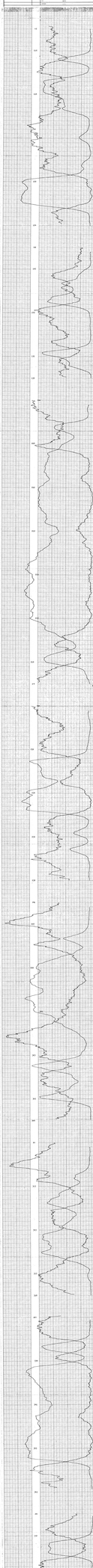
629

WELL	629
FIELD	
COUNTY	
STATE	
LOCATION	
DATE	
RUN	
DATUM	
ELEV.	
TD	
CASING	
BIT	
MUD	
RM	
RMF	
RMC	
RM @ MEAS. TEMP.	
RMF @ MEAS. TEMP.	
RMC @ MEAS. TEMP.	
SOURCE OF SAMPLE	
RM @ BHT	
TIME SINCE CIRC.	
TIME LOGGED	
MAX. REC. TEMP.	
EQUIP. LOCATION	
RECORDED BY	
WITNESSED BY	

B.P.B. COAL QUALITY LOG

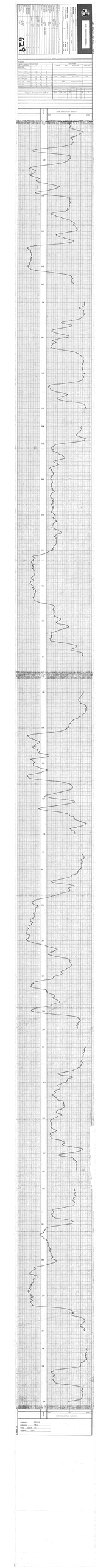
DEPTH	GAMMA RAY
	COAL BULK DENSITY



DEPTH	GAMMA RAY
	COAL BULK DENSITY

BPB	WELL: 629	FIELD:	COUNTY:
	STATE:	LOCATION:	DATE:

COAL QUALITY LOG



78 - SAXON 78 (3)A 7801

COAL LITHOLOGY LOG

BPB

SONDE TYPE: COAL COMBINATION SONDE

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

BOREHOLE: 7801
CLIENT: DENISON
AREA: SAXON
COUNTRY: CDN.
DATE LOGGED: 14/7/78

DEPTH SCALE

1 OF 4 LOGS

BOREHOLE DATA

PERMANENT DATUM	Ground Level	
ELEVATION OF P.D.		
MEASUREMENTS FROM	BPB: Floor	DRILLER: Floor
DEPTH REACHED	357 m	
CASING SHOE	14.6	
BIT SIZES	1: 5 5/8" TO 14.62	2: TO
	3: 3 3/4" TO 361	4: TO
CASING SIZES	1: 4" TO 14.62	2: TO

FLUID DATA

NATURE	Bentonite
S.G.	
LEVEL	Flowing, Gas
VISCOSITY	
Rm at meas. temp.	
B.H.T	

OPERATION DATA

FIRST READING	354.8m
LAST READING	0
INTERVAL LOGGED	354.8m
UNIT-TRUCK No.	26/34
ENGINEER	F.H.
WITNESS	J.F.

629

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: T.C. SECS	PANEL: NORM	CAL. COEFF.	DEPTHS: FROM	DEPTHS: TO	DEPTHS: INTERVAL	SEAM LOG RUN
GAMMA RAY	134			Y	9	D	9	1	1.4		354.8	0	354.8	Y
L.S. DENSITY	SIDEWALL POSITION	M-5851	100	Y	9	D	9	1/3	5.6		356	1.26	"	Y
CALIPER				Logged inside rods i.d. 3"										

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

									INTERVAL TOTAL
FROM	354	345	318	306	238	219	152	124	
TO	351	337	311	296	230	206	146	115	
INTERVAL	3	8	7	10	8	13	6	9	= 64m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
90	HRD		20:1

REFER TO ADDITIONAL HEADINGS

REMARKS

Logged in rods
Flowing, Gas
Caliper malfunction - no repeat section

Hole direction : - Tropari tests 31 m 7°
229 m 2° (Asimuth N/A)

B P B COAL LITHOLOGY LOG

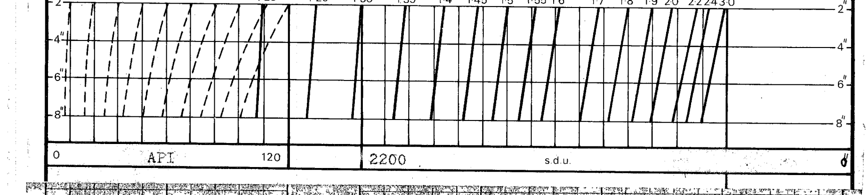
CALIBRATION DATA

JIG No.	VALUE 400 @ 2" DIAM.
JIG MARK SHOWN AT ABOVE VALUE →	

JIG CAL. DATE 12/7/78	JIG VALUE	SDU @ g/cm³	ins cps
JIG No. 100	SPAN	NORM SDU/CPS = 5.6	ins cps

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA (NOT VALID, IN RODS)



0 API 120 | 2200 s.d.u. 0"

0 API 120 | 2200 s.d.u. 0"

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	

BPB

BOREHOLE: 7801
AREA: SAXON
CLIENT: DENISON
COUNTRY: CDN.

COAL LITHOLOGY LOG

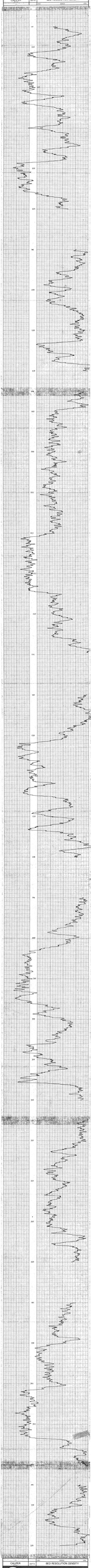
MY 88002 R

629

WELL	
FIELD	
COUNTY	
STATE	
LOCATION	
COMPANY	
API NO.	
SEC	TWP	RGE
ELEV	
DATE	
RUN	
DEPTH	
BIT	
CASING	
MUD	
RIG	
OPERATOR	
RECORDED BY	
WITNESSED BY	

R.P.S. SEAM THICKNESS LOG

CALIPER	DENSITY	BED RESOLUTION DENSITY



CALIPER	DENSITY	BED RESOLUTION DENSITY

RPS	FIELD	
		SEAM THICKNESS LOG

B P B

COAL LITHOLOGY LOG

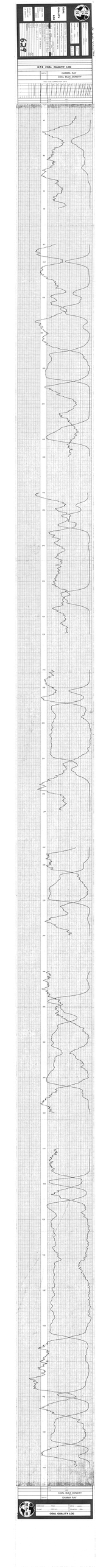
CALIBRATION DATA

GAMMA RAY — COAL BULK DENSITY — CALIPER

COAL BULK DENSITY

CALIPER

COAL LITHOLOGY LOG

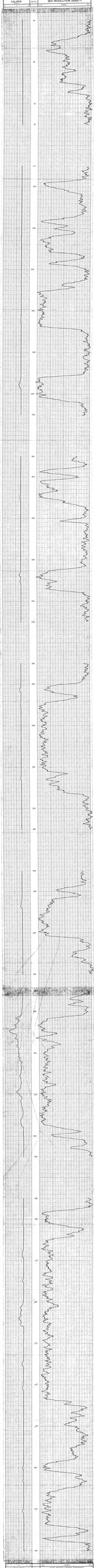

529
APB COAL QUALITY LOG
GAMMA RAY
COAL BULK DENSITY
COAL BULK DENSITY
GAMMA RAY
COAL QUALITY LOG

629

COMPANY	BP EXPLORATION (ALASKA) INC.
WELL	PRUDHOE BAY UNIT DS 4-9
FIELD	PRUDHOE BAY
COUNTY	NORTH SLOPE
STATE	ALASKA
LOCATION	1 FSL 1 FEL SEC 33 T11N R14E
OTHER SERVICES	CBL/VDL/GR/CCL
PERMANENT DATUM	GL
LOG MEASURED FROM	KB
DRILLING MEASURED FROM	KB
ELEVATION	KB 54.00 GL 18.00
DATE	10-Jan-1988
RUN NO.	ONE
DEPTH-DRILLER	10200
DEPTH-LOGGER	10200
BTM LOG INTERVAL	10200
TOP LOG INTERVAL	9800
CASING-DRILLER	9 5/8 @ 9800
CASING-LOGGER	9 5/8 @ 9800
BIT SIZE	8 1/2
TYPE FLUID IN HOLE	SEA WATER
DENSITY	8.5
VISCOSITY	28
PH	10.5
FLUID LOSS	5.0
SOURCE OF SAMPLE	FLOWLINE
RM @ MEAS. TEMP.	0.0 @ 0.0
RMF @ MEAS. TEMP.	0.0 @ 0.0
RMC @ MEAS. TEMP.	0.0 @ 0.0
RM @ BHT	0.0 @ 0.0
TIME LOGGER ON BOTTOM	0:00
TIME LOGGER AT BOTTOM	0:00
MAX. RECORDED TEMP.	0
EQUIPMENT NO.	0
LOCATION	0
RECORDED BY	0
WITNESSED BY	0

8 P.B. SEAM THICKNESS LOG

CALIPER	DEPTH	BED RESOLUTION DENSITY
6" 16"		1.95 2.95

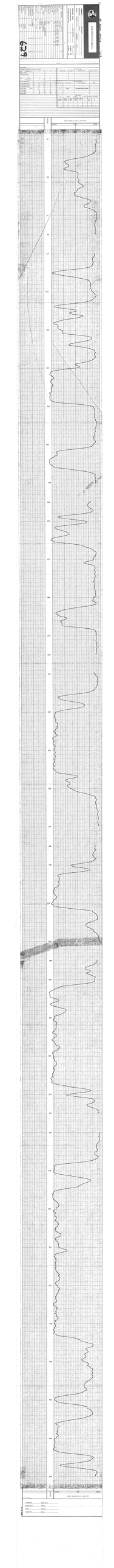


CALIPER	DEPTH	BED RESOLUTION DENSITY
6" 16"		1.95 2.95

BP EXPLORATION (ALASKA) INC.

PROSPECT: PRUDHOE BAY	DATE: 10-Jan-1988	PAGE: 1 OF 1
COMPANY: BP EXPLORATION (ALASKA) INC.	WELL: DS 4-9	COUNTY: NORTH SLOPE

SEAM THICKNESS LOG



Re. SAXON 78(2)A. 7802

629

BPB

FOCUSSED ELECTRIC
SONIC

COMPANY DENISON

BOREHOLE 7802

STATE SAXON B.C. COUNTRY CDN.

GRID REF. E ___ N ___ R.L. ___

Permanent Datum Rig Floor Elev. ___ m.

Log measured from " m. above P.D.

Drilling measured from " m. above P.D.

Run No.	4		
Depth Scale	200:1		
Date	27/7/78		
First Reading	448		
Last Reading	248		
Interval Measured	200 m		
Casing BPB	4		
Casing Driller	4		
Depth Reached	450		
Bottom Driller	450		
Mud Nature	Water , Bentonite		
S.G. / Viscosity	1.0 Flowing		
Bit Size 1	5 5/8" to 4	to	to
2	3 3/4" to 450	to	to
3	to	to	to
Casing Size 1	4" to 4	to	to
2	to	to	to
Rm @ Meas.Temp.	15 ohm m @	@	@
Rmf @ Meas.Temp.	@	@	@
Rmc @ Meas.Temp.	@	@	@
BHT			
Operating Time	6 hrs		
Truck No.	26/34		
Recorded By	F.H.		
Witness	J.F.		

fold here

REMARKS

Changes in Mud Type or Additional Samples				
Date	Sample No.			
Depth-Driller				
Type Fluid in Hole				
Dens.	Visc.			
ph.	Fluid Loss		ml	
Source of Sample				
Rm @ Meas.Temp.		@ °F		@ °F
Rmf @ Meas.Temp.		@ °F		@ °F
Rmc @ Meas.Temp.		@ °F		@ °F
Source: Rmf	Rmc			
Rm @ BHT		@ °F		@ °F
Rmf @ BHT		@ °F		@ °F
Rmc @ BHT		@ °F		@ °F

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
1	F.E.	eccentralised	
2	Sonic	semi-sidewall	

Logging Data

Log	Depths From	Depths To	Speed	T.C.	Norm.	Sonde No.	Source No.
F.E.	448	248	5	1/3			
Sonic	448	248	9	2			

Demonstration

	DEPTHS	FOCUSSED ELECTRIC
		50 ohm m 50000

	DEPTHS	
		140 u sec/ft 40
		SONIC

COMPANY DENISON

BOREHOLE 7802

STATE SAXON, B.C.

COUNTRY CDN.

MY (8) 58360 R

COMPANY: HUNTEC
WELL: 2709
FIELD:
STATE: SAANICH B.C.
COUNTRY: CDN.

RECORDED MATERIAL

Permanent Datum: Ground Elev. — Elev. —ft
Log measured from: Derrick Floor — ft. above P.D.
Drilling measured from: Rotary Table — ft. above P.D.

Date: 7/26/78
Run No.: ONE
Depth-Driller: 2505
Depth-Logger: 2505
Bottom Logged Interval: 2502
Top Logged Interval: 0
Type Fluid in Hole: SEA WATER
Salinity: 30
Density: 8.8
Level: FULL
Max. Rec. Temp. °F: 71
Equipment No. & Location: 5
Recorded By: R.H.
Witnessed By: [illegible]

Run No.: ONE
Bit No.: 1
Size: 8 1/2"
From: 0
To: 2505
Size: 8 5/8"
Wt.: 24#
From: 0
To: 2505
Size:
Wt.:
From:
To:

629

7028

hold here

REMARKS

Changes in Mud Type or Additional Samples
Date | Sample No. | | | |
Depth-Driller
Type Fluid in Hole
Dens. | Visc.
pH | Fluid Loss | cc
Source of Sample | - | | |
Rm @ Meas Temp | @ °F | @ °F
Rmf @ Meas Temp | @ °F | @ °F
Rmc @ Meas Temp | @ °F | @ °F
Source: Rmf | Rmc | | |
Rm @ BHT | @ °F | @ °F
Rmf @ BHT | @ °F | @ °F
Rmc @ BHT | @ °F | @ °F

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
5	P.E.	eccentralizer	

Logging Data

Log	Depth Interval		Speed	T.C.	Norm.	Inverted	Source No.
	From	To					
FE	300	224	5	1/3			
FG	250	230	5	1/3			

DEMONSTRATION :-
Detail - linear
General - linear (left track -not recorded)
" - Logrithmic (right track, recorded)

P.E. DETAIL - LINEAR
----Scale as marked----

DEPTH

224
230
240
250
290
300
320
340
360
380

RESOLUTION
20ft
5ft

Repeat Section

Ohm's
100 1000 10000

Scale as marked
P.E. GENERAL - LINEAR

DEPTH

100 ohm's 10000
P.E. GENERAL - LOGRITHMIC

COMPANY: HUNTEC
BOREHOLE: 2709
STATE: SAANICH B.C.
COUNTRY: CDN.

A DIVISION OF IHS

COAL LITHOLOGY LOG

BOREHOLE	2963
AREA	GAULS
DATE	1980
COAL COMBINATION SENSOR	2.25"
GAMMA RAY DETECTOR	2.25"
COAL SUITE CALIBRATION	1.5"
COAL SUITE LIBRARY	1.5"
CALIPER	1.5"

BOREHOLE	2963
AREA	GAULS
DATE	1980
COAL COMBINATION SENSOR	2.25"
GAMMA RAY DETECTOR	2.25"
COAL SUITE CALIBRATION	1.5"
COAL SUITE LIBRARY	1.5"
CALIPER	1.5"

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SENSOR

LOG	EQUIPMENT SENSOR	EQUIPMENT SUBUNIT	TAPING SPEED	TAPING DIRECTION	PANEL METRES PER CM	PANEL SCALE	DEPTH LOG	DEPTH TO	DEPTH SCALE
GAMMA RAY	1.5"	100 AUS	1	9	2	1	1.5	200	0 - 200
COAL SUITE LIBRARY		100	1	9	2	1/2	1.5		
CALIPER	1.5"		1	9	2	1/2	1.5		

COAL SUITE CALIBRATION DATA (COAL LOG METRES PER CM AND CPS)

FROM	272	253	230	232	162
TO	272	230	232	233	164
INTERVAL	0	9	2	1	2

32	33	35	40	45	50
0	0	0	0	0	0
0	0	0	0	0	0
2	1	2	5	5	2

INTERVAL TOTAL 4.5%

ADDITIONAL SONDES RUN

SONDE	TYPE	SERIAL NO. OR CALIBRATION
100	1150	2914-1

NEXT TO ADDITIONAL HEADING

REMARKS

Hole direction : Tempert turns 132 m 3° to 145°
200 m 2° to 2.45°

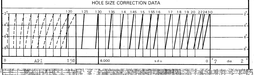
B P B COAL LITHOLOGY LOG

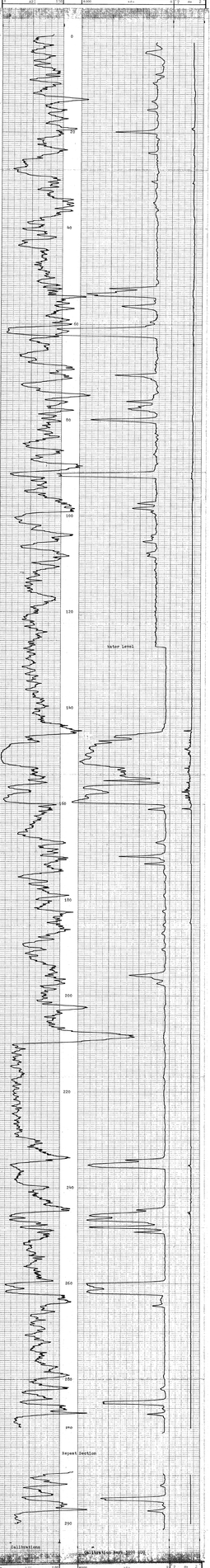
CALIBRATION DATA

JIG No. VALUE@ 0° TONNE	JIG CAL DATE 24/7/79 SO100 SO200 SO300
JIG No. SIGNAL AT ABOVE VALUE 1.5	JIG No. 100 1000 1500 SONDE No. 2.5

GAMMA RAY	DEPTH	COAL BULK DENSITY	CALIPER INCHES

HOLE SIZE CORRECTION DATA

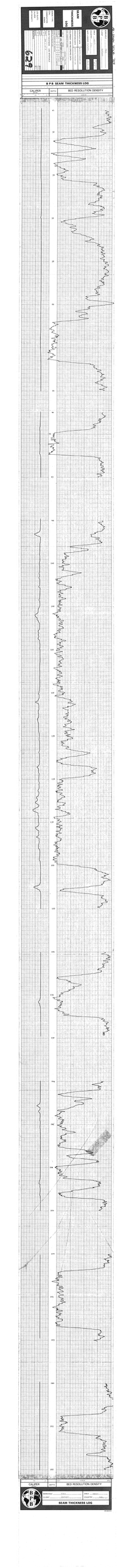


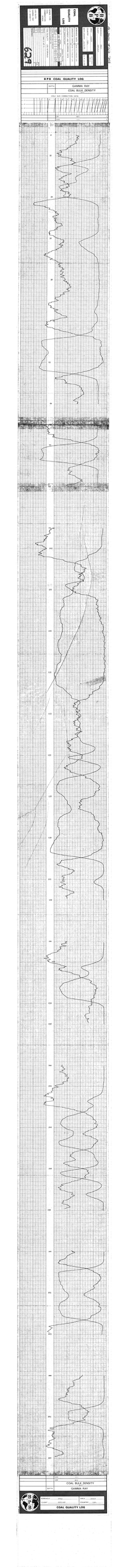


GAMMA RAY	DEPTH	COAL BULK DENSITY	CALIPER INCHES

BOREHOLE	2963	AREA	GAULS
CLIENT	GEOSICS	COUNTRY	COD.

