                  65.0
CO2 %                1.76

GROSS CALORIFIC VALUE (MJ/KG)  19.96
NET CALORIFIC VALUE (MJ/KG)  ---

```

```

GORI COAL DIVISION  SIZE  PROJ KPN  BLK LR  DS  DDH85013
=====
SAMPLE ID          62      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   SZ1     DATE ANALYSED  25/05/85
FRACTION SIZE     WTX%  ASH%    FSI    CAL    RM    VM    TS
FROM (MM) TO (MM) (MJ/KG)
50.00  25.00  22.43  ---   ---   ---   ---   ---
25.00  12.00  14.53  ---   ---   ---   ---   ---
12.00   6.00  10.17  ---   ---   ---   ---   ---
 6.00   1.00  27.71  ---   ---   ---   ---   ---
 1.00   0.50   9.41  ---   ---   ---   ---   ---
 0.50   0.15   9.61  ---   ---   ---   ---   ---
 0.15   0.00   6.14  ---   ---   ---   ---   ---
-----

```

```

GORI COAL DIVISION  ULTIMATE  PROJ KPN  BLK LR  DS  DDH85013
=====
SAMPLE ID          62
SAMPLE PRODUCT ID  SP1      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   UL1     DATE ANALYSED  25/05/85
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %          2.28
CARBON %         53.50
HYDROGEN %       1.85
SULPHUR %        0.57
NITROGEN %       0.77
ASH %            37.60
OXYGEN %         3.43

```


GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85013
 =====

SAMPLE ID 62
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 25/05/85

OXIDIZING ATMOSPHERE *****		REDUCING ATMOSPHERE *****	
INITIAL TEMP.(C)	1366.0	INITIAL TEMP.(C)	1319.0
SOFTENING TEMP.(C)	1409.0	SOFTENING TEMP.(C)	1366.0
HEMISPHERICAL TEMP.(C)	1420.0	HEMISPHERICAL TEMP.(C)	1398.0
FLUID TEMP.(C)	1448.0	FLUID TEMP.(C)	1448.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85013
 =====

SAMPLE ID 62
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 25/05/85

SILICON DIOXIDE %	(SI02)	58.62
ALUMINIUM OXIDE %	(AL2O3)	22.93
FERRIC OXIDE %	(FE2O3)	4.77
TITANIUM DIOXIDE %	(TI02)	1.22
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.76
CALCIUM OXIDE %	(CAO)	2.86
MAGNESIUM OXIDE %	(MGO)	2.49
SULPHUR TRIOXIDE %	(SO3)	1.89
SODIUM OXIDE %	(NA2O)	1.61
POTASSIUM OXIDE %	(K2O)	1.66

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85013
 =====

SAMPLE ID 62
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 25/05/85

PYRITE	%	28.00
SULPHATE	%	0.00
ORGANIC	%	72.00

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85013 SEAM - K

SAMPLE ID - 62

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SG-TME	SIZE(MM) 50.00 X 6.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 47.12				ASH % -		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.91	6.76	1.91	6.76	98.09	47.50										1.22	1.22
1.45	4.58	8.82	6.49	8.21	93.51	49.39										0.92	1.01
1.50	10.41	10.60	16.90	9.68	83.10	54.25										0.84	0.90
1.60	22.80	17.99	39.70	14.45	60.30	67.96										0.83	0.86
1.70	8.79	28.97	48.49	17.09	51.51	74.61										1.05	0.90
1.80	6.69	37.75	55.18	19.59	44.82	80.12										1.40	0.96
2.00	4.16	48.41	59.34	21.61	40.66	83.36										1.52	1.00
2.60	40.66	83.36	100.00	46.72												1.67	1.27

----- ANALYSIS TYPE - FLOAT -----

FRACTION SG-TME	SIZE(MM) 6.00 X 0.50		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 37.12				ASH % -		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	11.08	7.43	11.08	7.43	88.92	38.03										1.08	1.08
1.45	13.90	8.75	24.98	8.16	75.02	43.46										1.21	1.15
1.50	9.73	11.16	34.71	9.00	65.29	48.27										1.30	1.19
1.60	6.19	15.11	40.90	9.93	59.10	51.74										1.03	1.17
1.70	13.35	18.54	54.25	12.05	45.75	61.43										1.88	1.34
1.80	7.85	25.42	62.10	13.74	37.90	68.89										1.98	1.42
2.00	9.69	36.74	71.79	16.84	28.21	79.93										1.33	1.41
2.60	28.21	79.93	100.00	34.64												1.49	1.43

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85013 SEAM - K

SAMPLE ID - 62

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 9.61 ASH % -				CUM. C.V. CUM.		CUM. C.V. CUM.		CUM. C.V. CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	MOIST	MOIST
1.40	28.85	6.25	28.85	6.25	71.15	25.00								1.48	1.48		
1.45	18.15	6.87	47.00	6.49	53.00	31.21								1.03	1.31		
1.50	8.70	8.76	55.70	6.84	44.30	35.62								1.03	1.26		
1.60	14.26	13.93	69.96	8.29	30.04	45.92								1.56	1.32		
1.70	9.00	20.51	78.96	9.68	21.04	56.79								1.74	1.37		
1.80	4.27	28.63	83.23	10.65	16.77	63.96								1.16	1.36		
2.00	3.82	38.97	87.05	11.90	12.95	71.33								1.15	1.35		
2.60	12.95	71.33	100.00	19.59										1.75	1.40		

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 6.15 ASH % - 19.20				CUM. C.V. CUM.		CUM. C.V. CUM.		CUM. C.V. CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	MOIST	MOIST
240.00	*****	19.20	100.00	19.20										1.91	1.91		

```

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85013
=====
SAMPLE ID 48 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 16/05/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
SURFACE MOISTURE % --- TOTAL SULPHUR % 0.39
TOTAL MOISTURE % 5.23 PHOSPHOROUS % ---
EQUILIBRIUM MOISTURE % --- CHLORINE (PPM) 00248
RESIDUAL MOISTURE % 1.16 SPECIFIC GRAVITY 1.49
ASH % 19.05 FSI ---
VOLATILE MATTER % 7.09 HGI 47.0
FIXED CARBON % 72.70 CO2 % 1.61

GROSS CALORIFIC VALUE (MJ/KG) 26.91
NET CALORIFIC VALUE (MJ/KG) ---

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GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85013
=====
SAMPLE ID 48 DATA TYPE (REAL,BORO,AVER,CALC) CALC
SPLIT SAMPLE ID SZ1 DATE ANALYSED 05/06/85
FRACTION SIZE WT% ASH% FSI CAL RM VM TS
FROM (MM) TO (MM) (MJ/KG)
50.00 25.00 47.96 --- --- --- --- ---
25.00 12.00 12.32 --- --- --- --- ---
12.00 6.00 9.32 --- --- --- --- ---
6.00 1.00 20.33 --- --- --- --- ---
1.00 0.50 4.33 --- --- --- --- ---
0.50 0.15 3.79 --- --- --- --- ---
0.15 0.00 2.05 --- --- --- --- ---
-----

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GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85013
=====
SAMPLE ID 48
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID UL1 DATE ANALYSED 21/05/85
ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 1.16
CARBON % 72.08
HYDROGEN % 2.51
SULPHUR % 0.39
NITROGEN % 0.87
ASH % 19.05
OXYGEN % 3.94

```

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85013
 =====

SAMPLE ID 48
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 21/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1385.0
 SOFTENING TEMP.(C) 1398.0
 HEMISPHERICAL TEMP.(C) 1409.0
 FLUID TEMP.(C) 1448.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1210.0
 SOFTENING TEMP.(C) 1344.0
 HEMISPHERICAL TEMP.(C) 1357.0
 FLUID TEMP.(C) 1448.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85013
 =====

SAMPLE ID 48
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 21/05/85

SILICON DIOXIDE %	(SI02)	51.64
ALUMINIUM OXIDE %	(AL2O3)	25.71
FERRIC OXIDE %	(FE2O3)	5.14
TITANIUM DIOXIDE %	(TI02)	1.39
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.19
CALCIUM OXIDE %	(CAO)	3.82
MAGNESIUM OXIDE %	(MGO)	2.59
SULPHUR TRIOXIDE %	(SO3)	3.72
SODIUM OXIDE %	(NA2O)	2.27
POTASSIUM OXIDE %	(K2O)	1.80

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85013
 =====

SAMPLE ID 48
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 21/05/85

PYRITE	%	2.60
SULPHATE	%	0.00
ORGANIC	%	97.40

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85013 SEAM - I

SAMPLE ID - 48

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 69.50				ASH % -		CUM.		
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI	C.V.	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.38	4.26	6.38	4.26	93.62	21.19										0.82	0.82
1.45	42.01	7.06	48.39	6.69	51.61	32.70										0.91	0.90
1.50	9.88	12.85	58.27	7.74	41.73	37.40										1.14	0.94
1.60	15.99	20.34	74.26	10.45	25.74	47.99										1.14	0.98
1.70	5.26	30.40	79.52	11.77	20.48	52.51										1.14	0.99
1.80	6.57	33.45	86.09	13.42	13.91	61.51										1.15	1.00
2.00	3.64	38.21	89.73	14.43	10.27	69.77										1.25	1.01
2.60	10.27	69.77	100.00	20.11												1.02	1.02

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 24.66				ASH % -		CUM.		
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI	C.V.	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	57.78	4.44	57.78	4.44	42.22	25.88										1.02	1.02
1.45	13.85	9.22	71.63	5.36	28.37	34.02										1.07	1.03
1.50	7.10	13.98	78.73	6.14	21.27	40.71										1.31	1.05
1.60	6.82	18.64	85.55	7.14	14.45	51.12										1.55	1.09
1.70	3.75	26.56	89.30	7.95	10.70	59.73										1.07	1.09
1.80	1.56	32.41	90.86	8.37	9.14	64.39										1.52	1.10
2.00	1.97	42.33	92.83	9.09	7.17	70.45										1.42	1.11
2.60	7.17	70.45	100.00	13.49												1.18	1.11

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85013 SEAM - I

SAMPLE ID - 48

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. FLOATS		CUM. SINKS	RELATIVE WEIGHT % -				3.79 ASH % -		CUM. MOIST	CUM. MOIST
	WT%	ASH%	WT%	ASH%	WT%	ASH%		CUM. FSI	C.V.	CUM. C.V.	S	CUM. S	VOL.		
1.40	39.05	3.71	39.05	3.71	60.95	22.88								1.08	1.08
1.45	19.20	8.28	58.25	5.22	41.75	29.59								1.41	1.19
1.50	10.39	9.38	68.64	5.85	31.36	36.29								1.84	1.29
1.60	10.45	14.20	79.09	6.95	20.91	47.32								1.55	1.32
1.70	4.34	19.23	83.43	7.59	16.57	54.68								1.29	1.32
1.80	3.92	26.60	87.35	8.44	12.65	63.38								1.77	1.34
2.00	3.02	40.50	90.37	9.51	9.63	70.56								1.29	1.34
2.60	9.63	70.56	100.00	15.39										1.90	1.39

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -				2.05 ASH % -		CUM. MOIST	CUM. MOIST	
	WT%	ASH%	WT%	ASH%			CUM. FSI	C.V.	CUM. C.V.	S	CUM. S	VOL.			VOL.
240.00	*****	20.70	100.00	20.70										1.01	1.01

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85013
 =====
 SAMPLE ID 49 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 25/05/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 4.10
 EQUILIBRIUM MOISTURE % ---
 RESIDUAL MOISTURE % 1.31
 ASH % 33.85
 VOLATILE MATTER % 7.89
 FIXED CARBON % 56.95
 TOTAL SULPHUR % 0.62
 PHOSPHOROUS % ---
 CHLORINE (PPM) 00304
 SPECIFIC GRAVITY 1.21
 FSI ---
 HGI 48.0
 CO2 % 3.47
 GROSS CALORIFIC VALUE (MJ/KG) 21.04
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85013
 =====
 SAMPLE ID 49 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 05/06/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 (MM) TO (MM) (MJ/KG)
 50.00 25.00 51.11 --- --- --- --- --- ---
 25.00 12.00 12.92 --- --- --- --- --- ---
 12.00 6.00 6.39 --- --- --- --- --- ---
 6.00 1.00 18.03 --- --- --- --- --- ---
 1.00 0.50 6.69 --- --- --- --- --- ---
 0.50 0.15 3.90 --- --- --- --- --- ---
 0.15 0.00 0.96 --- --- --- --- --- ---
 --- --- --- --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85013
 =====
 SAMPLE ID 49
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 25/05/85
 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 1.31
 CARBON % 58.47
 HYDROGEN % 1.78
 SULPHUR % 0.62
 NITROGEN % 0.68
 ASH % 33.85
 OXYGEN % 3.29

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85013
 =====

SAMPLE ID 49
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 25/05/85

OXIDIZING ATMOSPHERE

 INITIAL TEMP.(C) 1322.0
 SOFTENING TEMP.(C) 1363.0
 HEMISPHERICAL TEMP.(C) 1382.0
 FLUID TEMP.(C) 1428.0

REDUCING ATMOSPHERE

 INITIAL TEMP.(C) 1257.0
 SOFTENING TEMP.(C) 1319.0
 HEMISPHERICAL TEMP.(C) 1333.0
 FLUID TEMP.(C) 1409.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85013
 =====

SAMPLE ID 49
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 25/05/85

SILICON DIOXIDE %	(SiO2)	56.62
ALUMINIUM OXIDE %	(AL2O3)	18.01
FERRIC OXIDE %	(FE2O3)	6.03
TITANIUM DIOXIDE %	(TiO2)	1.28
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.57
CALCIUM OXIDE %	(CAO)	6.27
MAGNESIUM OXIDE %	(MGO)	4.05
SULPHUR TRIOXIDE %	(SO3)	2.26
SODIUM OXIDE %	(NA2O)	2.08
POTASSIUM OXIDE %	(K2O)	0.82

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85013
 =====

SAMPLE ID 49
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 25/05/85

PYRITE	%	45.20
SULPHATE	%	0.00
ORGANIC	%	54.80

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85013 SEAM - H

SAMPLE ID - 49

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X		6.00		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -			70.42 ASH % -		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	ELEMENTAL WT%	ASH%	CUM. FLOATS WT%	ASH%			CUM. FSI	C.V. FSI (MJ KG)	CUM. C.V.	S	S				
1.40	7.21	3.50	7.21	3.50	92.79	42.05								0.89	0.89
1.45	8.59	8.29	15.80	6.10	84.20	45.49								0.96	0.93
1.50	7.64	15.49	23.44	9.16	76.56	48.49								1.08	0.98
1.60	16.58	22.46	40.02	14.67	59.98	55.68								0.87	0.93
1.70	13.53	34.27	53.55	19.62	46.45	61.92								0.97	0.94
1.80	2.75	36.62	56.30	20.45	43.70	63.51								1.15	0.95
2.00	13.46	49.24	69.76	26.01	30.24	69.86								1.02	0.97
2.60	30.24	69.86	100.00	39.27										1.08	1.00

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X		0.50		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -			24.72 ASH % -		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	ELEMENTAL WT%	ASH%	CUM. FLOATS WT%	ASH%			CUM. FSI	C.V. FSI (MJ KG)	CUM. C.V.	S	S				
1.40	25.54	3.61	25.54	3.61	74.46	32.62								0.91	0.91
1.45	21.56	9.04	47.10	6.10	52.90	42.23								1.02	0.96
1.50	8.38	13.55	55.48	7.22	44.52	47.63								1.16	0.99
1.60	10.07	20.59	65.55	9.28	34.45	55.53								1.29	1.04
1.70	5.56	28.94	71.11	10.81	28.89	60.65								1.14	1.04
1.80	3.82	35.38	74.93	12.07	25.07	64.50								1.26	1.06
2.00	7.92	45.21	82.85	15.23	17.15	73.41								1.47	1.10
2.60	17.15	73.41	100.00	25.21										1.12	1.10

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85013 SEAM - H

SAMPLE ID - 49

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SG-TME	SIZE(MM)		0.50 X ELEMENTAL CUM. FLOATS		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -				3.90 ASH % -		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	WT%	ASH%	WT%	ASH%			FSI	FSI (MJ/KG)	C.V.	S	S	VOL.				
1.40	27.81	4.78	27.81	4.78	72.19	31.62									1.24	1.24
1.45	16.75	5.32	44.56	4.98	55.44	39.56									1.63	1.39
1.50	7.25	8.17	51.81	5.43	48.19	44.29									1.22	1.36
1.60	10.09	13.16	61.90	6.69	38.10	52.53									1.95	1.46
1.70	5.93	23.06	67.83	8.12	32.17	57.96									1.10	1.43
1.80	5.30	27.37	73.13	9.52	26.87	64.00									1.72	1.45
2.00	6.31	38.97	79.44	11.86	20.56	71.68									1.36	1.44
2.60	20.56	71.68	100.00	24.16											1.15	1.38

ANALYSIS TYPE - FROTH

FRACTION SG-TME	SIZE(MM)		0.15 X ELEMENTAL CUM. FLOATS		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -				0.96 ASH % -		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	WT%	ASH%	WT%	ASH%			FSI	FSI (MJ/KG)	C.V.	S	S	VOL.				
240.00	*****	34.30	100.00	34.30											1.13	1.13

```

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85013
=====
SAMPLE ID 50 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 03/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
SURFACE MOISTURE % ---
TOTAL MOISTURE % 3.25
EQUILIBRIUM MOISTURE % ---
RESIDUAL MOISTURE % 1.35
ASH % 14.90
VOLATILE MATTER % 5.63
FIXED CARBON % 78.12

TOTAL SULPHUR % 0.80
PHOSPHOROUS % ---
CHLORINE (PPM) 00840
SPECIFIC GRAVITY 1.48
FSI ---
HGI 44.0
CO2 % 0.93

GROSS CALORIFIC VALUE (MJ/KG) 29.53
NET CALORIFIC VALUE (MJ/KG) ---

```

```

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85013
=====
SAMPLE ID 50 DATA TYPE (REAL,BORO,AVER,CALC) CALC
SPLIT SAMPLE ID SZ1 DATE ANALYSED 25/06/85
FRACTION SIZE WTY% ASH% FSI CAL RM VM TS
FROM (MM) TO (MM) (MJ/KG)
50.00 25.00 63.26 --- --- --- --- --- ---
25.00 12.00 11.97 --- --- --- --- --- ---
12.00 6.00 8.37 --- --- --- --- --- ---
6.00 1.00 10.89 --- --- --- --- --- ---
1.00 0.50 2.29 --- --- --- --- --- ---
0.50 0.15 2.01 --- --- --- --- --- ---
0.15 0.00 1.21 --- --- --- --- --- ---

```

```

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85013
=====
SAMPLE ID 50
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID UL1 DATE ANALYSED 03/06/85
ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 1.35
CARBON % 77.01
HYDROGEN % 2.50
SULPHUR % 0.80
NITROGEN % 0.88
ASH % 14.90
OXYGEN % 2.56

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85013
=====

SAMPLE ID 50
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1300.0
SOFTENING TEMP.(C) 1322.0
HEMISPHERICAL TEMP.(C) 1344.0
FLUID TEMP.(C) 1371.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1196.0
SOFTENING TEMP.(C) 1229.0
HEMISPHERICAL TEMP.(C) 1259.0
FLUID TEMP.(C) 1364.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85013
=====

SAMPLE ID 50
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	47.22
ALUMINIUM OXIDE %	(AL2O3)	21.79
FERRIC OXIDE %	(FE2O3)	10.32
TITANIUM DIOXIDE %	(TI02)	1.27
PHOSPHOROUS PENTOXIDE %	(P2O5)	2.55
CALCIUM OXIDE %	(CAO)	5.64
MAGNESIUM OXIDE %	(MGO)	3.41
SULPHUR TRIOXIDE %	(SO3)	2.69
SODIUM OXIDE %	(NA2O)	1.79
POTASSIUM OXIDE %	(K2O)	1.22

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85013
=====

SAMPLE ID 50
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	37.50
SULPHATE	%	0.00
ORGANIC	%	62.50

```

GCRI COAL DIVISION  HEAD      PROJ  KFN      BLK  LR      DS  DDH85013
=====
SAMPLE ID              51      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED   03/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,B6,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---
TOTAL MOISTURE %             3.18
EQUILIBRIUM MOISTURE %      ---
RESIDUAL MOISTURE %         1.92
ASH %                        72.32
VOLATILE MATTER %           5.93
FIXED CARBON %              19.83

TOTAL SULPHUR %              0.49
PHOSPHOROUS %               ---
CHLORINE (PPM)              00250
SPECIFIC GRAVITY            2.00
FSI                          ---
HGI                          58.0
CO2 %                        1.40

GROSS CALORIFIC VALUE (MJ/KG)  6.91
NET CALORIFIC VALUE (MJ/KG)  ---

```

```

GCRI COAL DIVISION  SIZE      PROJ  KFN      BLK  LR      DS  DDH85013
=====
SAMPLE ID              51      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID      SZ1      DATE ANALYSED   25/06/85
FRACTION SIZE        WTX      ASHX      FSI      CAL      RM      VM      TS
FROM (MM) TO (MM)   (MJ/KG)
50.00  25.00      70.36      ---      ---      ---      ---      ---
25.00  12.00      21.08      ---      ---      ---      ---      ---
12.00   6.00       4.16      ---      ---      ---      ---      ---
6.00   1.00       3.33      ---      ---      ---      ---      ---
1.00   0.50       0.49      ---      ---      ---      ---      ---
0.50   0.15       0.36      ---      ---      ---      ---      ---
0.15   0.00       0.22      ---      ---      ---      ---      ---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KFN      BLK  LR      DS  DDH85013
=====
SAMPLE ID              51      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID     SP1      DATE ANALYSED   03/06/85
SPLIT SAMPLE ID      UL1

```

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

```

WATER      %      1.92
CARBON     %      19.59
HYDROGEN  %      1.64
SULPHUR   %      0.49
NITROGEN  %      0.65
ASH        %      72.32
OXYGEN    %      3.39

```

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85013
=====

SAMPLE ID 51
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE		REDUCING ATMOSPHERE	
*****		*****	
INITIAL TEMP.(C)	1379.0	INITIAL TEMP.(C)	1311.0
SOFTENING TEMP.(C)	1448.0	SOFTENING TEMP.(C)	1390.0
HEMISPHERICAL TEMP.(C)	1448.0	HEMISPHERICAL TEMP.(C)	1428.0
FLUID TEMP.(C)	1448.0	FLUID TEMP.(C)	1448.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85013
=====

SAMPLE ID 51
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	58.75
ALLUMINIUM OXIDE %	(AL2O3)	25.93
FERRIC OXIDE %	(FE2O3)	4.27
TITANIUM DIOXIDE %	(TI02)	1.46
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.37
CALCIUM OXIDE %	(CAO)	1.02
MAGNESIUM OXIDE %	(MGO)	1.61
SULPHUR TRIOXIDE %	(SO3)	1.66
SODIUM OXIDE %	(NA2O)	2.89
POTASSIUM OXIDE %	(K2O)	1.91

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85013
=====

SAMPLE ID 51
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	53.06
SULPHATE	%	0.00
ORGANIC	%	46.94

GORI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85013
 =====
 SAMPLE ID 52 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 03/06/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) 50.00
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 3.34
 EQUILIBRIUM MOISTURE % ---
 RESIDUAL MOISTURE % 2.04
 ASH % 34.74
 VOLATILE MATTER % 7.82
 FIXED CARBON % 55.40

 TOTAL SULPHUR % 1.00
 PHOSPHOROUS % ---
 CHLORINE (PPM) 00272
 SPECIFIC GRAVITY 1.69
 FSI ---
 HGI 49.0
 CO2 % 2.89

 GROSS CALORIFIC VALUE (MJ/KG) 21.07
 NET CALORIFIC VALUE (MJ/KG) ---

GORI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85013
 =====
 SAMPLE ID 52 DATA TYPE (REAL,BORO,AVER,CALC) CALC
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 03/06/85
 FRACTION SIZE WTM% ASH% FSI CAL RM VM TS
 (MM) TO (MM) (MJ/KG)
 50.00 25.00 50.40 --- --- --- --- --- ---
 25.00 12.00 17.87 --- --- --- --- --- ---
 12.00 6.00 7.89 --- --- --- --- --- ---
 6.00 1.00 10.99 --- --- --- --- --- ---
 1.00 0.50 0.86 --- --- --- --- --- ---
 0.50 0.15 1.34 --- --- --- --- --- ---
 0.15 0.00 0.65 --- --- --- --- --- ---
 --- --- --- --- --- --- --- --- ---

GORI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85013
 =====
 SAMPLE ID 52
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 03/06/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 2.04
 CARBON % 56.76
 HYDROGEN % 1.90
 SULPHUR % 1.00
 NITROGEN % 0.71
 ASH % 34.74
 OXYGEN % 2.85

GORI COAL DIVISION ASH FUSION PROJ KFN BLK LR DS DDH85013
 =====

SAMPLE ID 52
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE *****		REDUCING ATMOSPHERE *****
INITIAL TEMP.(C) 1336.0		INITIAL TEMP.(C) 1240.0
SOFTENING TEMP.(C) 1344.0		SOFTENING TEMP.(C) 1251.0
HEMISPHERICAL TEMP.(C) 1357.0		HEMISPHERICAL TEMP.(C) 1265.0
FLUID TEMP.(C) 1379.0		FLUID TEMP.(C) 1355.0

GORI COAL DIVISION ASH MINERAL PROJ KFN BLK LR DS DDH85013
 =====

SAMPLE ID 52
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	52.41
ALUMINIUM OXIDE %	(AL2O3)	21.41
FERRIC OXIDE %	(FE2O3)	9.01
TITANIUM DIOXIDE %	(TI02)	1.16
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.72
CALCIUM OXIDE %	(CAO)	4.70
MAGNESIUM OXIDE %	(MGO)	2.82
SULPHUR TRIOXIDE %	(SO3)	4.34
SODIUM OXIDE %	(NA2O)	1.89
POTASSIUM OXIDE %	(K2O)	1.98

GORI COAL DIVISION SULPHUR PROJ KFN BLK LR DS DDH85013
 =====

SAMPLE ID 52
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	61.00
SULPHATE	%	0.00
ORGANIC	%	39.00

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlRDDH85013 SEAM - F

SAMPLE ID - 50

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. SINKS		RELATIVE WEIGHT % -			2.01 ASH % -			CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	7.72	3.06	7.72	3.06	92.28	17.49								0.92	0.92
1.45	34.55	3.59	42.27	3.49	57.73	25.80								0.89	0.90
1.50	8.57	7.30	50.84	4.13	49.16	29.03								1.00	0.91
1.60	17.13	11.35	67.97	5.95	32.03	38.48								1.39	1.03
1.70	9.97	16.76	77.94	7.34	22.06	48.30								1.56	1.10
1.80	5.76	22.29	83.70	8.36	16.30	57.50								1.30	1.11
2.00	4.07	31.01	87.77	9.41	12.23	66.31								1.31	1.12
2.60	12.23	66.31	100.00	16.37										1.98	1.23

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. SINKS		RELATIVE WEIGHT % -			1.21 ASH % - 23.01			CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	23.01	100.00	23.01										1.48	1.48

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPMLRDDH85013 SEAM - F

SAMPLE ID - 51

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -			0.36 ASH % -		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	ELEMENTAL WT%	ASH%	CUM. FLOATS WT%	ASH%			CUM. C.V.	CUM.	S	S	VOL.				
1.40	2.07	2.89	2.07	2.89	97.93	54.58								1.21	1.21
1.45	13.99	3.75	16.06	3.64	83.94	63.05								1.13	1.14
1.50	4.66	7.53	20.72	4.51	79.28	66.31								1.20	1.15
1.60	5.70	14.13	26.42	6.59	73.58	70.35								1.34	1.19
1.70	4.15	21.85	30.57	8.66	69.43	73.25								1.49	1.23
1.80	4.66	28.43	35.23	11.28	64.77	76.48								1.99	1.33
2.00	6.22	37.20	41.45	15.17	58.55	80.65								1.40	1.34
2.60	58.55	80.65	100.00	53.51										1.08	1.19

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -			0.22 ASH % - 64.40		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	ELEMENTAL WT%	ASH%	CUM. FLOATS WT%	ASH%			CUM. C.V.	CUM.	S	S	VOL.				
240.00	*****	64.40	100.00	64.40										1.60	1.60

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DATA SOURCE - KPNLRDDH85013 SEAM - F

SAMPLE ID - 52

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	50.00 X 6.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 86.16 ASH % -				CUM.			
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	0.35	2.33	0.35	2.33	99.65	36.86									1.02	1.02
1.45	1.43	7.40	1.78	6.40	98.22	37.29									1.24	1.20
1.50	6.82	8.93	8.60	8.41	91.40	39.41									1.13	1.14
1.60	29.66	21.18	38.26	18.31	61.74	48.17									1.50	1.42
1.70	23.85	29.20	62.11	22.49	37.89	60.11									1.46	1.44
1.80	7.82	36.97	69.93	24.11	30.07	66.12									1.50	1.44
2.00	7.22	49.20	77.15	26.46	22.85	71.47									1.58	1.46
2.60	22.85	71.47	100.00	36.74											1.56	1.48

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	6.00 X 0.50		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 11.85 ASH % -				CUM.			
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	9.66	4.40	9.66	4.40	90.34	26.60									0.98	0.98
1.45	18.39	5.64	28.05	5.21	71.95	31.96									1.05	1.03
1.50	14.72	11.03	42.77	7.21	57.23	37.34									1.10	1.05
1.60	23.28	18.56	66.05	11.21	33.95	50.22									1.11	1.07
1.70	10.83	28.59	76.88	13.66	23.12	60.35									1.20	1.09
1.80	4.91	36.96	81.79	15.06	18.21	66.66									1.55	1.12
2.00	5.44	47.24	87.23	17.07	12.77	74.93									1.65	1.15
2.60	12.77	74.93	100.00	24.46											1.38	1.18

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85013 SEAM - F

SAMPLE ID - 52

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.15		ELEMENTAL		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			1.34 ASH % -		CUM. MOIST	CUM. MOIST	
	SG-TME	WT%	ASH%	WT%			ASH%	WT%	ASH%	FSI	FSI (MJ/KG)			C.V.
1.40	7.85	1.95	7.85	1.95	92.15	36.39							1.10	1.10
1.45	19.45	3.97	27.30	3.39	72.70	45.07							0.92	0.97
1.50	9.73	8.34	37.03	4.69	62.97	50.74							1.05	0.99
1.60	13.40	15.03	50.43	7.44	49.57	60.40							1.13	1.03
1.70	7.59	23.27	58.02	9.51	41.98	67.11							1.31	1.07
1.80	5.03	30.65	63.05	11.20	36.95	72.07							1.58	1.11
2.00	6.66	41.57	69.71	14.10	30.29	78.78							1.77	1.17
2.60	30.29	78.78	100.00	33.69									1.33	1.22

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X 0.00		ELEMENTAL		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			0.65 ASH % - 43.01		CUM. MOIST	CUM. MOIST	
	SG-TME	WT%	ASH%	WT%			ASH%	WT%	ASH%	FSI	FSI (MJ/KG)			C.V.
240.00	*****	43.01	100.00	43.01									1.31	1.31

KPNLRDDH85014

GORI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85014		
=====									
SAMPLE ID	53	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 16/05/85							
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)					AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM									
TOP SIZE (MM)		50.00							
SURFACE MOISTURE %		---					TOTAL SULPHUR %	0.43	
TOTAL MOISTURE %		4.91					PHOSPHOROUS %	---	
EQUILIBRIUM MOISTURE %		---					CHLORINE (PPM)	00384	
						SPECIFIC GRAVITY	1.45		
RESIDUAL MOISTURE %		0.97					FSI	---	
ASH %		16.26					HGI	43.0	
VOLATILE MATTER %		6.94					CO2 %	1.43	
FIXED CARBON %		75.83							
GROSS CALORIFIC VALUE (MJ/KG)		29.35							
NET CALORIFIC VALUE (MJ/KG)		---							

GORI COAL DIVISION	SIZE	PROJ	KPN	BLK	LR	DS	DDH85014		
=====									
SAMPLE ID	53	DATA TYPE (REAL,BORO,AVER,CALC)					CALC		
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 05/06/85							
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS		
FROM (MM) TO (MM)				(MJ/KG)					
50.00 25.00	44.23	---	---	---	---	---	---	---	
25.00 12.00	18.00	---	---	---	---	---	---	---	
12.00 6.00	10.15	---	---	---	---	---	---	---	
6.00 1.00	18.15	---	---	---	---	---	---	---	
1.00 0.50	3.81	---	---	---	---	---	---	---	
0.50 0.15	3.54	---	---	---	---	---	---	---	
0.15 0.00	2.12	---	---	---	---	---	---	---	
-----	-----	-----	-----	-----	-----	-----	-----	-----	

GORI COAL DIVISION	ULTIMATE	PROJ	KPN	BLK	LR	DS	DDH85014		
=====									
SAMPLE ID	53	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED 21/05/85							
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)					AD		
WATER	%	0.97							
CARBON	%	75.59							
HYDROGEN	%	2.56							
SULPHUR	%	0.43							
NITROGEN	%	0.95							
ASH	%	16.26							
OXYGEN	%	3.24							

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85014
 =====

SAMPLE ID 53
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 21/05/85

OXIDIZING ATMOSPHERE		REDUCING ATMOSPHERE	
*****		*****	
INITIAL TEMP.(C)	1300.0	INITIAL TEMP.(C)	1286.0
SOFTENING TEMP.(C)	1379.0	SOFTENING TEMP.(C)	1333.0
HEMISPHERICAL TEMP.(C)	1387.0	HEMISPHERICAL TEMP.(C)	1355.0
FLUID TEMP.(C)	1445.0	FLUID TEMP.(C)	1407.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85014
 =====

SAMPLE ID 53
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 21/05/85

SILICON DIOXIDE %	(SI02)	51.67
ALUMINIUM OXIDE %	(AL2O3)	23.37
FERRIC OXIDE %	(FE2O3)	5.59
TITANIUM DIOXIDE %	(TI02)	1.26
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.92
CALCIUM OXIDE %	(CAO)	4.84
MAGNESIUM OXIDE %	(MGO)	3.32
SULPHUR TRIOXIDE %	(SO3)	4.36
SODIUM OXIDE %	(NA2O)	1.80
POTASSIUM OXIDE %	(K2O)	1.16

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85014
 =====

SAMPLE ID 53
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 21/05/85

PYRITE	%	2.30
SULPHATE	%	0.80
ORGANIC	%	97.70

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DATA SOURCE - KPNLRDDH85014 SEAM - I

SAMPLE ID - 53

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLDAT -----

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 72.37				ASH % -		CUM.				
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	8.99	3.85	8.99	3.85	91.01	19.84							0.64	0.64
1.45	33.28	6.54	42.27	5.97	57.73	27.50							0.63	0.63
1.50	23.24	10.55	65.51	7.59	34.49	38.92							0.87	0.72
1.60	11.52	15.58	77.03	8.79	22.97	50.63							0.81	0.73
1.70	4.61	22.83	81.64	9.58	18.36	57.61							0.79	0.73
1.80	4.54	31.88	86.18	10.76	13.82	66.06							0.91	0.74
2.00	4.28	36.88	90.46	11.99	9.54	79.15							0.78	0.74
2.60	9.54	79.15	100.00	18.40									1.28	0.80

----- ANALYSIS TYPE - FLDAT -----

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 21.97				ASH % -		CUM.				
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	57.44	4.58	57.44	4.58	42.56	26.01							0.68	0.68
1.45	9.93	7.80	67.37	5.05	32.63	31.55							0.67	0.68
1.50	8.52	10.77	75.89	5.70	24.11	38.89							0.81	0.69
1.60	9.79	15.45	85.68	6.81	14.32	54.92							0.93	0.72
1.70	3.57	23.00	89.25	7.46	10.75	65.52							1.11	0.74
1.80	1.34	30.15	90.59	7.79	9.41	70.56							1.47	0.75
2.00	1.33	42.32	91.92	8.29	8.08	75.21							1.31	0.75
2.60	8.08	75.21	100.00	13.70									1.36	0.80

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85014 SEAM - I

SAMPLE ID - 53

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.15		ELEMENTAL				CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 3.54 ASH % -							
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	32.80	4.06	32.80	4.06	67.20	20.83											1.34	1.34
1.45	24.98	5.05	57.78	4.49	42.22	30.16											1.71	1.50
1.50	9.34	8.24	67.12	5.01	32.88	36.39											1.11	1.45
1.60	11.82	12.63	78.94	6.15	21.06	49.73											1.59	1.47
1.70	6.00	17.89	84.94	6.98	15.06	62.41											1.47	1.47
1.80	2.34	26.94	87.28	7.52	12.72	68.94											1.77	1.48
2.00	2.12	43.07	89.40	8.36	10.60	74.11											1.36	1.47
2.60	10.60	74.11	100.00	15.33													1.27	1.45

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X 0.00		ELEMENTAL				CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 2.12 ASH % -							
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	19.19	100.00	19.19													1.13	1.13

GORI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85014
=====

SAMPLE ID 54 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 25/05/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
SURFACE MOISTURE % ---
TOTAL MOISTURE % 5.04
EQUILIBRIUM MOISTURE % ---

RESIDUAL MOISTURE % 1.26
ASH % 39.77
VOLATILE MATTER % 7.90
FIXED CARBON % 51.07

TOTAL SULPHUR % 0.35
PHOSPHOROUS % ---
CHLORINE (PPM) 00192
SPECIFIC GRAVITY 1.73

FSI ---
HGI 7110
CO2 % 3.63

GROSS CALORIFIC VALUE (MJ/KG) 19.85
NET CALORIFIC VALUE (MJ/KG) ---

GORI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85014
=====

SAMPLE ID 54 DATA TYPE (REAL,BORO,AVER,CALC) CALC
SPLIT SAMPLE ID SZ1 DATE ANALYSED 05/06/85

FRACTION SIZE	WT%	ASH%	FSI	CAL (MJ/KG)	RM	VM	TS
FROM (MM) TO (MM)							
50.00 25.00	41.90	---	---	---	---	---	---
25.00 12.00	14.48	---	---	---	---	---	---
12.00 6.00	8.91	---	---	---	---	---	---
6.00 1.00	22.44	---	---	---	---	---	---
1.00 0.50	5.16	---	---	---	---	---	---
0.50 0.15	4.55	---	---	---	---	---	---
0.15 0.00	2.56	---	---	---	---	---	---

GORI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85014
=====

SAMPLE ID 54
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID UL1 DATE ANALYSED 25/05/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	1.26
CARBON	%	52.86
HYDROGEN	%	1.78
SULPHUR	%	0.35
NITROGEN	%	0.60
ASH	%	39.77
OXYGEN	%	3.38

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85014

SAMPLE ID 54
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 25/05/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1344.0
SOFTENING TEMP.(C) 1371.0
HEMISPHERICAL TEMP.(C) 1382.0
FLUID TEMP.(C) 1431.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1319.0
SOFTENING TEMP.(C) 1344.0
HEMISPHERICAL TEMP.(C) 1366.0
FLUID TEMP.(C) 1420.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85014

SAMPLE ID 54
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 25/05/85

SILICON DIOXIDE %	(SI02)	63.80
ALUMINIUM OXIDE %	(AL2O3)	14.49
FERRIC OXIDE %	(FE2O3)	4.88
TITANIUM DIOXIDE %	(TI02)	0.86
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.17
CALCIUM OXIDE %	(CAO)	6.25
MAGNESIUM OXIDE %	(MGO)	3.94
SULPHUR TRIOXIDE %	(SO3)	1.62
SODIUM OXIDE %	(NA2O)	1.14
POTASSIUM OXIDE %	(K2O)	0.97

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85014

SAMPLE ID 54
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 25/05/85

PYRITE	%	8.60
SULPHATE	%	0.00
ORGANIC	%	91.40

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DATA SOURCE - KPnlRDDH85014 SEAM - H

