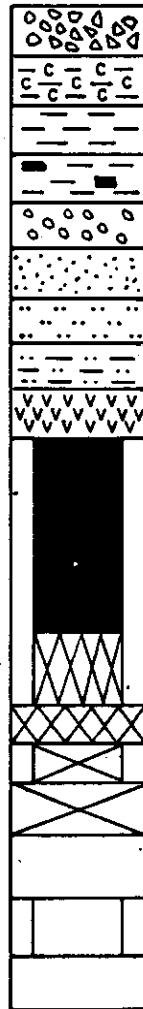
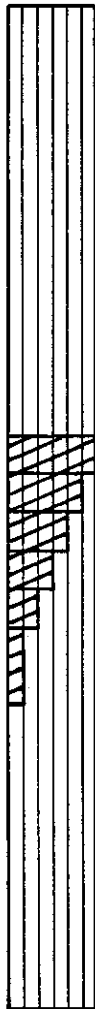


APPENDIX VI

COAL SEAM DATA SHEETS

**SEAM
COMP.**

**COAL
SEAM
LOG**




- breccia
- carbonaceous claystone
- claystone
- coaly claystone
- conglomerate
- sandstone
- siltstone
- silty claystone
- tuff
- coal
- coal-boney, stoney, coal and bands/rock - designated 'C6'
- rock } coal lithotype uncertain
- coal } MISSING CORE
- rock }
- rock
- coal

CORED HOLE
GEOPHYSICALLY
LOGGED
LITHOLOGY
DESCRIBED

UNCORED HOLE
GEOPHYSICAL
LOGS ONLY

LITHOTYPE

- C-1: Bright 80% Vitrain
- C-2: Bright banded 60-80 % Vitrain
- C-3: Dull/Bright 40-60 % Vitrain
- C-4: Dull banded 20-40 % Vitrain
- C-5: Dull 20 % Vitrain
- C-6: Bone

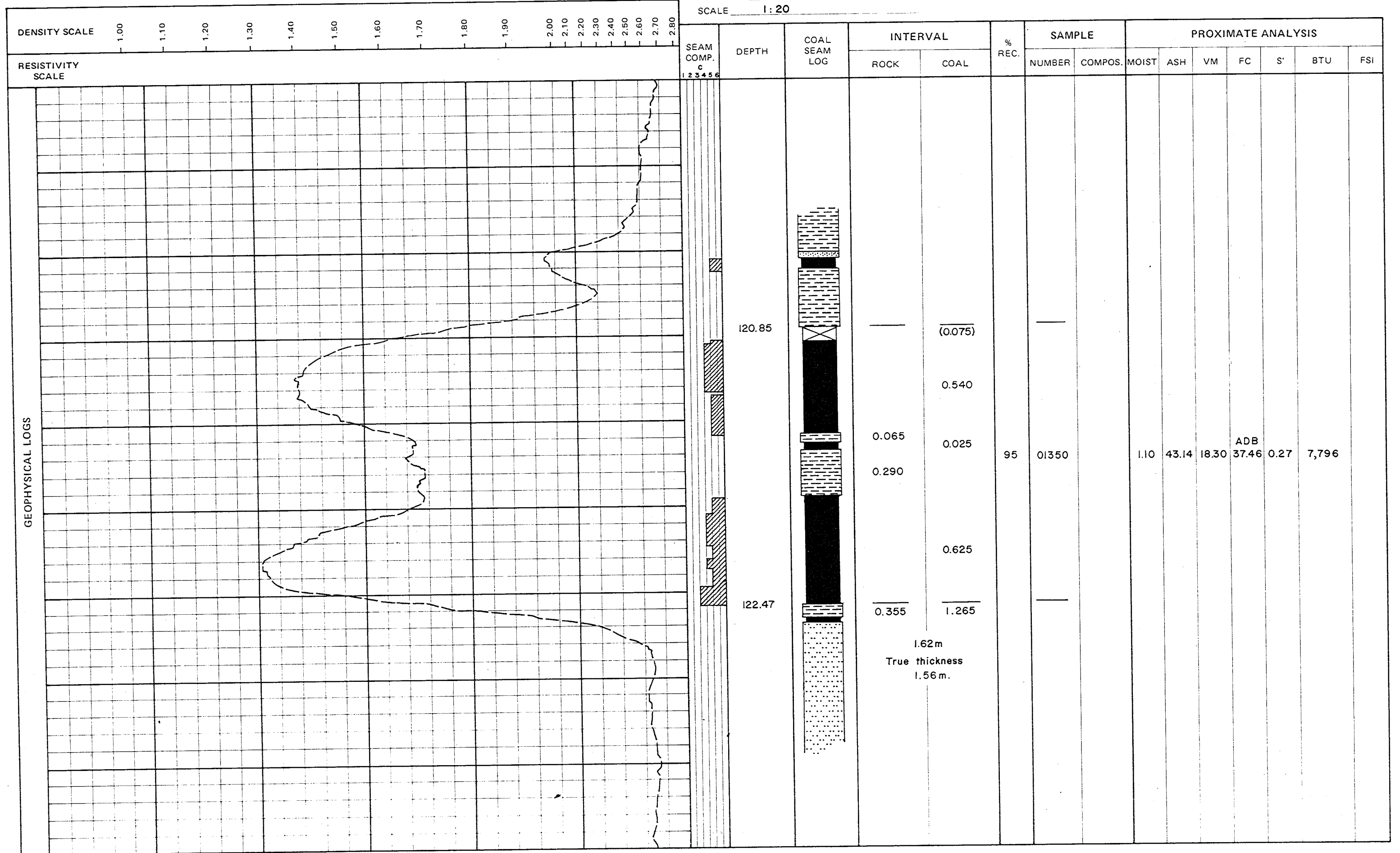
GULF CANADA RESOURCES INC.		
CALGARY	Coal Division	
LEGEND FOR COAL SEAM DATA SHEETS		
PREPARED BY: V.O.		SCALE 1:40
APPROVED BY:		DATE: JAN. 82 DRAWING No.

COAL SEAM DATA SHEET

GULF CANADA RESOURCES INC.
COAL DIVISION

DENSITY RESISTIVITY

DRILL NO. **TR RDH 8012** SEAM **HIGHHAT** SEAM INTERVAL **120.85m - 122.47m**
SCALE **1:20**



COAL SEAM DATA SHEET

GULF CANADA RESOURCES INC.
COAL DIVISION

DENSITY

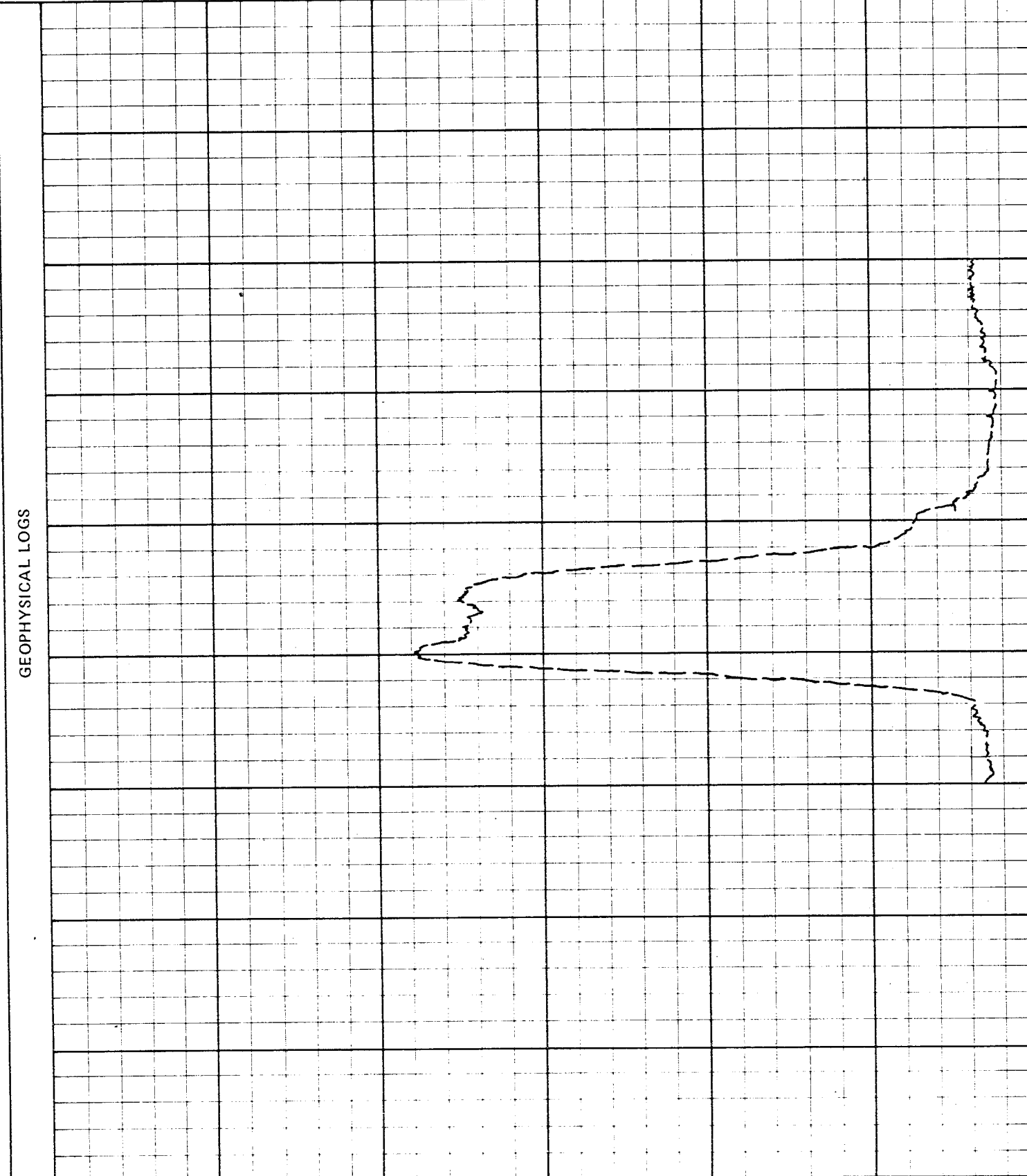
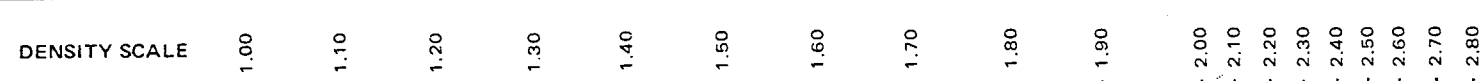
RESISTIVITY

DRILL NO. TR-DDH-8001

SEAM CARON

SEAM INTERVAL 170.28 m. - 171.16 m.

