COAL LITHOLOGY LOG

BPB Instruments

BOREHOLE: [illegible] (Hole 1)
CLIENT: [illegible]
AREA: [illegible]
COUNTRY: Canada
DATE LOGGED: 20/10/06
DEPTH SCALE: 1:50
LOG 2 006

RH-105

LOG SUITE: GAMMA RAY, L.S. DENSITY
SONDE TYPE: [illegible]
LEVEL: [illegible]
UNIT: [illegible]

BOREHOLE DATA

PERMANENT DATUM: [illegible]
ELEVATION OF P.D.: [illegible]
MEASUREMENTS TAKEN FROM: [illegible]
BPB / DRILLER

CASING SIZES: 1 FROM [illegible] TO [illegible]; 2 FROM [illegible] TO [illegible]
CASING SIZE: BPB [illegible] DRILLER [illegible]

FLUID DATA

BIT SIZES: 1 FROM [illegible] TO [illegible]; 2 FROM [illegible] TO [illegible]

OPERATION DATA

RUN NO: 1
S.O. NO: [illegible]
LOGGING ENGINEER: [illegible]
ANTI-TRUCK No.: [illegible]
WITNESS: [illegible]
FIRST READING: [illegible]
LAST READING: [illegible]
No. OF PASSES RUN: [illegible]
DATE: [illegible]

162 (3) (27)

EQUIPMENT AND RECORDING DATA

Client • Formation Density Log • Gamma Ray • Caliper

LOG	EQUIPMENT: SONDE	SOURCE	CALIBRATION	TAPING: LOG TAPED	RECORD SPEED	DIRECT or REPLAY	PANEL: SPEED	T.C. DECS	NORM	CAL CURVE	DEPTHS: FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY	[illegible]			[illegible]		9	1	1.4			75	0	75	
L.S. DENSITY				[illegible]		5	1/3	1.5			75	0	75	

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

		INTERVAL TOTAL
FROM	[illegible]	
TO	[illegible]	
INTERVAL	[illegible]	12m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
[illegible]	[illegible]		5:1

REFER TO ADDITIONAL HEADINGS

REMARKS

Borehole logged through drill rods.

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JG No. [illegible] VALUE @ 2" CKAM
JG MARK SHOWN AT ABOVE VALUE –
JG CAL DATE [illegible] JG VALUE [illegible] SDU Ⓐ [illegible] g/cm³
JG No. [illegible] SPAN [illegible] NORM [illegible] SDU Ⓐ [illegible]

GAMMA RAY — DEPTH — 1:50 (2" = 25')

0 API 100 — 0 CPS 1000

WATER LEVEL

GAMMA RAY — DEPTH — 1:50 (2" = 25')

0 API 100 — 0 CPS 1000

BOREHOLE [illegible] (Hole 1) AREA [illegible]
CLIENT [illegible] COUNTRY Canada

COAL LITHOLOGY LOG

MY A10261 B

162

COAL LITHOLOGY LOG

BPB

SONDE TYPE: Slimline Junction Sondes

LOG SUITE: GAMMA RAY L.S. DENSITY

BOREHOLE: RN 105 (Run 1)
CLIENT: Shell

AREA: Kerrittt
COUNTRY: Canada
DATE LOGGED: 29/07/96

SERVICE ORDER: 10014

3 or 4 cores

McNeill - Sokoya Rn105

BOREHOLE DATA
PERMANENT DATUM: Ground Level
ELEVATION OF: DRILLER
DEPTH: 53m
BPB
CASING SIZE: 1 5"/70 to 53m; 2
CASING SHOE: 1 to ; 2 to
BIT SIZE: 4 3/4"

FLUID DATA
NATURE: Air
GLS
LEVEL
DENSITY
Rm @ meas temp
Rmf
Rmc

OPERATION DATA
RECORDED BY: T.BAXTER
WITNESSED BY:
FIRST READING: 53m
LAST READING: 0m
DEPTH CONTROL: WIRELINE
CASING SHOE: 45/7/23
ENGINEER'S NAME:

EQUIPMENT AND RECORDING DATA

Single Function Gamma Ray and L. S. Density Sonde.

LOG	EQUIPMENT			TAPING			PANEL			DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL	
GAMMA RAY	50			N		D	9	1	1.5	53	0	53	
L.S. DENSITY				N		D	9	1/3	10	53	0	53	Y

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

FROM	40m	INTERVAL TOTAL
TO	37m	
INTERVAL	12m	12m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
	HRD		2d:1

REFER TO ADDITIONAL HEADINGS

REMARKS

Borehole logged through drill rods.

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No VALUE @ 2"DIAM
JIG MARK SHOWN AT ABOVE VALUE -

JIG CAL DATE JIG VALUE SDU @ g/cm³
JIG No SPAN NORM

GAMMA RAY — DEPTH — L.S. Density

0 API 100 — 1.970000 gm/cc — 0

Ground level

WATER LEVEL

Inpmat horizon

0 API 100 — 1.970000 gm/cc

GAMMA RAY — DEPTH — L. S. Density

BPB

BOREHOLE RN 105 (Run 1) — AREA Kerritt
CLIENT Shell — COUNTRY Canada

COAL LITHOLOGY LOG

MY A50261

HK-40C

H. Hewitt 80(3)A RM-105

BOREHOLE RM 105 (Run 1)
CLIENT Shell

AREA Merritt
COUNTRY Canada
DATE LOGGED 29/02/06

DEPTH SCALE 20:1
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	SPEED	PANEL	LOG
GAMMA	1	2	1	34
L.S. DENSITY	1	2	1	10

SOURCE SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

COAL QUALITY LOG INTERVALS
FROM 49m
TO 39m
INTERVAL 12m
FROM
TO
INTERVAL

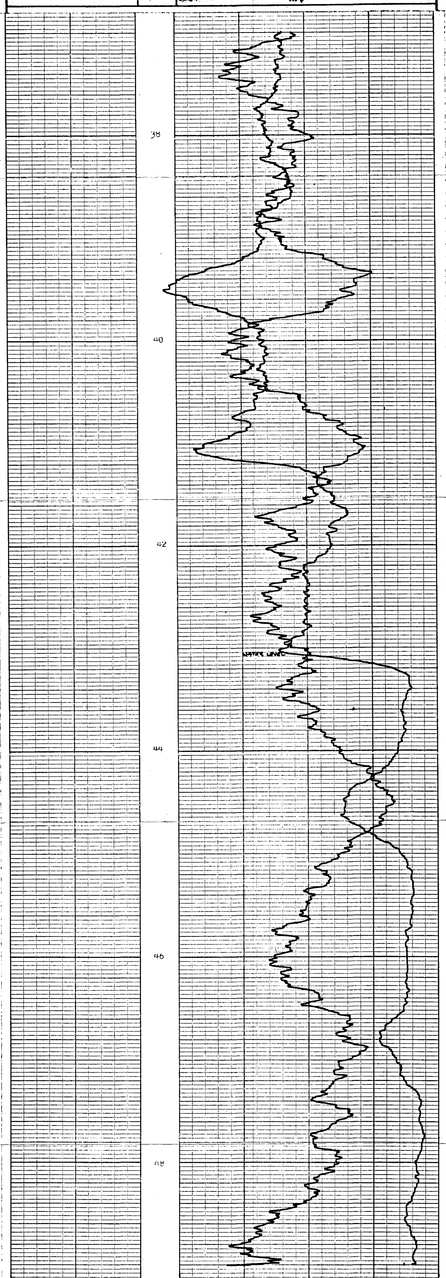
1622

WATER LEVEL
INTERVAL
TOTAL
REMARKS
Borehole logged through drill rods.

SONDE TYPE: Simple Function Sonde
LOG SUITE: GAMMA RAY L.S. DENSITY

BPB COAL QUALITY LOG

DEPTH	GAMMA RAY
	L.S. Density
	2000 cps 0
	100 API 0



	TBG API 0
	2000 cps 0
	L.S. Density
DEPTH	GAMMA RAY

BOREHOLE RM105(Run 1)
CLIENT Shell
AREA Merritt
COUNTRY Canada

COAL QUALITY LOG

High Resolution Density

BOREHOLE RR 105 (Run 1)

CLIENT Shell

AREA Merritt

COUNTRY Canada

DATE LOGGED 79/07/06

DEPTH SCALE 20:1

2 OF 2 LOGS

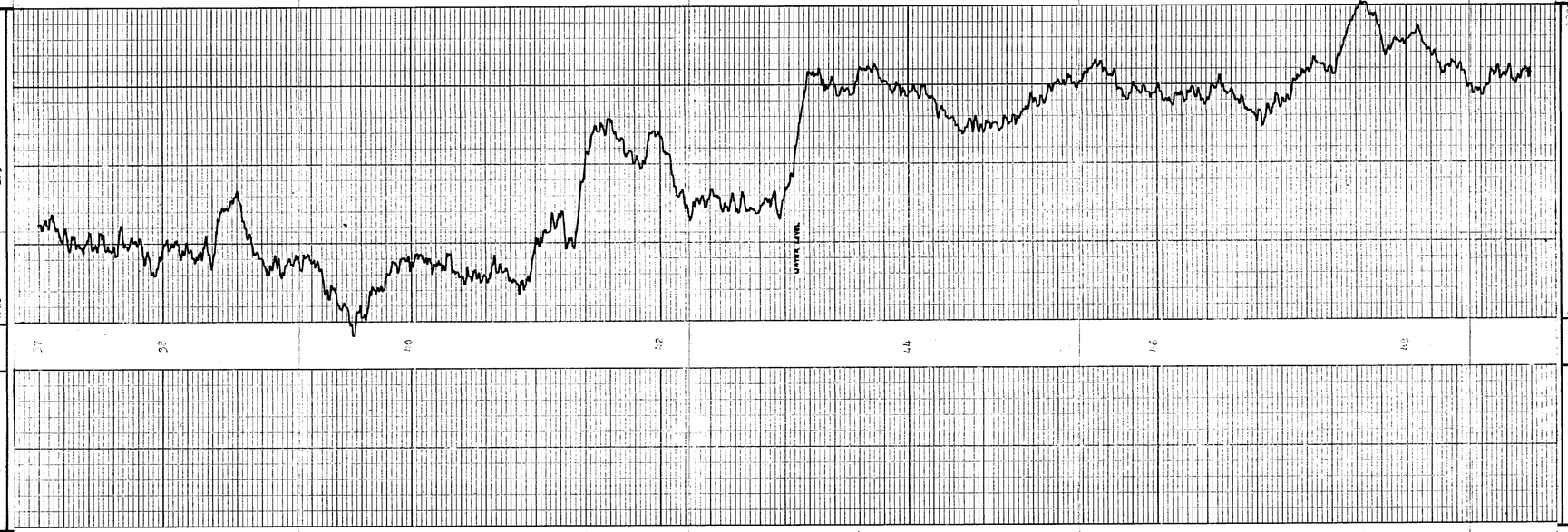
BOREHOLE DATA	REFER TO Lithology	LOG
OPERATION DATA	REFER TO Lithology	LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL			CAL COEFF
	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM	
HRD	N		D	2	1/3		
		SONDE NO		SOURCE NO			

REMARKS Borehole logged through drill rods

162 L03

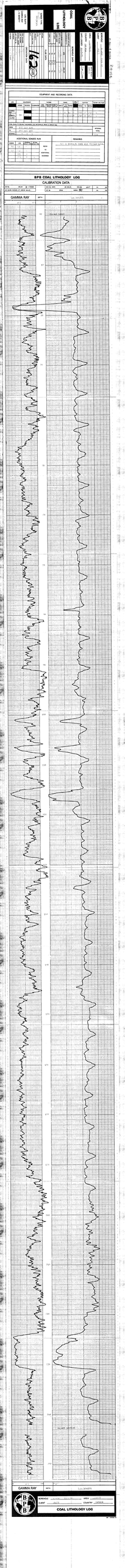


BOREHOLE RR 105 (Run 1)

CLIENT Shell

AREA Merritt

COUNTRY Canada

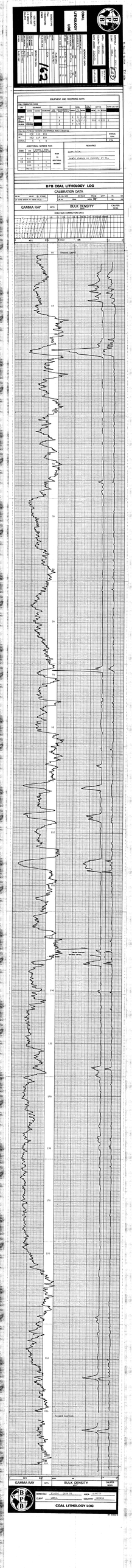


BPB COAL LITHOLOGY LOG

CALIBRATION DATA

GAMMA RAY

COAL LITHOLOGY LOG


COAL LITHOLOGY LOG
BPB
EQUIPMENT AND RECORDING DATA
CALIBRATION DATA
BPB COAL LITHOLOGY LOG
GAMMA RAY
BULK DENSITY
CALIPER
HOLE SIZE CORRECTION DATA
Tripod Leg(s)
Metal conduit
Tripod Section
COAL LITHOLOGY LOG
BOREHOLE
AREA
CLIENT
COUNTY

H-Hoyt 8-6/8A P.H-106

BPB

BOREHOLE RS-106 (BUL 1)
CLIENT SHELL
AREA LIBERTY
COUNTRY CANADA
DATE LOGGED 11-7-79
DEPTH SCALE 20:1
2 OF 2 LOGS

COAL QUALITY LOG

BOREHOLE DATA	REFER TO LITHOLOGY LOG				
OPERATION DATA	REFER TO LITHOLOGY LOG				
EQUIPMENT AND RECORDING DATA					
LOG	RANGE	SEQUENCE	POSITION		
GAMMA RAY	100	1	1	1	1
LOG DENSITY	100	1	1	1	1
LOG DENSITY	100	1	1	1	1
DOUBLE SPACE AND CALIBRATION	1	1	1	1	1
REFER TO LITHOLOGY LOG					
COAL QUALITY LOG INTERVALS					
FROM	220	110	100		
TO	225	114	100		
INTERVAL	5	3	0		
TO					
INTERVAL					
REMARKS	Run 1 Stopped Pass at 112				

