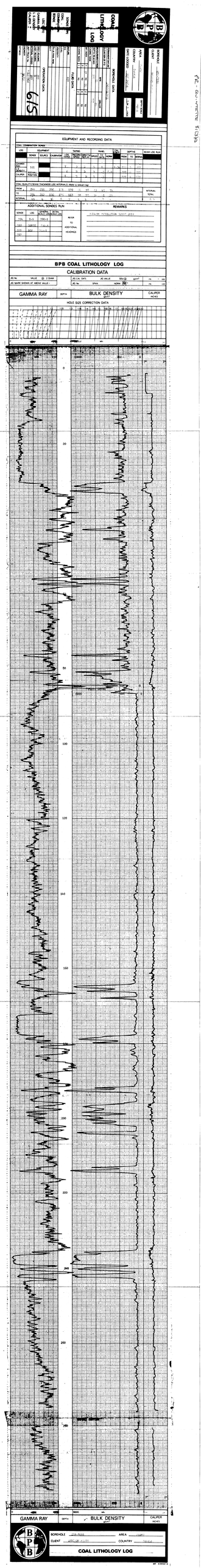
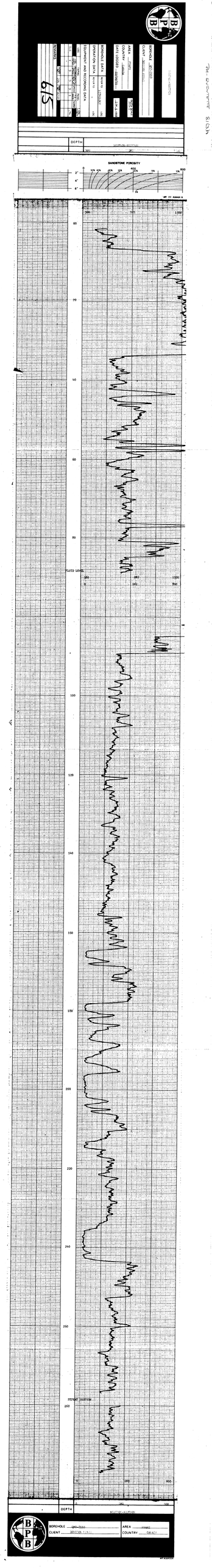

BPB COAL LITHOLOGY LOG
EQUIPMENT AND RECORDING DATA
BPB COAL LITHOLOGY LOG
CALIBRATION DATA
GAMMA RAY
BULK DENSITY
CALIPER
HOLE SIZE CORRECTION DATA
REMARKS
ADDITIONAL SONDES RUN
FIELD DATA
BOREHOLE
CLIENT
AREA
COUNTRY
COAL LITHOLOGY LOG



BOREHOLE
CLIENT
AREA
COUNTRY
DATE LOGGED
BOREHOLE DATA
OPERATION DATA
EQUIPMENT AND RECORDING DATA
LOG
REMARKS
615
DEPTH
SANDSTONE POROSITY
FLUID LENGTH
DEPTH
BOREHOLE
CLIENT
AREA
COUNTRY

BP - QUONTE 8/13/84

SONIC

BOREHOLE QMR-8110
CLIENT DENISON MINES

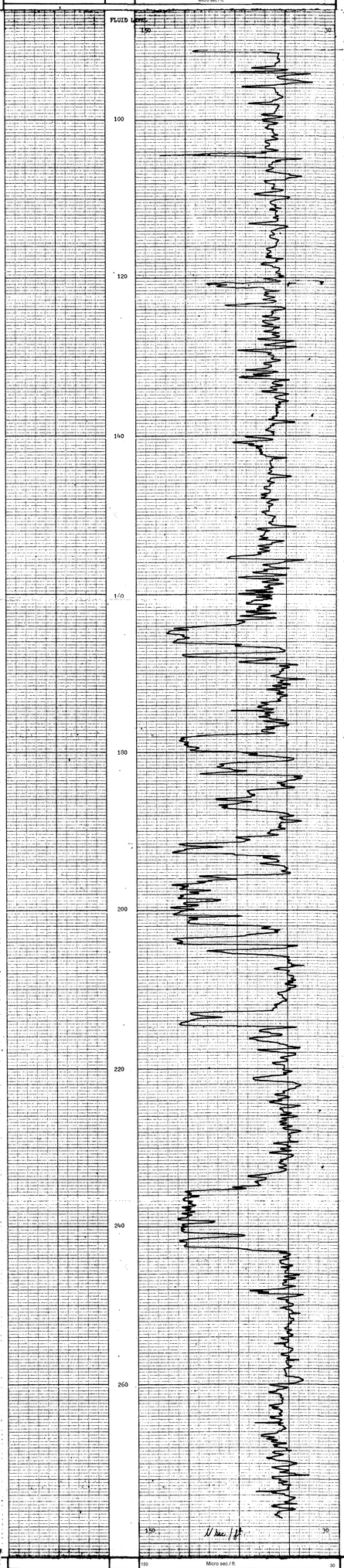
AREA FRAME
COUNTRY CANADA
DATE LOGGED 1 of 1 LOGS

DEPTH SCALE 1:200

EQUIPMENT AND RECORDING DATA
LOG SONIC
TAPING
PANEL
CONT. 7 SPEED 7 SENS. NORM
REMARKS

BOREHOLE DATA REFER TO LOG
OPERATION DATA REFER TO LOG

DEPTH | MEDIUM SPACED
150 Micro sec / ft. 30



DEPTH | MEDIUM SPACED
150 Micro sec / ft. 30

BOREHOLE QMR-8110
CLIENT DENISON MINES
AREA FRAME
COUNTRY CANADA

MT A584538

PR-QUINTETTE 8/(3)A

GAMMA RAY NEUTRON- NEUTRON

BOREHOLE OMR 8110
CLIENT QUINTETTE COAL — 6/15
AREA FRAME
COUNTRY CANADA
DATE LOGGED 22-9-81
DEPTH SCALE 200:1
1 of 1 LOGS

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

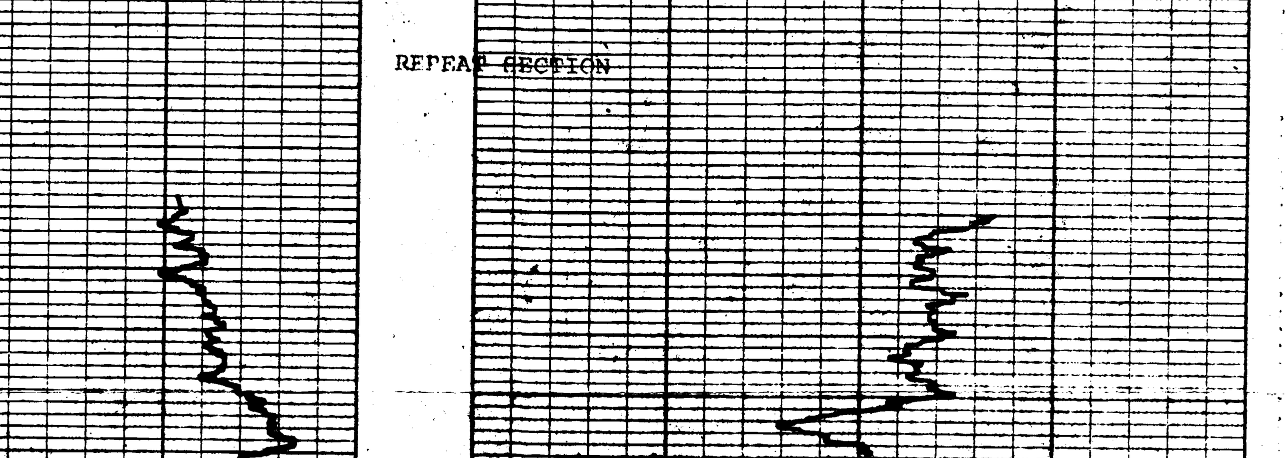
EQUIPMENT AND RECORDING DATA

LOG	LOG TAPED	RECORD DIRECT or REPLAY	SPEED	SONDE NO	SOURCE NO	PANEL SPEED	T.C SECS	NORM	CAL COEFF
GAMMA	Y	R	9			9	1		
N-N	Y	R	9			9	1/3	.74	1.54

REMARKS
TIME CONSTANT ON GAMMA RAY
CHANGE FROM 2 SEC TO 1 SEC AT 90
METER LEVEL.
REPLAY AS REQUESTED

0 API 150	DEPTH	500 SNU 1500

SANDSTONE POROSITY



MY (1) A58451 R

0 API 150	DEPTH	0 SNU 800

BOREHOLE OMR 81 10
CLIENT QUINTETTE COAL
AREA FRAME
COUNTRY CANADA

MY A58452R

BPB

COAL LITHOLOGY LOG

BOREHOLE	QMR-8111
CLIENT	DENISON MINES
AREA	FRAME
COUNTRY	CANADA
DATE LOGGED	23/09/81
DEPTH SCALE	200:1
	1 OF 5 LOGS

SONDE TYPE: COAL COMBINATION SONDE

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

BOREHOLE DATA

PERMANENT DATUM	GROUND LEVEL	
ELEVATION OF P.D.		
MEASUREMENTS FROM	BPB: GL	DRILLER: GL
DEPTH REACHED	187	189
CASING SHOE		
BIT SIZES	1: 5" TO TD	2: TO
	3: TO	4: TO
CASING SIZES	1: TO	2: TO

FLUID DATA

NATURE	AIR
SG	
LEVEL	
VISCOSITY	
Rm at meas. temp	
BHT	

OPERATION DATA

FIRST READING	187
LAST READING	0
INTERVAL LOGGED	187
UNIT-TRUCK No	HELI-BOX
ENGINEER	
WITNESS	DM/EF

615

Re. QUINTETTE 81(3)

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM	CAL COEFF	FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY	101			Y	9	D	9	2		1.54	187	0	187	
L.S. DENSITY				Y	9	D	9	.3	8.0		187	0	187	
CALIPER	SIDEWALL POSITION			Y	9	D	9	.3			187	0	187	

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

FROM		INTERVAL
TO		TOTAL
INTERVAL		

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	
204	N-N	200:1		REFER TO ADDITIONAL HEADINGS
SONIC		200:1		
221/217	DIP	200:1		

REMARKS

MEDIUM SPACED SONIC ONLY

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

BPB

BOREHOLE	QMR-8111	AREA	FRAME
CLIENT	DENISON MINES	COUNTRY	CANADA

COAL LITHOLOGY LOG

MY A50261 E

NEUTRON - NEUTRON

BOREHOLE GMR-0111

CLIENT DENISON MINES

AREA FRAME

COUNTRY MULGA

DATE LOGGED 22/09/91

CAPTIVE SCALE 20:1

2 of 2 (000)