COAL LITHOLOGY LOG


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



BPB COAL QUALITY LOG

DATUM	GAMMA RAY
	COAL BULK DENSITY

	COAL BULK DENSITY
DATUM	GAMMA RAY

DRAWN BY	DRAG	DATE	JANUARY
CHECKED BY	DRAG	CHECKED	JAN

COAL QUALITY LOG

629

Pr-Saxon 78 (2)A. 7803

HIGH RESOLUTION DENSITY

COMPANY	DENISON
BOREHOLE	7803
STATE	SAXON
COUNTRY	CDN.
Permanent Datum	Ground Level
Elev.	m.
Log measured from	" m. above P.D.
Drilling measured from	" m. above P.D.
GRID REF E	N R.L.

Run No.	1		
Depth Scale	20:1		
Date	25/7/78		
First Reading	287 263 250	237 162 93 64	
Last Reading	283 259 248	233 144 90 51	
Interval Measured	4 4 2	4 18 3 13	
Casing BPB	9m		
Casing Driller	9m		
Depth Reached	292		
Bottom Driller	292		
Mud Nature	Bentonite		
SG. / Viscosity			
Bit Size 1	5 5/8" to 9	to	to
2	3 3/4" to 292	to	to
Casing Size 1	4" to 9m	to	to
2	to	to	to
3	to	to	to
Rm @ Meas Temp.	@	@	@
Rmf @ Meas Temp.	@	@	@
Rmc @ Meas Temp.	@	@	@
BHT			
Operating Time	3½ hrs		
Truck No.	26		
Recorded By	P.H.		
Witness	J.I.		

629

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REMARKS

Changes in Mud Type or Additional Samples

Date	Sample No.		
Depth–Driller			
Type Fluid in Hole			
Dens. / Visc.			
ph. / Fluid Loss	ml		
Source of Sample			
Rm @ Meas. Temp.	@ °F	@ °F	
Rmf @ Meas. Temp.	@ °F	@ °F	
Rmc @ Meas. Temp.	@ °F	@ °F	
Source: Rmf / Rmc			
Rm @ BHT	@ °F	@ °F	
Rmf @ BHT	@ °F	@ °F	
Rmc @ BHT	@ °F	@ °F	

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
1	HRD	eccentralised	

Logging Data

Log	Depths From	Depths To	Speed m/min	T.C. sec	Norm.	Sonde No.	Source No.
HRD	287	51	2½	1		90	9

HIGH RESOLUTION DENSITY

DEPTHS

15000 CPS 8500

DEPTHS

11000 CPS 5200

HIGH RESOLUTION DENSITY

COMPANY DENISON

BOREHOLE 7803

STATE SAXON B.C.

COUNTRY CDN.

MY (8) 58360 R

PR- SAXON 76 (2) A. 7804

COAL LITHOLOGY LOG

BPB

BOREHOLE	7804
CLIENT	DENISON
AREA	SAXON
COUNTRY	CDN
DATE LOGGED	7/8/78
DEPTH SCALE	200:1
1 OF 5 LOGS	

SONDE TYPE: COAL COMBINATION SONDE

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

BOREHOLE DATA

	BPB	DRILLER
PERMANENT DATUM	Casing Top	
ELEVATION OF P.D.		
MEASUREMENTS FROM	Casing Top	Rig Floor
DEPTH REACHED	414	415
CASING SHOE	6m	6m
BIT SIZES 1	5 5/8 TO 6m	2 TO
BIT SIZES 3	3 3/4 TO 415	4 TO
CASING SIZES 1	4" TO 6m	2 TO

FLUID DATA

NATURE	Bentonite
S.G.	1.02
LEVEL	28
VISCOSITY	
Rm at meas. temp.	12
B.H.T	

OPERATION DATA

FIRST READING	412
LAST READING	0
INTERVAL LOGGED	412 M
UNIT-TRUCK No.	26/34
ENGINEER	F.H.
WITNESS	J.J.

629

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT: SONDE	SOURCE	CALIBRATOR	TAPING: LOG TAPED	RECORD SPEED	DIRECT or REPLAY	PANEL: SPEED	T.C. SECS	NORM	CAL. COEFF.	DEPTHS: FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY	134		400 api	Y	9	R	9	1	1.4		415	0		
L.S. DENSITY			100	Y	9	R	9	1/3	5.44					
CALIPER	SIDEWALL POSITION			Y	9	R	9	1/3						

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

							INTERVAL TOTAL
FROM	359	339	309	240	150	138	
TO	356	334	301	230	147	132	
INTERVAL	3	5	8	10	3	6	35

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
90	HRD		20:1
	F.E.	200:1	20:1

REFER TO ADDITIONAL HEADINGS

REMARKS

F.E. Demonstration

Hole direction: - Tropari tests 198 m 5° to N 019°

414 m 8° to N 028°

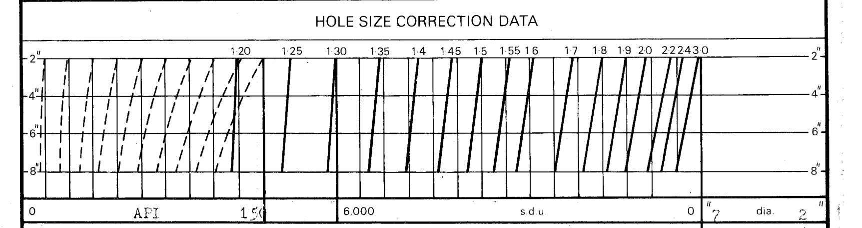
B P B COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. VALUE 400 @ 2" DIAM.	JIG CAL. DATE 6/8/78 JIG VALUE 4950 SDU @ g/cm³	7 ins 892 cps
JIG MARK SHOWN AT ABOVE VALUE = 3.33	JIG No. SPAN 6000 NORM SDU/CPS = 5.44	4 ins 476 cps

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA



0 API 150		6,000 s.d.u 0	7" dia. 2"

0 API 150		6,000 s.d.u 0	7" dia. 2"
GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

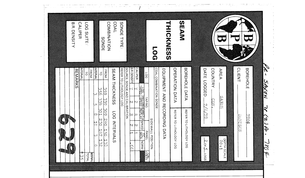
BPB

BOREHOLE 7804 AREA SAXON

CLIENT DENISON COUNTRY CDN.

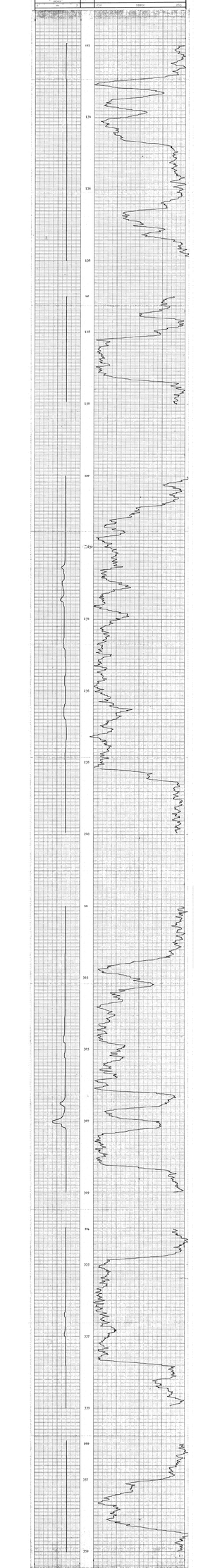
COAL LITHOLOGY LOG

MY 88002R



B P B SEAM THICKNESS LOG

CALIPER | DEPTH | BED RESOLUTION DENSITY



BPB

BOREHOLE _____ AREA _____

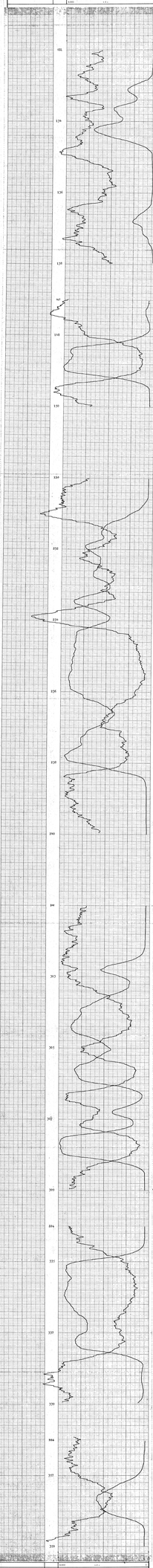
CLIENT _____ COUNTRY _____

SEAM THICKNESS LOG

BPB	COAL QUALITY LOG
SURVEY	1 of 1
DATE	27-Jun-1984
RIG	Diamond Drilling
DRILLED FROM	0.0 m
DRILLED TO	379.0 m
DRILLING DATA	
DRILLING DATA	
EQUIPMENT AND RECORDING MODE	
EQUIPMENT AND RECORDING MODE	
COAL QUALITY LOG	
GAMMA RAY	
COAL BULK DENSITY	
LOG SCALE	
GAMMA RAY	
COAL BULK DENSITY	
COAL QUALITY LOG	
CLIENT	COFFEY CONSULTANTS
CONTRACTOR	
LOG SCALE	
GAMMA RAY	
COAL BULK DENSITY	

629

BPB COAL QUALITY LOG	
DEPTH	GAMMA RAY
	COAL BULK DENSITY
HOLE SIZE CORRECTION DATA	
130	421
1000	1000



1000	1000
130	421
DEPTH	COAL BULK DENSITY
	GAMMA RAY

BPB	
BOREHOLE	7008
AREA	[illegible]
CLIENT	COFFEY CONSULTANTS
COUNTRY	[illegible]
COAL QUALITY LOG	

629

COMPANY	[illegible]
WELL	[illegible]
FIELD	[illegible]
COUNTY	[illegible]
STATE	[illegible]
Other Services	[illegible]
Permanent Datum	Elev. 0 ft.
Log Measured From	[illegible]
Drilling Measured From	[illegible]
Date	[illegible]
Run Number	[illegible]
Depth-Driller	[illegible]
Depth-Logger	[illegible]
Bottom Log Interval	[illegible]
Top Log Interval	[illegible]
Casing-Driller	[illegible]
Casing-Logger	[illegible]
Bit Size	[illegible]
Type Fluid in Hole	[illegible]
Dens. / Visc.	[illegible]
pH / Fluid Loss	[illegible]
Source of Sample	[illegible]
Rm @ Meas. Temp.	[illegible]
Rmf @ Meas. Temp.	[illegible]
Rmc @ Meas. Temp.	[illegible]
Source: Rmf / Rmc	[illegible]
Rm @ BHT	[illegible]
Time Since Circ.	[illegible]
Max. Rec. Temp.	[illegible]
Equip. Location	[illegible]
Recorded By	[illegible]
Witnessed By	[illegible]

Equipment Number	Location	Recorded By	Witnessed By
[illegible]	[illegible]	[illegible]	[illegible]

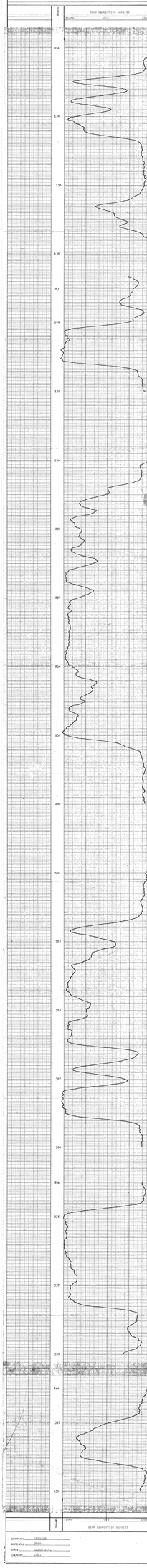
Run Number	Depth-Driller	Depth-Logger	Bottom Log Interval	Top Log Interval	Casing-Driller	Casing-Logger	Bit Size
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Type Fluid in Hole	Dens. / Visc.	pH / Fluid Loss	Source of Sample	Rm @ Meas. Temp.	Rmf @ Meas. Temp.	Rmc @ Meas. Temp.	Source: Rmf / Rmc
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Rm @ BHT	Time Since Circ.	Max. Rec. Temp.	Equip. Location	Recorded By	Witnessed By
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Run Number	Casing-Driller	Casing-Logger	Bit Size	Type Fluid in Hole	Dens. / Visc.	pH / Fluid Loss	Source of Sample
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Rm @ Meas. Temp.	Rmf @ Meas. Temp.	Rmc @ Meas. Temp.	Source: Rmf / Rmc	Rm @ BHT	Time Since Circ.	Max. Rec. Temp.	Equip. Location	Recorded By	Witnessed By
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]



COMPANY: [illegible]
WELL: [illegible]
FIELD: [illegible]
COUNTY: [illegible]
STATE: [illegible]
OTHER SERVICES: [illegible]

COAL CONSTRUCTION LOG

BPB

924

EQUIPMENT AND RECORDING DATA

CALIBRATION DATA

GAMMA RAY — COAL BULK DENSITY

HOLE SIZE CORRECTION DATA

DEPTH DRILLER

DEPTH LOGGER

CASING DRILLER

CASING LOGGER

BIT

TYPE FLUID

DENSITY VISC.

PH FLUID LOSS

SOURCE RM @ MEAS. TEMP.

RM @ BHT

TIME SINCE CIRC.

MAX. REC. TEMP.

EQUIP. LOCATION

RECORDED BY

WITNESSED BY

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

GAMMA RAY — COAL BULK DENSITY

HOLE SIZE CORRECTION DATA

DEPTH DRILLER

DEPTH LOGGER

CASING DRILLER

CASING LOGGER

BIT

TYPE FLUID

DENSITY VISC.

PH FLUID LOSS

SOURCE RM @ MEAS. TEMP.

RM @ BHT

TIME SINCE CIRC.

MAX. REC. TEMP.

EQUIP. LOCATION

RECORDED BY

WITNESSED BY

DUMMY VERTICAL

GAMMA RAY — COAL BULK DENSITY

BPB COAL LITHOLOGY LOG

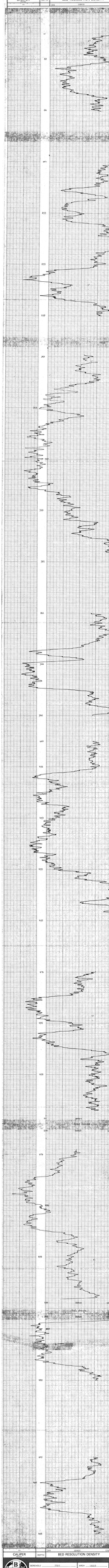
BPB

SEAM THICKNESS LOG

WELL	[illegible]
COUNTY	[illegible]
STATE	[illegible]
DATE	[illegible]
RUN NO.	[illegible]
DEPTH-DRILLER	[illegible]
DEPTH-LOGGER	[illegible]
BTM LOG INTERVAL	[illegible]
TOP LOG INTERVAL	[illegible]
CASING-DRILLER	[illegible]
CASING-LOGGER	[illegible]
BIT SIZE	[illegible]
TYPE FLUID IN HOLE	[illegible]
DENSITY	[illegible]
VISCOSITY	[illegible]
PH	[illegible]
FLUID LOSS	[illegible]
SOURCE OF SAMPLE	[illegible]
RM @ MEAS. TEMP.	[illegible]
RMF @ MEAS. TEMP.	[illegible]
RMC @ MEAS. TEMP.	[illegible]
RM @ BHT	[illegible]
TIME CIRC. STOPPED	[illegible]
TIME LOGGER ON BOTTOM	[illegible]
LUNCH	[illegible]
BHT	[illegible]
MAX. RECORDED TEMP.	[illegible]
EQUIPMENT NO.	[illegible]
LOCATION	[illegible]
RECORDED BY	[illegible]
WITNESSED BY	[illegible]

629

B P B SEAM THICKNESS LOG	
CALIPER	BED RESOLUTION DENSITY
6	2.25 2.75

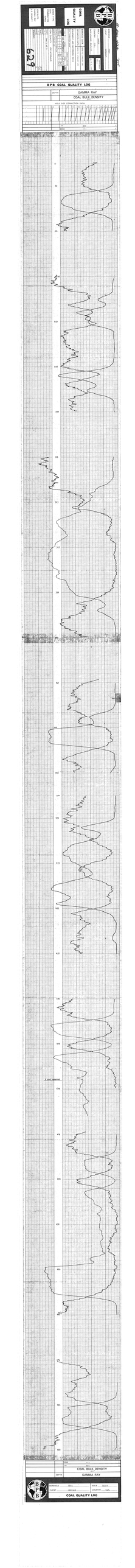


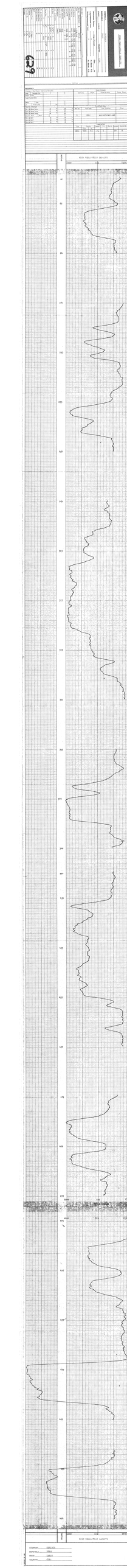
CALIPER	BED RESOLUTION DENSITY
6	2.25 2.75

BPB

WELL	[illegible]	DATE	[illegible]
COUNTY	[illegible]	STATE	[illegible]

SEAM THICKNESS LOG


COAL QUALITY LOG
BPB
629
BPB COAL QUALITY LOG
GAMMA RAY
COAL BULK DENSITY
HOLE SIZE CORRECTION DATA
COAL BULK DENSITY
GAMMA RAY
COAL QUALITY LOG


629
HIGH RESOLUTION DENSITY
HIGH RESOLUTION DENSITY
HIGH RESOLUTION DENSITY
COMPANY
BOREHOLE
FIELD
COUNTY

BOREHOLE 7806

CLIENT DENISON

AREA SAXON

COUNTRY CDN.

DATE LOGGED 17/8/78

DEPTH SCALE 200:1

1 OF 5 LOGS

COAL LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

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

BOREHOLE DATA

PERMANENT DATUM	Rig Floor			
ELEVATION OF P.D.				
	BPB		DRILLER	
MEASUREMENTS FROM	R.F.		R.F.	
DEPTH REACHED	280			
CASING SHOE	11			
BIT SIZES	1	5 5/8 TO 11	2	TO
	3	3 3/4 TO 280	4	TO
CASING SIZES	1	4" TO 11	2	TO

FLUID DATA

NATURE	Bentonite
S.G.	1.02
LEVEL	0 dropping
VISCOSITY	
Rm at meas.temp.	7 ohm m
B.H.T	

OPERATION DATA

FIRST READING	278
LAST READING	0
INTERVAL LOGGED	278
UNIT-TRUCK No.	26/34
ENGINEER	E.H.
WITNESS	J.P.

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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		400api	Y	9	D	9	1	1.4		278	0		
L.S. DENSITY	SIDEWALL POSITION		100	Y	9	D	9	1/3	5.5					
CALIPER				Y	9	R	9	1/3						

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

FROM	266	256	217	194	121	42	27	INTERVAL TOTAL
TO	263	251	214	188	108	39	24	
INTERVAL	3	5	3	6	13	3	3	= 36

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
90	F.E.	200:1	
	Sonic	200:1	
	HRD		20:1

REFER TO ADDITIONAL HEADINGS

REMARKS

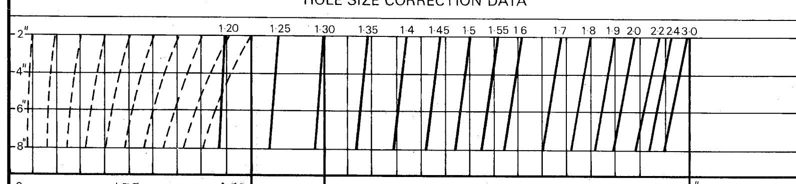
B P B COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. VALUE 40@ 2" DIAM.	JIG CAL. DATE 15/8/78 JIG VALUE 4950 SDU@ g/cm³	7 ins 898 cps
JIG. MARK SHOWN AT ABOVE VALUE ÷ 3.33	JIG No. 100 SPAN 6000 NORM SDU/CPS = 5.5	2 ins 476 cps

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA



0 API 150		6,000 s.d.u. 0	7" dia. 2"

0 API 150		6,000 s.d.u. 0	7" dia. 2"

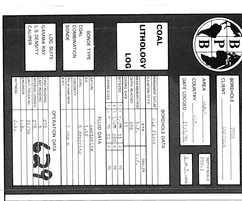
GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

BOREHOLE 7806 AREA SAXON

CLIENT DENISON COUNTRY CDN.