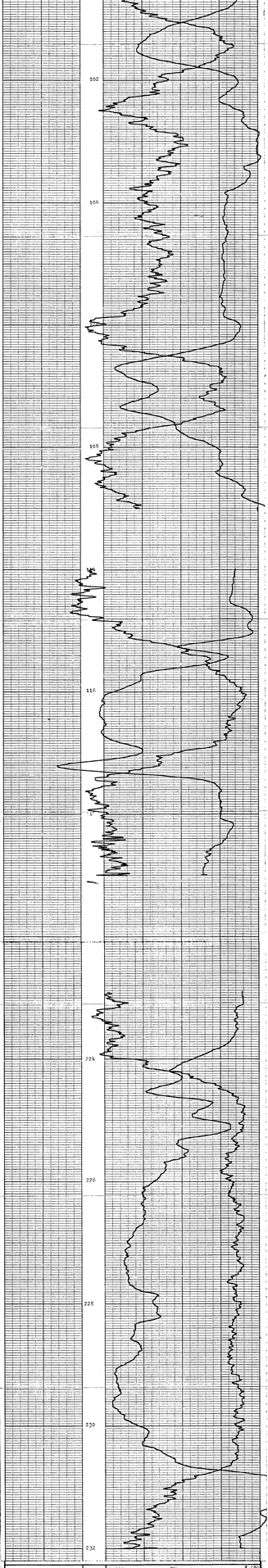
SONDE TYPE: SINGLE FUNCTION SONDE

LOG SUITE: GAMMA RAY L.S. DENSITY

162 Log

BPB COAL QUALITY LOG

DEPTH	GAMMA RAY
	L.S.DENSITY
	CPS
	10,000



10,000	CPS	4,000
100	API	0
	L.S.DENSITY	
DEPTH	GAMMA RAY	

BPB

BOREHOLE RS-106 (BUL 1)
CLIENT SHELL
AREA LIBERTY
COUNTRY CANADA

COAL QUALITY LOG

M-Merrill 80(3)A R11-106

BPB

BOREHOLE R-106 (Hole 2)
CLIENT [illegible]
AREA [illegible]
COUNTRY CANADA
DATE LOGGED 11-7-79
DEPTH SCALE 20:1
1 OF 2 LOGS

COAL QUALITY LOG

BOREHOLE DATA — REFER TO LITHOLOGY LOG
OPERATION DATA — REFER TO LITHOLOGY LOG
EQUIPMENT AND RECORDING DATA
COAL COMBINATION SONDE

SIDEWALL POSITION

LOG	TAPING			PANEL	CAL. LOG
GAMMA RAY	LOG RECORD	OPERATOR	SPEED	SCALE	NORM
L.S. DENSITY	2	2	2	2	2
SONDE SONDE AND CALIBRATION					

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY L.S. DENSITY

COAL QUALITY LOG INTERVALS

FROM	115	100
TO	114	100
INTERVAL	0	0
FROM		
TO		
INTERVAL		

INTERVAL TOTAL: 0

REMARKS

Client hole no: [illegible]

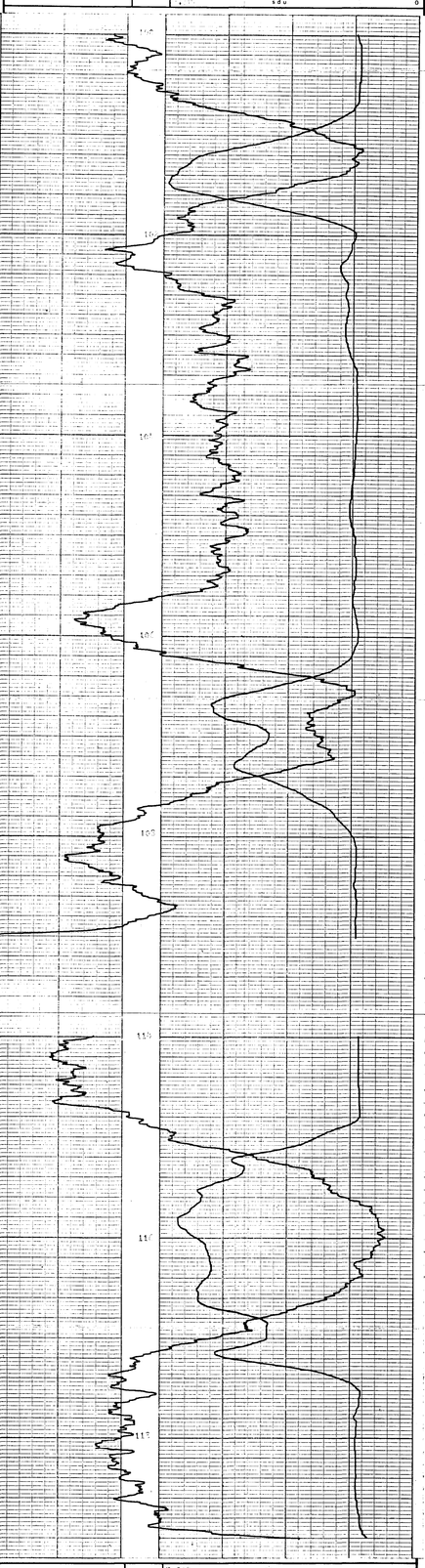
162

BPB COAL QUALITY LOG

DEPTH	GAMMA RAY
	COAL BULK DENSITY g/cm³

HOLE SIZE CORRECTION DATA

	Ave	0
	sdu	0



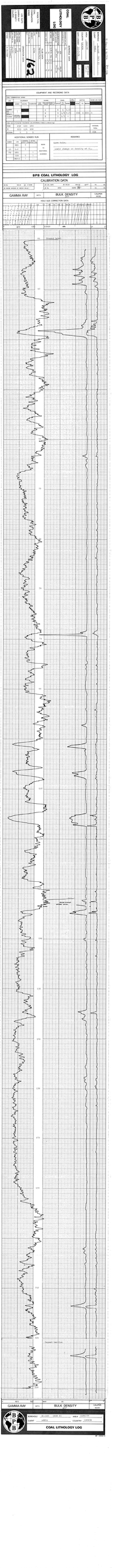
	sdu	0
	Ave	0
	COAL BULK DENSITY g/cm³	
DEPTH	GAMMA RAY	

BPB

BOREHOLE [illegible] (Hole 2) — AREA [illegible]
CLIENT [illegible] — COUNTRY CANADA

COAL QUALITY LOG

R EGOSS LIM


COAL LITHOLOGY LOG
EQUIPMENT AND RECORDING DATA
CALIBRATION DATA
GAMMA RAY
BULK DENSITY
COAL LITHOLOGY LOG

M-Mern H 80(1)A RM-106

BPB

R.R.DENSITY DETAIL LOG (L06)

BOREHOLE RL-106 (RUN 1)

CLIENT SNELL

AREA VERRITS

COUNTRY CANADA

DATE LOGGED 11-7-79

DEPTH SCALE 2 OF 2 LOGS

BOREHOLE DATA	REFER TO Lithology	LOG
OPERATION DATA	REFER TO Lithology	LOG

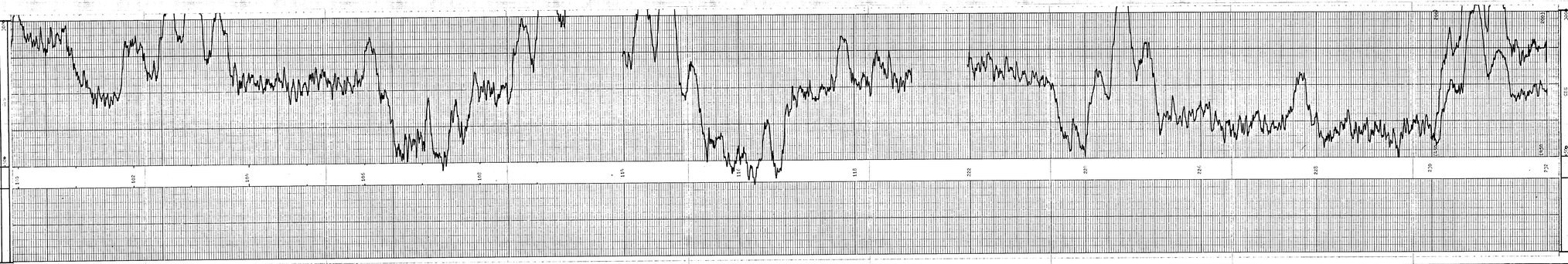
EQUIPMENT AND RECORDING DATA

LOG	TAPING		PANEL		LOG
	LOG DEPTH	RECORDED DEPTH	SPEED	LOG	NORM
1	1000	1000	24	1/3	10.0

NORM SPEED 10 MIN

REMARKS LOGGED THROUGH ROCK AIR FILLED. SCALE CHANGE ON LOGGED DETAIL.

162



BPB

BOREHOLE RL-106 (RUN 1)

CLIENT SNELL

AREA VERRITS

COUNTRY CANADA

H-Herrill 80(3)A RH-106

NEUTRON-NEUTRON RESISTIVITY LOG. (108)

BOREHOLE RH-106 (RUN 2)
CLIENT SHELL

AREA FERRITT
COUNTRY CANADA
DATE LOGGED 11-2-79

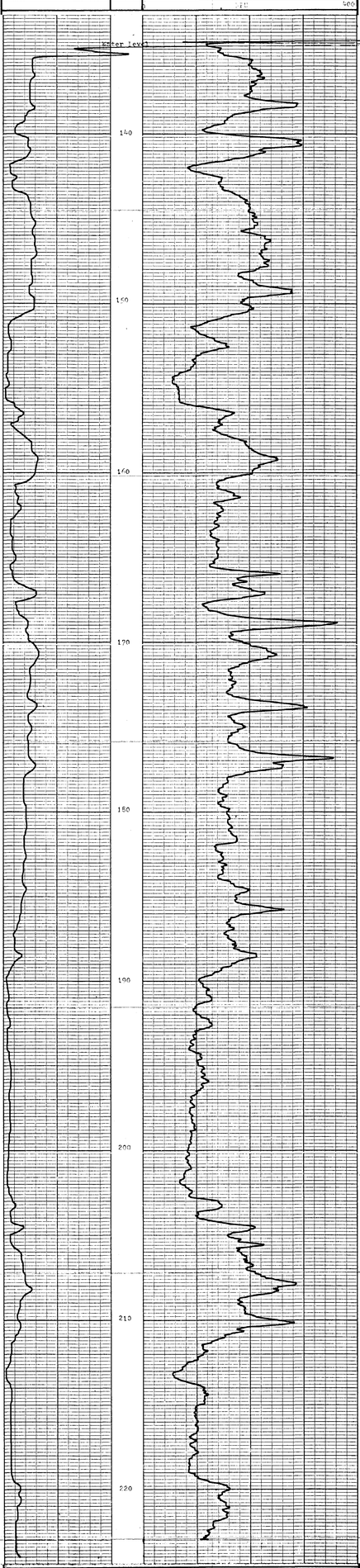
OPEN SCALE 100:1
Low Freq

BOREHOLE DATA — REFER TO Lithology LOG
OPERATION DATA — REFER TO Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	RECORDING	PANEL	CALC. LOG
	TAPE	SPEED	SEC.	HORIZ.
RESS. N-N	X	12		
	X	9	1	C.(.25)

REMARKS
Open hole to RH.
162



RESISTIVITY | DEPTH | NEUTRON-NEUTRON

BOREHOLE RH-106 (RUN 2)
CLIENT SHELL
AREA FERRITT
COUNTRY CANADA

MT A38452R

H-Merritt 80(3)A RM-106

BPB

BOREHOLE RM-106 (RUN 2)
CLIENT SHELL (L10)

AREA MERRITT
COUNTRY CANADA
DATE LOGGED 11-7-79

DEPTH SCALE 20:1

7 OF 7 LOGS

SEAM THICKNESS LOG

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

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

SIDEWALL POSITION

LOG	TAPING		PANEL			CAL CORR
	LOG TAPED	RECORD DIRECT OF SPEED	REPLAY	SPEED	TC SECS	NORM
CALIPER	X		2	1/3		
B.R. DENSITY	X		2	1	0.725	

SOURCE: SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: CALIPER B.R. DENSITY