BOREHOLE DATA REFER TO LOG

OPERATION DATA REFER TO LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	CAL
1	1	1	1

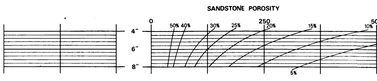
LOG	RECORDING SPEED	SPEED	TIME	NORM
1	5	3	1	2%

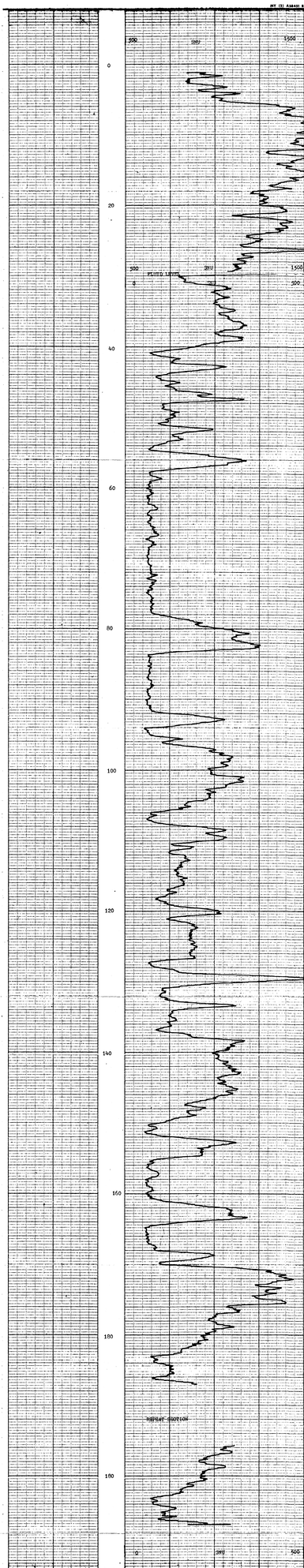
REMARKS

615

DEPTH

NEUTRON-NEUTRON





DEPTH

NEUTRON-NEUTRON

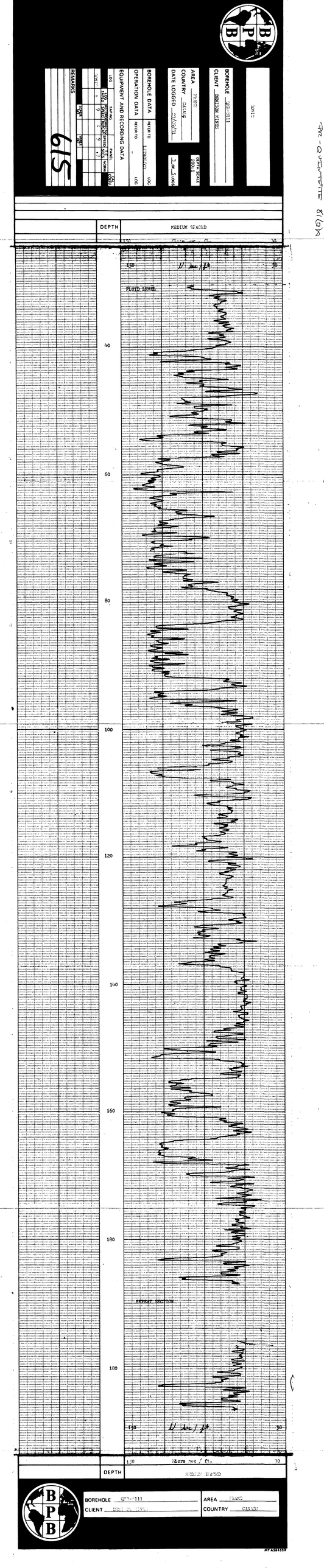
BOREHOLE GMR-0111

CLIENT DENISON MINES

AREA FRAME

COUNTRY MULGA

MT A58481 R


BPB
CITY
BOREHOLE GWS-3111
CLIENT PRAIRIE MINES
AREA PRAIRIE
COUNTRY CANADA
DATE LOGGED 27/12/78
DEPTH SCALE 2000 1
1 OF 1 LOGS
BOREHOLE DATA
REFER TO LOG
OPERATION DATA
REFER TO LOG
EQUIPMENT AND RECORDING DATA
LOG
TRACKS
RECORDED
SPEED
PANEL
NORM
CORR
REMARKS
DEPTH
MEDIUM STACKED
150
Micro sec / ft.
30
11 Dec / 78
FLUID LEVEL
REPEAT SECTION
BOREHOLE GWS-3111
CLIENT PRAIRIE MINES
AREA PRAIRIE
COUNTRY CANADA

GAMMA RAY & NEUTRON - NEUTRON LOGS

BOREHOLE [illegible]
CLIENT [illegible]

AREA [illegible]
COUNTRY [illegible]
DATE LOGGED [illegible]

DEPTH SCALE 200:1
__ OF __ LOGS

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

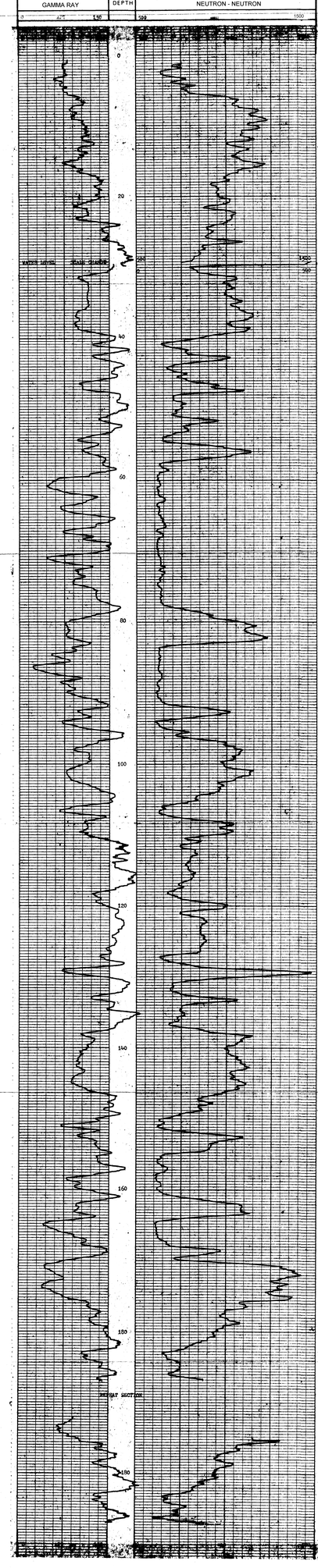
EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	LOG

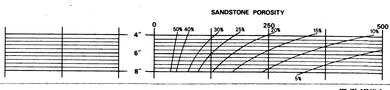
LOG	RECORDING	SPEED	NORM
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

REMARKS

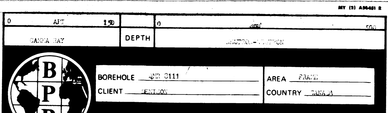
615



SANDSTONE POROSITY



MY (3) A3640) B



BOREHOLE [illegible]
CLIENT [illegible]

AREA [illegible]
COUNTRY [illegible]

MY A1643B

PR-QUINTETTE 81(3)A

BPB

High Resolution Sonic

BOREHOLE QMR-8112

CLIENT Denison Mines

AREA Frame

COUNTRY Canada

DATE LOGGED 21.09.25

DEPTH SCALE 1:200

2 OF 6 LOGS

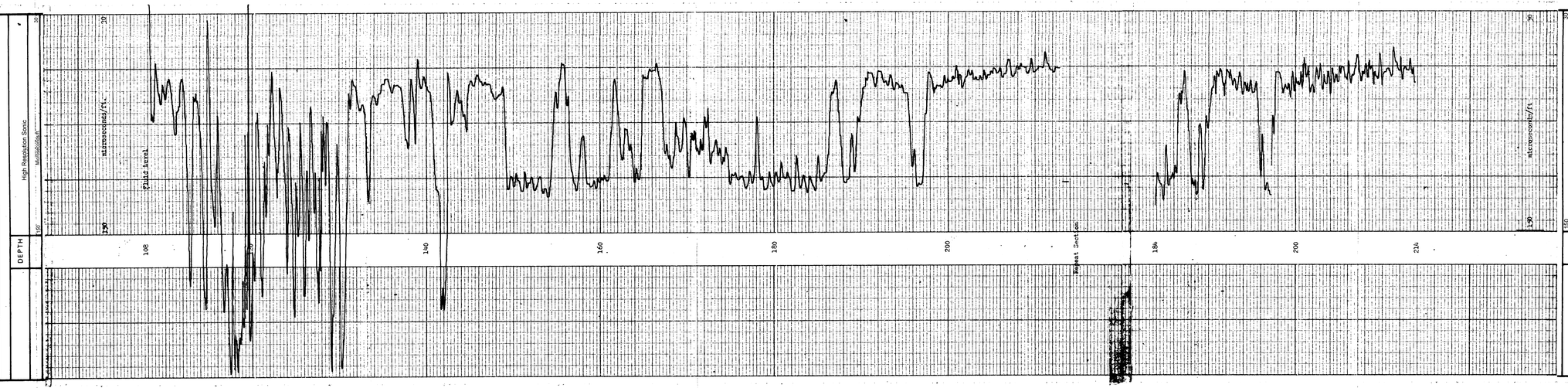
BOREHOLE DATA	REFER TO Lithology	LOG
OPERATION DATA	REFER TO Lithology	LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL			CAL COEFF
	LOG TAPED	RECORDING SPEED	DIRECTOR REPLAY	SPEED	T.K. SECS	NORM	
Sonic	✓	9	D	9			
		SCALE NO	321	SHEET NO			

REMARKS

615



BOREHOLE QMR-8112

CLIENT Denison Mines

AREA Frame

COUNTRY Canada

BPB

COAL LITHOLOGY LOG

615

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

FROM	198	190	143	63	28	INTERVAL TOTAL
TO	194	148	136	61	16	
INTERVAL	4	52	7	2	8	= 73m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
321	Sonic	1:200	
204	N-N	1:200	
Dip.	201/217	1:200	

REFER TO ADDITIONAL HEADINGS

REMARKS

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. VALUE 63 @ 2 DIAM — JIG MARK SHOWN AT ABOVE VALUE

JIG CAL DATE — JIG VALUE — SDU @ g/cm³ — 7 ins 717 cps

JIG No — SPAN — NORM SDU/CPS = 2.0 — 2 ins 500 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA

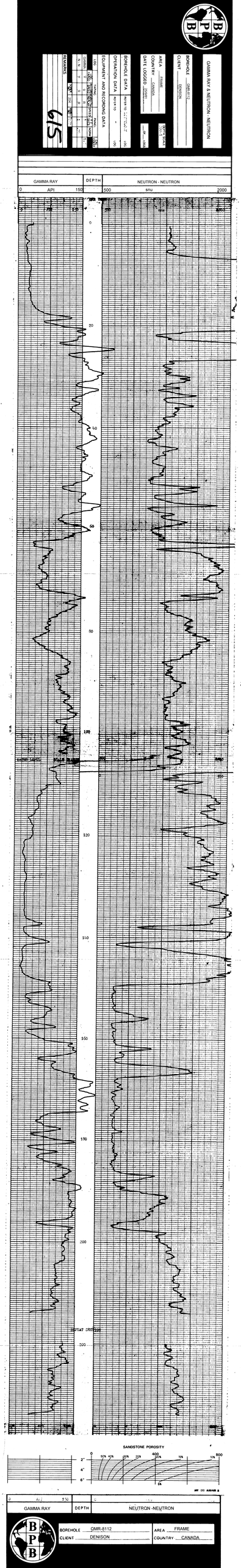
GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

BOREHOLE ONR 3112 — AREA Frame

CLIENT Denison Mines — COUNTRY Canada

COAL LITHOLOGY LOG

MY A50261 R


GAMMA RAY & NEUTRON - NEUTRON
BOREHOLE
CLIENT DENISON
AREA FRAME
COUNTRY CANADA
DATE LOGGED
BOREHOLE DATA
OPERATION DATA
EQUIPMENT AND RECORDING DATA
REMARKS
GAMMA RAY
DEPTH
NEUTRON - NEUTRON
0 API 150
500 snu 2000
SANDSTONE POROSITY
BOREHOLE OMR-8112
CLIENT DENISON
AREA FRAME
COUNTRY CANADA

PRE-QUINTETTE 81(3)A

Neutron-Neutron

BOREHOLE 2ND FILE

CLIENT DRIVING MINES

AREA PLANT

COUNTRY CANADA

DATE LOGGED 31.09.25

DEPTH SCALE 1:200

1 OF 1 LOGS

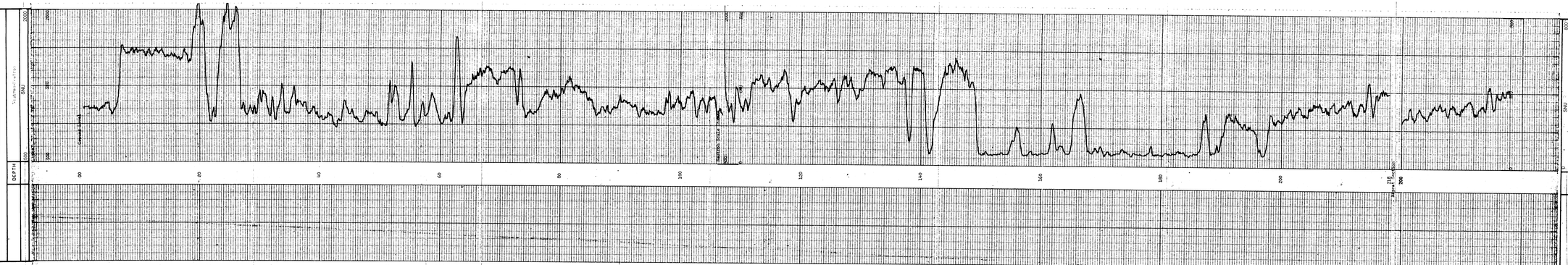
BOREHOLE DATA	REFER TO	Lithology LOG
OPERATION DATA	REFER TO	Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL			CAB COUNT
	LOG PAPER	RECORDING SPEED	REPLAY	SPEED	SCALE	NORM	
X-N	Y	9	0	9	1	.75	
		MOVE 5%	20%	MOVE 5%	20%		

REMARKS

615



NEUTRON - NEUTRON

BOREHOLE 2ND FILE

CLIENT DRIVING MINES

AREA PLANT

COUNTRY CANADA

GAMMA RAY & NEUTRON - NEUTRON

BOREHOLE QMR-8113
CLIENT DENISON

AREA [illegible]
COUNTRY [illegible]
DATE LOGGED [illegible]

DEPTH SCALE 20:1 1:1
— OR — LOGS

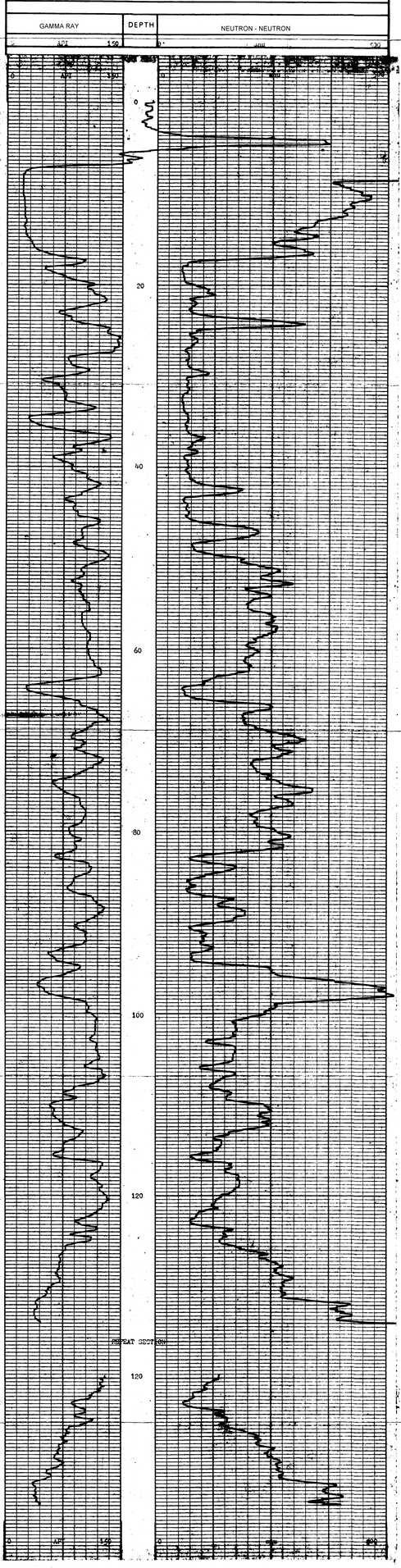
BOREHOLE DATA — REFER TO MASTER LOG — LOG
OPERATION DATA — REFER TO " — LOG

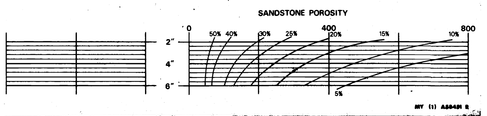
EQUIPMENT AND RECORDING DATA

LOG	TAPE NO.	RECORDING SPEED	PANEL	SENS.	CAL. COEFF.
GAMMA RAY	[illegible]	2	1		
NEUTRON	[illegible]	2	1	1	1.21

REMARKS

615





MY (1) A584528

API 150 | DEPTH | 400

GAMMA RAY | NEUTRON - NEUTRON

BOREHOLE [illegible]
CLIENT [illegible]
AREA [illegible]
COUNTRY [illegible]

MY A584528

COAL LITHOLOGY LOG

BPB

BOREHOLE
CLIENT
AREA
COUNTRY
DATE LOGGED
LOGGING ENGINEER
OPERATOR

BOREHOLE DATA

DRILLER'S DEPTH			
LOGGER'S DEPTH			
CASING DEPTH			
CASING SIZE			
CASING WEIGHT			
BIT SIZE			
FLUID TYPE			
FLUID LEVEL			
MAX. REC. TEMP.			
TIME SINCE CIRC.			
RECORDED BY			
WITNESSED BY			

OPERATION DATA

	RUN 1	RUN 2	RUN 3
DATE			
TIME			
RECORDED DEPTH			
LOGGING SPEED			
TIME CONSTANT			

LOG TYPE
GAMMA RAY
NEUTRON
CALIPER

SONDE TYPE
COAL COMBINATION BOREHOLE

615

EQUIPMENT AND RECORDING DATA

COAL COMBINATION BOREHOLE

LOG	EQUIPMENT: SONDE	SOURCE	CALIBRATION	TAPING: LOG STARTED	RECORD SPEED	DIRECT or REPLAY	PANEL: SPEED	T.C. SECS	NORM	DEPTHS: FROM	TO	SEAM LOG RUN: INTERVAL	TOTAL
GAMMA RAY													
DENSITY													
CALIPER													
POSITION													

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

																				INTERVAL TOTAL
FROM																				
TO																				
INTERVAL																				

ADDITIONAL SONDES RUN

SONDE	LOG	SERIAL No.	DATE SONDE LOGGED

REFER TO ADDITIONAL HEADINGS

REMARKS

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No	VALUE @ 2 DIAM	JIG CAL DATE	JIG VALUE	SDU @ g/cm³	n/s	GRS
JIG MARK SHOWN AT ABOVE VALUE -		JIG No	SPAN	NORM	n/s	GRS

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

HOLE SIZE CORRECTION DATA

REPEAT SECTION

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

BPB

BOREHOLE
CLIENT
AREA
COUNTRY

COAL LITHOLOGY LOG

BPB A 330341 9

PR-QUINTETTE 81(3)

Sonic

BOREHOLE QMR 3113

CLIENT Denison Mines

AREA Frame

COUNTRY Canada

DATE LOGGED 81 09 27

DEPTH SCALE 1:200

1 OF 6 LOGS

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

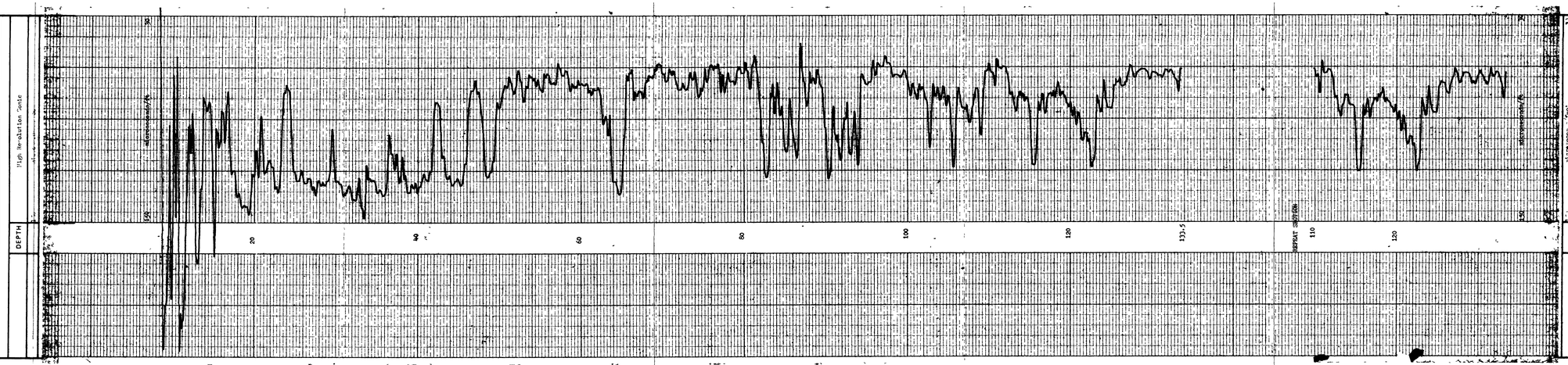
EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL			CAL COEFF
	LOG TAPED	RECORDING SPEED	DIRECTION REPLAY	SPEED	T.C. SECS	NORM	
Sonic	Yes	9	D	9	1	-	-
		SCALE NO	321	SCALE NO			

REMARKS

High Resolution Channel only.