SAMPLE ID - 54

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT																	
FRACTION SIZE(MM)			50.00 X 6.00		RELATIVE WEIGHT % - 65.30 ASH % -												
SG-TME	ELEMENTAL	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM. S	CUM. VOL.	CUM. VOL.	MOIST	MOIST
1.40	1.64	8.13	1.64	8.13	98.36	48.37										1.05	1.05
1.45	2.58	9.23	4.22	8.80	95.78	49.42										1.00	1.02
1.50	2.94	13.08	7.16	10.56	92.84	50.58										0.99	1.01
1.60	10.67	24.35	17.83	18.81	82.17	53.98										0.74	0.85
1.70	22.03	29.81	39.86	24.89	60.14	62.84										0.77	0.80
1.80	13.84	38.44	53.70	28.38	46.30	70.13										0.72	0.78
2.00	12.01	50.45	65.71	32.42	34.29	77.02										0.73	0.77
2.60	34.29	77.02	100.00	47.71												1.56	1.04

ANALYSIS TYPE - FLOAT																	
FRACTION SIZE(MM)			6.00 X 0.50		RELATIVE WEIGHT % - 27.60 ASH % -												
SG-TME	ELEMENTAL	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM. S	CUM. VOL.	CUM. VOL.	MOIST	MOIST
1.40	42.44	10.30	42.44	10.30	57.56	37.72										0.98	0.98
1.45	2.70	11.78	45.14	10.39	54.86	39.00										1.06	0.98
1.50	2.17	12.79	47.31	10.50	52.69	40.08										1.17	0.99
1.60	12.64	17.41	59.95	11.96	40.05	47.23										1.26	1.05
1.70	13.05	25.88	73.00	14.45	27.00	57.55										1.22	1.08
1.80	7.02	35.14	80.02	16.26	19.98	65.42										1.76	1.14
2.00	6.07	46.31	86.09	18.38	13.91	73.76										2.01	1.20
2.60	13.91	73.76	100.00	26.08												1.05	1.18

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85014 SEAM - H

SAMPLE ID - 54

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	ELEMENTAL		0.50 X 0.15 CUM. FLOATS		CUM. SINKS	RELATIVE WEIGHT % -			4.55 ASH % -		CUM. MOIST	CUM. MOIST	
	WT%	ASH%	WT%	ASH%		FSI	FSI (MJ/KG)	C.V.	S	S			VOL.
1.40	8.54	5.06	8.54	5.06	91.46							1.13	1.13
1.45	21.30	5.95	29.84	5.70	70.16							0.99	1.03
1.50	9.95	8.60	39.79	6.42	60.21							1.28	1.09
1.60	19.60	11.17	59.39	7.99	40.61							1.65	1.28
1.70	9.71	17.66	69.10	9.35	30.90							1.14	1.26
1.80	10.07	21.66	79.17	10.91	20.83							1.48	1.29
2.00	7.40	35.53	86.57	13.02	13.43							1.24	1.28
2.60	13.43	71.50	100.00	20.87								1.98	1.38

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	ELEMENTAL		0.15 X 0.00 CUM. FLOATS		CUM. SINKS	RELATIVE WEIGHT % -			2.55 ASH % -		CUM. MOIST	CUM. MOIST	
	WT%	ASH%	WT%	ASH%		FSI	FSI (MJ/KG)	C.V.	S	S			VOL.
240.00	*****	22.46	100.00	22.46								1.37	1.97

```

GCRI COAL DIVISION  HEAD  PROJ  KPN  BLK  LR  DS  DDH85014
=====
SAMPLE ID          55      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   HD1      DATE ANALYSED 03/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)          50.00
SURFACE MOISTURE %    -----
TOTAL MOISTURE %      3.94
EQUILIBRIUM MOISTURE % -----
RESIDUAL MOISTURE %   1.23
ASH %                 35.85
VOLATILE MATTER %    6.59
FIXED CARBON %       56.33

TOTAL SULPHUR %      0.47
PHOSPHOROUS %       -----
CHLORINE (PPM)      02520
SPECIFIC GRAVITY    1.67
FSI                 -----
HGI                 49.0
CO2 %               2.10

GROSS CALORIFIC VALUE (MJ/KG)  21.66
NET CALORIFIC VALUE (MJ/KG)  -----

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GCRI COAL DIVISION  SIZE  PROJ  KPN  BLK  LR  DS  DDH85014
=====
SAMPLE ID          55      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID   SZ1      DATE ANALYSED 25/06/85
FRACTION SIZE     WT%   ASH%   FSI   CAL   RM   VM   TS
FROM (MM) TO (MM) (MJ/KG)
50.00 25.00 48.91 -----
25.00 12.00 14.49 -----
12.00 6.00 8.82 -----
6.00 1.00 18.12 -----
1.00 0.50 4.10 -----
0.50 0.15 3.67 -----
0.15 0.00 1.89 -----
-----

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GCRI COAL DIVISION  ULTIMATE  PROJ  KPN  BLK  LR  DS  DDH85014
=====
SAMPLE ID          55
SAMPLE PRODUCT ID  SP1      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   UL1      DATE ANALYSED 03/06/85

ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %           1.23
CARBON %          57.55
HYDROGEN %        1.89
SULPHUR %         0.47
NITROGEN %        0.62
ASH %             35.85
OXYGEN %          2.39

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85014 SEAM - F

SAMPLE ID - 55

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 72.23 ASH % -										
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	2.94	4.75	2.94	4.75	97.06	42.12							0.90	0.90
1.45	5.21	7.68	8.15	6.62	91.85	44.07							0.71	0.78
1.50	7.62	9.99	15.77	8.25	84.23	47.16							0.76	0.77
1.60	13.40	22.30	29.17	14.70	70.83	51.86							0.94	0.85
1.70	9.77	32.57	38.94	19.19	61.06	54.94							0.81	0.84
1.80	9.63	37.18	48.57	22.75	51.43	58.27							0.81	0.83
2.00	23.74	50.91	72.31	32.00	27.69	64.58							1.00	0.89
2.60	27.69	64.58	100.00	41.02									1.04	0.93

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 22.22 ASH % -										
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	29.93	5.65	29.93	5.65	70.07	35.62							0.79	0.79
1.45	8.64	8.00	38.57	6.18	61.43	39.50							0.84	0.80
1.50	10.20	12.22	48.77	7.44	51.23	44.93							0.84	0.81
1.60	10.41	19.51	59.18	9.56	40.82	51.41							1.06	0.85
1.70	6.81	26.76	65.99	11.34	34.01	56.35							1.19	0.89
1.80	6.37	33.83	72.36	13.32	27.64	61.54							1.58	0.95
2.00	9.18	44.75	81.54	16.86	18.46	69.89							1.73	1.04
2.60	18.46	69.89	100.00	26.65									1.91	1.20

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85014 SEAM - F

SAMPLE ID - 55

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -				3.67 ASH % -					
	SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	CUM. SINKS	FSI	FSI (MJ/KG)	C.V.	S	CUM.	CUM.	VOL.	VOL.	MOIST	MOIST
1.40	8.90	5.81	8.90	5.81	91.10	29.58									1.62	1.62
1.45	18.96	6.60	27.86	6.35	72.14	35.62									1.32	1.42
1.50	5.94	9.30	33.80	6.87	66.20	37.98									1.76	1.48
1.60	14.89	11.26	48.69	8.21	51.31	45.73									1.67	1.54
1.70	10.02	18.20	58.71	9.92	41.29	52.41									1.18	1.47
1.80	7.88	23.19	66.59	11.49	33.41	59.30									1.31	1.46
2.00	10.84	36.18	77.43	14.94	22.57	70.41									1.16	1.41
2.60	22.57	70.41	100.00	27.46											1.44	1.42

----- ANALYSIS TYPE - FROTH -----

FRACTION	SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -				1.88 ASH % -		31.96			
	SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	CUM. SINKS	FSI	FSI (MJ/KG)	C.V.	S	CUM.	CUM.	VOL.	VOL.	MOIST	MOIST
240.00	*****	31.96	100.00	31.96											1.08	1.08

KPNLRDDH85015

```

GCRI COAL DIVISION  HEAD      PROJ  KPN      BLK  LR      DS  DDH85015
=====
SAMPLE ID              56      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED   03/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---
TOTAL MOISTURE %             7.07
EQUILIBRIUM MOISTURE %      ---

RESIDUAL MOISTURE %         1.27
ASH %                       26.83
VOLATILE MATTER %          7.91
FIXED CARBON %             63.99

TOTAL SULPHUR %             0.77
PHOSPHOROUS %              1.400
CHLORINE (PPM)             01400
SPECIFIC GRAVITY           1.80
FSI                          ---
HGI                         63.0
CO2 %                       3.86

GROSS CALORIFIC VALUE (MJ/KG) 24.31
NET CALORIFIC VALUE (MJ/KG)  ---

```

```

GCRI COAL DIVISION  SIZE      PROJ  KPN      BLK  LR      DS  DDH85015
=====
SAMPLE ID              56      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID      SZ1      DATE ANALYSED   25/06/85

FRACTION SIZE      WTX      ASH%      FSI      CAL      RM      VM      TS
FROM (MM) TO (MM)
50.00  25.00  31.52  ---  ---  ---  ---  ---
25.00  12.00  14.92  ---  ---  ---  ---  ---
12.00   6.00   6.92  ---  ---  ---  ---  ---
 6.00   1.00  27.50  ---  ---  ---  ---  ---
 1.00   0.50   7.96  ---  ---  ---  ---  ---
 0.50   0.15   7.16  ---  ---  ---  ---  ---
 0.15   0.00   4.02  ---  ---  ---  ---  ---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN      BLK  LR      DS  DDH85015
=====
SAMPLE ID              56
SAMPLE PRODUCT ID     SP1      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      UL1      DATE ANALYSED   03/06/85

ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER      %      1.27
CARBON     %      64.98
HYDROGEN   %      1.94
SULPHUR    %      0.77
NITROGEN   %      0.70
ASH        %      26.83
OXYGEN     %      3.51

```


GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 56
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE		REDUCING ATMOSPHERE	
*****		*****	
INITIAL TEMP.(C)	1267.0	INITIAL TEMP.(C)	1183.0
SOFTENING TEMP.(C)	1286.0	SOFTENING TEMP.(C)	1226.0
HEMISPHERICAL TEMP.(C)	1311.0	HEMISPHERICAL TEMP.(C)	1245.0
FLUID TEMP.(C)	1387.0	FLUID TEMP.(C)	1371.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 56
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SiO2)	45.12
ALUMINIUM OXIDE %	(AL2O3)	19.46
FERRIC OXIDE %	(FE2O3)	8.96
TITANIUM DIOXIDE %	(TiO2)	0.86
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.18
CALCIUM OXIDE %	(CAO)	9.23
MAGNESIUM OXIDE %	(MGO)	5.23
SULPHUR TRIOXIDE %	(SO3)	7.89
SODIUM OXIDE %	(NA2O)	1.26
POTASSIUM OXIDE %	(K2O)	1.30

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 56
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	42.86
SULPHATE	%	0.00
ORGANIC	%	57.14

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85015 SEAM - E

SAMPLE ID - 56

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT										RELATIVE WEIGHT % - 53.36 ASH % -					
FRACTION SIZE(MM)		50.00 X		6.00		CUM. SINKS		CUM. C.V.		CUM. S		CUM. VOL.		CUM. MOIST	
SG-TME	ELEMENTAL WT%	ASH%	CUM. WT%	FLOATS ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.09	2.10	0.09	2.10	99.91	31.05								0.69	0.69
1.45	5.04	4.56	5.13	4.52	94.87	32.46								0.74	0.74
1.50	13.32	9.01	18.45	7.76	81.55	36.29								0.67	0.69
1.60	23.39	14.98	41.84	11.80	58.16	44.86								0.90	0.81
1.70	15.43	25.97	57.27	15.62	42.73	51.67								0.79	0.80
1.80	6.31	31.96	63.58	17.24	36.42	55.09								0.78	0.80
2.00	11.26	42.11	74.84	20.98	25.16	60.90								0.76	0.79
2.60	25.16	60.90	100.00	31.02										0.89	0.82

ANALYSIS TYPE - FLOAT										RELATIVE WEIGHT % - 35.46 ASH % -					
FRACTION SIZE(MM)		6.00 X		0.50		CUM. SINKS		CUM. C.V.		CUM. S		CUM. VOL.		CUM. MOIST	
SG-TME	ELEMENTAL WT%	ASH%	CUM. WT%	FLOATS ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	3.08	2.95	3.08	2.95	96.92	16.93								0.92	0.92
1.45	18.38	3.61	21.46	3.52	78.54	20.05								0.78	0.80
1.50	27.42	8.08	48.88	6.08	51.12	26.47								0.90	0.86
1.60	22.17	13.65	71.05	8.44	28.95	36.29								1.18	0.96
1.70	11.83	20.74	82.88	10.20	17.12	47.04								1.39	1.02
1.80	4.76	30.10	87.64	11.28	12.36	53.56								1.25	1.03
2.00	4.72	40.19	92.36	12.75	7.64	61.82								1.56	1.06
2.60	7.64	61.82	100.00	16.50										1.01	1.05

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85015 SEAM - E

SAMPLE ID - S6

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. SINKS		RELATIVE WEIGHT % -			7.16 ASH % -		CUM. MOIST	CUM. MOIST
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V.	CUM. S	CUM. S		
1.40	1.55	5.23	1.55	5.23	98.45	15.36						0.84	0.84
1.45	26.05	5.58	27.60	5.56	72.40	18.88						0.89	0.89
1.50	14.64	5.97	42.24	5.70	57.76	22.16						0.94	0.91
1.60	28.64	10.57	70.88	7.67	29.12	33.56						1.42	1.11
1.70	13.39	18.43	84.27	9.38	15.73	46.43						1.24	1.13
1.80	4.77	27.37	89.04	10.34	10.96	54.73						1.34	1.14
2.00	3.01	36.28	92.05	11.19	7.95	61.71						1.19	1.15
2.60	7.95	61.71	100.00	15.21								1.11	1.14

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. SINKS		RELATIVE WEIGHT % -			4.02 ASH % -		20.26	
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V.	CUM. S	CUM. S	VOL.	VOL.
240.00	*****	20.26	100.00	20.26								1.10	1.10

```

GCRI COAL DIVISION  HEAD      PROJ  KPN      BLK  LR      DS  DDH85015
=====
SAMPLE ID              57      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED   03/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,B3,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---.---
TOTAL MOISTURE %             4.78
EQUILIBRIUM MOISTURE %      ---.---
RESIDUAL MOISTURE %          1.50
ASH %                        38.50
VOLATILE MATTER %           6.98
FIXED CARBON %              53.02

TOTAL SULPHUR %              0.78
PHOSPHOROUS %               ---.---
CHLORINE (PPM)              01820
SPECIFIC GRAVITY            1.39
FSI                           ---.---
HGI                          89.0
CO2 %                        2.40

GROSS CALORIFIC VALUE (MJ/KG) 19.87
NET CALORIFIC VALUE (MJ/KG)  ---.---

```

```

GCRI COAL DIVISION  SIZE      PROJ  KPN      BLK  LR      DS  DDH85015
=====
SAMPLE ID              57      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID      SZ1      DATE ANALYSED   05/06/85
FRACTION SIZE        WT%      ASH%      FSI      CAL      RM      VM      TS
FROM (MM) TO (MM)   (MJ/KG)
50.00  25.00   33.36   ---.---   ---.---   ---.---   ---.---   ---.---
25.00  12.00   16.57   ---.---   ---.---   ---.---   ---.---   ---.---
12.00   6.00   11.00   ---.---   ---.---   ---.---   ---.---   ---.---
6.00    1.00   22.50   ---.---   ---.---   ---.---   ---.---   ---.---
1.00    0.50    6.05   ---.---   ---.---   ---.---   ---.---   ---.---
0.50    0.15    6.28   ---.---   ---.---   ---.---   ---.---   ---.---
0.15    0.00    4.24   ---.---   ---.---   ---.---   ---.---   ---.---

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN      BLK  LR      DS  DDH85015
=====
SAMPLE ID              57      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID     SP1      DATE ANALYSED   03/06/85
SPLIT SAMPLE ID      UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER      %      1.50
CARBON     %      52.82
HYDROGEN   %      2.06
SULPHUR    %      0.78
NITROGEN   %      0.60
ASH        %      38.50
OXYGEN     %      3.74

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 57
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE *****	REDUCING ATMOSPHERE *****
INITIAL TEMP.(C) 1311.0	INITIAL TEMP.(C) 1229.0
SOFTENING TEMP.(C) 1352.0	SOFTENING TEMP.(C) 1262.0
HEMISPHERICAL TEMP.(C) 1365.0	HEMISPHERICAL TEMP.(C) 1292.0
FLUID TEMP.(C) 1415.0	FLUID TEMP.(C) 1387.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 57
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	51.18
ALUMINIUM OXIDE %	(AL2O3)	24.98
FERRIC OXIDE %	(FE2O3)	8.12
TITANIUM DIOXIDE %	(TI02)	1.47
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.74
CALCIUM OXIDE %	(CAO)	2.45
MAGNESIUM OXIDE %	(MGO)	2.71
SULPHUR TRIOXIDE %	(SO3)	4.28
SODIUM OXIDE %	(NA2O)	1.91
POTASSIUM OXIDE %	(K2O)	2.11

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 57
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	47.44
SULPHATE	%	0.00
ORGANIC	%	52.56

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85015 SEAM - F

SAMPLE ID - 57

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT													
FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 60.92 ASH % -									
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. FSI (MJ/KG)	CUM. C.V.	S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%
1.40	1.50	4.01	1.50	4.01	98.50	46.55						0.84	0.84
1.45	3.61	5.36	5.11	4.96	94.89	48.12						0.75	0.78
1.50	3.47	15.55	8.58	9.25	91.42	49.36						1.14	0.92
1.60	10.88	18.47	19.46	14.40	80.54	53.53						1.32	1.15
1.70	13.53	25.79	32.99	19.07	67.01	59.13						1.24	1.18
1.80	12.35	32.68	45.34	22.78	54.66	65.11						1.28	1.21
2.00	15.63	47.10	60.97	29.01	39.03	72.32						1.43	1.27
2.60	39.03	72.32	100.00	45.92								1.15	1.22

ANALYSIS TYPE - FLOAT													
FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 28.55 ASH % -									
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. FSI (MJ/KG)	CUM. C.V.	S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%
1.40	0.41	4.28	0.41	4.28	99.59	33.01						0.87	0.87
1.45	8.57	6.37	8.98	6.27	91.02	35.51						0.75	0.76
1.50	9.90	9.24	18.88	7.83	81.12	38.72						1.03	0.90
1.60	15.44	14.47	34.32	10.82	65.68	44.42						1.61	1.22
1.70	12.50	19.35	46.82	13.10	53.18	50.31						1.79	1.37
1.80	14.17	27.08	60.99	16.34	39.01	58.75						1.03	1.29
2.00	15.60	40.63	76.59	21.29	23.41	70.83						1.84	1.40
2.60	23.41	70.83	100.00	32.89								1.11	1.33

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85015 SEAM - F

SAMPLE ID - 57

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. SINKS		RELATIVE WEIGHT % -				6.28 ASH % -				
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
1.40	10.08	7.22	10.08	7.22	89.92	24.67								1.53	1.53
1.45	15.80	8.64	25.88	8.09	74.12	28.09								1.41	1.46
1.50	13.76	11.89	39.64	9.41	60.36	31.78								1.04	1.31
1.60	14.81	13.62	54.45	10.55	45.55	37.68								1.39	1.33
1.70	13.69	17.01	68.14	11.85	31.86	46.56								1.22	1.31
1.80	9.36	26.14	77.50	13.58	22.50	55.06								1.24	1.30
2.00	9.62	37.45	87.12	16.21	12.88	68.21								1.30	1.30
2.60	12.88	68.21	100.00	22.91										1.64	1.37

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. SINKS		RELATIVE WEIGHT % -				4.25 ASH % - 22.32				
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
240.00	*****	22.32	100.00	22.32										1.30	1.30

```

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85015
=====
SAMPLE ID 58 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 03/06/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
SURFACE MOISTURE % ---
TOTAL MOISTURE % 4.04 TOTAL SULPHUR % 0.27
EQUILIBRIUM MOISTURE % --- PHOSPHOROUS % ---
RESIDUAL MOISTURE % 2.23 CHLORINE (PPM) 00720
ASH % 55.90 SPECIFIC GRAVITY 1.84
VOLATILE MATTER % 6.04 FSI ---
FIXED CARBON % 35.83 HGI 6210
CO2 % 1.48

GROSS CALORIFIC VALUE (MJ/KG) 12.23
NET CALORIFIC VALUE (MJ/KG) ---

```

```

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85015
=====
SAMPLE ID 58 DATA TYPE (REAL,BORO,AVER,CALC) CALC
SPLIT SAMPLE ID SZ1 DATE ANALYSED 03/06/85
FRACTION SIZE WT% ASH% FSI CAL RM VM TS
FROM (MM) TO (MM) (MJ/KG)
50.00 25.00 56.90 --- --- --- --- --- ---
25.00 12.00 14.69 --- --- --- --- --- ---
12.00 6.00 7.56 --- --- --- --- --- ---
6.00 1.00 13.26 --- --- --- --- --- ---
1.00 0.50 3.40 --- --- --- --- --- ---
0.50 0.15 2.83 --- --- --- --- --- ---
0.15 0.00 1.36 --- --- --- --- --- ---
-----

```

```

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85015
=====
SAMPLE ID 58
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID UL1 DATE ANALYSED 03/06/85
ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 2.32
CARBON % 35.45
HYDROGEN % 1.66
SULPHUR % 0.27
NITROGEN % 0.46
ASH % 55.90
OXYGEN % 3.94

```


GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 58
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1401.0
 SOFTENING TEMP.(C) 1439.0
 HEMISPHERICAL TEMP.(C) 1448.0
 FLUID TEMP.(C) 1448.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1319.0
 SOFTENING TEMP.(C) 1320.0
 HEMISPHERICAL TEMP.(C) 1377.0
 FLUID TEMP.(C) 1448.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 58
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	60.57
ALUMINIUM OXIDE %	(AL2O3)	21.96
FERRIC OXIDE %	(FE2O3)	6.35
TITANIUM DIOXIDE %	(TI02)	1.31
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.05
CALCIUM OXIDE %	(CAO)	0.82
MAGNESIUM OXIDE %	(MGO)	2.27
SULPHUR TRIOXIDE %	(SO3)	2.19
SODIUM OXIDE %	(NA2O)	2.13
POTASSIUM OXIDE %	(K2O)	1.97

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 58
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	25.93
SULPHATE	%	0.00
ORGANIC	%	74.07

```

GCRI COAL DIVISION  HEAD      PROJ  KPN      BLK  LR      DS  DDH85015
=====
SAMPLE ID              59      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED   03/06/85
                                   ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---
TOTAL MOISTURE %             3.32
EQUILIBRIUM MOISTURE %      ---
RESIDUAL MOISTURE %          1.83
ASH %                        57.14
VOLATILE MATTER %           6.55
FIXED CARBON %              34.48

TOTAL SULPHUR %              2.54
PHOSPHOROUS %               ---
CHLORINE (PPM)              00720
SPECIFIC GRAVITY            1.85
FSI                          ---
HGI                          61.0
CO2 %                        1.20

GROSS CALORIFIC VALUE (MJ/KG) 12.27
NET CALORIFIC VALUE (MJ/KG)  ---

```

```

GCRI COAL DIVISION  SIZE      PROJ  KPN      BLK  LR      DS  DDH85015
=====
SAMPLE ID              59      DATA TYPE (REAL,BORO,AVER,CALC)  CALC
SPLIT SAMPLE ID      SZ1      DATE ANALYSED   25/06/85
  FRACTION SIZE      WT%      ASH%      FSI      CAL      RM      VM      TB
FROM (MM) TO (MM)      (MJ/KG)
50.00  25.00      48.80      ---      ---      ---      ---      ---
25.00  12.00      15.18      ---      ---      ---      ---      ---
12.00   6.00       8.52       ---      ---      ---      ---      ---
 6.00   1.00      17.79      ---      ---      ---      ---      ---
 1.00   0.50       4.03       ---      ---      ---      ---      ---
 0.50   0.15       3.59       ---      ---      ---      ---      ---
 0.15   0.00       2.09       ---      ---      ---      ---      ---
-----

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN      BLK  LR      DS  DDH85015
=====
SAMPLE ID              59      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID     SP1      DATE ANALYSED   03/06/85
SPLIT SAMPLE ID      UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER      %      1.83
CARBON     %      34.08
HYDROGEN  %      1.69
SULPHUR   %      2.54
NITROGEN  %      0.45
ASH       %      57.14
OXYGEN    %      2.27

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 59
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 03/06/85

OXIDIZING ATMOSPHERE *****		REDUCING ATMOSPHERE *****	
INITIAL TEMP.(C)	1352.0	INITIAL TEMP.(C)	1229.0
SOFTENING TEMP.(C)	1368.0	SOFTENING TEMP.(C)	1245.0
HEMISPHERICAL TEMP.(C)	1420.0	HEMISPHERICAL TEMP.(C)	1314.0
FLUID TEMP.(C)	1437.0	FLUID TEMP.(C)	1390.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 59
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 03/06/85

SILICON DIOXIDE %	(SI02)	58.19
ALUMINIUM OXIDE %	(AL2O3)	19.84
FERRIC OXIDE %	(FE2O3)	9.16
TITANIUM DIOXIDE %	(TI02)	1.09
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.17
CALCIUM OXIDE %	(CAO)	1.67
MAGNESIUM OXIDE %	(MGO)	2.26
SULPHUR TRIOXIDE %	(SO3)	3.67
SODIUM OXIDE %	(NA2O)	1.61
POTASSIUM OXIDE %	(K2O)	2.09

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85015
 =====

SAMPLE ID 59
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 03/06/85

PYRITE	%	85.43
SULPHATE	%	0.39
ORGANIC	%	14.17

GULF CANADA RESOURCES INC. - COAL DIVISION

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DATA SOURCE - KPNLRDDH85015 SEAM - G

SAMPLE ID - 58

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)		50.00 X 6.00		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % - 79.15 ASH % -				CUM. MOIST	CUM. MOIST	
	SG-TME	ELEMENTAL WT%	ASH%	CUM. FLOATS WT%			ASH%	CUM. FSI	C.V. (MJ/KG)	CUM. S			ASH % S
1.45	1.43	3.55	1.43	3.55	98.57	61.81						0.89	0.89
1.50	1.44	9.14	2.87	6.35	97.13	62.59						0.84	0.86
1.60	1.43	16.92	4.30	9.87	95.70	63.27						0.85	0.86
1.70	1.14	27.31	5.44	13.52	94.56	63.70						1.01	0.89
1.80	13.02	36.12	18.46	29.46	81.54	68.11						1.18	1.09
2.00	24.74	47.39	43.20	39.73	56.80	77.13						1.40	1.27
2.60	56.80	77.13	100.00	60.97								1.61	1.46

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)		6.00 X 0.50		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % - 16.66 ASH % -				CUM. MOIST	CUM. MOIST	
	SG-TME	ELEMENTAL WT%	ASH%	CUM. FLOATS WT%			ASH%	CUM. FSI	C.V. (MJ/KG)	CUM. S			ASH % S
1.40	8.38	3.68	8.38	3.68	91.62	41.66						1.04	1.04
1.45	12.39	4.35	20.77	4.08	79.23	47.50						0.90	0.96
1.50	5.02	8.03	25.79	4.85	74.21	50.17						0.88	0.94
1.60	6.11	17.63	31.90	7.30	68.10	53.09						1.04	0.96
1.70	7.64	27.04	39.54	11.11	60.46	56.38						1.16	1.00
1.80	11.88	34.76	51.42	16.58	48.58	61.66						1.48	1.11
2.00	19.58	46.07	71.00	24.71	29.00	72.19						1.68	1.27
2.60	29.00	72.19	100.00	38.48								1.64	1.38

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DATA SOURCE - KPNLRDDH85015 SEAM - G

SAMPLE ID - 58

WASHABILITY ID - WA2

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -					2.83 ASH % -			
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.						
1.40	6.52	4.25	6.52	4.25	93.48	35.96							0.88	0.88
1.45	21.99	4.51	28.51	4.45	71.49	45.63							0.95	0.93
1.50	10.90	6.17	39.41	4.93	60.59	52.73							0.97	0.94
1.60	7.54	13.95	46.95	6.38	53.05	58.24							0.94	0.94
1.70	6.19	22.45	53.14	8.25	46.86	62.97							1.34	0.99
1.80	5.35	30.90	58.49	10.32	41.51	67.11							1.79	1.06
2.00	9.79	40.46	68.28	14.64	31.72	75.33							1.04	1.06
2.60	31.72	75.33	100.00	33.89									1.30	1.14

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -					1.36 ASH % -		43.76	
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.						
240.00	*****	43.76	100.00	43.76									1.67	1.67

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DATA SOURCE - KPNLRDDH85015 SEAM - G

SAMPLE ID - 59

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 72.50				ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.31	6.02	1.31	6.02	98.69	64.22							0.44	0.44
1.45	0.87	6.66	2.18	6.28	97.82	64.73							0.68	0.54
1.50	1.21	7.60	3.39	6.75	96.61	65.45							0.50	0.52
1.60	2.80	17.95	6.19	11.82	93.81	66.87							0.52	0.52
1.70	6.27	29.82	12.46	20.88	87.54	69.52							0.57	0.55
1.80	7.26	35.74	19.72	26.35	80.28	72.57							0.59	0.56
2.00	25.07	49.66	44.79	39.40	55.21	82.98							0.86	0.73
2.60	55.21	82.98	100.00	63.46									0.82	0.78

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 21.82				ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	7.69	4.06	7.69	4.06	92.31	42.66							0.53	0.53
1.45	9.34	4.49	17.03	4.30	82.97	46.96							0.31	0.41
1.50	5.87	10.62	22.90	5.92	77.10	49.73							0.54	0.44
1.60	10.90	17.45	33.80	9.64	66.20	55.04							0.65	0.51
1.70	11.22	25.83	45.02	13.67	54.98	61.01							0.88	0.60
1.80	9.34	33.66	54.36	17.11	45.64	66.60							1.11	0.69
2.00	14.17	46.35	68.53	23.15	31.47	75.72							1.32	0.82
2.60	31.47	75.72	100.00	39.70									1.55	1.05

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DATA SOURCE - KPNLRDDH85015 SEAM - G

SAMPLE ID - 59

WASHABILITY ID - WA2

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % -				3.59 ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	4.63	4.29	4.63	4.29	95.37	34.35							0.69	0.69
1.45	17.65	5.34	22.28	5.12	77.72	40.94							0.88	0.84
1.50	9.39	5.80	31.67	5.32	68.33	45.77							0.85	0.84
1.60	10.18	13.28	41.85	7.26	58.15	51.46							1.25	0.94
1.70	8.91	19.35	50.76	9.38	49.24	57.27							1.10	0.97
1.80	8.58	27.35	59.34	11.98	40.66	63.58							1.89	1.10
2.00	10.99	40.02	70.33	16.36	29.67	72.31							1.01	1.09
2.60	29.67	72.31	100.00	32.96									1.28	1.15

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % -				2.09 ASH % -		38.91				
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	38.91	100.00	38.91									1.60	1.60

GORI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85015		
=====									
SAMPLE ID	60	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 03/06/85							
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)					ASTM			AD	
=====									
TOP SIZE (MM)		50.00							
SURFACE MOISTURE %		---					TOTAL SULPHUR %		3.73
TOTAL MOISTURE %		4.31					PHOSPHOROUS %		---
EQUILIBRIUM MOISTURE %		---					CHLORINE (PPM)		00320
							SPECIFIC GRAVITY		1.76
RESIDUAL MOISTURE %		1.34					FSI		---
ASH %		41.27					HGI		53.0
VOLATILE MATTER %		5.74					CO2 %		1.04
FIXED CARBON %		51.65							
=====									
GROSS CALORIFIC VALUE (MJ/KG)		19.13							
NET CALORIFIC VALUE (MJ/KG)		---							

GORI COAL DIVISION	SIZE	PROJ	KPN	BLK	LR	DS	DDH85015		
=====									
SAMPLE ID	60	DATA TYPE (REAL,BORO,AVER,CALC)					CALC		
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 25/06/85							
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS		
FROM (MM) TO (MM)				(MJ/KG)					
50.00	25.00	45.86	---	---	---	---	---	---	
25.00	12.00	16.72	---	---	---	---	---	---	
12.00	6.00	7.25	---	---	---	---	---	---	
6.00	1.00	19.53	---	---	---	---	---	---	
1.00	0.50	4.91	---	---	---	---	---	---	
0.50	0.15	3.95	---	---	---	---	---	---	
0.15	0.00	1.78	---	---	---	---	---	---	
---	---	---	---	---	---	---	---	---	

GORI COAL DIVISION	ULTIMATE	PROJ	KPN	BLK	LR	DS	DDH85015		
=====									
SAMPLE ID	60	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED 03/06/85							
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)					AD		
=====									
WATER	%	1.34							
CARBON	%	48.19							
HYDROGEN	%	1.69							
SULPHUR	%	3.73							
NITROGEN	%	0.57							
ASH	%	41.27							
OXYGEN	%	3.21							

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85015 SEAM - G

SAMPLE ID - 60

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 69.83					ASH % -						
	SG-TME	ELEMENTAL	WT%	ASH%	CUM. WT%	FLOATS	ASH%	CUM. WT%	SINKS	ASH%	FSI	C.V.	CUM. S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST
1.40	0.29	4.87	0.29	4.87	99.71	47.05											1.00	1.00
1.45	0.77	6.23	1.06	5.86	98.94	47.37											0.97	0.98
1.50	2.74	13.27	3.80	11.20	96.20	48.34											0.87	0.90
1.60	17.56	22.40	21.36	20.41	78.64	54.14											0.71	0.74
1.70	13.85	31.04	35.21	24.59	64.79	59.07											0.84	0.78
1.80	9.93	38.82	45.14	27.72	54.86	62.74											0.95	0.82
2.00	17.78	51.10	62.92	34.33	37.08	68.32											1.18	0.92
2.60	37.08	68.32	100.00	46.93													0.83	0.89

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 24.44					ASH % -						
	SG-TME	ELEMENTAL	WT%	ASH%	CUM. WT%	FLOATS	ASH%	CUM. WT%	SINKS	ASH%	FSI	C.V.	CUM. S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST
1.40	8.89	4.59	8.89	4.59	91.11	27.94											1.01	1.01
1.45	15.61	6.78	24.50	5.99	75.50	32.32											1.11	1.07
1.50	9.54	11.58	34.04	7.55	65.96	35.32											1.20	1.11
1.60	24.51	19.68	58.55	12.63	41.45	44.56											1.19	1.14
1.70	12.80	27.03	71.35	15.21	28.65	52.40											1.21	1.15
1.80	8.03	32.96	79.38	17.01	20.62	59.97											1.42	1.18
2.00	8.55	42.74	87.93	19.51	12.07	72.17											1.59	1.22
2.60	12.07	72.17	100.00	25.87													1.11	1.21

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DATA SOURCE - KPnlRDDH85015 SEAM - G

SAMPLE ID - 60

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -			3.95 ASH % -		CUM. MOIST	CUM. MOIST
	ELEMENTAL	CUM. WT%	FLOATS ASH%	CUM. WT%			CUM. C.V.	CUM. S	CUM. S	VOL. VOL.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.
1.40	3.78	5.23	3.78	5.23	96.22	17.89						1.15	1.15
1.45	12.02	5.33	15.80	5.31	84.20	19.69						1.24	1.22
1.50	52.93	7.37	68.73	6.90	31.27	40.54						1.33	1.30
1.60	9.36	15.07	78.09	7.88	21.91	51.41						1.92	1.38
1.70	5.37	21.63	83.46	8.76	16.54	61.08						1.25	1.37
1.80	2.96	30.24	86.42	9.50	13.58	67.81						1.34	1.37
2.00	3.31	40.96	89.73	10.66	10.27	76.46						1.29	1.37
2.60	10.27	76.46	100.00	17.41								1.52	1.38

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -			1.78 ASH % -		CUM. MOIST	CUM. MOIST
	ELEMENTAL	CUM. WT%	FROTH ASH%	CUM. WT%			CUM. C.V.	CUM. S	CUM. S	VOL. VOL.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.
240.00	*****	35.77	100.00	35.77								1.19	1.19

KPNLRDDH85016

```

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85016
=====
SAMPLE ID 64 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 08/09/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
SURFACE MOISTURE % ---
TOTAL MOISTURE % 4.20
EQUILIBRIUM MOISTURE % ---
RESIDUAL MOISTURE % 1.75
ASH % 24.55
VOLATILE MATTER % 7.12
FIXED CARBON % 66.58

TOTAL SULPHUR % 0.37
PHOSPHOROUS % ---
CHLORINE (PPM) 90170
SPECIFIC GRAVITY 1.50
FSI ---
HGI 67.0
CO2 % 1.95

GROSS CALORIFIC VALUE (MJ/KG) 25.23
NET CALORIFIC VALUE (MJ/KG) ---

```

```

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85016
=====
SAMPLE ID 64 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SZ1 DATE ANALYSED 08/09/85
FRACTION SIZE WT% ASH% FSI CAL RM VM TS
FROM (MM) TO (MM) (MJ/KG)
50.00 6.00 31.93 --- --- --- --- ---
6.00 0.50 46.94 --- --- --- --- ---
0.50 0.15 10.49 --- --- --- --- ---
0.15 0.00 10.64 14.63 --- 1.62 --- ---
-----

```

```

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85016
=====
SAMPLE ID 64
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID UL1 DATE ANALYSED 08/09/85
ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 1.75
CARBON % 67.62
HYDROGEN % 2.29
SULPHUR % 0.37
NITROGEN % 0.87
ASH % 24.55
OXYGEN % 2.55

```

GCRI COAL DIVISION ASH FUSION PROJ KFN BLK LR DS DDH85016
 =====

SAMPLE ID 64
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE		REDUCING ATMOSPHERE	
*****		*****	
INITIAL TEMP.(C)	1248.0	INITIAL TEMP.(C)	1239.0
SOFTENING TEMP.(C)	1267.0	SOFTENING TEMP.(C)	1258.0
HEMISPHERICAL TEMP.(C)	1296.0	HEMISPHERICAL TEMP.(C)	1285.0
FLUID TEMP.(C)	1378.0	FLUID TEMP.(C)	1372.0

GCRI COAL DIVISION ASH MINERAL PROJ KFN BLK LR DS DDH85016
 =====

SAMPLE ID 64
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	55.66
ALUMINIUM OXIDE %	(AL2O3)	18.65
FERRIC OXIDE %	(FE2O3)	5.82
TITANIUM DIOXIDE %	(TI02)	0.78
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.82
CALCIUM OXIDE %	(CAO)	6.26
MAGNESIUM OXIDE %	(MGO)	4.14
SULPHUR TRIOXIDE %	(SO3)	2.28
SODIUM OXIDE %	(NA2O)	1.81
POTASSIUM OXIDE %	(K2O)	1.29

GCRI COAL DIVISION SULPHUR PROJ KFN BLK LR DS DDH85016
 =====

SAMPLE ID 64
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.02
SULPHATE	%	0.00
ORGANIC	%	0.35

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85016 SEAM - I

SAMPLE ID - 64

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X		6.00		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % - 31.93			ASH % -		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	ELEMENTAL WT%	ASH%	CUM. FLOATS WT%	ASH%			CUM. FSI	C.V. FSI (MJ KG)	CUM. C.V.	S	S				
1.40	0.74	9.60	0.74	9.60	99.26	29.20								0.78	0.78
1.45	24.32	9.13	25.06	9.14	74.94	35.71								0.85	0.85
1.50	15.52	13.74	40.58	10.90	59.42	41.45								0.90	0.87
1.60	20.71	19.97	61.29	13.97	38.71	52.95								0.85	0.86
1.70	9.13	29.47	70.42	15.98	29.58	60.19								0.88	0.86
1.80	4.48	38.66	74.90	17.33	25.10	64.04								0.84	0.86
2.00	6.13	42.40	81.03	19.23	18.97	71.03								0.83	0.86
2.60	18.97	71.03	100.00	29.06										0.99	0.88

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X		0.50		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % - 46.94			ASH % -		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	ELEMENTAL WT%	ASH%	CUM. FLOATS WT%	ASH%			CUM. FSI	C.V. FSI (MJ KG)	CUM. C.V.	S	S				
1.40	14.06	9.10	14.06	9.10	85.94	26.19								0.59	0.59
1.45	22.10	13.45	36.16	11.76	63.84	30.60								0.86	0.76
1.50	16.47	15.41	52.63	12.90	47.37	35.88								0.83	0.78
1.60	22.14	16.03	74.77	13.83	25.23	53.30								1.18	0.90
1.70	7.05	23.93	81.82	14.70	18.18	64.69								1.53	0.95
1.80	2.32	32.72	84.14	15.20	15.86	69.37								1.66	0.97
2.00	2.98	42.75	87.12	16.14	12.88	75.53								0.76	0.96
2.60	12.88	75.53	100.00	23.79										1.22	1.00

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85016 SEAM - I

SAMPLE ID - 64

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.15		RELATIVE WEIGHT % - 10.49				ASH % -		CUM.		CUM.				
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	28.73	2.37	28.73	2.37	71.27	17.74								0.57	0.57
1.45	28.24	4.46	56.97	3.41	43.03	26.46								0.58	0.57
1.50	10.58	7.53	67.55	4.05	32.45	32.63								0.65	0.59
1.60	13.90	11.35	81.45	5.30	18.55	48.58								0.83	0.63
1.70	6.28	18.69	87.73	6.26	12.27	63.88								0.84	0.64
1.80	2.17	24.19	89.90	6.69	10.10	72.41								0.87	0.65
2.00	1.95	39.15	91.85	7.38	8.15	80.37								1.09	0.66
2.60	8.15	80.37	100.00	13.33										1.26	0.71

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X 0.00		RELATIVE WEIGHT % - 10.64				ASH % - 14.63		CUM.		CUM.				
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	14.63	100.00	14.63										1.62	1.62