COAL LITHOLOGY LOG

MY 88002 R



29

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

TOOL	SONDE	EQUIPMENT SERIAL NO.	SCINTILLATOR	VOLTAGE (VOLTS)	DISCRIMINATOR LEVEL (MeV)	GAIN SETTING	PANEL SPEED	TC (SECS)	SONDE	CAL. CHECK	DEPTH FROM	DEPTH TO	INTERVAL	ZONE LOCATION
GAMMA RAY	17½		500kg	1	1	2	9	1	1.5		270	0		
DENSITY			100	1		3	9	1	1.5					
CALIPER	HIGH RES.			3		3	9	1	1.5					

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to Drillers' Log)

																					INTERVAL TOTAL
FROM	260	245	215	159	125	92	27														
TO	243	223	194	152	100	50	24														
INTERVAL	17	22	21	7	25	42	3														16

ADDITIONAL SONDES RUN

SONDE	LOGGING SPEED	LOGGING DIRECTION
GG	7.62	DOWN
Gamma	7.62	DOWN
BHC		DOWN

REMARKS

REFER TO ADDITIONAL HEADINGS

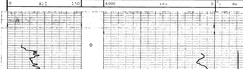
B P B COAL LITHOLOGY LOG

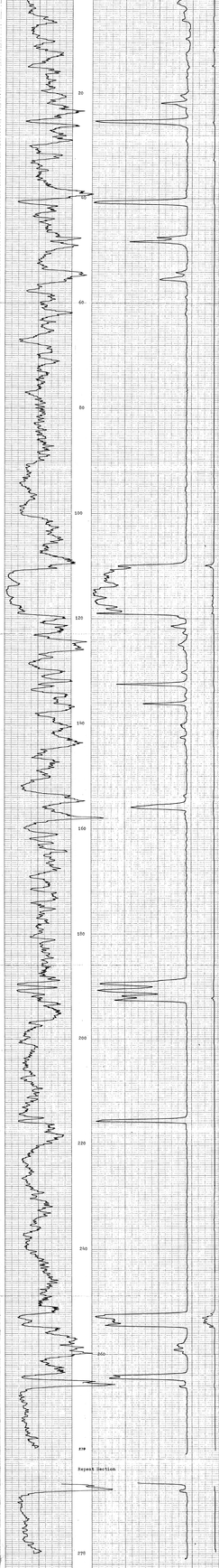
CALIBRATION DATA

WS No.	VALVE Log@ 7°/min	WS CAL DATE	13/5/1981 VALVE Log@ 40m/min
WS MAIN SCREW AT MEAS. VALUE =	5	WS No. 100	SPAN 4000 NORM 100 =

GAMMA RAY — DEPTH — COAL BULK DENSITY — CALIPER (INCHES)

HOLE SIZE CORRECTION DATA





GAMMA RAY — DEPTH — COAL BULK DENSITY — CALIPER (INCHES)

B P B

BOREHOLE 2260 AREA KALB

CLIENT PEKAN COUNTRY COAL

COAL LITHOLOGY LOG

BPB

SEAM THICKNESS LOG

BOREHOLE NO. 7556

CLIENT: [illegible]

AREA: [illegible]

COUNTRY: [illegible]

DATE: [illegible]

OPERATOR: [illegible]

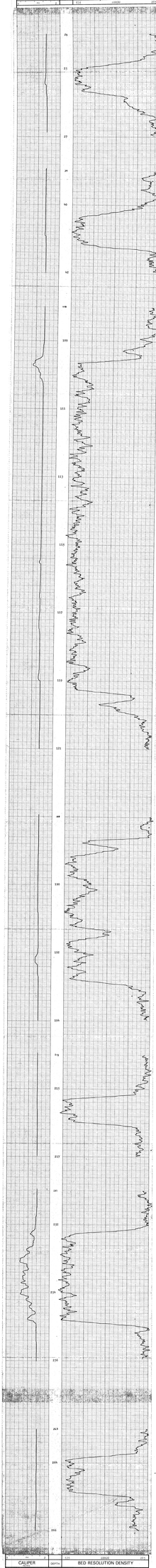
DATE: [illegible]

DEPTH: [illegible]

629

BPB SEAM THICKNESS LOG

CALIPER	DEPTH	BED RESOLUTION DENSITY
6		2.0 2.5



CALIPER	DEPTH	BED RESOLUTION DENSITY
6		2.0 2.5

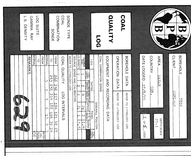
BPB

BOREHOLE: 7556 | AREA: [illegible]

CLIENT: [illegible] | COUNTRY: [illegible]

SEAM THICKNESS LOG

BPB/SEAM



BPB COAL QUALITY LOG

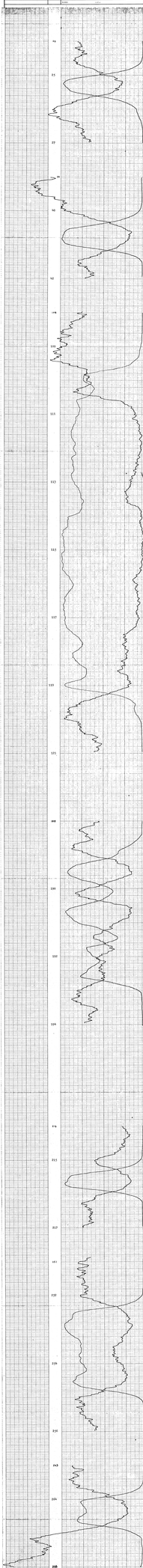
DEPTH | GAMMA RAY

COAL BULK DENSITY

HOLE SIZE CORRECTION DATA

150 API

1.1 2.7



1.1 2.7

150 API

DEPTH | GAMMA RAY

COAL BULK DENSITY

BPB COAL QUALITY LOG

COMPANY _____ FIELD _____ AREA _____ LEASE _____

CLIENT _____ LOCATION _____ COUNTY _____ STATE _____

Re-SAXON 78(3)A. 7806

SONIC
FOCUSSED ELECTRIC

BPB

COMPANY: DENISON
BOREHOLE: 7806
STATE: SAXON COUNTRY: CDN.

Permanent Datum: Rig Floor Elev. ___ m.
Log measured from: " m. above P.D.
Drilling measured from: " m. above P.D.

GRID REF. E ___ N ___ R.L. ___

Run No.	5			
DepthScale	200:1			
Date	17/8/78			
First Reading	278	278		
Last Reading	90	22		
Interval Measured	188	256		
Casing BPB	11			
Casing Driller	11			
Depth Reached	280			
Bottom Driller	280			
Mud Nature	Bent			
S.G. / Viscosity	1.02			
Bit Size 1	5 5/8" to 11	to	to	
2	3 3/4" to 280	to	to	
3	to	to	to	
Casing Size 1	4" to 11	to	to	
2	to	to	to	
Rm @ Meas.Temp.	7 ohm m @	@	@	
Rmf @ Meas.Temp.	@	@	@	
Rmc @ Meas.Temp.	@	@	@	
BHT				
Operating Time	4 hrs			
Truck No.	26/34			
Recorded By	E.H.			
Witness	J.F.			

629

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REMARKS

Changes in Mud Type or Additional Samples				
Date / Sample No.				
Depth–Driller				
Type Fluid in Hole				
Dens. / Visc.				
ph. / Fluid Loss		ml		
Source of Sample				
Rm @ Meas.Temp.	@	°F	@	°F
Rmf @ Meas.Temp.	@	°F	@	°F
Rmc @ Meas.Temp.	@	°F	@	°F
Source: Rmf / Rmc				
Rm @ BHT	@	°F	@	°F
Rmf @ BHT	@	°F	@	°F
Rmc @ BHT	@	°F	@	°F

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
5	Sonic	semi-sidewall	
6	F.E.	eccentralised	

Logging Data

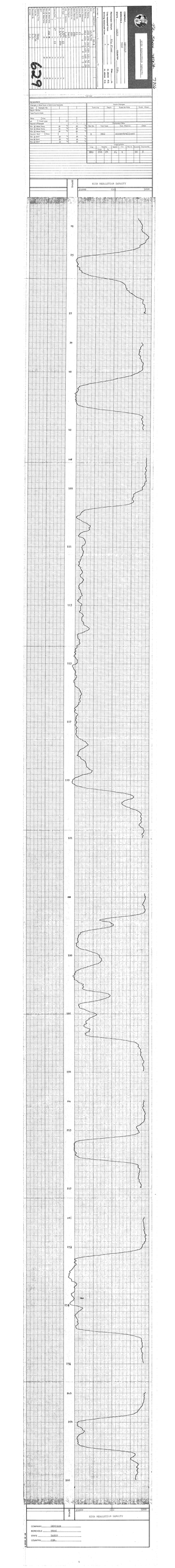
Log	Depths From	Depths To	Speed	T.C.	Norm.	Sonde No.	Source No.
Sonic	278	90	9	1			
F.E.	278	22	5	1/3		117	

	DEPTHS	FOCUSSED ELECTRIC
		50 ohm m 50000

	DEPTHS	140 U sec/ft 40
		SONIC

COMPANY: DENISON
BOREHOLE: 7806
STATE: SAXON
COUNTRY: CDN.

MY (8) 58360 R


6279
HIGH RESOLUTION INDUCTION
HIGH RESOLUTION INDUCTION

PE-SAXON 78(3)A. 7807

BPB

FOCUSSED ELECTRIC
SONIC

COMPANY: DENISON
BOREHOLE: 7807
STATE: SAXON   COUNTRY: CDN.
Permanent Datum: Rig Floor   Elev. ___ m.
Log measured from: "   m. above P.D.
Drilling measured from: "   m. above P.D.
GRID REF. E ___ N ___ R.L. ___

Run No.	1			
Depth Scale	200:1			
Date	1/9/78			
First Reading	361 F.E.	362 Sonic		
Last Reading	200	200		
Interval Measured	161	162		
Casing BPB	12.5			
Casing Driller	12.5			
Depth Reached	363			
Bottom Driller	363			
Mud Nature	Bent			
SG / Viscosity	1.02			
Bit Size 1	5 5/8" to 12.5	to	to	
2	3 3/4" to 363	to	to	
3	to	to	to	
Casing Size 1	4" to 12.5	to	to	
2	to	to	to	
Rm @ Meas Temp.	12 ohm m	@	@	
Rmf @ Meas Temp.	@	@	@	
Rmc @ Meas Temp.	@	@	@	
BHT				
Operating Time	5½ hrs			
Truck No.	26/34			
Recorded By	P.H.			
Witness	J.F.			

629

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REMARKS

Changes in Mud Type or Additional Samples			
Date / Sample No.			
Depth – Driller			
Type Fluid in Hole			
Dens. / Visc			
ph. / Fluid Loss	ml		
Source of Sample			
Rm @ Meas.Temp	@ °F	@ °F	
Rmf @ Meas.Temp.	@ °F	@ °F	
Rmc @ Meas.Temp.	@ °F	@ °F	
Source: Rmf / Rmc			
Rm @ BHT	@ °F	@ °F	
Rmf @ BHT	@ °F	@ °F	
Rmc @ BHT	@ °F	@ °F	

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
1	F.E.	eccentralised	
2	SONIC	Semi-Sidewall	

Sonic – 5m/min over coal interval.

Logging Data

Log	Depths From	Depths To	Speed	T.C.	Norm.	Sonde No.	Source No.
F.E	361	200	5	1/3		117	
SONIC	362	200	9/5	2			

MONITOR	DEPTHS	FOCUSSED ELECTRIC
		50 ohm m 50000

	DEPTHS	SONIC
		140 u sec/ft 40

COMPANY: DENISON
BOREHOLE: 7807
STATE: SAXON
COUNTRY: CDN.

MY (8) 58360 R

COAL QUALITY LOG

COMPANY	BP
WELL	[illegible]
FIELD	[illegible]
COUNTY	[illegible]
STATE	[illegible]
COUNTRY	[illegible]
DATE	[illegible]
RUN NO.	[illegible]
DEPTH-DRILLER	[illegible]
DEPTH-LOGGER	[illegible]
BTM LOG INTERVAL	[illegible]
TOP LOG INTERVAL	[illegible]
CASING-DRILLER	[illegible]
CASING-LOGGER	[illegible]
BIT SIZE	[illegible]
TYPE FLUID IN HOLE	[illegible]
DENSITY	[illegible]
VISCOSITY	[illegible]
PH	[illegible]
FLUID LOSS	[illegible]
SOURCE OF SAMPLE	[illegible]
RM @ MEAS. TEMP.	[illegible]
RMF @ MEAS. TEMP.	[illegible]
RMC @ MEAS. TEMP.	[illegible]
SOURCE RMF / RMC	[illegible]
RM @ BHT	[illegible]
TIME SINCE CIRC.	[illegible]
MAX. REC. TEMP.	[illegible]
EQUIP. LOCATION	[illegible]
RECORDED BY	[illegible]
WITNESSED BY	[illegible]

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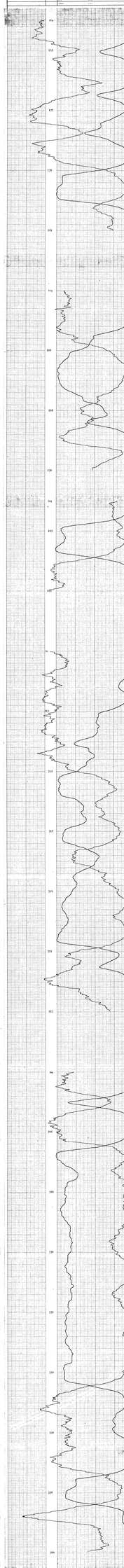
BPB COAL QUALITY LOG

DEPTH	GAMMA RAY COAL BULK DENSITY

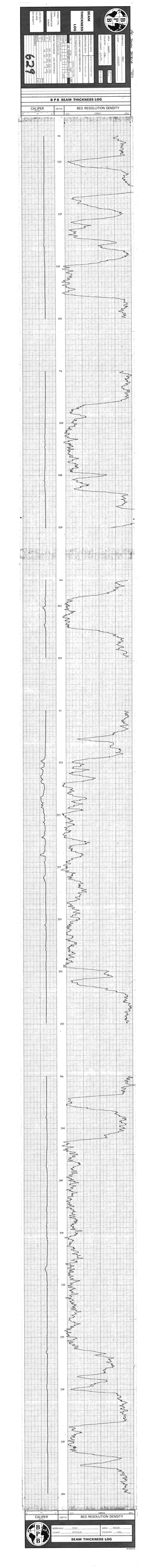
HOLE SIZE CORRECTION DATA

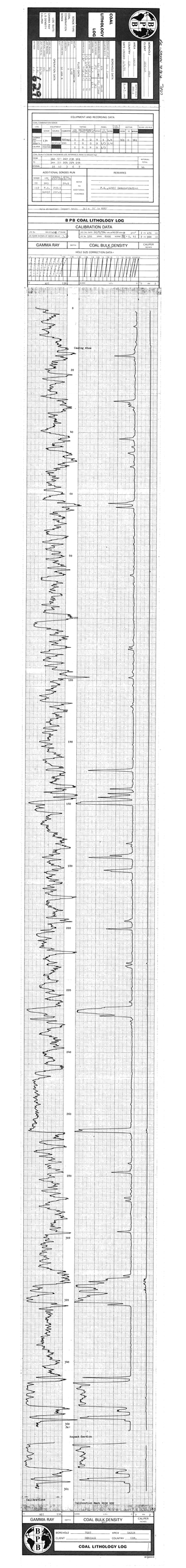


DEPTH	GAMMA RAY COAL BULK DENSITY

BOROUGH	[illegible]	AREA	LEEDS
COUNTY	[illegible]	COUNTRY	[illegible]

COAL QUALITY LOG


B P B
SEAM THICKNESS LOG
629
B P B SEAM THICKNESS LOG
CALIPER
DEPTH
BED RESOLUTION DENSITY
SEAM THICKNESS LOG


COAL LITHOLOGY LOG
EQUIPMENT AND RECORDING DATA
ADDITIONAL SONDES RUN
REMARKS
CALIBRATION DATA
GAMMA RAY
COAL BULK DENSITY
CALIPER
HOLE SIZE CORRECTION DATA
Casing Shoe
Repeat Section
Calibration Mark 1930 SDE
BPB COAL LITHOLOGY LOG

PC-SAXON 78(3)A. 7807

HIGH RESOLUTION DENSITY

COMPANY: DENISON
BOREHOLE: 7807
STATE: SAXON COUNTRY: CDN.

Permanent Datum: Rig Floor Elev. ___ m.
Log measured from: " ___ m. above P.D.
Drilling measured from: " ___ m. above P.D.

GRID REF E ___ N ___ RL ___

Run No.	1			
Depth Scale	20:1			
Date	1/9/78			
First Reading	360 323 267 230 161			
Last Reading	344 311 264 224 154			
Interval Measured	16 12 3 6 7			
Casing BPB	12.5			
Casing Driller	12.5			
Depth Reached	363			
Bottom Driller	363			
Mud Nature	Bent			
SG. / Viscosity	1.02			
Bit Size 1	5 5/8" to 12.5	to	to	
2	3 3/4" to 363	to	to	
3	to	to	to	
Casing Size 1	4" to 12.5	to	to	
2	to	to	to	
Rm @ Meas Temp.	12 @	@	@	
Rmf @ Meas Temp.	@	@	@	
Rmc @ Meas Temp.	@	@	@	
BHT				
Operating Time	5 1/2 hrs			
Truck No.	26/34			
Recorded By	F.H.			
Witness	J.F.			

629

fold here

REMARKS

Changes in Mud Type or Additional Samples

Date	Sample No.		
Depth – Driller			
Type Fluid in Hole			
Dens. / Visc.			
ph. / Fluid Loss		ml	
Source of Sample			
Rm @ Meas.Temp.		@ °F	@ °F
Rmf @ Meas.Temp.		@ °F	@ °F
Rmc @ Meas.Temp.		@ °F	@ °F
Source. Rmf / Rmc			
Rm @ BHT		@ °F	@ °F
Rmf @ BHT		@ °F	@ °F
Rmc @ BHT		@ °F	@ °F

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
1	HRD	eccentralised	

Logging Data

Log	Depths From	Depths To	Speed	T.C.	Norm.	Sonde No	Source No.
HRD	360	154	2¼	1		90	9

DEPTHS | HIGH RESOLUTION DENSITY | 11000 CPS 5200

DEPTHS | 11000 CPS 5200 | HIGH RESOLUTION DENSITY

COMPANY: DENISON
BOREHOLE: 7807
STATE: SAXON
COUNTRY: CDN.

MY (8) 58360 R

PR-SAXON 78(3)A. 7808

COAL LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

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

BOREHOLE 7808
CLIENT DENISON
AREA SAXON
COUNTRY CDN.
DATE LOGGED 8/9/78

DEPTH SCALE 200:1
1 OF 4 LOGS

BOREHOLE DATA

PERMANENT DATUM: Rig Floor
ELEVATION OF P.D.:
MEASUREMENTS FROM: rig floor
DEPTH REACHED: BPB 455 in rods; DRILLER: rig floor
CASING SHOE: 16"
BIT SIZES: 1 5 5/10 TO 5; 3 3 3/40 459 TO; 2 TO; 4 TO
CASING SIZES: 1 4" TO 4; 2 3" TO 455

FLUID DATA

NATURE:
S.G.:
LEVEL: Top
VISCOSITY:
Rm at meas. temp.:
B.H.T:

OPERATION DATA

FIRST READING: 453
LAST READING: 0
INTERVAL LOGGED: 453
UNIT-TRUCK No.: 26/34
ENGINEER: D.E./A.H.
WITNESS: J.P.