615



BOREHOLE QMR 3113

CLIENT Denison Mines

AREA Frame, B.C.

COUNTRY Canada

Pr. Quintette 81/3h

NEUTRON - NEUTRON

BOREHOLE QMR-8113
CLIENT Denison Mines

AREA Frame, B.C.
COUNTRY Canada
DATE LOGGED 81 09 27

DEPTH SCALE 1:200
2 of 6 LOGS

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

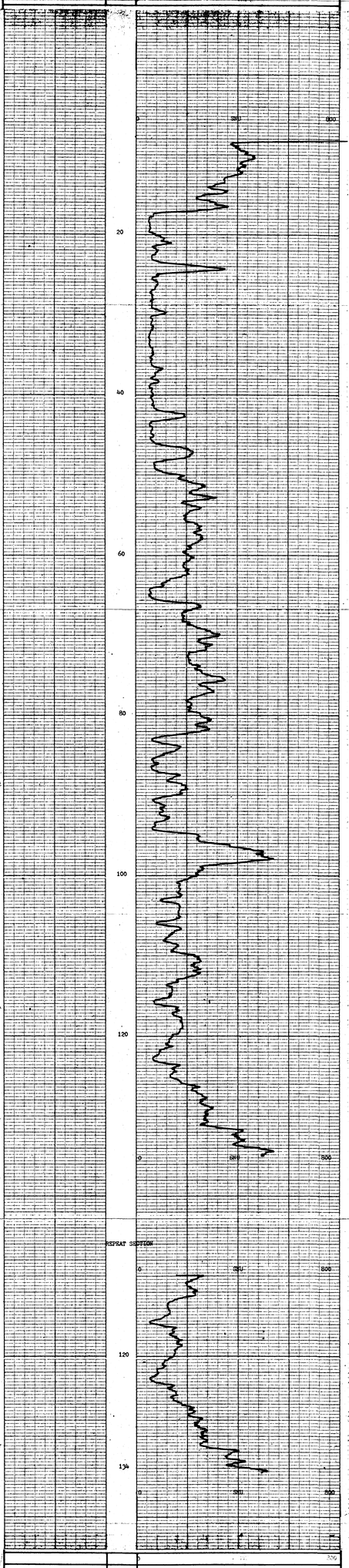
EQUIPMENT AND RECORDING DATA

LOG	TAPING				PANEL	CAL LOG
	LOG SPEED	RECORDING SPEED	SCALE	SPEED	SCALE	NORM
N-1	Yes	9	D	9	1	.75

SCALE FOR NEUTRON 1/60/27

REMARKS

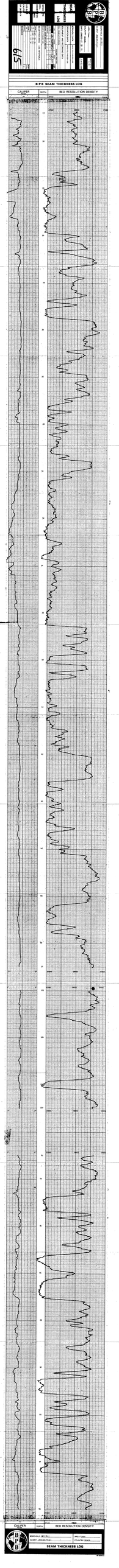
615

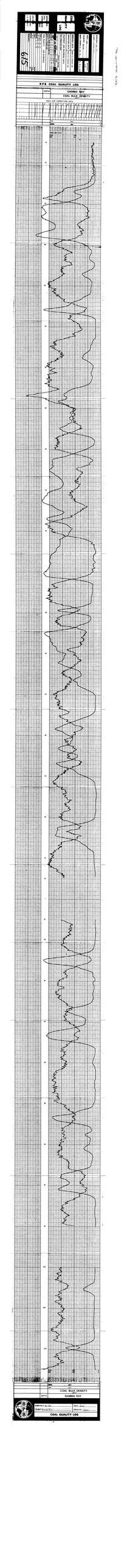


DEPTH — Neutron-Neutron

BOREHOLE QMR 8113
CLIENT Denison Mines
AREA Frame, B.C.
COUNTRY Canada

MYA384333


S19
B P B SEAM THICKNESS LOG
CALIPER
DEPTH
BED RESOLUTION DENSITY
SEAM THICKNESS LOG


519
BPB COAL QUALITY LOG
GAMMA RAY
COAL BULK DENSITY
HOLE SIZE CORRECTION (INCH)
COAL BULK DENSITY
GAMMA RAY
COAL QUALITY LOG

Pr. Quintette 81/3/2

GUIDA RAY NEUTRON-NEUTRON

BOREHOLE OMR 81 14
CLIENT QUINTETTE COAL

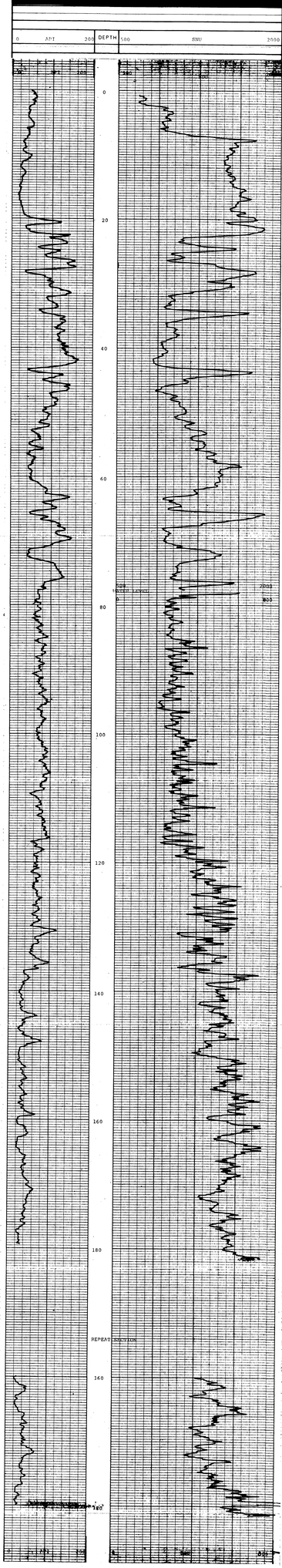
AREA FRAME
COUNTRY CANADA
DATE LOGGED 28-9-81

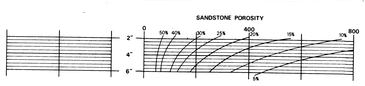
LOGGED SCALE 1:200

BOREHOLE DATA
OPERATION DATA
EQUIPMENT AND RECORDING DATA

LOG	TAPING	FRAME	LOG
CAMBIO	1	1	1
N-N	1	1	1
	1	1	1
	1	1	1

REMARKS
REPEAT AS REQUESTED
6/5





0 API 200 DEPTH 0 SNU 800

BOREHOLE OMR 81 14
CLIENT QUINTETTE COAL
AREA FRAME
COUNTRY CANADA

Pre-Quintette 81(3)

SONIC

BOREHOLE GMR 8114

CLIENT Denison Mines

AREA Fraser

COUNTRY Canada

DATE LOGGED 23 09 81

DEPTH SCALE 1:200

2 OF 5 LOGS

BOREHOLE DATA — REFER TO Lithology LOG

OPERATION DATA — REFER TO Lithology LOG

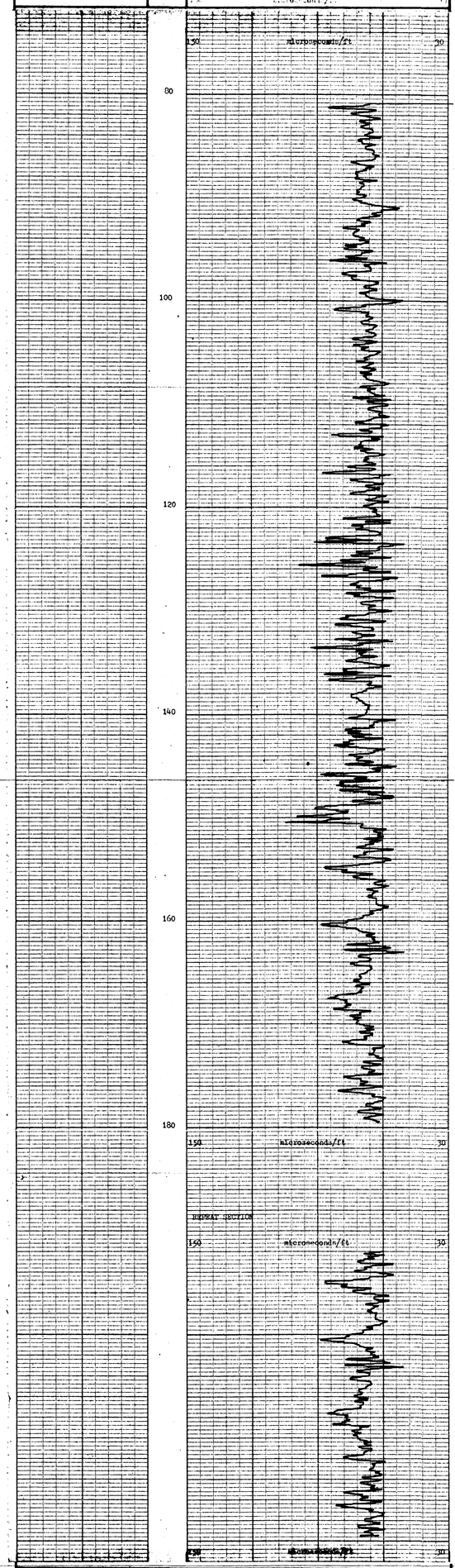
EQUIPMENT AND RECORDING DATA

LOG	TAPING		PANEL	CAL COEFF
SONIC	TAPE SPEED	RECORDING SPEED	SPEED	NORM
	7	2	9	1

REMARKS

SCALE NO 321 SHEET NO 1

615



BOREHOLE GMR 8114

CLIENT Denison Mines

AREA Fraser

COUNTRY Canada

MYA36455R

BPB

COAL LITHOLOGY LOG

SONDE TYPE: GAMMA RAY DENSITY CALIPER

LOG @ SITE: GAMMA RAY DENSITY CALIPER

SONDE COMBINATION: SONDE

BOREHOLE DATA

BOREHOLE NO. (ELEV.): 615

CLIENT: Amoco Minerals

AREA: Powder River Basin

COUNTRY: Wyoming

DATE LOGGED: 10-23-81

DEPTH DRILLER: 1,240'

DEPTH LOGGER: 1,240'

BTM. LOG INTERVAL: 1,240'

TOP LOG INTERVAL: 0'

CASING: DRILLER 8 5/8" @ 1,240' LOGGER

TYPE FLUID IN HOLE: Water

DENSITY: 8.4 LB/GAL

VISCOSITY: 28 SEC

PH: 7.0

FLUID LOSS: 10 ML

SOURCE OF SAMPLE: CUTTINGS

RM @ MEAS. TEMP.: .75 @ 70 °F

RMF @ MEAS. TEMP.: .75 @ 70 °F

RMC @ MEAS. TEMP.: .75 @ 70 °F

RM @ BHT: .75 @ 70 °F

TIME SINCE CIRC.: 4 HRS.

