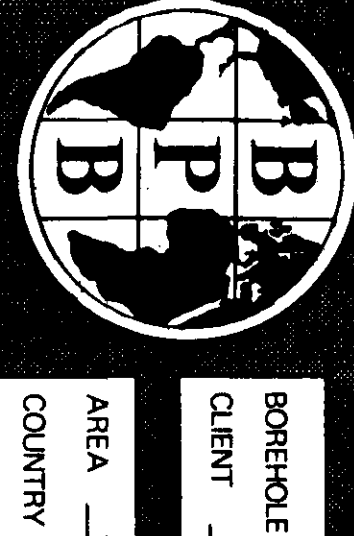


1627th BOONBY R 11-10



BOREHOLE No. - 101
CLIENT SHELL

AREA IBERITTE
COUNTRY CANADA
DATE LOGGED 22-6-75

REPORT SCALE 1:00:11
LOG 4 LOGS

BOREHOLE DATA
PERMANENT DATA
ELEMENTS OF P.I.O.
ZEPHYRUS
ZEPHYRUS
ZEPHYRUS

COAL LITHOLOGY LOG
SONDE TYPE
COAL COMBINATION
SONDE
LOG SITE
GAMMA RAY
CALIPER

SONDE TYPE
COAL COMBINATION
SONDE
LOG SITE
GAMMA RAY
CALIPER

EQUIPMENT AND RECORDING DATA													
COAL COMBINATION SONDE		EQUIPMENT		TAPING		PANEL		CAL COEFF		DEPTHS		SEAM LOG RUN	
LOG	SONDE	SOURCE	CALIBRATOR	LOG TAKED	RECORD SPEED	DIRECT REFLECT	SPEED	TC SECS	NORM	FROM	TO	MIRIAL	
GAMMA RAY	12E				all logs	✓	7	1.45		all		130	
DENSITY													
CALIPER	SEAWALL POSITION												

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)				INTERVAL TOTAL
FROM	51	14		
TO	46	11		
INTERVAL	5	3		8

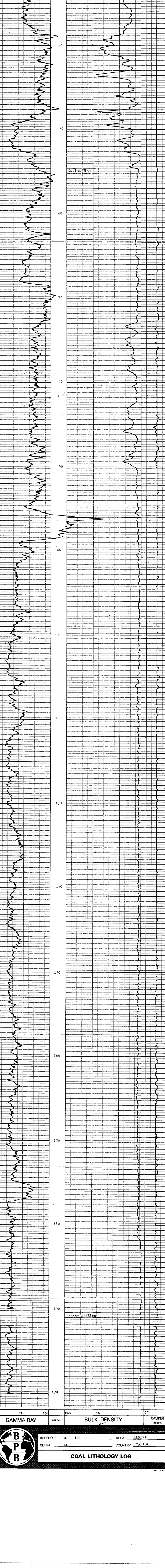
ADDITIONAL SONDES RUN				REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL LOG SCALE LOG	REFER TO ADDITIONAL HEADINGS
104	12E	Y	51-07	

BPB COAL LITHOLOGY LOG

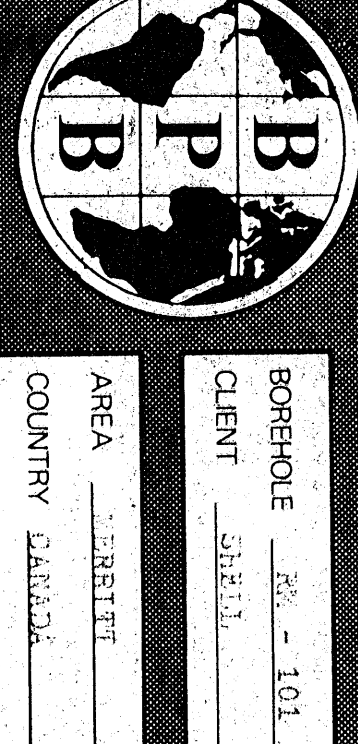
CALIBRATION DATA

JIG No.	VALUE @ 2" DIAM	JIG CAL DATE	JIG VALUE	SOU @	g/cm ³	INS	CPA

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



M. TERRIT 2010/05 R-101

CLIENT SHELL	BOREHOLE R-101	DEPTH SCALE 100.1	DATE LOGGED 20-1-79
AREA TERRIT	COUNTRY CANADA	LOG LOSS 1 of 4 LOSSES	

BOREHOLE DATA			
REMARKS/DATA	ELEVATION OF P.D.	LOG NUMBER	OPERATION
7-3117-1 13243	879		
LOG NUMBER	LOG DATE	LOG TIME	LOG TIME
7-3117-1	1-21-79	12:22	12:22
LOG DEPTH	LOG DEPTH	LOG DEPTH	LOG DEPTH
104	104	104	104
LOG DEPTH	LOG DEPTH	LOG DEPTH	LOG DEPTH
104	104	104	104
LOG DEPTH	LOG DEPTH	LOG DEPTH	LOG DEPTH
104	104	104	104

EQUIPMENT AND RECORDING DATA										
LOG	EQUIPMENT	TAPPING	PANEL	CAL	DEPTHS		SEAM LOG RUN			
GAMMA RAY	SONDE	LOG TAPED	RECORD SPEED	DIRECTOR REPLAY	SPEED	T.C. SECS	NORM	FROM	TO	INTERVAL
12P	SONDE	Y	10E6	Y	7	1/3	1.45	6.11	190	

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)										
FROM	51	14								INTERVAL TOTAL
TO	46	11								6m
INTERVAL	5	3								

ADDITIONAL SONDES RUN			REMARKS
SONDE	LOG	GENERAL SCALE LOG	
104	VERT.	510T.	

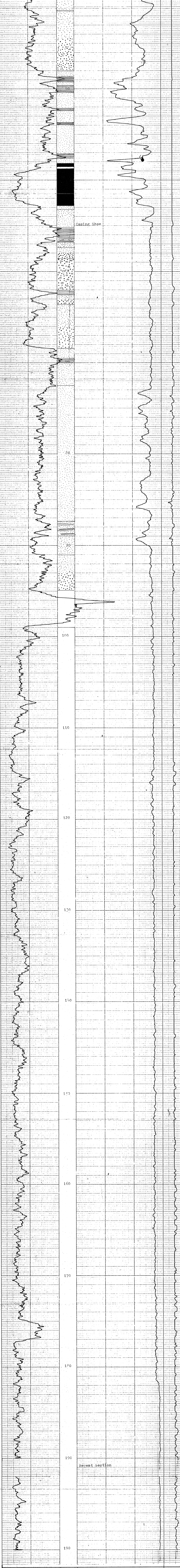
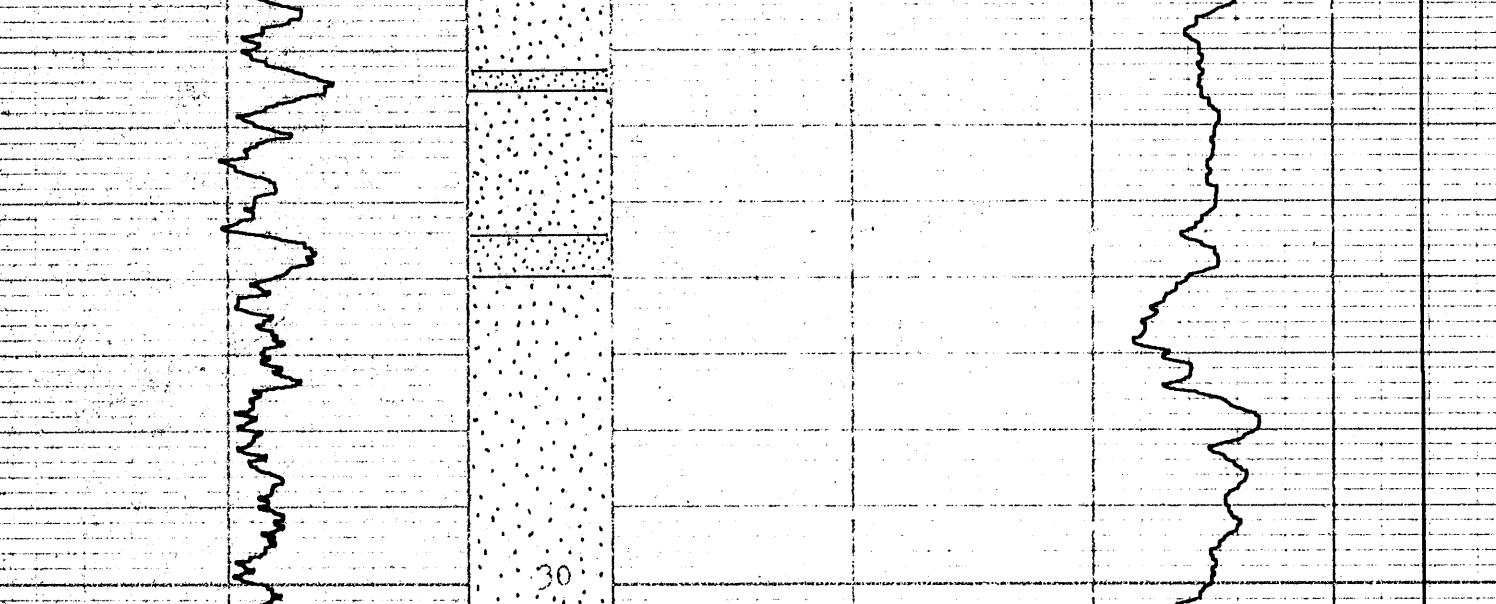
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No.	VALUE	@ 2" DIAM	JIG CAL DATE	JIG VALUE	SDU @	g/cm ³	#6	CP9
JIG MARK SHOWN	AF ABOVE-VALUE		JIG No.	SPAN	NORM	2.24"	#6	CP9

GAMMA RAY BULK DENSITY CALIPER

HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



SINGLE TELLER RESISTIVITY LOG
 (L2)
 Y 103

BOREHOLE R - 101
 CLIENT SHELL

162

AREA BRITISH COLUMBIA
 COUNTRY CANADA

DATE LOGGED 20-6-79

BOREHOLE DATA REFER TO: 1. PROLOG
 LOG

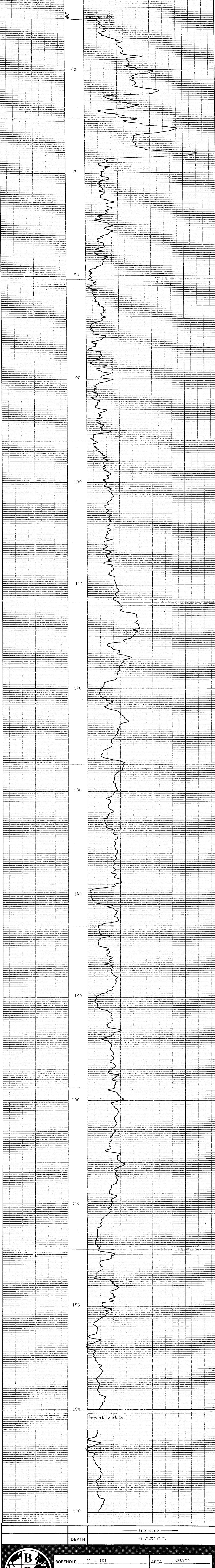
OPERATION DATA REFER TO: 1. PROLOG
 LOG

EQUIPMENT AND RECORDING DATA

LOG TAPING PANEL TEST COEFF.