629

HOLE DEVIATION :- 64° at 457m, 58° at 229m

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	134		400api	Y	9	D	9	1	1.4		453	0	453	
L.S. DENSITY		m5851	100	Y	9	D	9	1/3	5.45					
CALIPER	SIDEWALL POSITION													

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

					INTERVAL TOTAL
FROM	362	352	326	274	
TO	358	341	319	260	
INTERVAL	4	11	7	14	= 36

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
90	HRD		20:1

REFER TO ADDITIONAL HEADINGS

REMARKS: Hole logged through rods

B P B COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. VALUE -0 @ 2" DIAM.
JIG MARK SHOWN AT ABOVE VALUE - 3.33
JIG CAL. DATE 6/9/78 JIG VALUE 4950 SDU @ g/cm³
JIG No. 100 SPAN 2200 NORM SDU/CPS = 5.45

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES
0 API 120		2200 s.d.u. 0	" dia. "

HOLE SIZE CORRECTION DATA

0 API 120		2200 s.d.u. 0	" dia. "
GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

BOREHOLE 7808 AREA SAXON
CLIENT DENISON COUNTRY CDN.

COAL LITHOLOGY LOG

MY 88002 R

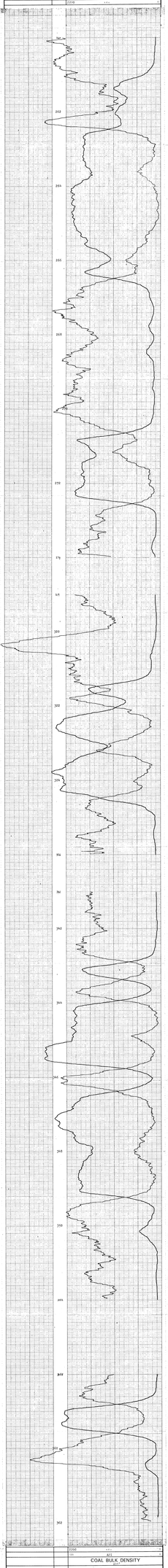
COAL QUALITY LOG	
SOURCE TYPE	
COMMENTS: LOG CONTAINS GAMMA RAY	
LOG RUN NO.	629
RUN NO.	1
DATE	5-8-86
DEPTH DRILLED	1250
DEPTH LOGGED	1250
CASING	9 5/8
BIT SIZE	12 1/4
MUD TYPE	WATER
MUD WT.	8.5
VISCOSITY	28
PH	9.5
FLUID LOSS	NA
RM	NA
RMF	NA
RMC	NA
MAX. REC. TEMP.	90
EQUIPMENT AND RECORDING DATA	
LOGGING UNIT	7000
OPERATOR	DEVON
RIG	5
CONTRACTOR	BPB
DATE LOGGED	5-8-86
RECORDED BY	
WITNESSED BY	

BPB COAL QUALITY LOG

DEPTH	GAMMA RAY
	COAL BULK DENSITY

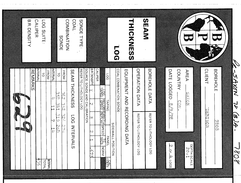
HOLE SIZE CORRECTION DATA

	API
1250	



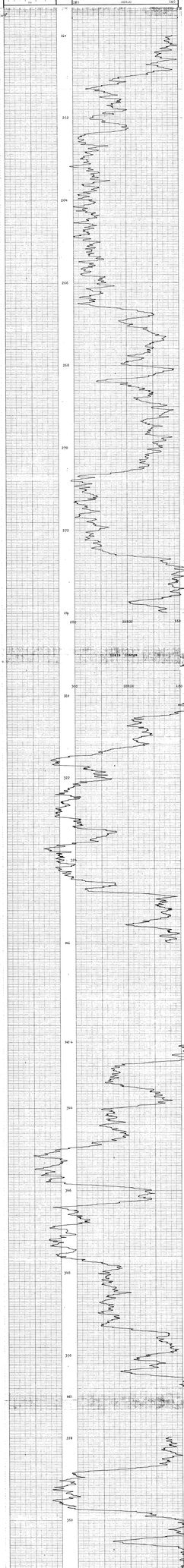
1250	
	API
	COAL BULK DENSITY
DEPTH	GAMMA RAY

BOREHOLE	7000
CLIENT	DEVON
AREA	SASK.
COUNTRY	CAN.
COAL QUALITY LOG	



B P B SEAM THICKNESS LOG

CALIPER | DEPTH | BED RESOLUTION DENSITY



CALIPER | DEPTH | BED RESOLUTION DENSITY

BOREHOLE ____ AREA ____
CLIENT ____ COUNTRY ____

SEAM THICKNESS LOG

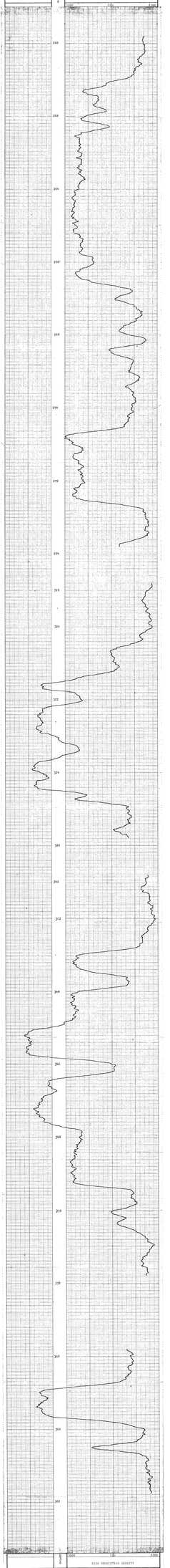
629

Company	SCHLUMBERGER
Well	1 - ELLIOTT
Field	WILDCAT
County	LEON
State	TEXAS
Other Services	
Permanent Datum	GL
Elevation	
Log Measured From	KB 12 Ft. Above Perm. Datum
Drilling Measured From	KB
Date	4-4-61
Run Number	ONE
Depth-Driller	3000
Depth-Logger	3000
Bottom Log Interval	2998
Top Log Interval	2000
Casing-Driller	8 5/8 @ 2000
Casing-Logger	NONE
Bit Size	7 7/8
Type Fluid in Hole	SALT WATER
Dens.	10.0
Visc.	50
pH	10.5
Fluid Loss	8.4
Source of Sample	
Rm @ Meas. Temp.	.8 @ 75
Rmf @ Meas. Temp.	.8 @ 75
Rmc @ Meas. Temp.	.8 @ 75
Rm @ BHT	.8 @ 75
Time Since Circ.	8
Max. Rec. Temp.	75
Equip. Location	24
Recorded By	[illegible]
Witnessed By	[illegible]

Run No.	Bit Size	Top Interval	Bottom Interval	Time
1	7 7/8	2000	3000	8

Log	Depth Driller	Depth Logger	Bottom Log Interval	Top Log Interval	Casing Driller	Casing Logger	Bit Size
DIL	2998	2998	2998	2000	8 5/8 @ 2000	NONE	7 7/8

Logged through rods



COMPANY	SHELLEY
BOREHOLE	SAND
STATE	TEXAS
COUNTY	COP.

B P B

COAL LITHOLOGY LOG

WELL	MAKA 1
LOCATION	SOUTH WEST TANZANIA
COUNTRY	TANZANIA
DATE	1-5-84
RIG	
ELEVATION	
DATUM	
ZERO POINT	
DRILLER'S DEPTH	629
LOGGER'S DEPTH	629
CASING SIZE	
CASING DEPTH	
MUD TYPE	
MUD WEIGHT	
MUD VISCOSITY	
MUD PH	
FLUID LOSS	
RESISTIVITY	
TEMPERATURE	
RM	
RMF	
RMC	
MEAS. TEMP.	
RM @ MEAS. TEMP.	
RMF @ MEAS. TEMP.	
RMC @ MEAS. TEMP.	
SOURCE OF RMF & RMC	
RM @ BHT	
TIME SINCE CIRCULATION	
MAX. REC. TEMP.	
EQUIPMENT LOCATION	
RECORDED BY	
WITNESSED BY	

Revision No. 1 Feb 1985

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

TOOL	EQUIPMENT SERIAL NO.	DIAMETER	CALIBRATION DATE	RANGE		DEPTH		DATUM CHECK
				FROM	TO	FROM	TO	
GAMMA RAY	136		1	0	1	0	629	1
CALIPER			1	0	1	0	629	1
DENSITY			1/2	1.5	3.5	0	629	1
				2.5	4.5	0	629	1

ADDITIONAL SONDES RUN

SONDE	SERIAL NO.	DIAMETER	CALIBRATION DATE

RUN	1	2	3		INTERVAL TOTAL
FROM	0	629			
TO	629				629

NOTE TO ADDITIONAL HOLDER

REMARKS

CALIBRATION: 1 M = 0.1 DEGREES/MINUTE
CENTERING: CENTERED TO THE CLEARESTOCK OF THE HOLE. NO REPEAT SECTION
TRAVEL OF CALIBRATORS:

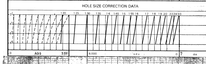
B P B COAL LITHOLOGY LOG

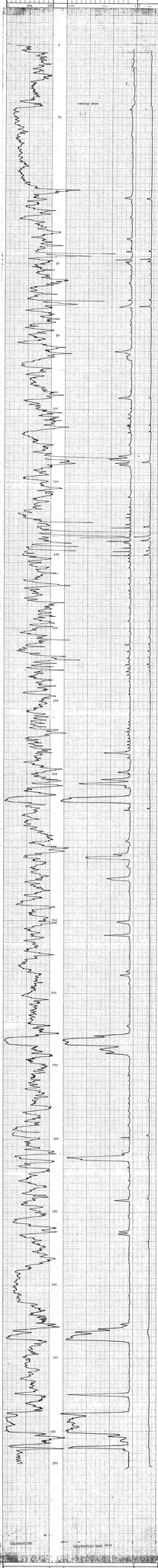
CALIBRATION DATA

GR No. 136	HIGH VALUE 2.0 API	CALIBRATOR VALUE 140 API	API 0 API 200
GR BOREHOLE EFFECT VALUE 0		CALIBRATOR VALUE 100 API	API 0 API 200

GAMMA RAY	API/FT	COAL BULK DENSITY	CALIPER INCHES

HOLE SIZE CORRECTION DATA





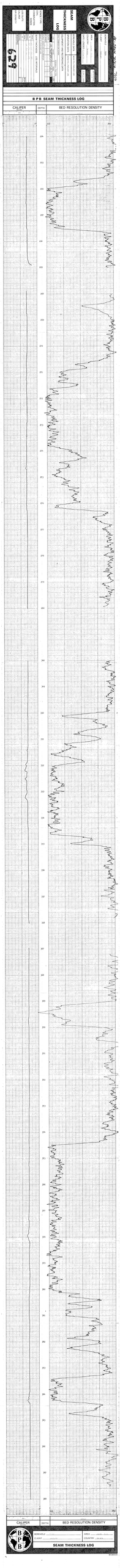
API	100	API		0	100
GAMMA RAY	API/FT	COAL BULK DENSITY		CALIPER INCHES	

B P B

BOREHOLE	MAKA	AREA	LAKE S.W.
CLIENT		COUNTRY	TANZA

COAL LITHOLOGY LOG

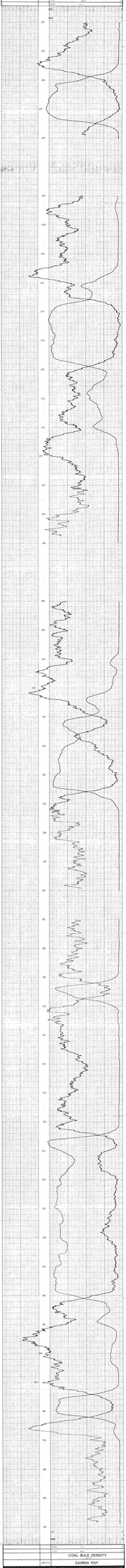
BP 00 0 0


B P B
SEAM THICKNESS LOG
629
B P B SEAM THICKNESS LOG
CALIPER
DEPTH
BED RESOLUTION DENSITY
SEAM THICKNESS LOG

BPB COAL QUALITY LOG

DEPTH	GAMMA RAY
	COAL BULK DENSITY

HOLE SIZE CORRECTION DATA



	COAL BULK DENSITY
DEPTH	GAMMA RAY

BPB			
SURVEY	Dolomite	HOLE	Sand Ck. N.T.
CLIENT		COUNTRY	Canada

COAL QUALITY LOG

CONFIDENTIAL

Run No.	ONE
Date	27-JUL-2010
Type Log	PGGS/DSI
Depth-Driller	3500
Depth-Logger	3500
Bottom Logged Interval	3500
Top Logged Interval	1000
Casing-Driller	1000 @ 0
Casing-Logger	1000
Bit Size	8.5
Type Fluid in Hole	WBM
Density / Viscosity	1.1 / 50
pH / Fluid Loss	9.5 / 4.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp.	0.1 @ 20
Rmf @ Meas. Temp.	0.08 @ 20
Rmc @ Meas. Temp.	0.12 @ 20
Source of Rmf / Rmc	MEASURED / CALCULATED
Rm @ BHT	0.06 @ 120
Time Since Circulation	12 HOURS
Time on Bottom	08:00 27-JUL-2010
Max. Rec. Temp.	120
Equipment / Location	1009 / PRINCE GEORGE
Recorded By	D. MCKAY
Witnessed By	J. MCKAY

Schlumberger

PACKARD BIOSCIENCE COMPANY (CANADA) LTD.

WELL: PACKARD BIOSCIENCE COMPANY (CANADA) LTD. PRINCE GEORGE 1009

FIELD: PRINCE GEORGE

COUNTY: CARIBOO

PROVINCE: BRITISH COLUMBIA

LOCATION: 1009

Other Services: PGGS

Permanent Datum: GROUND LEVEL

Elevation: 0 m

Log Measured From: KELLY BUSHING

Drilling Measured From: KELLY BUSHING

Elev.: K.B.	0		
D.F.	0	G.L.	0

Run No. ONE

Depth-Driller: 3500

Depth-Logger: 3500

Bottom Logged Interval: 3500

Top Logged Interval: 1000

Type Fluid in Hole: WBM

Salinity, PPM Cl: 0

Density: 1.1

Level: FULL

Max. Rec. Temp. deg. C: 120

Equip. No. Location: 1009 PRINCE GEORGE

Recorded By: D. MCKAY

Witnessed By: J. MCKAY

Run No.	Bit No.	Casing Depth	Logged Interval
ONE	8.5	1000 @ 0	3500 - 1000

Run No.	Tool Type	Tool Position	Other
ONE	PSI	ECCENTERED	

Run No.	Service Order	Gamma Ray Standoff	Tool Type	Serial No.	Diameter	Weight	Max. Temp. deg. C	Max. Time Rec.
ONE	1009		PGGS	1009	3.625	0	120	

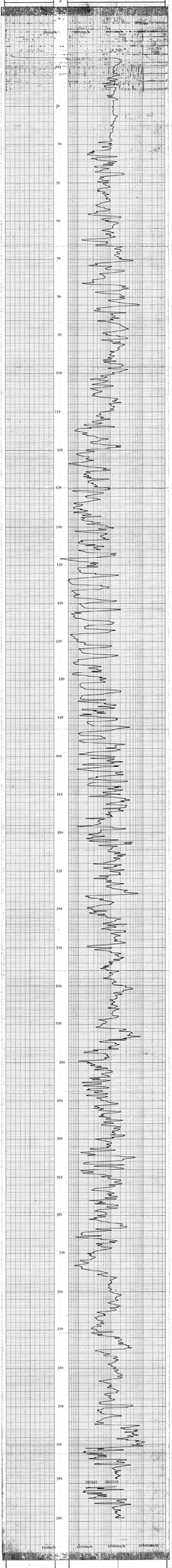
Remarks: PGGS/DSI RUN#ONE

Engineer's Signature: D. MCKAY

Witness's Signature: J. MCKAY

Schlumberger

PGGS/DSI RUN#ONE



Schlumberger

PGGS/DSI RUN#ONE

COMPANY: PACKARD

BIOSCIENCE COMPANY (CANADA) LTD.

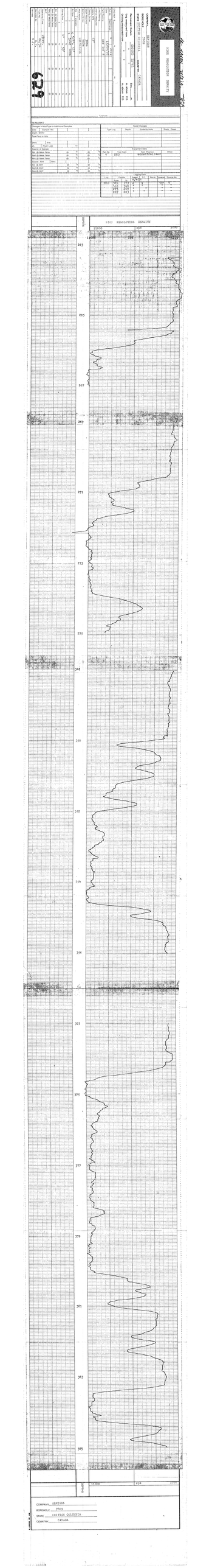
WELL: PACKARD BIOSCIENCE COMPANY (CANADA) LTD. PRINCE GEORGE 1009

FIELD: PRINCE GEORGE

COUNTY: CARIBOO

STATE: BRITISH COLUMBIA

COUNTRY: CANADA


HIGH RESOLUTION DUAL INDUCTION SHORT
DUAL INDUCTION SHORT
HIGH RESOLUTION
COMPANY
WELL
FIELD
COUNTY
STATE
COUNTRY
GENTOR
7003
BRITISH COLUMBIA
CANADA
ALTERED BOREHOLE DIA
BOREHOLE DIA
GAMMA RAY
SPONTANEOUS POTENTIAL
RESISTIVITY
CONDUCTIVITY
11000
0
200
205
269
271
273
275
348
350
352
354
356
373
375
377
379
381
383
385

Re. Saxon 72 Bldr. R0178

BPB

BOREHOLE R0178
CLIENT DENISON
AREA SAXON
COUNTRY CDN.
DATE 06/08/72 20/7/72
OPT. SCALE 1:50 1:20
SOUTH WEST 1:10 1:5

SEAM THICKNESS LOG

LOG SUITE
CALIPER
BR DENSITY

SONDE TYPE
COAL COMBINATION SONDE

SEAM THICKNESS LOG INTERVALS

From	106	110	113	116	
To	109	113	116	119	
Thickness	3	3	3	3	
Dip	0	0	0	0	

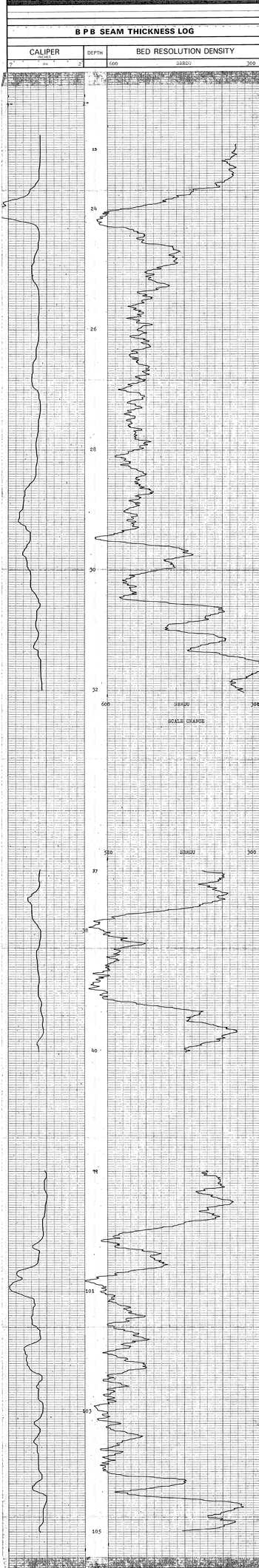
REMARKS
Thickness in Inches
Dip in Degrees

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

GAIN	1000	1000	1000	1000	
LLS DENSITY	1	1	1	1	
LLD DENSITY	1	1	1	1	
TENSION	2	2	2	2	
SPEED	1	1	1	1	
SCINT. GAIN	6.8	6.8	6.8	6.8	

SEAM THICKNESS LOG

B P B SEAM THICKNESS LOG



BOREHOLE R0178
CLIENT DENISON
AREA SAXON
COUNTRY CDN.