MAX. REC. TEMP.: 70 °F

EQUIP. LOCATION: 6 MILES SOUTH OF SUNDANCE

RECORDED BY: DENNIS STOCK

WITNESSED BY: MR. BOB MCCLAIN

OPERATION DATA

RIG NO.: 615

TRUCK NO.: 3

ENGINEER: [illegible]

WITNESS:

LOGGING DATA

LOG NO.: 1

RUN NO.: 1

DATE: 10-23-81

TIME: 1400

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT: SONDE	EQUIPMENT: CALIBRATOR	TAPING: LOG SPEED	TAPING: RECORD DIRECT	TAPING: RECORD AMPLIFY	PANEL: SPEED	PANEL: SENS. NORM	CAL. PULSE NORM	DEPTHS: FROM	DEPTHS: TO	DEPTHS: NEUTRAL	SEAM LOG RUN
GAMMA RAY			1	9	2	5	1		1,240'±	0	879.0	
DENSITY / SIDEWALL POSITION			1	9	2	5	1		879.5	0	879.0	
CALIPER			1	9	2	5	1/1		879.5	0	879.0	

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

	FROM	TO	INTERVAL
	22.45		
	23.15		INTERVAL TOTAL
INTERVAL	6.27		33

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE	DETAIL LOG SCALE	LOG
[illegible]	-	1:500		
[illegible]	Y	1:100		

REFER TO ADDITIONAL HEADINGS

REMARKS

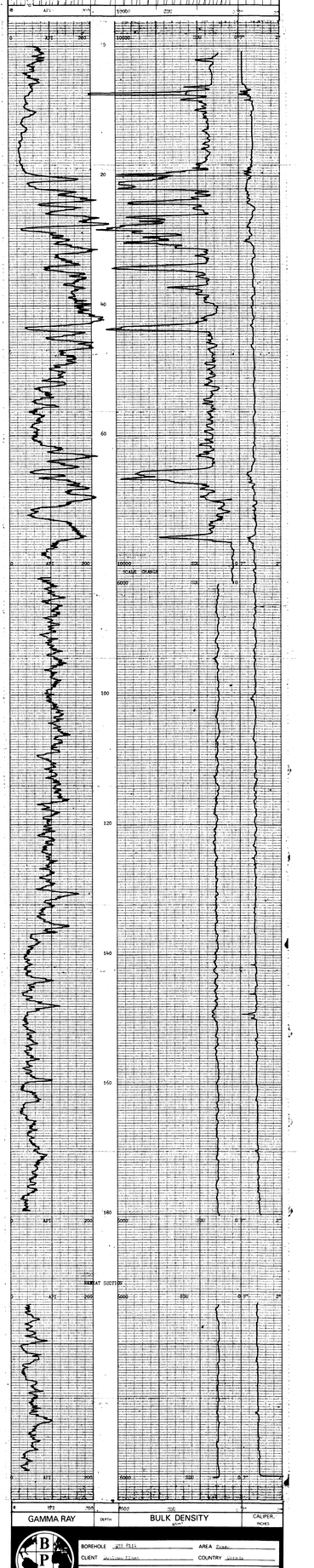
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

AC No.	VALUE @ 2 OHM	AC CAL DATA	AC VALUE	SDU @ 60HZ	m/s	cps
AC MARK SHOWN AT ABOVE VALUE ↓		AC No.	SPAN	NORM PAY	m/s	cps

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

HOLE SIZE CORRECTION DATA



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

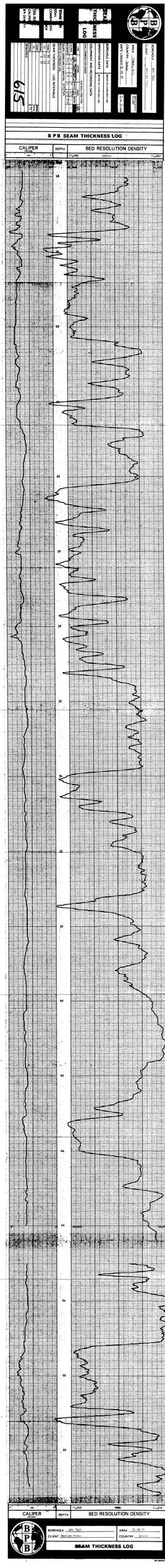
BPB

BOREHOLE 615 Fig. 1 — AREA Powder River Basin

CLIENT Wyoming Fuels — COUNTRY Wyoming

COAL LITHOLOGY LOG

NO. A100381 B



BPB
SEAM THICKNESS LOG
BOREHOLE
CLIENT
AREA
COUNTRY
DATE LOGGED
BOREHOLE DATA
OPERATION DATA
EQUIPMENT AND RECORDING DATA
SEAM THICKNESS LOG INTERVALS
SEAM THICKNESS LOG
CALIPER
DEPTH
BED RESOLUTION DENSITY
SBRDU
CALIPER
DEPTH
BED RESOLUTION DENSITY
BOREHOLE
CLIENT
AREA
COUNTRY
SEAM THICKNESS LOG

BPB

COAL QUALITY LOG

BOREHOLE 1 CLIENT Smoky River Coal
AREA Smoky River, Alta.
COUNTRY Canada
DATE 1980-Jan-25

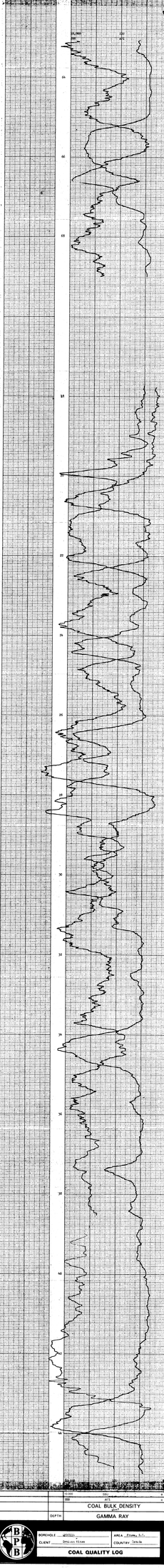
EQUIPMENT DATA Mark III Uphole Logger
OPERATOR DATA Mark III Uphole Logger
CALIBRATION DATA Mark III Uphole Logger

BOREHOLE TYPE	COAL QUALITY LOG	
DRILLING METHOD		
BIT SIZE	6.25	
CASING SIZE	6.25	
CASING DEPTH	1.0	
GAMMA RAY CALIBRATION	1.0	
GAMMA RAY SENSITIVITY	1.0	
LS DENSITY CALIBRATION	1.0	
LS DENSITY SENSITIVITY	1.0	

615

BPB COAL QUALITY LOG

DEPTH	GAMMA RAY / COAL BULK DENSITY
HOLE SIZE CORRECTION DATA	
	150 API
	1.0 g/cc



	10,000 CPS	150 API
	1.0 g/cc	4.0 g/cc
DEPTH	COAL BULK DENSITY / GAMMA RAY	

BPB

BOREHOLE 1 AREA Smoky R.C.
CLIENT Smoky River Coal COUNTRY Canada

COAL QUALITY LOG

Pr - QUINTETTE 81(3)A

BOREHOLE QMR 811
CLIENT Denison Mines

AREA Frame
COUNTRY Canada
DATE LOGGED 25 09 81

DEPTH SCALE 1:200
1 of 5 1000

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

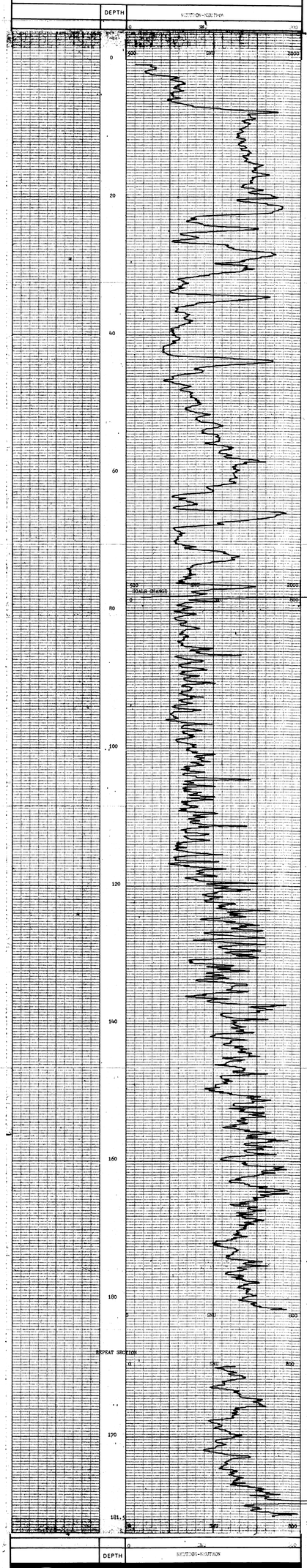
EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL				
	LOG	RECORDING	SPEED	SELS	NORM	CALIB
	8-3	9	0	1		.74