SCALE 1:20



SEAM COMP. C 1 2 3 4 5 6	DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE		PROXIMATE ANALYSIS							
			ROCK	COAL		NUMBER	COMPOS.	MOIST	ASH	VM	FC	S	BTU	FSI	
	170.28			0.88	100	0001			0.85	11.31	23.19	64.65	0.63	13,430	
	171.16			0.88											
			True thickness 0.88 m.												

COAL SEAM DATA SHEET

GULF CANADA RESOURCES INC.
COAL DIVISION

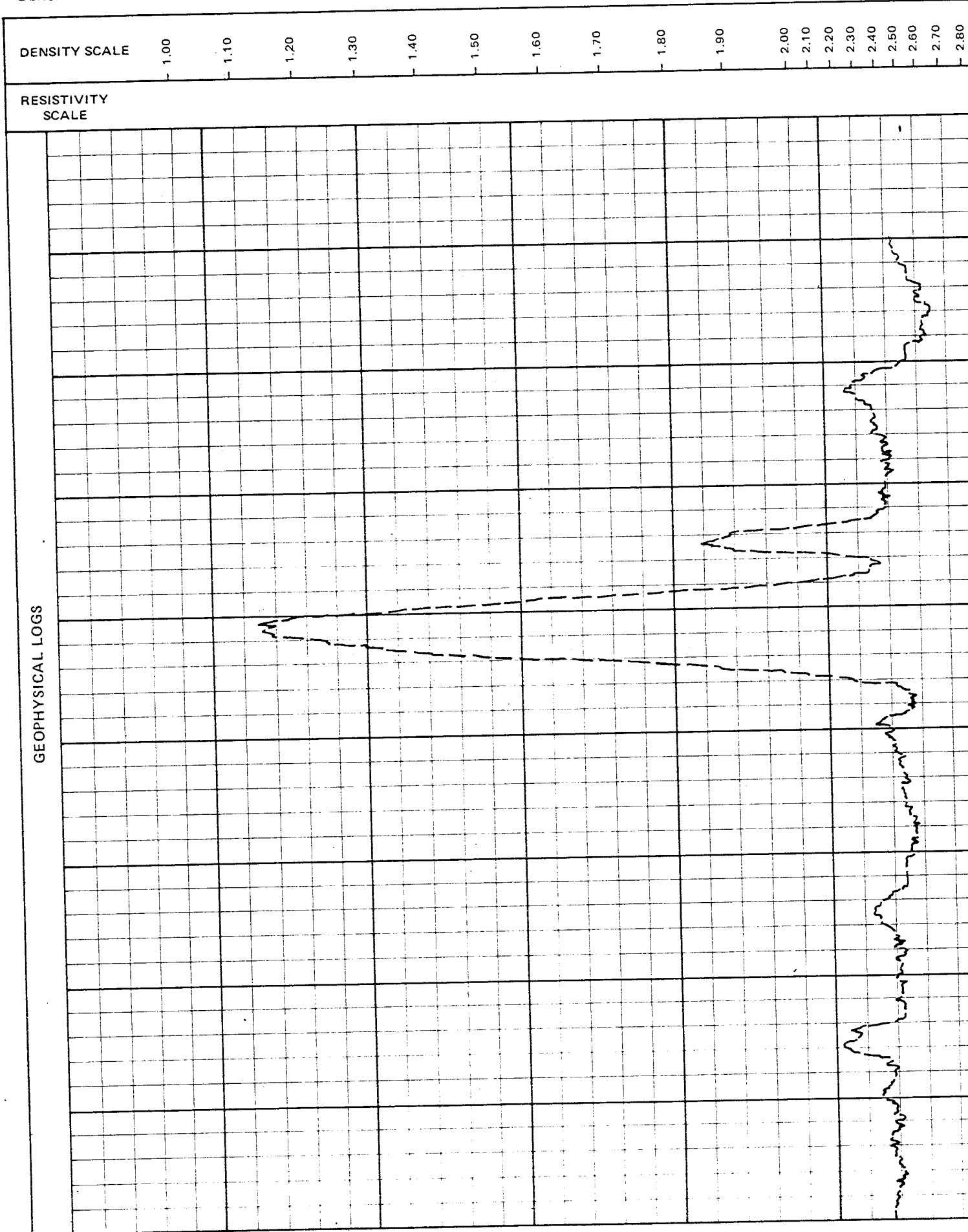
P-267 (12-80)

DENSITY

RESISTIVITY

DRILL NO. TR-DDH 8002
SCALE 1:40

SEAM INTERVAL 214.93 m. - 215.44 m.



SEAM COMP. <small>1 2 3 4 5 6</small>	DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE		PROXIMATE ANALYSIS											
			ROCK	COAL		NUMBER	COMPOS.	MOIST	ASH	VM	FC	S'	BTU	FSI					
	214.93			(0.13)															
	215.44			0.38	75	0002		1.41	14.58	23.24	60.77	0.35	12,780						
				True thickness 0.48 m.															

GEOPHYSICAL LOGS

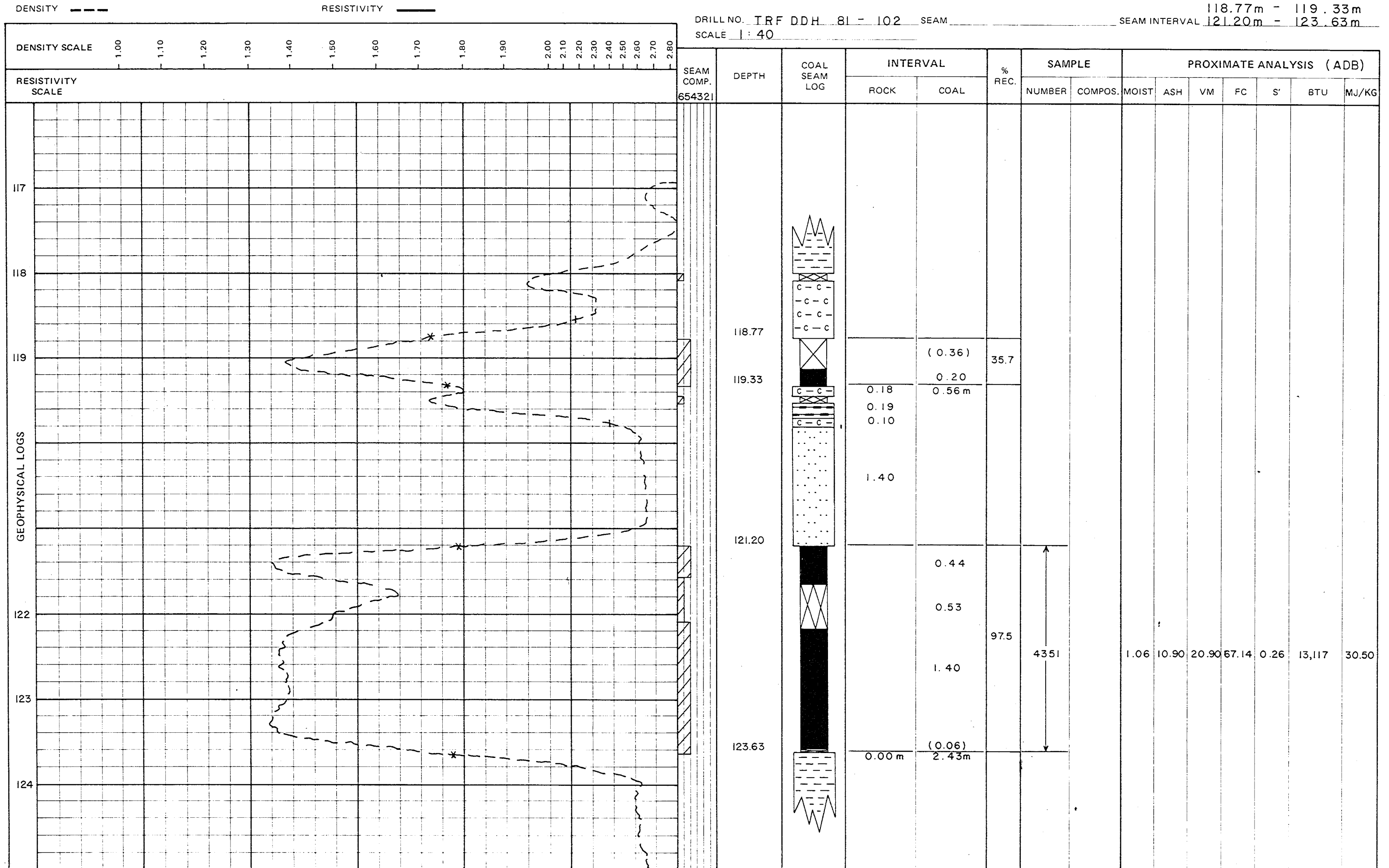
COAL SEAM DATA SHEET

GULF CANADA RESOURCES INC.
COAL DIVISION

P-267 (12-80)