SEAM THICKNESS LOG INTERVALS

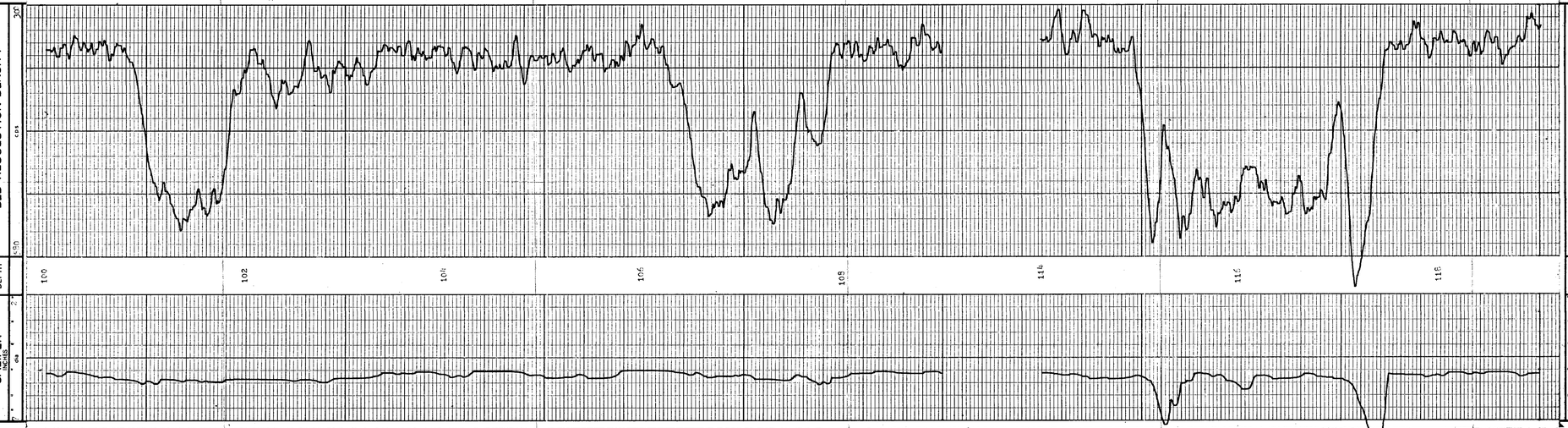
FROM	119	109
TO	114	100
INTERVAL	5	9
FROM		INTERVAL
TO		TOTAL
INTERVAL		4m

REMARKS

Open hole air filled

162

B P B SEAM THICKNESS LOG



BED RESOLUTION DENSITY

DEPTH

CALIPER INCHES

AREA MERRITT
COUNTRY CANADA

BOREHOLE RM-106 (RUN 2)
CLIENT SHELL

SEAM THICKNESS LOG

MY 68002 R

BPB COAL LITHOLOGY LOG

GAMMA RAY | DENSITY | NEUTRON | CALIPER | RESISTIVITY

COMPANY | WELL | FIELD | COUNTY | STATE | LOCATION | OTHER SERVICES | PERMANENT DATUM | ELEV. | LOG MEASURED FROM | DRILLING MEASURED FROM | DATE | RUN | TYPE LOG | DEPTH DRILLER | DEPTH LOGGER | BTM. LOG INTERVAL | TOP LOG INTERVAL | CASING DRILLER | CASING LOGGER | BIT SIZE | TYPE FLUID IN HOLE | DENSITY | VISCOSITY | PH | FLUID LOSS | SOURCE OF SAMPLE | RM @ MEAS. TEMP | RMF @ MEAS. TEMP | RMC @ MEAS. TEMP | SOURCE OF RMF | SOURCE OF RMC | RM @ BHT | TIME SINCE CIRC. | MAX. REC. TEMP. | EQUIP. LOCATION | RECORDED BY | WITNESSED BY

BOREHOLE RECORD

RUN	BIT	FROM	TO

CASING RECORD

SIZE	WGT.	GRADE	FROM	TO

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDES

RUN	EQUIPMENT			TUNING				PANEL			CAL OUTPUT			BORE HOLE RUN
	SONDE	SOURCE	RUNNING	LOG SPEED	SECOND TIME CONST.	TIME CONST.	SPEED	SCALE	SONDE		FROM	TO	SHOE	

COAL QUALITY/BEAM THICKNESS LOG INTERVALS (Refer to witness log)

FROM		INTERVAL TOTAL
TO		
INTERVAL		

ADDITIONAL SONDES RUN

SONDE	LOG	LOGGING DOWN (CHECK ONE)	LOGGING UP (CHECK ONE)

SIZE
TO
ADDITIONAL
HEADING

REMARKS

upper chains at 6m static level
on bit

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

GR PU	VALUE @ FT/MIN	GR CAL DATE	GR VALUE	API @ FT/MIN	PU
DC SHARP SHEAR AT ARROW VALUE		DC PU	SPAN	PU	GM

GAMMA RAY | DEPTH | BULK DENSITY | CALIPER INCHES

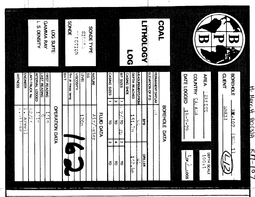
HOLE SIZE CORRECTION DATA

GAMMA RAY | DEPTH | BULK DENSITY | CALIPER INCHES

BOREHOLE _____ AREA _____

CLIENT _____ COUNTRY _____

COAL LITHOLOGY LOG



EQUIPMENT AND RECORDING DATA

RUN	EQUIPMENT			TAPES			MODEL			CAL	SUPPLY		GEAR LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG DATA	RECORD CHECK	REPLAY CHECK	SPEED	SCALE	SPAN		FROM	TO	
1													
COMBO NO.													
DENSITY	D1			1			1	1/5	16.3		371.6	121.7m	
CALIPER													

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

FROM	TO	INTERVAL (Cm)

ADDITIONAL SONDES RUN

SONDE	S	LOG	SONDE / TOOL DESCRIPTION
4SG	4SG		
GTK	CCG	1	
GT	G-G	1	

REFER TO ADDITIONAL HEADINGS

REMARKS

Run 1 through hole, scale change at water level, 121m on Sclu.

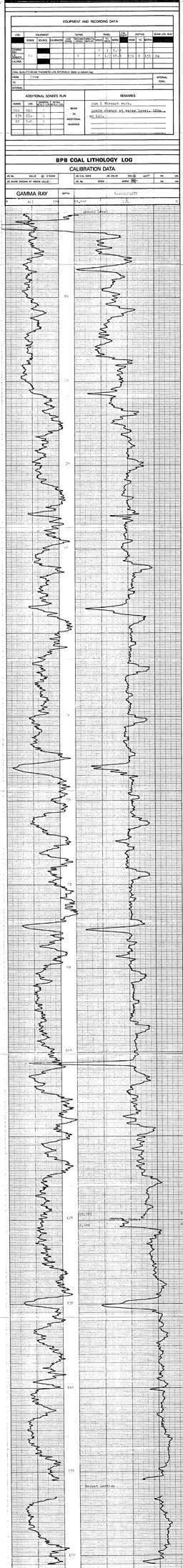
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

AS No.	VALUE @ 2"/MIN
AT MAIN SHOW AT WEIR HOUSE	

AS CAL DATE	AS VALUE	MAG	UNIT	m/s
AS No.	SPAN	WORK		m/s

GAMMA RAY — DEPTH — Scale 1:1250



GAMMA RAY — DEPTH — Scale 1:1250

BPB COAL LITHOLOGY LOG

BOREHOLE 1-WIT 19-3-91 AREA Lichfield
CLIENT Wits COUNTRY Victoria

AS 43034

162

COAL LITHOLOGY LOG

BOREHOLE: RM-107 (RUN 2)
CLIENT: SHELL
AREA: MERRITT
COUNTRY: CANADA
DATE LOGGED: 14-7-79

M-Merritt 80(3)A RM-107

DEPTH SCALE 100:1
2 OF 3 LOGS

SONDE TYPE: COAL COMBINATION SONDE

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

BOREHOLE DATA

PERMANENT DATUM	GL	
ELEVATION OF P.D.		
MEASUREMENTS FROM	BPB: GL	DRILLER: GL
DEPTH REACHED	158.5m	152.4m
CASING SHOE		
BIT SIZES	1 4 7/8TO TD	2 TO
	3 TO	4 TO
CASING SIZES	1 TO	2 TO

FLUID DATA

NATURE	Air/Water
S.G.	
LEVEL	95m
VISCOSITY	
Rm at meas. temp	
B.H.T.	

OPERATION DATA

FIRST READING	156m
LAST READING	0
INTERVAL LOGGED	156m
UNIT-TRUCK No	42/25
ENGINEER	I Maxwell
WITNESS	I Gilmar

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT: SONDE	EQUIPMENT: SOURCE	EQUIPMENT: CALIBRATOR	TAPING: LOG TAPED	TAPING: RECORD SPEED	TAPING: DIRECT or REPLAY	PANEL: SPEED	PANEL: TC SECS	PANEL: NORM	CAL COEFF	DEPTHS: FROM	DEPTHS: TO	DEPTHS: INTERVAL	SEAM LOG RUN
GAMMA RAY	134						9	1	1.6					
L.S. DENSITY		5821			X		9	1/3	6.95		156	0	156m	No
CALIPER	SIDEWALL POSITION						9	1/3	-					

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

FROM	None	INTERVAL TOTAL
TO		
INTERVAL		

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
RES	RES	Y	
10	N-N	Y	
80	LSD	Y	
	GAMMA	Y	

REFER TO ADDITIONAL HEADINGS

REMARKS

Scale Change at 95m, Water Level or LSD.

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

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

GAMMA RAY	DEPTH	BULK DENSITY g/cm3	CALIPER INCHES
0 API 150		15,000 sdu	0 7" 2"

HOLE SIZE CORRECTION DATA

GAMMA RAY	DEPTH	BULK DENSITY g/cm3	CALIPER INCHES
0 API 150		6000 sdu	0 7" 2"

BOREHOLE RM-107 (RUN 2) AREA MERRITT
CLIENT SHELL COUNTRY CANADA

COAL LITHOLOGY LOG

MY A50261 R

1-A-410

M. Hecht 80(3)A RM-107

NEUTRON-NEUTRON RESISTIVITY LOG

BOREHOLE RM-107 (RUN 2)
CLIENT Shell (13)

AREA BERRITT
COUNTRY CANADA
DATE LOGGED 14-7-79

DEPTH SCALE 100:1
2 or 2 LOGS

BOREHOLE DATA	REFER TO lithology LOG
OPERATION DATA	REFER TO lithology LOG

EQUIPMENT AND RECORDING DATA

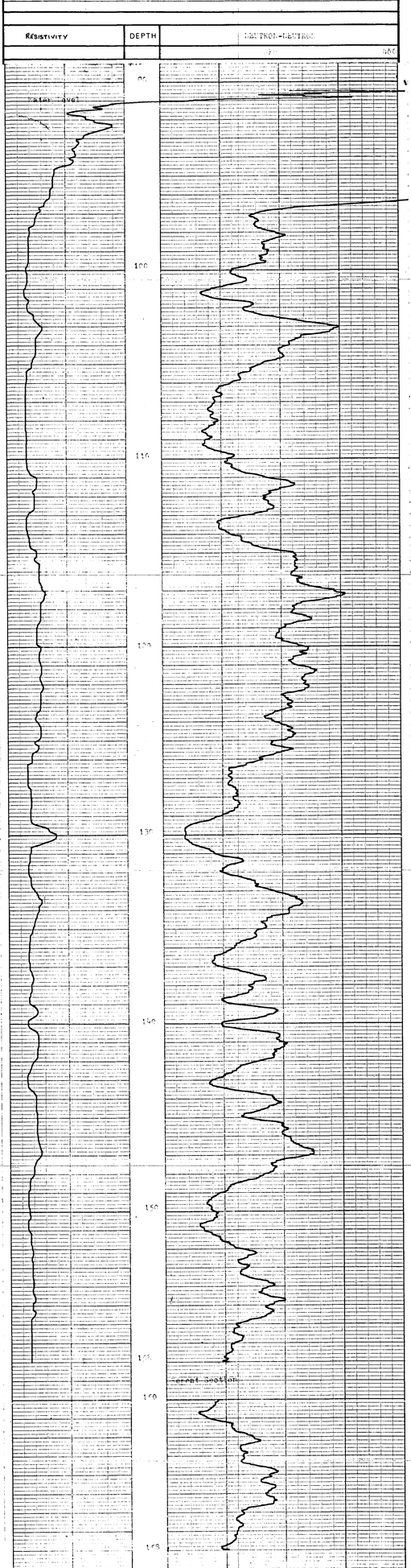
LOG	TARING	PANEL	CAL. COEFF.

LOG TARED	RECORDING SPEED	SPEED REFERENCE	SIZE	NORM

SCALE	SCALE	SCALE

REMARKS

162



RESISTIVITY | DEPTH | NEUTRON-NEUTRON

BOREHOLE RM-107 (RUN 2)
CLIENT SHELL

AREA BERRITT
COUNTRY CANADA

MF A58452R

M-Merritt 80(3)A RM 108

BOREHOLE RM 108
CLIENT Shell
(L14)

AREA Merritt
COUNTRY Canada
DATE LOGGED [illegible]

DEPTH SCALE [illegible]
[illegible] OF [illegible] LOGS

COAL QUALITY LOG

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

EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL			CAL CODES
	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM	
GAMMA RAY				2	2	[illegible]	
L.S DENSITY				2	1/2	10	