	SOLID	SOLID	RELAY			

REMARKS

615



BOREHOLE QMR 811
CLIENT Denison Mines
AREA Frame
COUNTRY Canada

NEUTRON - NEUTRON

BOREHOLE QMR-8115

CLIENT DENISON MINES

AREA FRAME

COUNTRY Canada

DATE LOGGED 29.09.21

DEPTH SCALE 1:200

1 OF 5 LOGS

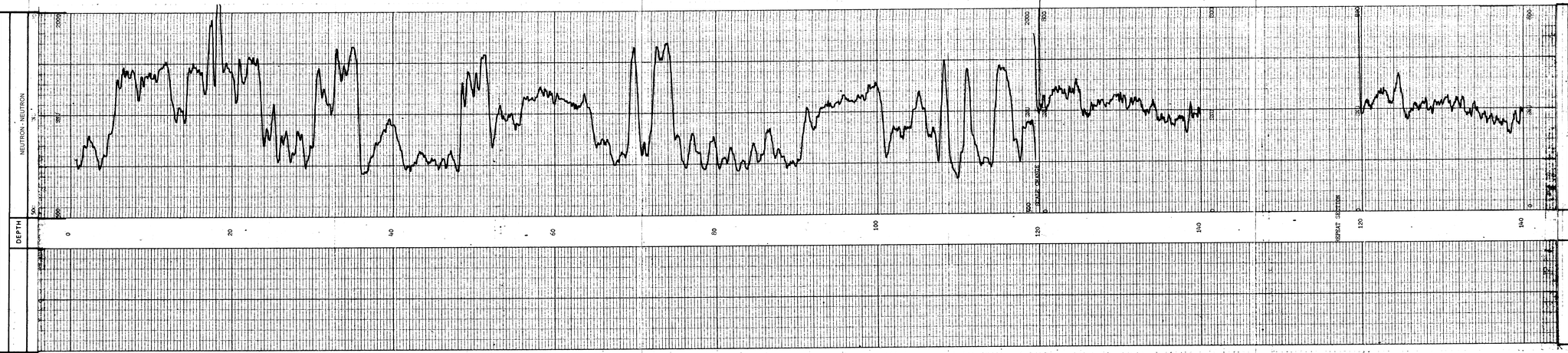
BOREHOLE DATA	REFER TO Lithology	LOG
OPERATION DATA	REFER TO Lithology	LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL			CAL COEFF
	LOG TAPED	RECORDING SPEED	RECTIFIER REPLAY	SPEED	T.C. SECS	NORM	
N-N	Y	9	D	9	1		.74
		SCALE NO.	204	SHEET NO.	6229		

REMARKS

615



BOREHOLE QMR-8115

CLIENT Denison Mines

AREA Frame

COUNTRY Canada

Sonic

BOREHOLE QMR 8115

CLIENT Denison Mines

AREA Prame, B.C.

COUNTRY Canada

DATE LOGGED 81 09 29

DEPTH SCALE 1:200

2 of 5 LOGS

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

EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL		
	LOG TAPED	RECORD SPEED	DIRECT/ REPLAY	SPEED	TC SECS	NORM
Sonic	Yes	9	D	9	1	-
	SONDE NO			SOURCE NO		

CAL COEFF: 0

REMARKS

612

	DEPTH	High Resolution Sonic
		150 microseconds/ft 30

150 microseconds/ft 30

120

138

Repeat Section

120

138

150 microseconds/ft 30

	DEPTH	High Resolution Sonic
		150 microseconds/ft 30

BOREHOLE QMR 8115

CLIENT Denison Mines

AREA 81 09 29

COUNTRY Canada

MY A584528

BPB

COAL LITHOLOGY LOG

LOG SUITE: GAMMA RAY CALIPER

SONDE TYPE

COAL COMBINATION SONDE

BOREHOLE
WELL: GPC 615
CLIENT: Denison Mines

AREA: Elsake, B.C.
COUNTRY: Canada
DATE LOGGED: 81.09.28
RUN NUMBER: 2
DEPTH DRILLER: 1400
DEPTH LOGGER: 1399
BOTTOM LOGGED INTERVAL: 1399
TOP LOGGED INTERVAL: 0
CASING TYPE: Steel
CASING DEPTH: 139
CASING THICKNESS: 7mm
BIT SIZE: 152mm
TYPE FLUID IN HOLE: Drilling Mud
DENSITY: 1.3
VISCOSITY: 135
PH: 9
FLUID LOSS: 10
SOURCE OF SAMPLE: Circulation
RM @ MEAS. TEMP: 0.9 @ 20°C
RMF @ MEAS. TEMP: 0.9 @ 20°C
RMC @ MEAS. TEMP: 0.9 @ 20°C
SOURCE OF RMF & RMC: Measured
RM @ BHT: 0.9 @ 20°C
TIME SINCE CIRC.: 24 hrs
MAX. REC. TEMP.: 20°C
EQUIP. LOCATION: 3403
RECORDED BY: Dave Nicholas
WITNESS:

OPERATION DATA

BOREHOLE DATA

RUN DATA

RUN	BIT	FROM	TO	CASING	WEIGHT	GRADE	TOP	BOTTOM
1	152mm	0	139	178mm	34.2 kg/m	J55	0	139
2	152mm	139	1400					

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT: SONDE	EQUIPMENT: SOURCE	EQUIPMENT: CALIBRATOR	TAPING: LOG TAPED	TAPING: RECORD SPEED	TAPING: DIRECT/ REPLAY	PANEL: SPEED	PANEL: TC SECS	PANEL: NORM	CAL. OUT?	DEPTHS: FROM	DEPTHS: TO	DEPTHS: MEAS/CAL	SEAM LOG RUN
GAMMA RAY	101			Yes	9	D	9	1		1.5	138	0	138	Yes
DENSITY	101	5700		Yes	9	D	9	1/3	9.0		139	1	138	Yes
CALIPER				Yes	9	D	9	1/3			139	1	139	Yes

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

FROM	113	75	53	38		INTERVAL TOTAL
TO	101	67	47	11		
INTERVAL	12	8	6	27		53m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE	DETAIL LOGICAL LOG
701	7-X	1:200	
321	Sonic	1:200	
707/801	Dip.	1:200	

REFER TO ADDITIONAL HEADINGS

REMARKS

BPB COAL LITHOLOGY LOG

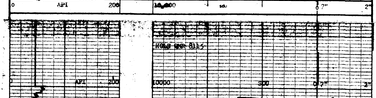
CALIBRATION DATA

JG No. VALUE 6.3 @ 2 DIAM
JG MARK SHOWN AT ABOVE VALUE -

JG CAL DATE: JG VALUE 4.990 SDU @ 600 kg/m³ 2 m/s 916 cps
JG No. SPAN NORM 8.0 2 m/s 500 cps

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

HOLE SIZE CORRECTION DATA



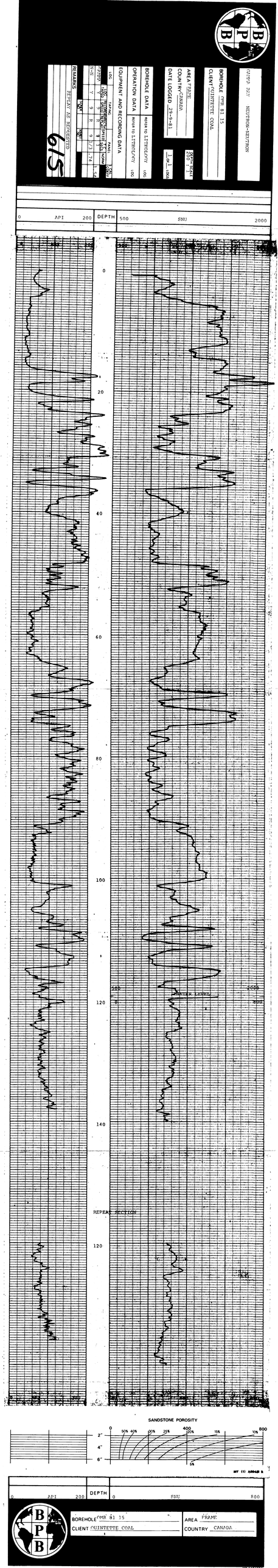
GAMMA RAY | DEPTH | BULK DENSITY g/cm³ | CALIPER INCHES

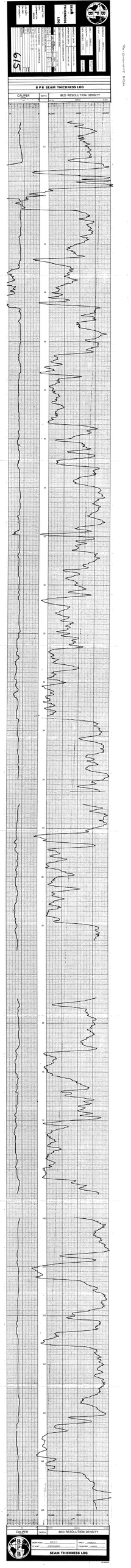
BPB

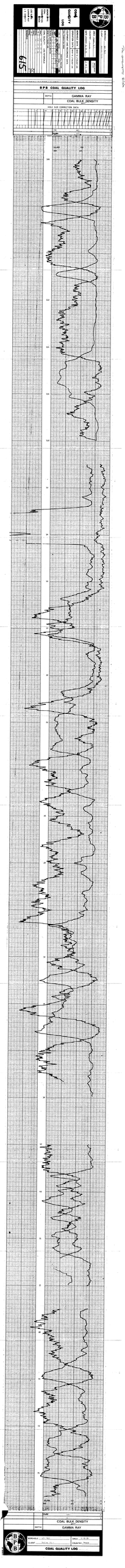
BOREHOLE GPC 615 | AREA Elsake, B.C.
CLIENT Denison Mines | COUNTRY Canada

COAL LITHOLOGY LOG

MT A30341 6


BPB
GAMMA RAY NEUTRON-NEUTRON
BOREHOLE CMR 81 15
CLIENT QUINTETTE COAL
AREA PEACE
COUNTRY CANADA
DATE LOGGED 29-9-81
BOREHOLE DATA
OPERATION DATA
EQUIPMENT AND RECORDING DATA
REMARKS
REPEAT SECTION
WATER LEVEL
SANDSTONE POROSITY
BOREHOLE CMR 81 15
CLIENT QUINTETTE COAL
AREA PEACE
COUNTRY CANADA


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


SI9
COAL QUALITY LOG
EPB COAL QUALITY LOG
DEPTH
GAMMA RAY
COAL BULK DENSITY
HOLE SIZE CORRECTION DATA
COAL BULK DENSITY
DEPTH
GAMMA RAY
COAL QUALITY LOG