DRILL NO. TRF DDH 81 - 102 SEAM
SCALE 1 : 40

118.77m - 119.33m
SEAM INTERVAL 121.20m - 123.63m

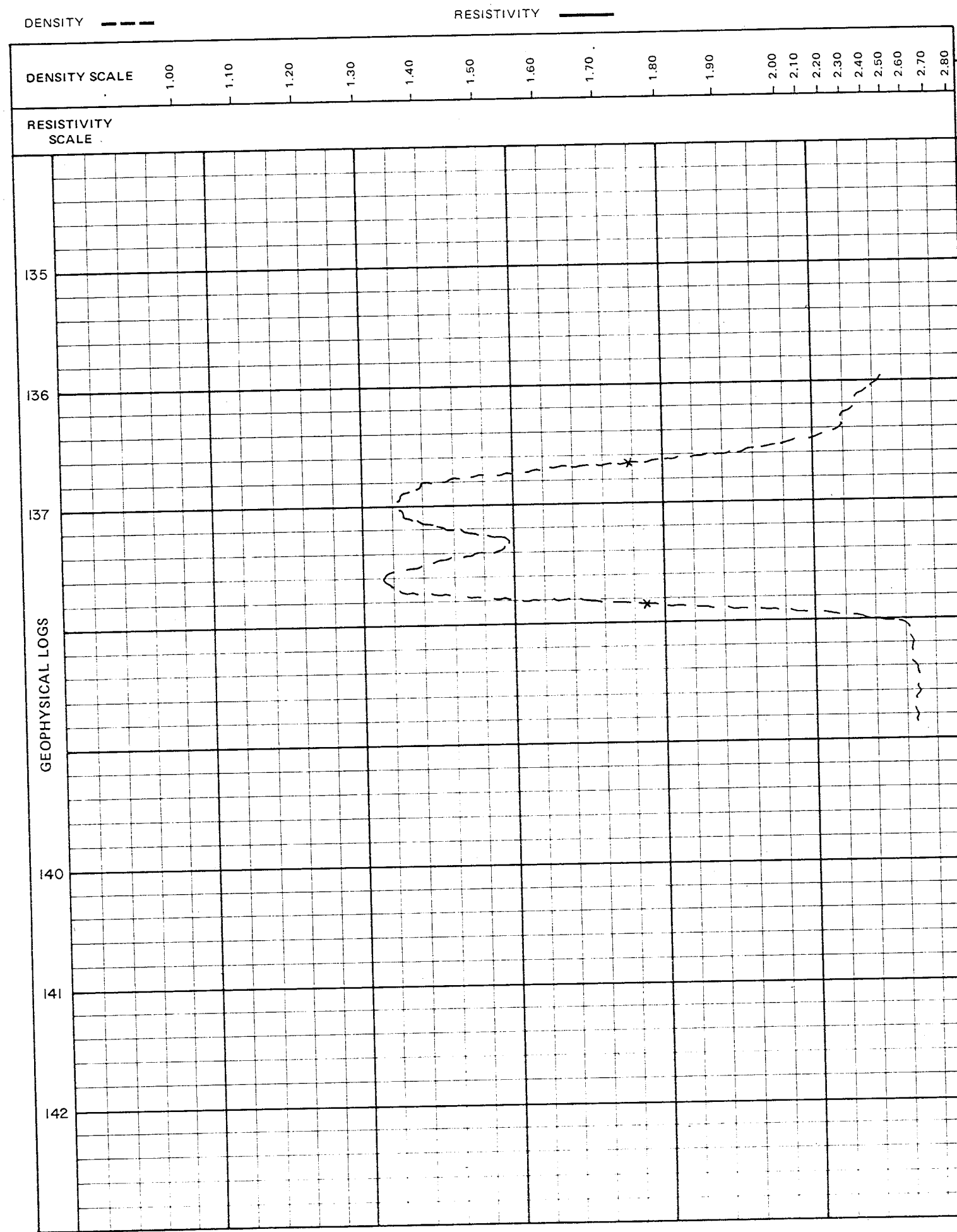


COAL SEAM DATA SHEET

GULF CANADA RESOURCES INC.
COAL DIVISION

DRILL NO. TRF DDH 81 - 102 SEAM
SCALE 1:40

SEAM INTERVAL 136.66m - 137.84m



SEAM COMP. 654321	DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE		PROXIMATE ANALYSIS (ADB)									
			ROCK	COAL		NUMBER	COMPOS.	MOIST	ASH	VM	FC	S'	BTU	MJ/KG			
	136.66			0.43													
	137.84		0.00m	0.30 0.35 (0.06)	94.9	4352		0.71	9.64	24.92	64.73	1.04	13,688	31.82			
				1.18m													

COAL SEAM DATA SHEET

GULF CANADA RESOURCES INC.
COAL DIVISION

P-267 (12-80)


DENSITY 

RESISTIVITY 

DRILL NO. TRF RDH - 81 - 103 SEAM

SEAM INTERVAL 303.14 m - 304.91 m

SCALE 1:40

GEOPHYSICAL LOGS	SEAM COMP. 654321	DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE		PROXIMATE ANALYSIS													
				ROCK	COAL		NUMBER	COMPOS.	MOIST	ASH	VM	FC	S	BTU	MJ/KG							
302																						
303		303.14																				
304																						
307																						
308																						
309																						

DENSITY

RESISTIVITY

260.82 m - 261.24 m

SEAM INTERVAL 263.28 m - 265.72 m

DRILL NO. TRF RDH 81 - 104 SEAM
SCALE 1:40

DENSITY SCALE	RESISTIVITY SCALE																	SEAM COMP. 654321	DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE		PROXIMATE ANALYSIS																										
	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20	2.30	2.40	2.50	2.60				2.70	2.80		ROCK	COAL	NUMBER	COMPOS.	MOIST	ASH	VM	FC	S	BTU	MJ/KG																		
																																			260.82																	
																																			261.24		0.42															
																																			263.26		0.42 m															
																																			265.72		2.44															
																																			266.72		2.44 m															

COAL SEAM DATA SHEET

GULF CANADA RESOURCES INC.
COAL DIVISION

P-267 (12-80)