SOURCE, SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

SONDE TYPE: Single Function Gamma and L. S. Density Sondes

LOG SUITE: GAMMA RAY L.S. DENSITY

COAL QUALITY LOG INTERVALS

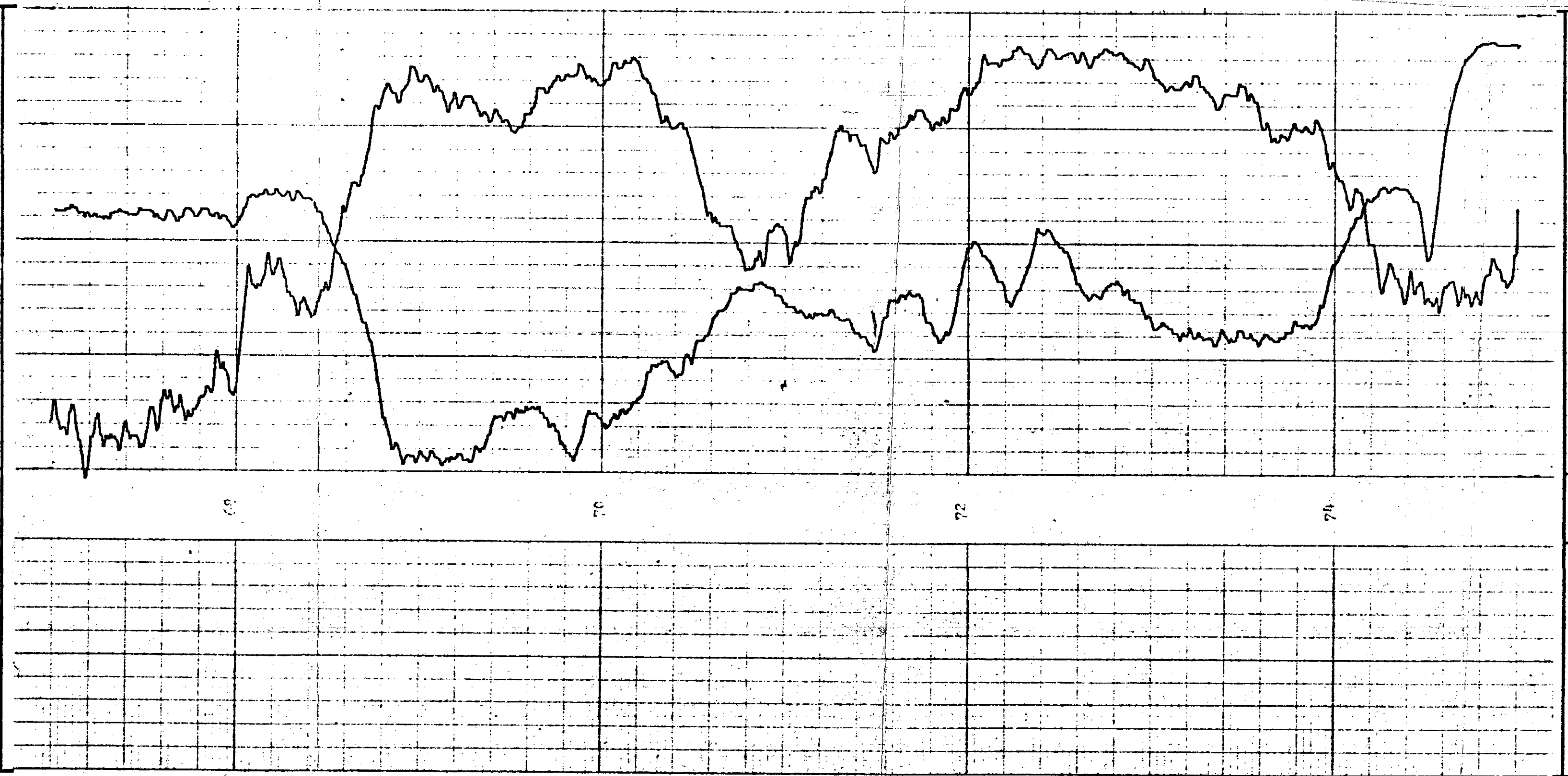
FROM	2.5m	
TO	7m	
INTERVAL	cm	
FROM		INTERVAL TOTAL
TO		
INTERVAL		

162

REMARKS
Borehole logged through rods.

BPB COAL QUALITY LOG

GAMMA RAY
L.S. Density
DEPTH



GAMMA RAY
L.S. Density
DEPTH

BOREHOLE RM 108 (Run 1)
CLIENT Shell
AREA Merritt
COUNTRY Canada

COAL QUALITY LOG

MY 88002 R

H-Merritt 80(3)A RM 108

BRD L15

BOREHOLE RM-108

CLIENT

AREA

COUNTRY

DATE LOGGED

DEPTH SCALE

OPS

BOREHOLE DATA REFER TO LOG

OPERATION DATA REFER TO LOG

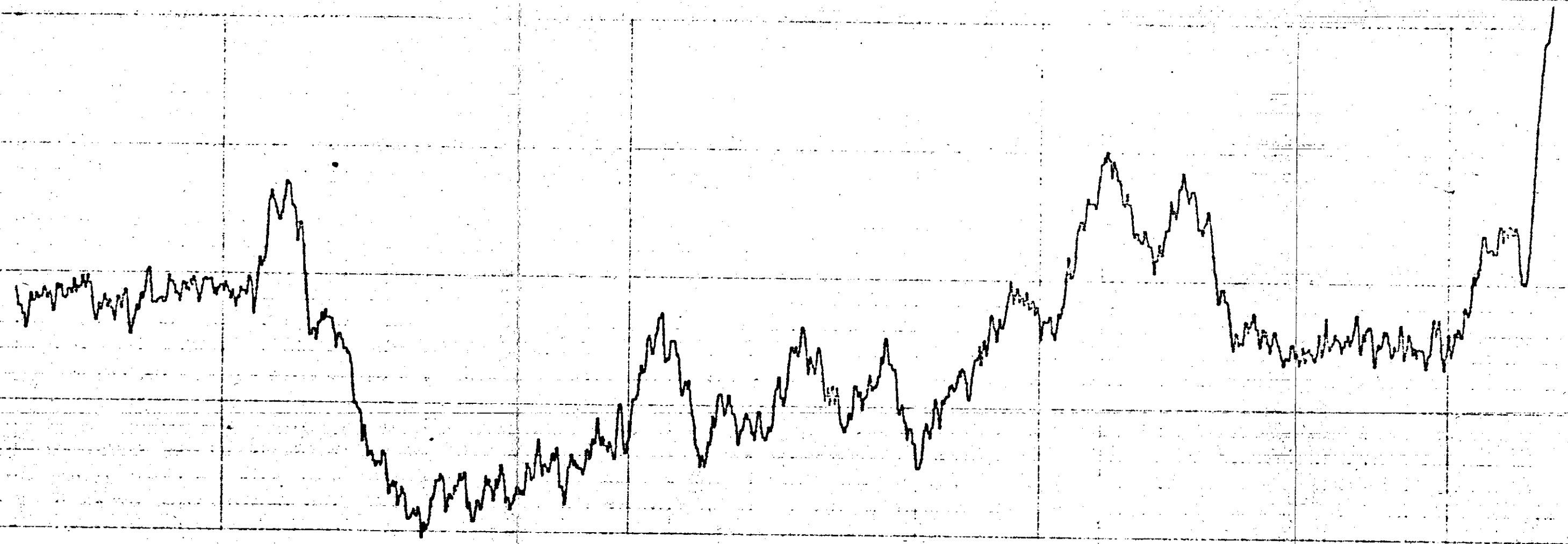
EQUIPMENT AND RECORDING DATA

LOG	TAPING				PANEL		CAL.
	LOG TAPED	RECORD SPEED	PLAYBACK SPEED	SPEED	SENS	NORM	
	SONDE		SOURCE				

REMARKS

162

DEPTH



DEPTH

AREA COUNTRY

BOREHOLE

CLIENT

COAL LITHOLOGY LOG

LOG SUITE: GAMMA RAY & DENSITY

SONDE TYPE: [illegible]

BOREHOLE: [illegible]
CLIENT: Shell
AREA: [illegible]
COUNTRY: Canada
DATE LOGGED: [illegible]

BOREHOLE DATA
DRILLER'S DEPTH: [illegible]
LOGGER'S DEPTH: [illegible]
DEPTH DRILLED: [illegible]
CASING SIZE: [illegible]
BIT SIZES: [illegible]
FLUID DATA: [illegible]
OPERATION DATA: [illegible]
WITNESS: [illegible]

M. Hogan Bolivia RTN 108

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT		CALIBRATION	TAPING			PANEL		CAL LENGTH	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE		LOG TAPED	RECORD SPEED	DIRECT REPLAY	SPEED	SCALE	NORM	FROM	TO	INTERVAL	
GAMMA RAY	[illegible]												
L.S. DENSITY													

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

FROM	[illegible]	INTERVAL TOTAL
TO	[illegible]	
INTERVAL	[illegible]	

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE	DETAIL SCALE
	[illegible]		[illegible]

REFER TO ADDITIONAL HEADINGS

REMARKS: [illegible]

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No	VALUE @ 2" DIAM	JIG CAL DATE	JIG VALUE SOLID @ gm/cm³
JIG MARK SHOWN AT ABOVE VALUE -		JIG No	SPAN NORM

GAMMA RAY | DEPTH | L. S. Density

0 | [illegible] | [illegible] | [illegible] | [illegible] | 0

Ground level

10

20

30

40

50

60

70

80

Water Level

Recent Section

90

0 | [illegible] | [illegible] | [illegible] | [illegible] | 0

GAMMA RAY | DEPTH | L. S. Density

BOREHOLE: [illegible] AREA: [illegible]
CLIENT: Shell COUNTRY: Canada

COAL LITHOLOGY LOG

BPB 4/80/A4

TW-40F

H-Hercules 8/1/81 R-11-108

BPB

COAL LITHOLOGY LOG

BOREHOLE RH 108

CLIENT

AREA

COUNTRY

DATE LOGGED

DEPTH SCALE 1/50

SONDE TYPE

LOG SUITE GAMMA RAY & DENSITY

BOREHOLE DATA

INFORMATION AVAILABLE	BPB
DRILLING CONTRACTOR	DRILLCOR
DRILLING METHOD	
DEPTH REACHED	
CASING SIZES	1 TO 2 TO 3 TO
	2 TO 3 TO 4 TO
	3 TO 4 TO 5 TO
WATER LEVEL	
DATE	
TIME	
FLUID LEVEL	
FLUID TYPE	
FLUID DENSITY	
PH	
VISCOSITY	
RESISTIVITY	

OPERATION DATA

OPERATOR	
LOG NO	162
DATE RECORDED	
TIME RECORDED	
DATE PROCESSED	
TIME PROCESSED	
ACTUAL RECORD	
ACTUAL PROCESS	
ACTUAL RUN NO	
DIST. MISSING	
DIST. RECORDED	
DIST. PROCESSED	

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL CHECK	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT/P DISPLAY	SPEED	T.C. SECS	NORM		FROM	TO	NORM	
GAMMA RAY & DENSITY	119	[illegible]						1						

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

FROM	[illegible]	INTERVAL TOTAL
TO	[illegible]	
INTERVAL		

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
	[illegible]		[illegible]

REFER TO ADDITIONAL HEADINGS

REMARKS

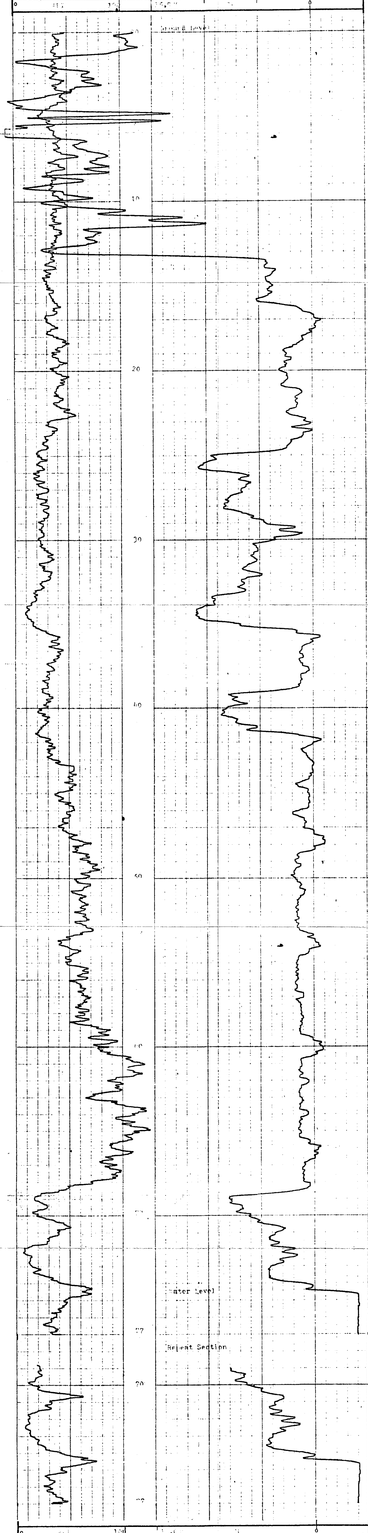
[illegible]

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No	VALUE @ 1 DIAM	JIG CAL DATE	JIG VALUE 50/GD GM/M³
JIG MARK SHOWN AT ABOVE VALUE		JIG No	OPEN SCREW 2.00

GAMMA RAY — DEPTH [illegible]



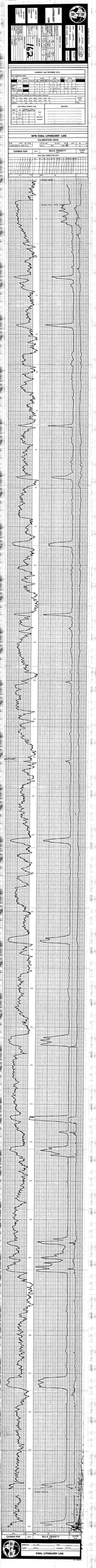
GAMMA RAY — DEPTH [illegible]

BPB

BOREHOLE [illegible] AREA [illegible]

CLIENT [illegible] COUNTRY [illegible]

COAL LITHOLOGY LOG


RUN NUMBER
DEPTH DRILLER
DEPTH LOGGER
BTM LOG INTERVAL
TOP LOG INTERVAL
CASING DRILLER
CASING LOGGER
BIT SIZE
TYPE FLUID IN HOLE
DENSITY
VISCOSITY
PH
FLUID LOSS
SOURCE OF SAMPLE
RM @ MEAS TEMP
RMF @ MEAS TEMP
RMC @ MEAS TEMP
SOURCE RMF
SOURCE RMC
RM @ BHT
TIME CIRC ENDED
TIME LOGGER ON BOTTOM
MAX REC TEMP
EQUIP. LOCATION
RECORDED BY
WITNESSED BY
BOREHOLE RECORD
CASING RECORD
EQUIPMENT AND RECORDING DATA
RECORDED DATA
CALIBRATION DATA
GAMMA RAY
BULK DENSITY
HOLE SIZE CORRECTION DATA
GAMMA RAY
BULK DENSITY
COAL LITHOLOGY LOG
COMPANY
WELL
FIELD
COUNTY
LOCATION
STATE