```

GCRI COAL DIVISION  HEAD  PROJ  KPN  BLK  LR  DS  DDH85016
=====
SAMPLE ID           65      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID    HD1      DATE ANALYSED 08/09/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           -----
TOTAL MOISTURE %             3.58
EQUILIBRIUM MOISTURE %      -----
RESIDUAL MOISTURE %         1.47
ASH %                        40.97
VOLATILE MATTER %           8.46
FIXED CARBON %              49.10

TOTAL SULPHUR %              0.35
PHOSPHOROUS %               -----
CHLORINE (PPM)              90430
SPECIFIC GRAVITY            1.76
FSI                          -----
HGI                          65.0
CO2 %                        3.75

GROSS CALORIFIC VALUE (MJ/KG) 18.87
NET CALORIFIC VALUE (MJ/KG)  -----

```

```

GCRI COAL DIVISION  SIZE  PROJ  KPN  BLK  LR  DS  DDH85016
=====
SAMPLE ID           65      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID    SZ1      DATE ANALYSED 08/09/85
FRACTION SIZE      WT%   ASH%   FSI   CAL   RM   VM   TS
FROM (MM) TO (MM)
50.00  6.00  44.38  -----  -----  -----  -----  -----
6.00   0.50  40.35  -----  -----  -----  -----  -----
0.50   0.15  8.74   -----  -----  -----  -----  -----
0.15   0.00  6.53   22.65  -----  1.09  -----  -----
-----  -----  -----  -----  -----  -----  -----  -----

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN  BLK  LR  DS  DDH85016
=====
SAMPLE ID           65      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID   SP1      DATE ANALYSED 08/09/85
SPLIT SAMPLE ID    UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %              1.47
CARBON %             50.93
HYDROGEN %           1.82
SULPHUR %            0.35
NITROGEN %           0.62
ASH %                40.97
OXYGEN %             3.84

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 65
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1245.0
 SOFTENING TEMP.(C) 1258.0
 HEMISPHERICAL TEMP.(C) 1283.0
 FLUID TEMP.(C) 1410.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1237.0
 SOFTENING TEMP.(C) 1250.0
 HEMISPHERICAL TEMP.(C) 1269.0
 FLUID TEMP.(C) 1399.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 65
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	59.19
ALUMINIUM OXIDE %	(AL2O3)	18.68
FERRIC OXIDE %	(FE2O3)	5.40
TITANIUM DIOXIDE %	(TI02)	0.79
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.56
CALCIUM OXIDE %	(CAO)	4.52
MAGNESIUM OXIDE %	(MGO)	3.91
SULPHUR TRIOXIDE %	(SO3)	1.82
SODIUM OXIDE %	(NA2O)	2.30
POTASSIUM OXIDE %	(K2O)	0.76

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 65
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.07
SULPHATE	%	0.00
ORGANIC	%	0.28

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH05016 SEAM - H

SAMPLE ID - 65

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM) 50.00 X 6.00			RELATIVE WEIGHT % - 44.38				ASH % -				
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. C.V.	CUM. C.V.	S	S	VOL.	VOL.	MOIST	MOIST
WT%	WT%	WT%	WT%	(MJ KG)	(MJ KG)						
1.40	0.16	3.07	0.16	3.07	99.84	52.81				0.66	0.66
1.45	0.10	8.78	0.26	5.27	99.74	52.85				0.71	0.68
1.50	1.86	15.24	2.12	14.02	97.88	53.57				0.71	0.71
1.60	10.53	23.57	12.65	21.97	87.35	57.19				0.92	0.88
1.70	19.14	32.39	31.79	28.24	68.21	64.14				0.83	0.85
1.80	14.68	38.95	46.47	31.63	53.53	71.05				0.94	0.88
2.00	12.19	50.68	58.66	35.59	41.34	77.06				0.95	0.89
2.60	41.34	77.06	100.00	52.73						1.36	1.09

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM) 6.00 X 0.50			RELATIVE WEIGHT % - 40.35				ASH % -				
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. C.V.	CUM. C.V.	S	S	VOL.	VOL.	MOIST	MOIST
WT%	WT%	WT%	WT%	(MJ KG)	(MJ KG)						
1.40	7.56	2.02	7.56	2.02	92.44	33.56				0.56	0.56
1.45	4.78	4.22	12.34	2.87	87.66	35.16				0.64	0.59
1.50	10.90	8.80	23.24	5.65	76.76	38.90				0.98	0.77
1.60	23.90	15.09	47.14	10.44	52.86	49.66				1.22	1.00
1.70	16.29	22.93	63.43	13.65	36.57	61.57				1.78	1.20
1.80	8.18	30.49	71.61	15.57	28.39	70.53				1.18	1.20
2.00	6.89	42.01	78.50	17.89	21.50	79.67				1.81	1.25
2.60	21.50	79.67	100.00	31.17						1.06	1.21

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85016 SEAM - H

SAMPLE ID - 65

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.15		RELATIVE WEIGHT % - 8.74				ASH % -								
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	ASH %	CUM.	CUM.	MOIST	MOIST			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	20.37	1.68	20.37	1.68	79.63	22.14								0.63	0.63
1.45	20.01	2.94	40.38	2.30	59.62	28.58								0.69	0.66
1.50	13.26	5.95	53.64	3.21	46.36	35.05								0.82	0.70
1.60	15.09	10.87	68.73	4.89	31.27	46.72								1.04	0.77
1.70	10.45	17.44	79.18	6.54	20.82	61.42								1.89	0.92
1.80	3.90	26.41	83.08	7.48	16.92	69.49								1.82	0.96
2.00	3.50	37.17	86.58	8.68	13.42	77.92								1.69	0.99
2.60	13.42	77.92	100.00	17.97										1.42	1.05

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X 0.00		RELATIVE WEIGHT % - 6.53				ASH % - 22.65								
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	ASH %	CUM.	CUM.	MOIST	MOIST			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	22.65	100.00	22.65										1.09	1.09

GCRI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85016
=====							
SAMPLE ID	66	DATA TYPE (REAL,BORO,AVER,CALC)				REAL	
SPLIT SAMPLE ID	HD1	DATE ANALYSED 01/10/85					
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)				ASTM		AD	
ANALYSIS BASIS TYPE (AD,DB,AR,EM)							
TOP SIZE (MM)		----			TOTAL SULPHUR %	0.93	
SURFACE MOISTURE %		----			PHOSPHOROUS %	-----	
TOTAL MOISTURE %		1.52			CHLORINE (PPM)	00860	
EQUILIBRIUM MOISTURE %		----			SPECIFIC GRAVITY	2.21	
RESIDUAL MOISTURE %		0.64			FBI	----	
ASH %		79.03			HGI	52.0	
VOLATILE MATTER %		6.65			CO2 %	0.00	
FIXED CARBON %		13.68					
GROSS CALORIFIC VALUE (MJ/KG) ----							
NET CALORIFIC VALUE (MJ/KG) ----							

GCRI COAL DIVISION	ULTIMATE	PROJ	KPN	BLK	LR	DS	DDH85016
=====							
SAMPLE ID	66	DATA TYPE (REAL,BORO,AVER,CALC)				----	
SAMPLE PRODUCT ID	SP1	DATE ANALYSED				___/___/___	
SPLIT SAMPLE ID	UL1						
ANALYSIS BASIS TYPE (DAF,DB,AD)				----			
WATER	%	----					
CARBON	%	----					
HYDROGEN	%	----					
SULPHUR	%	----					
NITROGEN	%	0.22					
ASH	%	----					
OXYGEN	%	----					

GCR1 COAL DIVISION ASH MINERAL PROJ KFN BLK LR DS DDH85016
=====

SAMPLE ID 66
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 01/10/85

SILICON DIOXIDE %	(SI02)	65.17
ALUMINIUM OXIDE %	(AL2O3)	14.78
FERRIC OXIDE %	(FE2O3)	---
TITANIUM DIOXIDE %	(TI02)	---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---
CALCIUM OXIDE %	(CAO)	---
MAGNESIUM OXIDE %	(MGO)	---
SULPHUR TRIOXIDE %	(SO3)	---
SODIUM OXIDE %	(NA2O)	1.26
POTASSIUM OXIDE %	(K2O)	---

GCR1 COAL DIVISION SULPHUR PROJ KFN BLK LR DS DDH85016
=====

SAMPLE ID 66
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 01/10/85

PYRITE	%	0.74
SULPHATE	%	0.00
ORGANIC	%	0.18

GCR1 COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85016	
=====		=====		=====		=====		
SAMPLE ID	6500	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 01/10/85						
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)				AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)		ASTM						
TOP SIZE (MM)		---.---		TOTAL SULPHUR %		0.33		
SURFACE MOISTURE %		---.---		PHOSPHOROUS %		---.---		
TOTAL MOISTURE %		1.76		CHLORINE (PPM)		03370		
EQUILIBRIUM MOISTURE %		---.---		SPECIFIC GRAVITY		1.30		
RESIDUAL MOISTURE %		0.56		FSI		---.---		
ASH %		51.04		HGI		77.0		
VOLATILE MATTER %		8.96		CO2 %		---.---		
FIXED CARBON %		39.44						
GROSS CALORIFIC VALUE (MJ/KG)		---.---						
NET CALORIFIC VALUE (MJ/KG)		---.---						

GCR1 COAL DIVISION	ULTIMATE	PROJ	KPN	BLK	LR	DS	DDH85016	
=====		=====		=====		=====		
SAMPLE ID	6500	DATA TYPE (REAL,BORO,AVER,CALC)				----		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED ___/___/___						
SPLIT SAMPLE ID	UL1							
ANALYSIS BASIS TYPE (DAF,DB,AD)		---						
WATER	%	---.---						
CARBON	%	---.---						
HYDROGEN	%	---.---						
SULPHUR	%	---.---						
NITROGEN	%	0.49						
ASH	%	---.---						
OXYGEN	%	---.---						

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85018
=====

SAMPLE ID 6500
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 01/10/85

SILICON DIOXIDE %	(SI02)	65.00
ALUMINIUM OXIDE %	(AL2O3)	14.71
FERRIC OXIDE %	(FE2O3)	---
TITANIUM DIOXIDE %	(TI02)	---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---
CALCIUM OXIDE %	(CAO)	---
MAGNESIUM OXIDE %	(MGO)	---
SULPHUR TRIOXIDE %	(SO3)	---
SODIUM OXIDE %	(NA2O)	0.90
POTASSIUM OXIDE %	(K2O)	---

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85018
=====

SAMPLE ID 6500
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 01/10/85

PYRITE	%	0.08
SULPHATE	%	0.00
ORGANIC	%	0.25

```

GORI COAL DIVISION  HEAD      PROJ  KPN      BLK  LR      DS  DDH85016
=====
SAMPLE ID              67      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED  08/09/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)              50.00
SURFACE MOISTURE %        ---
TOTAL MOISTURE %          2.74
EQUILIBRIUM MOISTURE %   ---
RESIDUAL MOISTURE %       1.17
ASH %                     43.99
VOLATILE MATTER %        6.86
FIXED CARBON %           47.98

TOTAL SULPHUR %          0.32
PHOSPHOROUS %           ---
CHLORINE (PPM)          00870
SPECIFIC GRAVITY         1.71
FSI                      ---
HGI                      56.0
CO2 %                   2.04

GROSS CALORIFIC VALUE (MJ/KG)  17.99
NET CALORIFIC VALUE (MJ/KG)   ---

```

```

GORI COAL DIVISION  SIZE      PROJ  KPN      BLK  LR      DS  DDH85016
=====
SAMPLE ID              67      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      SZ1      DATE ANALYSED  08/09/85
FRACTION SIZE        WT%      ASH%      FSI      CAL      RM      VM      TS
FROM (MM) TO (MM)   (MJ/KG)
50.00  6.00      55.94      ---      ---      ---      ---      ---
6.00  0.50      36.10      ---      ---      ---      ---      ---
0.50  0.15      4.32      ---      ---      ---      ---      ---
0.15  0.00      3.64      43.42      ---      1.10      ---      ---
-----

```

```

GORI COAL DIVISION  ULTIMATE  PROJ  KPN      BLK  LR      DS  DDH85016
=====
SAMPLE ID              67      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID     SP1      DATE ANALYSED  08/09/85
SPLIT SAMPLE ID      UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %                1.17
CARBON %               49.67
HYDROGEN %             1.61
SULPHUR %              0.32
NITROGEN %             0.65
ASH %                  43.99
OXYGEN %               2.59

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 67
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE *****		REDUCING ATMOSPHERE *****	
INITIAL TEMP.(C)	1302.0	INITIAL TEMP.(C)	1269.0
SOFTENING TEMP.(C)	1351.0	SOFTENING TEMP.(C)	1329.0
HEMISPHERICAL TEMP.(C)	1378.0	HEMISPHERICAL TEMP.(C)	1340.0
FLUID TEMP.(C)	1410.0	FLUID TEMP.(C)	1383.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 67
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	61.58
ALUMINIUM OXIDE %	(AL2O3)	19.40
FERRIC OXIDE %	(FE2O3)	4.96
TITANIUM DIOXIDE %	(TI02)	0.78
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.14
CALCIUM OXIDE %	(CAO)	2.74
MAGNESIUM OXIDE %	(MGO)	2.86
SULPHUR TRIOXIDE %	(SO3)	1.31
SODIUM OXIDE %	(NA2O)	1.80
POTASSIUM OXIDE %	(K2O)	1.98

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 67
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.02
SULPHATE	%	0.00
ORGANIC	%	0.30

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85016 SEAM - F

SAMPLE ID - 67

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	ELEMENTAL		CUM. FLOATS		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -				4.32 ASH % -		CUM. MOIST	CUM. MOIST
	WT%	ASH%	WT%	ASH%			CUM. FSI	C.V. FSI (MJ/KG)	CUM. C.V.	S	CUM. S	VOL.		
1.40	10.14	1.65	10.14	1.65	89.86	37.64							0.57	0.57
1.45	17.54	3.17	27.68	2.61	72.32	46.00							0.72	0.67
1.50	6.52	7.09	34.20	3.47	65.80	49.85							0.86	0.70
1.60	7.55	9.65	41.75	4.58	58.25	55.06							0.99	0.75
1.70	7.35	17.46	49.10	6.51	50.90	60.49							1.73	0.90
1.80	6.12	23.34	55.22	8.38	44.78	65.57							1.37	0.95
2.00	10.24	35.98	65.46	12.70	34.54	74.34							1.64	1.06
2.60	34.54	74.34	100.00	33.99									1.70	1.28

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	ELEMENTAL		CUM. FLDATS		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -				3.64 ASH % - 43.42		CUM. MOIST	CUM. MOIST
	WT%	ASH%	WT%	ASH%			CUM. FSI	C.V. FSI (MJ/KG)	CUM. C.V.	S	CUM. S	VOL.		
240.00	*****	43.42	100.00	43.42									1.10	1.10

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85016 SEAM - F

SAMPLE ID - 67

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)			50.00 X		6.00		RELATIVE WEIGHT % - 55.94 ASH % -								
SG-TME	ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM. C.V.		CUM.	CUM.		CUM.	CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	2.09	2.28	2.09	2.28	97.91	48.95								0.52	0.52
1.45	1.10	7.18	3.19	3.97	96.81	49.43								0.57	0.54
1.50	2.25	13.49	5.44	7.91	94.56	50.28								0.61	0.57
1.60	12.32	21.90	17.76	17.61	82.24	54.53								0.64	0.62
1.70	19.27	32.04	37.03	25.12	62.97	61.42								0.87	0.75
1.80	9.96	41.30	46.99	28.55	53.01	65.19								0.90	0.78
2.00	19.88	51.97	66.87	35.51	33.13	73.13								0.98	0.84
2.60	33.13	73.13	100.00	47.98										0.87	0.85

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)			6.00 X		0.50		RELATIVE WEIGHT % - 36.10 ASH % -								
SG-TME	ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM. C.V.		CUM.	CUM.		CUM.	CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	13.79	2.04	13.79	2.04	86.21	44.40								0.59	0.59
1.45	9.10	5.77	22.89	3.52	77.11	48.96								0.70	0.63
1.50	5.49	11.38	28.38	5.04	71.62	51.84								0.73	0.65
1.60	10.72	18.52	39.10	8.74	60.90	57.71								0.76	0.68
1.70	8.84	27.15	47.94	12.13	52.06	62.90								1.16	0.77
1.80	9.08	35.36	57.02	15.83	42.98	68.72								1.35	0.86
2.00	10.81	46.96	67.83	20.79	32.17	76.03								1.47	0.96
2.60	32.17	76.03	100.00	38.56										1.65	1.18

GCRI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85016	
=====								
SAMPLE ID	68	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 08/09/85						
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)				AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)								ASTM
TOP SIZE (MM)		50.00						
SURFACE MOISTURE %		---				TOTAL SULPHUR %	0.42	
TOTAL MOISTURE %		3.84				PHOSPHOROUS %	---	
EQUILIBRIUM MOISTURE %		---				CHLORINE (PPM)	00510	
						SPECIFIC GRAVITY	1.49	
RESIDUAL MOISTURE %		0.88				FSI	---	
ASH %		18.24				HGI	45.0	
VOLATILE MATTER %		7.32				CO2 %	2.57	
FIXED CARBON %		73.56						
GROSS CALORIFIC VALUE (MJ/KG)		27.95						
NET CALORIFIC VALUE (MJ/KG)		---						

GCRI COAL DIVISION	SIZE	PROJ	KPN	BLK	LR	DS	DDH85016	
=====								
SAMPLE ID	68	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 08/09/85						
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS	
FROM (MM) TO (MM)				(MJ/KG)				
50.00	6.00	65.89	---	---	---	---	---	---
6.00	0.50	28.68	---	---	---	---	---	---
0.50	0.15	3.09	---	---	---	---	---	---
0.15	0.00	2.34	27.43	---	1.04	---	---	---
---	---	---	---	---	---	---	---	---

GCRI COAL DIVISION	ULTIMATE	PROJ	KPN	BLK	LR	DS	DDH85016	
=====								
SAMPLE ID	68	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED 08/09/85						
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (IAF,DB,AD)				AD		
WATER	%	0.88						
CARBON	%	73.43						
HYDROGEN	%	2.48						
SULPHUR	%	0.42						
NITROGEN	%	0.83						
ASH	%	18.24						
OXYGEN	%	3.72						

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 68
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE *****		REDUCING ATMOSPHERE *****
INITIAL TEMP.(C) 1269.0		INITIAL TEMP.(C) 1258.0
SOFTENING TEMP.(C) 1275.0		SOFTENING TEMP.(C) 1269.0
HEMISPHERICAL TEMP.(C) 1294.0		HEMISPHERICAL TEMP.(C) 1285.0
FLUID TEMP.(C) 1340.0		FLUID TEMP.(C) 1329.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 68
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	40.88
ALUMINIUM OXIDE %	(AL2O3)	18.90
FERRIC OXIDE %	(FE2O3)	7.21
TITANIUM DIOXIDE %	(TI02)	0.78
PHOSPHOROUS PENTOXIDE %	(P2O5)	2.15
CALCIUM OXIDE %	(CAO)	13.77
MAGNESIUM OXIDE %	(MGO)	6.06
SULPHUR TRIOXIDE %	(SO3)	4.93
SODIUM OXIDE %	(NA2O)	1.96
POTASSIUM OXIDE %	(K2O)	1.13

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 68
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.01
SULPHATE	%	0.00
ORGANIC	%	0.41

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85016 SEAM - E

SAMPLE ID - 68

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)		50.00 X 6.00		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -			65.89 ASH % -		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	SG-TME	ELEMENTAL	WT%	ASH%			FSI	FSI (MJ/KG)	C.V.	S	S				
1.40	6.04	2.24	6.04	2.24	93.96	19.24								0.61	0.61
1.45	37.80	7.01	43.84	6.35	56.16	27.48								0.67	0.66
1.50	22.50	11.40	66.34	8.06	33.66	38.22								0.70	0.67
1.60	8.88	17.76	75.22	9.21	24.78	45.55								1.03	0.72
1.70	3.39	27.19	78.61	9.98	21.39	48.46								1.24	0.74
1.80	3.22	30.66	81.83	10.80	18.17	51.62								1.02	0.75
2.00	6.43	38.00	88.26	12.78	11.74	59.08								0.65	0.74
2.60	11.74	59.08	100.00	18.22										0.58	0.72

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)		6.00 X 0.50		CUM. WT%	SINKS ASH%	RELATIVE WEIGHT % -			28.68 ASH % -		CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
	SG-TME	ELEMENTAL	WT%	ASH%			FSI	FSI (MJ/KG)	C.V.	S	S				
1.40	22.00	2.34	22.00	2.34	78.00	18.43								0.60	0.60
1.45	33.09	6.17	55.09	4.64	44.91	27.46								0.57	0.58
1.50	16.42	11.24	71.51	6.16	28.49	36.80								0.71	0.61
1.60	9.23	16.77	80.74	7.37	19.26	46.40								0.85	0.64
1.70	4.47	25.05	85.21	8.30	14.79	52.86								1.06	0.66
1.80	2.40	32.27	87.61	8.95	12.39	56.85								1.17	0.67
2.00	3.18	43.48	90.79	10.16	9.21	61.46								1.11	0.69
2.60	9.21	61.46	100.00	14.89										1.04	0.72

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85016 SEAM - E

SAMPLE ID - 68

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			3.09 ASH % -		CUM. MOIST	CUM. MOIST
	WT%	ASH%	WT%	ASH%			FSI	FSI (MJ KG)	C.V.	S	CUM. S		
1.40	10.47	2.24	10.47	2.24	89.53	21.21						0.82	0.82
1.45	24.67	3.43	35.14	3.08	64.86	27.97						0.80	0.81
1.50	15.84	6.31	50.98	4.08	49.02	34.97						0.86	0.82
1.60	13.63	11.44	64.61	5.63	35.39	44.03						1.16	0.89
1.70	8.71	17.35	73.32	7.02	26.68	52.74						1.64	0.98
1.80	4.35	24.32	77.67	7.99	22.33	58.28						1.93	1.04
2.00	4.92	34.13	82.59	9.55	17.41	65.10						2.14	1.10
2.60	17.41	65.10	100.00	19.22								1.61	1.19

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			2.34 ASH % -		CUM. MOIST	CUM. MOIST
	WT%	ASH%	WT%	ASH%			FSI	FSI (MJ KG)	C.V.	S	CUM. S		
240.00	*****	27.43	100.00	27.43								1.04	1.04

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85016
 =====
 SAMPLE ID 69 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 02/11/85
 ANALYSIS BASIS TYPE (AD,DB,AR,SM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) -----
 SURFACE MOISTURE % ----- TOTAL SULPHUR % 0.35
 TOTAL MOISTURE % 3.71 PHOSPHOROUS % -----
 EQUILIBRIUM MOISTURE % ----- CHLORINE (PPM) 00992
 RESIDUAL MOISTURE % 0.81 SPECIFIC GRAVITY 1.48
 FSI -----
 ASH % 33.33 HGI 55.0
 VOLATILE MATTER % 7.56 CO2 % 2.83
 FIXED CARBON % 58.30

 GROSS CALORIFIC VALUE (MJ/KG) 21.71
 NET CALORIFIC VALUE (MJ/KG) -----

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85016
 =====
 SAMPLE ID 69 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 02/11/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 6.00 49.88 -----
 6.00 0.50 40.84 -----
 0.50 0.15 5.10 -----
 0.15 0.00 4.18 32.43 0.85 -----

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85016
 =====
 SAMPLE ID 69
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 02/11/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 0.81
 CARBON % 61.44
 HYDROGEN % 2.07
 SULPHUR % 0.35
 NITROGEN % 0.56
 ASH % 33.33
 OXYGEN % 1.44

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 69
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 02/11/85

OXIDIZING ATMOSPHERE		REDUCING ATMOSPHERE	
*****		*****	
INITIAL TEMP.(C)	1322.0	INITIAL TEMP.(C)	1289.0
SOFTENING TEMP.(C)	1342.0	SOFTENING TEMP.(C)	1300.0
HEMISPHERICAL TEMP.(C)	1380.0	HEMISPHERICAL TEMP.(C)	1387.0
FLUID TEMP.(C)	1425.0	FLUID TEMP.(C)	1411.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 69
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 02/11/85

SILICON DIOXIDE %	(SI02)	58.88
ALUMINIUM OXIDE %	(AL2O3)	17.62
FERRIC OXIDE %	(FE2O3)	4.24
TITANIUM DIOXIDE %	(TI02)	1.05
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.56
CALCIUM OXIDE %	(CAO)	6.74
MAGNESIUM OXIDE %	(MGO)	3.53
SULPHUR TRIOXIDE %	(SO3)	1.19
SODIUM OXIDE %	(NA2O)	1.87
POTASSIUM OXIDE %	(K2O)	2.08

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 69
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 02/11/85

PYRITE	%	0.02
SULPHATE	%	0.00
ORGANIC	%	0.33

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlRDDH85016 SEAM - D

SAMPLE ID - 69

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)	50.00 X 6.00		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % - 49.88			ASH % -		CUM. MOIST	CUM. MOIST	
		WT%	ASH%			CUM. FSI	C.V. (MJ/KG)	CUM. S	CUM. S	VOL.			VOL.
SG-TME		WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	C.V.	S	S	VOL.	VOL.
1.40	5.20	1.72		5.20	1.72	94.80	38.92					0.52	0.52
1.45	4.90	6.55		10.10	4.06	89.90	40.69					0.55	0.53
1.50	8.17	12.11		18.27	7.66	81.73	43.55					0.52	0.53
1.60	15.83	20.06		34.10	13.42	65.90	49.19					0.57	0.55
1.70	15.96	31.90		50.06	19.31	49.94	54.71					0.70	0.60
1.80	12.78	40.56		62.84	23.63	37.16	59.58					0.77	0.63
2.00	16.47	50.26		79.31	29.16	20.69	67.00					0.65	0.64
2.60	20.69	67.00		100.00	36.99							0.56	0.62

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)	6.00 X 0.50		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % - 40.84			ASH % -		CUM. MOIST	CUM. MOIST	
		WT%	ASH%			CUM. FSI	C.V. (MJ/KG)	CUM. S	CUM. S	VOL.			VOL.
SG-TME		WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	C.V.	S	S	VOL.	VOL.
1.40	9.36	2.23		9.36	2.23	90.64	30.13					0.60	0.60
1.45	15.86	4.83		25.22	3.87	74.78	35.50					0.66	0.64
1.50	15.92	10.24		41.14	6.33	58.86	42.33					0.76	0.69
1.60	16.59	17.84		57.73	9.64	42.27	51.94					0.59	0.66
1.70	12.04	26.37		69.77	12.53	30.23	62.13					0.87	0.69
1.80	7.05	34.30		76.82	14.52	23.18	70.59					1.18	0.74
2.00	5.49	45.54		82.31	16.59	17.69	78.37					1.29	0.78
2.60	17.69	78.37		100.00	27.52							1.00	0.82

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85016 SEAM - D

SAMPLE ID - 69

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	ELEMENTAL		0.50 X		0.15		RELATIVE WEIGHT % -					5.10 ASH % -			
	WT%	ASH%	CUM. WT%	FLOATS ASH%	CUM. WT%	SINKS ASH%	CUM. FSI	C.V. FSI	CUM. C.V.	S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST
1.40	6.08	1.83	6.08	1.83	93.92	29.28								0.62	0.62
1.45	17.96	2.99	24.04	2.70	75.96	35.49								0.74	0.71
1.50	12.78	6.30	36.82	3.95	63.18	41.40								0.85	0.76
1.60	15.73	12.55	52.55	6.52	47.45	50.96								0.96	0.82
1.70	10.70	20.05	63.25	8.81	36.75	59.96								1.36	0.91
1.80	6.67	28.01	69.92	10.64	30.08	67.04								1.51	0.97
2.00	7.68	38.88	77.60	13.44	22.40	76.70								1.51	1.02
2.60	22.40	76.70	100.00	27.61										0.91	1.00

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	ELEMENTAL		0.15 X		0.00		RELATIVE WEIGHT % -					4.18 ASH % -		32.43	
	WT%	ASH%	CUM. WT%	FLOATS ASH%	CUM. WT%	SINKS ASH%	CUM. FSI	C.V. FSI	CUM. C.V.	S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST
240.00	*****	32.43	100.00	32.43										0.85	0.85

```

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85016
=====
SAMPLE ID 6515 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 01/10/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) -----
SURFACE MOISTURE % ----- TOTAL SULPHUR % 2.19
TOTAL MOISTURE % 1.86 PHOSPHOROUS % -----
EQUILIBRIUM MOISTURE % ----- CHLORINE (PPM) 60810
SPECIFIC GRAVITY 1.61
RESIDUAL MOISTURE % 0.54 FSI -----
ASH % 33.18 HGI 52.0
VOLATILE MATTER % 6.78 CO2 % -----
FIXED CARBON % 59.50

GROSS CALORIFIC VALUE (MJ/KG) -----
NET CALORIFIC VALUE (MJ/KG) -----

```

```

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85016
=====
SAMPLE ID 6515
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) -----
SPLIT SAMPLE ID UL1 DATE ANALYSED ___/___/___

ANALYSIS BASIS TYPE (DAF,DB,AD) -----

WATER % -----
CARBON % -----
HYDROGEN % -----
SULPHUR % -----
NITROGEN % 0.59
ASH % -----
OXYGEN % -----

```

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 6515
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 01/10/85

SILICON DIOXIDE %	(SI02)	57.80
ALUMINIUM OXIDE %	(AL2O3)	11.98
FERRIC OXIDE %	(FE2O3)	---
TITANIUM DIOXIDE %	(TI02)	---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---
CALCIUM OXIDE %	(CAO)	---
MAGNESIUM OXIDE %	(MGO)	---
SULPHUR TRIOXIDE %	(SO3)	---
SODIUM OXIDE %	(NA2O)	1.03
POTASSIUM OXIDE %	(K2O)	---

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85016
 =====

SAMPLE ID 6515
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 01/10/85

PYRITE	%	1.63
SULPHATE	%	0.02
ORGANIC	%	0.54

MOUNT KLAPPAN COAL PROJECT
LOST - FOX AREA
GEOLOGICAL REPORT
1985

APPENDIX IV

DIAMOND DRILL HOLE COAL QUALITY

CONFIDENTIAL DATA

KPNLRDDH 85017

TO

KPNLRDDH 85034

707



GULF CANADA LIMITED
COAL DIVISION

KPNLRDDH85017

CONFIDENTIAL

```

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85017
=====
SAMPLE ID 70 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 08/09/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
SURFACE MOISTURE % ---
TOTAL MOISTURE % 4.65
EQUILIBRIUM MOISTURE % ---

RESIDUAL MOISTURE % 1.08
ASH % 17.70
VOLATILE MATTER % 7.04
FIXED CARBON % 74.18

TOTAL SULPHUR % 0.43
PHOSPHOROUS % ---
CHLORINE (PPM) 00330
SPECIFIC GRAVITY 1.48
FSI ---
HGI 41.0
CO2 % 1.92

GROSS CALORIFIC VALUE (MJ/KG) 28.38
NET CALORIFIC VALUE (MJ/KG) ---

```

```

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85017
=====
SAMPLE ID 70 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SZ1 DATE ANALYSED 08/09/85
FRACTION SIZE WT% ASH% FSI CAL RM VM TB
FROM (MM) TO (MM) (MJ/KG)
50.00 6.00 57.14 --- --- --- --- --- ---
6.00 0.50 36.19 --- --- --- --- --- ---
0.50 0.15 3.97 --- --- --- --- --- ---
0.15 0.00 2.70 31.61 --- --- 1.20 --- ---
-----

```

```

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85017
=====
SAMPLE ID 70
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID UL1 DATE ANALYSED 08/09/85
ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 1.08
CARBON % 75.60
HYDROGEN % 2.88
SULPHUR % 0.43
NITROGEN % 0.95
ASH % 17.70
OXYGEN % 1.36

```

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85017 SEAM - I

SAMPLE ID - 70

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT										RELATIVE WEIGHT % - 57.14				ASH % -	
FRACTION SIZE(MM)		50.00 X		6.00		CUM. SINKS		CUM. C.V.		CUM. S		CUM. S		CUM. MOIST	
SG-TME	WT%	ASH%	CUM. WT%	CUM. ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	21.75	3.80	21.75	3.80	78.25	22.43								0.48	0.48
1.45	33.07	7.49	54.82	6.03	45.18	33.37								0.50	0.49
1.50	13.32	13.35	68.14	7.46	31.86	41.74								0.59	0.51
1.60	10.90	22.06	79.04	9.47	20.96	51.97								0.52	0.51
1.70	4.12	29.68	83.16	10.47	16.84	57.42								0.58	0.52
1.80	2.57	36.42	85.73	11.25	14.27	61.20								0.86	0.53
2.00	4.97	43.08	90.70	12.99	9.30	70.89								0.71	0.54
2.60	9.30	70.89	100.00	18.38										1.35	0.61

ANALYSIS TYPE - FLOAT										RELATIVE WEIGHT % - 36.19				ASH % -	
FRACTION SIZE(MM)		6.00 X		0.50		CUM. SINKS		CUM. C.V.		CUM. S		CUM. S		CUM. MOIST	
SG-TME	WT%	ASH%	CUM. WT%	CUM. ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	39.97	3.00	39.97	3.00	60.03	27.68								0.64	0.64
1.45	20.33	7.25	60.30	4.43	39.70	38.14								0.76	0.68
1.50	11.96	12.19	72.26	5.72	27.74	49.33								0.60	0.67
1.60	8.07	18.05	80.33	6.96	19.67	62.16								0.88	0.69
1.70	3.16	26.01	83.49	7.68	16.51	69.08								1.08	0.70
1.80	1.53	33.88	85.02	8.15	14.98	72.68								1.10	0.71
2.00	2.05	43.72	87.07	8.99	12.93	77.27								1.14	0.72
2.60	12.93	77.27	100.00	17.82										1.00	0.76

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85017 SEAM - I

SAMPLE ID - 70

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----															
FRACTION SIZE(MM)		0.50 X 0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			3.97 ASH % -				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM.	CUM.	VOL.	CUM.	CUM.
1.40	27.81	2.30	27.81	2.30	72.19	29.88								0.93	0.93
1.45	7.72	3.79	35.53	2.62	64.47	33.01								1.02	0.95
1.50	12.22	5.61	47.75	3.39	52.25	39.42								1.00	0.96
1.60	14.26	9.81	62.01	4.86	37.99	50.53								1.74	1.14
1.70	9.54	16.41	71.55	6.40	28.45	61.97								1.95	1.25
1.80	4.39	24.41	75.94	7.45	24.06	68.82								1.53	1.27
2.00	4.13	39.17	80.07	9.08	19.93	74.97								3.25	1.37
2.60	19.93	74.97	100.00	22.21										1.82	1.46

----- ANALYSIS TYPE - FROTH -----															
FRACTION SIZE(MM)		0.15 X 0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			2.70 ASH % - 31.61				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	CUM.	CUM.	VOL.	CUM.	CUM.
240.00	*****	31.61	100.00	31.61										1.20	1.20

```

GCRI COAL DIVISION  HEAD      PROJ  KPN      BLK  LR      DS  DDH85017
=====
SAMPLE ID              71      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED   08/09/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---
TOTAL MOISTURE %             2.92
EQUILIBRIUM MOISTURE %      ---
RESIDUAL MOISTURE %          1.08
ASH %                        35.12
VOLATILE MATTER %           7.78
FIXED CARBON %              56.02

TOTAL SULPHUR %              0.35
PHOSPHOROUS %               ---
CHLORINE (PPM)              60350
SPECIFIC GRAVITY            1.64
FSI                          ---
HGI                          46.0
CO2 %                        3.52

GROSS CALORIFIC VALUE (MJ/KG) 21.26
NET CALORIFIC VALUE (MJ/KG)  ---

```

```

GCRI COAL DIVISION  SIZE      PROJ  KPN      BLK  LR      DS  DDH85017
=====
SAMPLE ID              71      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      SZ1      DATE ANALYSED   08/09/85
FRACTION SIZE        WTX%   ASH%   FSI    CAL    RM    VM    TS
FROM (MM) TO (MM)
50.00  5.00   67.57  ---   ---   ---   ---   ---
6.00   0.50   27.81  ---   ---   ---   ---   ---
0.50   0.15    2.72  ---   ---   ---   ---   ---
0.15   0.00    1.90  48.80 ---   ---   1.32  ---
-----

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KPN      BLK  LR      DS  DDH85017
=====
SAMPLE ID              71
SAMPLE PRODUCT ID     SP1      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      UL1      DATE ANALYSED   08/09/85
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %                1.08
CARBON %               56.11
HYDROGEN %             2.35
SULPHUR %              0.35
NITROGEN %             0.68
ASH %                  35.12
OXYGEN %               2.31

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DCH85017
 =====

SAMPLE ID 71
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

 INITIAL TEMP.(C) 1253.0
 SOFTENING TEMP.(C) 1264.0
 HEMISPHERICAL TEMP.(C) 1291.0
 FLUID TEMP.(C) 1410.0

REDUCING ATMOSPHERE

 INITIAL TEMP.(C) 1210.0
 SOFTENING TEMP.(C) 1218.0
 HEMISPHERICAL TEMP.(C) 1237.0
 FLUID TEMP.(C) 1378.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DCH85017
 =====

SAMPLE ID 71
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	55.48
ALUMINIUM OXIDE %	(AL2O3)	17.39
FERRIC OXIDE %	(FE2O3)	5.85
TITANIUM DIOXIDE %	(TI02)	0.78
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.86
CALCIUM OXIDE %	(CAO)	8.17
MAGNESIUM OXIDE %	(MGO)	3.94
SULPHUR TRIOXIDE %	(SO3)	2.26
SODIUM OXIDE %	(NA2O)	2.21
POTASSIUM OXIDE %	(K2O)	0.82