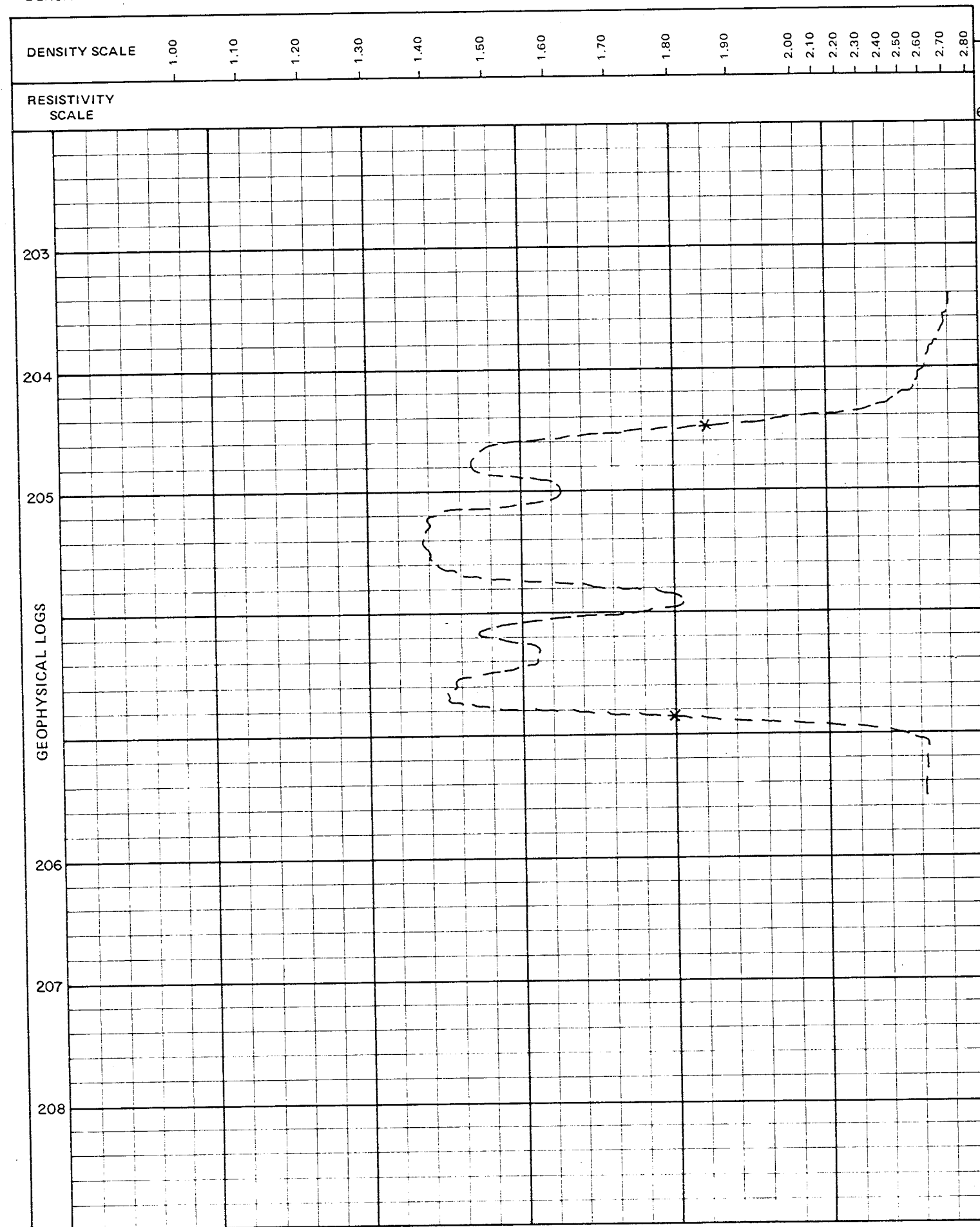
DRILL NO. TRF DDH - 81 - 105 SEAM

SEAM INTERVAL 204.48m - 206.85m

DENSITY

RESISTIVITY

SCALE 1:40



SEAM COMP.	DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE		PROXIMATE ANALYSIS (ADB)										
			ROCK	COAL		NUMBER	COMPOS.	MOIST	ASH	VM	FC	S	BTU	MJ/KG				
654321																		
	204.48			0.04		4353	16.3	0.80	12.08	21.66	65.46	0.52	13,282	30.88				
	204.88			0.36		4354	10.2	0.90	30.35	18.45	50.30	0.30	10,408	24.20				
	205.13		0.25		100.0	4355	24.9	0.74	7.42	25.00	66.84	0.39	14,073	32.72				
	205.74			0.61		4356	14.7	0.92	46.77	14.84	37.47	0.28	7,467	17.36				
	206.02		0.28			4357	9.0	0.74	7.21	22.73	69.32	0.39	14,073	32.72				
	206.24			0.22		4358	9.8	0.72	16.09	26.40	56.79	0.27	11,372	26.44				
	206.48			0.24		4359	15.1	0.72	6.56	24.77	67.95	0.36	14,142	32.88				
	206.85		0.53m	1.84m														

COAL SEAM DATA SHEET

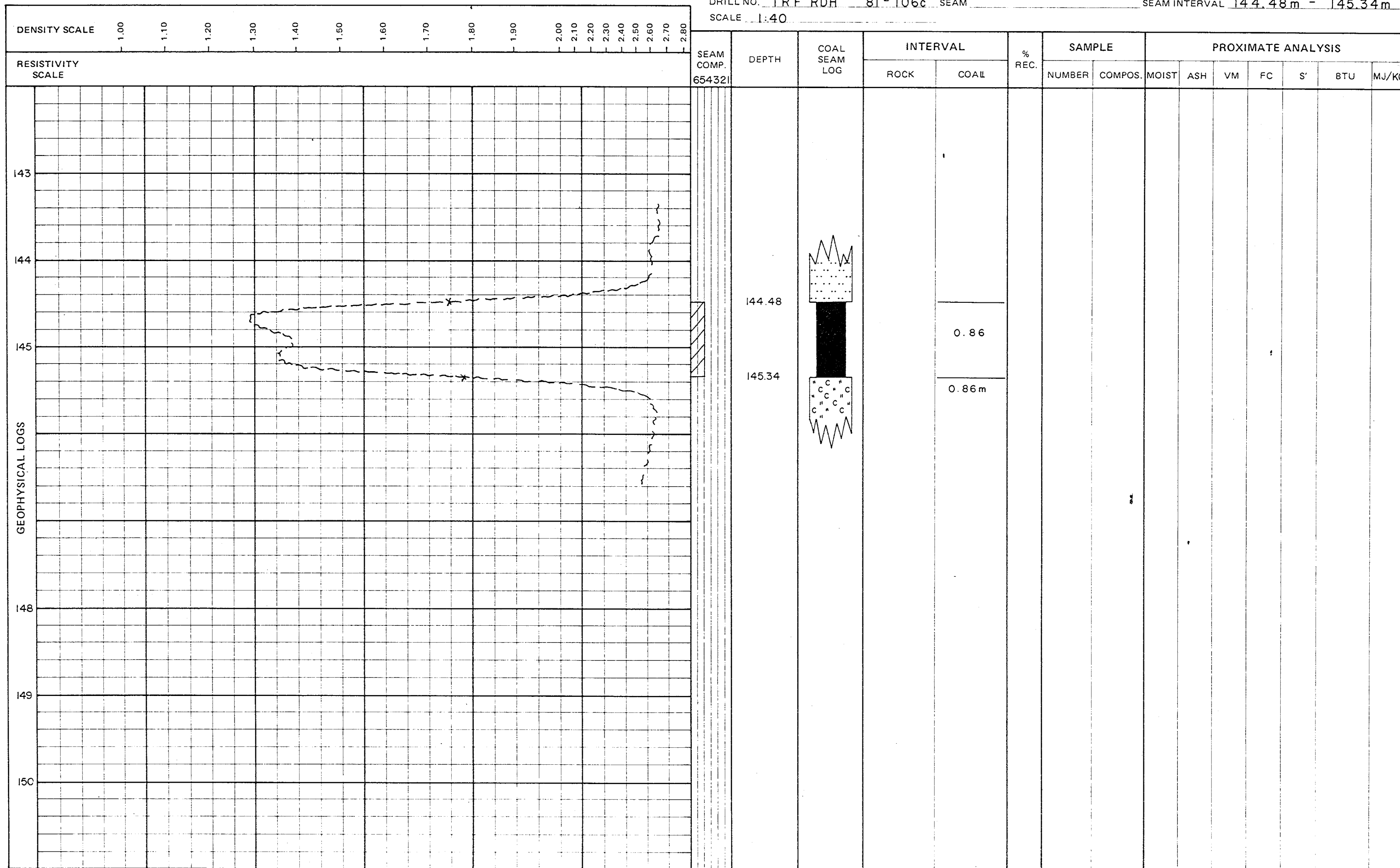
GULF CANADA RESOURCES INC.
COAL DIVISION

DENSITY RESISTIVITY

DRILL NO. TRF RDH 81-106c SEAM

SEAM INTERVAL 144.48m - 145.34m

SCALE 1:40



COAL SEAM DATA SHEET

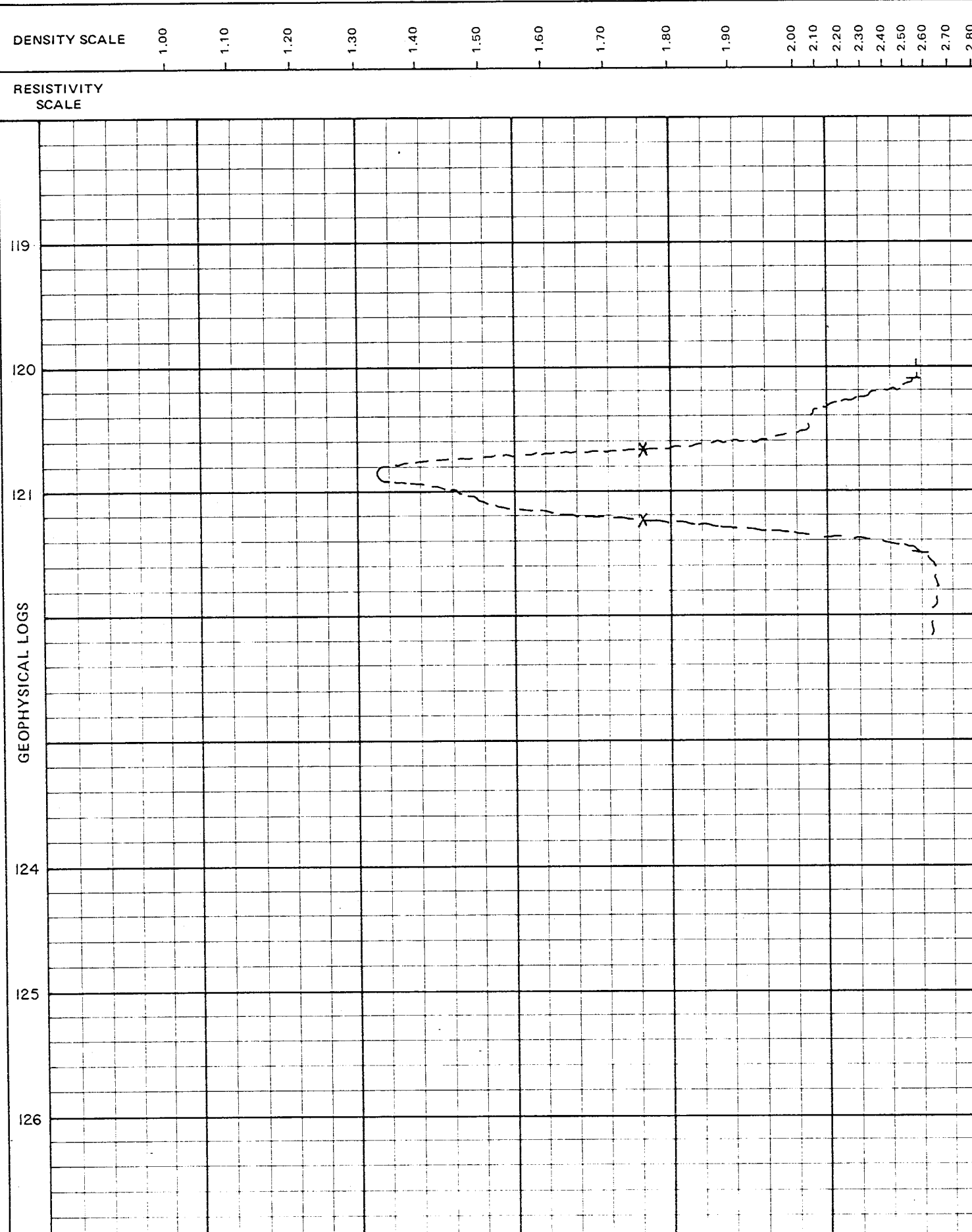
GULF CANADA RESOURCES INC.
COAL DIVISION