SEAM THICKNESS LOG

MT 46003 R

COAL LITHOLOGY LOG

LOG SUITE
GAMMA RAY
C.S. DENSITY
CALIPER

COAL COMBINATION SONDE

SONDE TYPE:

BOREHOLE R0178
CLIENT DENTSON

AREA SAXON
COUNTRY CDN.
DATE LOGGED 20/7/78

RECIPROCAL SCALE 200:1

2 or 3 LOGS

Re-Saxon 78 Jan. R0178

OPERATION DATA

WITNESS	J.J.
ENGINEER	20/7/78
LOGGING UNIT NO.	2
INTERVAL LOGGED	105
LAST READING	105
FIRST READING	105

FLUID DATA

NATURE	AIR
LEVEL	32 m below
VISCOSITY	
Rm @ °F/°C	
Rmf @ °F/°C	
Rmc @ °F/°C	

CASING SIZES: 1 6¼ TO 22m; 2 5.125 TO 107 m; 3 5.125 TO 105 m; 4 TO; 5 TO

BIT SIZES: 1 6¼ TO 22m; 2 4¾ TO 107 m; 3 TO; 4 TO

BOREHOLE DATA

PERMANENT DATUM	Ground Level
ELEVATION OF PD	0 m
DRILLER	
MEASUREMENTS FROM	G.L.
DEPTH DRILLED	107 m
DEPTH READ	107 m
CASING SHOE	105 m

629

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE:

LOG	EQUIPMENT			TAPING			PANEL			CAL DEPTH	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPE	RECORD SPEED	DIRECT/ REPLAY	SPEED	T.C. SECS	NORM		FROM	TO	INTERVAL	
GAMMA RAY	134	[redacted]	400 api	Y	9	D	9	1	1.4		105	0	105	Y
C.S. DENSITY		N5851	100	Y	9	D	9	1/3	5.55					
CALIPER		[redacted]		Y	9	R	9	1/3						

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

		INTERVAL TOTAL
FROM	105 40 32	
TO	99 37 23	
INTERVAL	6 3 9	= 18

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
90	HRD		20:1

REFER TO ADDITIONAL HEADINGS

REMARKS

water level different for HRD

B P B COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. VALUE 6000 @ 2" DIAM
JIG MARK SHOWN AT ABOVE VALUE = 5.55

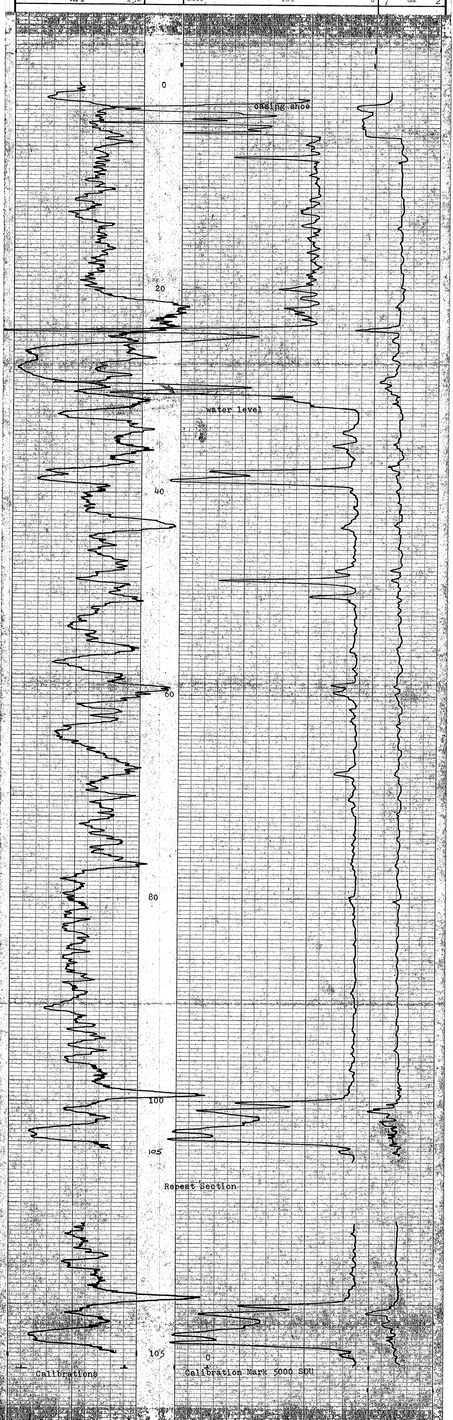
JIG CAL DATE 19/7/78 JIG VALUE 6000 SDU @ g/cm³
JIG No 100 SPAN 6000 NORM 888 = 5.55

2 ins 472 cps
7 ins 888 cps

GAMMA RAY | DEPTH | COAL BULK DENSITY (g/cm³) | CALIPER INCHES

HOLE SIZE CORRECTION DATA

0 API 150 | 6000 s.d.u. 0 | 7 dia 2



0 API 150 | 6000 s.d.u. 0 | 7 dia 2

GAMMA RAY | DEPTH | COAL BULK DENSITY (g/cm³) | CALIPER INCHES

BOREHOLE R0178 AREA SAXON
CLIENT DENTSON COUNTRY CDN.

COAL LITHOLOGY LOG

MY 860038

Re-Saxon 71(3)A. R0178

BPB

BOREHOLE R0178
CLIENT DENISON

AREA SAXON
COUNTRY CDN.
DATE LOGGED 20/7/78

DEPTH SCALE 1:
3 m to 1cm
20 m to 1cm

COAL QUALITY LOG

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

LOG	SONDE	SENSOR	SPACING	FREQUENCY
GAMMA RAY	2	2	2	1
ELECTRICAL	2	2	2	1	1.5
SONIC	2	2	2	1	1	5.5
DENSITY	2	2	2	1	1	1	5.5

REFER TO LITHOLOGY LOG

COAL QUALITY LOG INTERVALS

FROM	TO
104.50	105.30
99.97	99.29
6.3	9

INTERVAL	ACCEPT	REJECT
TOTAL	1.41	
INTERNAL	1.41	

REMARKS

LOG SUITE
GAMMA RAY
L.S. DENSITY

SONDE TYPE
COAL
COMBINATION
SONDE

COAL QUALITY
LOG

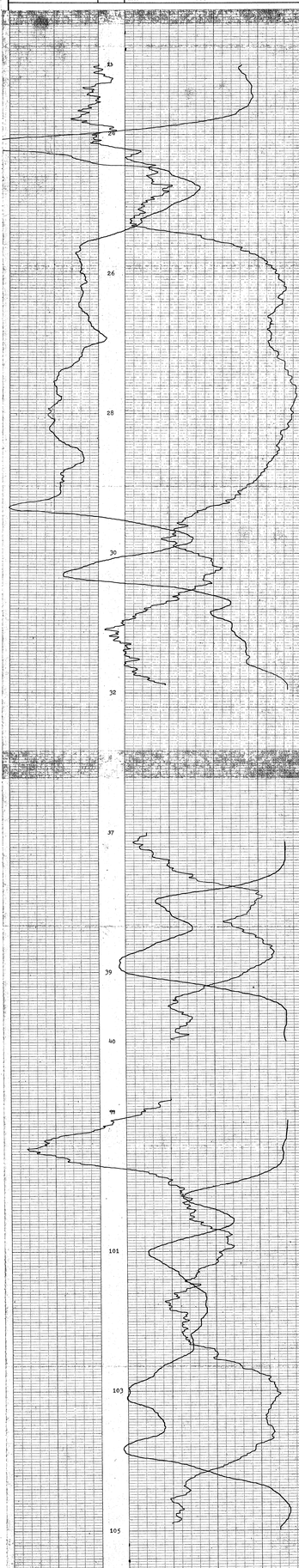
629

BPB COAL QUALITY LOG

DEPTH	GAMMA RAY
	COAL BULK DENSITY g/cm³

HOLE SIZE CORRECTION DATA

	150	API
	6.000	g/cm³



	6.000	g/cm³
	150	API
	COAL BULK DENSITY g/cm³	
DEPTH	GAMMA RAY	

BPB

BOREHOLE R0178 — AREA SAXON
CLIENT DENISON — COUNTRY CDN.

COAL QUALITY LOG

COMPANY DENISON
BOREHOLE 80178
STATE SASKH. P.C.
COUNTRY CDN.

J.A. BRANTZ

Permanent Datum: Ground Level
Drilling measured from: K.B.
m Above P.D.
m Above K.B.

Field Remk

RB-MARKS
Changes in Mud Type or Additional Samples:
Date | Sample No.
Depth / Circle:
Type Fluid in Hole:
Dens. | Visc.
ph | Fluid Loss | ml
Source of Sample:
Rm @ Meas.Temp | @ | °F | @ | °F
Rmf @ Meas.Temp | @ | °F | @ | °F
Rmc @ Meas.Temp | @ | °F | @ | °F
Source: Rmf | Rmc
Rm @ BHT | @ | °F | @ | °F
Rmf @ BHT | @ | °F | @ | °F
Rmc @ BHT | @ | °F | @ | °F

Type Log | Depth | Scale Changes: Scale Up Hole | Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
1	NRD	eccentralised	

Logging Data

Log	Depths From	To	Speed	T.C.	Norm.	Bowers	Source Key
NRD	105	23	24	1		90	9

water level in 4 seam

Run No.	Bit Size	Density/Viscosity	Fluid Loss	Max. Rec. Temperature	Equip. No. & Location	Recorded By	Witnessed By
1	6 1/2"	9.2/41	10.0/6.0	32°C	2504	J.A.	
2	6 1/2"	9.2/41	10.0/6.0	32°C	2504	J.A.	
3	6 1/2"	9.2/41	10.0/6.0	32°C	2504	J.A.	

Run No.	Casing Size	Casing Wgt.	Casing Grade	Casing Depth	Bit Size	Mud Type	Density	Viscosity	Fluid Loss	Rm @ Meas. Temp.	Rmf @ Meas. Temp.	Rmc @ Meas. Temp.	Source Rmf / Rmc	Rm @ BHT	Rmf @ BHT	Rmc @ BHT
1	7"	23 lb/ft	J-55	1507m	6 1/2"	Water	9.2	41	10.0	@ °F	@ °F	@ °F		@ °F	@ °F	@ °F
2	7"	23 lb/ft	J-55	1507m	6 1/2"	Water	9.2	41	10.0	@ °F	@ °F	@ °F		@ °F	@ °F	@ °F
3	7"	23 lb/ft	J-55	1507m	6 1/2"	Water	9.2	41	10.0	@ °F	@ °F	@ °F		@ °F	@ °F	@ °F

621

DEPTHS

HIGH RESOLUTION DENSITY

14500 CPS 7000

25
25
27
29
water level
31
33
14500 CPS 7000
SCALE CHANGE
10500 CPS 6500
37
39
41
43
101
103
105

DEPTHS

10500 CPS 6500

HIGH RESOLUTION DENSITY

COMPANY DENISON
BOREHOLE 80178
STATE SASKH. P.C.
COUNTRY CDN.

PR- SAXON 78 (3)A. R0278

COAL LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

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

BOREHOLE R0278
CLIENT DENISON
AREA SAXON
COUNTRY CDN.
DATE LOGGED 20/7/78
DEPTH SCALE 200:1
1 OF 4 LOGS

BOREHOLE DATA

PERMANENT DATUM	Ground Level		
ELEVATION OF P.D.			
MEASUREMENTS FROM	B.P.B.	DRILLER	
DEPTH REACHED	26	26	
CASING SHOE	1		
BIT SIZES	1 6.75 TO 1	2	TO
	3 5.125 TO 26	4	TO
CASING SIZES	1 6" TO 1m	2	TO

FLUID DATA

MATURE	
S.G.	
LEVEL	
VISCOSITY	
Rm at meas. temp.	
B.H.T.	45 ohm m

OPERATION DATA

FIRST READING	24
LAST READING	0
INTERVAL LOGGED	24
UNIT - TRUCK No.	26/34
ENGINEER	F.H.
WITNESS	J.F.

629

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: T.C. SECS	PANEL: NORM	CAL. COEFF	DEPTHS: FROM	DEPTHS: TO	DEPTHS: INTERVAL	SEAM LOG RUN
GAMMA RAY	134		400api	Y	9	D	9	1	1.4		24	0	24	Y
L.S. DENSITY	SIDEWALL POSITION		100	Y	9	D	9	1/3	5.55					
CALIPER				Y	9	R	9	1/3						

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

		INTERVAL TOTAL
FROM	20	
TO	7	
INTERVAL	13	13m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
	F.E.	200:1	
	HRD		20:1

REFER TO ADDITIONAL HEADINGS

REMARKS

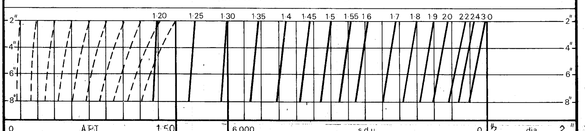
B P B COAL LITHOLOGY LOG

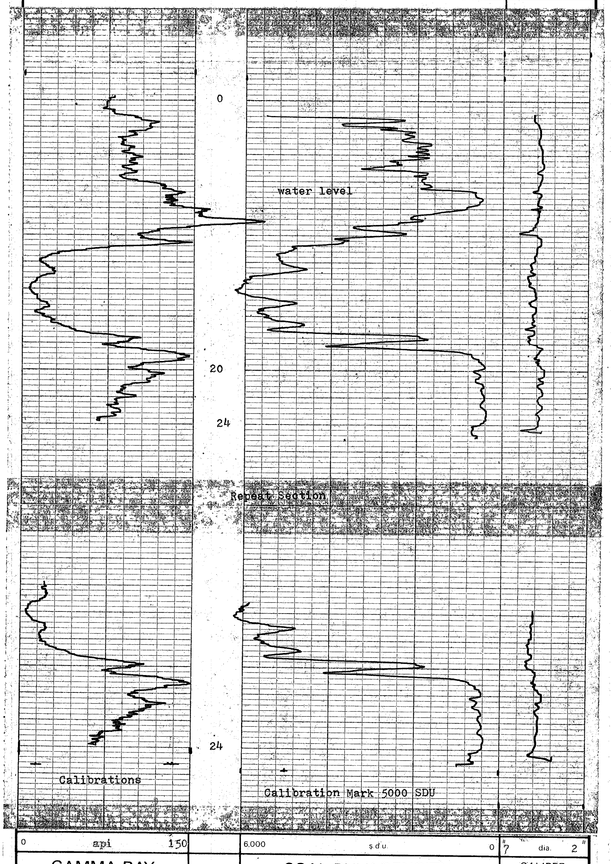
CALIBRATION DATA

JIG No. VALUE 40@ 2" DIAM.		JIG CAL. DATE 19/7/78 JIG VALUE 5000 SDU@ g/cm³	2 ins 472 cps
JIG MARK SHOWN AT ABOVE VALUE = 3.33		JIG No. 100 SPAN 6000 NORM SDU/CPS = 5.55	7 ins 888 cps

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA





0 api 150		6.000 s.d.u. 0	7 dia. 2"
GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

BOREHOLE R0278 AREA SAXON
CLIENT DENISON COUNTRY CDN.

COAL LITHOLOGY LOG

MY 88002 R

R2-SAXON 78 (B)A. R02-78

SEAM THICKNESS LOG

BOREHOLE R0278
CLIENT DENISON
AREA SAXON
COUNTRY CDN.
DATE LOGGED 20.7.78
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
SIDEWALL POSITION

LOG	TAPING	PANEL		
CALIPER	Y	2	R	1
B.R. DENSITY	X	2	R	1
SONDE TYPE: COAL COMBINATION SONDE				

SPEED	SEC.	NORM.	LOG
2	1	.68	

SONDE TYPE: COAL COMBINATION SONDE
LOG SUITE: CALIPER B.R. DENSITY

REFER TO LITHOLOGY LOG
SEAM THICKNESS LOG INTERVALS

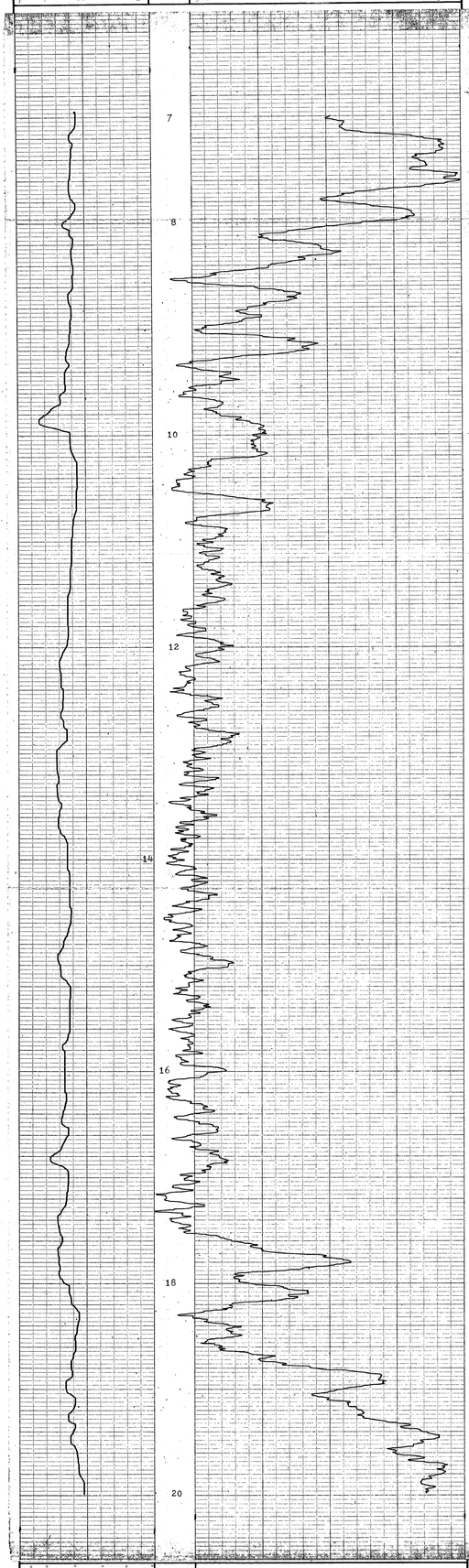
FROM	20		
TO	7		
INTERVAL	13		
FROM			
TO			
INTERVAL			

REMARKS

629

B P B SEAM THICKNESS LOG

CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 dia 2		520 SBRDU 300



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 dia 2		520 SBRDU 300

BOREHOLE R0278
CLIENT Denison
AREA SAXON
COUNTRY CDN.

SEAM THICKNESS LOG

MY 88002 R

PR-SAXON 78 (3)A. R0278

BPB

COAL QUALITY LOG

BOREHOLE R0278
CLIENT DENISON
AREA SAXON
COUNTRY CDN.
DATE LOGGED 20/7/78
DEPTH SCALE 20:1
3 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	
	LOG	RECORDING	SPEED			NORM
GAMMA	1	2	2	2	1.6	
L.S. DENSITY	1	2	2	1	5.5	

SOURCE: SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

COAL QUALITY LOG INTERVALS

FROM	20		
TO	7		
INTERVAL	13		
FROM		INTERVAL	
TO		TOTAL	
INTERVAL		13	

REMARKS

629

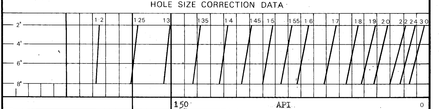
SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY L.S. DENSITY

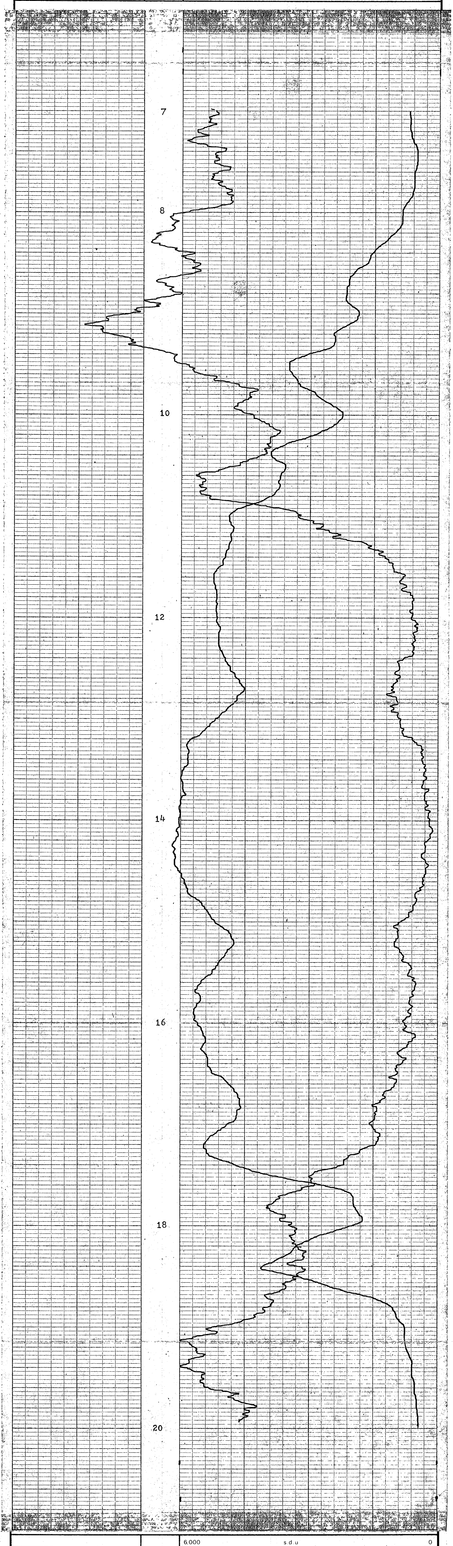
BPB COAL QUALITY LOG

	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 R0278 — AREA SAXON
CLIENT DENISON — COUNTRY CDN.