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DCH85017
 =====

SAMPLE ID 71
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.03
SULPHATE	%	0.00
ORGANIC	%	0.32

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85017 SEAM - H

SAMPLE ID - 71

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		RELATIVE WEIGHT % - 67.57 ASH % -				CUM.		CUM.		CUM.				
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.91	3.53	1.91	3.53	98.09	38.12								0.37	0.37
1.45	9.20	8.95	11.11	8.02	88.89	41.14								0.35	0.35
1.50	16.14	12.95	27.25	10.94	72.75	47.39								0.47	0.42
1.60	20.99	22.45	48.24	15.95	51.76	57.51								0.37	0.40
1.70	12.66	32.51	60.90	19.39	39.10	65.60								0.40	0.40
1.80	6.35	38.78	67.25	21.22	32.75	70.81								0.37	0.40
2.00	5.91	47.99	73.16	23.38	26.84	75.83								0.46	0.40
2.60	26.84	75.83	100.00	37.46										0.88	0.53

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		RELATIVE WEIGHT % - 27.81 ASH % -				CUM.		CUM.		CUM.				
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	S	S	VOL.	VOL.	MOIST	MOIST		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	18.63	2.33	18.63	2.33	81.37	35.54								0.46	0.46
1.45	18.11	6.76	36.74	4.51	63.26	43.78								0.46	0.46
1.50	13.37	11.84	50.11	6.47	49.89	52.34								0.43	0.45
1.60	12.52	18.59	62.63	8.89	37.37	63.65								0.47	0.46
1.70	5.24	27.81	67.87	10.35	32.13	69.49								0.50	0.46
1.80	2.99	35.77	70.86	11.42	29.14	72.95								0.66	0.47
2.00	4.45	46.49	75.31	13.50	24.69	77.72								0.72	0.48
2.60	24.69	77.72	100.00	29.35										1.17	0.65

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85017 SEAM - H

SAMPLE ID - 71

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			2.72 ASH % -		CUM.		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	10.42	2.43	10.42	2.43	89.58	45.91								0.67	0.67
1.45	12.55	4.30	22.97	3.45	77.03	52.69								0.73	0.70
1.50	10.04	7.75	33.01	4.76	66.99	59.42								0.74	0.71
1.60	8.97	13.46	41.98	6.62	58.02	66.53								0.67	0.70
1.70	6.08	21.02	48.06	8.44	51.94	71.86								0.76	0.71
1.80	3.80	29.41	51.86	9.98	48.14	75.21								0.89	0.72
2.00	4.56	42.20	56.42	12.58	43.58	78.66								0.96	0.74
2.60	43.58	78.66	100.00	41.38										0.56	0.66

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			1.90 ASH % - 48.80		CUM.		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	48.80	100.00	48.80										1.32	1.32

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85017
 =====

SAMPLE ID 6475 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 01/10/85
 ANALYSIS BASIS TYPE (AD,DS,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	-----	TOTAL SULPHUR %	0.45
SURFACE MOISTURE %	-----	PHOSPHOROUS %	-----
TOTAL MOISTURE %	3.88	CHLORINE (PPM)	01230
EQUILIBRIUM MOISTURE %	-----	SPECIFIC GRAVITY	1.95
RESIDUAL MOISTURE %	1.08	FSI	-----
ASH %	58.93	HGI	6810
VOLATILE MATTER %	6.91	CO2 %	-----
FIXED CARBON %	33.08		

GROSS CALORIFIC VALUE (MJ/KG) -----
 NET CALORIFIC VALUE (MJ/KG) -----

```

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85017
=====
SAMPLE ID 72 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 08/09/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
SURFACE MOISTURE % ---
TOTAL MOISTURE % 3.90
EQUILIBRIUM MOISTURE % ---
RESIDUAL MOISTURE % 1.46
ASH % 35.77
VOLATILE MATTER % 7.49
FIXED CARBON % 55.28

TOTAL SULPHUR % 0.62
PHOSPHOROUS % ---
CHLORINE (PPM) 00370
SPECIFIC GRAVITY 1.64
FSI ---
HGI 55.0
CO2 % 2.57

GROSS CALORIFIC VALUE (MJ/KG) 21.46
NET CALORIFIC VALUE (MJ/KG) ---

```

```

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85017
=====
SAMPLE ID 72 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SZ1 DATE ANALYSED 08/09/85
FRACTION SIZE WT% ASH% FSI CAL RM VM TS
FROM (MM) TO (MM) (MJ/KG)
50.00 6.00 49.87 --- --- --- --- --- ---
6.00 0.50 40.57 --- --- --- --- --- ---
0.50 0.15 5.31 --- --- --- --- --- ---
0.15 0.00 4.25 31.51 --- --- 1.23 --- ---
-----

```

```

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85017
=====
SAMPLE ID 72
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID UL1 DATE ANALYSED 08/09/85
ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 1.46
CARBON % 57.78
HYDROGEN % 1.82
SULPHUR % 0.62
NITROGEN % 0.68
ASH % 35.77
OXYGEN % 1.89

```

GORI COAL DIVISION ASH FUSION PROJ KFN BLK LR DS DDH85017
 =====

SAMPLE ID 72
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORG,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE *****		REDUCING ATMOSPHERE *****
INITIAL TEMP.(C) 1269.0		INITIAL TEMP.(C) 1182.0
SOFTENING TEMP.(C) 1280.0		SOFTENING TEMP.(C) 1219.0
HEMISPHERICAL TEMP.(C) 1318.0		HEMISPHERICAL TEMP.(C) 1237.0
FLUID TEMP.(C) 1389.0		FLUID TEMP.(C) 1340.0

GORI COAL DIVISION ASH MINERAL PROJ KFN BLK LR DS DDH85017
 =====

SAMPLE ID 72
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORG,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	53.20
ALUMINIUM OXIDE %	(AL2O3)	19.28
FERRIC OXIDE %	(FE2O3)	7.85
TITANIUM DIOXIDE %	(TI02)	0.78
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.93
CALCIUM OXIDE %	(CAO)	5.35
MAGNESIUM OXIDE %	(MGO)	3.73
SULPHUR TRIOXIDE %	(SO3)	2.68
SODIUM OXIDE %	(NA2O)	1.83
POTASSIUM OXIDE %	(K2O)	1.91

GORI COAL DIVISION SULPHUR PROJ KFN BLK LR DS DDH85017
 =====

SAMPLE ID 72
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORG,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.25
SULPHATE	%	0.00
ORGANIC	%	0.36

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85017 SEAM - F

SAMPLE ID - 72

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)			50.00 X 6.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			49.87 ASH % -		CUM. C.V.		CUM. MOIST	
SG-TME	ELEMENTAL WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.16	3.53	1.16	3.53	98.84	42.13										0.62	0.62
1.45	6.65	7.19	7.81	6.65	92.19	44.65										0.67	0.66
1.50	14.05	12.65	21.86	10.51	78.14	50.41										0.79	0.74
1.60	14.88	19.90	36.74	14.31	63.26	57.59										0.98	0.84
1.70	7.60	32.07	44.34	17.35	55.66	61.07										1.12	0.89
1.80	9.54	38.66	53.88	21.13	46.12	65.71										1.28	0.96
2.00	12.10	48.26	65.98	26.10	34.02	71.91										1.12	0.99
2.60	34.02	71.91	100.00	41.69												0.88	0.95

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)			6.00 X 0.50		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			40.57 ASH % -		CUM. C.V.		CUM. MOIST	
SG-TME	ELEMENTAL WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	7.80	3.46	7.80	3.46	92.20	34.07										0.88	0.88
1.45	10.21	5.87	18.01	4.83	81.99	37.58										0.99	0.94
1.50	9.58	11.07	27.59	6.99	72.41	41.09										1.12	1.00
1.60	17.73	17.75	45.32	11.20	54.68	48.66										1.32	1.13
1.70	12.44	24.89	57.76	14.15	42.24	55.66										1.09	1.12
1.80	9.80	32.76	67.56	16.85	32.44	62.57										1.92	1.24
2.00	13.73	43.81	81.29	21.40	18.71	76.34										1.02	1.20
2.60	18.71	76.34	100.00	31.68												1.19	1.20

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85017 SEAM - F

SAMPLE ID - 72

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		CUM. SINKS		RELATIVE WEIGHT % -			5.31 ASH % -		CUM.		
SG-TME	ELEMENTAL	CUM. FLOATS		WT%	ASH%	CUM.	C.V.	CUM.	CUM.	CUM.	VOL.	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST
1.40	5.17	2.30	5.17	2.30	94.83	29.08						1.03	1.03
1.45	19.04	2.75	24.21	2.65	75.79	35.69						1.12	1.10
1.50	8.86	5.95	33.07	3.54	66.93	39.63						1.28	1.15
1.60	12.82	12.12	45.89	5.93	54.11	46.14						1.62	1.28
1.70	11.66	19.13	57.55	8.61	42.45	53.57						1.58	1.34
1.80	9.56	25.49	67.11	11.01	32.89	61.73						1.66	1.39
2.00	11.15	37.95	78.26	14.85	21.74	73.92						1.80	1.45
2.60	21.74	73.92	100.00	27.69								1.96	1.56

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		CUM. SINKS		RELATIVE WEIGHT % -			4.25 ASH % -		31.51		
SG-TME	ELEMENTAL	CUM. FLOATS		WT%	ASH%	CUM.	C.V.	CUM.	CUM.	CUM.	VOL.	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST
240.00	*****	31.51	100.00	31.51								1.23	1.23

```

GCRI COAL DIVISION HEAD      PROJ KPN   BLK LR   DS DDH85017
=====
SAMPLE ID              73      DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED 08/09/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)          50.00
SURFACE MOISTURE %    -----
TOTAL MOISTURE %      3.59
EQUILIBRIUM MOISTURE % -----
RESIDUAL MOISTURE %   2.30
ASH %                 18.39
VOLATILE MATTER %    6.17
FIXED CARBON %       73.14

TOTAL SULPHUR %       0.49
PHOSPHOROUS %        -----
CHLORINE (PPM)       00170
SPECIFIC GRAVITY     1.50
FSI                  -----
HGI                  32.0
OD2 %                1.01

GROSS CALORIFIC VALUE (MJ/KG) 27.59
NET CALORIFIC VALUE (MJ/KG)  ---

```

```

GCRI COAL DIVISION SIZE      PROJ KPN   BLK LR   DS DDH85017
=====
SAMPLE ID              73      DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID      SZ1      DATE ANALYSED 08/09/85
FRACTION SIZE        WTX%   ASHX%   FSI     CAL     RM     VM     TS
FROM (MM) TO (MM)   (MJ/KG)
50.00 6.00 29.20 -----
6.00 0.50 53.88 -----
0.50 0.15 9.53 -----
0.15 0.00 7.39 22.00 -----
-----

```

```

GCRI COAL DIVISION ULTIMATE   PROJ KPN   BLK LR   DS DDH85017
=====
SAMPLE ID              73      DATA TYPE (REAL,BORO,AVER,CALC) REAL
SAMPLE PRODUCT ID     SP1      DATE ANALYSED 08/09/85
SPLIT SAMPLE ID      UL1
ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER %              2.30
CARBON %             73.05
HYDROGEN %           2.21
SULPHUR %            0.49
NITROGEN %           0.87
ASH %                18.39
OXYGEN %             2.69

```


GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85017
 =====

SAMPLE ID 73
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

 INITIAL TEMP.(C) 1304.0
 SOFTENING TEMP.(C) 1323.0
 HEMISPHERICAL TEMP.(C) 1351.0
 FLUID TEMP.(C) 1421.0

REDUCING ATMOSPHERE

 INITIAL TEMP.(C) 1258.0
 SOFTENING TEMP.(C) 1269.0
 HEMISPHERICAL TEMP.(C) 1291.0
 FLUID TEMP.(C) 1399.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85017
 =====

SAMPLE ID 73
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SiO2)	46.52
ALUMINIUM OXIDE %	(Al2O3)	23.82
FERRIC OXIDE %	(Fe2O3)	5.56
TITANIUM DIOXIDE %	(TiO2)	0.99
PHOSPHOROUS PENTOXIDE %	(P2O5)	2.98
CALCIUM OXIDE %	(CaO)	8.62
MAGNESIUM OXIDE %	(MgO)	3.58
SULPHUR TRIOXIDE %	(SO3)	2.04
SODIUM OXIDE %	(Na2O)	2.05
POTASSIUM OXIDE %	(K2O)	1.49

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85017
 =====

SAMPLE ID 73
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.05
SULPHATE	%	0.00
ORGANIC	%	0.44

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85017 SEAM - E

SAMPLE ID - 73

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			29.20 ASH % -		CUM. MOIST	CUM. MOIST
	WT%	ASH%			FSI	C.V.	CUM. C.V.	S	S		
1.40	2.01	3.67	2.01	3.67	97.99	26.66				0.56	0.56
1.45	35.80	8.17	37.81	7.93	62.19	37.31				0.62	0.62
1.50	18.22	12.42	56.03	9.39	43.97	47.63				0.48	0.57
1.60	16.16	17.85	72.19	11.28	27.81	64.93				0.55	0.57
1.70	2.85	28.06	75.04	11.92	24.96	69.14				0.65	0.57
1.80	1.51	38.74	76.55	12.45	23.45	71.09				0.65	0.57
2.00	6.61	52.48	83.16	15.63	16.84	78.40				0.52	0.57
2.60	16.84	78.40	100.00	26.20						0.62	0.58

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			53.88 ASH % -		CUM. MOIST	CUM. MOIST
	WT%	ASH%			FSI	C.V.	CUM. C.V.	S	S		
1.40	12.65	2.43	12.65	2.43	87.35	14.65				0.41	0.41
1.45	30.27	5.40	42.92	4.52	57.08	19.55				0.40	0.40
1.50	20.70	9.10	63.62	6.01	36.38	25.50				0.45	0.42
1.60	18.54	14.41	82.16	7.91	17.84	37.03				1.14	0.58
1.70	5.51	19.12	87.67	8.61	12.33	45.03				1.66	0.65
1.80	4.33	23.99	92.00	9.34	8.00	56.41				1.73	0.70
2.00	2.81	36.66	94.81	10.15	5.19	67.11				1.64	0.73
2.60	5.19	67.11	100.00	13.10						1.01	0.74


```

GCRI COAL DIVISION  HEAD  PROJ  KFN  BLK  LR  DS  DCH85017
=====
SAMPLE ID           74      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID    HD1      DATE ANALYSED  01/10/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)      -----
SURFACE MOISTURE %  -----
TOTAL MOISTURE %   3.01
EQUILIBRIUM MOISTURE % -----
RESIDUAL MOISTURE %  1.28
ASH %              68.98
VOLATILE MATTER %  6.61
FIXED CARBON %     23.13

TOTAL SULPHUR %    1.99
PHOSPHOROUS %     -----
CHLORINE (PPM)    66470
SPECIFIC GRAVITY  2.26
FSI               -----
HGI              28.0
CO2 %            -----

GROSS CALORIFIC VALUE (MJ/KG)  -----
NET CALORIFIC VALUE (MJ/KG)   -----

```

```

GCRI COAL DIVISION  ULTIMATE  PROJ  KFN  BLK  LR  DS  DCH85017
=====
SAMPLE ID           74
SAMPLE PRODUCT ID   SP1      DATA TYPE (REAL,BORO,AVER,CALC)  -----
SPLIT SAMPLE ID    UL1      DATE ANALYSED  ___/___/___

ANALYSIS BASIS TYPE (DAF,DB,AD)  ---

WATER      %      -----
CARBON     %      -----
HYDROGEN   %      -----
SULPHUR    %      -----
NITROGEN   %      0.32
ASH        %      -----
OXYGEN     %      -----

```


KPNLRDDH 85018

```

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85018
=====
SAMPLE ID 75 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 08/09/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
SURFACE MOISTURE % ---
TOTAL MOISTURE % 3.34
EQUILIBRIUM MOISTURE % ---
RESIDUAL MOISTURE % 0.95
ASH % 19.47
VOLATILE MATTER % 7.20
FIXED CARBON % 72.38

TOTAL SULPHUR % 0.42
PHOSPHOROUS % ---
CHLORINE (PPM) 30480
SPECIFIC GRAVITY 1.51
FSI ---
HGI 89.0
CO2 % 1.69

GROSS CALORIFIC VALUE (MJ/KG) 27.85
NET CALORIFIC VALUE (MJ/KG) ---

```

```

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85018
=====
SAMPLE ID 75 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SZ1 DATE ANALYSED 08/09/85
FRACTION SIZE WT% ASH% FSI CAL RM VM TS
FROM (MM) TO (MM) (MJ/KG)
50.00 6.00 21.42 --- --- --- --- --- ---
6.00 0.50 49.43 --- --- --- --- --- ---
0.50 0.15 14.28 --- --- --- --- --- ---
0.15 0.00 14.87 9.62 --- --- 1.22 --- ---
-----

```

```

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85018
=====
SAMPLE ID 75
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID UL1 DATE ANALYSED 08/09/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 0.95
CARBON % 71.62
HYDROGEN % 1.92
SULPHUR % 0.42
NITROGEN % 0.89
ASH % 19.47
OXYGEN % 4.73

```

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85018
 =====

SAMPLE ID 75
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

 INITIAL TEMP.(C) 1291.0
 SOFTENING TEMP.(C) 1307.0
 HEMISPHERICAL TEMP.(C) 1356.0
 FLUID TEMP.(C) 1418.0

REDUCING ATMOSPHERE

 INITIAL TEMP.(C) 1226.0
 SOFTENING TEMP.(C) 1237.0
 HEMISPHERICAL TEMP.(C) 1291.0
 FLUID TEMP.(C) 1410.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85018
 =====

SAMPLE ID 75
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SiO2)	50.70
ALUMINIUM OXIDE %	(AL2O3)	19.78
FERRIC OXIDE %	(FE2O3)	6.13
TITANIUM DIOXIDE %	(TiO2)	0.78
PHOSPHOROUS PENTOXIDE %	(P2O5)	2.00
CALCIUM OXIDE %	(CAO)	7.42
MAGNESIUM OXIDE %	(MGO)	4.39
SULPHUR TRIOXIDE %	(SO3)	3.06
SODIUM OXIDE %	(NA2O)	1.73
POTASSIUM OXIDE %	(K2O)	1.51

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85018
 =====

SAMPLE ID 75
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.01
SULPHATE	%	0.00
ORGANIC	%	0.41

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85018 SEAM - I

SAMPLE ID - 75

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT																	
FRACTION SIZE(MM)	0.50 X		0.15		RELATIVE WEIGHT % - 14.28								ASH % - 0.00				
SG-TME	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	CUM. S	CUM. S	VOL. VOL.	CUM. CUM.	MOIST MOIST	
1.40	32.43	8.52	32.43	8.52	67.57	14.52										0.69	0.69
1.45	30.37	9.50	62.80	8.99	37.20	18.62										0.77	0.73
1.50	5.39	10.05	68.19	9.08	31.81	20.08										0.86	0.74
1.60	14.99	10.82	83.18	9.39	16.82	28.32										1.39	0.86
1.70	8.84	12.36	92.02	9.68	7.98	46.01										1.88	0.95
1.80	2.76	22.46	94.78	10.05	5.22	58.46										1.62	0.97
2.00	1.96	34.41	96.74	10.54	3.26	72.92										1.41	0.98
2.60	3.26	72.92	100.00	12.58												0.94	0.98

ANALYSIS TYPE - FROTH																	
FRACTION SIZE(MM)	0.15 X		0.00		RELATIVE WEIGHT % - 14.87								ASH % - 9.62				
SG-TME	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	CUM. S	CUM. S	VOL. VOL.	CUM. CUM.	MOIST MOIST	
240.00	*****	9.62	100.00	9.62												1.22	1.22

GORI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85018

SAMPLE ID 76 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 08/09/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) 50.00
 SURFACE MOISTURE % 3.33 TOTAL SULPHUR % 0.35
 TOTAL MOISTURE % 3.33 PHOSPHOROUS % 0.15
 EQUILIBRIUM MOISTURE % 3.33 CHLORINE (PPM) 00550
 RESIDUAL MOISTURE % 0.94 SPECIFIC GRAVITY 1.25
 FSI
 ASH % 35.91 HGI 62.0
 VOLATILE MATTER % 7.06 CO2 % 2.48
 FIXED CARBON % 56.09

GROSS CALDRIFIC VALUE (MJ/KG) 21.37
 NET CALDRIFIC VALUE (MJ/KG) 21.37

GORI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85018

SAMPLE ID 76 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 08/09/85

FRACTION SIZE	WT%	ASH%	FSI	CAL (MJ/KG)	RM	VM	TS
FROM (MM) TO (MM)							
50.00 6.00	44.39	---	---	---	---	---	---
6.00 0.50	44.37	---	---	---	---	---	---
0.50 0.15	6.10	---	---	---	---	---	---
0.15 0.00	5.14	25.98	---	---	1.14	---	---

GORI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85018

SAMPLE ID 76 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SAMPLE PRODUCT ID SP1 DATE ANALYSED 08/09/85
 SPLIT SAMPLE ID UL1

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 0.94
 CARBON % 56.84
 HYDROGEN % 2.08
 SULPHUR % 0.35
 NITROGEN % 0.65
 ASH % 35.91
 OXYGEN % 3.23

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85018 SEAM - H

SAMPLE ID - 76

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT																		
FRACTION SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -						6.10 ASH % -		0.00				
SG-TME	ELEMENTAL	WT%	ASH%	CUM. WT%	FLOATS	ASH%	CUM. SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	CUM. S	CUM. S	VOL.	VOL.	MOIST	MOIST
1.40	17.41	3.74		17.41	3.74		82.59	25.32									1.53	1.53
1.45	16.79	4.43		34.20	4.08		65.80	30.65									1.68	1.60
1.50	8.25	6.24		42.45	4.50		57.55	34.15									4.38	2.14
1.60	14.22	10.48		56.67	6.00		43.33	41.92									2.60	2.26
1.70	16.99	17.94		73.66	8.75		26.34	57.39									1.22	2.02
1.80	5.47	23.70		79.13	9.79		20.87	66.22									2.02	2.02
2.00	5.77	38.92		84.90	11.77		15.10	76.65									2.10	2.02
2.60	15.10	76.65		100.00	21.56												2.07	2.03

ANALYSIS TYPE - FROTH																		
FRACTION SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -						5.14 ASH % -		25.98				
SG-TME	ELEMENTAL	WT%	ASH%	CUM. WT%	FLOATS	ASH%	CUM. SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	CUM. S	CUM. S	VOL.	VOL.	MOIST	MOIST
240.00	*****	25.98		100.00	25.98												1.14	1.14

```

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85018
=====
SAMPLE ID 77 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 08/09/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GDST,ISO) ASTM

TOP SIZE (MM) 50.00 TOTAL SULPHUR % 0.36
SURFACE MOISTURE % --- PHOSPHOROUS % ---
TOTAL MOISTURE % 3.53 CHLORINE (PPM) 00680
EQUILIBRIUM MOISTURE % --- SPECIFIC GRAVITY 1.39

RESIDUAL MOISTURE % 0.96 FSI ---
ASH % 50.77 HGI 58.0
VOLATILE MATTER % 8.10 CO2 % 3.85
FIXED CARBON % 40.17

GROSS CALORIFIC VALUE (MJ/KG) 14.90
NET CALORIFIC VALUE (MJ/KG) ---

```

```

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85018
=====
SAMPLE ID 77 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SZ1 DATE ANALYSED 08/09/85
FRACTION SIZE WT% ASH% FSI CAL RM VM TS
FROM (MM) TO (MM) (MJ/KG)
50.00 6.00 62.83 --- --- --- --- ---
6.00 0.50 31.28 --- --- --- --- ---
0.50 0.15 3.00 --- --- --- --- ---
0.15 0.00 2.89 42.12 --- --- 1.00 --- ---
-----

```

```

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85018
=====
SAMPLE ID 77 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SAMPLE PRODUCT ID SP1 DATE ANALYSED 08/09/85
SPLIT SAMPLE ID UL1
ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 0.96
CARBON % 41.81
HYDROGEN % 1.61
SULPHUR % 0.36
NITROGEN % 0.48
ASH % 50.77
OXYGEN % 4.01

```

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85018
 =====

SAMPLE ID 77
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE		REDUCING ATMOSPHERE	
*****		*****	
INITIAL TEMP.(C)	1258.0	INITIAL TEMP.(C)	1191.0
SOFTENING TEMP.(C)	1280.0	SOFTENING TEMP.(C)	1231.0
HEMISPHERICAL TEMP.(C)	1304.0	HEMISPHERICAL TEMP.(C)	1296.0
FLUID TEMP.(C)	1323.0	FLUID TEMP.(C)	1321.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85018
 =====

SAMPLE ID 77
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	58.52
ALUMINIUM OXIDE %	(AL2O3)	17.39
FERRIC OXIDE %	(FE2O3)	6.95
TITANIUM DIOXIDE %	(TI02)	0.90
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.29
CALCIUM OXIDE %	(CAO)	4.79
MAGNESIUM OXIDE %	(MGO)	4.15
SULPHUR TRIOXIDE %	(S03)	1.35
SODIUM OXIDE %	(NA2O)	1.42
POTASSIUM OXIDE %	(K2O)	1.87

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85018
 =====

SAMPLE ID 77
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.09
SULPHATE	%	0.00
ORGANIC	%	0.27

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85018 SEAM - F

SAMPLE ID - 77

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 62.83 ASH % - 0.00				CUM. MOIST					
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V.	CUM. FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.06	12.88		1.06	12.88	98.94	59.35									0.52	0.52
1.45	0.97	15.10		2.03	13.94	97.97	59.78									0.57	0.54
1.50	0.82	16.75		2.85	14.75	97.15	60.15									0.54	0.54
1.60	2.56	23.57		5.41	18.92	94.59	61.14									0.55	0.55
1.70	5.20	30.06		10.61	24.38	89.39	62.94									0.70	0.62
1.80	13.10	39.47		23.71	32.72	76.29	66.98									0.81	0.73
2.00	21.41	50.61		45.12	41.21	54.88	73.36									0.88	0.80
2.60	54.88	73.36		100.00	58.85											1.02	0.92

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 31.28 ASH % - 0.00				CUM. MOIST					
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V.	CUM. FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.29	8.44		6.29	8.44	93.71	40.43									0.92	0.92
1.45	15.78	9.64		22.07	9.30	77.93	46.67									0.83	0.86
1.50	8.40	11.16		30.47	9.81	69.53	50.96									0.82	0.85
1.60	9.99	15.86		40.46	11.30	59.54	56.85									0.92	0.86
1.70	7.80	24.56		48.26	13.45	51.74	61.71									1.12	0.91
1.80	6.75	33.17		55.01	15.87	44.99	66.00									1.13	0.93
2.00	11.30	44.91		66.31	20.82	33.69	73.07									1.44	1.02
2.60	33.69	73.07		100.00	38.42											1.21	1.08

GULF CANADA RESOURCES INC. - COAL DIVISION

JAN 09/86

WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85018 SEAM - F

SAMPLE ID - 77

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT														
FRACTION	SIZE(MM)	0.50 X		0.15		RELATIVE WEIGHT % -				3.00 ASH % - 0.00				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM. SINKS		CUM. C.V.		CUM.		CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	11.37	5.46	11.37	5.46	88.63	38.71							0.89	0.89
1.45	15.18	6.80	26.55	6.23	73.45	45.30							0.94	0.92
1.50	7.83	7.01	34.38	6.40	65.62	49.87							0.85	0.90
1.60	9.87	10.63	44.25	7.35	55.75	56.82							1.17	0.96
1.70	6.74	22.04	50.99	9.29	49.01	61.60							1.58	1.04
1.80	5.85	22.66	56.84	10.67	43.16	66.88							1.52	1.09
2.00	8.65	39.17	65.49	14.43	34.51	73.83							1.62	1.16
2.60	34.51	73.83	100.00	34.93									1.21	1.18

ANALYSIS TYPE - FROTH														
FRACTION	SIZE(MM)	0.15 X		0.00		RELATIVE WEIGHT % -				2.89 ASH % - 42.12				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM. SINKS		CUM. C.V.		CUM.		CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	42.12	100.00	42.12									1.00	1.00

GORI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85018	
=====								
SAMPLE ID	6556	DATA TYPE (REAL,BORO,AVER,CALC)						REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 01/10/85						AD
ANALYSIS BASIS TYPE (AD,DB,AR,EM)								AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)								ASTM
TOP SIZE (MM)		---	---			TOTAL SULPHUR %		0.38
SURFACE MOISTURE %		---	---			PHOSPHOROUS %		---
TOTAL MOISTURE %		4.67				CHLORINE (PPM)		02190
EQUILIBRIUM MOISTURE %		---	---			SPECIFIC GRAVITY		1.57
RESIDUAL MOISTURE %		0.72				FBI		---
ASH %		25.98				HGI		50.0
VOLATILE MATTER %		10.22				CO2 %		---
FIXED CARBON %		63.08						
GROSS CALORIFIC VALUE (MJ/KG)		---	---					
NET CALORIFIC VALUE (MJ/KG)		---	---					

GORI COAL DIVISION	ULTIMATE	PROJ	KPN	BLK	LR	DS	DDH85018	
=====								
SAMPLE ID	6556	DATA TYPE (REAL,BORO,AVER,CALC)						REAL
SAMPLE PRODUCT ID	SP1	DATE ANALYSED 01/10/85						
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)						AD
WATER	%	---	---					
CARBON	%	---	---					
HYDROGEN	%	---	---					
SULPHUR	%	---	---					
NITROGEN	%		0.67					
ASH	%	---	---					
OXYGEN	%	---	---					

GORI COAL DIVISION ASH MINERAL PROJ - KPN BLK LR DS DDH85018
 =====

SAMPLE ID 6556
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 01/10/85

SILICON DIOXIDE %	(SI02)	44.36
ALUMINIUM OXIDE %	(AL2O3)	12.93
FERRIC OXIDE %	(FE2O3)	---
TITANIUM DIOXIDE %	(TI02)	---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---
CALCIUM OXIDE %	(CAO)	---
MAGNESIUM OXIDE %	(MGO)	---
SULPHUR TRIOXIDE %	(SO3)	---
SODIUM OXIDE %	(NA2O)	1.27
POTASSIUM OXIDE %	(K2O)	---

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85018
 =====

SAMPLE ID 6556
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 01/10/85

PYRITE	%	0.03
SULPHATE	%	0.00
ORGANIC	%	0.35

```

GORI COAL DIVISION  HEAD      PROJ  KPN    BLK  LR    DS  DDH85018
=====
SAMPLE ID              78      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      HD1      DATE ANALYSED  08/09/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)                50.00
SURFACE MOISTURE %           ---.---
TOTAL MOISTURE %             3.50
EQUILIBRIUM MOISTURE %      ---.---
RESIDUAL MOISTURE %          0.99
ASH %                        61.95
VOLATILE MATTER %           7.09
FIXED CARBON %              29.97

TOTAL SULPHUR %              0.62
PHOSPHOROUS %               ---.---
CHLORINE (PPM)              00460
SPECIFIC GRAVITY            1.98
FSI                          ---.---
HGI                          86.0
CO2 %                        2.47

GROSS CALORIFIC VALUE (MJ/KG) 10.59
NET CALORIFIC VALUE (MJ/KG)  ---.---

```

```

GORI COAL DIVISION  SIZE      PROJ  KPN    BLK  LR    DS  DDH85018
=====
SAMPLE ID              78      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID      SZ1      DATE ANALYSED  08/09/85
FRACTION SIZE        WT%    ASH%    FSI    CAL    RM    VM    TS
FROM (MM) TO (MM)    (MJ/KG)
50.00  6.00    45.81  ---.---  ---.---  ---.---  ---.---  ---.---
6.00   0.50    42.97  ---.---  ---.---  ---.---  ---.---  ---.---
0.50   0.15     5.82  ---.---  ---.---  ---.---  ---.---  ---.---
0.15   0.00     5.40  43.16  ---.---  1.22  ---.---  ---.---
-----

```

```

GORI COAL DIVISION  ULTIMATE  PROJ  KPN    BLK  LR    DS  DDH85018
=====
SAMPLE ID              78      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SAMPLE PRODUCT ID    SP1      DATE ANALYSED  08/09/85
SPLIT SAMPLE ID      UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER      %      0.99
CARBON     %      29.98
HYDROGEN   %      1.69
SULPHUR    %      0.62
NITROGEN   %      0.41
ASH        %      61.95
OXYGEN     %      4.36

```

GCRI COAL DIVISION ASH FUSION PROJ KFN BLK LR DS DDH85018
 =====

SAMPLE ID 78
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE *****		REDUCING ATMOSPHERE *****	
INITIAL TEMP.(C)	1289.0	INITIAL TEMP.(C)	1231.0
SOFTENING TEMP.(C)	1307.0	SOFTENING TEMP.(C)	1299.0
HEMISPHERICAL TEMP.(C)	1356.0	HEMISPHERICAL TEMP.(C)	1351.0
FLUID TEMP.(C)	1372.0	FLUID TEMP.(C)	1367.0

GCRI COAL DIVISION ASH MINERAL PROJ KFN BLK LR DS DDH85018
 =====

SAMPLE ID 78
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	60.30
ALUMINIUM OXIDE %	(AL2O3)	19.15
FERRIC OXIDE %	(FE2O3)	5.03
TITANIUM DIOXIDE %	(TI02)	0.90
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.56
CALCIUM OXIDE %	(CAO)	4.20
MAGNESIUM OXIDE %	(MGO)	2.95
SULPHUR TRIOXIDE %	(SO3)	1.11
SODIUM OXIDE %	(NA2O)	1.74
POTASSIUM OXIDE %	(K2O)	1.76

GCRI COAL DIVISION SULPHUR PROJ KFN BLK LR DS DDH85018
 =====

SAMPLE ID 78
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.35
SULPHATE	%	0.01
ORGANIC	%	0.26

KPNLRDDH85019

GCRI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85019	
=====								
SAMPLE ID	06518	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED		01/10/85				
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)				ASTM		AD		
TOP SIZE (MM)		----						
SURFACE MOISTURE %		----	TOTAL SULPHUR %				0.55	
TOTAL MOISTURE %		3.95	PHOSPHOROUS %				----	
EQUILIBRIUM MOISTURE %		----	CHLORINE (PPM)				01150	
			SPECIFIC GRAVITY				1.88	
RESIDUAL MOISTURE %		1.29	FSI				----	
ASH %		65.17	HGI				61.0	
VOLATILE MATTER %		7.87	CO2 %				----	
FIXED CARBON %		25.67						
GROSS CALORIFIC VALUE (MJ/KG)		----						
NET CALORIFIC VALUE (MJ/KG)		----						

GCRI COAL DIVISION	ULTIMATE	PROJ	KPN	BLK	LR	DS	DDH85019	
=====								
SAMPLE ID	06518	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED		01/10/85				
SPLIT SAMPLE ID	UL1							
ANALYSIS BASIS TYPE (DAF,DB,AD)				AD				
WATER	%	----						
CARBON	%	----						
HYDROGEN	%	----						
SULPHUR	%	----						
NITROGEN	%	0.37						
ASH	%	----						
OXYGEN	%	----						

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85019
=====

SAMPLE ID 06518
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 01/10/85

SILICON DIOXIDE %	(SI02)	59.34
ALUMINIUM OXIDE %	(AL2O3)	18.75
FERRIC OXIDE %	(FE2O3)	---^---
TITANIUM DIOXIDE %	(TI02)	---^---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---^---
CALCIUM OXIDE %	(CAO)	---^---
MAGNESIUM OXIDE %	(MGO)	---^---
SULPHUR TRIOXIDE %	(SO3)	---^---
SODIUM OXIDE %	(NA2O)	1.44
POTASSIUM OXIDE %	(K2O)	---^---

90.0 <= TOTAL <= 100.0

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85019
=====

SAMPLE ID 06518
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 01/10/85

PYRITE	%	0.37
SULPHATE	%	0.00
ORGANIC	%	0.18

COMBUSTIBLE	%	---^---
UNCOMBUSTIBLE	%	---^---

TOTAL 100.00

```

GCRI COAL DIVISION HEAD      PROJ KPN   BLK LR   DS   DDH85019
=====
SAMPLE ID          00110      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   HD1        DATE ANALYSED   01/10/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)          ----.---
SURFACE MOISTURE %     ----.---      TOTAL SULPHUR %          0.29
TOTAL MOISTURE %       2.41          PHOSPHOROUS %           ----.---
EQUILIBRIUM MOISTURE % ----.---      CHLORINE (PPM)         00670
RESIDUAL MOISTURE %    1.32          SPECIFIC GRAVITY        1.85
ASH %                  52.65         FSI                      ----.---
VOLATILE MATTER %     6.45          HGI                      54.0
FIXED CARBON %        39.58         CO2 %                   ----.---

GROSS CALORIFIC VALUE (MJ/KG)  ----.---
NET CALORIFIC VALUE (MJ/KG)   ----.---

```

```

GCRI COAL DIVISION ULTIMATE    PROJ KPN   BLK LR   DS   DDH85019
=====
SAMPLE ID          00110
SAMPLE PRODUCT ID  SP1      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   UL1      DATE ANALYSED   01/10/85

ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER      %      ----.---
CARBON     %      ----.---
HYDROGEN   %      ----.---
SULPHUR    %      ----.---
NITROGEN   %      0.52
ASH        %      ----.---
OXYGEN     %      ----.---

```

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85019
 =====

SAMPLE ID 00110
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 01/10/85

SILICON DIOXIDE %	(SI02)	64.64
ALUMINIUM OXIDE %	(AL2O3)	17.69
FERRIC OXIDE %	(FE2O3)	---.---
TITANIUM DIOXIDE %	(TI02)	---.---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---.---
CALCIUM OXIDE %	(CAO)	---.---
MAGNESIUM OXIDE %	(MGO)	---.---
SULPHUR TRIOXIDE %	(SO3)	---.---
SODIUM OXIDE %	(NA2O)	1.39
POTASSIUM OXIDE %	(K2O)	---.---

90.0 <= TOTAL <= 100.0

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85019
 =====

SAMPLE ID 00110
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 01/10/85

PYRITE	%	0.07
SULPHATE	%	0.00
ORGANIC	%	0.22

GORI COAL DIVISION	HEAD	PROJ	KPN	BLK	LR	DS	DDH85019	
=====								
SAMPLE ID	6525	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 01/10/85						
				ANALYSIS BASIS TYPE (AD,DB,AR,EM)		AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM								
TOP SIZE (MM)		----						
SURFACE MOISTURE %		----						
TOTAL MOISTURE %		2.74					TOTAL SULPHUR %	1.17
EQUILIBRIUM MOISTURE %		----					PHOSPHOROUS %	----
							CHLORINE (PPM)	01150
							SPECIFIC GRAVITY	1.86
RESIDUAL MOISTURE %		0.93					FSI	----
ASH %		52.99					HGI	59.0
VOLATILE MATTER %		8.85					CO2 %	----
FIXED CARBON %		37.23						
GROSS CALORIFIC VALUE (MJ/KG)		----						
NET CALORIFIC VALUE (MJ/KG)		----						

GORI COAL DIVISION	ULTIMATE	PROJ	KPN	BLK	LR	DS	DDH85019	
=====								
SAMPLE ID	6525	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED 01/10/85						
SPLIT SAMPLE ID	UL1							
				ANALYSIS BASIS TYPE (DAF,DB,AD)		AD		
WATER	%	----						
CARBON	%	----						
HYDROGEN	%	----						
SULPHUR	%	----						
NITROGEN	%	0.49						
ASH	%	----						
OXYGEN	%	----						

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85019
 =====

SAMPLE ID 06525
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 01/10/85

SILICON DIOXIDE %	(SI02)	54.94
ALUMINIUM OXIDE %	(AL2O3)	16.86
FERRIC OXIDE %	(FE2O3)	---.---
TITANIUM DIOXIDE %	(TI02)	---.---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---.---
CALCIUM OXIDE %	(CAO)	---.---
MAGNESIUM OXIDE %	(MGO)	---.---
SULPHUR TRIOXIDE %	(SO3)	---.---
SODIUM OXIDE %	(NA2O)	1.59
POTASSIUM OXIDE %	(K2O)	---.---