DENSITY

RESISTIVITY

DRILL NO. TRF RDH 81 - 107 SEAM
SCALE 1:40

SEAM INTERVAL 120.65 m - 121.22 m



SEAM COMP. 654321	DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE		PROXIMATE ANALYSIS											
			ROCK	COAL		NUMBER	COMPOS.	MOIST	ASH	VM	FC	S	BTU	MJ/KG					
	120.65			0.57															
	121.22			0.57 m															

COAL SEAM DATA SHEET

GULF CANADA RESOURCES INC.
COAL DIVISION

P-267 (12-80)

DENSITY RESISTIVITY

DRILL NO. TRF RDH 81 - 107 SEAM

SEAM INTERVAL 130.80m - 131.76m

SCALE 1:40

GEOPHYSICAL LOGS	DENSITY SCALE	RESISTIVITY SCALE	SEAM COMP. 654321	DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE		PROXIMATE ANALYSIS											
						ROCK	COAL		NUMBER	COMPOS.	MOIST	ASH	VM	FC	S	BTU	MJ/KG					
129																						
130																						
131				130.80																		
				131.76																		
134																						
135																						
136																						

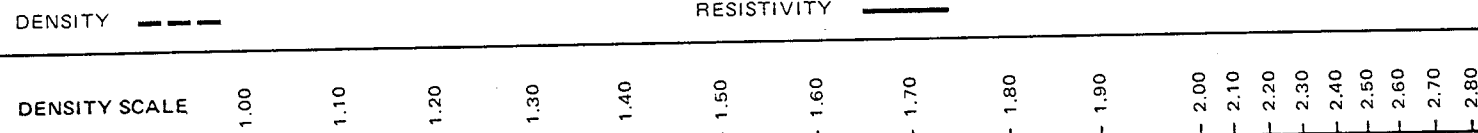
COAL SEAM DATA SHEET

GULF CANADA RESOURCES INC.
COAL DIVISION

DRILL NO. TRF DDH 81 - 108 SEAM

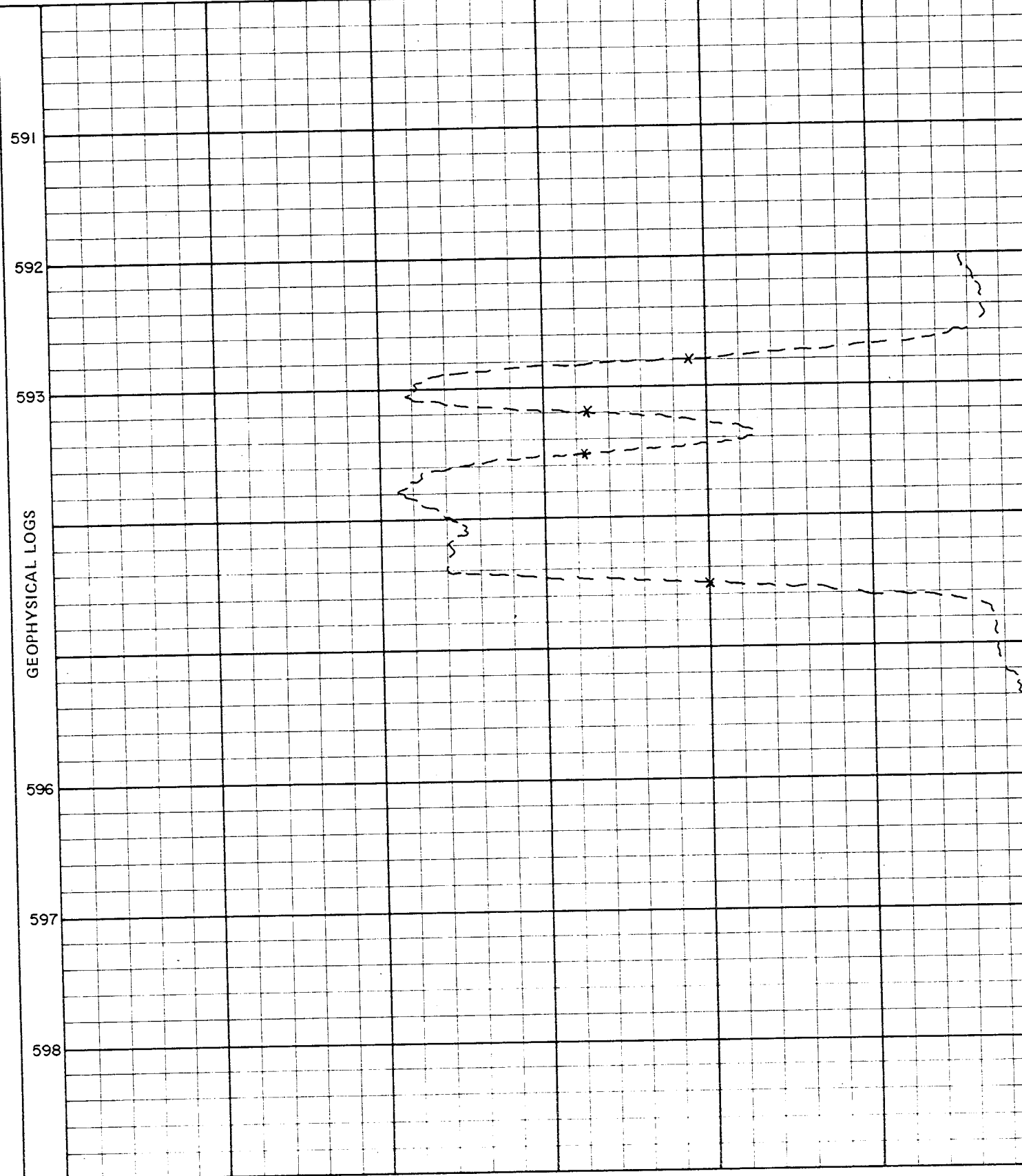
SEAM INTERVAL 592.80m - 594.50m

SCALE 1:40



SEAM COMP.
654321

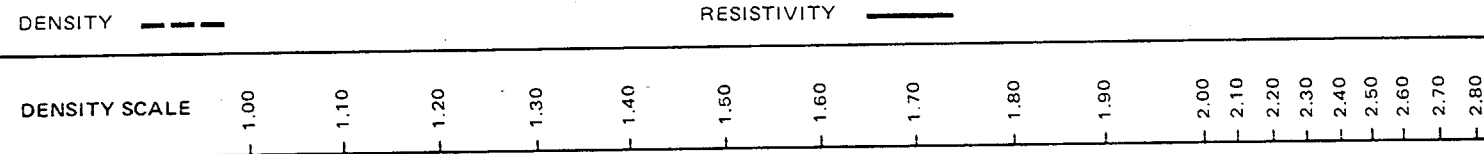
RESISTIVITY SCALE



DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE		PROXIMATE ANALYSIS (ADB)							
		ROCK	COAL		NUMBER	COMPOS.	MOIST	ASH	VM	FC	S'	BTU	MJ/KG	
592.80			0.40		4360	20.5	0.91	12.83	21.82	64.44	0.45	13,011	30.25	
593.20		0.14 (0.16)		90.6	4361	23.1	0.77	76.56	8.43	14.24	0.10	2,882	6.70	
593.50			0.11 0.20 0.10 0.09 0.12 0.36 0.02		4362	56.4	0.82	10.09	21.84	67.25	0.51	13,290	30.90	
594.50		0.30m	1.40m											

COAL SEAM DATA SHEET

GULF CANADA RESOURCES INC.
COAL DIVISION



DRILL NO. TRF DDH 81 - 108 SEAM
SCALE 1:40

SEAM INTERVAL 608.42m - 609.38m

DENSITY SCALE	RESISTIVITY SCALE	SEAM COMP.	DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE		PROXIMATE ANALYSIS										
					ROCK	COAL		NUMBER	COMPOS.	MOIST	ASH	VM	FC	S	BTU	MJ/KG				
		654321	608.42	[Symbol]																
			609.38	[Symbol]	0.00m	0.96m	97.9	4363	0.89	17.06	25.24	56.81	0.26	12,340	2869					

GEOPHYSICAL LOGS

COAL SEAM DATA SHEET

GULF CANADA RESOURCES INC.
COAL DIVISION

P-267 (12-80)

DENSITY RESISTIVITY

DRILL NO. TRF RDH 81 - 109c SEAM
SCALE 1:40

184.54m - 184.96m
SEAM INTERVAL 187.94m - 190.24m

DENSITY SCALE	RESISTIVITY SCALE	SEAM COMP.	DEPTH	COAL SEAM LOG	INTERVAL		% REC.	SAMPLE		PROXIMATE ANALYSIS (ADB)								
					ROCK	COAL		NUMBER	COMPOS.	MOIST	ASH	VM	FC	S'	BTU	MJ/KG		
1.00		654321	184.54			0.42												
1.10			184.96			0.42 m												
1.20			187.94															
1.30			189.25				95.7	4364	57.0	0.99	5.40	20.86	72.75	0.54	14,133	32.86		
1.40			189.75			0.50		4365	21.7	0.73	13.21	23.17	62.89	0.26	12,520	29.11		
1.50			189.75			0.39		4366	21.3	0.73	6.05	27.43	65.79	0.44	14,146	32.89		
1.60			190.24			(0.10)												
1.70						2.30												
1.80																		
1.90																		
2.00																		
2.10																		
2.20																		
2.30																		
2.40																		
2.50																		
2.60																		
2.70																		
2.80																		