LOG RECORDING SPEED SECS
 TAPING SPEED SECS

REMARKS



BOREHOLE R - 101 AREA BRITISH COLUMBIA
 CLIENT SHELL COUNTRY CANADA



M-Herith 80(3)A RM-101



BOREHOLE RM - 101
 CLIENT SHELL
162

AREA HERMIT **(E3)** DEPTH SCALE 20:1
 COUNTRY CANADA
 DATE LOGGED 2-2-70 LOGS

SEAM THICKNESS LOG

SONDE TYPE:
 COAL
 COMBINATION
 SONDE

LOG SUITE:
 CALIPER
 BR DENSITY

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE:

LOG	TAPING	SIDEWALL POSITION	CAL
	LOG RECORD DIRECT	PANEL	COEFF
CALIPER	TAPED SPEED RELIANT	SECS	NORM
BR DENSITY		2	1/3
		2	1
			0.74

SOURCE, SONDE AND CALIBRATION

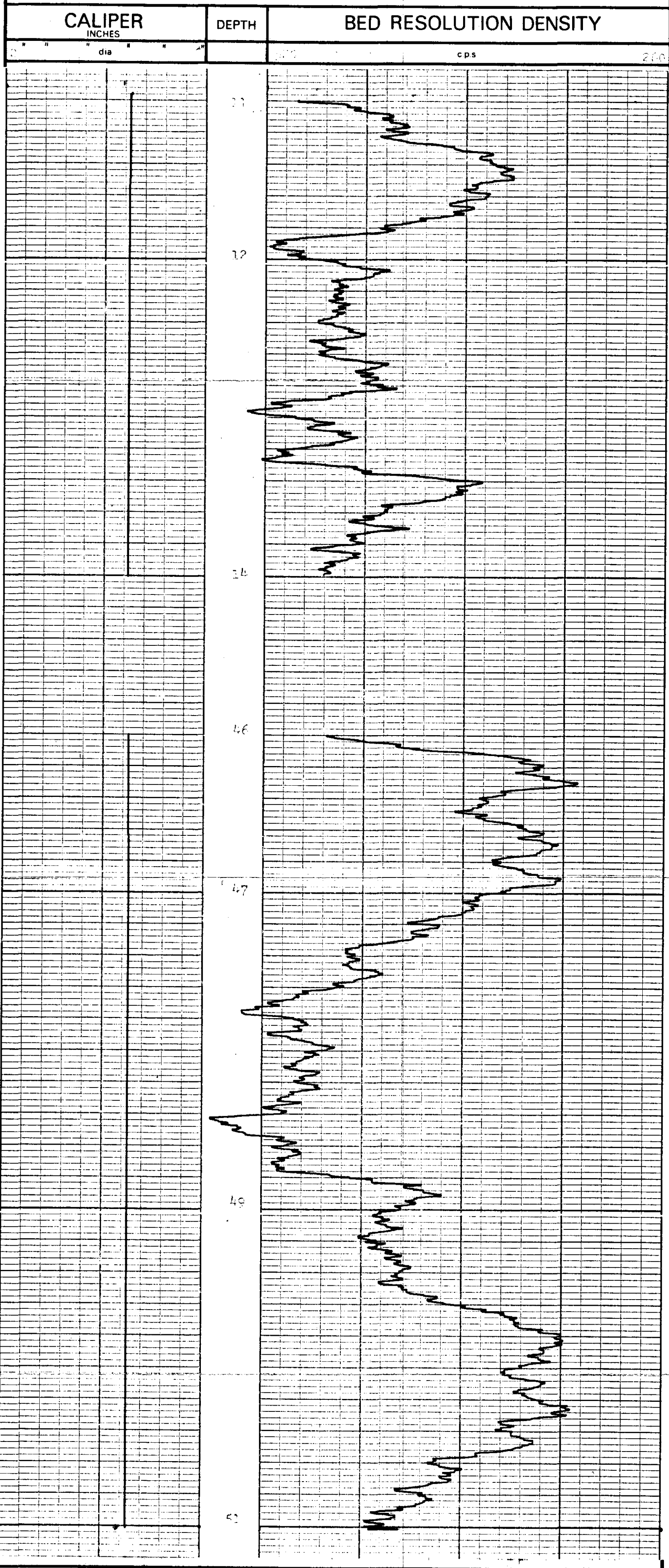
REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

FROM	51	11
TO	40	11
INTERVAL	5	3
FROM		
TO		
INTERVAL		
INTERVAL TOTAL		

REMARKS Logs Run Through Casing

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
dia		cps



BOREHOLE RM - 101 AREA HERMIT
 CLIENT SHELL COUNTRY CANADA

SEAM THICKNESS LOG



M. Herdth 8013A RM-107

BOREHOLE RM - 101
CLIENT SHELL **162**

AREA LEBRITT **(24)** DEPTH SCALE
COUNTRY CANADA 20:1

DATE LOGGED 29-6-79 2 OF 4 LOGS

COAL QUALITY LOG

COAL QUALITY LOG

LOG

SONDE TYPE :
COAL COMBINATION SONDE

LOG SUITE :
GAMMA RAY
L.S. DENSITY

BOREHOLE DATA REFER TO LITHOLOGY LOG
OPERATION DATA REFER TO LITHOLOGY LOG
EQUIPMENT AND RECORDING DATA
COAL COMBINATION SONDE
LOG TAPPING SIDEWALL POSITION
GAMMA RAY LOG RECORDING SPEED 1.5 NORM
TAPED SPEED HEREIN 2 2 1.45
L.S. DENSITY 2 2 1 1 1.33
SOURCE SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

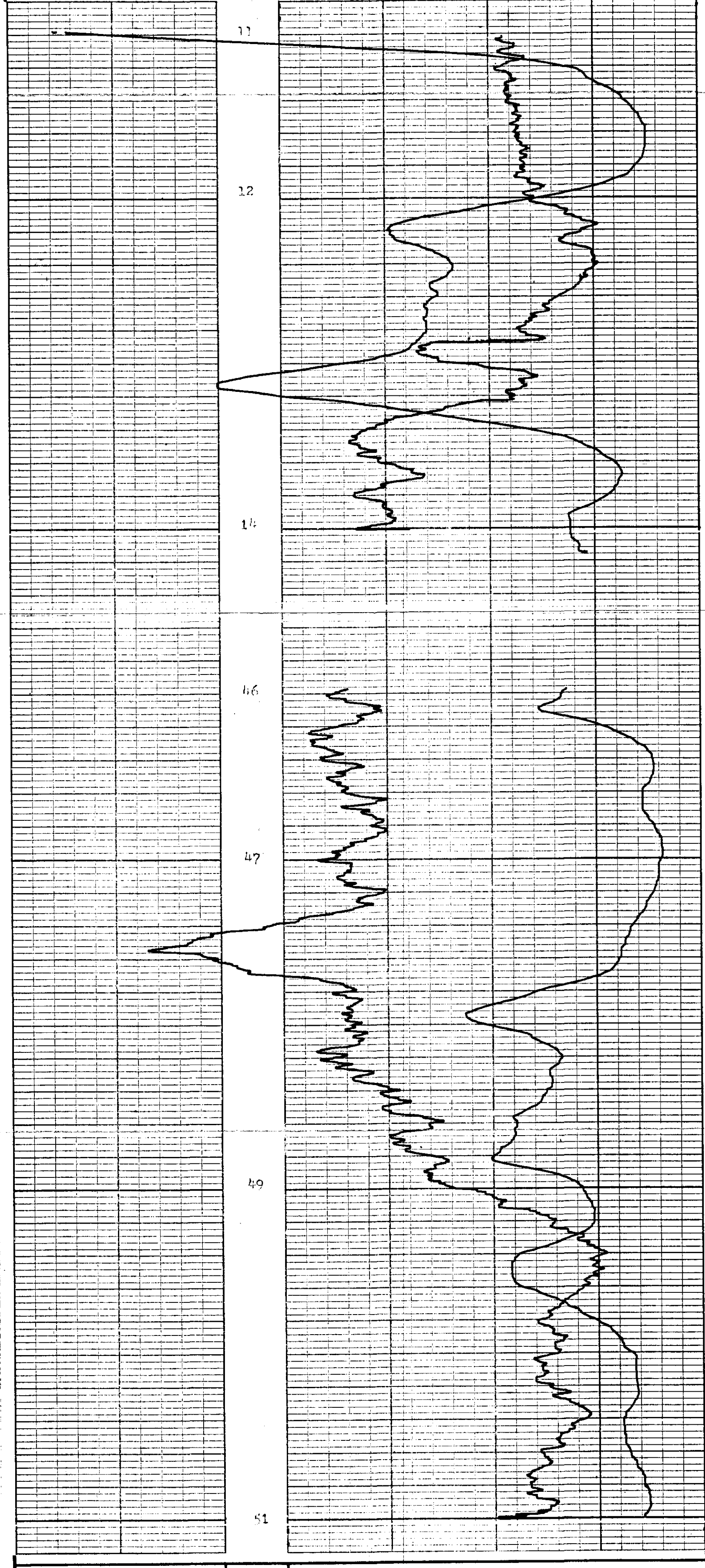
COAL QUALITY LOG INTERVALS

FROM	51	11
TO	46	11
INTERVAL	5	3
FROM		
TO		
INTERVAL		
INTERVAL TOTAL		

REMARKS LOGS RUN THROUGH CASING.

B P B COAL QUALITY LOG

DEPTH	GAMMA RAY
	COAL BULK DENSITY g/cm^3
HOLE SIZE CORRECTION DATA	
2'	125 13 135 14 145 15 155 16 17 18 19 20 22 24 30
4'	
6'	
8'	
	50 s.g.u. 0
	6000 s.d.u. 0



	6000	s.d.u.	0
	150	s.g.u.	0
DEPTH	GAMMA RAY		
	COAL BULK DENSITY g/cm^3		

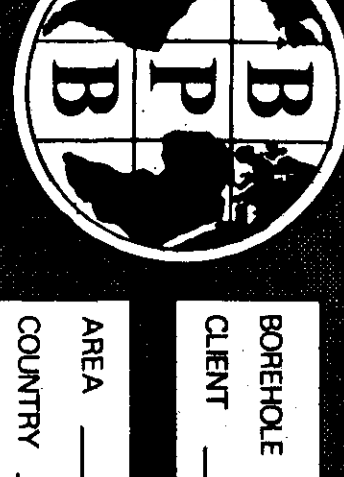


BOREHOLE RM - 101 AREA LEBRITT
CLIENT SHELL COUNTRY CANADA

COAL QUALITY LOG

NY 88023 R

H. Herit 8063A RM-02



BOREHOLE No. - 102
 CLIENT SHELL
 AREA HERRIT
 COUNTY CANADA
 DATE LOGGED 1-27/79
 DEPTH SCALE 100-1
 LOG 2 LOSS

COAL LITHOLOGY LOG

PERMANENT DATA
 G.I.
 ELEVATION OF P.D.
 B.P.
 DIAL LRI
 ZEPHYRUS POSITION
 G.I.
 10m
 196m

DEPTH HEADS
 1 5 1/2 1 1/2 2
 2 1 2
 3 1 2
 4 1 2
 5 1 2

LOG
 CASING SIZES 1 TO TO
 2 TO TO
 3 TO TO

SONDE TYPE
 COMBINATION
 SONDE
 LOG SUITE
 GAMMA RAY
 L.S. DENSITY
 CALIPER
 OPERATOR
 DATE

OPERATION DATA
 180 (GAMMA) 1.1 (COS)
 180
 1.31
 1.31
 E. MARKER 1
 11m

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE + single function sonde.