90.0 <= TOTAL <= 100.0

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85019
 =====

SAMPLE ID 06525
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 01/10/85

PYRITE	%	0.92
SULPHATE	%	0.02
ORGANIC	%	0.23

<u>GCRI COAL DIVISION</u>	<u>HEAD</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85019</u>	
SAMPLE ID	79	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED		08/09/85				
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)				AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)		ASTM						
TOP SIZE (MM) -----								
SURFACE MOISTURE %	-----	TOTAL SULPHUR %				0.89		
TOTAL MOISTURE %	3.42	PHOSPHOROUS %				-----		
EQUILIBRIUM MOISTURE %	-----	CHLORINE (PPM)				00500		
		SPECIFIC GRAVITY				1.66		
RESIDUAL MOISTURE %	0.82	FSI				-----		
ASH %	38.80	HGI				64.0		
VOLATILE MATTER %	6.80	CO2 %				1.57		
FIXED CARBON %	53.58							
GROSS CALORIFIC VALUE (MJ/KG)		20.01						
NET CALORIFIC VALUE (MJ/KG)		-----						

<u>GCRI COAL DIVISION</u>	<u>SIZE</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85019</u>	
SAMPLE ID	79	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SPLIT SAMPLE ID	SZ1	DATE ANALYSED		08/09/85				
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS	
FROM (MM) TO (MM)				(MJ/KG)				
50.00	6.00	36.11	-----	-----	-----	-----	-----	-----
6.00	0.50	49.32	-----	-----	-----	-----	-----	-----
0.50	0.15	7.53	-----	-----	-----	-----	-----	-----
0.15	0.00	7.04	23.83	-----	-----	0.91	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----	-----

<u>GCRI COAL DIVISION</u>	<u>ULTIMATE</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85019</u>	
SAMPLE ID	79	DATA TYPE (REAL,BORO,AVER,CALC)				REAL		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED		08/09/85				
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)				AD		
WATER	%	0.82						
CARBON	%	52.81						
HYDROGEN	%	1.67						
SULPHUR	%	0.89						
NITROGEN	%	0.65						
ASH	%	38.80						
OXYGEN	%	4.36						

GCRI COAL DIVISION ASH FUSION PROJ KFN BLK LR DS DDH85019
 =====

SAMPLE ID 79
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE *****	REDUCING ATMOSPHERE *****
INITIAL TEMP.(C) 1283.0	INITIAL TEMP.(C) 1248.0
SOFTENING TEMP.(C) 1323.0	SOFTENING TEMP.(C) 1277.0
HEMISPHERICAL TEMP.(C) 1389.0	HEMISPHERICAL TEMP.(C) 1323.0
FLUID TEMP.(C) 1410.0	FLUID TEMP.(C) 1397.0

GCRI COAL DIVISION ASH MINERAL PROJ KFN BLK LR DS DDH85019
 =====

SAMPLE ID 79
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	59.58
ALUMINIUM OXIDE %	(AL2O3)	18.90
FERRIC OXIDE %	(FE2O3)	5.05
TITANIUM DIOXIDE %	(TI02)	0.90
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.50
CALCIUM OXIDE %	(CAO)	4.56
MAGNESIUM OXIDE %	(MGO)	3.02
SULPHUR TRIOXIDE %	(SO3)	2.06
SODIUM OXIDE %	(NA2O)	1.22
POTASSIUM OXIDE %	(K2O)	1.91

GCRI COAL DIVISION SULPHUR PROJ KFN BLK LR DS DDH85019
 =====

SAMPLE ID 79
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVR,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.52
SULPHATE	%	0.01
ORGANIC	%	0.36

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85019 SEAM - F

SAMPLE ID - 79

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 36.11		ASH % - 0.00						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.			CUM.	CUM.
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.56	4.39	0.56	4.39	99.44	51.02							0.71	0.71
1.45	0.31	8.55	0.87	5.87	99.13	51.15							0.85	0.76
1.50	1.93	12.57	2.80	10.49	97.20	51.92							0.91	0.86
1.60	4.10	21.16	6.90	16.83	93.10	53.27							0.88	0.87
1.70	20.25	31.26	27.15	27.59	72.85	59.39							0.91	0.90
1.80	8.62	41.07	35.77	30.84	64.23	61.85							1.03	0.93
2.00	23.36	50.62	59.13	38.65	40.87	68.27							1.24	1.05
2.60	40.87	68.27	100.00	50.76									0.97	1.02

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 49.32		ASH % - 0.00						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.			CUM.	CUM.
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.50	3.17	6.50	3.17	93.50	34.84							0.69	0.69
1.45	7.25	4.47	13.75	3.86	86.25	37.40							0.80	0.75
1.50	7.24	8.97	20.99	5.62	79.01	40.00							0.96	0.82
1.60	13.80	15.59	34.79	9.57	65.21	45.17							1.23	0.98
1.70	17.32	23.97	52.11	14.36	47.89	52.83							1.02	1.00
1.80	7.81	30.83	59.92	16.51	40.08	57.12							1.83	1.10
2.00	17.81	42.57	77.73	22.48	22.27	68.76							1.87	1.28
2.60	22.27	68.76	100.00	32.78									1.19	1.26

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPnlRDDH85019 SEAM - F

SAMPLE ID - 79

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -		7.53 ASH % -		0.00				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	5.58	3.06	5.58	3.06	94.42	22.12							0.75	0.75
1.45	18.32	4.78	23.90	4.38	76.10	26.30							0.70	0.71
1.50	18.46	6.47	42.36	5.29	57.64	32.64							1.13	0.89
1.60	14.48	10.11	56.84	6.52	43.16	40.21							1.32	1.00
1.70	11.64	15.82	68.48	8.10	31.52	49.21							1.23	1.04
1.80	9.50	24.62	77.98	10.11	22.02	59.82							1.65	1.12
2.00	7.68	37.86	85.66	12.60	14.34	71.58							1.68	1.17
2.60	14.34	71.58	100.00	21.06									1.78	1.25

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -		7.04 ASH % -		23.83				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	23.83	100.00	23.83									0.91	0.91

<u>GRI COAL DIVISION</u>	<u>HEAD</u>	<u>PROJ KPN</u>	<u>BLK LR</u>	<u>DS</u>	<u>DDH85019</u>
SAMPLE ID	6534	DATA TYPE (REAL,BORO,AVER,CALC)			REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 01/10/85			
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)			AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)		ASTM			
TOP SIZE (MM)	---				
SURFACE MOISTURE %	---	TOTAL SULPHUR %		0.47	
TOTAL MOISTURE %	3.86	PHOSPHOROUS %		---	
EQUILIBRIUM MOISTURE %	---	CHLORINE (PPM)		01770	
		SPECIFIC GRAVITY		1.53	
RESIDUAL MOISTURE %	0.85	FSI		---	
ASH %	24.03	HGI		54.0	
VOLATILE MATTER %	6.72	CO2 %		---	
FIXED CARBON %	68.40				
GROSS CALORIFIC VALUE (MJ/KG)	---				
NET CALORIFIC VALUE (MJ/KG)	---				

<u>GRI COAL DIVISION</u>	<u>ULTIMATE</u>	<u>PROJ KPN</u>	<u>BLK LR</u>	<u>DS</u>	<u>DDH85019</u>
SAMPLE ID	6534	DATA TYPE (REAL,BORO,AVER,CALC)			---
SAMPLE PRODUCT ID	SP1	DATE ANALYSED			___/___/___
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)			---
WATER	%	---			
CARBON	%	---			
HYDROGEN	%	---			
SULPHUR	%	---			
NITROGEN	%	0.72			
ASH	%	---			
OXYGEN	%	---			

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85019
=====

SAMPLE ID 6534
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 01/10/85

SILICON DIOXIDE %	(SI02)	46.27
ALUMINIUM OXIDE %	(AL2O3)	28.39
FERRIC OXIDE %	(FE2O3)	---
TITANIUM DIOXIDE %	(TI02)	---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---
CALCIUM OXIDE %	(CAO)	---
MAGNESIUM OXIDE %	(MGO)	---
SULPHUR TRIOXIDE %	(SO3)	---
SODIUM OXIDE %	(NA2O)	2.09
POTASSIUM OXIDE %	(K2O)	---

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85019
=====

SAMPLE ID 6534
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 01/10/85

PYRITE	%	0.03
SULPHATE	%	0.00
ORGANIC	%	0.44

<u>GRI COAL DIVISION</u>	<u>HEAD</u>	<u>PROJ KPN</u>	<u>BLK LR</u>	<u>DS</u>	<u>DDH85019</u>
SAMPLE ID	6537	DATA TYPE (REAL,BORO,AVER,CALC)			REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 01/10/85			
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)			AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)					ASTM
TOP SIZE (MM)	---				
SURFACE MOISTURE %	---		TOTAL SULPHUR %		0.34
TOTAL MOISTURE %	2.56		PHOSPHOROUS %		---
EQUILIBRIUM MOISTURE %	---		CHLORINE (PPM)		01010
			SPECIFIC GRAVITY		1.77
RESIDUAL MOISTURE %	0.84		FSI		---
ASH %	49.66		HGI		93.0
VOLATILE MATTER %	7.37		CO2 %		---
FIXED CARBON %	42.13				
GROSS CALORIFIC VALUE (MJ/KG)					---
NET CALORIFIC VALUE (MJ/KG)					---

<u>GRI COAL DIVISION</u>	<u>ULTIMATE</u>	<u>PROJ KPN</u>	<u>BLK LR</u>	<u>DS</u>	<u>DDH85019</u>
SAMPLE ID	6537	DATA TYPE (REAL,BORO,AVER,CALC)			REAL
SAMPLE PRODUCT ID	SP1	DATE ANALYSED 01/10/85			
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)			AD
WATER	%	---			
CARBON	%	---			
HYDROGEN	%	---			
SULPHUR	%	---			
NITROGEN	%	0.53			
ASH	%	---			
OXYGEN	%	---			

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85019
 =====

SAMPLE ID 6537
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 01/10/85

SILICON DIOXIDE %	(SI02)	58.32
ALUMINIUM OXIDE %	(AL2O3)	19.58
FERRIC OXIDE %	(FE2O3)	---
TITANIUM DIOXIDE %	(TI02)	---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---
CALCIUM OXIDE %	(CAO)	---
MAGNESIUM OXIDE %	(MGO)	---
SULPHUR TRIOXIDE %	(SO3)	---
SODIUM OXIDE %	(NA2O)	1.50
POTASSIUM OXIDE %	(K2O)	---

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85019
 =====

SAMPLE ID 6537
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 01/10/85

PYRITE	%	0.06
SULPHATE	%	0.00
ORGANIC	%	0.28

```

GRI COAL DIVISION  HEAD  PROJ  KPN  BLK  LR  DS  DDH85019
=====
SAMPLE ID          6540      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   HD1       DATE ANALYSED  01/10/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)          ---.---
SURFACE MOISTURE %    ---.---
TOTAL MOISTURE %      2.34
EQUILIBRIUM MOISTURE % ---.---
RESIDUAL MOISTURE %   0.83
ASH %                 59.67
VOLATILE MATTER %    12.52
FIXED CARBON %       26.98

TOTAL SULPHUR %      4.66
PHOSPHOROUS %       ---.---
CHLORINE (PPM)      00730
SPECIFIC GRAVITY     1.95
FSI                  ---.---
HGI                  65.0
CO2 %                ---.---

GROSS CALORIFIC VALUE (MJ/KG)  ---.---
NET CALORIFIC VALUE (MJ/KG)   ---.---

```

```

GRI COAL DIVISION  ULTIMATE  PROJ  KPN  BLK  LR  DS  DDH85019
=====
SAMPLE ID          6540
SAMPLE PRODUCT ID  SP1      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID   UL1     DATE ANALYSED  01/10/85
ANALYSIS BASIS TYPE (DAF,DB,AD)  AD

WATER %           ---.---
CARBON %          ---.---
HYDROGEN %        ---.---
SULPHUR %         ---.---
NITROGEN %        0.34
ASH %             ---.---
OXYGEN %          ---.---

```


GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85019
 =====

SAMPLE ID 6540
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 01/10/85

SILICON DIOXIDE %	(SI02)	49.16
ALUMINIUM OXIDE %	(AL2O3)	11.53
FERRIC OXIDE %	(FE2O3)	—.—
TITANIUM DIOXIDE %	(TI02)	—.—
PHOSPHOROUS PENTOXIDE %	(P2O5)	—.—
CALCIUM OXIDE %	(CAO)	—.—
MAGNESIUM OXIDE %	(MGO)	—.—
SULPHUR TRIOXIDE %	(SO3)	—.—
SODIUM OXIDE %	(NA2O)	1.06
POTASSIUM OXIDE %	(K2O)	—.—

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85019
 =====

SAMPLE ID 6540
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 01/10/85

PYRITE	%	3.98
SULPHATE	%	0.07
ORGANIC	%	0.61

KPNLRDDH85020

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85020

SAMPLE ID 80
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE		REDUCING ATMOSPHERE	
*****		*****	
INITIAL TEMP.(C)	1264.0	INITIAL TEMP.(C)	1203.0
SOFTENING TEMP.(C)	1294.0	SOFTENING TEMP.(C)	1239.0
HEMISPHERICAL TEMP.(C)	1306.0	HEMISPHERICAL TEMP.(C)	1301.0
FLUID TEMP.(C)	1356.0	FLUID TEMP.(C)	1333.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85020

SAMPLE ID 80
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SiO2)	41.14
ALUMINIUM OXIDE %	(AL2O3)	25.33
FERRIC OXIDE %	(FE2O3)	6.19
TITANIUM DIOXIDE %	(TiO2)	1.30
PHOSPHOROUS PENTOXIDE %	(P2O5)	3.74
CALCIUM OXIDE %	(CAO)	10.41
MAGNESIUM OXIDE %	(MGO)	4.07
SULPHUR TRIOXIDE %	(SO3)	2.68
SODIUM OXIDE %	(NA2O)	1.44
POTASSIUM OXIDE %	(K2O)	1.31

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85020

SAMPLE ID 80
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 23/10/85

PYRITE	%	0.08
SULPHATE	%	0.00
ORGANIC	%	0.39

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPMLRDDH85020 SEAM - E

SAMPLE ID - 80

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 26.73				ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.30	1.33	0.30	1.33	99.70	16.19							0.71	0.71
1.45	24.44	5.27	24.74	5.22	75.26	19.73							0.84	0.84
1.50	38.91	9.26	63.65	7.69	36.35	30.94							0.77	0.80
1.60	11.76	15.93	75.41	8.98	24.59	38.12							0.98	0.83
1.70	6.45	25.87	81.86	10.31	18.14	42.48							1.10	0.85
1.80	4.14	28.84	86.00	11.20	14.00	46.51							1.09	0.86
2.00	11.11	43.53	97.11	14.90	2.89	57.97							1.37	0.92
2.60	2.89	57.97	100.00	16.14									1.30	0.93

ANALYSIS TYPE - FLOAT														
FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 52.69				ASH % -						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.25	3.78	1.25	3.78	98.75	12.74							0.83	0.83
1.45	28.62	3.19	29.87	3.21	70.13	16.64							0.84	0.84
1.50	24.20	6.87	54.07	4.85	45.93	21.78							1.04	0.93
1.60	22.51	12.10	76.58	6.98	23.42	31.09							1.21	1.01
1.70	10.03	18.72	86.61	8.34	13.39	40.35							1.63	1.08
1.80	4.86	25.35	91.47	9.24	8.53	48.90							1.17	1.09
2.00	4.75	38.70	96.22	10.70	3.78	61.71							1.51	1.11
2.60	3.78	61.71	100.00	12.63									1.65	1.13

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPRLRDDH85020 SEAM - E

SAMPLE ID - 80

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	0.50 X 0.15		RELATIVE WEIGHT % - 11.80 ASH % -												
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.12	2.71	1.12	2.71	98.88	17.74								0.92	0.92
1.45	23.21	2.95	24.33	2.94	75.67	22.27								1.08	1.07
1.50	2.97	4.35	27.30	3.09	72.70	23.00								1.17	1.08
1.60	21.55	7.47	48.85	5.02	51.15	29.55								1.74	1.37
1.70	19.66	12.14	68.51	7.07	31.49	40.42								1.23	1.33
1.80	10.74	19.49	79.25	8.75	20.75	51.25								1.29	1.33
2.00	8.61	32.53	87.86	11.08	12.14	64.52								1.29	1.32
2.60	12.14	64.52	100.00	17.57										1.56	1.35

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	0.15 X 0.00		RELATIVE WEIGHT % - 8.78 ASH % - 23.79												
	ELEMENTAL	CUM. FLOATS	CUM.	SINKS	CUM. C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	23.79	100.00	23.79										1.08	1.08

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85020

SAMPLE ID 81 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	---	TOTAL SULPHUR %	0.32
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	3.34	CHLORINE (PPM)	02340
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	1.66
RESIDUAL MOISTURE %	0.95	FSI	---
ASH %	38.47	HGI	69.0
VOLATILE MATTER %	7.06	CO2 %	2.88
FIXED CARBON %	53.52		
GROSS CALORIFIC VALUE (MJ/KG)	19.72		
NET CALORIFIC VALUE (MJ/KG)	---		

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85020

SAMPLE ID	81	DATA TYPE (REAL,BORO,AVER,CALC)		REAL
SPLIT SAMPLE ID	SZ1	DATE ANALYSED		24/10/85
FRACTION SIZE	WT%	ASH%	FSI	CAL (MJ/KG)
FROM (MM) TO (MM)				
50.00 6.00	32.53	---	---	---
6.00 0.50	49.72	---	---	---
0.50 0.15	10.36	---	---	---
0.15 0.00	7.39	30.15	---	0.78
---	---	---	---	---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85020

SAMPLE ID 81 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SAMPLE PRODUCT ID SP1 DATE ANALYSED 24/10/85
 SPLIT SAMPLE ID UL1

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	0.95
CARBON	%	52.87
HYDROGEN	%	1.86
SULPHUR	%	0.32
NITROGEN	%	0.53
ASH	%	38.47
OXYGEN	%	5.00

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85020

SAMPLE ID 81
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1250.0
SOFTENING TEMP.(C) 1303.0
HEMISPHERICAL TEMP.(C) 1333.0
FLUID TEMP.(C) 1417.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1194.0
SOFTENING TEMP.(C) 1267.0
HEMISPHERICAL TEMP.(C) 1278.0
FLUID TEMP.(C) 1353.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85020

SAMPLE ID 81
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	57.64
ALUMINIUM OXIDE %	(AL2O3)	20.41
FERRIC OXIDE %	(FE2O3)	3.85
TITANIUM DIOXIDE %	(TI02)	0.89
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.62
CALCIUM OXIDE %	(CAO)	6.02
MAGNESIUM OXIDE %	(MGO)	3.36
SULPHUR TRIOXIDE %	(SO3)	1.58
SODIUM OXIDE %	(NA2O)	2.00
POTASSIUM OXIDE %	(K2O)	1.22

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85020

SAMPLE ID 81
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.07
SULPHATE	%	0.00
ORGANIC	%	0.25

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85020 SEAM - D

SAMPLE ID - 81

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % - 10.36 ASH % -								
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. FSI	CUM. C.V.	S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	(MJ/KG)						
1.40	0.75	2.53	0.75	2.53	99.25	27.74					0.72	0.72
1.45	8.06	1.81	8.81	1.87	91.19	30.04					0.76	0.76
1.50	15.02	4.46	23.83	3.50	76.17	35.08					1.17	1.02
1.60	17.58	8.85	41.41	5.77	58.59	42.95					1.17	1.08
1.70	12.10	14.81	53.51	7.82	46.49	50.27					1.92	1.27
1.80	12.11	21.91	65.62	10.42	34.38	60.26					1.27	1.27
2.00	12.24	34.29	77.86	14.17	22.14	74.62					1.78	1.35
2.60	22.14	74.62	100.00	27.55							1.34	1.35

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % - 7.39 ASH % - 30.15								
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. FSI	CUM. C.V.	S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	(MJ/KG)						
240.00	*****	30.15	100.00	30.15							0.98	0.98

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85020

SAMPLE ID 82
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1250.0
SOFTENING TEMP.(C) 1275.0
HEMISPHERICAL TEMP.(C) 1286.0
FLUID TEMP.(C) 1433.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1200.0
SOFTENING TEMP.(C) 1253.0
HEMISPHERICAL TEMP.(C) 1272.0
FLUID TEMP.(C) 1383.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85020

SAMPLE ID 82
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	58.62
ALUMINIUM OXIDE %	(AL2O3)	15.50
FERRIC OXIDE %	(FE2O3)	3.49
TITANIUM DIOXIDE %	(TI02)	0.90
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.70
CALCIUM OXIDE %	(CAO)	10.24
MAGNESIUM OXIDE %	(MGO)	4.20
SULPHUR TRIOXIDE %	(SO3)	2.09
SODIUM OXIDE %	(NA2O)	1.23
POTASSIUM OXIDE %	(K2O)	0.97

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85020

SAMPLE ID 82
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.05
SULPHATE	%	0.00
ORGANIC	%	0.28

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85020 SEAM - C

SAMPLE ID - 82

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		RELATIVE WEIGHT % - 42.90 ASH % -												
	ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V. CUM.		42.90 ASH % -						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.45	0.43	3.43	0.43	3.43	99.57	40.66								0.80	0.80
1.50	3.12	10.02	3.55	9.22	96.45	41.65								0.77	0.77
1.60	19.92	19.15	23.47	17.65	76.53	47.51								0.76	0.76
1.70	14.98	27.78	38.45	21.60	61.55	52.31								1.00	0.85
1.80	9.54	36.42	47.99	24.54	52.01	55.22								1.12	0.91
2.00	19.79	45.16	67.78	30.56	32.22	61.40								1.28	1.02
2.60	32.22	61.40	100.00	40.50										0.86	0.97

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		RELATIVE WEIGHT % - 45.45 ASH % -												
	ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V. CUM.		45.45 ASH % -						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.35	1.28	0.35	1.28	99.65	27.03								1.04	1.04
1.45	10.94	3.07	11.29	3.01	88.71	29.98								0.70	0.71
1.50	13.91	8.11	25.20	5.83	74.80	34.05								0.89	0.81
1.60	24.06	15.17	49.26	10.39	50.74	43.01								1.07	0.94
1.70	15.57	23.42	64.83	13.52	35.17	51.68								1.82	1.15
1.80	10.49	31.34	75.32	16.00	24.68	60.32								1.21	1.16
2.00	9.19	42.17	84.51	18.85	15.49	71.09								1.29	1.17
2.60	15.49	71.09	100.00	26.94										1.54	1.23

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85020 SEAM - C

SAMPLE ID - 82

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % -				6.82 ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	2.35	3.12	2.35	3.12	97.65	26.77							1.03	1.03
1.45	11.17	3.16	13.52	3.15	86.48	29.82							0.96	0.97
1.50	15.64	5.12	29.16	4.21	70.84	35.28							1.11	1.05
1.60	18.69	10.16	47.85	6.53	52.15	44.28							1.52	1.23
1.70	11.86	17.59	59.71	8.73	40.29	52.13							1.35	1.25
1.80	10.07	24.81	69.78	11.05	30.22	61.24							1.22	1.25
2.00	9.84	36.69	79.62	14.22	20.38	73.09							1.11	1.23
2.60	20.38	73.09	100.00	26.22									1.49	1.28

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % -				4.83 ASH % - 32.13						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	32.13	100.00	32.13									0.93	0.93

KPNLRDDH85021

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85021

SAMPLE ID 83
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1302.0
SOFTENING TEMP.(C) 1326.0
HEMISPHERICAL TEMP.(C) 1410.0
FLUID TEMP.(C) 1437.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1273.0
SOFTENING TEMP.(C) 1299.0
HEMISPHERICAL TEMP.(C) 1329.0
FLUID TEMP.(C) 1410.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85021

SAMPLE ID 83
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	65.72
ALUMINIUM OXIDE %	(AL2O3)	12.85
FERRIC OXIDE %	(FE2O3)	4.70
TITANIUM DIOXIDE %	(TI02)	0.54
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.77
CALCIUM OXIDE %	(CAO)	5.77
MAGNESIUM OXIDE %	(MGO)	3.18
SULPHUR TRIOXIDE %	(SO3)	1.81
SODIUM OXIDE %	(NA2O)	1.00
POTASSIUM OXIDE %	(K2O)	1.26

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85021

SAMPLE ID 83
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.06
SULPHATE	%	0.00
ORGANIC	%	0.36

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DATA SOURCE - KPNLRDDH85021 SEAM - I

SAMPLE ID - 83

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 14.42		ASH % - 0.00									
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	VOL.	VOL.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	
1.45	0.42	15.41	0.42	15.41	99.58	69.85								1.13	1.13
1.50	2.01	17.37	2.43	17.03	97.57	70.93								1.06	1.07
1.60	14.09	21.73	16.52	21.04	83.48	79.23								0.83	0.87
1.70	6.38	28.95	22.90	23.24	77.10	83.40								0.77	0.84
1.80	1.18	29.54	24.08	23.55	75.92	84.23								0.95	0.84
2.00	0.27	35.83	24.35	23.69	75.65	84.41								0.80	0.84
2.60	66.54	86.43	90.89	69.62										0.84	0.84

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 53.93		ASH % - 0.00									
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	VOL.	VOL.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	
1.45	23.57	4.36	23.57	4.36	76.43	27.04								0.60	0.60
1.50	17.90	9.39	41.47	6.53	58.53	32.44								0.64	0.62
1.60	23.62	16.53	65.09	10.16	34.91	43.20								1.93	1.09
1.70	12.46	23.50	77.55	12.30	22.45	54.14								1.58	1.17
1.80	3.29	31.90	80.84	13.10	19.16	57.96								1.45	1.18
2.00	2.48	41.44	83.32	13.94	16.68	60.41								1.78	1.20
2.60	11.13	79.72	94.45	21.70										1.12	1.19

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlR0DDH85021 SEAM - I

SAMPLE ID - 83

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 16.96				ASH % - 0.00		CUM.		
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	9.37	2.99		9.37	2.99	90.63	15.11								1.12	1.12
1.45	24.86	3.40		34.23	3.29	65.77	19.54								1.06	1.08
1.50	21.08	5.74		55.31	4.22	44.69	26.05								1.28	1.15
1.60	17.53	10.71		72.84	5.78	27.16	35.95								1.71	1.29
1.70	12.37	19.27		85.21	7.74	14.79	49.89								1.61	1.33
1.80	4.37	25.29		89.58	8.60	10.42	60.21								1.53	1.34
2.00	3.40	36.10		92.98	9.60	7.02	71.89								1.03	1.33
2.60	7.02	71.89		100.00	13.98										1.46	1.34

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 14.69				ASH % - 21.00		CUM.		
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	21.00		100.00	21.00										0.96	0.96

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85021

SAMPLE ID 84 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 08/09/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	---	TOTAL SULPHUR %	0.70
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	6.13	CHLORINE (PPM)	00400
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	1.78
RESIDUAL MOISTURE %	1.27	FSI	---
ASH %	41.59	HGI	55.0
VOLATILE MATTER %	8.06	CO2 %	3.11
FIXED CARBON %	49.08		

GROSS CALORIFIC VALUE (MJ/KG) 18.56
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85021

SAMPLE ID	84	DATA TYPE (REAL,BORO,AVER,CALC)		REAL			
SPLIT SAMPLE ID	SZ1	DATE ANALYSED		08/09/85			
FRACTION SIZE	WT%	ASH%	FSI	CAL (MJ/KG)	RM	VM	TS
FROM (MM) TO (MM)							
50.00 6.00	43.18	---	---	---	---	---	---
6.00 0.50	44.43	---	---	---	---	---	---
0.50 0.15	6.52	---	---	---	---	---	---
0.15 0.00	5.87	35.39	---	---	1.35	---	---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85021

SAMPLE ID 84
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 08/09/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	1.27
CARBON	%	50.62
HYDROGEN	%	1.89
SULPHUR	%	0.70
NITROGEN	%	0.54
ASH	%	41.59
OXYGEN	%	3.39

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85021

SAMPLE ID 84
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1267.0
SOFTENING TEMP.(C) 1283.0
HEMISPHERICAL TEMP.(C) 1334.0
FLUID TEMP.(C) 1410.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1258.0
SOFTENING TEMP.(C) 1275.0
HEMISPHERICAL TEMP.(C) 1329.0
FLUID TEMP.(C) 1405.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85021

SAMPLE ID 84
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SiO2)	61.46
ALUMINIUM OXIDE %	(Al2O3)	16.63
FERRIC OXIDE %	(Fe2O3)	3.83
TITANIUM DIOXIDE %	(TiO2)	0.78
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.32
CALCIUM OXIDE %	(CaO)	6.66
MAGNESIUM OXIDE %	(MgO)	3.35
SULPHUR TRIOXIDE %	(SO3)	2.17
SODIUM OXIDE %	(Na2O)	1.66
POTASSIUM OXIDE %	(K2O)	0.97

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85021

SAMPLE ID 84
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.35
SULPHATE	%	0.01
ORGANIC	%	0.34

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85021 SEAM - H

SAMPLE ID - 84

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 43.18		ASH % - 0.00		CUM.					
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI	C.V.	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.83	2.52		0.83	2.52	99.17	46.43									0.63	0.63
1.45	4.88	6.39		5.71	5.83	94.29	48.50									0.62	0.62
1.50	14.19	11.98		19.90	10.21	80.10	54.97									0.54	0.56
1.60	9.95	20.67		29.85	13.70	70.15	59.84									0.66	0.60
1.70	9.71	29.78		39.56	17.65	60.44	64.67									0.54	0.58
1.80	6.99	38.36		46.55	20.76	53.45	68.11									0.54	0.58
2.00	11.39	48.39		57.94	26.19	42.06	73.45									0.73	0.61
2.60	42.06	73.45		100.00	46.07											1.44	0.96

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 44.43		ASH % - 0.00		CUM.					
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI	C.V.	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.05	2.42		6.05	2.42	93.95	39.66									0.50	0.50
1.45	15.78	5.17		21.83	4.41	78.17	46.62									0.50	0.50
1.50	10.07	10.47		31.90	6.32	68.10	51.96									0.61	0.53
1.60	13.61	16.79		45.51	9.45	54.49	60.75									0.73	0.59
1.70	7.70	24.81		53.21	11.67	46.79	66.66									0.86	0.63
1.80	5.24	32.51		58.45	13.54	41.55	70.97									1.26	0.69
2.00	8.32	45.34		66.77	17.50	33.23	77.39									1.55	0.80
2.60	33.23	77.39		100.00	37.40											2.01	1.20

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85021 SEAM - H

SAMPLE ID - 84

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT																				
FRACTION SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -						6.52 ASH % -		0.00						
SG-TME	ELEMENTAL	WT%	ASH%	CUM.	FLOATS	WT%	ASH%	CUM.	SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST
1.40	2.77	3.00		2.77	3.00	97.23	31.52												0.81	0.81
1.45	18.89	3.18		21.66	3.16	78.34	38.35												0.98	0.96
1.50	14.92	5.62		36.58	4.16	63.42	46.05												1.15	1.04
1.60	15.54	10.64		52.12	6.09	47.88	57.55												1.44	1.16
1.70	6.64	16.98		58.76	7.32	41.24	64.08												2.09	1.26
1.80	5.84	24.26		64.60	8.85	35.40	70.65												1.48	1.28
2.00	6.42	37.60		71.02	11.45	28.98	77.97												1.85	1.33
2.60	28.98	77.97		100.00	30.73														1.02	1.24

ANALYSIS TYPE - FROTH																				
FRACTION SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -						5.87 ASH % -		35.39						
SG-TME	ELEMENTAL	WT%	ASH%	CUM.	FLOATS	WT%	ASH%	CUM.	SINKS	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST
240.00	*****	35.39		100.00	35.39														1.35	1.35

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85021

SAMPLE ID 85 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 08/09/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	50.00	TOTAL SULPHUR %	0.33
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	5.30	CHLORINE (PPM)	00520
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	1.80
RESIDUAL MOISTURE %	1.65	FSI	---
ASH %	48.02	HGI	54.0
VOLATILE MATTER %	6.65	CO2 %	1.64
FIXED CARBON %	43.68		

GROSS CALORIFIC VALUE (MJ/KG) 15.97
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85021

SAMPLE ID	85	DATA TYPE (REAL,BORO,AVER,CALC) REAL						
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 08/09/85						
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS	
FROM (MM) TO (MM)				(MJ/KG)				
50.00 6.00	59.02	---	---	---	---	---	---	
6.00 0.50	34.77	---	---	---	---	---	---	
0.50 0.15	3.18	---	---	---	---	---	---	
0.15 0.00	3.03	42.82	---	---	1.44	---	---	
---	---	---	---	---	---	---	---	

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85021

SAMPLE ID 85
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 08/09/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	1.65
CARBON	%	43.65
HYDROGEN	%	1.69
SULPHUR	%	0.33
NITROGEN	%	0.54
ASH	%	48.02
OXYGEN	%	4.12

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85021

SAMPLE ID 85
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1304.0
SOFTENING TEMP.(C) 1334.0
HEMISPHERICAL TEMP.(C) 1389.0
FLUID TEMP.(C) 1437.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1248.0
SOFTENING TEMP.(C) 1294.0
HEMISPHERICAL TEMP.(C) 1326.0
FLUID TEMP.(C) 1394.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85021

SAMPLE ID 85
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	62.94
ALUMINIUM OXIDE %	(AL2O3)	18.65
FERRIC OXIDE %	(FE2O3)	5.00
TITANIUM DIOXIDE %	(TI02)	0.90
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.48
CALCIUM OXIDE %	(CAO)	2.80
MAGNESIUM OXIDE %	(MGO)	2.62
SULPHUR TRIOXIDE %	(SO3)	1.03
SODIUM OXIDE %	(NA2O)	1.11
POTASSIUM OXIDE %	(K2O)	1.97

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85021

SAMPLE ID 85
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.05
SULPHATE	%	0.00
ORGANIC	%	0.28

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPDLRODH85021 SEAM - F

SAMPLE ID - 85

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT																
FRACTION SIZE(MM)		50.00 X 6.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 59.02				ASH % - 0.00				
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V.	CUM. C.V.	S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST
1.40	0.32	3.48	0.32	3.48	99.68	49.44									0.79	0.79
1.45	6.74	6.49	7.06	6.35	92.94	52.55									0.84	0.84
1.50	9.97	10.58	17.03	8.83	82.97	57.60									0.97	0.92
1.60	8.72	20.71	25.75	12.85	74.25	61.93									0.91	0.91
1.70	9.99	30.93	35.74	17.90	64.26	66.75									0.81	0.88
1.80	8.00	38.03	43.74	21.59	56.26	70.83									0.81	0.87
2.00	14.71	50.14	58.45	28.77	41.55	78.16									1.02	0.91
2.60	41.55	78.16	100.00	49.29											0.81	0.87

ANALYSIS TYPE - FLOAT																
FRACTION SIZE(MM)		6.00 X 0.50		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 34.77				ASH % - 0.00				
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	CUM. FSI	C.V.	CUM. C.V.	S	CUM. S	VOL.	CUM. VOL.	MOIST	CUM. MOIST
1.40	4.66	3.38	4.66	3.38	95.34	47.16									0.81	0.81
1.45	14.89	4.72	19.55	4.40	80.45	55.02									0.72	0.74
1.50	8.82	9.30	28.37	5.92	71.63	60.65									0.84	0.77
1.60	9.41	17.35	37.78	8.77	62.22	67.20									0.83	0.79
1.70	6.97	26.30	44.75	11.50	55.25	72.36									0.94	0.81
1.80	5.33	35.07	50.08	14.01	49.92	76.34									1.08	0.84
2.00	7.98	47.42	58.06	18.60	41.94	81.84									1.27	0.90
2.60	41.94	81.84	100.00	45.12											1.73	1.25

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85021 SEAM - F

SAMPLE ID - 85

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % - 3.18 ASH % - 0.00								
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. CUM.	C.V. CUM.	S	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI (MJ/KG)						
1.40	1.50	4.31	1.50	4.31	98.50	41.91					0.82	0.82
1.45	13.21	6.68	14.71	6.44	85.29	47.37					0.95	0.94
1.50	11.62	7.18	26.33	6.77	73.67	53.71					0.96	0.95
1.60	13.68	10.99	40.01	8.21	59.99	63.45					1.09	1.00
1.70	6.75	19.05	46.76	9.77	53.24	69.08					1.25	1.03
1.80	5.90	25.89	52.66	11.58	47.34	74.46					1.60	1.10
2.00	5.91	40.26	58.57	14.47	41.43	79.34					1.83	1.17
2.60	41.43	79.34	100.00	41.35							1.68	1.38

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % - 3.03 ASH % - 42.82								
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. CUM.	C.V. CUM.	S	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI (MJ/KG)						
240.00	*****	42.82	100.00	42.82							1.44	1.44

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85021

SAMPLE ID 86 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 08/09/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	50.00	TOTAL SULPHUR %	0.45
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	5.54	CHLORINE (PPM)	00740
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	1.50
RESIDUAL MOISTURE %	1.09	FSI	---
ASH %	19.70	HGI	45.0
VOLATILE MATTER %	6.27	CO2 %	1.43
FIXED CARBON %	72.94		
GROSS CALORIFIC VALUE (MJ/KG)	27.69		
NET CALORIFIC VALUE (MJ/KG)	---		

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85021

SAMPLE ID	86	DATA TYPE (REAL,BORO,AVER,CALC)		REAL
SPLIT SAMPLE ID	SZ1	DATE ANALYSED		08/09/85
FRACTION SIZE	WT%	ASH%	FSI	CAL (MJ/KG)
FROM (MM) TO (MM)				RM
50.00 6.00	45.99	---	---	---
6.00 0.50	42.95	---	---	---
0.50 0.15	6.29	---	---	---
0.15 0.00	4.77	27.26	---	1.23
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85021

SAMPLE ID 86
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 08/09/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	1.09
CARBON	%	71.70
HYDROGEN	%	1.96
SULPHUR	%	0.45
NITROGEN	%	0.77
ASH	%	19.70
OXYGEN	%	4.33

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85021

SAMPLE ID 86
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1304.0
SOFTENING TEMP.(C) 1323.0
HEMISPHERICAL TEMP.(C) 1350.0
FLUID TEMP.(C) 1420.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1248.0
SOFTENING TEMP.(C) 1258.0
HEMISPHERICAL TEMP.(C) 1280.0
FLUID TEMP.(C) 1378.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85021

SAMPLE ID 86
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	47.66
ALUMINIUM OXIDE %	(AL2O3)	21.93
FERRIC OXIDE %	(FE2O3)	6.39
TITANIUM DIOXIDE %	(TI02)	0.78
PHOSPHOROUS PENTOXIDE %	(P2O5)	2.82
CALCIUM OXIDE %	(CAO)	9.38
MAGNESIUM OXIDE %	(MGO)	3.99
SULPHUR TRIOXIDE %	(SO3)	2.10
SODIUM OXIDE %	(NA2O)	1.86
POTASSIUM OXIDE %	(K2O)	1.30

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85021

SAMPLE ID 86
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.02
SULPHATE	%	0.00
ORGANIC	%	0.43

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85021 SEAM - E

SAMPLE ID - 86

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 45.99				ASH % - 0.00						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	(MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.48	1.58	0.48	1.58	99.52	19.90							0.62	0.62
1.45	13.76	5.91	14.24	5.76	85.76	22.14							0.58	0.58
1.50	37.78	9.94	52.02	8.80	47.98	31.75							0.65	0.63
1.60	18.86	17.11	70.88	11.01	29.12	41.23							0.66	0.64
1.70	9.53	28.30	80.41	13.06	19.59	47.52							0.59	0.63
1.80	7.95	36.54	88.36	15.17	11.64	55.02							0.60	0.63
2.00	6.52	46.14	94.88	17.30	5.12	66.33							0.84	0.64
2.60	5.12	66.33	100.00	19.81									1.64	0.70