BPB

BOREHOLE 88-109
CLIENT SYSTEM

AREA ASHERN
COUNTRY CANADA
DATE LOGGED 23-3-89

RUN NUMBER(S) 1

3 or 3 1/2

COAL LITHOLOGY LOG

LOG SUITE:
GAMMA RAY
L S DENSITY
CALIPER

SONDE TYPE
COAL COMBINATION SONDE

BOREHOLE DATA

PERMANENT DATUM GL
ELEVATION OF P.D. [illegible]

	BPB	SPL LEE
DRILLER'S DEPTH	504.5	504.5
DEPTH REACHED	504.5 ±0.05	504.5 ±0.05
CASING SHOE	4.5m	4.5m
BIT SIZES	1) 6 7/8" to 54.5	1) 6 3/4" to 54.5
	2) 6 7/8" to 4	2) to
CASING SIZES	1) 4 1/2" to 4	1) to

FLUID DATA

FLUID TYPE	FRESH WATER
PH	
FLUID LEVEL	DRY
VISCOSITY	
DEN. or PRESS. MTHD.	
UNIT	

OPERATION DATA

FIRST READING	BHD
LAST READING	2650
INITIAL LOGGED	2650
UNIT CHECK No.	42 / 23
ENGINEER	J.CHERNELL
WITNESS	J.GILBERT

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EQUIPMENT AND RECORDING DATA

CASING/BOREHOLE SIZES

	DEPTH	DIAMETER
CASING	4.5m	4" (approx)
OPEN HOLE	504.5m	6 3/4"

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
GAMMA DETECTOR	5361	22-3-89	1
GAMMA SOURCE	5361		
GAMMA HOUSING			

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
DENSITY DETECTOR	5361	22-3-89	1
DENSITY SOURCE	5361		
DENSITY HOUSING			

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
CALIPER ARM	5361	22-3-89	1
CALIPER SPRING	5361		
CALIPER HOUSING			

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
NEUTRON DETECTOR			
NEUTRON SOURCE			
NEUTRON HOUSING			

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
RESISTIVITY ELECTRODES			
RESISTIVITY HOUSING			

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
TEMPERATURE DETECTOR			
TEMPERATURE HOUSING			

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
CABLE HEAD	5361	22-3-89	1
CABLE LENGTH	5361	22-3-89	1
CABLE TYPE	5361	22-3-89	1

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
CENTRALIZER			
OTHER			

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
SONDE WEIGHT	5361	22-3-89	1
SONDE LENGTH	5361	22-3-89	1
SONDE DIAMETER	5361	22-3-89	1

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
OTHER			
OTHER			

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
OTHER			
OTHER			

	SERIAL No.	CALIBRATION DATE	CALIBRATION No.
OTHER			
OTHER			

OPEN HOLE/CASING SIZES, WEIGHTS, GRADES, DEPTHS

	1st STRING	2nd STRING	3rd STRING
SIZE	4"		
WEIGHT	9.5		
GRADE	J55		
TOP	0		
BOTTOM	4		

	1st STRING	2nd STRING
SIZE	6 3/4"	
TOP	4	
BOTTOM	504.5	

ADDITIONAL LOGGING RUN

RUN No.	TOP	BOTTOM	HOLE SIZE
2	3.5	504.5	6 3/4"
3	3.5	504.5	6 3/4"

REMARKS

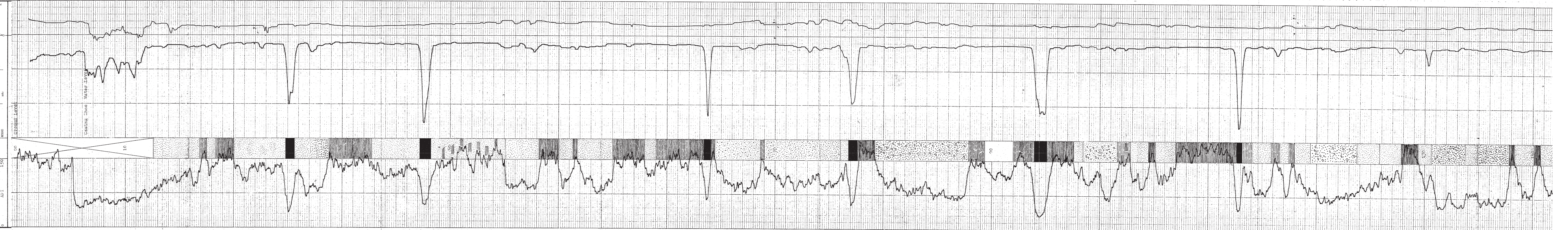
BPB COAL LITHOLOGY LOG

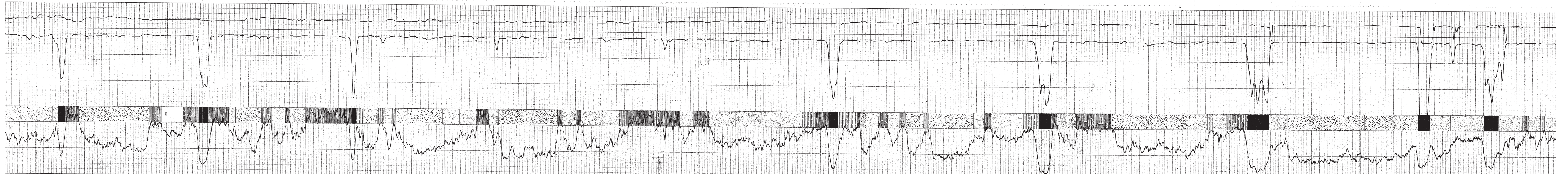
CALIBRATION DATA

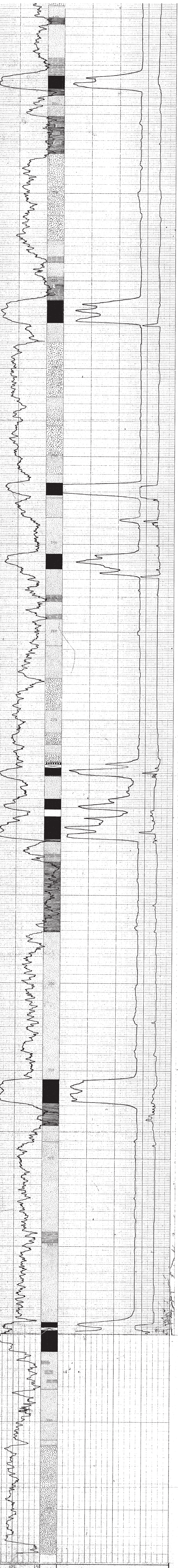
AT No.	HOLE @ 22mM	DEN. CAL. UNITS	2650
AT MEAN WINDOW SHIFT	4	AT No.	1
GAMMA RAY	METRIC	BULK DENSITY	GM/CC

HOLE SIZE CORRECTION DATA

6	6.0	6.0	6.0
6.5	6.5	6.5	6.5
7	7.0	7.0	7.0
7.5	7.5	7.5	7.5
8	8.0	8.0	8.0
8.5	8.5	8.5	8.5
9	9.0	9.0	9.0
9.5	9.5	9.5	9.5
10	10.0	10.0	10.0
10.5	10.5	10.5	10.5
11	11.0	11.0	11.0
11.5	11.5	11.5	11.5
12	12.0	12.0	12.0



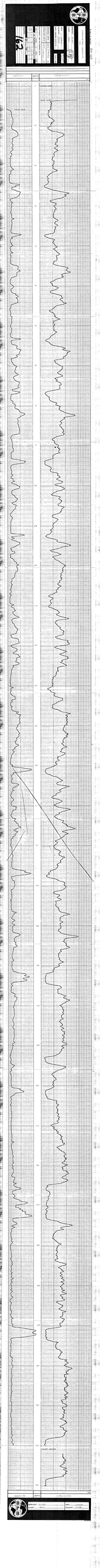




API 150		
GAMMA RAY	DEPTH	

BOREHOLE RM-109	AREA MERRITT
CLIENT SHELL	COUNTRY CANADA

MY A58452R



McMerritt 80(3)A RM-109

GAMMA RAY LOG (L20)

BOREHOLE RM-109
CLIENT SHELL 162

AREA MERRITT
COUNTRY CANADA
DATE LOGGED (20-7-79)

DEPTH SCALE 100:1

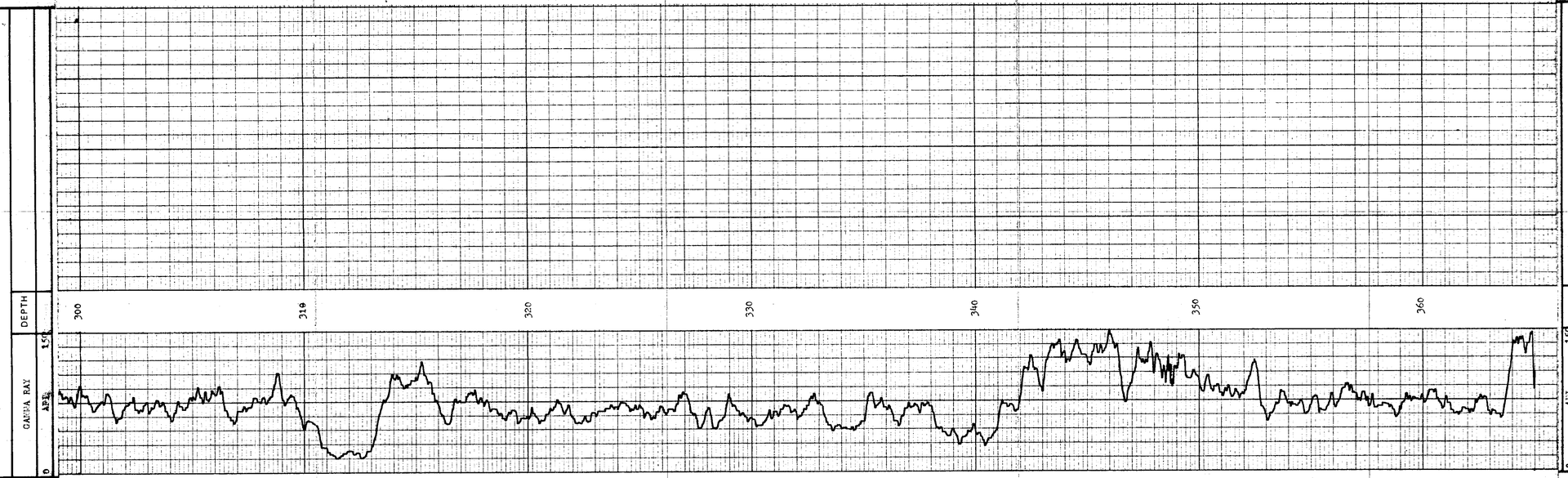
3 OF 5 LOGS

BOREHOLE DATA	REFER TO Lithology	LOG
OPERATION DATA	REFER TO Lithology	LOG

EQUIPMENT AND RECORDING DATA

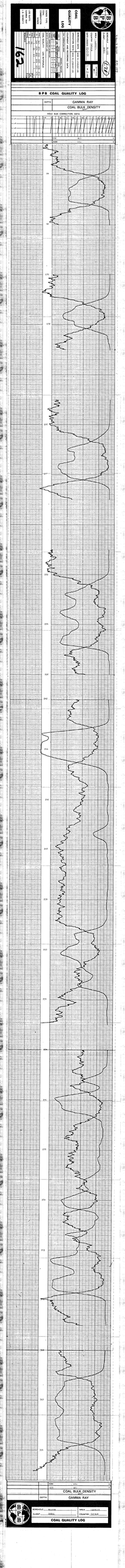
LOG	TAPING			PANEL			CAL COEFF
	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM	
Gamma	N			9	1	1.62	
		SONDE NO	89	SUBSET NO			

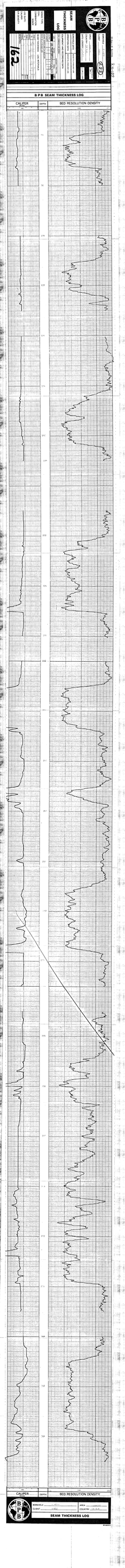
REMARKS Logged through the rods to TD at that stage (20-7-79).



AREA MERRITT
COUNTRY CANADA

BOREHOLE RM-109
CLIENT SHELL


BPB COAL QUALITY LOG
GAMMA RAY
COAL BULK DENSITY
HOLE SIZE CORRECTION DATA
COAL BULK DENSITY
GAMMA RAY
COAL QUALITY LOG


B P B
SEAM THICKNESS LOG
162
B P B SEAM THICKNESS LOG
CALIPER
BED RESOLUTION DENSITY
SEAM THICKNESS LOG

COAL LITHOLOGY LOG

BPB

BOREHOLE	Sr-110 (Hole 1)
CLIENT	Sirtis
AREA	Lafarge
COUNTRY	Canada
DATE LOGGED	21-2-96
RUN NO.	1
DEPTH DRILLER	1001
DEPTH LOGGER	1001
BTM LOG INTERVAL	1001
TOP LOG INTERVAL	0
CASING DRILLER	115
CASING LOGGER	115
CASING FLUID LEVEL	Dry
BOREHOLE FLUID	Air
SALINITY	
DENSITY	
LOGGED INTERVAL	1001
MAX REC. TEMP.	
EQUIPMENT NO.	1621
LOCATION	
RECORDED BY	
WITNESSED BY	

SONDE TYPE: 3" SINGLE DETECTOR

SONDE NO.: 1621

MOG SUITE: GAMMA RAY DENSITY

LOGGING UNIT NO.: 23

BOREHOLE RECORD

BIT	FROM	TO
1	0	115
2	115	1001

CASING RECORD

	SIZE	WEIGHT	FROM	TO
1	6"		0	115

REMARKS: Run 1 through the rods.