LOG	SONDE	EQUIPMENT	CALIBRATOR	LOG TAPED	TAPPING RECORD DIRECT/REPLAY	SPEED	TC SECS	NORM	CAL COEFF	DEPTHS FROM	TO	MIRAL	SEAM LOG RUN
GAMMA RAY	39				Not Taped	9	1	1.53		180	0	150	Yes
L.S. DENSITY					Not Taped	9	1	10		121	0	121	No
CALIPER						9	1/2	-					

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)

FROM (S.F. gamma) 140
 TO 129
 INTERVAL 11m

INTERNAL TOTAL

ADDITIONAL SONDES RUN

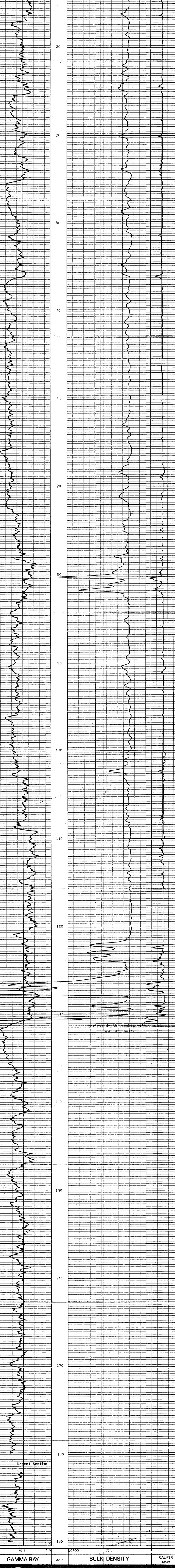
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG

REMARKS
 Single function gamma run through rods, then COS density & caliper run from 131m in open dry hole.

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

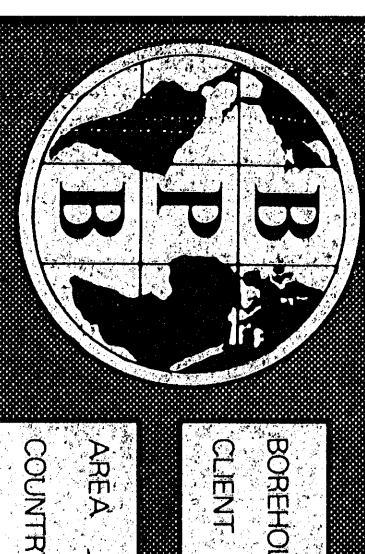
JIG No	VALUE @ 2" DIAM	JIG CAL DATE	JIG VALUE	SOU @	g/cm ³	ins	cps
JIG MARK SHOWN AT ABOVE VALUE		JIG No	SPAN	NORM	SOU @	ins	cps



COAL LITHOLOGY LOG

BOREHOLE No. - 102
 CLIENT SHELL
 AREA HERRIT
 COUNTY CANADA





MERRITT SOCIETY RN-102

BOREHOLE: RM - 102
 CLIENT: SHELL
 AREA: MERRITT
 COUNTRY: CANADA
 DATE LOGGED: 1-22/79
 OPERATOR: 1001

COAL LITHOLOGY LOG

LOG
 BOREHOLE DATA
 REPRESENTATION: G.I.
 ELEVATION OF D.: 988
 MAGNETIC DEVIATION: G.I.
 DEPTH HEADS: 1.0m
 CASING SHAPE: 1.00in
 CASING SIZES: 1 TO 4, 2 TO 4, 3 TO 4, 1 TO 2

SONDE TYPE: AT
 COAL COMBINATION: SONDE
 LOG SUIVE: GAMMA RAY
 U.S. DENSITY: 1.60
 CALIPER: 1.31in

OPERATION DATA
 FIRST READING: 1.80 (JAMMAB)
 LAST READING: 1.80
 INTERVAL LOGGED: 1.60/28
 UNIT TRACK NO.: 46/28
 ENGINEER: J. LAVERGNE
 WITNESS: J. LAVERGNE

162

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE + single function sonde.

LOG	EQUIPMENT	TYPING	PANEL	CAL DEF.	DEPTH	SEAM LOG RUN
SONDE	SOURCE	RECORD SPEED	DIRECT REPLAY	TC SECS	FROM TO	IN/FW
GAMMA RAY	89	Rot Tape	9	1 1.53	180	0 180 Yes
DENSITY	1.60	Rot Tape	9	1 10	131	0 131 No
CALIPER	1.31		9	1/3		

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)

FROM	TO	INTERVAL	TOTAL
		129	
		11m	

ADDITIONAL SONDES RUN

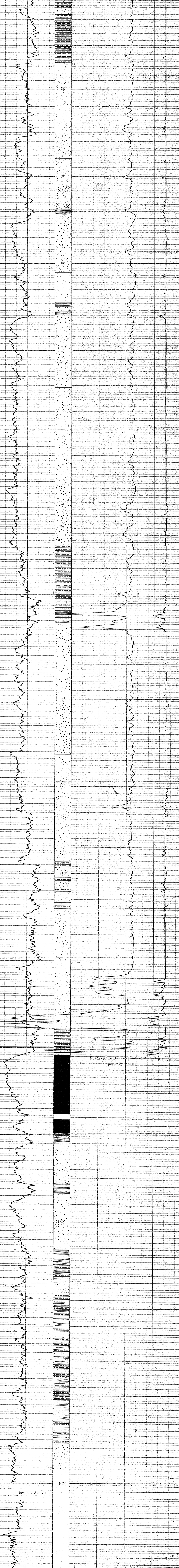
SONDE	LOG	GENERAL SCALE	DETAIL SCALE

REMARKS: Single function gamma run through rods, then CCS density & caliper run from 131m in open dry hole.

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. VALUE @ 2" DIAM. JIG CAL. DATE JIG VALUE SDU @ g/cm³ ms cps
 JIG MARK SHOWN AT ABOVE VALUE - JIG No. SPAN NORM SDU @ ms cps



GAMMA RAY DEPTH BULK DENSITY CALIPER INCHES

BOREHOLE: RM - 102 AREA: MERRITT
 CLIENT: SHELL COUNTRY: CANADA

COAL LITHOLOGY LOG



HK-40



GAMMA RAY DETAIL LOG. (49)

BOREHOLE RM - 102
 CLIENT SHELL **162**

AREA MERRITT
 COUNTRY CANADA
 DATE LOGGED 1-27/79

DEPTH SCALE
 10:1
 2 of 2 LOGS

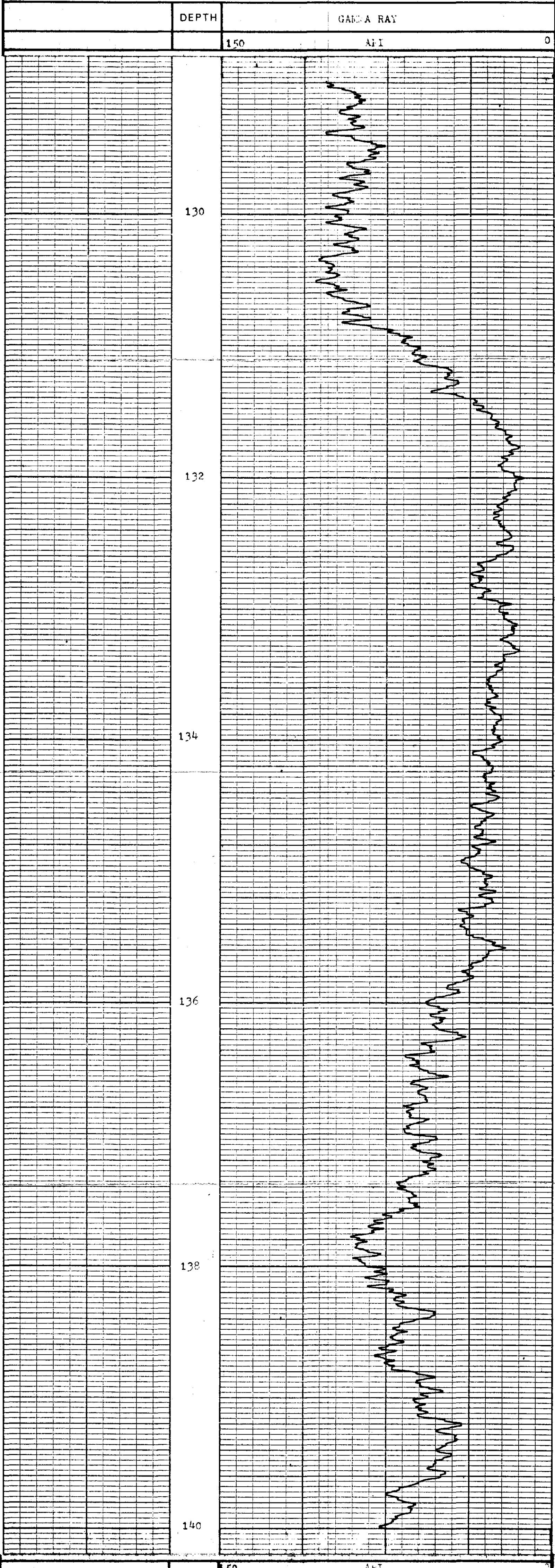
BOREHOLE DATA REFER TO Lithology LOG

OPERATION DATA REFER TO Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL	CAL
	LOGS	RECORD	SPEED		
Gamma 1	N	D	9	1	1.53

REMARKS
 Gamma run through rods in dry hole. (single function sorde.)

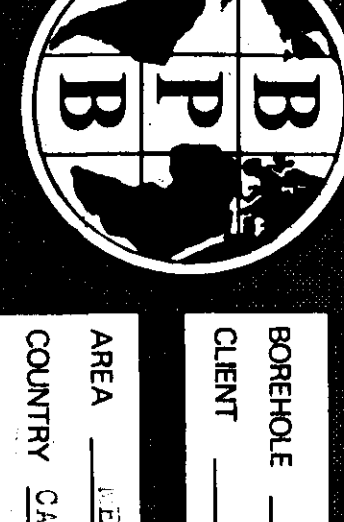


DEPTH	GAMMA RAY
150	API

BOREHOLE RM - 102
 CLIENT SHELL

AREA MERRITT
 COUNTRY CANADA





BOREHOLE RS-103 (1) (REV. 1)
 CLIENT SHELL
 AREA MERRITT
 COUNTRY CANADA
 DATE LOGGED 4-7-72
 LOG SCALE 100:1
 L.S. 1.005

COAL LITHOLOGY LOG
 BOREHOLE DATA
 BOREHOLE NO. CL
 DEPTH REACHED 200.2m
 MASS WASTING CL
 LOG SCALE CL
 BIT SIZES 1 1/2" 2" 3" 4" 5" 6" 7" 8" 9" 10"
 CHANGING SIZES 1 TO 2
 FLUID DATA

SONDE TYPE _____
 COAL COMBINATION _____
 LOG SCALE _____
 LOG SUIITE AMMA RAY S DENSITY
 OPERATOR S. PERRY
 WITNESSES _____

162

LOG	EQUIPMENT	TAPING	PANEL	CAL	DEPTH	SEAM LOG RUN
SONDE	SOURCE	RECORDING SPEED	SPEED	COEFF	FROM	TO
GAMMA RAY	69		9	1	0	200
DENSITY	6		9	1/2	0	200

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)

FROM	TO	INTERVAL
175	82	
169	84	
6m	8m	14m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE	DETAIL SCALE
89	HRD		

REMARKS

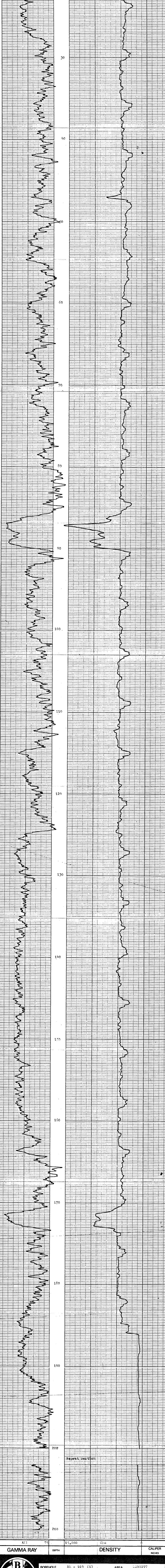
Run 1 through the rods, air only.
 Run 2 open hole, water filled.