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 42.95				ASH % - 0.00						
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	(MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	3.37	1.90	3.37	1.90	96.63	16.53							0.84	0.84
1.45	29.32	3.91	32.69	3.70	67.31	22.03							0.44	0.48
1.50	25.93	8.15	58.62	5.67	41.38	30.72							0.41	0.45
1.60	19.83	14.47	78.45	7.89	21.55	45.67							0.77	0.53
1.70	6.81	22.44	85.26	9.06	14.74	56.41							0.99	0.57
1.80	3.25	30.98	88.51	9.86	11.49	63.60							1.23	0.59
2.00	2.83	41.30	91.34	10.84	8.66	70.89							1.26	0.61
2.60	8.66	70.89	100.00	16.04									2.02	0.73

KPNLRDDH85022

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85022

SAMPLE ID 87
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1296.0
SOFTENING TEMP.(C) 1313.0
HEMISPHERICAL TEMP.(C) 1394.0
FLUID TEMP.(C) 1410.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1231.0
SOFTENING TEMP.(C) 1253.0
HEMISPHERICAL TEMP.(C) 1326.0
FLUID TEMP.(C) 1399.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85022

SAMPLE ID 87
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	65.76
ALUMINIUM OXIDE %	(AL2O3)	15.50
FERRIC OXIDE %	(FE2O3)	4.14
TITANIUM DIOXIDE %	(TI02)	0.78
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.16
CALCIUM OXIDE %	(CAO)	4.93
MAGNESIUM OXIDE %	(MGO)	2.81
SULPHUR TRIOXIDE %	(SO3)	1.91
SODIUM OXIDE %	(NA2O)	1.59
POTASSIUM OXIDE %	(K2O)	1.22

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85022

SAMPLE ID 87
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.01
SULPHATE	%	0.00
ORGANIC	%	0.41

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPMLRDDHB5022 SEAM - I

SAMPLE ID - 87

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 66.37		ASH % - 0.00		CUM.		CUM.			
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI	C.V.	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.64	9.28		1.64	9.28	98.36	18.42									0.87	0.87
1.45	44.65	12.01		46.29	11.91	53.71	23.75									0.94	0.94
1.50	22.33	12.39		68.62	12.07	31.38	31.83									0.94	0.94
1.60	15.14	16.54		83.76	12.88	16.24	46.09									0.96	0.94
1.70	3.48	29.27		87.24	13.53	12.76	50.67									1.11	0.95
1.80	1.91	34.98		89.15	13.99	10.85	53.44									1.12	0.95
2.00	7.72	49.99		96.87	16.86	3.13	61.94									1.09	0.96
2.60	3.13	61.94		100.00	18.27											1.19	0.97

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 29.41		ASH % - 0.00		CUM.		CUM.			
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI	C.V.	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.46	6.08		1.46	6.08	98.54	14.60									1.04	1.04
1.45	41.29	5.94		42.75	5.94	57.25	20.84									0.93	0.93
1.50	25.55	8.72		68.30	6.98	31.70	30.61									1.07	0.98
1.60	16.40	14.71		84.70	8.48	15.30	47.65									1.08	1.00
1.70	4.47	23.18		89.17	9.22	10.83	57.74									1.23	1.01
1.80	2.20	31.75		91.37	9.76	8.63	64.37									1.53	1.03
2.00	2.35	43.85		93.72	10.61	6.28	72.05									1.58	1.04
2.60	6.28	72.05		100.00	14.47											1.60	1.08

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DATA SOURCE - KPNLRDDH85022 SEAM - I

SAMPLE ID - 87

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % - 2.17 ASH % - 0.00								
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. FSI (MJ/KG)	CUM. C.V.	S	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%							
1.40	1.09	2.79	1.09	2.79	98.91	24.76					1.15	1.15
1.45	14.01	4.23	15.10	4.13	84.90	28.15					1.15	1.15
1.50	18.24	5.78	33.34	5.03	66.66	34.27					1.30	1.23
1.60	27.29	9.31	60.63	6.96	39.37	51.57					1.65	1.42
1.70	7.73	17.81	68.36	8.18	31.64	59.82					1.83	1.47
1.80	6.04	24.90	74.40	9.54	25.60	68.06					1.40	1.46
2.00	5.80	36.85	80.20	11.52	19.80	77.20					1.67	1.48
2.60	19.80	77.20	100.00	24.52							1.59	1.50

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % - 2.05 ASH % - 32.95								
SG-TME	ELEMENTAL	CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. FSI (MJ/KG)	CUM. C.V.	S	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%							
240.00	*****	32.95	100.00	32.95							1.42	1.42

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85022

SAMPLE ID 88 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 08/09/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	50.00		
SURFACE MOISTURE %	---	TOTAL SULPHUR %	0.37
TOTAL MOISTURE %	5.69	PHOSPHOROUS %	---
EQUILIBRIUM MOISTURE %	---	CHLORINE (PPM)	00520
		SPECIFIC GRAVITY	1.65
RESIDUAL MOISTURE %	1.41	FSI	---
ASH %	35.27	HGI	53.0
VOLATILE MATTER %	6.78	CO2 %	2.50
FIXED CARBON %	56.54		
GROSS CALORIFIC VALUE (MJ/KG)	21.44		
NET CALORIFIC VALUE (MJ/KG)	---		

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85022

SAMPLE ID	88							
SPLIT SAMPLE ID	SZ1							
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS	
FROM (MM) TO (MM)				(MJ/KG)				
50.00 6.00	49.39	---	---	---	---	---	---	---
6.00 0.50	43.41	---	---	---	---	---	---	---
0.50 0.15	3.81	---	---	---	---	---	---	---
0.15 0.00	3.39	50.82	---	---	1.67	---	---	---
---	---	---	---	---	---	---	---	---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85022

SAMPLE ID 88
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 08/09/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	1.41
CARBON	%	56.15
HYDROGEN	%	1.63
SULPHUR	%	0.37
NITROGEN	%	0.59
ASH	%	35.27
OXYGEN	%	4.58

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85022

SAMPLE ID 88
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1283.0
SOFTENING TEMP.(C) 1302.0
HEMISPHERICAL TEMP.(C) 1318.0
FLUID TEMP.(C) 1372.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1242.0
SOFTENING TEMP.(C) 1261.0
HEMISPHERICAL TEMP.(C) 1304.0
FLUID TEMP.(C) 1370.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85022

SAMPLE ID 88
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	56.84
ALUMINIUM OXIDE %	(AL2O3)	19.28
FERRIC OXIDE %	(FE2O3)	5.59
TITANIUM DIOXIDE %	(TI02)	0.78
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.79
CALCIUM OXIDE %	(CAO)	6.94
MAGNESIUM OXIDE %	(MGO)	3.38
SULPHUR TRIOXIDE %	(SO3)	2.87
SODIUM OXIDE %	(NA2O)	1.71
POTASSIUM OXIDE %	(K2O)	1.22

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85022

SAMPLE ID 88
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.06
SULPHATE	%	0.00
ORGANIC	%	0.31

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DATA SOURCE - KPNLRDDH85022 SEAM - H

SAMPLE ID - 88

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		CUM. SINKS		RELATIVE WEIGHT % -			3.81 ASH % - 0.00		CUM.			
SG-TME	ELEMENTAL	CUM. FLOATS		WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%									
1.40	1.26	5.51	1.26	5.51	98.74	42.69							0.95	0.95
1.45	9.95	3.76	11.21	3.96	88.79	47.05							0.99	0.99
1.50	10.52	5.09	21.73	4.51	78.27	52.69							1.18	1.08
1.60	14.99	9.97	36.72	6.74	63.28	62.81							1.36	1.19
1.70	5.60	17.73	42.32	8.19	57.68	67.19							1.37	1.22
1.80	6.61	24.52	48.93	10.40	51.07	72.72							1.43	1.25
2.00	9.70	37.04	58.63	14.80	41.37	81.08							1.82	1.34
2.60	41.37	81.08	100.00	42.22									2.03	1.63

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		CUM. SINKS		RELATIVE WEIGHT % -			3.39 ASH % - 50.82		CUM.			
SG-TME	ELEMENTAL	CUM. FLOATS		WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%									
240.00	*****	50.82	100.00	50.82									1.67	1.67

KPNLRDDH85023

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85023

SAMPLE ID 89
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1211.0
SOFTENING TEMP.(C) 1272.0
HEMISPHERICAL TEMP.(C) 1281.0
FLUID TEMP.(C) 1322.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1128.0
SOFTENING TEMP.(C) 1189.0
HEMISPHERICAL TEMP.(C) 1197.0
FLUID TEMP.(C) 1217.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85023

SAMPLE ID 89
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	45.18
ALUMINIUM OXIDE %	(AL2O3)	19.78
FERRIC OXIDE %	(FE2O3)	10.18
TITANIUM DIOXIDE %	(TI02)	1.23
PHOSPHOROUS PENTOXIDE %	(P2O5)	2.02
CALCIUM OXIDE %	(CAO)	8.23
MAGNESIUM OXIDE %	(MGO)	4.97
SULPHUR TRIOXIDE %	(SO3)	3.07
SODIUM OXIDE %	(NA2O)	1.72
POTASSIUM OXIDE %	(K2O)	1.33

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85023

SAMPLE ID 89
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.06
SULPHATE	%	0.00
ORGANIC	%	0.40

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WASHABILITY REPORT 2

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DATA SOURCE - KPRLRDDH85023 SEAM - K OVERTURNED SAMPLE ID - 89 WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 51.59					ASH % -		CUM.		
SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	FSI	C.V.	CUM. S	CUM. VOL.	CUM. MOIST	CUM. MOIST
1.40	0.76	2.41		0.76	2.41		99.24	41.23						0.60	0.60
1.45	6.77	7.02		7.53	6.55		92.47	43.74						0.77	0.75
1.50	12.63	12.13		20.16	10.05		79.84	48.74						0.80	0.78
1.60	12.02	21.00		32.18	14.14		67.82	53.65						0.86	0.81
1.70	11.19	30.10		43.37	18.26		56.63	58.31						0.63	0.76
1.80	9.60	38.87		52.97	21.99		47.03	62.28						0.71	0.75
2.00	11.01	45.58		63.98	26.05		36.02	67.38						0.90	0.78
2.60	36.02	67.38		100.00	40.94									0.98	0.85

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 37.25					ASH % -		CUM.		
SG-TME	ELEMENTAL	WT%	ASH%	CUM. FLOATS	WT%	ASH%	CUM. SINKS	WT%	ASH%	FSI	C.V.	CUM. S	CUM. VOL.	CUM. MOIST	CUM. MOIST
1.40	9.29	2.02		9.29	2.02		90.71	22.87						0.48	0.48
1.45	16.46	5.35		25.75	4.15		74.25	26.75						0.68	0.61
1.50	19.45	10.58		45.20	6.92		54.80	32.50						0.75	0.67
1.60	17.04	16.26		62.24	9.47		37.76	39.82						0.74	0.69
1.70	13.73	22.14		75.97	11.76		24.03	49.92						1.29	0.80
1.80	6.97	29.81		82.94	13.28		17.06	58.14						1.45	0.85
2.00	5.86	41.06		88.80	15.11		11.20	67.08						1.27	0.88
2.60	11.20	67.08		100.00	20.93									1.23	0.92

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85023 SEAM - K OVERTURNED SAMPLE ID - 89 WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				5.90 ASH % -		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.15	3.60	6.15	3.60	93.85	19.79								1.01	1.01
1.45	24.97	3.12	31.12	3.21	68.88	25.83								1.28	1.23
1.50	15.08	6.21	46.20	4.19	53.80	31.33								1.41	1.29
1.60	18.65	11.26	64.85	6.23	35.15	41.98								1.69	1.40
1.70	11.07	17.71	75.92	7.90	24.08	53.13								1.08	1.36
1.80	5.41	24.65	81.33	9.01	18.67	61.39								1.29	1.35
2.00	6.15	36.38	87.48	10.94	12.52	73.67								1.60	1.37
2.60	12.52	73.67	100.00	18.79										1.88	1.43

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X 0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				5.26 ASH % - 25.42		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	25.42	100.00	25.42										0.90	0.90

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85023

SAMPLE ID 90 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) ---.---
 SURFACE MOISTURE % ---.--- TOTAL SULPHUR % 0.44
 TOTAL MOISTURE % 8.93 PHOSPHOROUS % ---.---
 EQUILIBRIUM MOISTURE % ---.--- CHLORINE (PPM) 02080
 RESIDUAL MOISTURE % 0.77 SPECIFIC GRAVITY 1.68
 FSI
 ASH % 46.07 HGI 67.0
 VOLATILE MATTER % 7.82 CO2 % 2.69
 FIXED CARBON % 45.34
 GROSS CALORIFIC VALUE (MJ/KG) 17.33
 NET CALORIFIC VALUE (MJ/KG) ---.---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85023

SAMPLE ID 90 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 24/10/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 6.00 50.57 ---.--- ---.--- ---.--- ---.--- ---.---
 6.00 0.50 39.08 ---.--- ---.--- ---.--- ---.--- ---.---
 0.50 0.15 5.58 ---.--- ---.--- ---.--- ---.--- ---.---
 0.15 0.00 4.77 39.29 ---.--- 0.72 ---.--- ---.---
 ---.--- ---.--- ---.--- ---.--- ---.--- ---.--- ---.---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85023

SAMPLE ID 90
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 24/10/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 0.77
 CARBON % 46.92
 HYDROGEN % 1.63
 SULPHUR % 0.44
 NITROGEN % 0.61
 ASH % 46.07
 OXYGEN % 3.56

GULF CANADA RESOURCES INC. - COAL DIVISION

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DATA SOURCE - KPNLRDDH85023 SEAM - L OVERTURNED SAMPLE ID - 90 WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 50.57				ASH % -		CUM.	
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.41	3.01	0.41	3.01	99.59	53.54									0.56	0.56
1.45	0.09	7.74	0.50	3.86	99.50	53.58									0.66	0.58
1.50	0.51	13.85	1.01	8.91	98.99	53.79									0.55	0.56
1.60	3.99	25.19	5.00	21.90	95.00	54.99									0.59	0.58
1.70	11.58	32.34	16.58	29.19	83.42	58.13									0.65	0.63
1.80	7.22	40.47	23.80	32.61	76.20	59.81									0.84	0.69
2.00	30.86	48.75	54.66	41.72	45.34	67.33									0.75	0.73
2.60	45.34	67.33	100.00	53.33											0.94	0.82

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 39.08				ASH % -		CUM.	
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	9.73	2.18	9.73	2.18	90.27	44.04									0.53	0.53
1.45	7.30	5.93	17.03	3.79	82.97	47.40									0.56	0.54
1.50	5.71	11.65	22.74	5.76	77.26	50.04									0.56	0.55
1.60	12.41	18.91	35.15	10.40	64.85	56.00									0.69	0.60
1.70	10.78	27.80	45.93	14.49	54.07	61.62									0.96	0.68
1.80	8.69	36.68	54.62	18.02	45.38	66.39									1.30	0.78
2.00	13.73	48.47	68.35	24.13	31.65	74.17									1.79	0.98
2.60	31.65	74.17	100.00	39.97											1.75	1.23

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPMLRDDH85023 SEAM - L OVERTURNED SAMPLE ID - 90 WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.15		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			5.58 ASH % -				
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	14.27	3.09	14.27	3.09	85.73	35.29									0.44	0.44
1.45	13.61	2.91	27.88	3.00	72.12	41.40									0.74	0.59
1.50	8.43	5.68	36.31	3.62	63.69	46.13									0.78	0.63
1.60	11.31	10.95	47.62	5.36	52.38	53.73									0.93	0.70
1.70	8.01	18.73	55.63	7.29	44.37	60.04									1.35	0.80
1.80	6.68	26.76	62.31	9.38	37.69	65.94									1.74	0.90
2.00	9.22	40.05	71.53	13.33	28.47	74.33									2.09	1.05
2.60	28.47	74.33	100.00	30.70											1.05	1.05

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X 0.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -			4.77 ASH % -		39.29			
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	
240.00	*****	39.29	100.00	39.29											0.72	0.72	

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85023

SAMPLE ID 91 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	----	TOTAL SULPHUR %	0.35
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	4.67	CHLORINE (PPM)	02080
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	1.69
RESIDUAL MOISTURE %	0.95	FSI	---
ASH %	47.19	HGI	71.0
VOLATILE MATTER %	8.24	CO2 %	4.00
FIXED CARBON %	43.62		
GROSS CALORIFIC VALUE (MJ/KG) 16.71			
NET CALORIFIC VALUE (MJ/KG) ----			

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85023

SAMPLE ID	91	DATA TYPE (REAL,BORO,AVER,CALC)						REAL
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 24/10/85						
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS	
FROM (MM) TO (MM)				(MJ/KG)				
50.00 6.00	39.74	---	---	---	---	---	---	
6.00 0.50	47.13	---	---	---	---	---	---	
0.50 0.15	7.70	---	---	---	---	---	---	
0.15 0.00	5.43	33.44	---	---	0.80	---	---	
----	----	----	----	----	----	----	----	

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85023

SAMPLE ID 91 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SAMPLE PRODUCT ID SP1 DATE ANALYSED 24/10/85
 SPLIT SAMPLE ID UL1

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	0.95
CARBON	%	44.50
HYDROGEN	%	2.02
SULPHUR	%	0.35
NITROGEN	%	0.56
ASH	%	47.19
OXYGEN	%	4.43

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85023

SAMPLE ID 91
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE		REDUCING ATMOSPHERE	
INITIAL TEMP.(C)	1267.0	INITIAL TEMP.(C)	1194.0
SOFTENING TEMP.(C)	1317.0	SOFTENING TEMP.(C)	1267.0
HEMISPHERICAL TEMP.(C)	1339.0	HEMISPHERICAL TEMP.(C)	1294.0
FLUID TEMP.(C)	1433.0	FLUID TEMP.(C)	1367.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85023

SAMPLE ID 91
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	55.24
ALUMINIUM OXIDE %	(AL2O3)	22.43
FERRIC OXIDE %	(FE2O3)	4.93
TITANIUM DIOXIDE %	(TI02)	1.23
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.34
CALCIUM OXIDE %	(CAO)	5.57
MAGNESIUM OXIDE %	(MGO)	3.11
SULPHUR TRIOXIDE %	(SO3)	1.26
SODIUM OXIDE %	(NA2O)	2.18
POTASSIUM OXIDE %	(K2O)	1.54

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85023

SAMPLE ID 91
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.03
SULPHATE	%	0.00
ORGANIC	%	0.32

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85023 SEAM - M

SAMPLE ID - 91

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 39.74				ASH % -		CUM.				
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.42	2.23	0.42	2.23	99.58	54.81							0.75	0.75
1.45	0.99	7.78	1.41	6.13	98.59	55.28							0.69	0.71
1.50	1.63	13.63	3.04	10.15	96.96	55.98							0.82	0.77
1.60	6.04	21.59	9.08	17.76	90.92	58.27							0.87	0.84
1.70	8.98	31.26	18.06	24.47	81.94	61.22							1.11	0.97
1.80	11.30	39.09	29.36	30.10	70.64	64.77							1.31	1.10
2.00	21.04	46.25	50.40	36.84	49.60	72.62							1.24	1.16
2.60	49.60	72.62	100.00	54.59									1.09	1.13

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 47.13				ASH % -		CUM.				
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	11.03	2.27	11.03	2.27	88.97	48.04							0.81	0.81
1.45	7.00	5.63	18.03	3.57	81.97	51.66							0.92	0.85
1.50	5.69	9.63	23.72	5.03	76.28	54.79							1.14	0.92
1.60	9.39	17.29	33.11	8.50	66.89	60.06							1.52	1.09
1.70	10.24	25.45	43.35	12.51	56.65	66.31							1.03	1.08
1.80	8.14	32.93	51.49	15.74	48.51	71.91							1.83	1.20
2.00	9.72	44.07	61.21	20.24	38.79	78.89							1.75	1.28
2.60	38.79	78.89	100.00	42.99									1.48	1.36

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRD85023 SEAM - M

SAMPLE ID - 91

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	0.50 X 0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				7.70 ASH % -		CUM.		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	22.21	2.50	22.21	2.50	77.79	34.12								0.84	0.84
1.45	17.37	4.33	39.58	3.30	60.42	42.69								1.03	0.92
1.50	7.81	7.81	47.39	4.05	52.61	47.86								1.33	0.99
1.60	8.81	19.98	56.20	6.54	43.80	53.47								1.00	0.99
1.70	6.99	13.27	63.19	7.29	36.81	61.11								1.61	1.06
1.80	5.47	28.11	68.66	8.95	31.34	66.87								1.44	1.09
2.00	7.99	39.09	76.65	12.09	23.35	76.37								1.81	1.17
2.60	23.35	76.37	100.00	27.10										1.29	1.19

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	0.15 X 0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				5.43 ASH % -		33.44		
	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	33.44	100.00	33.44										0.80	0.80

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85023

SAMPLE ID 92 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	---	TOTAL SULPHUR %	0.35
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	4.10	CHLORINE (PPM)	02520
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	1.66
RESIDUAL MOISTURE %	0.85	FSI	---
ASH %	41.06	HGI	77.0
VOLATILE MATTER %	10.89	CO2 %	4.50
FIXED CARBON %	47.20		
GROSS CALORIFIC VALUE (MJ/KG) 18.47			
NET CALORIFIC VALUE (MJ/KG) ---			

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85023

SAMPLE ID	92	DATA TYPE (REAL,BORO,AVER,CALC)						REAL
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 24/10/85						
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS	
FROM (MM) TO (MM)				(MJ/KG)				
50.00 6.00	48.23	---	---	---	---	---	---	
6.00 0.50	38.92	---	---	---	---	---	---	
0.50 0.15	6.73	---	---	---	---	---	---	
0.15 0.00	6.12	25.41	---	---	0.78	---	---	
---	---	---	---	---	---	---	---	

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85023

SAMPLE ID 92 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SAMPLE PRODUCT ID SP1 DATE ANALYSED 24/10/85
 SPLIT SAMPLE ID UL1

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	0.85
CARBON	%	50.31
HYDROGEN	%	1.63
SULPHUR	%	0.35
NITROGEN	%	0.58
ASH	%	41.06
OXYGEN	%	5.22

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85023

SAMPLE ID 92
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

XXXXXXXXXXXXXXXXXXXX

INITIAL TEMP.(C) 1244.0
SOFTENING TEMP.(C) 1272.0
HEMISPHERICAL TEMP.(C) 1292.0
FLUID TEMP.(C) 1339.0

REDUCING ATMOSPHERE

XXXXXXXXXXXXXXXXXXXX

INITIAL TEMP.(C) 1178.0
SOFTENING TEMP.(C) 1206.0
HEMISPHERICAL TEMP.(C) 1217.0
FLUID TEMP.(C) 1256.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85023

SAMPLE ID 92
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	45.72
ALUMINIUM OXIDE %	(AL2O3)	19.40
FERRIC OXIDE %	(FE2O3)	10.23
TITANIUM DIOXIDE %	(TI02)	0.99
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.02
CALCIUM OXIDE %	(CAO)	10.13
MAGNESIUM OXIDE %	(MGO)	5.49
SULPHUR TRIOXIDE %	(SO3)	1.98
SODIUM OXIDE %	(NA2O)	1.69
POTASSIUM OXIDE %	(K2O)	1.10

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85023

SAMPLE ID 92
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.03
SULPHATE	%	0.00
ORGANIC	%	0.32

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85023 SEAM - M

SAMPLE ID - 92

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT										RELATIVE WEIGHT % - 48.23				ASH % -	
FRACTION SIZE(MM)	50.00 X 6.00		ELEMENTAL		CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. CUM.	C.V. CUM.	S	CUM. S	CUM. VOL.	CUM. VOL.	MOIST	CUM. MOIST
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	(MJ/KG)	C.V.		S	VOL.	VOL.	MOIST	MOIST
1.40	0.19	2.36	0.19	2.36	99.81	51.08								0.82	0.82
1.45	0.60	13.10	0.79	10.52	99.21	51.31								0.82	0.82
1.50	3.62	14.63	4.41	13.89	95.59	52.70								0.79	0.80
1.60	5.69	22.36	10.10	18.66	89.90	54.62								0.80	0.80
1.70	9.30	31.12	19.40	24.63	80.60	57.33								0.79	0.79
1.80	8.07	38.02	27.47	28.57	72.53	59.48								0.93	0.83
2.00	20.20	45.40	47.67	35.70	52.33	64.91								0.90	0.86
2.60	52.33	64.91	100.00	50.99										0.58	0.71

ANALYSIS TYPE - FLOAT										RELATIVE WEIGHT % - 38.92				ASH % -	
FRACTION SIZE(MM)	6.00 X 0.50		ELEMENTAL		CUM. FLOATS	CUM. SINKS	CUM. FSI	C.V. CUM.	C.V. CUM.	S	CUM. S	CUM. VOL.	CUM. VOL.	MOIST	CUM. MOIST
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	(MJ/KG)	C.V.		S	VOL.	VOL.	MOIST	MOIST
1.40	8.39	2.59	8.39	2.59	91.61	37.97								0.77	0.77
1.45	11.65	6.09	20.04	4.62	79.96	42.62								0.82	0.80
1.50	10.02	11.45	30.06	6.90	69.94	47.08								0.79	0.80
1.60	12.86	17.32	42.92	10.02	57.08	53.79								1.08	0.88
1.70	10.58	25.27	53.50	13.04	46.50	60.27								1.30	0.96
1.80	9.11	33.11	62.61	15.96	37.39	66.89								1.55	1.05
2.00	10.09	44.17	72.70	19.87	27.30	75.29								1.44	1.10
2.60	27.30	75.29	100.00	35.00										1.02	1.08

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlRDDH85023 SEAM - M

SAMPLE ID - 92

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % -				6.73 ASH % -						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	14.39	2.27	14.39	2.27	85.61	24.48							0.73	0.73
1.45	22.92	3.48	37.31	3.01	62.69	32.15							0.77	0.75
1.50	9.68	6.80	46.99	3.79	53.01	36.78							0.84	0.77
1.60	12.55	11.92	59.54	5.51	40.46	44.49							0.97	0.81
1.70	10.98	18.92	70.52	7.59	29.48	54.02							1.46	0.91
1.80	5.98	25.57	76.50	9.00	23.50	61.26							1.57	0.97
2.00	7.75	37.41	84.25	11.61	15.75	72.99							1.28	0.99
2.60	15.75	72.99	100.00	21.28									0.86	0.97

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % -				6.12 ASH % - 25.41						
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	25.41	100.00	25.41									0.78	0.78

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85023

SAMPLE ID 93 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	----	TOTAL SULPHUR %	0.38
SURFACE MOISTURE %	----	PHOSPHOROUS %	----
TOTAL MOISTURE %	3.89	CHLORINE (PPM)	01760
EQUILIBRIUM MOISTURE %	----	SPECIFIC GRAVITY	1.67
RESIDUAL MOISTURE %	0.77	FSI	----
ASH %	41.79	HGI	64.0
VOLATILE MATTER %	9.80	CO2 %	5.69
FIXED CARBON %	47.64		

GROSS CALORIFIC VALUE (MJ/KG) 18.77
 NET CALORIFIC VALUE (MJ/KG) ----

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85023

SAMPLE ID	93	DATA TYPE (REAL,BORO,AVER,CALC) REAL						
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 24/10/85						
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS	
FROM (MM) TO (MM)				(MJ/KG)				
50.00 6.00	46.67	----	----	----	----	----	----	
6.00 0.50	42.39	----	----	----	----	----	----	
0.50 0.15	6.08	----	----	----	----	----	----	
0.15 0.00	4.86	30.49	----	----	0.80	----	----	
----	----	----	----	----	----	----	----	

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85023

SAMPLE ID 93 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SAMPLE PRODUCT ID SP1 DATE ANALYSED 24/10/85
 SPLIT SAMPLE ID UL1

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	0.77
CARBON	%	50.23
HYDROGEN	%	1.83
SULPHUR	%	0.38
NITROGEN	%	0.72
ASH	%	41.79
OXYGEN	%	4.28

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85023

SAMPLE ID 93
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1250.0
SOFTENING TEMP.(C) 1278.0
HEMISPHERICAL TEMP.(C) 1292.0
FLUID TEMP.(C) 1333.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1189.0
SOFTENING TEMP.(C) 1217.0
HEMISPHERICAL TEMP.(C) 1231.0
FLUID TEMP.(C) 1289.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85023

SAMPLE ID 93
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	51.10
ALUMINIUM OXIDE %	(AL2O3)	20.16
FERRIC OXIDE %	(FE2O3)	8.14
TITANIUM DIOXIDE %	(TI02)	1.14
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.60
CALCIUM OXIDE %	(CAO)	7.11
MAGNESIUM OXIDE %	(MGO)	4.87
SULPHUR TRIOXIDE %	(SO3)	1.82
SODIUM OXIDE %	(NA2O)	1.71
POTASSIUM OXIDE %	(K2O)	1.18

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85023

SAMPLE ID 93
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.06
SULPHATE	%	0.00
ORGANIC	%	0.32

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85023 SEAM - M OVERTURNED SAMPLE ID - 93 WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 46.67				ASH % -		CUM.	
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	2.47	3.29	2.47	3.29	97.53	49.77									0.55	0.55
1.45	3.96	9.47	6.43	7.10	93.57	51.48									0.56	0.56
1.50	5.40	14.14	11.83	10.31	88.17	53.77									0.54	0.55
1.60	14.67	21.90	26.50	16.73	73.50	60.13									0.41	0.47
1.70	9.76	31.37	36.26	20.67	63.74	64.53									0.52	0.48
1.80	6.09	38.83	42.35	23.28	57.65	67.25									0.49	0.49
2.00	14.26	45.69	56.61	28.92	43.39	74.33									0.50	0.49
2.60	43.39	74.33	100.00	48.63											0.39	0.45

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 42.39				ASH % -		CUM.	
	SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	8.54	2.53	8.54	2.53	91.46	41.95									0.35	0.35
1.45	8.53	6.95	17.07	4.74	82.93	45.55									0.40	0.37
1.50	9.57	12.01	26.64	7.35	73.36	49.92									0.55	0.44
1.60	14.79	17.60	41.43	11.01	58.57	58.08									0.61	0.50
1.70	11.13	24.08	52.56	13.78	47.44	66.06									1.19	0.65
1.80	6.82	31.82	59.38	15.85	40.62	71.81									1.40	0.73
2.00	7.90	43.78	67.28	19.13	32.72	78.58									1.21	0.79
2.60	32.72	78.58	100.00	38.58											0.97	0.85

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlRDDH85023 SEAM - M OVERTURNED SAMPLE ID - 93 WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		RELATIVE WEIGHT % -				6.08 ASH % -						
	ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	ASH %	CUM.	CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	10.37	1.79	10.37	1.79	89.63	31.51								0.70	0.70
1.45	18.69	3.39	29.06	2.82	70.94	38.92								0.80	0.76
1.50	8.94	7.03	38.00	3.81	62.00	43.52								0.81	0.78
1.60	12.61	12.55	50.61	5.99	49.39	51.43								1.01	0.83
1.70	9.61	18.71	60.22	8.02	39.78	59.33								0.65	0.80
1.80	5.50	25.81	65.72	9.51	34.28	64.71								1.60	0.87
2.00	9.48	35.85	75.20	12.83	24.80	75.74								1.66	0.97
2.60	24.80	75.74	100.00	28.43										1.07	1.00

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		RELATIVE WEIGHT % -				4.86 ASH % -		30.49				
	ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	ASH %	CUM.	CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	30.49	100.00	30.49										0.80	0.80

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85023

SAMPLE ID 94
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1256.0
SOFTENING TEMP.(C) 1300.0
HEMISPHERICAL TEMP.(C) 1333.0
FLUID TEMP.(C) 1411.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1206.0
SOFTENING TEMP.(C) 1261.0
HEMISPHERICAL TEMP.(C) 1325.0
FLUID TEMP.(C) 1350.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85023

SAMPLE ID 94
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	55.12
ALUMINIUM OXIDE %	(AL2O3)	22.43
FERRIC OXIDE %	(FE2O3)	6.51
TITANIUM DIOXIDE %	(TI02)	1.14
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.37
CALCIUM OXIDE %	(CAO)	4.51
MAGNESIUM OXIDE %	(MGO)	3.65
SULPHUR TRIOXIDE %	(SO3)	1.03
SODIUM OXIDE %	(NA2O)	1.63
POTASSIUM OXIDE %	(K2O)	1.40

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85023

SAMPLE ID 94
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.12
SULPHATE	%	0.00
ORGANIC	%	0.29

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85023 SEAM - M UPRIGHT

SAMPLE ID - 94

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		RELATIVE WEIGHT % - 50.47 ASH % -				CUM.								
	ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V.								
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.54	3.54	0.54	3.54	99.46	52.18								0.92	0.92
1.45	0.83	10.26	1.37	7.61	98.63	52.53								0.95	0.94
1.50	1.71	14.80	3.08	11.60	96.92	53.20								0.92	0.93
1.60	8.34	22.69	11.42	19.70	88.58	56.07								0.85	0.87
1.70	12.04	32.04	23.46	26.03	76.54	59.85								0.89	0.88
1.80	15.92	38.67	39.38	31.14	60.62	65.41								1.01	0.93
2.00	16.15	49.77	55.53	36.56	44.47	71.09								0.92	0.93
2.60	44.47	71.09	100.00	51.92										0.86	0.90

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		RELATIVE WEIGHT % - 39.82 ASH % -				CUM.								
	ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V.								
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	11.17	2.33	11.17	2.33	88.83	43.88								1.03	1.03
1.45	8.49	7.70	19.66	4.65	80.34	47.70								0.99	1.01
1.50	4.91	13.00	24.57	6.32	75.43	49.96								1.00	1.01
1.60	12.06	18.77	36.63	10.42	63.37	55.90								1.09	1.04
1.70	8.76	26.06	45.39	13.44	54.61	60.69								1.17	1.06
1.80	7.70	33.25	53.09	16.31	46.91	65.19								1.38	1.11
2.00	13.50	43.44	66.59	21.81	33.41	73.98								1.81	1.25
2.60	33.41	73.98	100.00	39.24										1.36	1.29

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85023 SEAM - M UPRIGHT

SAMPLE ID - 94,

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		CUM. SINKS		RELATIVE WEIGHT % -			6.67 ASH % -		CUM.					
SG-TME	ELEMENTAL	CUM. FLOATS		WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.26	1.28	6.26	1.28	93.74	32.19									0.95	0.95
1.45	20.48	3.03	26.74	2.62	73.26	40.34									1.13	1.09
1.50	8.52	5.37	35.26	3.28	64.74	44.94									1.10	1.09
1.60	12.57	10.83	47.83	5.27	52.17	53.16									1.35	1.16
1.70	8.81	19.22	56.64	7.44	43.36	60.06									1.68	1.24
1.80	5.48	23.64	62.12	8.87	37.88	65.33									1.86	1.29
2.00	10.93	38.05	73.05	13.23	26.95	76.39									1.10	1.27
2.60	26.95	76.39	100.00	30.25											1.67	1.37

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		CUM. SINKS		RELATIVE WEIGHT % -			4.04 ASH % -		35.29		CUM.			
SG-TME	ELEMENTAL	CUM. FLOATS		WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	35.29	100.00	35.29											0.84	0.84

KPNLRDDH85024

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85024

SAMPLE ID 95
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1399.0
SOFTENING TEMP.(C) 1437.0
HEMISPHERICAL TEMP.(C) 1437.0
FLUID TEMP.(C) 1437.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1313.0
SOFTENING TEMP.(C) 1342.0
HEMISPHERICAL TEMP.(C) 1405.0
FLUID TEMP.(C) 1437.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85024

SAMPLE ID 95
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	62.14
ALUMINIUM OXIDE %	(AL2O3)	20.79
FERRIC OXIDE %	(FE2O3)	4.35
TITANIUM DIOXIDE %	(TI02)	0.90
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.20
CALCIUM OXIDE %	(CAO)	1.88
MAGNESIUM OXIDE %	(MGO)	2.78
SULPHUR TRIOXIDE %	(SO3)	0.81
SODIUM OXIDE %	(NA2O)	1.89
POTASSIUM OXIDE %	(K2O)	1.98

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85024

SAMPLE ID 95
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.31
SULPHATE	%	0.01
ORGANIC	%	0.29

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85024 SEAM - I

SAMPLE ID - 95

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % - 7.65 ASH % - 0.00							
ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V. CUM.		CUM. C.V. CUM.		CUM. CUM.	
SG-TME	WT% ASH%	WT% ASH%	WT% ASH%	WT% ASH%	WT% ASH%	FSI FSI (MJ/KG)	C.V. S	S	VOL.	VOL.	MOIST MOIST
1.40	0.75 3.12	0.75 3.12	99.25 36.16							0.76 0.76	
1.45	10.25 2.48	11.00 2.52	89.00 40.04							0.75 0.75	
1.50	15.98 4.87	26.98 3.91	73.02 47.74							0.95 0.87	
1.60	15.63 10.27	42.61 6.25	57.39 57.94							1.26 1.01	
1.70	8.98 17.10	51.59 8.13	48.41 65.52							1.46 1.09	
1.80	6.33 24.79	57.92 9.95	42.08 71.64							1.53 1.14	
2.00	6.76 36.75	64.68 12.76	35.32 78.32							2.05 1.23	
2.60	35.32 78.32	100.00 35.91								1.45 1.31	

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % - 6.83 ASH % - 40.42							
ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V. CUM.		CUM. C.V. CUM.		CUM. CUM.	
SG-TME	WT% ASH%	WT% ASH%	WT% ASH%	WT% ASH%	WT% ASH%	FSI FSI (MJ/KG)	C.V. S	S	VOL.	VOL.	MOIST MOIST
240.00	***** 40.42	100.00 40.42								1.41 1.41	

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85024

SAMPLE ID 96 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 08/09/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	0.00		
SURFACE MOISTURE %	---	TOTAL SULPHUR %	0.38
TOTAL MOISTURE %	5.07	PHOSPHOROUS %	---
EQUILIBRIUM MOISTURE %	---	CHLORINE (PPM)	00420
		SPECIFIC GRAVITY	1.75
RESIDUAL MOISTURE %	1.21	FSI	---
ASH %	38.99	HGI	50.0
VOLATILE MATTER %	6.55	CO2 %	2.88
FIXED CARBON %	53.25		
GROSS CALORIFIC VALUE (MJ/KG)	23.27		
NET CALORIFIC VALUE (MJ/KG)	---		

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85024

SAMPLE ID	96	DATA TYPE (REAL,BORO,AVER,CALC)		REAL
SPLIT SAMPLE ID	SZ1	DATE ANALYSED		08/09/85
FRACTION SIZE	WT%	ASH%	FSI	CAL (MJ/KG)
FROM (MM) TO (MM)				RM VM TS
50.00 6.00	62.55	---	---	---
6.00 0.50	31.76	---	---	---
0.50 0.15	3.05	---	---	---
0.15 0.00	2.64	49.32	---	1.42
---	---	---	---	---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85024

SAMPLE ID 96 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SAMPLE PRODUCT ID SP1 DATE ANALYSED 08/09/85
 SPLIT SAMPLE ID UL1
 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	1.21
CARBON	%	54.61
HYDROGEN	%	1.60
SULPHUR	%	0.38
NITROGEN	%	0.55
ASH	%	38.99
OXYGEN	%	2.66

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85024

SAMPLE ID 96
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 08/09/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1372.0
SOFTENING TEMP.(C) 1399.0
HEMISPHERICAL TEMP.(C) 1437.0
FLUID TEMP.(C) 1437.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1277.0
SOFTENING TEMP.(C) 1307.0
HEMISPHERICAL TEMP.(C) 1383.0
FLUID TEMP.(C) 1427.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85024