APPENDIX VII

ANALYTIC DATA

19/JAN/82 GULF CANADA RESOURCES INC. - COAL DIVISION
SIMPLE SAMPLE SUMMARY PAGE 1

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	REC CORE	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK
DDH81102		4352	136.66	137.80	1.08	94.74	1.08	0.00	0.06	0.00
		4351	121.20	123.63	2.37	97.53	1.93	0.44	0.06	0.00

GULF CANADA RESOURCES INC. - COAL DIVISION
 19/JAN/82 SIMPLE SAMPLE SUMMARY PAGE 1

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	REC CORE	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK
DDH81105		4356	205.74	206.02	0.28	100.00	0.00	0.28	0.00	0.00
		4355	205.13	205.74	0.61	100.00	0.61	0.00	0.00	0.00
		4354	204.88	205.13	0.25	100.00	0.00	0.25	0.00	0.00
		4353	204.48	204.88	0.40	100.00	0.40	0.00	0.00	0.00
		4357	206.02	206.24	0.22	100.00	0.22	0.00	0.00	0.00
		4358	206.24	206.48	0.24	100.00	0.24	0.00	0.00	0.00
		4359	206.48	206.85	0.37	100.00	0.37	0.00	0.00	0.00

GULF CANADA RESOURCES INC. - COAL DIVISION
 19/JAN/82 SIMPLE SAMPLE SUMMARY PAGE 1

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	REC CORE	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK
DDHB1108		4360	592.80	593.20	0.40	100.00	0.40	0.00	0.00	0.00
		4361	593.20	593.34	0.14	100.00	0.00	0.14	0.00	0.00
		4362	593.50	594.50	1.00	100.00	1.00	0.00	0.00	0.00
		4363	608.42	609.38	0.94	97.92	0.94	0.00	0.02	0.00

GULF CANADA RESOURCES INC. - COAL DIVISION
 19/JAN/62 SIMPLE SAMPLE SUMMARY PAGE 1

DATA SOURCE	SEAM	SAMPLE ID	DEPTH FROM	DEPTH TO	REC CORE	PERCENT REC	RECOVERED COAL	RECOVERED ROCK	MISSING COAL	MISSING ROCK
RDH81109		4364	187.94	189.25	1.31	100.00	1.31	0.00	0.00	0.00
		4365	189.25	189.75	0.50	100.00	0.50	0.00	0.00	0.00
		4366	189.75	190.14	0.29	74.36	0.29	0.00	0.10	0.00

PROJ - TRF		ANALYSIS BASIS TYPE - AD					NAME OF STANDARD - ASTM			
DATA SOURCE	SEAM	SAMPLE ID	INHERENT MOISTURE%	ASH%	FIXED CARBON%	VOLATILE MATTER%	TOTAL SULPHUR%	GROSS CALORIFIC VALUE (MJ-KG)	SPG	FSI
DDH81102		4351	1.06	10.90	67.14	20.90	0.26	30.50	1.39	1.00
		4352	0.71	9.64	64.73	24.92	1.04	31.83	1.36	2.00

GULF CANADA RESOURCES INC. - COAL DIVISION

19/JAN/82

HEAD ANALYSIS SUMMARY

PAGE 1

PROJ - TRF		ANALYSIS BASIS TYPE - AD				NAME OF STANDARD - ASTM				
DATA SOURCE	SEAM	SAMPLE ID	INHERENT MOISTURE%	ASH%	FIXED CARBON%	VOLATILE MATTER%	TOTAL SULPHUR%	GROSS CALORIFIC VALUE (MJ-KG)	SPG	FSI
DDHB1105		4353	0.80	12.08	65.46	21.66	0.52	30.88	1.41	1.00
		4354	0.90	30.35	50.30	18.45	0.30	24.20	1.54	1.00
		4355	0.74	7.42	66.84	25.00	0.39	32.72	1.36	2.00
		4356	0.92	46.77	37.47	14.84	0.28	17.36	1.73	0.00
		4357	0.74	7.21	69.32	22.73	0.39	32.72	1.37	1.00
		4358	0.72	16.09	56.79	26.40	0.27	26.44	1.49	1.00
		4359	0.72	6.56	67.95	24.77	0.36	32.88	1.35	1.00

PROJ - TRF		ANALYSIS BASIS TYPE - AD					NAME OF STANDARD - ASTM			
DATA SOURCE	SEAM	SAMPLE ID	INHERENT MOISTURE%	ASH%	FIXED CARBON%	VOLATILE MATTER%	TOTAL SULPHUR%	GROSS CALORIFIC VALUE (MJ-KG)	SPG	FSI
DDH81108		4360	0.91	12.83	64.44	21.82	0.45	30.25	1.40	1.00
		4361	0.77	76.56	14.24	8.43	0.10	6.70	2.21	0.00
		4362	0.82	10.09	67.25	21.84	0.51		1.39	1.00
		4363	0.89	17.06	56.81	25.24	0.26	28.69	1.44	1.50

PROJ - TRF		ANALYSIS BASIS TYPE - AD					NAME OF STANDARD - ASTM			
DATA SOURCE	SEAM	SAMPLE ID	INHERENT MOISTURE%	ASH%	FIXED CARBON%	VOLATILE MATTER%	TOTAL SULPHUR%	GROSS CALORIFIC VALUE (MJ-KG)	SPG	FSI
RDH81109		4366	0.73	6.05	65.79	27.43	0.44	32.89	1.33	7.00
		4365	0.73	13.21	62.89	23.17	0.26	29.11	1.42	1.00
		4364	0.99	5.40	72.75	20.86	0.54	32.86	1.34	1.00

GULF CANADA RESOURCES INC. - COAL DIVISION
 COAL COMPOSITION OR HEAD ANALYSIS

PROJ BLK DS

LAB SAMPLE ID

NOTE: Do not mark shaded regions.

THIS PART APPLIES WITH HEAD ANALYSIS ONLY.

SAMPLE

SAMPLE ID

LAB NAME

DATE RECEIVED

/ /
DY MO YR

SAMPLE WEIGHT (KG)

*

* THIS IS THE WEIGHT OF THE SAMPLE RECEIVED FROM THE FIELD.

CHECK ONE OF:

COAL COMPOSITION ANALYSIS

HEAD ANALYSIS

SAMPLE ID HEAD

SAMPLE PRODUCT ID DATA TYPE (REAL, BORO, AVER, CALC)

SPLIT SAMPLE ID DATE ANALYSED / /
DY MO YR

ANALYSIS BASIS TYPE (AD, DB, AR, EM)

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

NORMAL RANGE

SURFACE MOISTURE % <input type="text" value="AD, AR"/>	<input type="text" value=""/>	0. <= VALUE <= 15.0
TOTAL MOISTURE % <input type="text" value="AR"/>	<input type="text" value=""/>	0. <= VALUE <= 80.0
INHERENT MOISTURE <input type="text" value="AD, EM"/>	<input type="text" value="0.66"/>	0. <= VALUE <= 60.0
ASH %	<input type="text" value="17.61"/>	0. <= VALUE <= 80.0
FIXED CARBON %	<input type="text" value="60.11"/>	0. <= VALUE <= 99.99
VOLATILE MATTER %	<input type="text" value="21.62"/>	0. <= VALUE <= 50.0
TOTAL SULPHUR %	<input type="text" value="0.35"/>	0. <= VALUE <= 15.0
PHOSPHOROUS	<input type="text" value="0.090"/>	0. <= VALUE <= 5.0
GROSS CALORIFIC VALUE (MJ/KG)	<input type="text" value="28.56"/>	0. <= VALUE <= 34.0
NET CALORIFIC VALUE (MJ/KG)	<input type="text" value=""/>	0. <= VALUE <= 34.0
CHLORINE (PPM)	<input type="text" value=""/>	0. <= VALUE <= 20000
SPG	<input type="text" value=""/>	1.0 <= VALUE <= 2.6
FSI	<input type="text" value=""/>	0. <= VALUE <= 9.0
HGI	<input type="text" value="55.0"/>	30. <= VALUE <= 150.0
TOP SIZE (mm) (head analysis only)	<input type="text" value=""/>	0. <= VALUE <= 200

GULF CANADA RESOURCES INC. - COAL DIVISION
 COAL COMPOSITION OR HEAD ANALYSIS

PROJ TRF BLK DS

LAB SAMPLE ID 22687

NOTE: Do not mark shaded regions.

THIS PART APPLIES WITH HEAD ANALYSIS ONLY.

SAMPLE

SAMPLE ID

LAB NAME

LORING

DATE RECEIVED

/ /
 DY MO YR

SAMPLE WEIGHT (KG)

*

* THIS IS THE WEIGHT OF THE SAMPLE RECEIVED FROM THE FIELD.