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

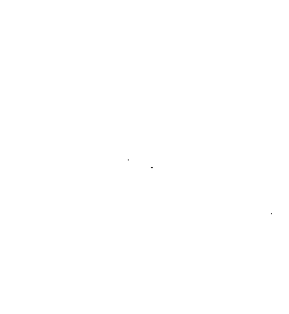
JIG No.	VALUE @ 2" DIAM	JIG CAL DATE	JIG VALUE	SOUL @	INS	GRS

GAMMA RAY	DEPTH	DENSITY	CALIPER
0	AT 1	75	15,000

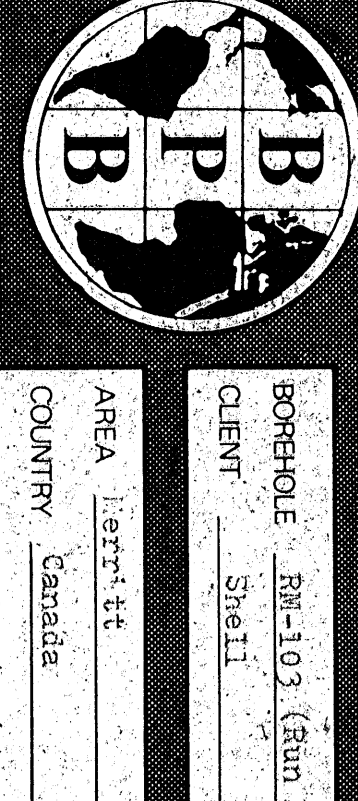


GAMMA RAY	DEPTH	DENSITY	CALIPER
0	AT 1	75	15,000

BOREHOLE RS-103 (1) AREA MERRITT
 CLIENT SHELL COUNTRY CANADA
COAL LITHOLOGY LOG



162



COAL LITHOLOGY LOG

CLIENT: Shell
 BOREHOLE: RM-103 (Run 2)
 AREA: Merritt
 COUNTRY: Canada
 DATE LOGGED: 79/07/04

LOG SUITE: GAMMA RAY, L.S. DENSITY, CALIPER

COAL COMBINATION SONDE: GAMMA RAY 128

SONDE TYPE: LOG TAPED

FLUID DATA: NATURE, SG, TVP, VISCOSITY, BHT

OPERATION DATA: FIRST BEARING, LAST BEARING, INTERNAL LOGGED, UNTRUCK NO., NUMBER, PRESS

LOG	EQUIPMENT	TAPPING	PANEL	CA	DEPTHS	SEAM LOG RUN
	SONDE	RECORD SPEED	TC SECS	TOFF	FROM TO	
GAMMA RAY	128	Y	9	1	180 83	97
L.S. DENSITY		Y	9	1/3	180 0	180
CALIPER	SIDEWALL POSITION	Y	9	R	190 0	180

FROM	TO	INTERVAL	TOTAL
179	92		
166	84		
		8m	16m

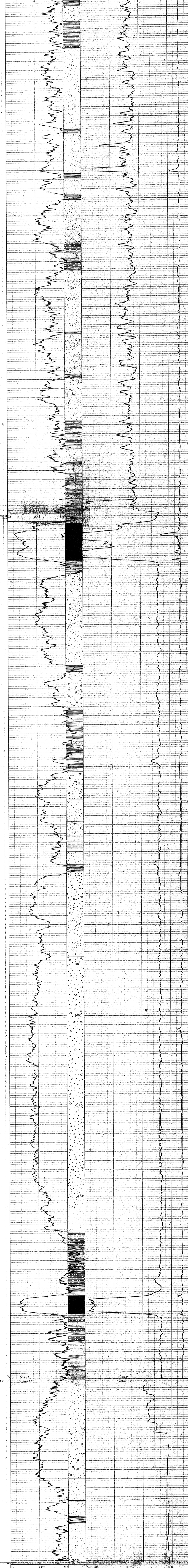
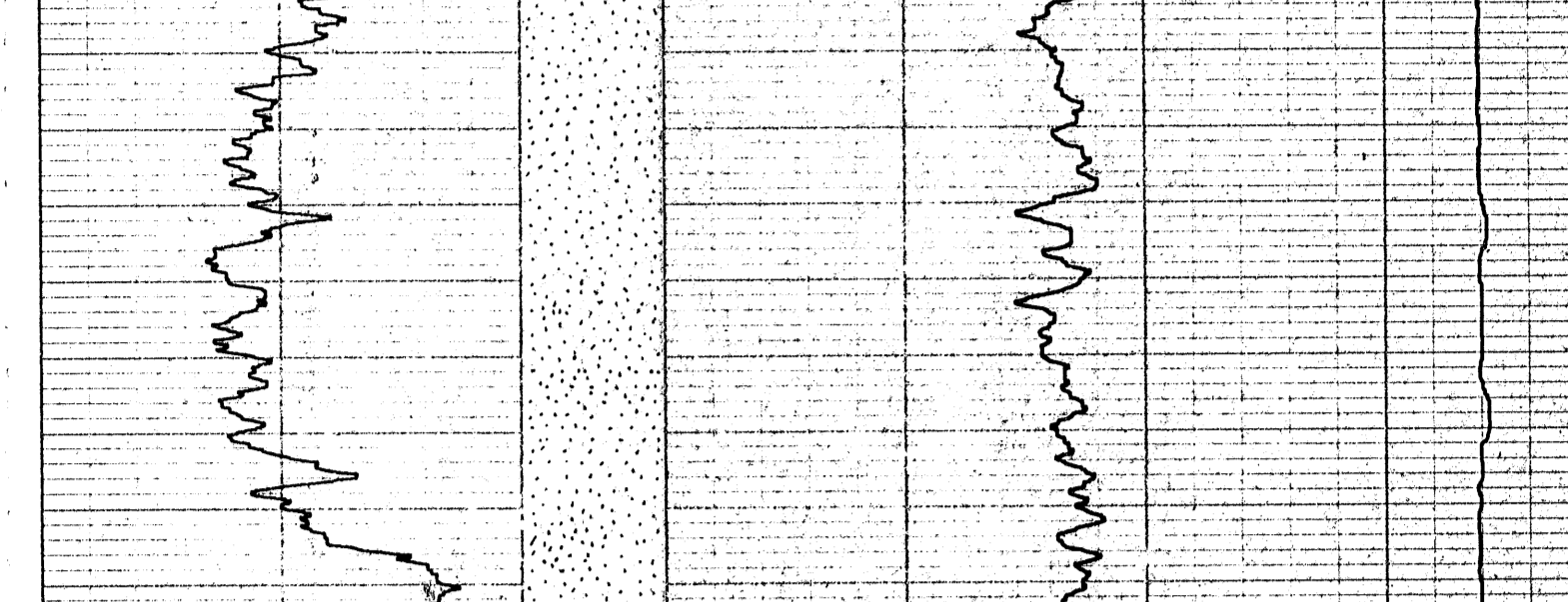
SONDE	LOG	GENERAL SCALE	DETAIL SCALE	REFER TO ADDITIONAL HEADINGS
Res.	100:1			
Neutron	100:1			
Res.	100:1			

BPB COAL LITHOLOGY LOG

Calibration Data

JIG No	VALUE	@ 2" DIAM	JIG CAL DATE	JIG VALUE	SDU @	g/cm ³	557	ms	7	cps
JIG MARK SHOWN AT ABOVE VALUE			JIG No	SPAN	NORM		423	ms	2	cps

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

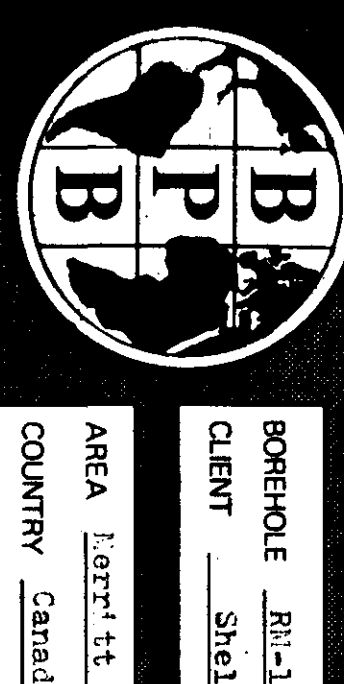


GAMMA RAY	DEPTH	DENSITY	CALIPER
		g/cm ³	INCHES

BOREHOLE: RM-103 (Run 2) AREA: Merritt
 CLIENT: Shell COUNTRY: Canada

COAL LITHOLOGY LOG HK-40A

H North 60/30N - R1-103



BOREHOLE R1-103 (Run 2)
 CLIENT Shell
 AREA Merritt
 COUNTRY Canada
 DATE LOGGED 29/07/04

COAL LITHOLOGY LOG

SONDE TYPE: **162**
 COAL COMBINATION: **162**
 LOG SLIT: GAMMA RAY
 L.S. DENSITY
 CALIPER

BOREHOLE DATA
 ELEMENTS: GROUTED [LAVA]
 ELEMENTS OF P.C.: 6.7
 MASS PERCENTAGE: 200.20
 DEPTH RANGE: 198.10
 CASING SIZE: 1 TO 2
 CASING SIZES: 1 TO 2

OPERATION DATA
 FIRST READING: 130
 LAST READING: 130
 INTERVAL LOGGED: 130
 UNIT-TRUCK No: 17-33XW11
 ENGINEERS: J. GILMOUR
 WITNESS

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT	TAPPING	PANEL	CAL	DEPTHS	SEAM LOG RUN
SONDE	SOURCE	LOG TAPED	RECORD SPEED	TC SECS	FROM TO	INTERVAL
GAMMA RAY	128	Y	9 R	9 1	180 83	97
DENSITY		Y	9 R	9 1/3	180 0	180 Y
CALIPER		Y	9 R	9 1/3	180 0	180 Y

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)

FROM	TO	INTERVAL	SEAM LOG RUN
176	02		
166	64		
5m	5m		
TOTAL			16m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS
	Res.	100:1		
	Neutron	100:1		
	Gamma	100:1		