SAMPLE ID 96
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 08/09/85

SILICON DIOXIDE %	(SI02)	49.56
ALUMINIUM OXIDE %	(AL2O3)	23.82
FERRIC OXIDE %	(FE2O3)	7.01
TITANIUM DIOXIDE %	(TI02)	0.90
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.54
CALCIUM OXIDE %	(CAO)	5.29
MAGNESIUM OXIDE %	(MGO)	3.73
SULPHUR TRIOXIDE %	(SO3)	2.28
SODIUM OXIDE %	(NA2O)	2.13
POTASSIUM OXIDE %	(K2O)	1.40

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85024

SAMPLE ID 96
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 08/09/85

PYRITE	%	0.08
SULPHATE	%	0.00
ORGANIC	%	0.30

GULF CANADA RESOURCES INC. - COAL DIVISION

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DATA SOURCE - KPMLRDDH85024 SEAM - H

SAMPLE ID - 96

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X		6.00		CUM.		SINKS		RELATIVE WEIGHT % -		62.55 ASH % -		0.00						
SG-TME	ELEMENTAL	WT%	ASH%	CUM.	FLOATS	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	CUM.	S	S	VOL.	CUM.	VOL.	MOIST	MOIST
1.45	2.76	5.10		2.76	5.10	97.24	39.17												0.70	0.70
1.50	15.73	9.77		18.49	9.07	81.51	44.84												0.78	0.77
1.60	23.93	17.93		42.42	14.07	57.58	56.03												1.78	1.34
1.70	10.46	29.69		52.88	17.16	47.12	61.87												0.67	1.21
1.80	8.58	40.25		61.46	20.38	38.54	66.69												1.28	1.22
2.00	16.22	48.06		77.68	26.16	22.32	80.22												1.14	1.20
2.60	22.32	80.22		100.00	38.23														1.36	1.24

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X		0.50		CUM.		SINKS		RELATIVE WEIGHT % -		31.76 ASH % -		0.00						
SG-TME	ELEMENTAL	WT%	ASH%	CUM.	FLOATS	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	CUM.	S	S	VOL.	CUM.	VOL.	MOIST	MOIST
1.40	0.40	1.74		0.40	1.74	99.60	36.98												0.79	0.79
1.45	11.73	3.72		12.13	3.65	87.87	41.43												0.80	0.80
1.50	15.82	9.00		27.95	6.68	72.05	48.54												0.86	0.83
1.60	20.42	16.33		48.37	10.75	51.63	61.29												1.02	0.91
1.70	9.74	24.97		58.11	13.14	41.89	69.73												1.21	0.96
1.80	5.54	32.94		63.65	14.86	36.35	75.34												2.01	1.05
2.00	6.46	44.09		70.11	17.55	29.89	82.09												2.14	1.15
2.60	29.89	82.09		100.00	36.84														1.94	1.39

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDHDH85024 SEAM - H

SAMPLE ID - 96

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % -				3.05 ASH % - 0.00							
ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	4.48	6.37	4.48	6.37	95.52	46.01								0.98	0.98
1.45	12.87	3.99	17.35	4.60	82.65	52.55								1.04	1.02
1.50	9.65	7.23	27.00	6.54	73.00	58.55								1.17	1.08
1.60	7.48	12.60	34.48	7.07	65.52	63.79								1.44	1.16
1.70	8.74	16.43	43.22	8.97	56.78	71.08								1.26	1.18
1.80	5.94	23.61	49.16	10.74	50.84	76.63								1.73	1.24
2.00	6.99	38.04	56.15	14.13	43.85	82.78								1.15	1.23
2.60	43.85	82.78	100.00	44.24										1.89	1.52

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % -				2.64 ASH % - 49.32							
ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	49.32	100.00	49.32										1.42	1.42

KPNLRDDH85025

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85025

SAMPLE ID 97 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) ---
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 5.58
 EQUILIBRIUM MOISTURE % ---
 RESIDUAL MOISTURE % 0.80
 ASH % 21.30
 VOLATILE MATTER % 6.08
 FIXED CARBON % 71.82
 TOTAL SULPHUR % 0.36
 PHOSPHOROUS % ---
 CHLORINE (PPM) 01440
 SPECIFIC GRAVITY 1.44
 FSI ---
 HGI 48.0
 CO2 % 1.63

GROSS CALORIFIC VALUE (MJ/KG) 26.59
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85025

SAMPLE ID 97 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 24/10/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 6.00 66.58 --- --- --- --- --- ---
 6.00 0.50 28.66 --- --- --- --- --- ---
 0.50 0.15 2.79 --- --- --- --- --- ---
 0.15 0.00 1.97 36.88 --- 0.99 --- --- ---
 --- --- --- --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85025

SAMPLE ID 97
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 24/10/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 0.80
 CARBON % 72.38
 HYDROGEN % 2.53
 SULPHUR % 0.36
 NITROGEN % 0.75
 ASH % 21.30
 OXYGEN % 1.88

GORI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH65025
 =====

SAMPLE ID 97
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AP1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

 INITIAL TEMP.(C) 1250.0
 SOFTENING TEMP.(C) 1303.0
 HEMISPHERICAL TEMP.(C) 1350.0
 FLUID TEMP.(C) 1400.0

REDUCING ATMOSPHERE

 INITIAL TEMP.(C) 1217.0
 SOFTENING TEMP.(C) 1270.0
 HEMISPHERICAL TEMP.(C) 1344.0
 FLUID TEMP.(C) 1387.0

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH65025
 =====

SAMPLE ID 97
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	53.57
ALUMINIUM OXIDE %	(AL2O3)	22.78
FERRIC OXIDE %	(FE2O3)	5.51
TITANIUM DIOXIDE %	(TI02)	1.00
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.95
CALCIUM OXIDE %	(CAO)	5.28
MAGNESIUM OXIDE %	(MGO)	3.93
SULPHUR TRIOXIDE %	(SO3)	2.00
SODIUM OXIDE %	(NA2O)	1.71
POTASSIUM OXIDE %	(K2O)	1.17

GORI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH65025
 =====

SAMPLE ID 97
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.02
SULPHATE	%	0.00
ORGANIC	%	0.34

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85025 SEAM - I

SAMPLE ID - 97

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 66.58 ASH % -			CUM. MOIST			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	
1.40	0.40	6.89	0.40	6.89	99.60	20.84									0.67	0.67
1.45	11.37	4.10	11.77	4.19	88.23	23.00									0.69	0.69
1.50	37.94	8.09	49.71	7.17	50.29	34.24									0.83	0.80
1.60	23.57	15.88	73.28	9.97	26.72	50.44									0.85	0.81
1.70	9.08	26.24	82.36	11.76	17.64	62.90									0.79	0.81
1.80	3.66	36.06	86.02	12.80	13.98	69.93									1.07	0.82
2.00	4.35	42.79	90.37	14.24	9.63	82.19									0.96	0.83
2.60	9.63	82.19	100.00	20.78											1.04	0.85

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 28.66 ASH % -			CUM. MOIST			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	
1.40	0.24	1.67	0.24	1.67	99.76	18.49									0.96	0.96
1.45	29.45	3.31	29.69	3.30	70.31	24.84									0.76	0.76
1.50	29.32	7.05	59.01	5.16	40.99	37.57									0.90	0.83
1.60	17.84	13.95	76.85	7.20	23.15	55.77									0.98	0.87
1.70	5.19	23.84	82.04	8.25	17.96	65.00									0.98	0.87
1.80	2.73	31.81	84.77	9.01	15.23	70.95									1.48	0.89
2.00	3.16	41.87	87.93	10.19	12.07	78.56									1.67	0.92
2.60	12.07	78.56	100.00	18.45											1.59	1.00

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85025 SEAM - I

SAMPLE ID - 97

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION	SIZE(MM)	0.50 X 0.15		CUM.	SINKS	RELATIVE WEIGHT % -		2.79 ASH % -		CUM.	CUM.	CUM.			
		ELEMENTAL	CUM. FLDATS			CUM. C.V.	CUM.	CUM.	CUM.						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	1.15	5.10	1.15	5.10	98.85	30.49								1.20	1.20
1.45	19.24	4.58	20.39	4.61	79.61	36.76								1.36	1.35
1.50	25.00	6.86	45.39	5.85	54.61	50.44								1.05	1.19
1.60	11.82	8.21	57.21	6.34	42.79	62.11								1.40	1.23
1.70	6.99	18.27	64.20	7.64	35.80	70.67								1.69	1.28
1.80	2.95	26.90	67.15	8.48	32.85	74.60								1.17	1.27
2.00	4.47	36.64	71.62	10.24	28.38	80.58								1.30	1.28
2.60	28.38	80.58	100.00	30.20										1.62	1.37

----- ANALYSIS TYPE - FROTH -----

FRACTION	SIZE(MM)	0.15 X 0.00		CUM.	SINKS	RELATIVE WEIGHT % -		1.97 ASH % - 36.88		CUM.	CUM.	CUM.			
		ELEMENTAL	CUM. FLDATS			CUM. C.V.	CUM.	CUM.	CUM.						
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	36.88	100.00	36.88										0.99	0.99

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85025

SAMPLE ID 98 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	---	TOTAL SULPHUR %	0.39
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	4.93	CHLORINE (PPM)	01440
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	1.64
RESIDUAL MOISTURE %	0.76	FSI	---
ASH %	36.10	HGI	51.0
VOLATILE MATTER %	7.87	CO2 %	4.58
FIXED CARBON %	55.27		
GROSS CALORIFIC VALUE (MJ/KG)	20.02		
NET CALORIFIC VALUE (MJ/KG)	---		

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85025

SAMPLE ID	98	DATA TYPE (REAL,BORO,AVER,CALC)		REAL
SPLIT SAMPLE ID	SZ1	DATE ANALYSED		24/10/85
FRACTION SIZE	WT%	ASH%	FSI	CAL
FROM (MM) TO (MM)				(MJ/KG)
50.00 6.00	69.59	---	---	---
6.00 0.50	26.59	---	---	---
0.50 0.15	2.13	---	---	---
0.15 0.00	1.69	47.25	---	1.15
---	---	---	---	---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85025

SAMPLE ID 98 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SAMPLE PRODUCT ID SP1 DATE ANALYSED 24/10/85
 SPLIT SAMPLE ID UL1

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	0.76
CARBON	%	58.14
HYDROGEN	%	1.74
SULPHUR	%	0.39
NITROGEN	%	0.49
ASH	%	36.10
OXYGEN	%	2.38

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85025

SAMPLE ID 98
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1239.0
SOFTENING TEMP.(C) 1281.0
HEMISPHERICAL TEMP.(C) 1314.0
FLUID TEMP.(C) 1389.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1225.0
SOFTENING TEMP.(C) 1264.0
HEMISPHERICAL TEMP.(C) 1283.0
FLUID TEMP.(C) 1344.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85025

SAMPLE ID 98
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	52.86
ALUMINIUM OXIDE %	(AL2O3)	19.66
FERRIC OXIDE %	(FE2O3)	4.23
TITANIUM DIOXIDE %	(TI02)	0.90
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.00
CALCIUM OXIDE %	(CAO)	9.68
MAGNESIUM OXIDE %	(MGO)	4.32
SULPHUR TRIOXIDE %	(SO3)	1.78
SODIUM OXIDE %	(NA2O)	1.64
POTASSIUM OXIDE %	(K2O)	1.43

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85025

SAMPLE ID 98
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.09
SULPHATE	%	0.00
ORGANIC	%	0.30

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85025 SEAM - H

SAMPLE ID - 98

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SG-TME	SIZE(MM)		50.00 X 6.00 ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 69.59 ASH % -				CUM. MOIST			
	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	CUM. S	CUM. VOL.	CUM. MOIST	
1.40	0.61	2.38	0.61	2.38	99.39	37.86									0.45	0.45
1.45	11.99	5.45	12.60	5.30	87.40	42.31									0.41	0.41
1.50	18.40	10.56	31.00	8.42	69.00	50.78									0.42	0.42
1.60	15.82	18.55	46.82	11.84	53.18	60.37									0.36	0.40
1.70	13.19	29.71	60.01	15.77	39.99	70.48									0.47	0.41
1.80	5.61	37.16	65.62	17.60	34.38	75.91									0.35	0.41
2.00	5.74	46.00	71.36	19.88	28.64	81.91									0.41	0.41
2.60	28.64	81.91	100.00	37.65											0.68	0.49

----- ANALYSIS TYPE - FLOAT -----

FRACTION SG-TME	SIZE(MM)		6.00 X 0.50 ELEMENTAL		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 26.59 ASH % -				CUM. MOIST			
	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	CUM. S	CUM. VOL.	CUM. MOIST	
1.40	4.91	1.04	4.91	1.04	95.09	28.63									0.42	0.42
1.45	21.09	3.93	26.00	3.38	74.00	35.67									0.42	0.42
1.50	21.02	9.24	47.02	6.00	52.98	46.15									0.36	0.39
1.60	18.15	15.93	65.17	8.77	34.83	61.90									0.44	0.41
1.70	7.12	25.04	72.29	10.37	27.71	71.37									0.67	0.43
1.80	3.14	33.42	75.43	11.33	24.57	76.22									0.69	0.44
2.00	3.36	43.60	78.79	12.71	21.21	81.39									0.70	0.45
2.60	21.21	81.39	100.00	27.27											0.81	0.53

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85025 SEAM - H

SAMPLE ID - 98

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION	SIZE(MM)	0.50 X 0.15		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -				2.13 ASH % -		CUM. MOIST	CUM. MOIST	
		WT%	ASH%			WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S			CUM.
1.40	3.22	2.75	3.22	2.75	96.78	41.00							0.68	0.68
1.45	17.30	2.47	20.52	2.51	79.48	49.39							0.74	0.73
1.50	11.11	5.82	31.63	3.68	68.37	56.47							0.75	0.74
1.60	11.79	11.81	43.42	5.88	56.58	69.78							0.75	0.74
1.70	5.60	19.73	49.02	7.47	50.98	70.83							0.93	0.76
1.80	4.92	27.89	53.94	9.33	46.06	75.42							1.05	0.79
2.00	5.00	37.65	58.94	11.73	41.06	80.02							1.12	0.82
2.60	41.06	80.02	100.00	39.77									0.86	0.83

ANALYSIS TYPE - FROTH

FRACTION	SIZE(MM)	0.15 X 0.00		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -				1.69 ASH % -		CUM. MOIST	CUM. MOIST	
		WT%	ASH%			WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S			CUM.
240.00	*****	47.25	100.00	47.25									1.15	1.15

KPNLRDDH85026

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GCRI COAL DIVISION  HEAD  PROJ  KPN  BLK  LR  DS  DDH85026
=====
SAMPLE ID           6610      DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID    HD1       DATE ANALYSED  10/10/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)      -----
SURFACE MOISTURE %  -----          TOTAL SULPHUR %          0.22
TOTAL MOISTURE %    4.25           PHOSPHOROUS %           -----
EQUILIBRIUM MOISTURE %  -----          CHLORINE (PPM)         00596
RESIDUAL MOISTURE %  0.64           SPECIFIC GRAVITY       1.91
ASH %              55.82          FSI                     -----
VOLATILE MATTER %  -----          HGI                    65.0
FIXED CARBON %     -----          CO2 %                  -----

GROSS CALORIFIC VALUE (MJ/KG)  -----
NET CALORIFIC VALUE (MJ/KG)   -----

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GCRI COAL DIVISION  ULTIMATE  PROJ  KPN  BLK  LR  DS  DDH85026
=====
SAMPLE ID           6610      DATA TYPE (REAL,BORO,AVER,CALC)  -----
SAMPLE PRODUCT ID   SP1       DATE ANALYSED  __/__/__
SPLIT SAMPLE ID     UL1
ANALYSIS BASIS TYPE (DAF,DB,AD)  -----