COAL QUALITY LOG

NH 8/2002 X

Pc - SASKN. JUL'81. R02.2C

COMPANY 1231830
BOREHOLE R0273
STATE SASKN. R.O. COUNTRY CDN.
Permanent Datum ____ Elev. ____ m.
Log measured from Ground Level m. above P.D.
Drilling measured from " m. above P.D.

GRD-DEF. E. R.

	Run No.	1	
	Depth Driller	1251	
	Depth Logger	1250.1	(MSD)
	Btm. Log Interval		
	Top Log Interval		
Casing Driller			
Casing Logger			
Bit Size		7 7/8	
Type Fluid in Hole		Lignosulphonate	
Dens.		1.13	
Visc.		34	
pH		10.5	
Fluid Loss		17	
Source of Sample			
Rm @ Meas Temp		2.7@ 24° C	
Rmf @ Meas Temp		2.2@ 24° C	
Rmc @ Meas Temp		- @ -	
Source: Rmf	Rmc	-	
Rm @ BHT		2.7@ 24° C	
Rmf @ BHT		2.2@ 24° C	
Rmc @ BHT		- @ -	

Fold here

REMARKS

Changes in Mud Type or Additional Samples

Date	Sample No.					
Depth - Driller						
Type Fluid in Hole						
Dens.	Visc.					
pH	Fluid Loss					
Source of Sample						
Rm @ Meas Temp		@	°F	@	°F	
Rmf @ Meas Temp		@	°F	@	°F	
Rmc @ Meas Temp		@	°F	@	°F	
Source: Rmf	Rmc					
Rm @ BHT		@	°F	@	°F	
Rmf @ BHT		@	°F	@	°F	
Rmc @ BHT		@	°F	@	°F	

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type -	Tool Position	Other
1	NRD	eccentralised	
2	P.E.	"	

Logging Data

Log	Depths From	Depths To	Speed	T.C.	Norm.	Isolated	Source No.
NRD	20	7	24	1		90	9
P.E.	24	6	5	1/3			

Kwd res.ext. 45ohm m

DEPTHS

HIGH RESOLUTION DENSITY

10500 CPS 6500

7
8
10
12
14
16
18
20

Compensated Resistivity ohm m

10 100 1000

10
20
24

Repeat section

24

DEPTHS

5 ohm m 5000

FOCUSED ELECTRIC

COMPANY DENTSCH
BOREHOLE R0273
STATE SASKN
COUNTRY CDN.

929

COAL LITHOLOGY LOG

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

SONDE TYPE: COAL COMBINATION SONDE

BOREHOLE: R0378
CLIENT: DENISON
AREA: SAXON
COUNTRY: CDN.
DATE LOGGED: 21/7/78
DEPTH SCALE: 20:1
Log & Loss

BOREHOLE DATA

PERMANENT DATUM	Ground Level
ELEVATION OF P.D.	
TRANSMISSION	G.L.L.
CASING SHOE	G.L.L.
CASING FLOOR	G.L.L.

BIT SIZES	FROM	TO
3	5.12	20
2	20	1.5

CASING SIZES	FROM	TO
1	6.12	20
2	20	1.5

FLUID DATA

NATURE	AIR - FOAM
S.G.	
LEVEL	
VISCOSITY	
P.H.	
BIT	

OPERATION DATA

WITNESS	
ENGINEER	J.F.
UNIT-TRUCK No.	26/34
INTERVAL LOGGED	42
FIRST READING	47
LAST READING	629
RECORDED BY	

R0378 74 (e) 14 Saxon

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT: SONDE	SOURCE	CALIBRATOR	TAPING: LOG TAPED	RECORD SPEED	CORRECT for REPLAY	PANEL: SPEED	T.C. SECS	NORM	CAL COEFF	DEPTHS: FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY	134		400api	Y	9	D	9	1	1.4		47	0	47	Y
L.S. DENSITY			100	Y	9	D	9	1/3	5.55					Y
CALIPER	SIDEWALL POSITION			Y	9	R	9	1/3						Y

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

FROM	38 13	INTERVAL TOTAL
TO	32 6	
INTERVAL	6 7	13m

ADDITIONAL SONDES RUN				REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	
90	HRD		20:1	REFER TO ADDITIONAL HEADINGS

B P B COAL LITHOLOGY LOG

CALIBRATION DATA

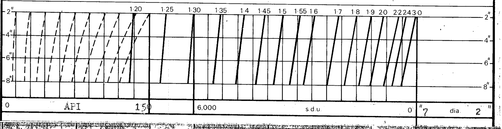
JIG No. VALUE 1000 @ 2" DIAM.
JIG MARK SHOWN AT ABOVE VALUE = 3.33

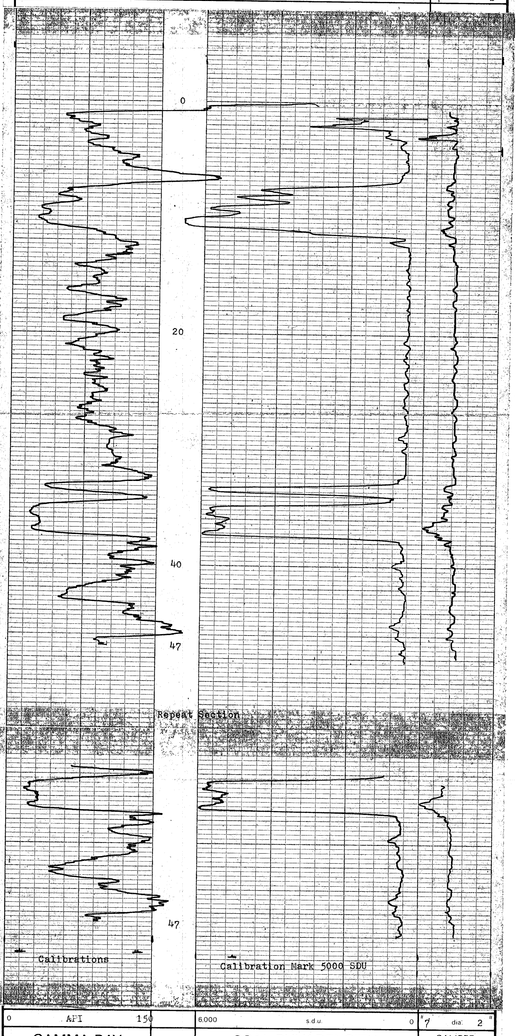
JIG CAL. DATE 19/7/78 JIG VALUE 5000 SDU @ g/cm³
JIG No. 100 SPAN 6000 NORM (GAMMA / DENSITY) = 5.55

7 ins 888 cps
2 ins 472 cps

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA





0 API 150 | 6.000 s.d.u. 0 | 7 dia 2

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

BOREHOLE R0378 AREA Saxon
CLIENT DENISON COUNTRY CDN.

COAL LITHOLOGY LOG

MY 88003R

SEAM THICKNESS LOG

SONDE TYPE
COAL COMBINATION SONDE

LOG SUITE
CALIPER
BR DENSITY

BOREHOLE R0328
CLIENT DENISON

AREA SAXON
COUNTRY CDN.
DATE LOGGED 21/7/78

2 OR 4 LOGS

DEPTH SCALE 1:200

BOREHOLE DATA
REFER TO LITHOLOGY LOG

OPERATION DATA
REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA
COAL COMBINATION SONDE

	LOG	TAPING	SPECIFICATION	PANEL
RUN NUMBER	1	1	1	1
DATE	21/7/78			
TIME	1400			
DEPTH DRILLER	2			
DEPTH LOGGER	2			
BOTTOM LOGGED INTERVAL	1			
TOP LOGGED INTERVAL	1.68			
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 & RMC				
RM @ BHT				
TIME SINCE CIRC.				
MAX. REC. TEMP.				
EQUIP. LOCATION				
RECORDED BY				
WITNESSED BY				

SEAM THICKNESS LOG INTERVALS
REFER TO LITHOLOGY LOG
SOURCE SONDE AND CALIBRATION

	FROM	TO	THICKNESS
	38.13	32.6	5.7
	6	7	1
TOTAL			6.7

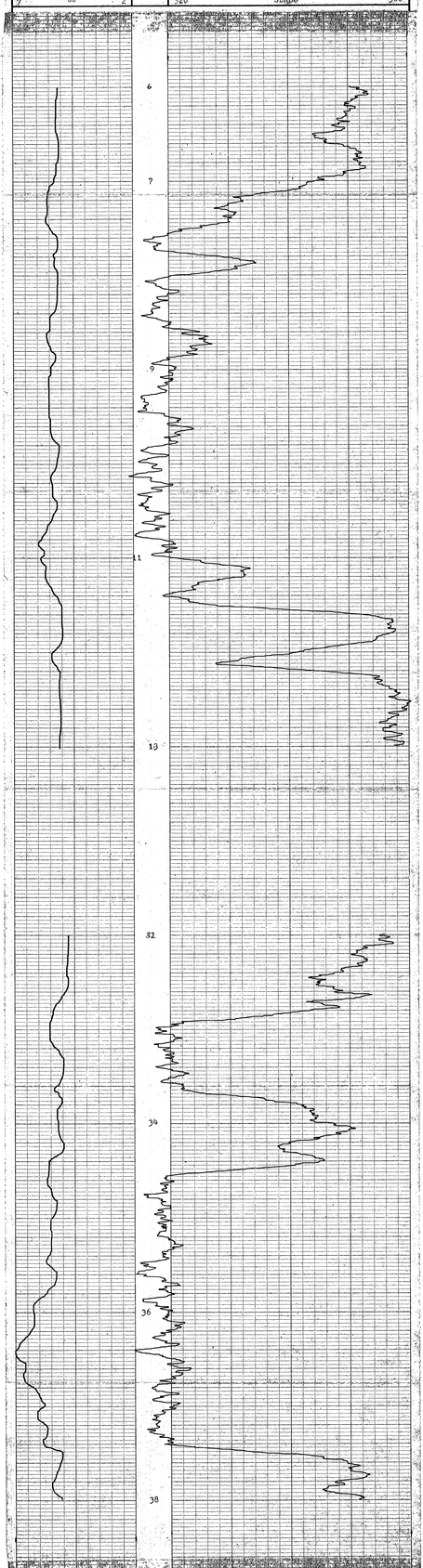
REMARKS

129

12 - SAXON 7/78 R328

B P B SEAM THICKNESS LOG

CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 dia 2		520 SBRDU 300



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 dia 2		520 SBRDU 300

BOREHOLE R0328
CLIENT DENISON

AREA SAXON
COUNTRY CDN.

SEAM THICKNESS LOG

MY880018

Pr- Saxon 71 (s) Ltd. R0378

BPB

COAL QUALITY LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY L.S. DENSITY

BOREHOLE: R0378
CLIENT: DENTSON
AREA: SAXON
COUNTRY: CDN.
DATE LOGGED: 21/7/78
DEPTH SCALE: 20:1
3 OF 4 LOGS

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

LOG	TAPING	SPEED	SCALE
GAMMA	1	2	1
L.S. DENSITY	1	2	1

SCHEMATIC POSITION: PANEL 1 (CDN) 2 (CDN) 3 (CDN) 4 (CDN) 5 (CDN)

SOURCE SONDE AND CALIBRATION: REFER TO LITHOLOGY LOG

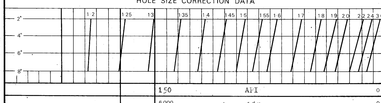
COAL QUALITY LOG INTERVALS	FROM	38.13
	TO	32.6
	INTERVAL	6.7
	INTERVAL	1.3

REMARKS: 629

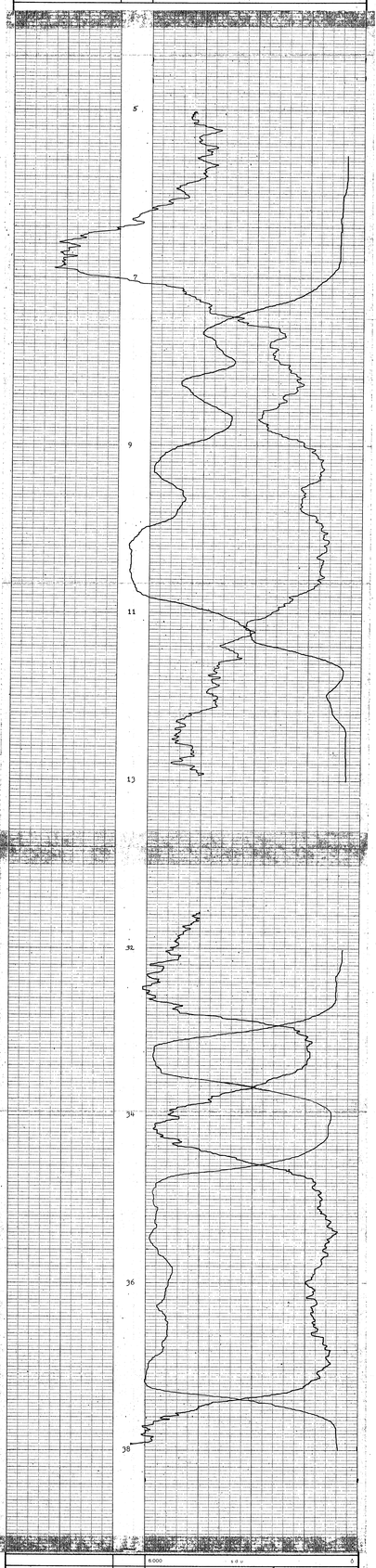
BPB COAL QUALITY LOG

DEPTH	GAMMA RAY
	COAL BULK DENSITY g/cm³

HOLE SIZE CORRECTION DATA



150	API	0
6000	s d u	0



6000	s d u	0
150	API	0
	COAL BULK DENSITY g/cm³	
DEPTH	GAMMA RAY	

BPB

BOREHOLE R0378	AREA SAXON
CLIENT DENTSON	COUNTRY CDN.

COAL QUALITY LOG

COMPANY DENISON
BOREHOLE ROJ 78
STATE SAXON COUNTRY CDN.

HIGH RESOLUTION DENSITY

Permanent Datum: Ground Level — Elev. — m.
Log measured from — m. above P.D.
Drilling measured from — m. above P.D.

Date	21/7/78		
First Reading	38 12		
Last Reading	32 7		
Hrs. Recorded	11 8		
Casing Driller	11		
Casing Logger	11		
Bit Size	9		
Type Fluid	AIR		
Fluid Level			
Max. Rec. Temp.			
Equip. No.			
Location			
Recorded By			
Witnessed By			

Elev.: K.B. — D.F. — G.L.
Date — Run No. — Depth-Driller — Depth-Logger — Btm. Log Interval — Top Log Interval — Casing-Driller — Casing-Logger — Bit Size — Type Fluid in Hole — Dens. — Visc. — pH — Fluid Loss — Source of Sample — Rm @ Meas. Temp. — Rmf @ Meas. Temp. — Rmc @ Meas. Temp. — Source: Rmf — Rmc — Rm @ BHT — Rmf @ BHT — Rmc @ BHT

Date	21/7/78		
Run No.	1		
Depth-Driller	38.12		
Depth-Logger	32.7		
Btm. Log Interval	11.8		
Top Log Interval	11		
Casing-Driller	11		
Casing-Logger	11		
Bit Size	9		
Type Fluid in Hole	AIR		
Dens.			
Visc.			
pH			
Fluid Loss			
Source of Sample			
Rm @ Meas. Temp.	@ °F	@ °F	
Rmf @ Meas. Temp.	@ °F	@ °F	
Rmc @ Meas. Temp.	@ °F	@ °F	
Source: Rmf / Rmc			
Rm @ BHT	@ °F	@ °F	
Rmf @ BHT	@ °F	@ °F	
Rmc @ BHT	@ °F	@ °F	

Casing Size 1 — 6.625 to 13m
Casing Size 2 — 5.125 to 40
Bit Size — 2.875 to 13m
Mud Source — AIR
Rm @ Meas. Temp. — @ °F — @ °F — @ °F
Rmf @ Meas. Temp. — @ °F — @ °F — @ °F
Rmc @ Meas. Temp. — @ °F — @ °F — @ °F
Source: Rmf / Rmc
Rm @ BHT — @ °F — @ °F — @ °F
Rmf @ BHT — @ °F — @ °F — @ °F
Rmc @ BHT — @ °F — @ °F — @ °F

Time Circulating — 2 hrs
Time Logger on Bottom — 2/8/94
Truck No. — 1-14
Recorded By — J.H.
Witnessed By —

Logging Data

Log	Depths From	Depths To	Speed	T.C.	Norm.	Sovarid	Source No.
HRD	38	6	21	1		90	9

Equipment Data

Run No	Tool Type	Tool Position	Other
1	HRD	eccentralised	

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

REMARKS

Changes in Mud Type or Additional Samples

Date	Sample No.	
Depth-Driller		
Type Fluid in Hole		
Dens. / Visc.		
pH / Fluid Loss		
Source of Sample		
Rm @ Meas. Temp.	@ °F	@ °F
Rmf @ Meas. Temp.	@ °F	@ °F
Rmc @ Meas. Temp.	@ °F	@ °F
Source: Rmf / Rmc		
Rm @ BHT	@ °F	@ °F
Rmf @ BHT	@ °F	@ °F
Rmc @ BHT	@ °F	@ °F

fold here

DEPTHS

10500 CPS 6500

HIGH RESOLUTION DENSITY

5
6
8
10
12
13
32
34
36
38

DEPTHS

10500 CPS 6500

HIGH RESOLUTION DENSITY

COMPANY DENISON
BOREHOLE ROJ 78
STATE SAXON
COUNTRY CDN.

629

Re-Saxon 71 (81)t. 10938

PR - SAXON - 36(3)A. R0478

HIGH RESOLUTION DENSITY

COMPANY DENISON
BOREHOLE R0478
STATE SAXON B.C. COUNTRY CDN.

Permanent Datum Ground Level Elev. m.
Log measured from " m. above P.D.
Drilling measured from " m. above P.D.

GRID REF E N R.L.

Run No.	Depth Scale	1	20:1
Date		22/7/78	
First Reading		56	
Last Reading		48	
Interval Measured		8	
Casing BPB		1	
Casing Driller		1	
Depth Reached		67m	
Bottom Driller			
Mud Nature		water	
SG	Viscosity	1	
Bit Size	1	7 7/8" to 1	to
	2	5 1/8" to 67	to
	3	to	to
Casing Size	1	6 1/8" to 1	to
	2	to	to
Rm @ Meas Temp.		@	@
Rmf @ Meas Temp.		@	@
Rmc @ Meas Temp.		@	@
BHT		@	@
Operating Time		1 ½ hrs	
Truck No.		26/ 34	
Recorded By		P.H.	
Witness		J.F.	