REMARKS: Run 2 in open hole with a variable water level

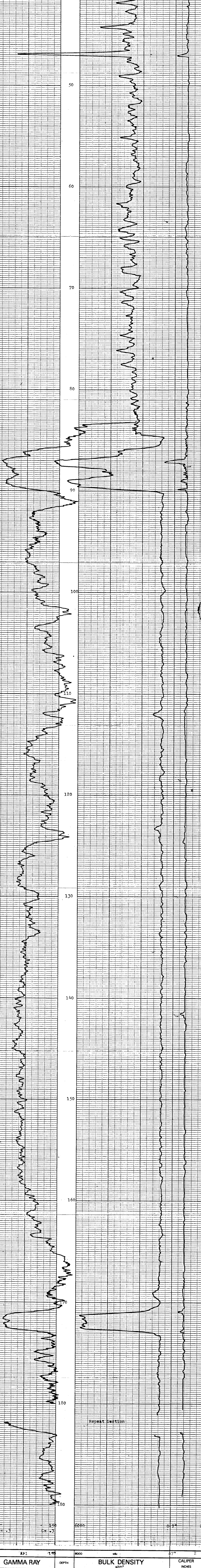
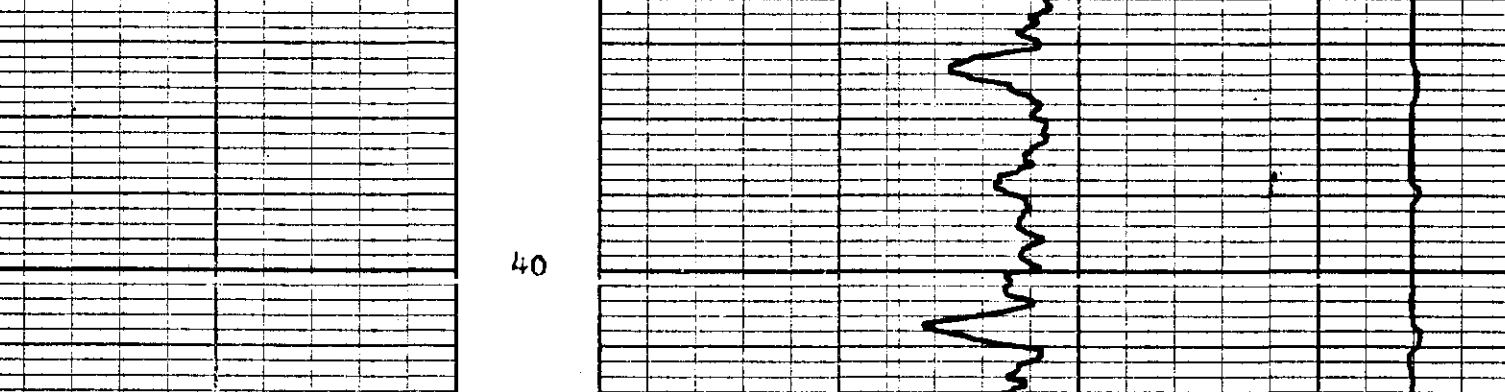
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No.	VALUE @ 2" DIAM	JIG CAL DATE	JIG VALUE	SDU @	g/cm ³	557	ms	7	cps
JIG MARK SHOWN AT ABOVE VALUE =		JIG No.	SPAN	NORM	557	ms	2	cps	

GAMMA RAY DEPTH BULK DENSITY CALIPER

HOLE SIZE CORRECTION DATA



Repeat Section

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

BOREHOLE R1-103 (Run 2) AREA Merritt
 CLIENT Shell COUNTRY Canada
COAL LITHOLOGY LOG



H-Meritt 8030A RM-103



COAL QUALITY LOG

BOREHOLE No. - 103 (Rpt. 1)
 CLIENT SHELL 28
 AREA MERRITT
 COUNTRY CANADA
 DEPTH SCALE 2011
 DATE LOGGED 4-7-79 2 of 2 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA

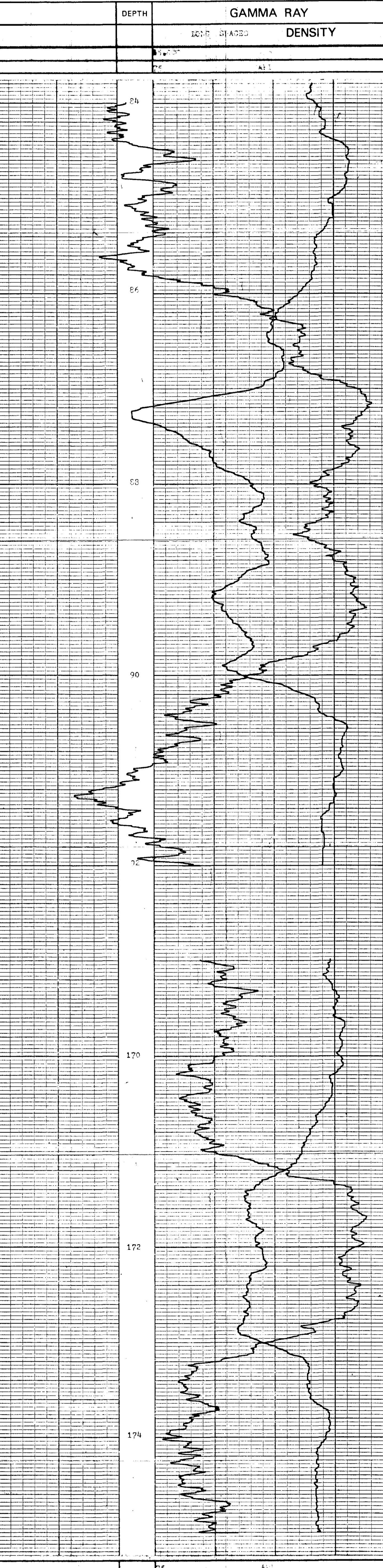
LOG TAPING	SIDEWALL POSITION	COAL
GAMMA RAY	LOG RECORDING SPEED SCS NORM	COEFF
RAV	2	1.5
LS DENSITY	3	1.710
SOURCE SONDE AND CALIBRATION		09
REFER TO LITHOLOGY LOG		

COAL QUALITY LOG INTERVALS

FROM	175	92
TO	169	34
INTERVAL	6	3
FROM		
TO		
INTERVAL		
INTERVAL TOTAL		41.7m

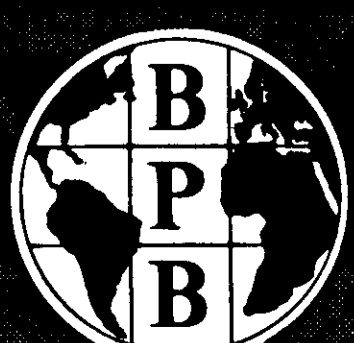
LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

B P B COAL QUALITY LOG



BOREHOLE 803-103 (1)
 CLIENT SHELL
 AREA MERRITT
 COUNTRY CANADA

COAL QUALITY LOG



NY 8802 R

V-Meritt 80(3)A R1-103



BOREHOLE R# 103 (Run 2)
CLIENT Shell

AREA Merritt
COUNTRY Canada

DATE LOGGED 79/07/04

DEPTH SCALE
20.1

2 OF 4 LOGS

COAL QUALITY LOG

COAL QUALITY LOG

COAL QUALITY LOG

SONDE TYPE:
COAL COMBINATION
SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY

162

BPB COAL QUALITY LOG

GAMMA RAY

COAL BULK DENSITY

g/cm³

DEPTH

1.50

6.000

84

86

88

90

92

168

170

172

174

176

150

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

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6.000

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6.000

1.50

6.000

1.50

6.000

1.50

6.000

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1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

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6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

1.50

6.000

COAL BULK DENSITY

g/cm³

GAMMA RAY

DEPTH

1.50

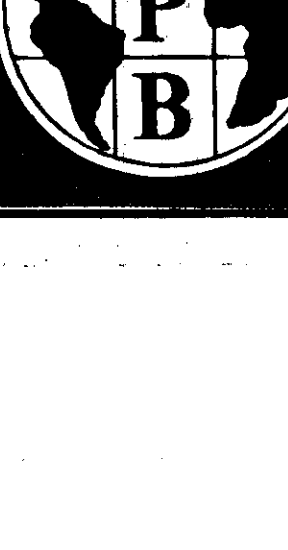
6.000

1.50

6.000

1.50

6.000



BOREHOLE R# 103 (Run 2)
CLIENT Shell

AREA Merritt
COUNTRY Canada

COAL QUALITY LOG

162



H-Perm H-90(3)B RM-103

HR DENSITY DETAIL
LOG. (29)

BOREHOLE RM - 103 (RUN 1)

CLIENT SHELL

AREA MERRITT

COUNTRY CANADA

DATE LOGGED 4-7-79

DEPTH SCALE

3 OF 3 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

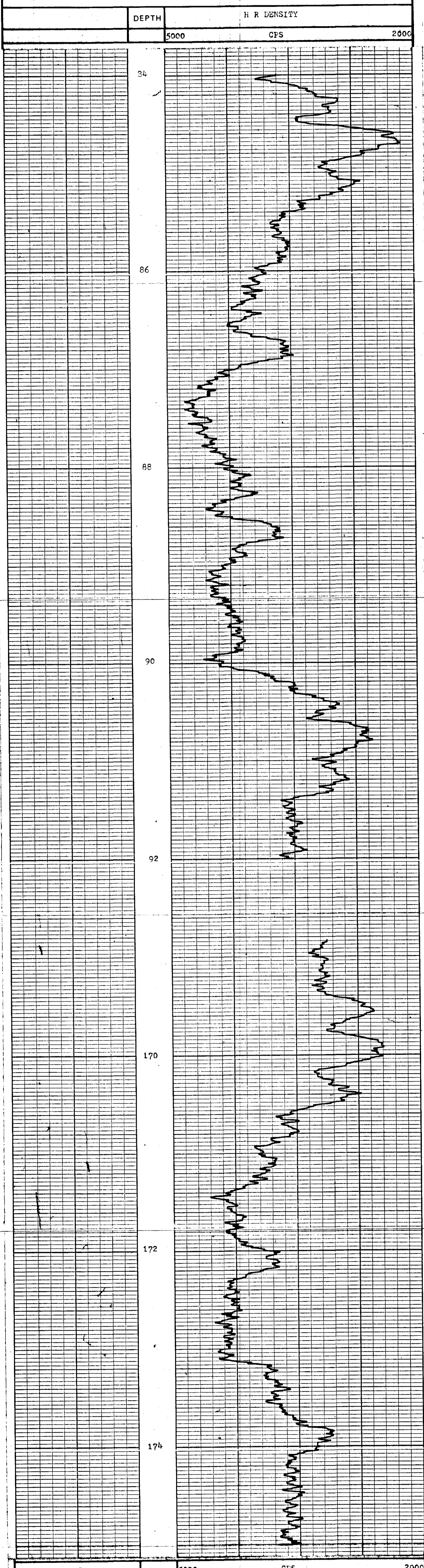
OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	CAI
LOG	RECORDING	T.C.	NORM
LOG	SPEED	REPLAY	2.5
LOG			1/10

REMARKS RUN THROUGH RODS

162



BOREHOLE RM - 103 (1)
CLIENT SHELL

AREA MERRITT
COUNTRY CANADA



A-Herritt 80(3)A RM-103

BOREHOLE RM 103 (Run 2)

CLIENT Shell

(L12)