WATER      %      -----
CARBON     %      -----
HYDROGEN   %      -----
SULPHUR    %      -----
NITROGEN   %      0.50
ASH        %      -----
OXYGEN     %      -----

```

GORI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85026
=====

SAMPLE ID 6610
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 10/10/85

SILICON DIOXIDE %	(SI02)	---
ALUMINIUM OXIDE %	(AL2O3)	---
FERRIC OXIDE %	(FE2O3)	---
TITANIUM DIOXIDE %	(TI02)	---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---
CALCIUM OXIDE %	(CAO)	---
MAGNESIUM OXIDE %	(MGO)	---
SULPHUR TRIOXIDE %	(SO3)	---
SODIUM OXIDE %	(NA2O)	3.40
POTASSIUM OXIDE %	(K2O)	---

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85026 SEAM - H

SAMPLE ID - 99

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 66.13					ASH % -			
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.		
1.40	0.75	1.80	0.75	1.80	99.25	36.72							0.57	0.57
1.45	7.44	6.09	8.19	5.70	91.81	39.20							0.42	0.43
1.50	18.11	10.87	26.30	9.26	73.70	46.16							0.54	0.51
1.60	16.58	19.43	42.88	13.19	57.12	53.92							0.55	0.52
1.70	11.30	27.64	54.18	16.21	45.82	60.40							0.55	0.53
1.80	2.78	36.91	56.96	17.22	43.04	61.92							0.63	0.53
2.00	17.24	44.91	74.20	23.65	25.80	73.28							0.50	0.53
2.60	25.80	73.28	100.00	36.45									0.81	0.60

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 28.26					ASH % -			
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.		
1.40	4.13	1.56	4.13	1.56	95.87	25.35							0.51	0.51
1.45	27.00	5.13	31.13	4.66	68.87	33.27							0.51	0.51
1.50	19.81	9.94	50.94	6.71	49.06	42.70							0.58	0.54
1.60	16.73	16.70	67.67	9.18	32.33	56.15							0.70	0.58
1.70	7.82	25.40	75.49	10.86	24.51	65.96							0.77	0.60
1.80	3.40	33.24	78.89	11.83	21.11	71.23							0.95	0.61
2.00	4.38	44.25	83.27	13.53	16.73	78.29							1.04	0.64
2.60	16.73	78.29	100.00	24.37									0.83	0.67

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85026 SEAM - H

SAMPLE ID - 99

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		CUM. SINKS		RELATIVE WEIGHT % -			3.09 ASH % -		CUM.			
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	7.62	1.96	7.62	1.96	92.38	41.06							1.69	1.69
1.45	17.25	3.85	24.87	3.27	75.13	49.61							1.24	1.38
1.50	8.85	8.30	33.72	4.59	66.28	55.12							0.59	1.17
1.60	13.02	13.24	46.74	7.00	53.26	65.36							0.91	1.10
1.70	5.60	21.84	52.34	8.59	47.66	70.48							1.24	1.11
1.80	3.71	27.90	56.05	9.87	43.95	74.07							1.50	1.14
2.00	7.10	37.58	63.15	12.98	36.85	81.10							1.47	1.18
2.60	36.85	81.10	100.00	38.08									0.88	1.07

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		CUM. SINKS		RELATIVE WEIGHT % -			2.52 ASH % - 46.64		CUM.			
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	46.64	100.00	46.64									1.28	1.28

KPNLRDDH85027

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85027

SAMPLE ID 100 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) ---.---
 SURFACE MOISTURE % ---.--- TOTAL SULPHUR % 1.50
 TOTAL MOISTURE % 4.99 PHOSPHOROUS % ---.---
 EQUILIBRIUM MOISTURE % ---.--- CHLORINE (PPM) 00400
 RESIDUAL MOISTURE % 0.99 SPECIFIC GRAVITY 1.64
 FSI
 ASH % 39.72 HGI 50.0
 VOLATILE MATTER % 5.86 CO2 % 1.20
 FIXED CARBON % 53.43
 GROSS CALORIFIC VALUE (MJ/KG) 19.61
 NET CALORIFIC VALUE (MJ/KG) ---.---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85027

SAMPLE ID 100 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 24/10/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 6.00 70.34 ---.--- ---.--- ---.--- ---.--- ---.---
 6.00 0.50 25.27 ---.--- ---.--- ---.--- ---.--- ---.---
 0.50 0.15 2.53 ---.--- ---.--- ---.--- ---.--- ---.---
 0.15 0.00 1.86 44.33 ---.--- 1.19 ---.--- ---.---
 ---.--- ---.--- ---.--- ---.--- ---.--- ---.--- ---.---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85027

SAMPLE ID 100
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 24/10/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 0.99
 CARBON % 50.70
 HYDROGEN % 1.62
 SULPHUR % 1.50
 NITROGEN % 0.75
 ASH % 39.72
 OXYGEN % 4.72

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85027

SAMPLE ID 100
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

 INITIAL TEMP.(C) 1258.0
 SOFTENING TEMP.(C) 1333.0
 HEMISPHERICAL TEMP.(C) 1389.0
 FLUID TEMP.(C) 1461.0

REDUCING ATMOSPHERE

 INITIAL TEMP.(C) 1194.0
 SOFTENING TEMP.(C) 1311.0
 HEMISPHERICAL TEMP.(C) 1347.0
 FLUID TEMP.(C) 1406.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85027

SAMPLE ID 100
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	63.73
ALUMINIUM OXIDE %	(AL2O3)	18.46
FERRIC OXIDE %	(FE2O3)	4.95
TITANIUM DIOXIDE %	(TI02)	0.74
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.90
CALCIUM OXIDE %	(CAO)	2.20
MAGNESIUM OXIDE %	(MGO)	3.07
SULPHUR TRIOXIDE %	(SO3)	2.11
SODIUM OXIDE %	(NA2O)	1.73
POTASSIUM OXIDE %	(K2O)	1.25

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85027

SAMPLE ID 100
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	1.10
SULPHATE	%	0.02
ORGANIC	%	0.38

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDHB5027 SEAM - 0

SAMPLE ID - 100

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----														
FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 70.34 ASH % -								
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	CUM.		
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.44	4.56	6.44	4.56	93.56	47.50							0.45	0.45
1.45	14.61	10.16	21.05	8.45	78.95	54.41							0.51	0.49
1.50	7.04	15.49	28.09	10.21	71.91	58.21							0.42	0.47
1.60	12.29	21.86	40.38	13.76	59.62	65.71							0.59	0.51
1.70	9.23	32.16	49.61	17.18	50.39	71.85							0.51	0.51
1.80	7.71	40.52	57.32	20.32	42.68	77.51							0.66	0.53
2.00	9.27	53.89	66.59	24.99	33.41	84.07							0.60	0.54
2.60	33.41	84.07	100.00	44.73									0.88	0.65

----- ANALYSIS TYPE - FLOAT -----														
FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 25.27 ASH % -								
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	CUM.		
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	25.25	2.98	25.25	2.98	74.75	38.24							0.44	0.44
1.45	13.17	9.08	38.42	5.07	61.58	44.47							0.41	0.43
1.50	10.34	13.80	48.76	6.92	51.24	50.66							0.46	0.44
1.60	13.47	20.90	62.23	9.95	37.77	61.28							0.62	0.48
1.70	7.55	29.76	69.78	12.09	30.22	69.15							0.67	0.50
1.80	4.41	36.87	74.19	13.56	25.81	74.67							0.77	0.51
2.00	4.97	46.79	79.16	15.65	20.84	81.32							1.05	0.55
2.60	20.84	81.32	100.00	29.34									1.17	0.68

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WASHABILITY REPORT 2

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DATA SOURCE - KPMLRDDH85027 SEAM - 0

SAMPLE ID - 100

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.00		RELATIVE WEIGHT % -				2.53 ASH % -								
	ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	25.07	2.73	25.07	2.73	74.93	42.98								0.73	0.73
1.45	12.40	5.66	37.47	3.70	62.53	50.39								0.97	0.81
1.50	7.08	9.83	44.55	4.67	55.45	55.56								1.18	0.87
1.60	10.16	16.20	54.71	6.81	45.29	64.39								1.51	0.99
1.70	4.38	22.17	59.09	7.95	40.91	68.91								1.55	1.03
1.80	4.37	29.18	63.46	9.41	36.54	73.67								2.24	1.11
2.00	6.90	39.89	70.36	12.40	29.64	81.53								2.05	1.20
2.60	29.64	81.53	100.00	32.89										1.15	1.19

----- ANALYSIS TYPE - FRDTH -----

FRACTION SIZE(MM)	0.15 X 0.00		RELATIVE WEIGHT % -				1.86 ASH % - 44.33								
	ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	44.33	100.00	44.33										1.19	1.19

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85027

SAMPLE ID 101
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1244.0
SOFTENING TEMP.(C) 1306.0
HEMISPHERICAL TEMP.(C) 1367.0
FLUID TEMP.(C) 1406.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1203.0
SOFTENING TEMP.(C) 1250.0
HEMISPHERICAL TEMP.(C) 1367.0
FLUID TEMP.(C) 1325.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85027

SAMPLE ID 101
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	57.59
ALUMINIUM OXIDE %	(AL2O3)	19.18
FERRIC OXIDE %	(FE2O3)	5.91
TITANIUM DIOXIDE %	(TI02)	1.17
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.83
CALCIUM OXIDE %	(CAO)	3.89
MAGNESIUM OXIDE %	(MGO)	2.08
SULPHUR TRIOXIDE %	(SO3)	4.29
SODIUM OXIDE %	(NA2O)	2.43
POTASSIUM OXIDE %	(K2O)	1.29

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85027

SAMPLE ID 101
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.75
SULPHATE	%	0.01
ORGANIC	%	0.33

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DATA SOURCE - KPNLRDDHB5027 SEAM - N

SAMPLE ID - 101

WASHABILITY ID - WA1

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 65.36				ASH % -				
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	2.60	4.88	2.60	4.88	97.40	42.51							0.75	0.75
1.45	11.58	9.69	14.18	8.81	85.82	46.94							0.70	0.71
1.50	8.46	14.75	22.64	11.03	77.36	50.46							0.78	0.74
1.60	16.14	21.75	38.78	15.49	61.22	58.02							0.70	0.72
1.70	13.00	32.08	51.78	19.66	48.22	65.02							0.72	0.72
1.80	11.04	40.03	62.82	23.24	37.18	72.44							0.71	0.72
2.00	10.08	50.57	72.90	27.02	27.10	80.57							0.81	0.73
2.60	27.10	80.57	100.00	41.53									1.08	0.83

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 28.63				ASH % -				
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	20.21	2.57	20.21	2.57	79.79	31.79							0.53	0.53
1.45	15.40	8.15	35.61	4.98	64.39	37.44							0.71	0.61
1.50	13.23	12.05	48.84	6.90	51.16	44.01							0.77	0.65
1.60	15.51	18.31	64.35	9.65	35.65	55.19							0.84	0.70
1.70	8.40	26.01	72.75	11.54	27.25	64.18							0.82	0.71
1.80	4.86	33.73	77.61	12.93	22.39	70.80							1.01	0.73
2.00	5.09	44.03	82.70	14.84	17.30	78.67							1.10	0.75
2.60	17.30	78.67	100.00	25.88									0.99	0.79

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85027 SEAM - N

SAMPLE ID - 101

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)	0.50 X 0.15		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			3.30 ASH % -		CUM. MOIST	CUM. MOIST				
	ELEMENTAL	WT%			ASH%	CUM. C.V.	CUM. C.V.	S	CUM.			CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	22.06	1.59	22.06	1.59	77.94	31.17								0.73	0.73
1.45	15.26	4.05	37.32	2.60	62.68	37.77								0.62	0.69
1.50	8.96	8.22	46.28	3.68	53.72	42.70								0.90	0.73
1.60	13.85	11.74	60.13	5.54	39.87	53.46								0.90	0.77
1.70	7.79	18.64	67.92	7.04	32.08	61.92								1.48	0.85
1.80	4.31	25.90	72.23	8.17	27.77	67.51								1.41	0.88
2.00	7.05	36.43	79.28	10.68	20.72	78.08								1.62	0.95
2.60	20.72	78.08	100.00	24.65										0.89	0.94

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)	0.15 X 0.00		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			2.71 ASH % - 34.27		CUM. MOIST	CUM. MOIST				
	ELEMENTAL	WT%			ASH%	CUM. C.V.	CUM. C.V.	S	CUM.			CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	34.27	100.00	34.27										1.16	1.16

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85027

SAMPLE ID 102
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1278.0
SOFTENING TEMP.(C) 1400.0
HEMISPHERICAL TEMP.(C) 1444.0
FLUID TEMP.(C) 1544.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1250.0
SOFTENING TEMP.(C) 1395.0
HEMISPHERICAL TEMP.(C) 1433.0
FLUID TEMP.(C) 1483.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85027

SAMPLE ID 102
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	71.28
ALUMINIUM OXIDE %	(AL2O3)	13.31
FERRIC OXIDE %	(FE2O3)	3.33
TITANIUM DIOXIDE %	(TI02)	0.75
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.27
CALCIUM OXIDE %	(CAO)	3.64
MAGNESIUM OXIDE %	(MGO)	2.50
SULPHUR TRIOXIDE %	(SO3)	2.58
SODIUM OXIDE %	(NA2O)	1.30
POTASSIUM OXIDE %	(K2O)	0.95

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85027

SAMPLE ID 102
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.01
SULPHATE	%	0.00
ORGANIC	%	0.21

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DATA SOURCE - KPNLRDDH85027 SEAM - M/N

SAMPLE ID - 102

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT															
FRACTION SIZE(MM)		50.00 X 6.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 44.80 ASH % -				CUM. C.V. CUM. S		CUM. VOL. VOL. MOIST MOIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.57	3.39	0.57	3.39	99.43	75.02								0.91	0.91
1.50	0.07	16.98	0.64	4.88	99.36	75.06								0.84	0.90
1.60	1.99	24.03	2.63	19.37	97.37	76.10								1.05	1.01
1.70	4.08	35.55	6.71	29.21	93.29	77.88								0.94	0.97
1.80	1.31	41.35	8.02	31.19	91.98	78.40								0.91	0.96
2.00	4.56	54.41	12.58	39.61	87.42	79.65								1.41	1.12
2.60	87.42	79.65	100.00	74.61										0.79	0.83

ANALYSIS TYPE - FLOAT															
FRACTION SIZE(MM)		6.00 X 0.50		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 41.44 ASH % -				CUM. C.V. CUM. S		CUM. VOL. VOL. MOIST MOIST	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	9.03	2.39	9.03	2.39	90.97	59.91								0.89	0.89
1.45	6.11	6.00	15.14	3.85	84.86	63.80								1.01	0.94
1.50	1.60	9.78	16.74	4.41	83.26	64.83								1.08	0.95
1.60	6.98	15.22	23.72	7.59	76.28	69.37								1.15	1.01
1.70	6.76	22.67	30.48	10.94	69.52	73.91								1.33	1.08
1.80	5.57	29.97	36.05	13.88	63.95	77.74								1.38	1.13
2.00	6.71	43.38	42.76	18.51	57.24	81.77								1.43	1.17
2.60	57.24	81.77	100.00	54.72										1.53	1.38

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPnlRDDH85027 SEAM - M/N

SAMPLE ID - 102

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % - 7.44 ASH % -											
ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	ASH %	CUM.	CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	7.99	2.02	7.99	2.02	92.01	37.93								1.05	1.05
1.45	13.16	3.30	21.15	2.82	78.85	43.72								1.20	1.14
1.50	7.75	5.52	28.90	3.54	71.10	47.88								1.27	1.18
1.60	13.26	10.52	42.16	5.74	57.84	56.44								1.70	1.34
1.70	8.90	17.61	51.06	7.81	48.94	63.51								1.30	1.33
1.80	7.23	24.41	58.29	9.87	41.71	70.28								1.62	1.37
2.00	8.95	37.09	67.24	13.49	32.76	79.35								1.48	1.38
2.60	32.76	79.35	100.00	35.07										1.28	1.35

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % - 6.32 ASH % - 32.99											
ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	ASH %	CUM.	CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	32.99	100.00	32.99										1.12	1.12

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85027

SAMPLE ID 103 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	-----	TOTAL SULPHUR %	0.41
SURFACE MOISTURE %	-----	PHOSPHOROUS %	-----
TOTAL MOISTURE %	5.99	CHLORINE (PPM)	00480
EQUILIBRIUM MOISTURE %	-----	SPECIFIC GRAVITY	1.47
RESIDUAL MOISTURE %	1.10	FSI	-----
ASH %	32.86	HGI	58.0
VOLATILE MATTER %	6.46	CO2 %	3.07
FIXED CARBON %	59.58		

GROSS CALORIFIC VALUE (MJ/KG) 22.50
 NET CALORIFIC VALUE (MJ/KG) -----

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85027

SAMPLE ID	103	DATA TYPE (REAL,BORO,AVER,CALC)						REAL
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 24/10/85						
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS	
FROM (MM) TO (MM)				(MJ/KG)				
50.00 6.00	45.05	-----	-----	-----	-----	-----	-----	
6.00 0.50	42.24	-----	-----	-----	-----	-----	-----	
0.50 0.15	6.88	-----	-----	-----	-----	-----	-----	
0.15 0.00	5.83	29.11	-----	-----	1.22	-----	-----	
-----	-----	-----	-----	-----	-----	-----	-----	

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85027

SAMPLE ID 103
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 24/10/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	1.10
CARBON	%	60.71
HYDROGEN	%	2.02
SULPHUR	%	0.41
NITROGEN	%	0.83
ASH	%	32.86
OXYGEN	%	2.07

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85027

SAMPLE ID 103
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1261.0
SOFTENING TEMP.(C) 1361.0
HEMISPHERICAL TEMP.(C) 1378.0
FLUID TEMP.(C) 1456.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1208.0
SOFTENING TEMP.(C) 1289.0
HEMISPHERICAL TEMP.(C) 1306.0
FLUID TEMP.(C) 1403.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85027

SAMPLE ID 103
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	59.39
ALUMINIUM OXIDE %	(AL2O3)	21.89
FERRIC OXIDE %	(FE2O3)	5.14
TITANIUM DIOXIDE %	(TI02)	1.41
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.29
CALCIUM OXIDE %	(CAO)	2.90
MAGNESIUM OXIDE %	(MGO)	1.73
SULPHUR TRIOXIDE %	(SO3)	3.03
SODIUM OXIDE %	(NA2O)	1.92
POTASSIUM OXIDE %	(K2O)	1.89

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85027

SAMPLE ID 103
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.02
SULPHATE	%	0.00
ORGANIC	%	0.39

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85027 SEAM - M UPPER

SAMPLE ID - 103

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 45.05 ASH % -									
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	MOIST	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	
1.40	4.69	6.24	4.69	6.24	95.31	42.08						0.70	0.70
1.45	5.94	9.14	10.63	7.86	89.37	44.26						0.78	0.74
1.50	7.54	15.68	18.17	11.11	81.83	46.90						0.78	0.76
1.60	16.60	23.53	34.77	17.04	65.23	52.84						0.66	0.71
1.70	10.48	31.22	45.25	20.32	54.75	56.98						0.70	0.71
1.80	10.21	41.23	55.46	24.17	44.54	60.60						0.91	0.75
2.00	14.15	47.57	69.61	28.93	30.39	66.66						0.89	0.78
2.60	30.39	66.66	100.00	40.39								0.89	0.81

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 42.24 ASH % -									
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	MOIST	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	
1.40	18.95	2.84	18.95	2.84	81.05	31.27						0.87	0.87
1.45	12.26	7.26	31.21	4.58	68.79	35.55						0.77	0.83
1.50	11.09	13.00	42.30	6.78	57.70	39.88						0.81	0.83
1.60	17.26	19.44	59.56	10.45	40.44	48.61						0.86	0.84
1.70	8.98	27.63	68.54	12.70	31.46	54.60						0.88	0.84
1.80	6.74	35.65	75.28	14.76	24.72	59.76						1.41	0.89
2.00	10.32	46.80	85.60	18.62	14.40	69.05						1.35	0.95
2.60	14.40	69.05	100.00	25.88								1.03	0.96

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85027 SEAM - M UPPER

SAMPLE ID - 103

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT																	
FRACTION SIZE(MM)	0.50 X		0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				6.88 ASH % -				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	11.79	1.87	11.79	1.87	88.21	29.22										0.74	0.74
1.45	16.42	3.44	28.21	2.78	71.79	35.12										0.81	0.78
1.50	7.44	6.38	35.65	3.53	64.35	38.44										0.89	0.80
1.60	14.99	12.02	50.64	6.05	49.36	46.47										1.08	0.89
1.70	10.30	18.71	60.94	8.19	39.06	53.79										1.77	1.03
1.80	7.14	26.26	68.08	10.08	31.92	59.94										1.78	1.11
2.00	11.49	38.31	79.57	14.16	20.43	72.11										1.34	1.14
2.60	20.43	72.11	100.00	26.00												1.19	1.15

ANALYSIS TYPE - FROTH																	
FRACTION SIZE(MM)	0.15 X		0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % -				5.83 ASH % - 29.11				
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	29.11	100.00	29.11												1.22	1.22

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85027

SAMPLE ID 104
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1250.0
SOFTENING TEMP.(C) 1283.0
HEMISPHERICAL TEMP.(C) 1294.0
FLUID TEMP.(C) 1308.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1175.0
SOFTENING TEMP.(C) 1203.0
HEMISPHERICAL TEMP.(C) 1208.0
FLUID TEMP.(C) 1258.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85027

SAMPLE ID 104
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	50.51
ALUMINIUM OXIDE %	(AL2O3)	20.14
FERRIC OXIDE %	(FE2O3)	10.16
TITANIUM DIOXIDE %	(TI02)	1.33
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.93
CALCIUM OXIDE %	(CAO)	6.02
MAGNESIUM OXIDE %	(MGO)	3.47
SULPHUR TRIOXIDE %	(SO3)	4.02
SODIUM OXIDE %	(NA2O)	2.05
POTASSIUM OXIDE %	(K2O)	1.44

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85027

SAMPLE ID 104
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.02
SULPHATE	%	0.00
ORGANIC	%	0.33

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85027 SEAM - L

SAMPLE ID - 104

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	50.00 X 6.00		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % - 44.55			ASH % -			CUM. MOIST	CUM. MOIST			
	ELEMENTAL				CUM.	CUM.	C.V.	CUM.	CUM.	CUM.					
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.41	3.23	0.41	3.23	99.59	47.83								0.55	0.55
1.45	5.98	7.54	6.39	7.26	93.61	50.40								0.42	0.43
1.50	7.11	11.95	13.50	9.73	86.50	53.56								0.54	0.49
1.60	6.38	19.42	19.88	12.84	80.12	56.28								0.58	0.52
1.70	7.78	30.17	27.66	17.72	72.34	59.09								0.63	0.55
1.80	8.70	35.87	36.36	22.06	63.64	62.26								0.70	0.58
2.00	14.46	47.44	50.82	29.28	49.18	66.62								0.90	0.67
2.60	49.18	66.62	100.00	47.64										0.85	0.76

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	6.00 X 0.50		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % - 43.03			ASH % -			CUM. MOIST	CUM. MOIST			
	ELEMENTAL				CUM.	CUM.	C.V.	CUM.	CUM.	CUM.					
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	6.06	2.58	6.06	2.58	93.94	35.21								0.60	0.60
1.45	10.38	5.19	16.44	4.23	83.56	38.94								0.59	0.59
1.50	8.43	8.83	24.87	5.79	75.13	42.31								0.69	0.63
1.60	14.79	13.07	39.66	8.50	60.34	49.48								0.73	0.66
1.70	9.47	21.64	49.13	11.04	50.87	54.66								1.76	0.88
1.80	9.15	29.17	58.28	13.88	41.72	60.26								1.49	0.97
2.00	13.72	41.35	72.00	19.12	28.00	69.52								1.90	1.15
2.60	28.00	69.52	100.00	33.23										1.03	1.12

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85027

SAMPLE ID 105 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM)	---	TOTAL SULPHUR %	0.29
SURFACE MOISTURE %	---	PHOSPHOROUS %	---
TOTAL MOISTURE %	3.96	CHLORINE (PPM)	00180
EQUILIBRIUM MOISTURE %	---	SPECIFIC GRAVITY	1.89
RESIDUAL MOISTURE %	0.96	FSI	---
ASH %	50.55	HGI	68.0
VOLATILE MATTER %	7.28	CO2 %	3.98
FIXED CARBON %	41.21		

GROSS CALORIFIC VALUE (MJ/KG) 15.37
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85027

SAMPLE ID	105	DATA TYPE (REAL,BORO,AVER,CALC)		REAL				
SPLIT SAMPLE ID	SZ1	DATE ANALYSED		24/10/85				
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS	
FROM (MM) TO (MM)				(MJ/KG)				
50.00 6.00	49.87	---	---	---	---	---	---	---
6.00 0.50	39.30	---	---	---	---	---	---	---
0.50 0.15	6.20	---	---	---	---	---	---	---
0.15 0.00	4.63	37.45	---	---	0.99	---	---	---
---	---	---	---	---	---	---	---	---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85027

SAMPLE ID 105 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SAMPLE PRODUCT ID SP1 DATE ANALYSED 24/10/85
 SPLIT SAMPLE ID UL1

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER	%	0.96
CARBON	%	42.93
HYDROGEN	%	1.61
SULPHUR	%	0.29
NITROGEN	%	0.55
ASH	%	50.55
OXYGEN	%	3.11

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85027

SAMPLE ID 105
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1256.0
SOFTENING TEMP.(C) 1300.0
HEMISPHERICAL TEMP.(C) 1336.0
FLUID TEMP.(C) 1389.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1203.0
SOFTENING TEMP.(C) 1267.0
HEMISPHERICAL TEMP.(C) 1283.0
FLUID TEMP.(C) 1378.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85027

SAMPLE ID 105
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	60.45
ALUMINIUM OXIDE %	(AL2O3)	20.30
FERRIC OXIDE %	(FE2O3)	5.83
TITANIUM DIOXIDE %	(TI02)	1.23
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.28
CALCIUM OXIDE %	(CAO)	2.76
MAGNESIUM OXIDE %	(MGO)	2.45
SULPHUR TRIOXIDE %	(SO3)	2.75
SODIUM OXIDE %	(NA2O)	2.01
POTASSIUM OXIDE %	(K2O)	1.81

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85027

SAMPLE ID 105
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.02
SULPHATE	%	0.00
ORGANIC	%	0.27

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85027 SEAM - K/L

SAMPLE ID - 105

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X		0.15		RELATIVE WEIGHT % -				6.20 ASH % -						
	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.87	2.04	0.87	2.04	99.13	35.51								0.56	0.56
1.45	10.80	2.78	11.67	2.72	88.33	39.51								0.76	0.75
1.50	11.21	5.25	22.88	3.96	77.12	44.49								0.97	0.86
1.60	13.76	9.85	36.64	6.17	63.36	52.01								1.20	0.98
1.70	10.42	16.62	47.06	8.49	52.94	58.97								1.76	1.16
1.80	8.19	23.58	55.25	10.72	44.75	65.45								1.72	1.24
2.00	12.57	35.53	67.82	15.32	32.18	77.14								1.43	1.28
2.60	32.18	77.14	100.00	35.21										0.94	1.17

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X		0.00		RELATIVE WEIGHT % -				4.63 ASH % - 37.45						
	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	CUM.	CUM.		
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	37.45	100.00	37.45										0.99	0.99

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85027

SAMPLE ID 106
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1256.0
 SOFTENING TEMP.(C) 1306.0
 HEMISPHERICAL TEMP.(C) 1333.0
 FLUID TEMP.(C) 1356.0

INITIAL TEMP.(C) 1144.0
 SOFTENING TEMP.(C) 1236.0
 HEMISPHERICAL TEMP.(C) 1244.0
 FLUID TEMP.(C) 1328.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85027

SAMPLE ID 106
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	53.41
ALUMINIUM OXIDE %	(AL2O3)	22.06
FERRIC OXIDE %	(FE2O3)	7.60
TITANIUM DIOXIDE %	(TI02)	1.25
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.94
CALCIUM OXIDE %	(CAO)	3.32
MAGNESIUM OXIDE %	(MGO)	3.11
SULPHUR TRIOXIDE %	(SO3)	3.40
SODIUM OXIDE %	(NA2O)	1.81
POTASSIUM OXIDE %	(K2O)	2.15

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85027

SAMPLE ID 106
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	1.13
SULPHATE	%	0.03
ORGANIC	%	0.31

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DATA SOURCE - KPNLRDDH85027 SEAM - K

SAMPLE ID - 106

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 33.47				ASH % -		CUM.				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	VOL.	VOL.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	2.00	11.72	2.00	11.72	98.00	55.18							0.47	0.47
1.45	3.64	10.74	5.64	11.09	94.36	56.89							0.51	0.50
1.50	3.51	12.59	9.15	11.66	90.85	58.60							0.68	0.57
1.60	11.46	22.52	20.61	17.70	79.39	63.81							0.77	0.68
1.70	9.63	28.18	30.24	21.04	69.76	68.73							1.01	0.78
1.80	3.63	37.01	33.87	22.75	66.13	70.47							1.18	0.83
2.00	6.77	48.23	40.64	26.99	59.36	73.01							0.94	0.85
2.60	59.36	73.01	100.00	54.31									0.79	0.81

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 49.81				ASH % -		CUM.				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	VOL.	VOL.	MOIST	MOIST	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	3.47	3.83	3.47	3.83	96.53	35.87							0.69	0.69
1.45	12.87	4.77	16.34	4.57	83.66	40.65							0.74	0.73
1.50	14.22	9.70	30.56	6.96	69.44	46.99							0.71	0.72
1.60	16.97	15.54	47.53	10.02	52.47	57.16							1.10	0.86
1.70	10.10	24.80	57.63	12.61	42.37	64.87							1.44	0.96
1.80	5.83	31.71	63.46	14.37	36.54	70.16							1.98	1.05
2.00	5.22	43.12	68.68	16.55	31.32	74.67							1.74	1.10
2.60	31.32	74.67	100.00	34.75									1.24	1.15

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

PAGE -

DATA SOURCE - KPNLRDDH85027 SEAM - K

SAMPLE ID - 106

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -				9.60 ASH % -				
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	CUM.	CUM.	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	S	VOL.	VOL.	MOIST	
1.40	1.82	3.07	1.82	3.07	98.18	30.56							0.47	0.47
1.45	7.20	2.85	9.02	2.89	90.98	32.75							0.35	0.37
1.50	13.98	5.23	23.00	4.31	77.00	37.75							0.70	0.57
1.60	18.89	10.20	41.89	6.97	58.11	46.71							0.96	0.75
1.70	12.24	16.63	54.13	9.15	45.87	54.73							1.55	0.93
1.80	8.56	22.38	62.69	10.96	37.31	62.15							1.78	1.04
2.00	11.61	34.85	74.30	14.69	25.70	74.49							1.60	1.13
2.60	25.70	74.49	100.00	30.06									0.98	1.09

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -				7.12 ASH % -		31.05		
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	S	CUM.	CUM.	CUM.	CUM.	
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	S	VOL.	VOL.	MOIST	
240.00	*****	31.05	100.00	31.05									1.13	1.13

<u>GCRI COAL DIVISION</u>	<u>HEAD</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85027</u>		
SAMPLE ID	107	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 24/10/85							
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)					AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)		ASTM							
TOP SIZE (MM) -----									
SURFACE MOISTURE %		-----				TOTAL SULPHUR %	0.36		
TOTAL MOISTURE %		3.20				PHOSPHOROUS %	-----		
EQUILIBRIUM MOISTURE %		-----				CHLORINE (PPM)	00600		
						SPECIFIC GRAVITY	1.44		
RESIDUAL MOISTURE %		1.70				FSI	-----		
ASH %		21.14				HGI	48.0		
VOLATILE MATTER %		5.58				CO2 %	2.36		
FIXED CARBON %		71.58							
GROSS CALORIFIC VALUE (MJ/KG)		26.91							
NET CALORIFIC VALUE (MJ/KG)		-----							

<u>GCRI COAL DIVISION</u>	<u>SIZE</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85027</u>		
SAMPLE ID	107	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SPLIT SAMPLE ID	SZ1	DATE ANALYSED 24/10/85							
FRACTION SIZE	WT%	ASH%	FSI	CAL	RM	VM	TS		
FROM (MM) TO (MM)				(MJ/KG)					
50.00 6.00	49.46	-----	-----	-----	-----	-----	-----	-----	
6.00 0.50	42.31	-----	-----	-----	-----	-----	-----	-----	
0.50 0.15	4.77	-----	-----	-----	-----	-----	-----	-----	
0.15 0.00	3.46	35.37	-----	-----	1.10	-----	-----	-----	
-----	-----	-----	-----	-----	-----	-----	-----	-----	

<u>GCRI COAL DIVISION</u>	<u>ULTIMATE</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85027</u>		
SAMPLE ID	107	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED 24/10/85							
SPLIT SAMPLE ID	UL1	ANALYSIS BASIS TYPE (DAF,DB,AD)					AD		
WATER	%	1.70							
CARBON	%	72.60							
HYDROGEN	%	2.54							
SULPHUR	%	0.36							
NITROGEN	%	0.78							
ASH	%	21.14							
OXYGEN	%	0.88							

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85027

SAMPLE ID 107
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1261.0
SOFTENING TEMP.(C) 1292.0
HEMISPHERICAL TEMP.(C) 1311.0
FLUID TEMP.(C) 1361.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1203.0
SOFTENING TEMP.(C) 1250.0
HEMISPHERICAL TEMP.(C) 1272.0
FLUID TEMP.(C) 1347.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85027

SAMPLE ID 107
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	53.39
ALUMINIUM OXIDE %	(AL2O3)	22.72
FERRIC OXIDE %	(FE2O3)	6.42
TITANIUM DIOXIDE %	(TI02)	1.03
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.28
CALCIUM OXIDE %	(CAO)	4.58
MAGNESIUM OXIDE %	(MGO)	4.01
SULPHUR TRIOXIDE %	(SO3)	0.72
SODIUM OXIDE %	(NA2O)	1.91
POTASSIUM OXIDE %	(K2O)	1.52

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85027

SAMPLE ID 107
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.02
SULPHATE	%	0.00
ORGANIC	%	0.34

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WASHABILITY REPORT 2

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DATA SOURCE - KPMLRDDH85027 SEAM - 1

SAMPLE ID - 107

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)		0.50 X		0.15		RELATIVE WEIGHT % -					4.77 ASH % -			
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.		CUM.	ASH %	CUM.	CUM.	
WT%	WT%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	4.37	4.14	4.37	4.14	95.63	30.44							0.73	0.73
1.45	23.90	4.22	28.27	4.21	71.73	39.17							0.74	0.74
1.50	13.34	6.48	41.61	4.94	58.39	46.64							0.88	0.78
1.60	13.88	11.12	55.49	6.48	44.51	57.72							1.29	0.91
1.70	7.18	18.98	62.67	7.91	37.33	65.17							1.83	1.02
1.80	5.15	23.53	67.82	9.10	32.18	71.83							1.21	1.03
2.00	5.62	36.55	73.44	11.20	26.56	79.30							1.32	1.05
2.60	26.56	79.30	100.00	29.29									0.71	0.96

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)		0.15 X		0.00		RELATIVE WEIGHT % -					3.46 ASH % -		35.37	
SG-TME	ELEMENTAL	CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.		CUM.	ASH %	CUM.	CUM.	
WT%	WT%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	35.37	100.00	35.37									1.10	1.10

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85027
 SAMPLE ID 108 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) ---
 SURFACE MOISTURE % --- TOTAL SULPHUR % 0.73
 TOTAL MOISTURE % 7.56 PHOSPHOROUS % ---
 EQUILIBRIUM MOISTURE % --- CHLORINE (PPM) 00360
 RESIDUAL MOISTURE % 1.30 SPECIFIC GRAVITY 1.59
 ASH % 24.09 FSI ---
 VOLATILE MATTER % 6.21 HGI 55.0
 FIXED CARBON % 68.40 CO2 % 2.85

 GROSS CALORIFIC VALUE (MJ/KG) 25.71
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85027
 SAMPLE ID 108 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 24/10/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 6.00 44.07 --- --- --- --- --- ---
 6.00 0.50 44.68 --- --- --- --- --- ---
 0.50 0.15 5.94 --- --- --- --- --- ---
 0.15 0.00 5.31 26.73 --- 1.12 --- --- ---
 --- --- --- --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85027
 SAMPLE ID 108
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 24/10/85

 ANALYSIS BASIS TYPE (DAF,DB,AD) AD

 WATER % 1.30
 CARBON % 67.50
 HYDROGEN % 2.01
 SULPHUR % 0.73
 NITROGEN % 0.64
 ASH % 24.09
 OXYGEN % 3.73

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85027

SAMPLE ID 108
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

INITIAL TEMP.(C) 1239.0
SOFTENING TEMP.(C) 1275.0
HEMISPHERICAL TEMP.(C) 1286.0
FLUID TEMP.(C) 1361.0

REDUCING ATMOSPHERE

INITIAL TEMP.(C) 1117.0
SOFTENING TEMP.(C) 1217.0
HEMISPHERICAL TEMP.(C) 1229.0
FLUID TEMP.(C) 1267.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85027

SAMPLE ID 108
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	49.87
ALUMINIUM OXIDE %	(AL2O3)	19.23
FERRIC OXIDE %	(FE2O3)	7.30
TITANIUM DIOXIDE %	(TI02)	1.21
PHOSPHOROUS PENTOXIDE %	(P2O5)	1.17
CALCIUM OXIDE %	(CAO)	7.05
MAGNESIUM OXIDE %	(MGO)	3.28
SULPHUR TRIOXIDE %	(SO3)	7.59
SODIUM OXIDE %	(NA2O)	1.84
POTASSIUM OXIDE %	(K2O)	1.37

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85027

SAMPLE ID 108
SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.45
SULPHATE	%	0.00
ORGANIC	%	0.28

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DATA SOURCE - KPNLRDDH85027 SEAM - H

SAMPLE ID - 108

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 44.07 ASH % -											
ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	44.07	ASH % -	CUM.	CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	0.89	7.45	0.89	7.45	99.11	29.59								0.56	0.56
1.45	12.45	6.39	13.34	6.46	86.66	32.92								0.56	0.56
1.50	26.51	11.77	39.85	9.99	60.15	42.25								0.57	0.57
1.60	17.09	17.30	56.94	12.19	43.06	52.15								0.78	0.63
1.70	5.11	26.99	62.05	13.41	37.95	55.54								0.61	0.63
1.80	4.02	33.21	66.07	14.61	33.93	58.18								0.65	0.63
2.00	11.27	40.77	77.34	18.42	22.66	66.84								0.63	0.63
2.60	22.66	66.84	100.00	29.39										0.88	0.69

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 44.68 ASH % -											
ELEMENTAL		CUM. FLOATS		CUM.	SINKS	CUM.	C.V.	CUM.	44.68	ASH % -	CUM.	CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	3.77	1.89	3.77	1.89	96.23	18.83								0.55	0.55
1.45	25.78	4.52	29.55	4.18	70.45	24.06								0.61	0.60
1.50	21.23	8.89	50.78	6.15	49.22	30.61								0.64	0.62
1.60	19.17	14.24	69.95	8.37	30.05	41.05								0.78	0.66
1.70	9.73	21.86	79.68	10.02	20.32	50.24								1.14	0.72
1.80	5.76	30.11	85.44	11.37	14.56	58.20								1.28	0.76
2.00	5.00	39.83	90.44	12.94	9.56	67.81								1.44	0.80
2.60	9.56	67.81	100.00	18.19										1.19	0.83

KPNLRDDH85028

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85028

SAMPLE ID 109 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 24/10/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) ---
 SURFACE MOISTURE % ---
 TOTAL MOISTURE % 3.17
 EQUILIBRIUM MOISTURE % ---
 RESIDUAL MOISTURE % 0.97
 ASH % 34.88
 VOLATILE MATTER % 8.63
 FIXED CARBON % 55.52
 TOTAL SULPHUR % 0.66
 PHOSPHOROUS % ---
 CHLORINE (PPM) 00640
 SPECIFIC GRAVITY 1.65
 FSI ---
 HGI 57.0
 CO2 % 4.26

GROSS CALORIFIC VALUE (MJ/KG) 21.28
 NET CALORIFIC VALUE (MJ/KG) ---

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85028

SAMPLE ID 109 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 24/10/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 6.00 51.62 --- --- --- --- --- ---
 6.00 0.50 39.29 --- --- --- --- --- ---
 0.50 0.15 5.12 --- --- --- --- --- ---
 0.15 0.00 3.97 35.78 --- 1.08 --- --- ---
 --- --- --- --- --- --- --- --- ---

GCRI COAL DIVISION ULTIMATE PROJ KPN BLK LR DS DDH85028

SAMPLE ID 109
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID UL1 DATE ANALYSED 24/10/85

ANALYSIS BASIS TYPE (DAF,DB,AD) AD

WATER % 0.97
 CARBON % 59.32
 HYDROGEN % 2.12
 SULPHUR % 0.66
 NITROGEN % 0.64
 ASH % 34.88
 OXYGEN % 1.41

GCRI COAL DIVISION ASH FUSION PROJ KPN BLK LR DS DDH85028

SAMPLE ID 109
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AF1 DATE ANALYSED 24/10/85

OXIDIZING ATMOSPHERE

 INITIAL TEMP.(C) 1233.0
 SOFTENING TEMP.(C) 1281.0
 HEMISPHERICAL TEMP.(C) 1294.0
 FLUID TEMP.(C) 1358.0

REDUCING ATMOSPHERE

 INITIAL TEMP.(C) 1194.0
 SOFTENING TEMP.(C) 1239.0
 HEMISPHERICAL TEMP.(C) 1250.0
 FLUID TEMP.(C) 1331.0

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85028

SAMPLE ID 109
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 24/10/85

SILICON DIOXIDE %	(SI02)	56.28
ALUMINIUM OXIDE %	(AL2O3)	18.98
FERRIC OXIDE %	(FE2O3)	6.14
TITANIUM DIOXIDE %	(TI02)	1.05
PHOSPHOROUS PENTOXIDE %	(P2O5)	0.36
CALCIUM OXIDE %	(CAO)	5.48
MAGNESIUM OXIDE %	(MGO)	3.30
SULPHUR TRIOXIDE %	(SO3)	5.35
SODIUM OXIDE %	(NA2O)	1.75
POTASSIUM OXIDE %	(K2O)	1.41

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85028

SAMPLE ID 109
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 24/10/85

PYRITE	%	0.31
SULPHATE	%	0.00
ORGANIC	%	0.35

GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDHB5028 SEAM - H

SAMPLE ID - 109

WASHABILITY ID - WA1

----- ANALYSIS TYPE - FLOAT -----

FRACTION SIZE(MM)	0.50 X 0.15		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			5.12 ASH % -		CUM. MOIST	CUM. MOIST				
	ELEMENTAL	WT%			WT%	WT%	ASH%	FSI	FSI (MJ/KG)			C.V.	CUM.	CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	5.36	2.83	5.36	2.83	94.64	30.70								1.02	1.02
1.45	15.21	2.96	20.57	2.93	79.43	36.01								1.30	1.23
1.50	11.68	6.56	32.25	4.24	67.75	41.09								1.29	1.25
1.60	17.54	11.75	49.79	6.89	50.21	51.34								1.44	1.32
1.70	8.07	17.68	57.86	8.39	42.14	57.78								1.43	1.33
1.80	8.38	24.97	66.24	10.49	33.76	65.93								1.18	1.31
2.00	8.85	38.29	75.09	13.77	24.91	75.75								1.69	1.36
2.60	24.91	75.75	100.00	29.21										1.42	1.37

----- ANALYSIS TYPE - FROTH -----

FRACTION SIZE(MM)	0.15 X 0.00		CUM. FLOATS	CUM. SINKS	RELATIVE WEIGHT % -			3.97 ASH % - 35.78		CUM. MOIST	CUM. MOIST				
	ELEMENTAL	WT%			WT%	WT%	ASH%	FSI	FSI (MJ/KG)			C.V.	CUM.	CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	35.78	100.00	35.78										1.08	1.08

<u>GCRI COAL DIVISION</u>	<u>HEAD</u>	<u>PROJ KPN</u>	<u>BLK LR</u>	<u>DS</u>	<u>DDH85028</u>
SAMPLE ID	111	DATA TYPE (REAL,BORO,AVER,CALC)			REAL
SPLIT SAMPLE ID	HD1	DATE ANALYSED 10/10/85			
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)			AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)					ASTM
TOP SIZE (MM)	---				
SURFACE MOISTURE %	---		TOTAL SULPHUR %		0.36
TOTAL MOISTURE %	3.01		PHOSPHOROUS %		---
EQUILIBRIUM MOISTURE %	---		CHLORINE (PPM)		00780
			SPECIFIC GRAVITY		1.74
RESIDUAL MOISTURE %	0.41		FSI		---
ASH %	41.59		HGI		48.0
VOLATILE MATTER %	---		CO2 %		---
FIXED CARBON %	---				
GROSS CALORIFIC VALUE (MJ/KG)	---				
NET CALORIFIC VALUE (MJ/KG)	---				

<u>GCRI COAL DIVISION</u>	<u>ULTIMATE</u>	<u>PROJ KPN</u>	<u>BLK LR</u>	<u>DS</u>	<u>DDH85028</u>
SAMPLE ID	111				
SAMPLE PRODUCT ID	SP1	DATA TYPE (REAL,BORO,AVER,CALC)			---
SPLIT SAMPLE ID	UL1	DATE ANALYSED ___/___/___			
ANALYSIS BASIS TYPE (DAF,DB,AD)					---
WATER	%	---			
CARBON	%	---			
HYDROGEN	%	---			
SULPHUR	%	---			
NITROGEN	%	0.59			
ASH	%	---			
OXYGEN	%	---			

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85028

SAMPLE ID 111
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 10/10/85

SILICON DIOXIDE %	(SI02)	---
ALUMINIUM OXIDE %	(AL2O3)	---
FERRIC OXIDE %	(FE2O3)	---
TITANIUM DIOXIDE %	(TI02)	---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---
CALCIUM OXIDE %	(CAO)	---
MAGNESIUM OXIDE %	(MGO)	---
SULPHUR TRIOXIDE %	(SO3)	---
SODIUM OXIDE %	(NA2O)	1.40
POTASSIUM OXIDE %	(K2O)	---

90.0 <= TOTAL <= 100.0

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85028

SAMPLE ID 111
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 10/10/85

PYRITE	%	0.08
SULPHATE	%	0.00
ORGANIC	%	0.28

KPNLRDDH85029

<u>GRI COAL DIVISION</u>	<u>HEAD</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85029</u>		
SAMPLE ID	6619	DATA TYPE (REAL,BORO,AVER,CALC)					REAL		
SPLIT SAMPLE ID	HD1	DATE ANALYSED 10/10/85							
		ANALYSIS BASIS TYPE (AD,DB,AR,EM)					AD		
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)		ASTM							
TOP SIZE (MM)		----							
SURFACE MOISTURE %		----			TOTAL SULPHUR %	0.35			
TOTAL MOISTURE %		3.61			PHOSPHOROUS %	----			
EQUILIBRIUM MOISTURE %		----			CHLORINE (PPM)	00800			
					SPECIFIC GRAVITY	1.61			
RESIDUAL MOISTURE %		0.47			FSI	----			
ASH %		33.57			HGI	59.0			
VOLATILE MATTER %		----			CD2 %	----			
FIXED CARBON %		----							
GROSS CALORIFIC VALUE (MJ/KG)		----							
NET CALORIFIC VALUE (MJ/KG)		----							

<u>GRI COAL DIVISION</u>	<u>ULTIMATE</u>	<u>PROJ</u>	<u>KPN</u>	<u>BLK</u>	<u>LR</u>	<u>DS</u>	<u>DDH85029</u>		
SAMPLE ID	6619	DATA TYPE (REAL,BORO,AVER,CALC)					----		
SAMPLE PRODUCT ID	SP1	DATE ANALYSED					___/___/___		
SPLIT SAMPLE ID	UL1								
ANALYSIS BASIS TYPE (DAF,DB,AD)		----							
WATER	%	----							
CARBON	%	----							
HYDROGEN	%	----							
SULPHUR	%	----							
NITROGEN	%	0.58							
ASH	%	----							
OXYGEN	%	----							

GCRI COAL DIVISION ASH MINERAL PROJ KPN BLK LR DS DDH85029
 =====

SAMPLE ID 6619
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID AM1 DATE ANALYSED 10/10/85

SILICON DIOXIDE %	(SI02)	---
ALUMINIUM OXIDE %	(AL2O3)	---
FERRIC OXIDE %	(FE2O3)	---
TITANIUM DIOXIDE %	(TI02)	---
PHOSPHOROUS PENTOXIDE %	(P2O5)	---
CALCIUM OXIDE %	(CAO)	---
MAGNESIUM OXIDE %	(MGO)	---
SULPHUR TRIOXIDE %	(SO3)	---
SODIUM OXIDE %	(NA2O)	1.11
POTASSIUM OXIDE %	(K2O)	---

GCRI COAL DIVISION SULPHUR PROJ KPN BLK LR DS DDH85029
 =====

SAMPLE ID 6619
 SAMPLE PRODUCT ID SP1 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SU1 DATE ANALYSED 10/10/85

PYRITE	%	0.01
SULPHATE	%	0.00
ORGANIC	%	0.34

KPNLRDDH85030

GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85030
 =====
 SAMPLE ID 0 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID HD1 DATE ANALYSED 28/08/85
 ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
 NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

 TOP SIZE (MM) -----
 SURFACE MOISTURE % ----- TOTAL SULPHUR % 0.45
 TOTAL MOISTURE % 3.70 PHOSPHOROUS % -----
 EQUILIBRIUM MOISTURE % ----- CHLORINE (PPM) -----
 RESIDUAL MOISTURE % 3.25 SPECIFIC GRAVITY -----
 ASH % 16.68 FSI -----
 VOLATILE MATTER % 5.45 HGI -----
 FIXED CARBON % 74.62 CO2 % -----

 GROSS CALORIFIC VALUE (MJ/KG) 27.84
 NET CALORIFIC VALUE (MJ/KG) -----

GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85030
 =====
 SAMPLE ID 0 DATA TYPE (REAL,BORO,AVER,CALC) REAL
 SPLIT SAMPLE ID SZ1 DATE ANALYSED 28/08/85
 FRACTION SIZE WT% ASH% FSI CAL RM VM TS
 FROM (MM) TO (MM) (MJ/KG)
 50.00 6.00 74.75 15.51 ----- 3.43 -----
 6.00 0.50 18.18 18.30 ----- 2.71 -----
 0.50 0.15 4.24 23.94 ----- 2.64 -----
 0.15 0.00 2.83 29.56 ----- 2.28 -----

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85030 SEAM - I

SAMPLE ID - O

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT																	
FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 74.75								ASH % - 15.51			
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	C.V.	S	S	VOL.	CUM.	CUM.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.									
1.40	0.08	5.56	0.08	5.56	99.92	15.49										0.85	0.85
1.45	6.84	6.16	6.92	6.15	93.08	16.17										1.79	1.78
1.50	45.44	7.56	52.36	7.37	47.64	24.39										1.32	1.38
1.60	28.35	11.52	80.71	8.83	19.29	43.31										1.23	1.33
1.70	11.13	26.46	91.84	10.97	8.16	66.28										1.02	1.29
1.80	1.31	27.66	93.15	11.20	6.85	73.67										1.27	1.29
2.00	1.18	39.73	94.33	11.56	5.67	80.73										1.34	1.29
2.60	5.67	80.73	100.00	15.48												1.73	1.32

ANALYSIS TYPE - FLOAT																	
FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 18.18								ASH % - 18.30			
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	C.V.	S	S	VOL.	CUM.	CUM.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.									
1.40	1.94	3.32	1.94	3.32	98.06	18.19										0.80	0.80
1.45	28.00	3.69	29.94	3.67	70.06	23.99										0.90	0.89
1.50	26.05	5.16	55.99	4.36	44.01	35.13										1.14	1.01
1.60	16.86	11.09	72.85	5.92	27.15	50.06										1.21	1.05
1.70	8.29	20.47	81.14	7.41	18.86	63.07										1.58	1.11
1.80	3.72	28.89	84.86	8.35	15.14	71.47										1.48	1.12
2.00	3.44	43.55	88.30	9.72	11.70	79.68										1.91	1.16
2.60	11.70	79.68	100.00	17.90												1.96	1.25

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WASHABILITY REPORT 2

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ANALYSIS TYPE - FLOAT									
FRACTION SIZE(MM)		50.00 X 6.00		RELATIVE WEIGHT % - 73.70				ASH % - 11.06	
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S
1.40	0.12	4.09	0.12	4.09	99.88	11.33			
1.45	14.67	3.18	14.79	3.19	85.21	12.73			3.26 3.26
1.50	50.07	5.11	64.86	4.67	35.14	23.60			1.41 1.43
1.60	20.38	11.16	85.24	6.22	14.76	40.77			1.51 1.49
1.70	6.90	19.32	92.14	7.20	7.86	59.61			1.63 1.52
1.80	1.55	29.46	93.69	7.57	6.31	67.01			2.13 1.57
2.00	0.86	42.75	94.55	7.89	5.45	70.84			2.54 1.59
2.60	5.45	70.84	100.00	11.32					2.72 1.60
									2.32 1.64

ANALYSIS TYPE - FLOAT									
FRACTION SIZE(MM)		6.00 X 0.50		RELATIVE WEIGHT % - 19.78				ASH % - 14.76	
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S
1.40	0.01	0.50	0.01	0.50	99.99	14.87			
1.45	2.51	2.64	2.52	2.63	97.48	15.19			1.83 1.82
1.50	28.21	2.99	30.73	2.96	69.27	20.15			1.76 1.77
1.60	41.02	6.99	71.75	5.26	28.25	39.26			2.30 2.07
1.70	11.67	16.31	83.42	6.81	16.58	55.42			3.47 2.27
1.80	4.03	27.13	87.45	7.75	12.55	64.50			3.80 2.34
2.00	4.08	42.48	91.53	9.29	8.47	75.11			2.99 2.37
2.60	8.47	75.11	100.00	14.87					1.94 2.33

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DATA SOURCE - KPNLRDDH85031 SEAM - I

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ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 4.21 ASH % - 21.68				CUM. C.V. CUM.		CUM. CUM.		CUM. CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	MOIST	MOIST
1.40	0.76	6.19	0.76	6.19	99.24	22.29								4.80	4.80		
1.45	0.78	2.74	1.54	4.44	98.46	22.44								3.73	4.26		
1.50	15.28	3.98	16.82	4.02	83.18	25.84								1.85	2.07		
1.60	31.46	6.29	48.28	5.50	51.72	37.72								2.20	2.15		
1.70	21.88	12.27	70.16	7.61	29.84	56.39								4.17	2.78		
1.80	7.95	22.44	78.11	9.12	21.89	68.72								4.66	2.97		
2.00	6.61	36.65	84.72	11.27	15.28	82.59								4.47	3.09		
2.60	15.28	82.59	100.00	22.17										2.10	2.94		

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 2.31 ASH % - 29.05				CUM. C.V. CUM.		CUM. CUM.		CUM. CUM.	
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST	MOIST	MOIST
240.00	*****	29.05	100.00	29.05										5.93	5.93		

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WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		50.00 X 6.00		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 59.18				ASH % - 37.77		CUM.		
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
1.40	1.93	4.02		1.93	4.02	98.07	37.78								0.47	0.47
1.45	2.06	5.15		3.99	4.60	96.01	38.48								0.46	0.46
1.50	8.50	8.93		12.49	7.55	87.51	41.35								0.59	0.55
1.60	30.16	15.06		42.65	12.86	57.35	55.18								0.67	0.63
1.70	14.49	25.20		57.14	15.99	42.86	65.31								0.73	0.66
1.80	3.44	28.46		60.58	16.70	39.42	68.53								0.43	0.65
2.00	10.57	40.80		71.15	20.28	28.85	78.69								0.87	0.68
2.60	28.85	78.69		100.00	37.13										1.15	0.82

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X 0.50		CUM. FLOATS		CUM. SINKS		RELATIVE WEIGHT % - 25.95				ASH % - 15.28		CUM.		
SG-TME	ELEMENTAL	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ KG)	C.V.	S	CUM. S	CUM. VOL.	CUM. VOL.	CUM. MOIST	CUM. MOIST
1.40	12.89	2.70		12.89	2.70	87.11	16.51								0.27	0.27
1.45	29.99	4.05		42.88	3.64	57.12	23.05								0.39	0.35
1.50	17.20	6.32		60.08	4.41	39.92	30.26								1.26	0.61
1.60	17.07	11.07		77.15	5.88	22.85	44.59								3.38	1.23
1.70	7.78	18.98		84.93	7.08	15.07	57.81								3.81	1.46
1.80	3.00	28.55		87.93	7.82	12.07	65.08								3.93	1.55
2.00	3.11	41.63		91.04	8.97	8.96	73.22								3.59	1.62
2.60	8.96	73.22		100.00	14.73										2.91	1.73

GULF CANADA RESOURCES INC. - COAL DIVISION

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DATA SOURCE - KPNLRDDH85032 SEAM - I

SAMPLE ID - O

WASHABILITY ID - WA1

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		0.50 X 0.15		RELATIVE WEIGHT % - 8.19 ASH % - 15.78											
ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V. CUM.		CUM. C.V. CUM.		CUM. CUM.		CUM. CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
1.40	18.75	3.22	18.75	3.22	81.25	17.99								2.87	2.87
1.45	24.99	3.88	43.74	3.60	56.26	24.26								4.70	3.92
1.50	8.63	4.76	52.37	3.79	47.63	27.79								3.82	3.90
1.60	19.59	7.33	71.96	4.75	28.04	42.09								5.03	4.21
1.70	10.02	13.69	81.98	5.85	18.02	57.88								4.67	4.26
1.80	2.92	22.88	84.90	6.43	15.10	64.65								4.80	4.28
2.00	3.84	35.76	88.74	7.70	11.26	74.50								4.32	4.28
2.60	11.26	74.50	100.00	15.22										2.57	4.09

ANALYSIS TYPE - FROTH

FRACTION SIZE(MM)		0.15 X 0.00		RELATIVE WEIGHT % - 6.68 ASH % - 17.28											
ELEMENTAL		CUM. FLOATS		CUM. SINKS		CUM. C.V. CUM.		CUM. C.V. CUM.		CUM. CUM.		CUM. CUM.			
SG-TME	WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST	MOIST
240.00	*****	17.28	100.00	17.28										2.62	2.62

KPNLRDDH85033

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GCRI COAL DIVISION  HEAD  PROJ  KPN  BLK  LR  DS  DDH85033
=====
SAMPLE ID  0  DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID  HD1  DATE ANALYSED  28/08/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM)  AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO)  ASTM

TOP SIZE (MM)  ----
SURFACE MOISTURE %  ----  TOTAL SULPHUR %  0.40
TOTAL MOISTURE %  4.68  PHOSPHOROUS %  ----
EQUILIBRIUM MOISTURE %  ----  CHLORINE (PPM)  ----
RESIDUAL MOISTURE %  4.58  SPECIFIC GRAVITY  ----
ASH %  14.40  FSI  ----
VOLATILE MATTER %  7.11  HGI  ----
FIXED CARBON %  73.91  CO2 %  ----

GROSS CALORIFIC VALUE (MJ/KG)  27.72
NET CALORIFIC VALUE (MJ/KG)  ----

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GCRI COAL DIVISION  SIZE  PROJ  KPN  BLK  LR  DS  DDH85033
=====
SAMPLE ID  0  DATA TYPE (REAL,BORO,AVER,CALC)  REAL
SPLIT SAMPLE ID  SZ1  DATE ANALYSED  28/08/85
FRACTION SIZE  WT%  ASH%  FSI  CAL  RM  VM  TS
FROM (MM) TO (MM)  (MJ/KG)
50.00  6.00  76.79  11.78  ----  4.76  ----  ----
6.00  0.50  17.26  21.61  ----  3.55  ----  ----
0.50  0.15  3.71  27.96  ----  4.46  ----  ----
0.15  0.00  2.24  34.23  ----  4.06  ----  ----
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GULF CANADA RESOURCES INC. - COAL DIVISION

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WASHABILITY REPORT 2

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DATA SOURCE - KPNLRDDH85033 SEAM - I

SAMPLE ID - 0

WASHABILITY ID - WAI

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		50.00 X		6.00		RELATIVE WEIGHT % - 76.79		ASH % - 11.78					
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST
1.40	0.01	8.91	0.01	8.91	99.99	11.96						1.35	1.35
1.45	18.17	5.57	18.18	5.57	81.82	13.38						3.24	3.24
1.50	49.10	5.52	67.28	5.53	32.72	25.18						4.26	3.98
1.60	20.04	13.03	87.32	7.25	12.68	44.37						3.64	3.91
1.70	5.83	24.84	93.15	8.35	6.85	61.00						3.15	3.86
1.80	2.32	37.56	95.47	9.06	4.53	73.01						3.26	3.84
2.00	0.67	46.26	96.14	9.32	3.86	77.65						2.69	3.84
2.60	3.86	77.65	100.00	11.96								2.96	3.80

ANALYSIS TYPE - FLOAT

FRACTION SIZE(MM)		6.00 X		0.50		RELATIVE WEIGHT % - 17.26		ASH % - 21.61					
SG-TME	ELEMENTAL	CUM.	FLOATS	CUM.	SINKS	CUM.	C.V.	CUM.	CUM.	CUM.	CUM.	MOIST	MOIST
WT%	ASH%	WT%	ASH%	WT%	ASH%	FSI	FSI (MJ/KG)	C.V.	S	S	VOL.	VOL.	MOIST
1.40	0.25	7.17	0.25	7.17	99.75	21.05						4.49	4.49
1.45	19.42	3.50	19.67	3.55	80.33	25.29						2.81	2.83
1.50	29.46	5.58	49.13	4.77	50.87	36.71						3.54	3.26
1.60	21.76	10.33	70.89	6.47	29.11	56.42						4.20	3.55
1.70	7.46	17.90	78.35	7.56	21.65	69.70						4.22	3.61
1.80	2.60	29.80	80.95	8.28	19.05	75.14						4.66	3.64
2.00	3.36	42.94	84.31	9.66	15.69	82.04						4.20	3.67
2.60	15.69	82.04	100.00	21.01								3.06	3.57

KPNLRDDH85034

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GCRI COAL DIVISION HEAD PROJ KPN BLK LR DS DDH85034
=====
SAMPLE ID 0 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID HD1 DATE ANALYSED 28/08/85
ANALYSIS BASIS TYPE (AD,DB,AR,EM) AD
NAME OF STANDARD (ASTM,JIS,DIN,BS,AS,GOST,ISO) ASTM

TOP SIZE (MM) ----*---
SURFACE MOISTURE % ----*--- TOTAL SULPHUR % 0.42
TOTAL MOISTURE % 4.81 PHOSPHOROUS % ----*---
EQUILIBRIUM MOISTURE % ----*--- CHLORINE (PPM) ----*---
SPECIFIC GRAVITY ----*---
RESIDUAL MOISTURE % 3.15 FSI ----*---
ASH % 16.71 HGI ----*---
VOLATILE MATTER % 5.72 CO2 % ----*---
FIXED CARBON % 74.42

GROSS CALORIFIC VALUE (MJ/KG) 27.85
NET CALORIFIC VALUE (MJ/KG) ----*---

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GCRI COAL DIVISION SIZE PROJ KPN BLK LR DS DDH85034
=====
SAMPLE ID 0 DATA TYPE (REAL,BORO,AVER,CALC) REAL
SPLIT SAMPLE ID SZ1 DATE ANALYSED 28/08/85
FRACTION SIZE WT% ASH% FSI CAL RM VM TS
FROM (MM) TO (MM) (MJ/KG)
50.00 6.00 73.47 16.09 ----*--- 3.62 ----*---
6.00 0.50 22.86 17.69 ----*--- 1.59 ----*---
0.50 0.15 2.22 23.96 ----*--- 1.49 ----*---
0.15 0.00 1.45 30.14 ----*--- 1.55 ----*---
----*--- ----*--- ----*--- ----*--- ----*--- ----*---

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