CHECK ONE OF:

COAL COMPOSITION ANALYSIS (1.65 Floats 83.81%)

HEAD ANALYSIS

SAMPLE ID DDH-81+105 FLOATS

SAMPLE PRODUCT ID DATA TYPE (REAL, BORO, AVER, CALC) REAL

SPLIT SAMPLE ID DATE ANALYSED / /
 DY MO YR

ANALYSIS BASIS TYPE (AD, DB, AR, EM) AD

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

NORMAL RANGE

SURFACE MOISTURE % [AD, AR]		0. <= VALUE <= 15.0
TOTAL MOISTURE % [AR]		0. <= VALUE <= 80.0
INHERENT MOISTURE [AD, EM]	.42	0. <= VALUE <= 60.0
ASH %	9.09	0. <= VALUE <= 80.0
FIXED CARBON %	67.97	0. <= VALUE <= 99.99
VOLATILE MATTER %	22.52	0. <= VALUE <= 50.0
TOTAL SULPHUR %	.40	0. <= VALUE <= 15.0
PHOSPHOROUS		0. <= VALUE <= 5.0
GROSS CALORIFIC VALUE (MJ/KG)	31.94	0. <= VALUE <= 34.0
NET CALORIFIC VALUE (MJ/KG)		0. <= VALUE <= 34.0
CHLORINE (PPM)		0. <= VALUE <= 20000
SPG		1.0 <= VALUE <= 2.6
FSI		0. <= VALUE <= 9.0
HGI		30. <= VALUE <= 150.0
TOP SIZE (mm) (head analysis only)		0. <= VALUE <= 200

GULF CANADA RESOURCES INC. - COAL DIVISION
 COAL COMPOSITION OR HEAD ANALYSIS

PROJ TRF BLK DS

LAB SAMPLE ID 22687

NOTE: Do not mark shaded regions.

THIS PART APPLIES WITH HEAD ANALYSIS ONLY.

SAMPLE

SAMPLE ID DDH-81-108

LAB NAME

DATE RECEIVED

/ /
DY MO YR

SAMPLE WEIGHT (KG)

.*

* THIS IS THE WEIGHT OF THE SAMPLE RECEIVED FROM THE FIELD.

CHECK ONE OF:

COAL COMPOSITION ANALYSIS

HEAD ANALYSIS

SAMPLE ID DDH-81-108 HEAD

SAMPLE PRODUCT ID DATA TYPE (REAL, BORO, AVER, CALC) REAL

SPLIT SAMPLE ID DATE ANALYSED / /
DY MO YR

ANALYSIS BASIS TYPE (AD, DB, AR, EM) AD

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

NORMAL RANGE

SURFACE MOISTURE % [AD, AR]	..*	0. <= VALUE <= 15.0
TOTAL MOISTURE % [AR]	..*	0. <= VALUE <= 80.0
INHERENT MOISTURE [AD, EM]	..64	0. <= VALUE <= 60.0
ASH %	28.46	0. <= VALUE <= 80.0
FIXED CARBON %	52.82	0. <= VALUE <= 99.99
VOLATILE MATTER %	18.08	0. <= VALUE <= 50.0
TOTAL SULPHUR %	..38	0. <= VALUE <= 15.0
PHOSPHOROUS	..080	0. <= VALUE <= 5.0
GROSS CALORIFIC VALUE (MJ/KG)	24.38	0. <= VALUE <= 34.0
NET CALORIFIC VALUE (MJ/KG)	..*	0. <= VALUE <= 34.0
CHLORINE (PPM)	..*	0. <= VALUE <= 20000
SPG	..*	1.0 <= VALUE <= 2.6
FSI	..*	0. <= VALUE <= 9.0
HGI	53.0	30. <= VALUE <= 150.0
TOP SIZE (mm) (head analysis only)	..*	0. <= VALUE <= 200

GULF CANADA RESOURCES INC. - COAL DIVISION
 COAL COMPOSITION OR HEAD ANALYSIS

PROJ TRF

BLK DS

LAB SAMPLE ID 22687

NOTE: Do not mark shaded regions.

THIS PART APPLIES WITH HEAD ANALYSIS ONLY.

SAMPLE

SAMPLE ID

LAB NAME

LORING

DATE RECEIVED

/ /
 DY MO YR

SAMPLE WEIGHT (KG)

*

* THIS IS THE WEIGHT OF THE SAMPLE RECEIVED FROM THE FIELD.

CHECK ONE OF:

COAL COMPOSITION ANALYSIS (1.65 Floats, 76.63%)

HEAD ANALYSIS

SAMPLE ID DDH-81-108 FLOATS

SAMPLE PRODUCT ID DATA TYPE (REAL, BORO, AVER, CALC) REAL

SPLIT SAMPLE ID DATE ANALYSED / /
 DY MO YR

ANALYSIS BASIS TYPE (AD, DB, AR, EM) AD

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

NORMAL RANGE

SURFACE MOISTURE % [AD, AR]		0. <= VALUE <= 15.0
TOTAL MOISTURE % [AR]		0. <= VALUE <= 80.0
INHERENT MOISTURE [AD, EM]	.44	0. <= VALUE <= 60.0
ASH %	7.66	0. <= VALUE <= 80.0
FIXED CARBON %	69.39	0. <= VALUE <= 99.99
VOLATILE MATTER %	22.51	0. <= VALUE <= 50.0
TOTAL SULPHUR %	.51	0. <= VALUE <= 15.0
PHOSPHOROUS		0. <= VALUE <= 5.0
GROSS CALORIFIC VALUE (MJ/KG)	32.26	0. <= VALUE <= 34.0
NET CALORIFIC VALUE (MJ/KG)		0. <= VALUE <= 34.0
CHLORINE (PPM)		0. <= VALUE <= 20000
SPG		1.0 <= VALUE <= 2.6
FSI		0. <= VALUE <= 9.0
HGI		30. <= VALUE <= 150.0
TOP SIZE (mm) (head analysis only)		0. <= VALUE <= 200

GULF CANADA RESOURCES INC. - COAL DIVISION
 COAL COMPOSITION OR HEAD ANALYSIS

PROJ TRF BLK DS

LAB SAMPLE ID 22687

NOTE: Do not mark shaded regions.

THIS PART APPLIES WITH HEAD ANALYSIS ONLY.

SAMPLE

SAMPLE ID RDH-81-109C

LAB NAME LORING

DATE RECEIVED

 / /
DY MO YR

SAMPLE WEIGHT (KG)

 *

* THIS IS THE WEIGHT OF THE SAMPLE RECEIVED FROM THE FIELD.

CHECK ONE OF:

COAL COMPOSITION ANALYSIS

HEAD ANALYSIS

SAMPLE ID RDH-81-109C HEAD

SAMPLE PRODUCT ID DATA TYPE (REAL, BORO, AVER, CALC) REAL

SPLIT SAMPLE ID DATE ANALYSED / /
DY MO YR

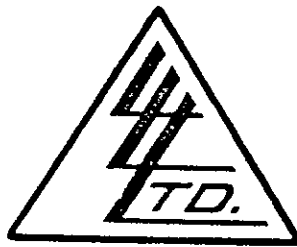
ANALYSIS BASIS TYPE (AD, DB, AR, EM) AD

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

NORMAL RANGE

SURFACE MOISTURE % <u>[AD, AR]</u>	<u> </u>	0. <= VALUE <= 15.0
TOTAL MOISTURE % <u>[AR]</u>	<u> </u>	0. <= VALUE <= 80.0
INHERENT MOISTURE <u>[AD, EM]</u>	<u> .79</u>	0. <= VALUE <= 60.0
ASH %	<u> 7.78</u>	0. <= VALUE <= 80.0
FIXED CARBON %	<u>68.77</u>	0. <= VALUE <= 99.99
VOLATILE MATTER %	<u>22.66</u>	0. <= VALUE <= 50.0
TOTAL SULPHUR %	<u> .32</u>	0. <= VALUE <= 15.0
PHOSPHOROUS	<u> .069</u>	0. <= VALUE <= 5.0
GROSS CALORIFIC VALUE (MJ/KG)	<u>31.98</u>	0. <= VALUE <= 34.0
NET CALORIFIC VALUE (MJ/KG)	<u> </u>	0. <= VALUE <= 34.0
CHLORINE (PPM)	<u> </u>	0. <= VALUE <= 20000
SPG	<u> </u>	1.0 <= VALUE <= 2.6
FSI	<u> </u>	0. <= VALUE <= 9.0
HGI	<u> 58.0</u>	30. <= VALUE <= 150.0
TOP SIZE (mm) (head analysis only)	<u> </u>	0. <= VALUE <= 200

To: PULP CANADA RESOURCES,
 402 - 9th Avenue S.W.,
 Calgary, Alberta



File No. 22687
 Date November 19, 1981
 Samples Coal Ash
 P.O. # 16298

ATTN: A. Bienia

Certificate of
 ASSAY of
LORING LABORATORIES LTD.

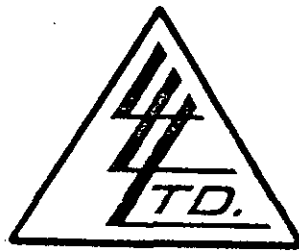
Page # 6

SAMPLE No.	105	108	109
<u>"Analysis of Ash"</u>			
%			
SiO ₂	54.49	70.96	33.00
Al ₂ O ₃	20.12	18.30	15.74
TiO ₂	.80	1.03	.56
Fe ₂ O ₃	3.76	1.57	7.29
CaO	9.73	1.57	25.75
MgO	1.98	.98	4.15
Na ₂ O	.85	.62	1.05
K ₂ O	1.65	1.63	.30
P ₂ O ₅	1.05	.56	1.95
SO ₃	3.92	.53	7.98
Undetermined	-1.65	-2.25	-2.23
<p>I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES</p>			

Rejects Retained one month.
 Pulps Retained one month
 unless specific arrangements
 made in advance.

Assayer

To: GFLF CANADA RESOURCES,
 401 - 9th Avenue S.W.,
 Calgary, Alberta
 ATTN: A. Bienia



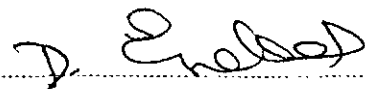
File No. 22687
 Date November 19, 1981
 Samples Coal Ash
 P.O. # 16298

Certificate of
ASSAY OF
LORING LABORATORIES LTD.