AREA Kerritt

COUNTRY Canada

DATE LOGGED 29/07/04

DEPTH SCALE 20:1

3 or 4 LOSS

SEAM THICKNESS LOG

SEAM THICKNESS LOG INTERVALS

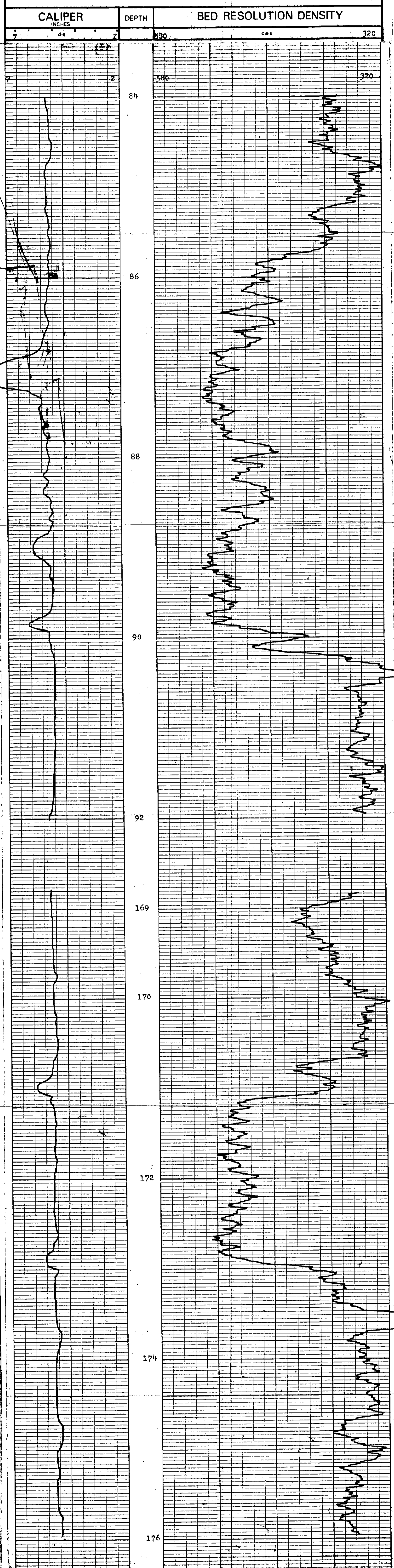
SONDE TYPE:

COAL COMBINATION SONDE

LOG SUITE:
CALIPER
B.R. DENSITY

BOREHOLE DATA	REFER TO LITHOLOGY LOG				
OPERATION DATA	REFER TO LITHOLOGY LOG				
EQUIPMENT AND RECORDING DATA					
COAL COMBINATION SONDE					
LOG	TAPPING	SIDEWALL POSITION	PANEL	CODE	
LOG RECORD SPEED	100	RECORD SPEED	100	RECORD SPEED	100
CALIPER	1	RECORD SPEED	2	RECORD SPEED	2
B.R. DENSITY	Y	RECORD SPEED	R	RECORD SPEED	2 1
		RECORD SPEED		RECORD SPEED	F 1.5
SOURCE SONDE AND CALIBRATION					
REFER TO LITHOLOGY LOG					

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
2	580	320



BOREHOLE RM 103 (Run 2)
CLIENT Shell

AREA Kerritt
COUNTRY Canada

SEAM THICKNESS LOG



M-Herritt 80(3)A RM103

NEUTRON - NEUTRON RESISTIVITY LOG. (L13)

BOREHOLE RM - 103 (RUN 2)
CLIENT SHELL

AREA MERRITT
COUNTRY CANADA
DATE LOGGED 4-7-79

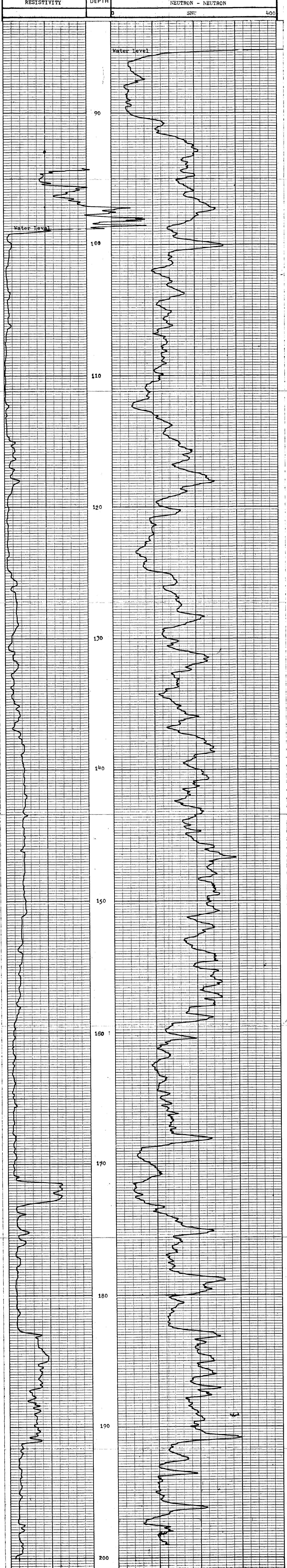
BOREHOLE DATA REFER TO LITHOLOGY LOG
OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	COEFF.
LOG	RECORDING	SPEED	FECS
R/S	12	1	0.62
R-1	9	1	0.62
SCALE	3000	3000	

REMARKS
Both logs run to W.L. at that time

162



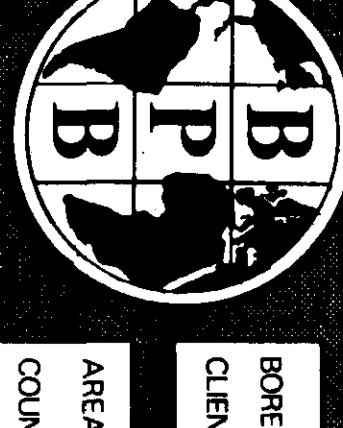
RESISTIVITY	DEPTH	NEUTRON - NEUTRON
		SN 400



BOREHOLE RM - 103 (2)
CLIENT SHELL

AREA MERRITT
COUNTRY CANADA

11-110001 80631A R1104



SONDE TYPE: **Single Function Sondes**
 LOG SUITE: **GAMMA RAY L.S. DENSITY**

COAL LITHOLOGY LOG

BOREHOLE: **R. 104 (rur. 1)**
 CLIENT: **Shell**
 AREA: **erritt**
 COUNTRY: **Canada**
 DATE LOGGED: **29/07/05**
 DEPTH SCALE: **100.1**
 LOGS: **1 or 3 logs**

BOREHOLE DATA
 REMANENTUM (Ground Level):
 ELEVATION OF D: **BBB**
 MEASUREMENT FROM: **5.1.1**
 DEPTH REACHED: **127.3**
 CASING SIZE 1: **1.5** TO **1.5**
 CASING SIZE 2: **1.5** TO **1.5**
 CASING SIZE 3: **1.5** TO **1.5**
 CASING SIZE 4: **1.5** TO **1.5**
 CASING SIZE 5: **1.5** TO **1.5**
 FLUID DATA

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT	TAPPING	PANEL	CAL COEFF	DEPTHS	SEAM LOG RUN					
SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL
GAMMA RAY									126	0	127
L.S. DENSITY									126	0	127

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)

FROM	TO	INTERVAL	TOTAL
0m	5m	5m	5m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
	FRD		20:1

OPERATION DATA

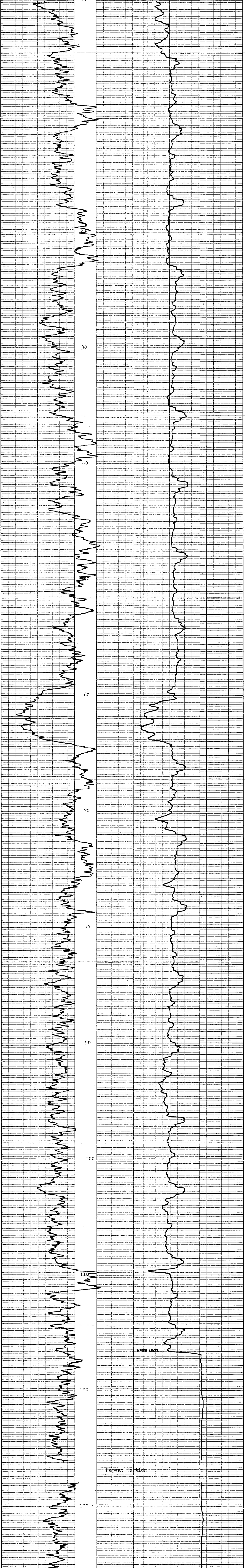
REFER TO ADDITIONAL HEADINGS

REMARKS: **Hole was logged through the rods.**

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No	VALUE @ 2" DIAM	JIG CAL DATE	JIG VALUE	SDU @	g/cm ³
JIG MARK SHOWN AT ABOVE VALUE +		JIG No	SPAN	NORM	



GAMMA RAY	DEPTH	L.S. Density
127	0	1.5000
	10	
	20	
	30	
	40	
	50	
	60	
	70	
	80	
	90	
	100	
	110	
	120	
	127	1.5000



BOREHOLE: **R. 104 (rur. 1)** AREA: **erritt**
 CLIENT: **Shell** COUNTRY: **Canada**

COAL LITHOLOGY LOG



H-Depth 80(3)A R4-104

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY L.S DENSITY CALIPER

COAL LITHOLOGY LOG

BOREHOLE: Rr. 104 (Run 2) CLIENT: Shell AREA: Merritt COUNTRY: Canada DATE LOGGED: 79/07/05

DEPTH SCALE: 100.1 LOG: 4 LOGS

BOREHOLE DATA	
PERMANENT DATUM	Ground Level
ELEVATION OF P.D.	899
MASS BURNING FROM	G.L. 127.5
DEPTH RECORDED	127.5
CASING SIZE	1 TO 2 TO
FLUID DATA	
NATURE	Water
S.G.	
VISCOSITY	
PH	

OPERATION DATA	
FIRST READING	120m
LAST READING	120m
INTERVAL LOGGED	46/728
UNIT TRACK NO.	1 - Maxwell 11
ENGINEER	
WITNESS	

EQUIPMENT AND RECORDING DATA											
COAL COMBINATION SONDE											
LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECTOR/REPLAY	SPEED	TC SECS	NORM	CAL. COEFF	SEAM LOG RUN
GAMMA RAY	134			Y	9	R	9	1	1.07	120	0 120
L.S. DENSITY				Y	9	R	9	1/3	6.20	120	0 120 Y
CALIPER				Y	9	R	9	1/3		120	0 120 Y

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)	
FROM	66m
TO	58m
INTERVAL	8m
INTERVAL TOTAL	8m

ADDITIONAL SONDES RUN				REMARKS
SONDE	LOG	GENERAL SCALE LOGS	DETAIL SCALE LOG	
	Neutron	100:1		REFER TO ADDITIONAL HEADINGS
	Res.	100:1		
	Spot Vert.			