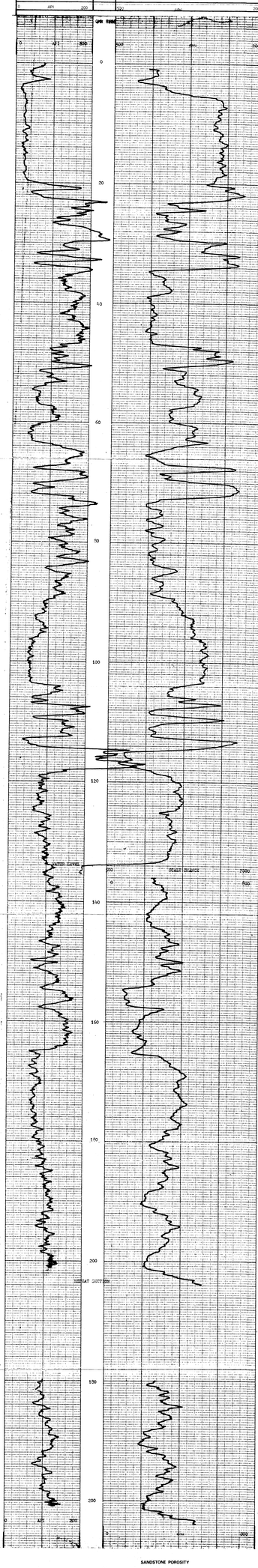
GAMMA RAY & NEUTRON-NEUTRON LOGS

BOREHOLE QMR 8116
CLIENT DENISON
AREA FRAME
COUNTRY CANADA
DATE LOGGED [illegible]

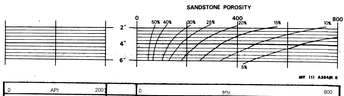
BOREHOLE DATA MEASURED FROM [illegible] LOG
MEASURED FROM [illegible] LOG
OPERATION DATA [illegible]
EQUIPMENT AND RECORDING DATA
LOG TRAVEL FRAME LOG
GAMMA RAY DETECTOR SIZE NONE
NEUTRON DETECTOR SIZE NONE
REMARKS

615

Pre-Quentite 81/3A



SANDSTONE POROSITY



MFF 115 A3640 B

0 API 200	DEPTH	0 kHz 800
GAMMA RAY		NEUTRON-NEUTRON

BOREHOLE QMR 8116
CLIENT DENISON
AREA FRAME
COUNTRY CANADA

Pa- QUINTETTE 8(3)A

COAL LITHOLOGY LOG

BOREHOLE	QMR 8116
CLIENT	Denison Mines
AREA	Frame
COUNTRY	Canada
DATE LOGGED	01 10 81
DEPTH SCALE	1:200
	1 OF 5 LOGS

SONDE TYPE: COAL COMBINATION SONDE

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

BOREHOLE DATA

	BPB	DRILLER
PERMANENT DATUM	GROUND LEVEL	
ELEVATION OF P D		
MEASUREMENTS FROM	GROUND LEVEL	
DEPTH REACHED	202m	
CASING SHOE	1 TO	2 TO
BIT SIZES	3 TO	4 TO
CASING SIZES	1 TO	2 TO

FLUID DATA

NATURE	GROUND WATER
SG	
LEVEL	123.5m
VISCOSITY	
Rm at meas temp	
BHT	

OPERATION DATA

FIRST READING	202m
LAST READING	0
INTERVAL LOGGED	202m
UNIT-TRUCK No	R011
ENGINEER	Reed/McMillan
WITNESS	

615

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM	CAL COEFF	FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY				Y	9	D	9	1		1.91	202	0	202	
L S DENSITY	SIDEWALL POSITION	101		Y	9	D	9	1		3.0	202	0	202	
CALIPER				Y	9	D	9	1/3			202	0	202	

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

					INTERVAL TOTAL
FROM	118	74	52	36	
TO	102	60	46	19	
INTERVAL	16	14	6	17	= 53

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
N-N		1:200	
DIP		1:200	

REFER TO ADDITIONAL HEADINGS

REMARKS

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No	VALUE 463 @ 2" DIAM	JIG CAL DATE	JIG VALUE 4090 SDU @ g/cm³ 7 ins 916 cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No	SPAN NORM SDU/CPS = 2 ins 500 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

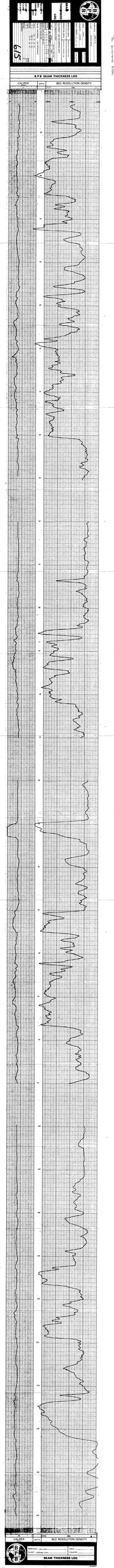
HOLE SIZE CORRECTION DATA

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

BOREHOLE QMR 8116	AREA Frame
CLIENT Denison Mines	COUNTRY Canada

COAL LITHOLOGY LOG

MY A50261 R


S19
B.P.B SEAM THICKNESS LOG
CALIPER
BED RESOLUTION DENSITY
SEAM THICKNESS LOG

Gamma 6th

BP

COAL QUALITY LOG

BOROUGH: [illegible]
FIELD: [illegible]
AREA: [illegible]
DATE: [illegible]
DATE LOGGED: [illegible]

ELEVATION: [illegible]
DATUM: [illegible]
TOTAL DEPTH: [illegible]

EQUIPMENT AND RECORDING DATA

BOREHOLE DATA	[illegible]
OPERATION DATA	[illegible]
EQUIPMENT AND RECORDING DATA	
CALIBRATION DATA	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

COAL QUALITY LOG INTERVALS

[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

REMARKS: 615

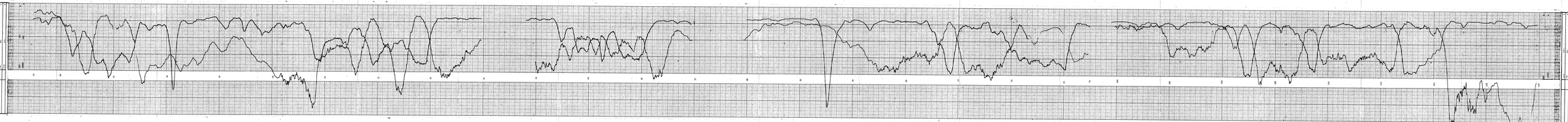
BP COAL QUALITY LOG

GAMMA RAY

COAL BLUF SERVICY

DATA

FILM SCALE



COAL BLUF SERVICY

GAMMA RAY

DATA

FILM SCALE

COAL QUALITY LOG

BP

Pre-Quintette 81(3)a

BPB

BOREHOLE QM 8116

CLIENT Denison Mines

AREA Frame

COUNTRY Canada

DATE LOGGED 29.09.81

DEPTH SCALE 1:200

1 OF 1 LOGS

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

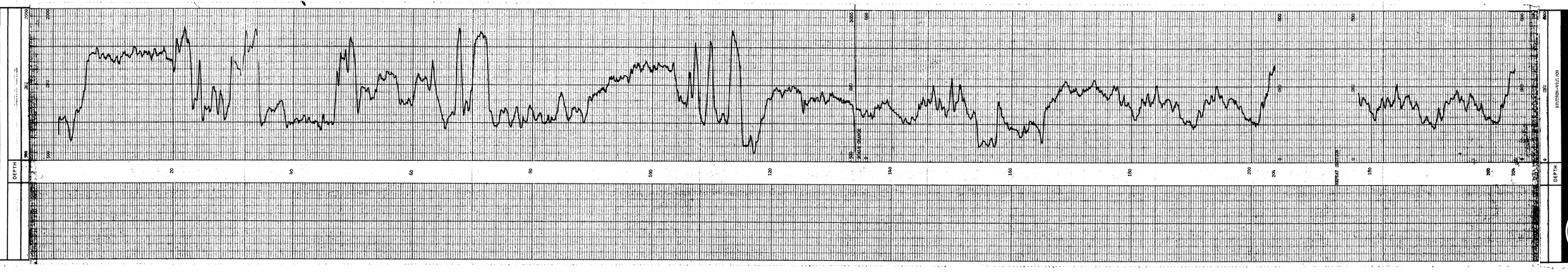
EQUIPMENT AND RECORDING DATA

LOG								CALIBRATION
	LOG TYPE	RECORDING SPEED	SAMPLING DEPTH	PANEL SPEED		NORM		
R-W	T	9	0	9	1			.24

NOISE RATIO	204	NOISE RATIO	6225

REMARKS

615



BOREHOLE QM 8116

CLIENT Denison Mines

AREA Frame

COUNTRY Canada

BPB

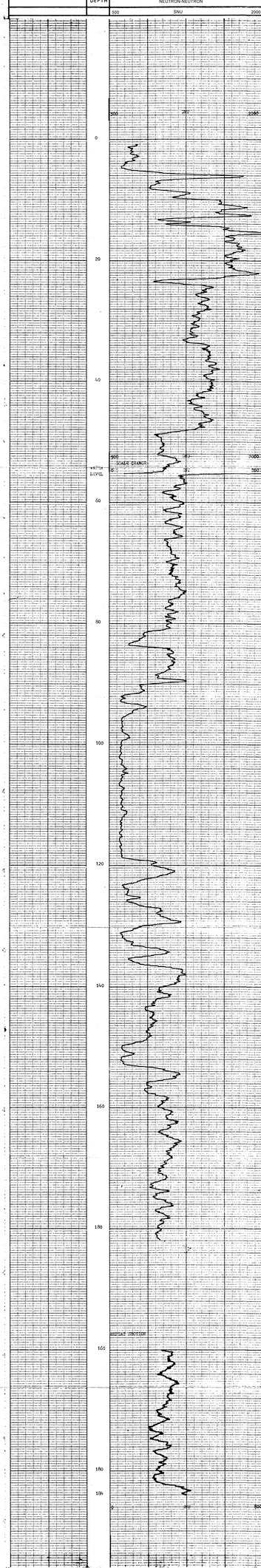
NEUTRON-NEUTRON

BOREHOLE QMR 8117
CLIENT Denison Mines

AREA Frame
COUNTRY Canada
DATE LOGGED 11-10-79

SCALE 1:1000

BOREHOLE DATA
METER TO 184.00 LOG
OPERATION DATA
METER TO 184.00 LOG
EQUIPMENT AND RECORDING DATA
LOG 1000 FAST RECORDING 1000 FAST RECORDING
DATE 11-10-79 PRINT 11-10-79
TIME 8 PM PRINT 8 PM
REMARKS
6.15



BOREHOLE QMR 8117
CLIENT Denison Mines
AREA Frame
COUNTRY Canada

BPB

COAL LITHOLOGY LOG

LOG SUITE: GAMMA/DENSITY (SLIM) CALIPER

SONDE TYPE: 2 DIAM

SONDE COMBINATION: 2 DIAM

BOREHOLE: CLIENT: COMPANY: WELL: FIELD: COUNTY: STATE: PROVINCE: AREA: COUNTRY: DATE LOGGED: RUN NO.: 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 SINCE CIRC: MAX REC TEMP: EQUIP LOCATION: RECORDED BY: WITNESSED BY:

OPERATION DATA

	RECORDED	REPEAT
DATE	13/5/91	
TIME	20:00	
CASING DEPTH	50	
BIT SIZE	50	
DEPTH DRILLER	50	
DEPTH LOGGER	50	
BTM LOG INTERVAL	50	
TOP LOG INTERVAL	0	

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT: SONDE	SOURCE	CALIBRATOR	TAPING: LOG TYPE	TAPING: RECORD CORRECT SPEED	TAPING: REPLAY	PANEL: SPEED	PANEL: GAIN NORM	DEPTHS: FROM	DEPTHS: TO	DEPTHS: MEAS	SEAM LOG RUN
GAMMA RAY				/	5	1	1	1.61	184	0	184	
DENSITY	SIDEWALL POSITION	5822		/	5	1	1	8.0	184	0	184	
CALIPER				/	5	1	1		184	0	184	

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

	INTERVAL
FROM	156 138 24
TO	148 90 4
INTERVAL	8 48 20
TOTAL	70m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL DETAIL LOG SCALE	DETAIL LOG SCALE
5-5		1:200	
202		1:200	

REFER TO ADDITIONAL HEADINGS

REMARKS

BPB COAL LITHOLOGY LOG

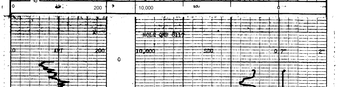
CALIBRATION DATA

JG No	VALUE @20	2 DIAM
JG MARK SHOWN AT ABOVE VALUE :		

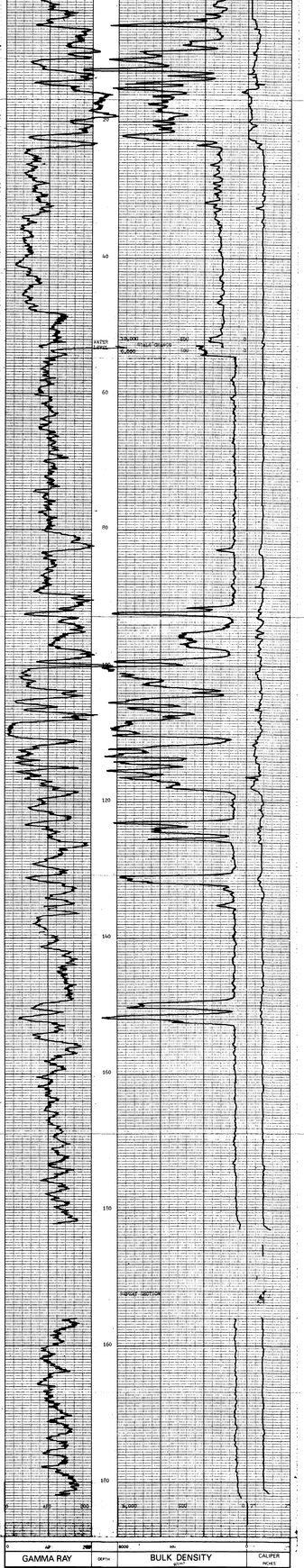
JG CAL DATA			
JG VALUE @20C	50	g/cm³	2 HS 250
JG No	SPAN	NORM 100	2 HS 500

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

HOLE SIZE CORRECTION DATA



0 API 200 | 10,000 MM 0 | 3,000 CPS 0 | 1.7 G/CC 2.7



0 API 200 | 8000 MM 0 | 30,000 CPS 0 | 1.7 G/CC 2.7

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

BPB

BOREHOLE [illegible] AREA [illegible]

CLIENT [illegible] COUNTRY [illegible]

COAL LITHOLOGY LOG

BPI 4305W

GAMA RAY NEUTRON- NEUTRON

BOREHOLE OMR 8117
CLIENT QUINTETTE COAL

AREA FRAME
COUNTRY CANADA
DATE LOGGED 1-10-81

DEPTH SCALE 200:1
1 of 1 pcs

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

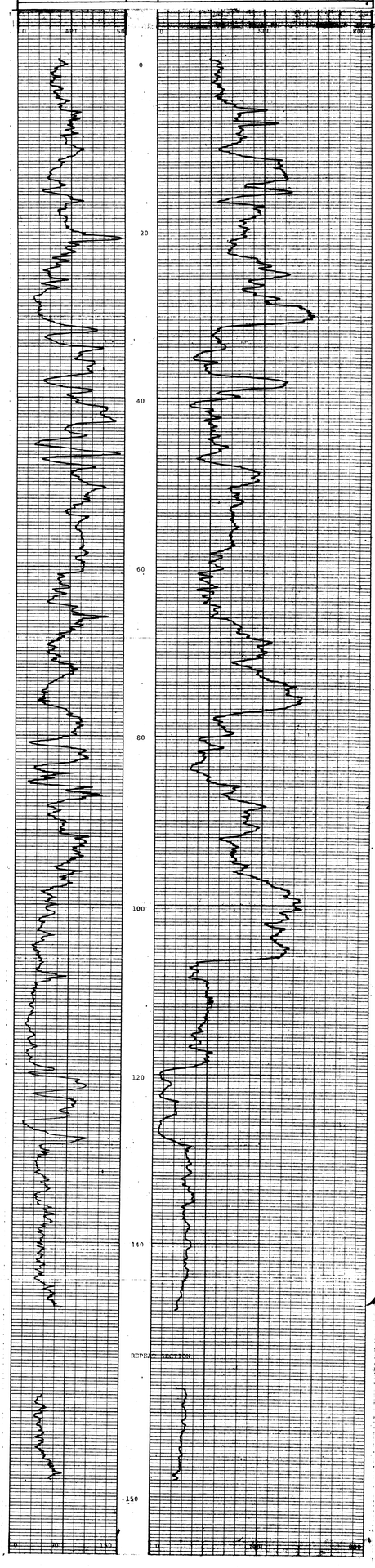
EQUIPMENT AND RECORDING DATA

LOG	RANGE	RECORDING SPEED	TC	PANEL	CAL
GAMA	0	9	1	SEC	NORM
N-N	Y	9	R	1	1.51
			9/3	.74	

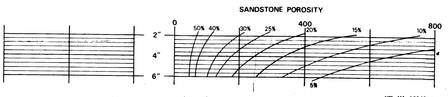
REMARKS
REPLAY AS REQUESTED

615

0 API 200 | DEPTH | 0 SNU 800



SANDSTONE POROSITY



0 API 200 | DEPTH | 500 SNU 2000

BOREHOLE OMR 81 17
CLIENT QUINTETTE COAL
AREA FRAME
COUNTRY CANADA

COAL LITHOLOGY LOG

BPB

BOREHOLE 6815
CLIENT Dorset Mine
COUNTRY Canada
AREA Ontario
DATE LOGGED 1-1-90
LOGGING ENGINEER
OPERATOR
WITNESS

BOREHOLE DATA
DRILLER'S DEPTH 6000
LOGGER'S DEPTH 6000
CASING SIZE 10 3/4
CASING WEIGHT 40.5
CASING DEPTH 0 TO 1000
BIT SIZE 9 7/8
BIT DEPTH 1000 TO 6000
FLUID TYPE WATER
FLUID LEVEL 1000
FLUID DENSITY 1.0
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

OPERATION DATA
RIG TIME
ARRIVAL TIME
DEPARTURE TIME
METRIC / IMPERIAL
GAMMA RAY CALIPER
GAMMA RAY DENSITY
LOG SUITE
CONVENTIONAL SONDE
SONDE TYPE
SONDE No.
SONDE SERIAL No.
GAMMA RAY
DENSITY
CALIPER

615

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT: SONDE	SOURCE	CALIBRATOR	TAPING: LOG SPEED	RECORD GAIN	REPEAT CHECK	SPEED	PANEL: G/C NORM	LOG DENS. NORM	DEPTHS: FROM	TO	REPEAT	SEAM LOG RUN
GAMMA RAY				2	1	5	1	1.54	1.20	0	170		
DENSITY	5802			2	1	5	1	8.2	1.70	0	170		
CALIPER	SIDEWALL POSITION			2	1	5	1	1.10		0	170		

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

FROM	335	615	INTERVAL
TO	370	710	TOTAL
INTERVAL			

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE	DETAIL SCALE	CALIBRATOR LOG
5-41		1:1000		
5112		1:1000		

REFER TO ADDITIONAL HEADINGS

REMARKS

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No	VALUE 60 SPI	Z DAM	JIG CAL DATE	JIG VALUE 4000 SPI	g/cm³ 2 m 1750 cps
JIG MARK SHOWN AT ABOVE VALUE -			JIG No	SPAN NORM 500	2 m 500 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA

0 API 200 | 10000 kHz | 2" 2"

CASING SHOE

WATER LEVEL

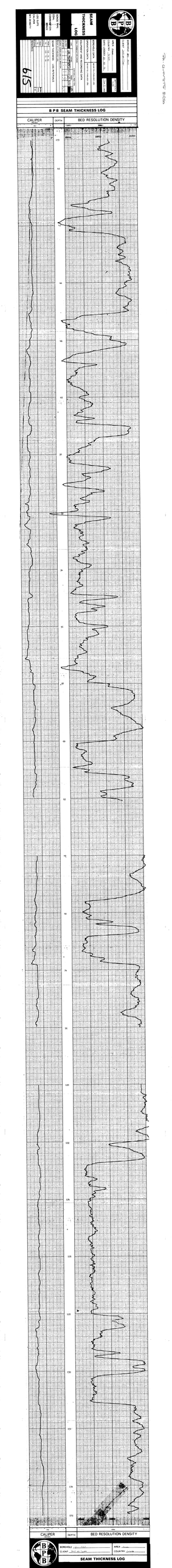
SURFACE CONTOUR

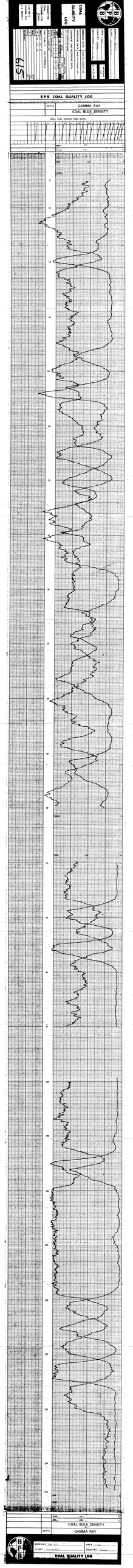
GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

BPB

BOREHOLE 6815 AREA Ontario
CLIENT Dorset Mine COUNTRY Canada

COAL LITHOLOGY LOG


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


BPB
COAL QUALITY LOG
GAMMA RAY
COAL BULK DENSITY
HOLE SIZE CORRECTION DATA
GAMMA RAY
COAL BULK DENSITY
BOREHOLE DATA
CLIENT
AREA
COUNTY
COAL QUALITY LOG