629

fold here

REMARKS

Changes in Mud Type or Additional Samples

Date	Sample No.		
Depth - Driller			
Type Fluid in Hole			
Dens.	Visc.		
ph.	Fluid Loss	ml	
Source of Sample			
Rm @ Meas. Temp.	@ °F	@ °F	
Rmf @ Meas. Temp.	@ °F	@ °F	
Rmc @ Meas. Temp.	@ °F	@ °F	
Source: Rmf	Rmc		
Rm @ BHT	@ °F	@ °F	
Rmf @ BHT	@ °F	@ °F	
Rmc @ BHT	@ °F	@ °F	

Scale Changes

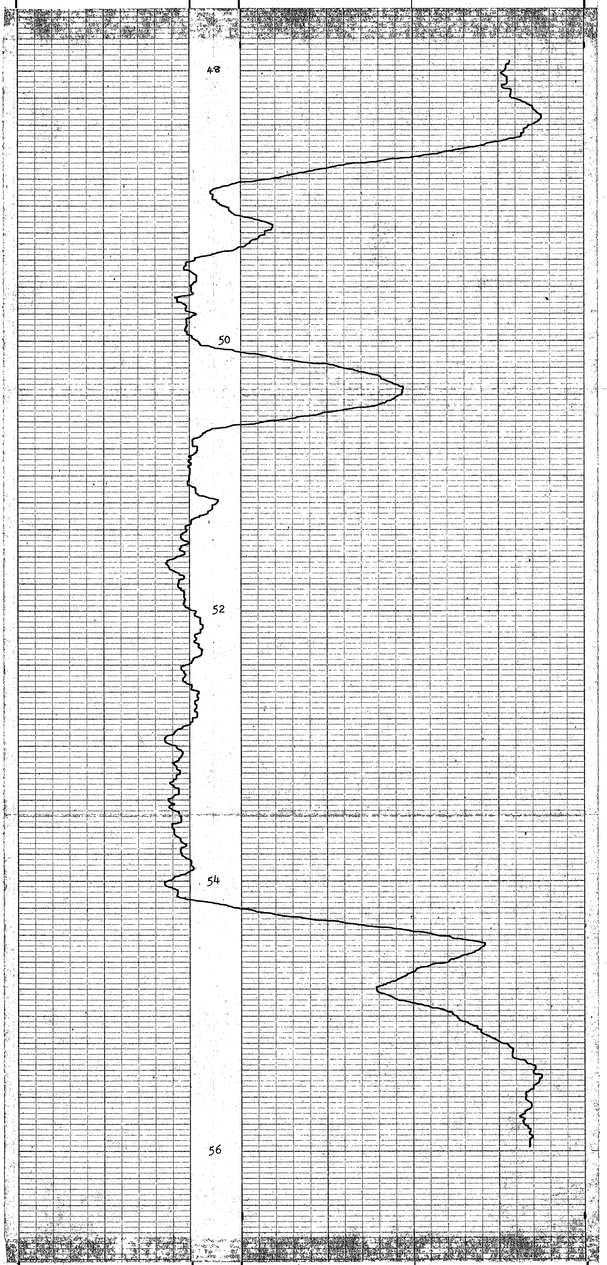
Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
1	HRD	eccentralised	

Logging Data

Log	Depths From	Depths To	Speed	T.C.	Norm.	Sond-No	Source No.
HRD	56	48	2½	1		90	9



COMPANY DENISON
BOREHOLE R0478
STATE SAXON B.C.
COUNTRY CDN.

MY (8) 58360 R

COAL LITHOLOGY LOG

BPB

BOREHOLE R0578
CLIENT DENISON
AREA SAXON
COUNTRY GUN.
DATE LOGGED 2/6/78
RUN 1
DEPTH SCALE 200:1
1 OF 4 LOGS

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

BOREHOLE DATA

PERMANENT DATUM: GROUND LEVEL
ELEVATION OF PD:
K.B. OR DRILLING FROM:

CASING SIZES					
	1	2	3	4	
6 1/8in	1	100			TO
4 1/2in	1	100			TO

	1	2	3	4
BIT SIZES	6 1/8in	4 1/2in		
CASING SIZES	6 1/8in	4 1/2in		
DEPTH REACHED	100	100		
DRILLING METHOD	D.D.	DRILLER		

OPERATION DATA

RECORDED BY	
WITNESSED BY	
DATE	2/6/78
TIME	2.30p.m.
RUN NO.	1
DEPTH-DRILLER	100
DEPTH-LOGGER	99
BTM. LOGGED INTERVAL	99
TOP LOGGED INTERVAL	0
CASING-DRILLER	
CASING-LOGGER	
BTM. CASING REF.	
MAX. REC. TEMP.	
EQUIP. LOCATION	
RECORDED BY	
WITNESSED BY	

FLUID DATA

MATRIX	AIR
DENSITY	
LEVEL	
VISCOSITY	
PH	
RM @ MEAS. TEMP.	
RMF @ MEAS. TEMP.	
RMC @ MEAS. TEMP.	
SOURCE OF RMF & RMC	
RM @ BHT	

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT: SONDE	SOURCE	CALIBRATOR	TAPING: LOG TAPED	RECORD SPEED	DIRECT? REPLAY	PANEL: SPEED	T.C. SECS	NORM	COAL DEPTH	DEPTHS: FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY	134		400 api	Y	9	D	9	1	1.4		99	0		
C.S. DENSITY			100	Y	9	D	9	1/3	5.44					
CALIPER	SIDEWALL POSITION			Y	9	D	9	1/3						

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

FROM	96 83	INTERVAL TOTAL
TO	90 76	
INTERVAL	6 7	= 13

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
90	HRD		20:1

REFER TO ADDITIONAL HEADINGS

REMARKS

Several logging attempts.
Hole finally collapsed.
Log assembled from previous runs.

B P B COAL LITHOLOGY LOG

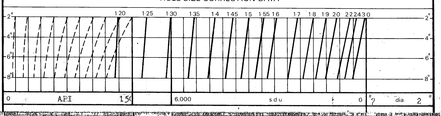
CALIBRATION DATA

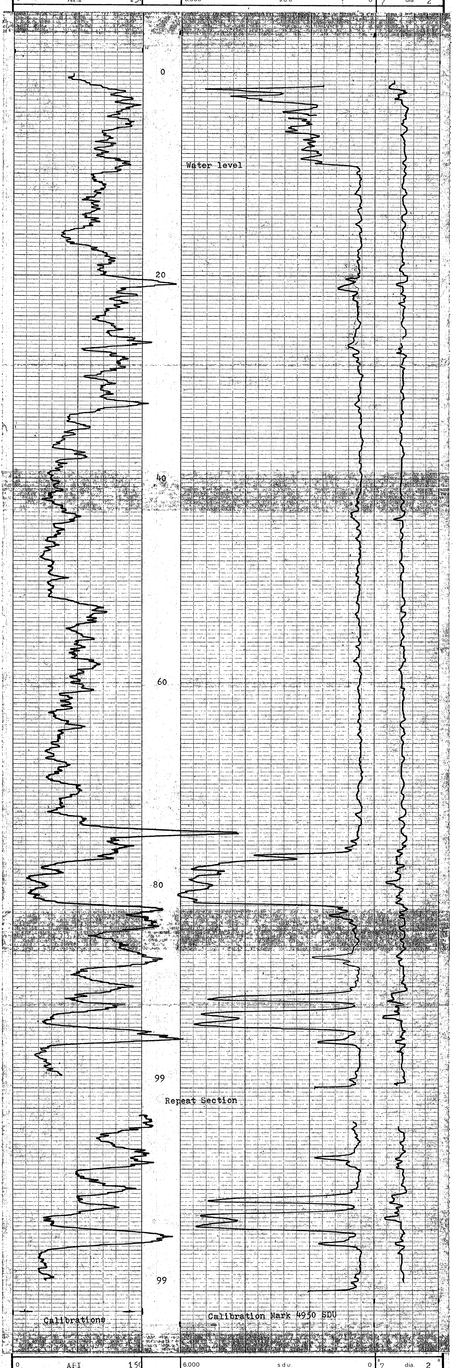
JIG No. VALUE 4000 @ 2" DIAM
JIG MARK SHOWN AT ABOVE VALUE -3.3

JIG CAL DATE 6/7/78 JIG VALUE 4950 SDU @ glcm³ 7 ins 892 cps
JIG No. SPAN 6000 NORM 5.44 2 ins 476 cps

GAMMA RAY	DEPTH	COAL BULK DENSITY	CALIPER INCHES

HOLE SIZE CORRECTION DATA





0 AFI 150		6000 s d u	0	7 dia 2
GAMMA RAY	DEPTH	COAL BULK DENSITY		CALIPER INCHES

BPB

BOREHOLE R0578 AREA SAXON
CLIENT DENISON COUNTRY GUN.

COAL LITHOLOGY LOG

MY 80001R

PR - SAXON 78 (B/P) · R0578

BOREHOLE R0578
CLIENT DENISON

AREA SAXON
COUNTRY CDN.
DATE LOGGED 7/8/78

DEPTH SCALE 20:1
2 of 4 LOGS

SEAM THICKNESS LOG

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

EQUIPMENT AND RECORDING DATA
COAL COMBINATION SONDE
SIGNAL POSITION

LOG	TAPING SPEED	SPEED	PANEL SCALE	SCALE
CALIPER	1	8	2	1
B.R. DENSITY	2	8	2	1
SOURCE SONDE AND CALIBRATION				.66

REFER TO LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: CALIPER B.R. DENSITY

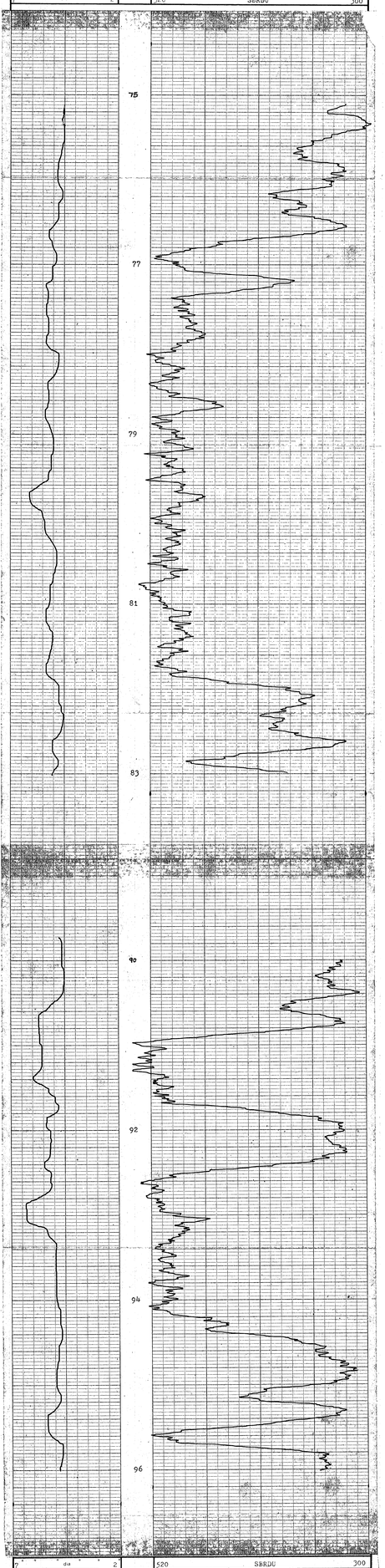
SEAM THICKNESS LOG INTERVALS

FROM	06.83
TO	09.56
INTERVAL	6.7
FROM	
TO	
INTERVAL	

REMARKS

629

B P B SEAM THICKNESS LOG



7 dia 2
CALIPER
INCHES
DEPTH
520 SBRDU 300
BED RESOLUTION DENSITY

BOREHOLE R0578
CLIENT DENISON
AREA SAXON
COUNTRY CDN.

SEAM THICKNESS LOG

MY 88002 R

BPB

BOREHOLE R0526
CLIENT DENISON

AREA SAXON
COUNTRY CON.
DATE LOGGED 7/8/73

DEPTH SCALE 1" = 5'-0"

COAL QUALITY LOG

SONDE TYPE
COAL QUALITY 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	SERIAL NO.	TAPING DISTANCE	CALIBRATION CHECK	PANEL POSITION
GAMMA	1005	24	2	1.4
L.S. DENSITY	1005	24	2	1.4

SIDEWALL POSITION: 100%

SOURCE, BOREHOLE AND CALIBRATION		
L.S. DENSITY	V	2
	R	24
		1
		1

REFER TO LITHOLOGY LOG

COAL QUALITY LOG INTERVALS

	FROM	TO
PRIMARY INTERVAL	56.5	97.5
SECONDARY INTERVAL		
TERTIARY INTERVAL		

TOTAL COAL THICKNESS: 41.0

REMARKS

129

02 SAXON 76 CB 0526

BPB COAL QUALITY LOG

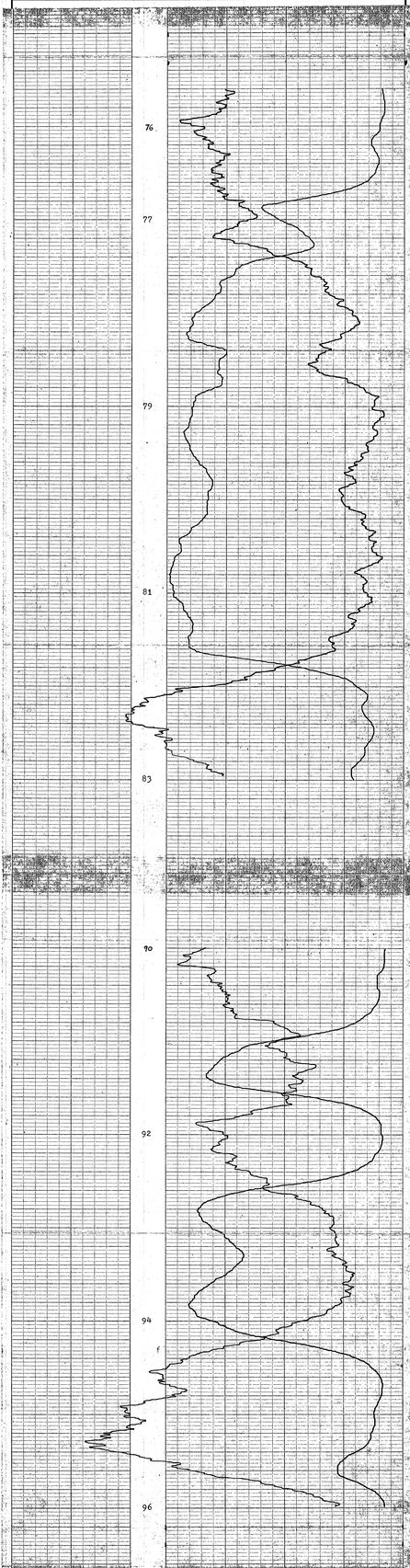
	DEPTH	GAMMA RAY
		COAL BULK DENSITY g/cm³

HOLE SIZE CORRECTION DATA

2" 4" 6" 8"

1.2 1.25 1.3 1.35 1.4 1.45 1.5 1.55 1.6 1.7 1.8 1.9 2.0 2.2 2.4 3.0

	150 API	0
	6.000 g/cm³	0



	6.000 g/cm³	0
	150 API	0
	COAL BULK DENSITY g/cm³	
DEPTH	GAMMA RAY	

BPB

BOREHOLE R0526 — AREA SAXON
CLIENT DENISON — COUNTRY CON.

COAL QUALITY LOG

MT 6000 B

PR-SAXON 78(3)A. R0578

HIGH RESOLUTION DENSITY

COMPANY DENISON
BOREHOLE R0578
STATE SAXON COUNTRY CDN.

Permanent Datum Ground Level Elev. ___ m.
Log measured from " m. above P.D.
Drilling measured from " m. above P.D.

GRID REF. E ___ N ___ R.L. ___

Run No.	Depth Scale	4	20:1
Date		7/8/78	
First Reading		96	
Last Reading		96	
Interval Measured		6	
Casing BPB		1	
Casing Driller		1	
Depth Reached		100	
Bottom Driller		100	
Mud Nature		AIR	
S.G.	Viscosity		
Bit Size 1		7 7/8" to 1	to
2		5 1/8" to 100	to
3		to	to
Casing Size 1		6 1/8" to 1	to
2		to	to
Rm @ Meas.Temp.		@	@
Rmf @ Meas.Temp.		@	@
Rmc @ Meas.Temp.		@	@
BHT			
Operating Time			
Truck No.		26/34	
Recorded By		F.H.	
Witness		J.F.	

629

fold here

REMARKS

Changes in Mud Type or Additional Samples			
Date	Sample No.		
Depth - Driller			
Type Fluid in Hole			
Dens.	Visc.		
ph.	Fluid Loss	ml	
Source of Sample			
Rm @ Meas.Temp.	@ °F	@ °F	
Rmf @ Meas.Temp.	@ °F	@ °F	
Rmc @ Meas.Temp.	@ °F	@ °F	
Source: Rmf	Rmc		
Rm @ BHT	@ °F	@ °F	
Rmf @ BHT	@ °F	@ °F	
Rmc @ BHT	@ °F	@ °F	

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

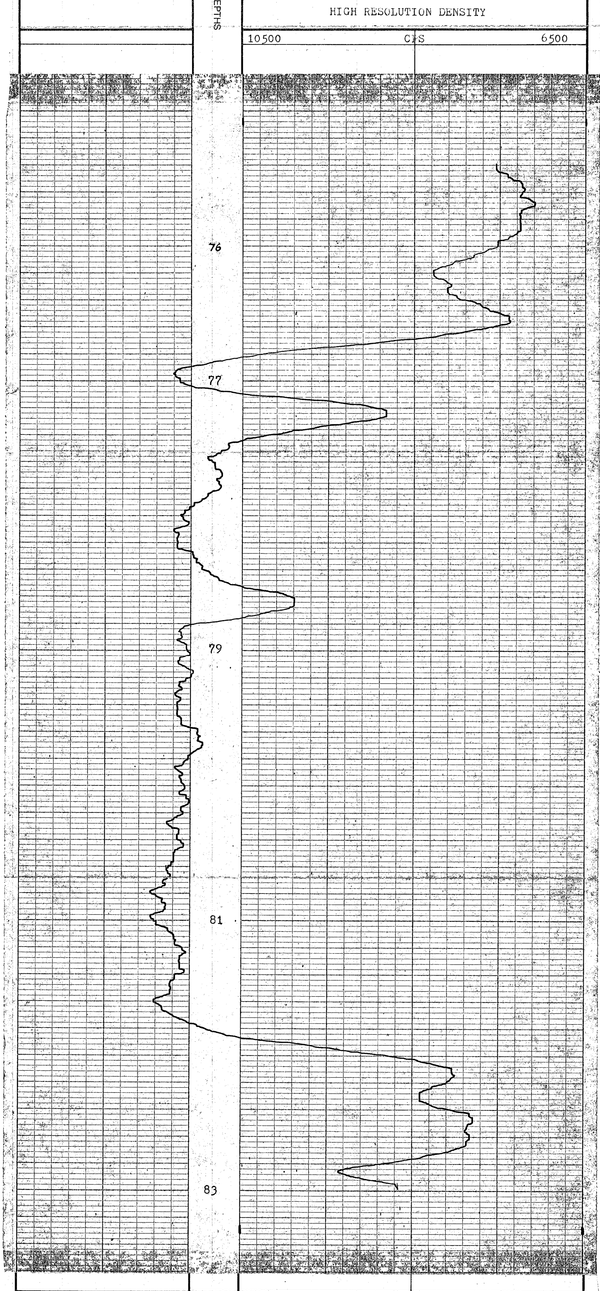
Equipment Data

Run No.	Tool Type	Tool Position	Other
4	HRD	eccentralised	

Logging Data

Log	Depths From	Depths To	Speed m/min	T.C. sec	Norm.	Sonde No.	Source No.
HRD	83	76	2¼	1		90	9

Unable to log lower detail:-
Hole collapsed



COMPANY DENISON
BOREHOLE R0578
STATE SAXON B.C.
COUNTRY CDN.