OPERATING RIG TIMES

	ON BOTTOM	OFF BOTTOM

OPERATION DATA

RIG No.	115
OPERATOR	Sirtis
ENGINEER	
WITNESS	
DATE	21/2/96
TIME	1:15PM

FLUID DATA

	TOP	BASE
TYPE	Air	
LEVEL	Dry	
DENSITY		
VISCOSITY		
PH		
RESISTIVITY		
CHLORIDES		

Hole 1 Rods

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT SONDE	SOURCE	CALIBRATOR	TAPING LOG (UP)	RECORDED (DIRECT)	SPEED	PANEL T.C.	NORM	T.C. (DN)	DEPTHS FROM	TO	NORM	BEAM LOG RUN
GAMMA RAY	89			ft			9	1	1.0	115	0	115	1
DENSITY	89	Low		ft			9	1/2	10.0	115	0	115	1
CALIPER													

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

FROM	89	INTERVAL
TO	63	TOTAL
INTERVAL	26	THK

ADDITIONAL SONDES RUN

SONDE	LOG	LOGGING UNIT NO.	DETAIL LOG/SCALE (1:50)
89	HRG	7	

REFER TO ADDITIONAL HEADING

REMARKS

Run 1 through the rods.

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No.	VALUE @ 2"DIAM	JIG CAL DATE	JIG VALUE	100/0	g/cm³
JIG MARK SHOWN AT ABOVE VALUE =		JIG No.	SPAN	NORM	

GAMMA RAY		DEPTH	L.S. DENSITY	
API	100	10,000	cps	0

Ground Level

Water Level

Basalt Section

Water Level

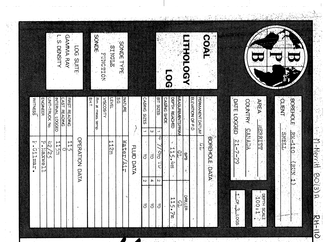
API	100	10,000	cps 0
GAMMA RAY		DEPTH	L.S. DENSITY

BPB

BOREHOLE	Sr-110 (Hole 1)
CLIENT	Sirtis
AREA	Lafarge
COUNTRY	Canada

COAL LITHOLOGY LOG

REF A33169 B



162

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT				TIMING			PANEL		LOG VALUE	OPTIONS			BEAM LOG BUS
	SONDE	SOURCE	CALIBRATION	LOG DATUM	RECORDING SPEED	DIRECT or REPLAY	SPEED (m/h)	NORM		FROM	TO	MOTOR	
GAMMA RAY	09			ft			9	1	1.42	115	0	115	Y
DENSITY		160		ft			9	1/3	10.0	115	0	115	Y
CALIPER													

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

FROM	0 ft
TO	115 ft
INTERVAL	

INTERNAL	
TOTAL	
	ft

ADDITIONAL SONDES RUN

SONDE	LOG	GAMMA RAY/NEUTRON/GAMMA LOG	DENSITY LOG
09	1.3.0	T	

REFER TO ADDITIONAL HEADINGS

REMARKS

Run 1 through the rods.

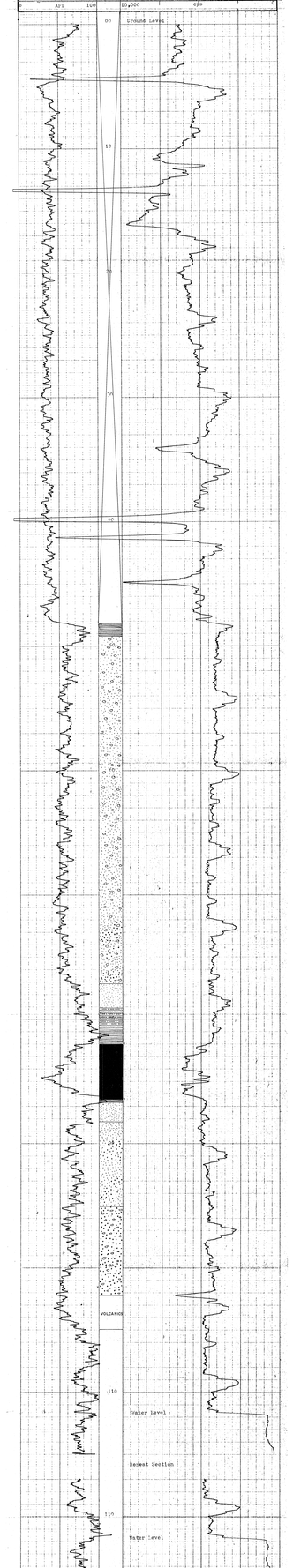
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

AG No	VALUE @ 2 GAMP	AG CAL DATE	AG VALUE	SDU@ 160	ms / 10ft
AG MARK SHOWN AT ABOVE VALUE		AG No	SPAN	NORM 200	ms

GAMMA RAY — DEPTH — L.S.DENSITY

API 100 — 10,000 cps 0



API 100 — 10,000 cps 0

GAMMA RAY — DEPTH — L.S.DENSITY

BPB

BOREHOLE SC-116 (BUS 1) AREA SBRITE

CLIENT SONIL COUNTRY CARAUA

COAL LITHOLOGY LOG

M-Merritt 80(3)A RM-110

BOREHOLE RM-110 (RUN 1)
CLIENT SHELL
(L24)

AREA MERRITT
COUNTRY CANADA
DATE LOGGED 21-7-79

DEPTH SCALE 20:1
2 OF 3 LOGS

COAL QUALITY LOG

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

LOG	TAPING		PANEL	CAL CODE
GAMMA RAY	LOG TAPED	RECORD SPEED	SPEED	SCALE	NORM
L.S. DENSITY	N		3	1	1.62
	N		3	1	10.0

SOURCE, SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

SONDE TYPE:	SINGLE FUNCTION SONDE
LOG SUITE:	GAMMA RAY L.S. DENSITY

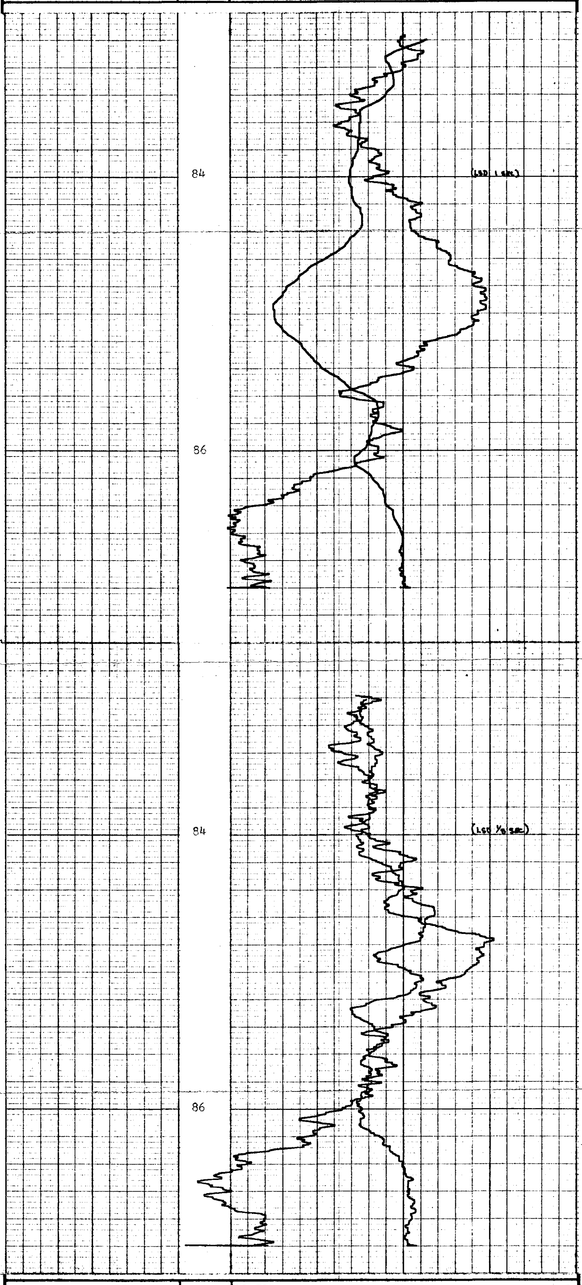
COAL QUALITY LOG INTERVALS

FROM	87
TO	83
INTERVAL	4m
FROM	
TO	
INTERVAL	
INTERVAL TOTAL	162

REMARKS Run 1 through the rods. Rods moved up 2m and details re-run.

BPB COAL QUALITY LOG

DEPTH	GAMMA RAY
	L.S. DENSITY
	100 API 0
	10,000 cps 0



	10,000 cps 0
	100 API 0
	L.S. DENSITY
DEPTH	GAMMA RAY

BOREHOLE RM-110 (RUN 1)
CLIENT SHELL
AREA MERRITT
COUNTRY CANADA

COAL QUALITY LOG

MY 88002 R

H. Merritt 80(3)A RM-110

HIGH RESOLUTION DENSITY LOG. (L25)

BOREHOLE R - 110 (RUN 1)

CLIENT SHELL 162

AREA MERRITT

COUNTRY CANADA

DATE LOGGED 21-7-79

DEPTH SCALE 20:1

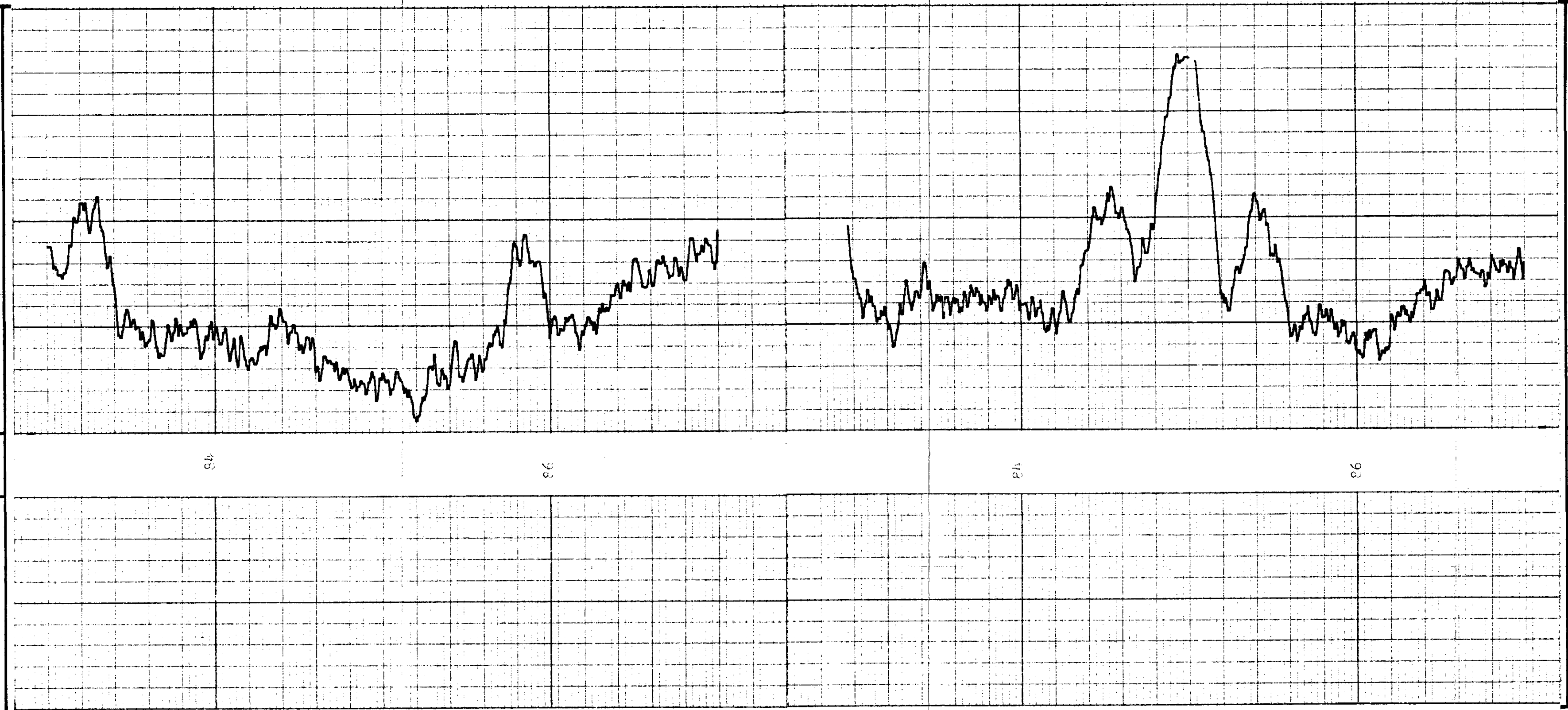
3 OF 3 LOGS

BOREHOLE DATA	REFER TO Lithology	LOG
OPERATION DATA	REFER TO Lithology	LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL			CAL COEFF
	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM	
HRD	N			2½	1/3	10	
		SONDE NO	59	SOURCE NO	HRD		

REMARKS Run 1 through rods.
Rods moved up 2m then detail re-run.