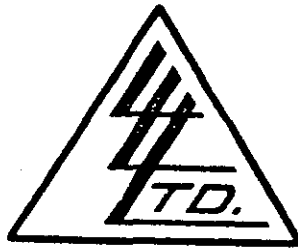
Page # 7

SAMPLE No.	REDUCING ATMOSPHERE			
	I.D. (F°)	H=W (F°)	H=½W (F°)	Fluid (F°)
<u>"Ash Fusion Analysis"</u>				
105	2314	2383	2433	2473
108	+2650	+2650	+2650	+2650
109	2194	2234	2239	2254
OXIDIZING ATMOSPHERE				
	I.D. (F°)	H=W (F°)	H=½W (F°)	Fluid (F°)
105	2348	2398	2448	2493
108	+2650	+2650	+2650	+2650
109	2284	2318	2323	2333
<p>I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES</p>				

Rejects Retained one month.
 Pulps Retained one month
 unless specific arrangements
 made in advance.


 Assayer

To: GULF CANADA RESOURCES,
 401 - 9th Avenue S.W.,
 Calgary, Alberta
 ATTN: A. Bienia



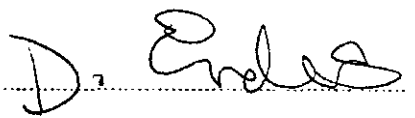
File No. 22687-1
 Date December 14, 1981
 Samples Coal
 P.O. #16298

Certificate of
ASSAY OF
LORING LABORATORIES LTD.

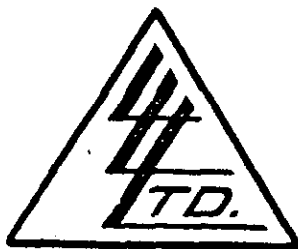
Page # 1

SAMPLE No.	%
	Cl
<p><u>"Coal Analysis"</u></p> <p><u>"Air Dried"</u></p>	
105	Trace
108	Trace
109	Trace
<p>I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES</p>	

Rejects Retained one month.
 Pulps Retained one month
 unless specific arrangements
 made in advance.


 Assayer

To: GULF CANADA RESOURCES
401 - 9th Avenue S.W.
Calgary, Alberta
ATTN: A. Bienia



File No. 22687-1
Date December 14, 1981
Samples Coal
P.O. # 16298


Certificate of
ASSAY of
LORING LABORATORIES LTD.

Page # 2

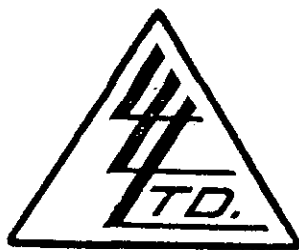
SAMPLE No.	% Equilibrium H2O
<u>"Coal Analysis"</u> 105 108 109	 1.4 1.6 2.1

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE
ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

Rejects Retained one month.
Pulps Retained one month
unless specific arrangements
made in advance.


Assayer

To: GULF CANADA RESOURCES,
 401 - 9th Avenue S.W.,
 Calgary, Alberta
 ATTN: A. Bienia



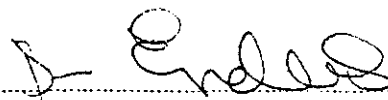
File No. 22687-1
 Date December 14, 1981
 Samples Coal
 P.O. # 16298

Certificate of
ASSAY OF
LORING LABORATORIES LTD.

Page # 3

SAMPLE No.	% H2O	% C	% H	% N	% Ash	% S	% O (diff)
<u>"Ultimate Analysis"</u>							
<u>"Air Dried"</u>							
105	.66	75.37	3.71	.84	17.61	.35	1.46
108	.64	61.41	3.18	.79	28.46	.38	5.14
109	.79	83.46	5.17	.85	7.78	.32	1.63
* Hydrogen & Oxygen do not include H & O in Sample Moisture.							
I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES							

Rejects Retained one month.
 Pulps Retained one month
 unless specific arrangements
 made in advance.


 Assayer

APPENDIX VIII

PERSONNEL AND CONTRACTORS

CONTRACTORS

Alberta Southern Exploration
Drilling Ltd.
D.W. Coates Enterprises Ltd.
P. Demeulemeester
Roke Oil Enterprises
Loring Laboratories
Cadaster Surveys Ltd.
W & J Schilling
Hardy and Associates
Northern Mountain Helicopter
Altawest Pressure Cement

Rotary Drilling
Diamond Drilling
Cat Work
Geophysical Logging
Coal Analysis
Hole Location Survey
Location Slashing
Map Preparation
Helicopter Support
Hole Cementing

PERSONNEL

A.E. Bienia
D.W. MacFarlane
K. Samson
P. Assa
L. Ollenbeger
B. MacKinnon
W. Heck
J.E. Hughes

Project Supervisor
Project Geologist
Geologist
Assistant Geologist
Assistant Geologist
Assistant Geologist
Field Accountant
Consultant

APPENDIX IX

SURVEY DATA

APPENDIX IX

SURVEY DATA

Hole Number	Elevation	UTM-N	UTM-E	Latitude	Longitude
81 - 100	923m	6,150,387.6m	572,298.7m	55° 29' 46.2"	121° 51' 20.3"
81 - 101	887m	6,153,764.2m	565,542.9m	55° 31' 38.9"	121° 57' 42.3"
81 - 102	1380m	6,150,000.7m	568,139.1m	55° 29' 35.9"	121° 55' 17.6"
81 - 103	1054m	6,143,464.9m	574,837.9m	55° 26' 01.0"	121° 49' 02.3"
81 - 104	1233m	6,147,413.5m	572,769.0m	55° 28' 09.8"	121° 50' 56.3"
81 - 105	971m	6,149,328.2m	571,077.7m	55° 29' 12.6"	121° 52' 30.8"
81 - 106c	1153m	6,144,933.3m	575,206.4m	55° 26' 48.2"	121° 48' 39.9"
81 - 107	1297m	6,146,244.2m	572,877.3m	55° 27' 31.9"	121° 50' 51.2"
81 - 108	1204m	6,151,687.3m	566,932.1m	55° 30' 31.0"	121° 56' 24.9"
81 - 109c	1250m	6,145,981.5m	573,577.5m	55° 27' 23.0"	121° 50' 11.6"
8001	763m	6,157,455.3m	564,526.4m	55° 33' 38.7"	121° 58' 37.1"
8006	1062m	6,144,283.4m	578,906.1m	55° 26' 25.1"	121° 45' 10.1"
8008	1154m	6,144,941.8m	575,194.7m	55° 26' 48.5"	121° 48' 40.6"
8012	832m	6,153,533.3m	564,081.2m	55° 31' 32.1"	121° 59' 05.8"

Testhole 8011 near 8012 was not located.

Testhole 8007 near 81-109c was not located.

APPENDIX X

ILLUSTRATIONS



Illustration No. 1

Looking northeast over Westcoast Transmission Grizzly Valley pipeline with Highhat Mountain in background. The southern end of the resource area lies roughly in the middle ground.



Illustration No. 2

Looking southwest over Highhat River Valley. Boulder Creek sandstones and conglomerates outcrop along ridge and down slope to east. Lower Compton Formation rocks are exposed to west above valley.



Illustration No. 3

Looking south along Westcoast Transmission Grizzly Valley pipeline with Highhat River crossing in lower foreground. Hole DDH-81-105 drilled in lower foreground immediately east of pipeline right of way. Hole RDH-81-104 drilled in upper left hand corner and RDH-81-107 drilled in upper right hand corner, both along B.P. rig access road. Picture illustrates typical relief and general physiography of Trefi area.



Illustration No. 4

D.W. Coates Enterprises Ltd., rig No. 29 Longyear 44 on location 81-108. Northern Mountain Helicopters C-FHTQ Bell 206 slinging out core.



Illustration No. 5

Alberta Southern Exploration Ltd. Drilling rig #1. Cyclone TH-60 drilling on location 81-109C.



Illustration No. 6

Core from hole 81-109C. Caron seam, intercepted thickness 2.3 metres. Core recovery 100 percent. Cut with diamond bit on standard split inner tube Christensen barrel.

APPENDIX XI

PROJECT COST SUMMARY DATA

TREFI COAL PROJECT
AFE #81115

Surveys		73,848.14
Wages/Salaries		
Pre & Post Field	16,569.39	
Field Examination	<u>29,859.00</u>	46,428.39
Consulting Fees		
Pre & Post Field	38,786.99	
Field Exam	<u>42,025.87</u>	80,812.86
Drafting (Pre & Post Field)		1,901.13
Field Camp & Examination		
Field Gear & Miscellaneous		
Supplies	8,107.59	
Equipment Rental-Trucks	10,234.43	
-Communications	2,015.24	
Truck Fuel	1,425.18	
Truck Repair & Maintenance	<u>1,297.98</u>	23,080.42
Personnel		
Food & Accommodation	26,697.84	
Travel	<u>2,784.30</u>	29,482.14
Field Examination		
Helicopter Reconnaissance		33,197.59
Drilling		
Diamond Drilling	138,471.33	
Rotary Drilling	<u>70,658.55</u>	209,129.88
Helicopter Support	24,481.00	
- Moves	<u>35,077.00</u>	59,558.00
Slashers		2,772.00
Supplies/Services - Freight	1,489.00	
- Core Storage	1,100.00	
- Cementing Drill	<u>5,297.20</u>	7,886.20
Coal Sample Analysis		4,124.95
Geophysical		
Contractor's Charges	34,926.98	
Personnel	1,150.17	36,077.15
Overhead -Drafting		608,298.85
		<u>15,000.00</u>
		<u>623,298.85</u>