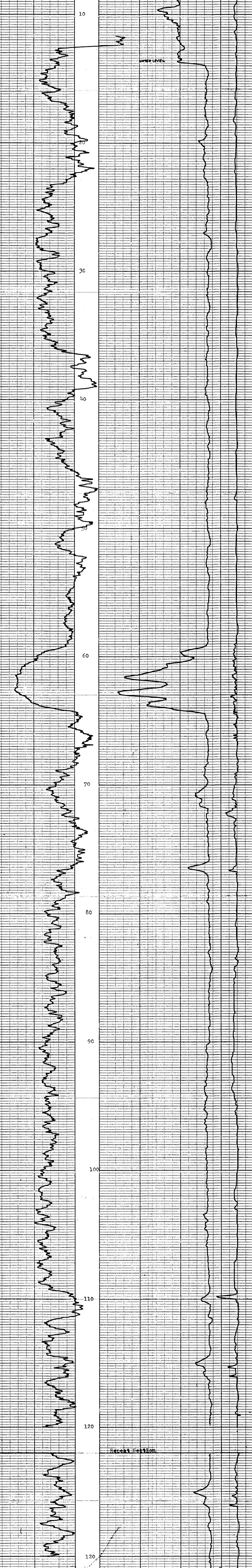
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No.	VALUE @ 2" DIAM.	JIG CAL DATE	JIG VALUE	SDU @	g/cm ³	ins.	cps
JIG MARK SHOWN AT ABOVE VALUE *		JIG No.	SPAN	NORM	SDU		

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA	
AFI	1.54
SDU	6000
INCHES	0.7
FEET	2

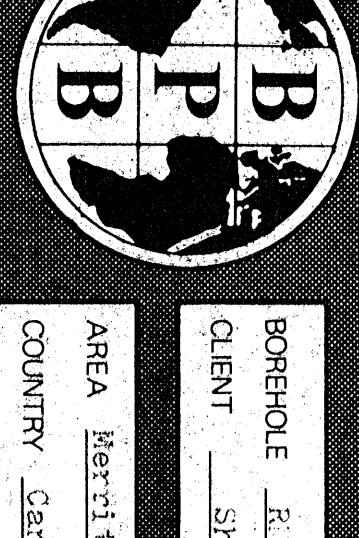


GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE: Rr. 104 (Run 2) AREA: Merritt
 CLIENT: Shell COUNTRY: Canada

COAL LITHOLOGY LOG

162



H-Perth 8003A RM-102

BOREHOLE Rh.104 (Run 2)
 CLIENT Shell
 AREA Merritt
 COUNTRY Canada
 DATE LOGGED 29/07/05

COAL LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE
 LOG SUITE: GAMMA RAY
 U.S. DENSITY CALIBER: 1.6778

OPERATION DATA
 FIRST READING: 1.20m
 LAST READING: 1.20m
 INTERVAL CORRECTED: 1.20m
 ANT-TRUCK NO.: 16/778
 OPERATOR: F. BEAUVILLI
 WITNESS: _____

BOREHOLE DATA
 REMARKS: Ground Level
 ELEVATION OF P.O.: BPB
 MEASUREMENTS FROM: C.L.L.
 DEPTH REACHED: 127.3
 CASING SIZE: 120.5
 BR. SECS: 1 TO 2
3 TO 4
1 TO 2
 CASING STRESS: 1 TO 2
3 TO 4

FLUID DATA
 NATURE: Water
 LEVEL: _____
 VISCOSITY: _____
 BH.T. _____

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT		TAPING		PANEL		CAL. COEFF	DEPTHS		SEAM LOG RUN
	SONDE	SOURCE	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	TC SECS		NORM	FROM	
GAMMA RAY	134		Y	9	R	9	1.67	120	0	120
U.S. DENSITY			Y	9	R	9	6.30	120	0	120
CALIBER	SIDEWALL POSITION		Y	9	R	9	1.73	120	0	120

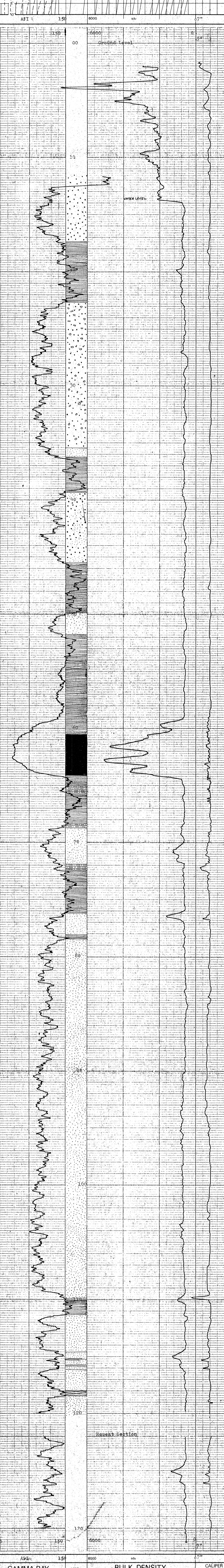
COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)

FROM	66m	INTERVAL TOTAL	
TO	58m		
INTERVAL	8m		8m

BPB COAL LITHOLOGY LOG CALIBRATION DATA

JIG No.	VALUE @ 2" DIAM.	JIG CAL. DATE	JIG VALUE	SCU @	g/cm ³	WIS	cps
JIG MARK SHOWN AT ABOVE VALUE		JIG No.	SPAN	NORM	g/cm ³	INS	cps

GAMMA RAY	DEPTH	BULK DENSITY (g/cm ³)	CALIPER INCHES



GAMMA RAY	DEPTH	BULK DENSITY (g/cm ³)	CALIPER INCHES

COAL LITHOLOGY LOG

BOREHOLE Rh.104 (Run 2) AREA Merritt
 CLIENT Shell COUNTRY Canada



HA-41



BOREHOLE EM104 (Run 1)
 CLIENT Shell

(L15)

AREA Herritt

DEPTH SCALE
20:1

COUNTRY Canada

DATE LOGGED 29/07/05

2 OF 2 LOGS

COAL

QUALITY

LOG

BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA

LOG	TAPING	LOG RECORDING	PANEL	SCALE
GAMMA RAY	TABED	SPEED	YCS	NORM
L.S. DENSITY	REFL	REFL	SECS	
			1	1.0
			2	1.0
			1	1.0

SONDE TYPE: _____

Single Function
 for use with _____

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

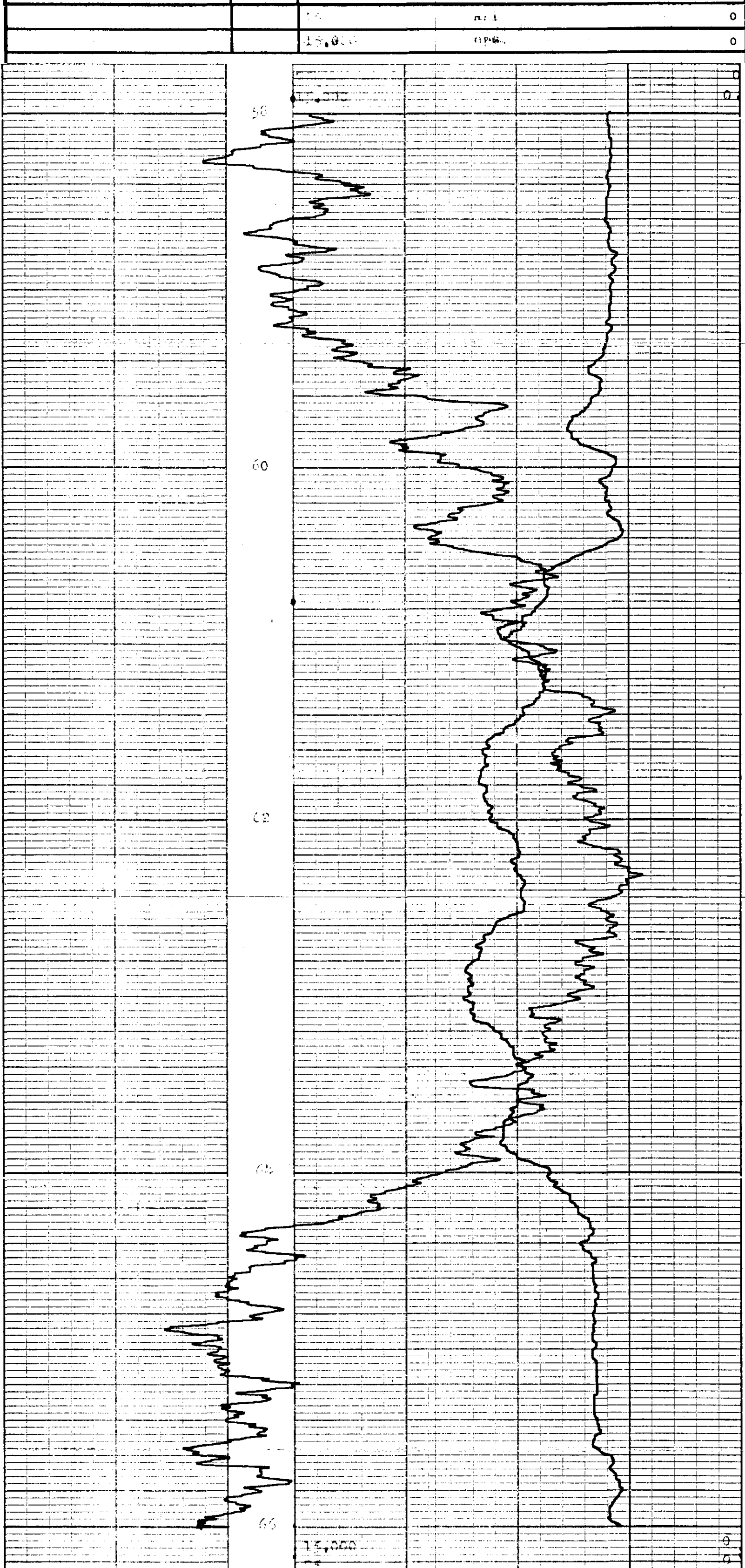
COAL QUALITY	LOG INTERVALS
FROM <u>2.0m</u>	
TO <u>5.0m</u>	
INTERVAL <u>3.0m</u>	
FROM _____	
TO _____	
INTERVAL _____	
INTERVAL TOTAL _____	

1622

REMARKS
 Hole was logged through drill pipe.

B P B COAL QUALITY LOG

DEPTH GAMMA RAY
 L. S. DENSITY.



DEPTH GAMMA RAY
 L. S. Density



BOREHOLE EM104 (Run 1) AREA Herritt
 CLIENT Shell COUNTRY Canada

COAL QUALITY LOG



BOREHOLE RE 104 (Run 2)
 CLIENT Shell

AREA Merritt
 COUNTRY Canada

DATE LOGGED 79/07/05

COAL QUALITY LOG

COAL QUALITY LOG

SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

(218)

DEPTH SCALE
 20:1
 2 of 4 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG TAPPING PANEL CAT
 LOGS RECORDED AT SPEED 1.5 NORM
 GAMMA TAPED SPEED REPEAT 2 2 1.5
 L.S. DENSITY X 2 R 2 1 6.30