H.R. DENSITY
cps
2000
4500
DEPTH

BOREHOLE R-110 (RUN 1)

CLIENT SHELL

AREA MERRITT

COUNTRY CANADA

MY A58452R

H-Merritt 80(3)A RM-111

BPB COAL LITHOLOGY LOG

BOREHOLE RM-111
CLIENT SHELL
AREA MERRITT
COUNTRY CANADA
DATE LOGGED 25-7-79
DEPTH SCALE 1:100
1 OF 4 LOGS

426

SONDE TYPE: COAL COMBINATION SONDE
LOG SUITE: GAMMA RAY, L.S. DENSITY, CALIPER

BOREHOLE DATA

	BPB	DRILLER
PERMANENT DATUM	GL	
ELEVATION OF P.D.		
MEASUREMENTS FROM		
DEPTH REACHED	151.m	152.m

BIT SIZES 1 | TO | 2 | TO
CASING SHOE 1 | TO | 2 | TO
CASING SIZES 3 | TO | 4 | TO

FLUID DATA

NATURE: bentonite
S.G.:
LEVEL: Gm
VISCOSITY:
Rm at meas temp:
BHT:

162

OPERATION DATA

FIRST READING 150
LAST READING 0
INTERVAL LOGGED 150m
UNIT-TRUCK No. L2/25
ENGINEER L. Maxwell
WITNESS F. Gilmar

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C SECS	NORM	CAL COEFF	FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY							9	1	1.6?					
L.S. DENSITY	134	5?21					9	1/3	7.6		150	0	150	Y
CALIPER	SIDEWALL POSITION						9	1/3	-					

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

				INTERVAL TOTAL
FROM	136	97	41	
TO	125	77	35	
INTERVAL	11	20	6	37m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
RES	RES	Y	
ND	N-N	Y	

REFER TO ADDITIONAL HEADINGS

REMARKS

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. VALUE @ 2" DIAM | JIG CAL DATE | JIG VALUE | SDU @ g/cm³ | ins. | cps
JIG MARK SHOWN AT ABOVE VALUE = | JIG No. | SPAN | NORM SDU/CPS = | ins. | cps

GAMMA RAY | DEPTH | BULK DENSITY g/cm³ | CALIPER INCHES

HOLE SIZE CORRECTION DATA

GAMMA RAY | DEPTH | BULK DENSITY g/cm³ | CALIPER INCHES

BOREHOLE RM-112 [?]
CLIENT SHELL
AREA MERRITT
COUNTRY CANADA

COAL LITHOLOGY LOG

MY A30261 R

162

M. Merritt 80(3)A RM-111

COAL LITHOLOGY LOG

BOREHOLE RM-111
CLIENT SHELL
AREA MERRITT
COUNTRY CANADA
DATE LOGGED 25-7-79
DEPTH SCALE 100:1
1 OF 4 LOGS

BOREHOLE DATA

PERMANENT DATUM: G.L.
ELEVATION OF P.D.:
MEASUREMENTS FROM: G.L. / G.L.

	BPB	DRILLER
DEPTH REACHED	151.9m	152.4m
CASING SHOE		

CASING SIZES	BIT SIZES		
1	3	4 7/8	TO TD
2	4		TO

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

SONDE TYPE: COAL COMBINATION SONDE

FLUID DATA

NATURE: Bentonite
LEVEL: 6m
S.G.:
VISCOSITY:
Rm at meas. temp:
B.H.T.:

OPERATION DATA

FIRST READING: 150
LAST READING: 0
INTERVAL LOGGED: 150m
UNIT-TRUCK No.: 42/25
ENGINEER: F.Maxwell
WITNESS: F.Gilmar

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM	CAL COEFF	FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY							9	1	1.68					
L.S. DENSITY	134	5821					9	1/3	7.6		150	0	150	Y
CALIPER	SIDEWALL POSITION						9	1/3	-					

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

FROM	136	97	41	
TO	125	77	35	
INTERVAL	11	20	6	INTERVAL TOTAL 37m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
RES	RES	Y	
10	N-N	Y	

REFER TO ADDITIONAL HEADINGS

REMARKS

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

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

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

BOREHOLE RM-112 AREA MERRITT
CLIENT SHELL COUNTRY CANADA

COAL LITHOLOGY LOG

MY A50261

HA 41A

M-Merritt 80(3)A RM-111

NEUTRON - NEUTRON, RESISTIVITY LOG.

BPB

BOREHOLE M-111

CLIENT SHELL

(27)

AREA MERRITT

COUNTRY CANADA

DATE LOGGED 25-7-79

DEPTH SCALE 100:1

1 OF 4 LOGS

BOREHOLE DATA	REFER TO Lithology LOG
OPERATION DATA	REFER TO Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING: LOG TAPED	TAPING: RECORD SPEED	TAPING: DIRECT or REPLAY	PANEL: SPEED	PANEL: T.C. SECS	PANEL: NORM	CAL COEFF
N-N	N			9	1	0.62	
RES	N			12			
		SONDE NO	10	SOURCE NO	N-1		

REMARKS

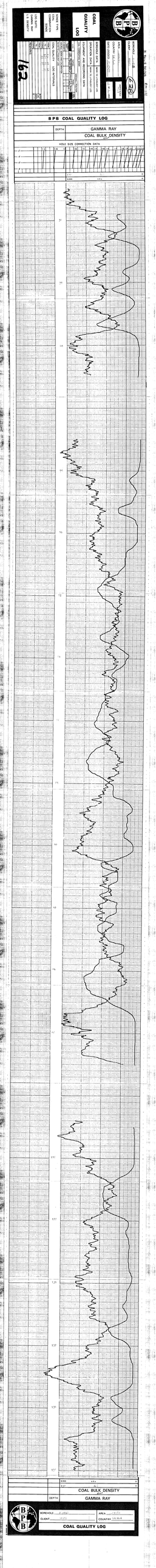
162

BOREHOLE M-111

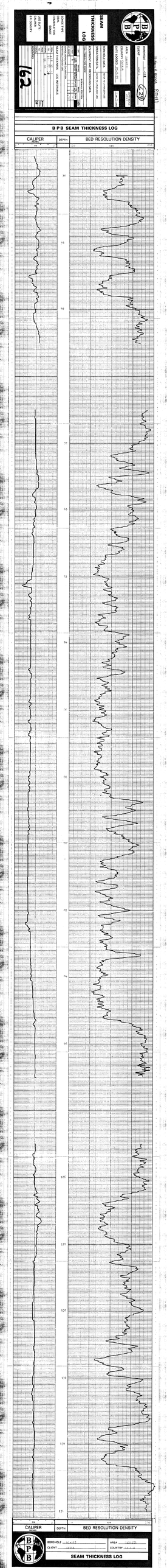
CLIENT SHELL

AREA MERRITT

COUNTRY CANADA



BPB COAL QUALITY LOG
GAMMA RAY
COAL BULK DENSITY
HOLE SIZE CORRECTION DATA



SEAM THICKNESS LOG
BPB
BPB SEAM THICKNESS LOG
CALIPER
DEPTH
BED RESOLUTION DENSITY
SEAM THICKNESS LOG

M-Merritt 80(3)A RM-112

BOREHOLE RM-112 (RUN 2)
CLIENT SHELL (130)
AREA MERRITT
COUNTRY CANADA
DATE LOGGED 23-7-79
DEPTH SCALE 20:1
4 OF 4 LOGS

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

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

SIDEWALL POSITION

LOG	TAPING		PANEL		CAL COEFF
	LOG TAPED	RECORD SPEED / DIRECT REPLAY	SPEED	TC SECS	NORM
CALIPER			2	1	0.725
BR DENSITY			2	1/3	-

SOURCE. SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

FROM	81		
TO	74		
INTERVAL	7	162	INTERVAL
FROM			TOTAL
TO			≠ 7m
INTERVAL			

REMARKS Open hole.

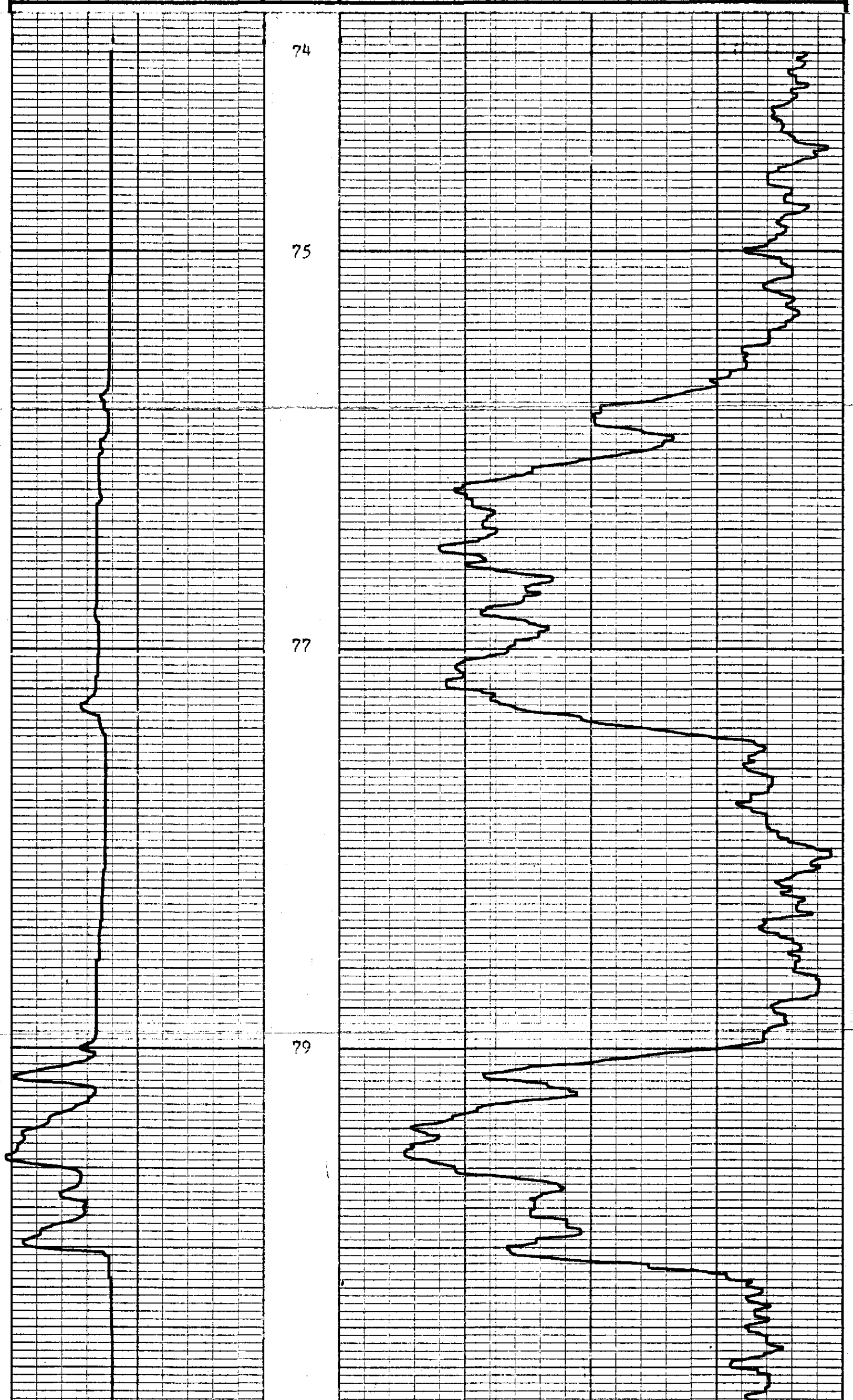
SEAM THICKNESS LOG

LOG SUITE:
CALIPER
B.R.DENSITY

SONDE TYPE:
COAL
COMBINATION
SONDE

B P B SEAM THICKNESS LOG

CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 " " " dia " " 2"		580 c.p.s. 290



7 " " " dia " " 2"		580 c.p.s. 290
CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY

BOREHOLE RM-111 (RUN 2)
CLIENT SHELL
AREA MERRITT
COUNTRY CANADA

SEAM THICKNESS LOG

MY 88002 R

M-Merritt 80(a)A RM-112

BPB

BOREHOLE RM-112 (RUN 2) (L31)
CLIENT SHELL

AREA MERRITT
COUNTRY CANADA
DATE LOGGED 23-7-79

DEPTH SCALE 20:1

3 OF 4 LOGS

COAL QUALITY LOG

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

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE:
SIDEWALL POSITION

LOG	TAPING: LOG TAPED	TAPING: RECORDING SPEED	TAPING: DIRECTION OF REPLAY	PANEL: SPEED	PANEL: T.C. SECS	PANEL: NORM	CAL COEFF
GAMMA RAY				2	2	1.68	
L.S. DENSITY				2	1	7.6	

SOURCE: SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

SONDE TYPE:
COAL COMBINATION SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY

COAL QUALITY LOG INTERVALS

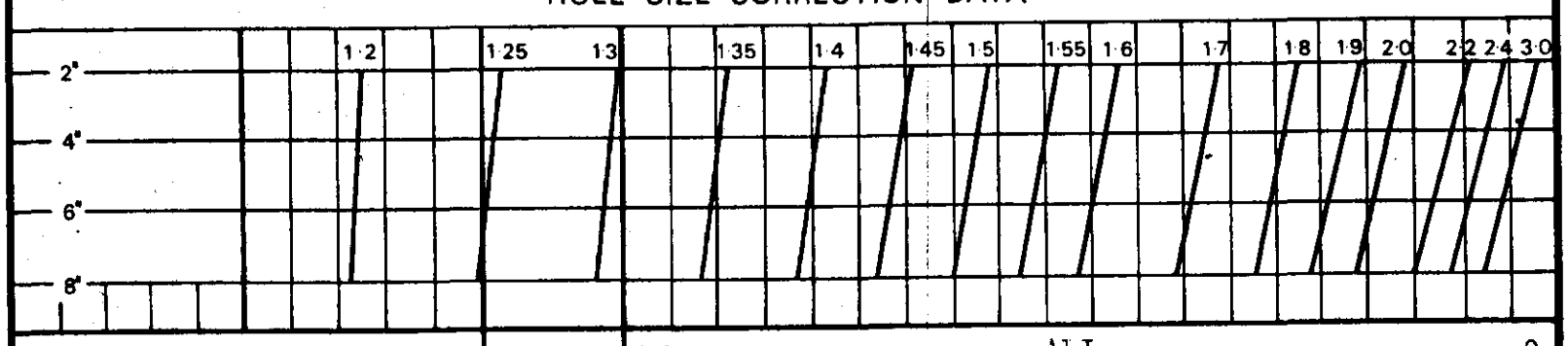
	FROM	TO	INTERVAL	INTERVAL TOTAL
	81	74	7	162m
	FROM	TO	INTERVAL	
	FROM	TO	INTERVAL	

REMARKS Open hole.