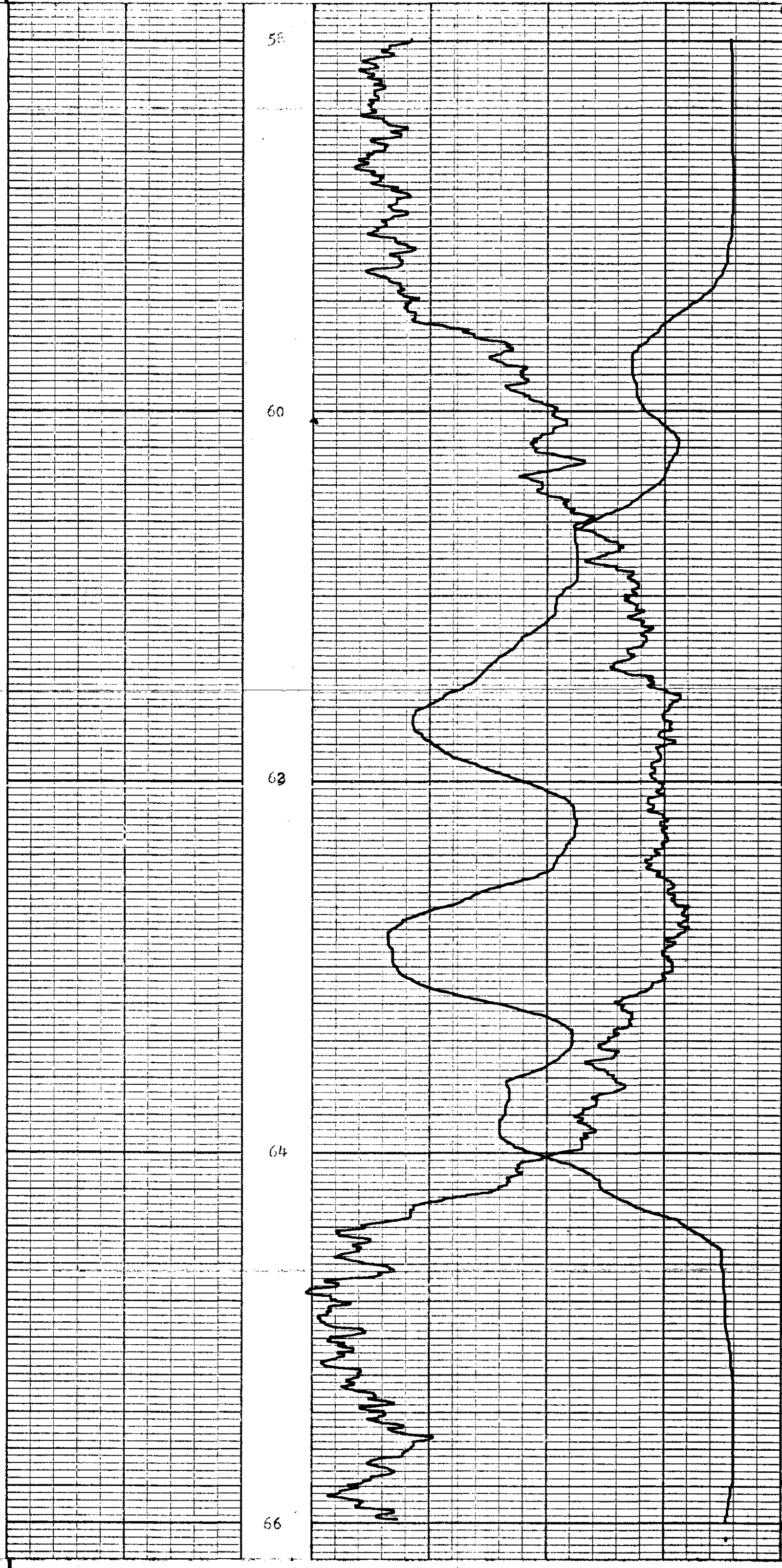
COAL QUALITY LOG INTERVALS
 FROM 65m
 TO 58m
 INTERVAL 5m
 FROM
 TO
 INTERVAL
 TOTAL
 INTERVAL

REMARKS

162

B P B COAL QUALITY LOG

DEPTH	GAMMA RAY	
	COAL BULK DENSITY g/cm ³	
	HOLE SIZE CORRECTION DATA	
2'	125	13
4'	135	14
6'	145	15
8'	155	16
	17	18
	19	20
	22	24
	26	30
	150	API
	6.000	s.d.u.



	6.000	s.d.u.	0
	150	API	0
	COAL BULK DENSITY g/cm ³		
DEPTH	GAMMA RAY		

BOREHOLE RE 104 (Run 2) AREA Merritt
 CLIENT Shell COUNTRY Canada

COAL QUALITY LOG





M-Herritt 80(3)A RM-104

High Resolution Density

(216)

BOREHOLE R1104 (Run 1)

CLIENT Shell

AREA Herritt

DEPTH SCALE 0:1

COUNTRY Canada

DATE LOGGED 29/07/05

2 OF 2 LOGS

BOREHOLE DATA

REFER TO Lithology LOG

OPERATION DATA

REFER TO Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	RECORDING	PANEL	CAL			
LOG	TAPED	SPEED	REPLAY	T.C.	SECS	NORM	COEFF
1	1	2	1/5				
		SONDE					
		NO.					
		SONDE					
		NO.					

REMARKS

hole logged through drill rods.

162

DEPTH

High Resolution Density

58.00

216

2500

58

60

62

64

66

66.00

216

2500

DEPTH

High Resolution Density

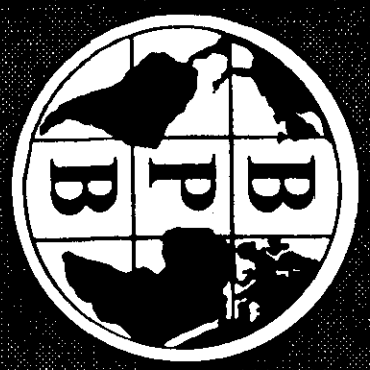
BOREHOLE R1104 (Run 1)

AREA Herritt

CLIENT Shell

COUNTRY Canada





Merritt 803A RM-104

BOREHOLE R. 104 (Run 2)
CLIENT Shell **(119)**

AREA Merritt
COUNTRY Canada
DATE LOGGED 79/07/05
3 OF 4 LOGS

DEPTH SCALE
20:1

SEAM THICKNESS LOG

SONDE TYPE:
COAL COMBINATION SONDE

LOG SUITE:
CALIPER
BR. DENSITY

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

SIDEWALL POSITION

LOG	TAPING	LOG RECORDING	PROJECT	SPEED	TC	SECS	NORM	CODE
CALIPER	1	2	R	2	1	-		
BR DENSITY	1	2	R	2	1	7.13		

SOURCE SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

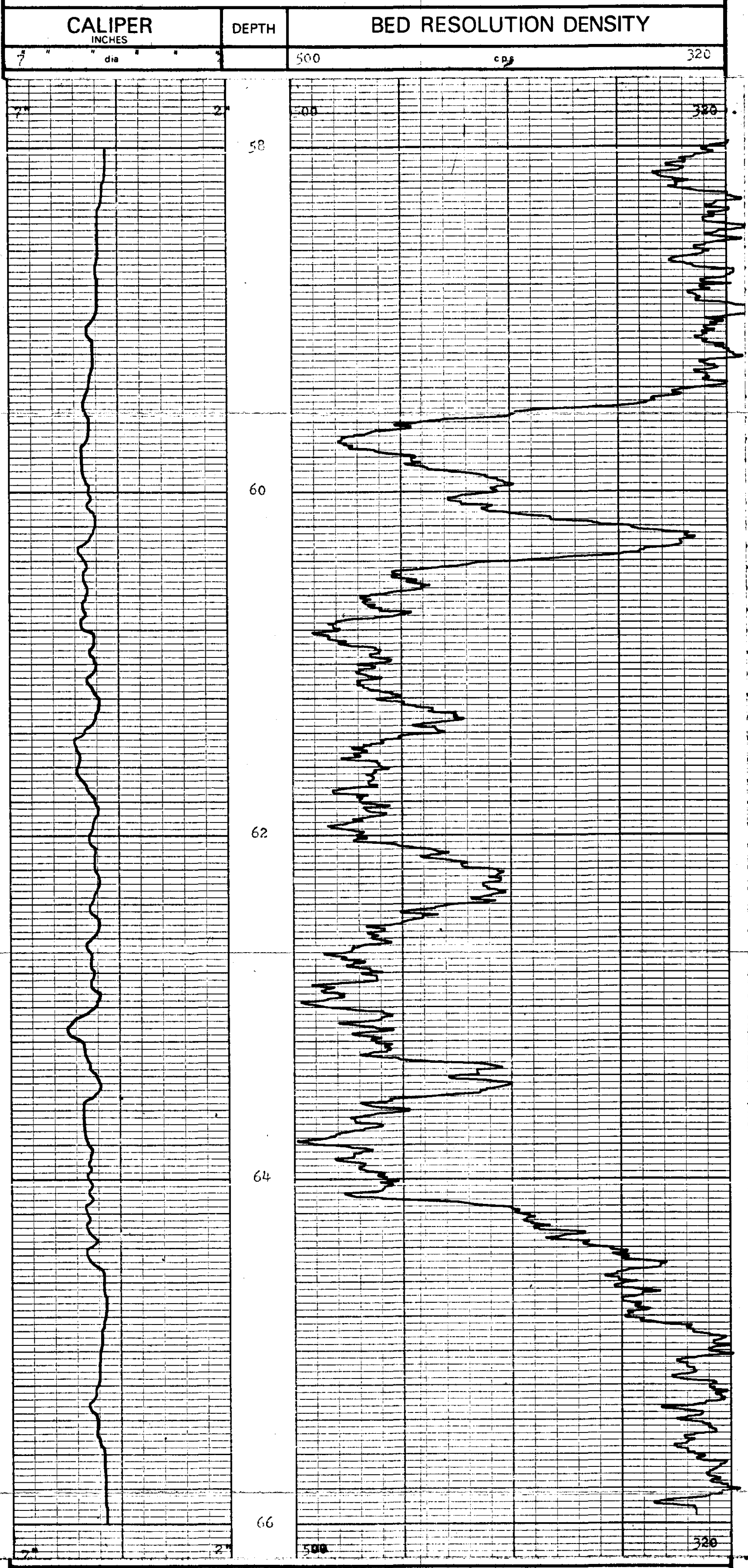
SEAM THICKNESS LOG INTERVALS

FROM	66m
TO	53m
INTERNAL	3m
FROM	
TO	
INTERNAL	
TOTAL	

REMARKS

162

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY cps
7 " dia	66	500 cps



BOREHOLE R. 104 (Run 2)
CLIENT Shell

AREA Merritt
COUNTRY Canada

SEAM THICKNESS LOG



H-Meritt 80(3)A RM-104

Resistivity
Neutron-Neutron

(20)

BOREHOLE No. 104 (Run 2)

CLIENT Shell

AREA Merritt

COUNTRY Canada

DATE LOGGED 29/07/05

DEPTH SCALE
100:1

LOG SCALE
100:1

BOREHOLE DATA refer to lithology LOG

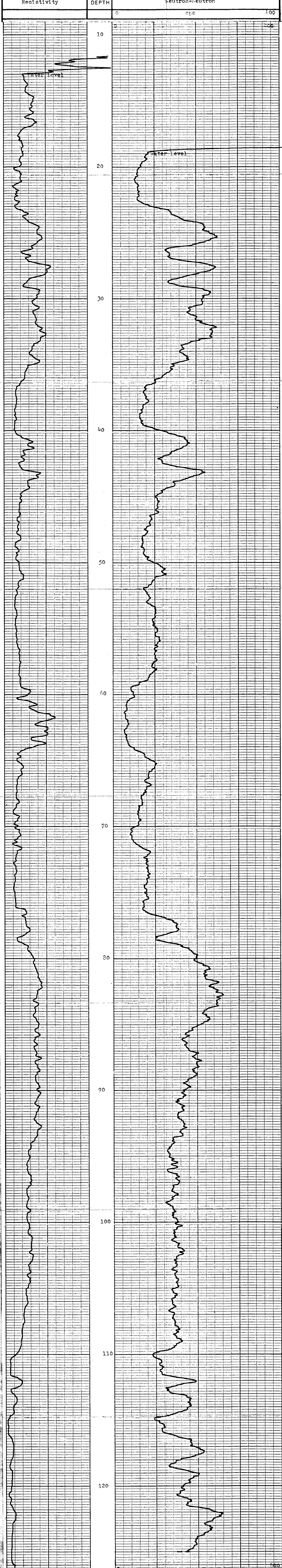
OPERATION DATA refer to lithology LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PAVING	DATE
LOG RECORDING SPEED T/C NORMAL			
Neutron	D	9	-
Neutron	D	9	0.62
Neutron	SP	SP	SP

REMARKS

162



Resistivity	DEPTH	Neutron-Neutron
	0	0
	100	100
	110	110
	120	120
	140	140



BOREHOLE No. 104 (Run 2)
CLIENT Shell

AREA Merritt
COUNTRY Canada