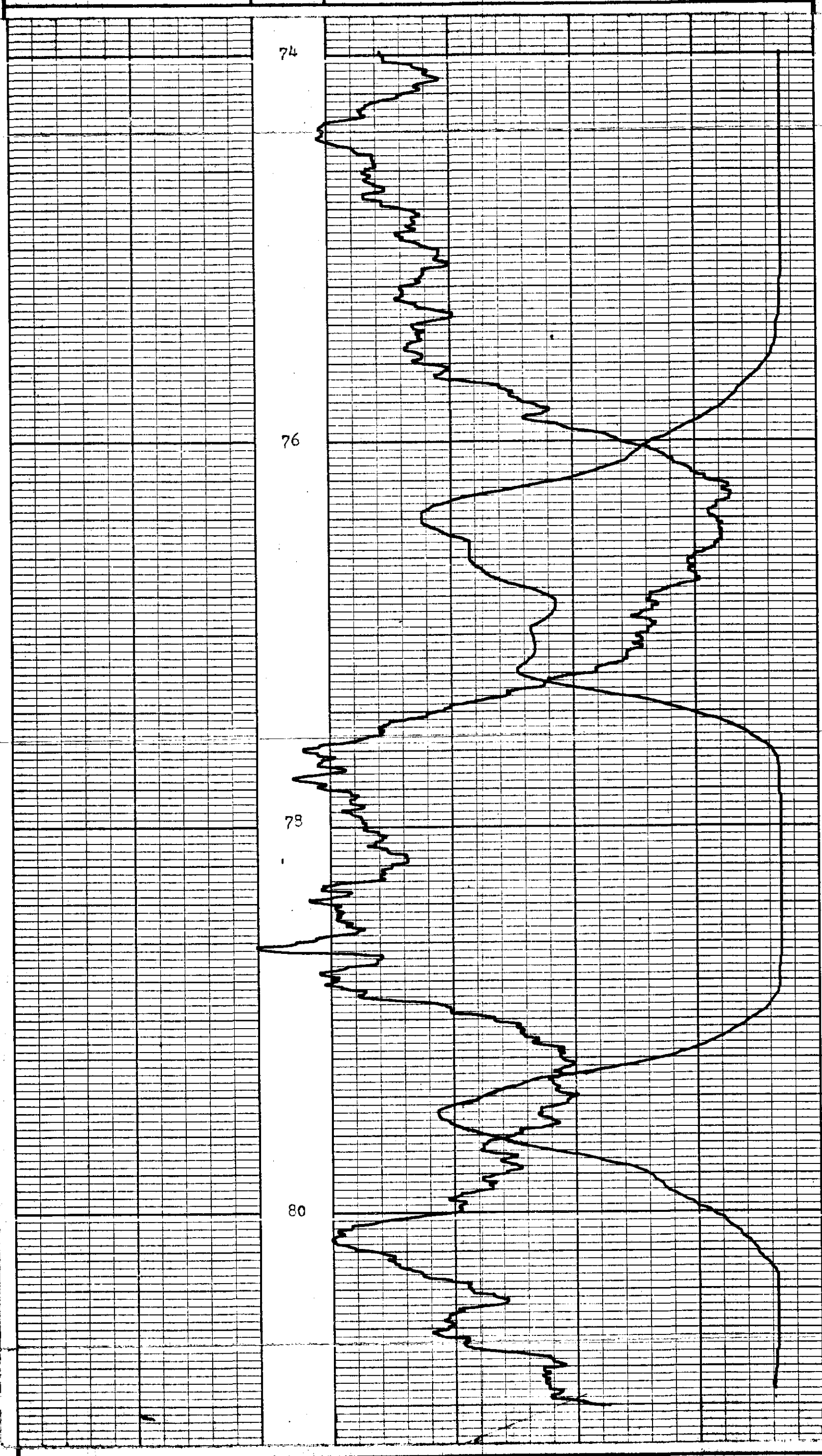
B P B COAL QUALITY LOG

	DEPTH	GAMMA RAY
		COAL BULK DENSITY g/cm³

HOLE SIZE CORRECTION DATA



		150 API	0
		6.000 s.d.u.	0



		6.000 s.d.u.	0
		150 API	0
		COAL BULK DENSITY g/cm³	
	DEPTH	GAMMA RAY	

BPB

BOREHOLE RM-111 (RUN 2)
CLIENT SHELL

AREA MERRITT
COUNTRY CANADA

COAL QUALITY LOG

MY 85002 B

M-Merritt 80(3)A RM-112

NEUTRON - NEUTRON, RESISTIVITY LOG.

BOREHOLE RM-112 (RUN 2) 〈32〉
CLIENT SHELL

AREA MERRITT
COUNTRY CANADA
DATE LOGGED 23-7-79

DEPTH SCALE 100:1

2 OF 4 LOGS

BOREHOLE DATA REFER TO Lithology LOG

OPERATION DATA REFER TO Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING		PANEL			CAL COEFF
	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T C SECS	NORM
N-N				9	1	0.62
RES				12		
		SONDE NO	10	SOURCE NO	N-N	

REMARKS Open hole.

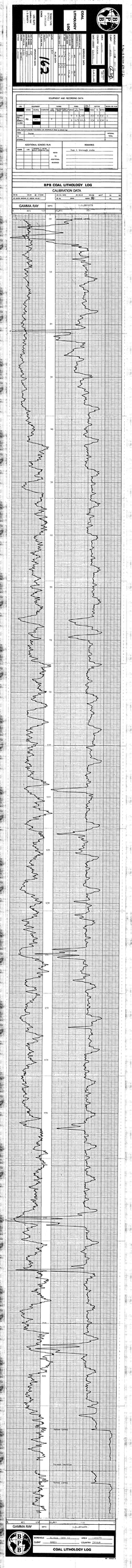
162

RESISTIVITY	DEPTH	NEUTRON-NEUTRON
		0 NPU 400

		0 NFU 400
RESISTIVITY	DEPTH	NEUTRON-NEUTRON

BOREHOLE RM-111 (RUN 2)
CLIENT SHELL
AREA MERRITT
COUNTRY CANADA

MY A58452R


COAL LITHOLOGY LOG
BPB
EQUIPMENT AND RECORDING DATA
CALIBRATION DATA
GAMMA RAY
Ground Level
Tunnel Section
Tunnel Invert

M-Merritt 80(3)A RM-112

BPB COAL LITHOLOGY LOG

BOREHOLE	RM-112 (RUN 2)
CLIENT	SHELL
AREA	MERRITT
COUNTRY	CANADA
DATE LOGGED	23-7-79
DEPTH SCALE	100:1
	1 OF 4 LOGS

233

SONDE TYPE: COAL COMBINATION SONDE

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

BOREHOLE DATA

	BPB	DRILLER
PERMANENT DATUM	GL	
ELEVATION OF P.D.		
MEASUREMENTS FROM	GL	GL
DEPTH REACHED	108m	237.3m
CASING SHOE		
BIT SIZES	1: 4 2/8 TO TD; 3: TO	2: TO; 4: TO
CASING SIZES	1: TO	2: TO

FLUID DATA

NATURE	Water
S.G.	
LEVEL	26m
VISCOSITY	
Rm at meas. temp.	
B.H.T.	

162

OPERATION DATA

FIRST READING	107
LAST READING	0
INTERVAL LOGGED	107m
UNIT-TRUCK No.	42/25
ENGINEER	F.Maxwell
WITNESS	F.Gilmar.

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT			TAPING			PANEL			CAL. COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM		FROM	TO	INTERVAL	
GAMMA RAY	134 SIDEWALL POSITION						9	1	1.68		107	0	107	Y
L.S. DENSITY		5821					9	1/3	7.6		107	0	107	Y
CALIPER							9	1/3	-		107	0	107	Y

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

FROM	81	INTERVAL TOTAL
TO	74	
INTERVAL	7	7m

ADDITIONAL SONDES RUN					REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS	
RES	RES	Y			Open hole.
10	N-N	Y			

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. VALUE @ 2"DIAM.	JIG CAL. DATE JIG VALUE SDU @ g/cm³	ins.	cps.
JIG MARK SHOWN AT ABOVE VALUE ÷	JIG No. SPAN NORM SDU/CPS =	ins.	cps.

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

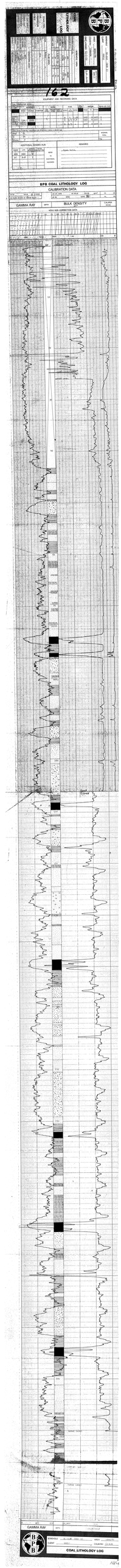
HOLE SIZE CORRECTION DATA

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

BOREHOLE	RM-111 (RUN 2)	AREA	MERRITT
CLIENT	SHELL	COUNTRY	CANADA

COAL LITHOLOGY LOG

MY A50261 R



BPB COAL LITHOLOGY LOG
CALIBRATION DATA
GAMMA RAY
BULK DENSITY
COAL LITHOLOGY LOG

BPB

COAL LITHOLOGY LOG

BOREHOLE RR-113
CLIENT SHELL
AREA HERRITT
COUNTRY CANADA
DATE LOGGED 15-Oct-81
RUN NO. ONE
DEPTH DRILLER 1001.1
DEPTH LOGGER 1001.1
BTM LOG INTERVAL 1001.1
TOP LOG INTERVAL SURFACE

CASING DATA
SIZE 9 5/8"
WEIGHT 36 lbs/ft
GRADE K-55
DEPTH DRILLER 56.2m
DEPTH LOGGER 56.2m

BOREHOLE DATA
DENSITY & VISC. MUD
RM @ MEAS. TEMP. 1.62 @ 24°C
RMF @ MEAS. TEMP. 1.62 @ 24°C
RMC @ MEAS. TEMP. 1.62 @ 24°C
SOURCE OF RM, RMF & RMC MEASURED
RM @ BHT 1.62 @ 24°C
TIME SINCE CIRC. 4 hrs
MAX. REC. TEMP. 24°C
EQUIP. LOCATION 1001.1
RECORDED BY R. Hilton
WITNESSED BY

OPERATION DATA
RIG TIME: STARTED 07:00 hrs 15-Oct-81
RIG TIME: FINISHED 20:00 hrs 15-Oct-81
TOTAL RECORDING TIME 13 hrs
UNIT NUMBER 3
LOGGING ENGINEER R. Hilton
OPERATING WITNESS

TOOL STRING DATA
GAMMA RAY
S. DENSITY
SONDE TYPE: PROBE
SONDE SERIAL NO. 1
SONDE GENERAL NO. 1

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT: SONDE	SOURCE	CALIBRATOR	LOG LIMITED	TUNING: RECORD SPEED	CHART DIRECTION / REPLAY	PANEL: SPEED	TC MSEC	NORM	CAL. DOWN	DEPTHS: FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY							9	1	1.62		80	0	90	
S. DENSITY	1.95	Ind					9	1/3	10.0		90	0	90	No
CALIPER	10-3													

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

	FROM	TO	INTERVAL	INTERVAL TOTAL
None				

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL / DETAIL SCALE LOGARITHMIC LOG

REFER TO ADDITIONAL HEADINGS

REMARKS

Run through rods.

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No.	VALUE @ 2"DIAM	JIG CAL DATE	JIG VALUE	SDU@ 60m³	PIN
JIG MARK SHOWN AT ABOVE VALUE =		JIG No.	SPAN	NORM 20%	PIN

GAMMA RAY — DEPTH — L.S. DENSITY

0 API 200 — 1.8 SDU 2.8 — 0 CPS 0

Casing Tank

00
10
20
30
40
50
60
70
80
90
Repeat Section
00

0 API 200 — 1.8 SDU 2.8 — 0 CPS 0

GAMMA RAY — DEPTH — L.S. DENSITY

BPB

BOREHOLE RR-113 AREA HERRITT
CLIENT SHELL COUNTRY CANADA

COAL LITHOLOGY LOG

BPT A 00361 B

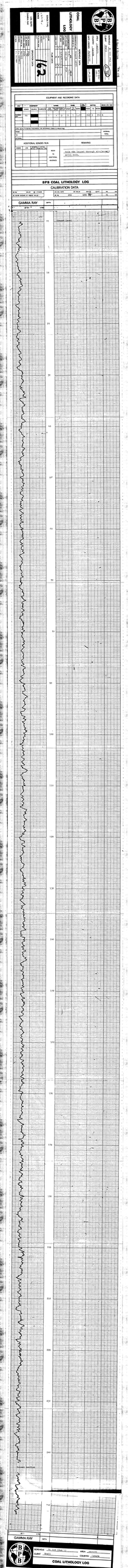
COAL LITHOLOGY LOG

BPB

EQUIPMENT AND RECORDING DATA

CALIBRATION DATA

GAMMA RAY



Natural Gamma

Natural Gamma

COAL LITHOLOGY LOG