MY (8) 58360 R

RR - SAXON 7x(3)A . R0678

BPB

COAL LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

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

BOREHOLE R0678
CLIENT DENISON
AREA SAXON
COUNTRY CDN.
DATE LOGGED 8/8/78
DEPTH SCALE 200:1
1 OF 1 LOGS

BOREHOLE DATA

PERMANENT DATUM	G.L.	
ELEVATION OF P.D.		
MEASUREMENTS FROM	BPB	DRILLER
DEPTH REACHED	17.8	
CASING SHOE	19.5	20
BIT SIZES	1 7 7/80 2	2 TO
	3 5 1/80 20	4 TO
CASING SIZES	1 6 1/80 2	2 TO

FLUID DATA

NATURE	AIR
S.G.	
LEVEL	13.6 rising
VISCOSITY	
Rm at meas temp.	
BHT	

OPERATION DATA

FIRST READING	17.8 (gam)
LAST READING	0
INTERVAL LOGGED	17.8
UNIT-TRUCK No.	26/34
ENGINEER	R.H.
WITNESS	J.F.

629

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: T.C. SECS	PANEL: NORM	CAL COEFF	DEPTHS: FROM	DEPTHS: TO	DEPTHS: INTERVAL	SEAM LOG RUN
GAMMA RAY	134		400 api	Y	9				1.4		17.8	0		
L.S. DENSITY	SIDEWALL POSITION		100	Y	9	D	9	1/3	5.44					
CALIPER				Y	9	D	9	1/3						

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

FROM		INTERVAL TOTAL
TO		
INTERVAL		

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG

REFER TO ADDITIONAL HEADINGS

REMARKS

No gamma requested by client

B P B COAL LITHOLOGY LOG

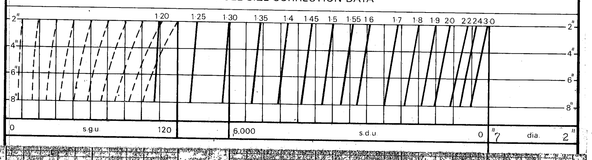
CALIBRATION DATA

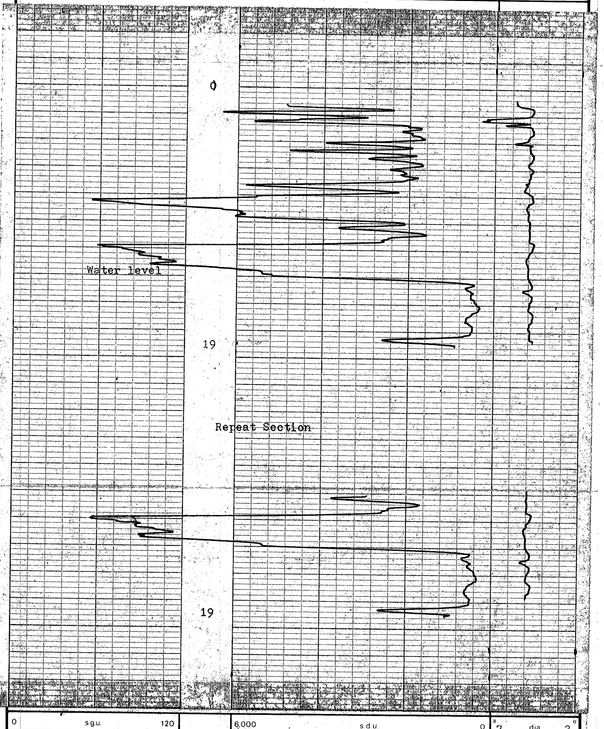
JIG No. VALUE @ 2" DIAM.
JIG MARK SHOWN AT ABOVE VALUE –

JIG CAL. DATE 7/8/78 JIG VALUE 4950 SDU @ g/cm³ 7 ins 892 cps
JIG No. SPAN 6000 NORM SDU/CPS = 5.44 2 ins 476 cps

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA





GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

BPB

BOREHOLE R0678 AREA SAXON
CLIENT DENISON COUNTRY CDN.

COAL LITHOLOGY LOG

MY 88002R

COAL LITHOLOGY LOG

BPB

BOREHOLE R0778
CLIENT DENISON

AREA SAXON
COUNTRY CDN.
DATE LOGGED 9/8/78

DEPTH SCALE 200:1

1 of 2 runs

LOG SUITE
GAMMA RAY
L.S. DENSITY
CALIPER

COAL COMBINATION SONDE

SONDE TYPE
COAL COMBINATION SONDE

BOREHOLE DATA

PERMANENT DATUM	Ground Level
ELEVATION OF P.D.	
LOG MEASURED FROM	R.B.
DEPTH REACHED	56 (87)
DRILLER	
CASING SHOE	56 (87)
CASING SIZES	1 2 3 4
BIT SIZES	1 7/8" 2 3/4" 3 4
	FROM 0 0
	TO 56 (87)
	TO
	TO

FLUID DATA

MATRIX	AIR
DENSITY	
VISCOSITY	12 cs/sec
PH or F-MUD WTR	

OPERATION DATA

LOG NUMBER	1
DEPTH READING	56 (87)
INTERVAL LOGGED	56 (87)
UNIT / TRUCK No.	
RECORDED BY	
WITNESSED BY	

Hole deepened on 27/8/78 from 56m to 87m.

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT			TAPING			PANEL			CAL CODE	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TIME CONST SECS	NORM		FROM	TO	INTERVAL	
GAMMA RAY	134		400 api	Y	9	D	9	1	1.4		54	0		
L.S. DENSITY			100	Y	9	D	9	1/3	5.44					
CALIPER	SIDEWALL POSITION			Y	9	R	9	1/3						

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

FROM	54 44	
TO	48 35	INTERVAL TOTAL
INTERVAL	6 9	+ 15

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
HRD			20:1
F.E.		200:1	

REFER TO ADDITIONAL HEADINGS

REMARKS

F.E. Demonstration

B P B COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No VALUE 6000 @ 2" DIAM.
JIG MARK SHOWN AT ABOVE VALUE - 3.93

JIG CAL DATE 7/8/78 JIG VALUE 4950 @ g/cm³
JIG No 1000 SPAN 6000 NORM 5.44

7 ins 892 cps
2 ins 476 cps

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

HOLE SIZE CORRECTION DATA

0 API 150 | 6000 s d u | 0 7 dia 2

Water Level

Repeat Section

Calibration

Calibration Mark 4950 SDU

0 API 150 | 6000 s d u | 0 7 dia 2

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

BPB

BOREHOLE R0778 AREA SAXON
CLIENT DENISON COUNTRY CDN.

COAL LITHOLOGY LOG

MY 800028

PR - SAXON 78 (3) A. R0778

BPB

BOREHOLE	R0778
CLIENT	DENISON

AREA	SAXON	DEPTH SCALE 20:1
COUNTRY	CDN.	
DATE LOGGED	9/8/78	3 OF 4 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 COEFF
	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM	
CALIPER	Y	2	R	2	1		
B.R. DENSITY	Y	2	R	2	1	.66	

SOURCE, SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

SONDE TYPE:
COAL
COMBINATION
SONDE

LOG SUITE:
CALIPER
B.R. DENSITY

SEAM THICKNESS LOG INTERVALS

FROM	54	44
TO	48	35
INTERVAL	6	9
FROM		
TO		
INTERVAL		INTERVAL TOTAL ≠15

REMARKS

629

B P B SEAM THICKNESS LOG

CALIPER INCHES 7 dia 2 | DEPTH | BED RESOLUTION DENSITY 520 SBRDU 300

CALIPER INCHES 7 dia 2 | DEPTH | BED RESOLUTION DENSITY 520 SBRDU 300

BPB

BOREHOLE	R0778	AREA	SAXON
CLIENT	DENISON	COUNTRY	CDN.

SEAM THICKNESS LOG

MY 88002

Re-scaled via Ish. R0728

BPB

COAL QUALITY LOG

SONDE TYPE
COAL COMBINATION SONDE

LOG SUITE
GAMMA RAY
L.S. DENSITY

BOREHOLE R0728
CLIENT DENSTON

AREA SAXON
COUNTRY Cumb.
DATE LOGGED 5/2/78

PAGE No. 2 OF 9 LOGS
DEPTH SCALE 1:200

BOREHOLE DATA
REFER TO LITHOLOGY LOG

OPERATION DATA
REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA
COAL COMBINATION SONDE
VERTICAL POSITION

SONDE	LOG	MAX. TEMP.	RECORDED APERTURE	MAX. SPEED
COAL COMBINATION SONDE	GAMMA RAY	70°C	1.5 in	20 ft/min
	L.S. DENSITY	70°C	1.5 in	20 ft/min

REFER TO LITHOLOGY LOG

SONDE SERIAL NUMBERS AND CALIBRATION

SONDE	SERIAL No.	CALIBRATION
COAL COMBINATION SONDE	24	1.4
	21	1.5

COAL QUALITY LOG INTERVALS

FROM	TO
54	44
6	0

REMARKS

629

BPB COAL QUALITY LOG

DEPTH
GAMMA RAY
COAL BULK DENSITY g/cm³

HOLE SIZE CORRECTION DATA

1" 1.2 1.25 1.3 1.35 1.4 1.45 1.5 1.55 1.6 1.7 1.8 1.9 2.0 2.2 2.4 2.6 3.0
4"
6"
8"

150 API 0
3.000 g/cm³ 0

35 36 38 40 42 44 48 50 52 54

3.000 g/cm³ 0
150 API 0
COAL BULK DENSITY g/cm³
DEPTH
GAMMA RAY

BPB

BOREHOLE R0728 AREA SAXON
CLIENT DENSTON COUNTRY Cumb.

COAL QUALITY LOG

COMPANY: DENISON
BOREHOLE: B0226
STATE: SASK.
COUNTRY: CDN.

HIGH RESOLUTION DENSITY
FOCUSED ELECTRIC

Run No. 1 | Date 2-4-76 | Depth Driller 6560 | Depth Logger 6560 | Btm. Log Interval 6560 | Top Log Interval 6000 | Casing Driller 6000 | Casing Logger 6000 | Bit Size 5 7/8 | Type Fluid in Hole WATER | Density 8.4 | Viscosity 28 | pH 8 | Fluid Loss 8 | Source of Sample CIRC. | Rm @ Meas Temp .5 @ 56 | Rmf @ Meas Temp .4 @ 56 | Rmc @ Meas Temp .6 @ 56 | Source: Rmf CIRC | Rmc | Rm @ BHT .5 @ 56 | Rmf @ BHT .4 @ 56 | Rmc @ BHT .6 @ 56 | Time Since Circ. 8 HRS | Max. Rec. Temp. 56 | Equip. Location 529 | Recorded By R. SMITH | Witnessed By [illegible]

Run No. 1 | Tool Type FDD | Tool Position eccentralised | Other

Logging Data

Log	Depths From	Depths To	Speed	Scale	Norm.	Reverse	Source Nos.
DEN	6560	6000	24	1		90	9
F.E.	6560	6000	24	5			

REMARKS

Changes in Mud Type or Additional Samples

Scale Changes

Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down
Depth Driller					
Type Fluid in Hole					
Density	Visc.				
pH	Fluid Loss				
Source of Sample					

Equipment Data

Rm @ Meas Temp	@	°F	Rm @ BHT	@	°F
Rmf @ Meas Temp	@	°F	Rmf @ BHT	@	°F
Rmc @ Meas Temp	@	°F	Rmc @ BHT	@	°F
Source: Rmf	Rmc				

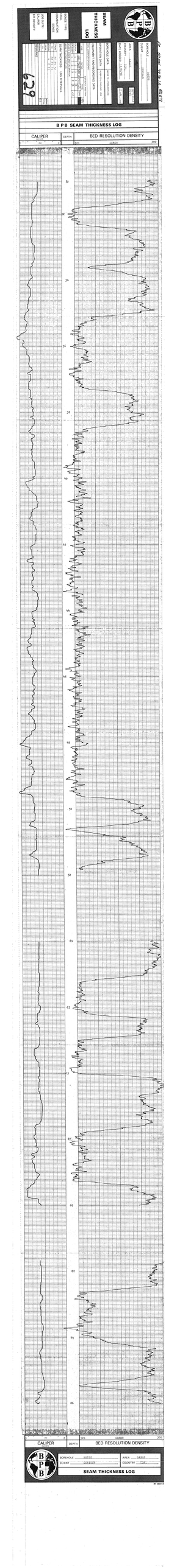
Run No. 1 | Tool Type FDD | Tool Position eccentralised | Other

Logging Data

Log	Depths From	Depths To	Speed	Scale	Norm.	Reverse	Source Nos.
DEN	6560	6000	24	1		90	9
F.E.	6560	6000	24	5			

Repeat section

COMPANY: DENISON
BOREHOLE: B0226
STATE: SASK.
COUNTRY: CDN.



SEAM THICKNESS LOG
BOREHOLE 50070
CLIENT 50320
AREA SABLE
COUNTRY CDA
DATE LOGGED 11/5/75
SEAM THICKNESS LOG ATTENUATE
SEAM THICKNESS LOG ATTENUATE
LOG SUITE
CALIPER
BED RESOLUTION DENSITY
CALIPER
DEPTH
BED RESOLUTION DENSITY
BOREHOLE 50070
CLIENT 50320
AREA SABLE
COUNTRY CDA
SEAM THICKNESS LOG

PL-SAXON 78 (3)A. RO878

HIGH RESOLUTION DENSITY
FOCUSSED ELECTRIC

COMPANY DENISON
BOREHOLE R0878
STATE SAXON COUNTRY CDN.

Permanent Datum Ground Level Elev. m.
Log measured from " m. above P.D.
Drilling measured from " m. above P.D.

GRID REF. E N R.L.

Run No. / DepthScale	4 / 20:1		200:1
Date	11/8/78		
First Reading	86 69 51	88	
Last Reading	82 61 31	25	
Interval Measured	4 8 20	63	
Casing BPB	2.5		
Casing Driller	2.5		
Depth Reached	90		
Bottom Driller	90		
Mud Nature	AIR		
SG / Viscosity			
Bit Size 1	7 7/8" to 2.5	to	to
2	5 1/8" to 90	to	to
3	to	to	to
Casing Size 1	6 1/8" to 2.5	to	to
2	to	to	to
Rm @ Meas Temp.	@	@	@
Rmf @ Meas Temp.	@	@	@
Rmc @ Meas Temp.	@	@	@
BHT			
Operating Time	2½ hrs		
Truck No.	26/34		
Recorded By	F.H.		
Witness	J.F.		

629

fold here

REMARKS

Changes in Mud Type or Additional Samples

Date / Sample No.		
Depth - Driller		
Type Fluid in Hole		
Dens. / Visc.		
ph. / Fluid Loss	ml	
Source of Sample		
Rm @ Meas. Temp.	@ °F	@ °F
Rmf @ Meas. Temp.	@ °F	@ °F
Rmc @ Meas. Temp.	@ °F	@ °F
Source: Rmf / Rmc		
Rm @ BHT	@ °F	@ °F
Rmf @ BHT	@ °F	@ °F
Rmc @ BHT	@ °F	@ °F

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
1	HRD	eccentralised	
2	F.E.	"	

Logging Data

Log	Depths From	Depths To	Speed m/min	T.C. sec	Norm.	Sonde No.	Source No.
HRD	69	31	2¼	1		90	9
F.E.	88	25	5	1/3		117	

DEPTHS

HIGH RESOLUTION DENSITY

10500 CPS 6500

DEPTHS

50 ohm m 50000

FOCUSSED ELECTRIC

COMPANY DENISON
BOREHOLE R0878
STATE SAXON
COUNTRY CDN.

MY (8) 58360 R

Pa-SAXON 78/31A. R0978

COAL LITHOLOGY LOG

BPB

BOREHOLE R0978
CLIENT DENISON
AREA SAXON
COUNTRY CDN.
DATE LOGGED 13/8/78
DEPTH SCALE 200:1
1 OF 4 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	G.L.	
DEPTH REACHED	65	
CASING SHOE	2.5	65
BIT SIZES	1 7 7/8 to 2.5	2 TO
	3 5 1/8 to 65	4 TO
CASING SIZES	1 6 1/8 to 2.5	2 TO

DRILLER

FLUID DATA

NATURE	AIR
S.G.	
LEVEL	
VISCOSITY	20
Rm at meas. temp.	
BHT	

OPERATION DATA

FIRST READING	63.6
LAST READING	0
INTERVAL LOGGED	63.6
UNIT - TRUCK No.	26/34
ENGINEER	F.H.
WITNESS	J.J.

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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: T.C. SECS	PANEL: NORM	CAL COEFF	DEPTHS: FROM	DEPTHS: TO	DEPTHS: INTERVAL	SEAM LOG RUN
GAMMA RAY	134		400 api	Y	9	D	9	1	1.4		63.6	0	63.6	
L.S. DENSITY			100	Y	9	D	9	1/3	5.44					
CALIPER	SIDEWALL POSITION			Y	9	R	9	1/3						

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

			INTERVAL TOTAL
FROM	63.6	38	
TO	56	32	
INTERVAL	7.6	6	13.6

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
90	F.E.		20:1

REFER TO ADDITIONAL HEADINGS

REMARKS

B P B COAL LITHOLOGY LOG

CALIBRATION DATA

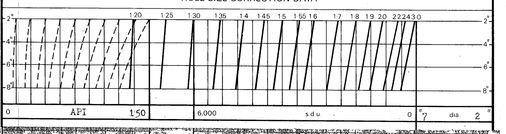
JIG No. VALUE 400 @ 2" DIAM
JIG MARK SHOWN AT ABOVE VALUE - 3.38

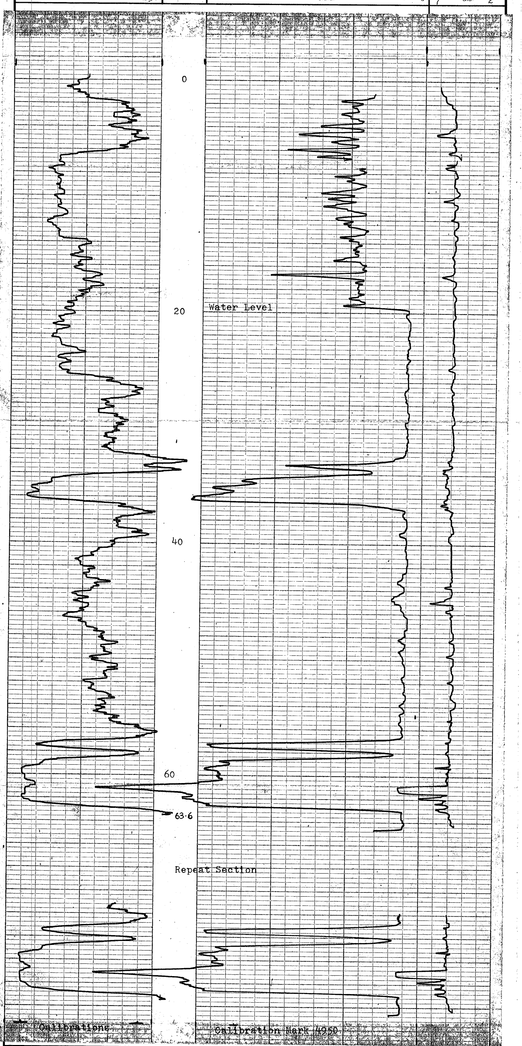
JIG CAL DATE 7/8/78 JIG VALUE 4950 SDU @ g/cm³
JIG No. 100 SPAN 6000 NORM SDU/CPS = 5.44

7 ins 886 cps
2 ins 476 cps

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

HOLE SIZE CORRECTION DATA





0 API 150 | 6,000 s d u 0 | 7 dia 2

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

BPB

BOREHOLE R0978 AREA SAXON
CLIENT DENISON COUNTRY CDN.

COAL LITHOLOGY LOG

MY 88002R

Pe-SAXON 7/3/12. R0978

BPB

SEAM THICKNESS LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: CALIPER B.R. DENSITY

BOREHOLE 80978
CLIENT DENISON

AREA SAXON
COUNTRY CDN.
DATE LOGGED 13/8/78

DEPTH SCALE 20 ft
2 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	
CALIPER	YES	NO	SPEED	SPEED	SPEED	SPEED	NORM	100%
B.R. DENSITY	Y	2	K	2	1	1	0.66	
SOURCE SONDE AND CALIBRATION								
REFER TO LITHOLOGY LOG								

SEAM THICKNESS LOG INTERVALS

FROM	64	38	
TO	56	32	
INTERVAL	8	6	
FROM			INTERVAL
TO			TOTAL
INTERVAL			
REMARKS			

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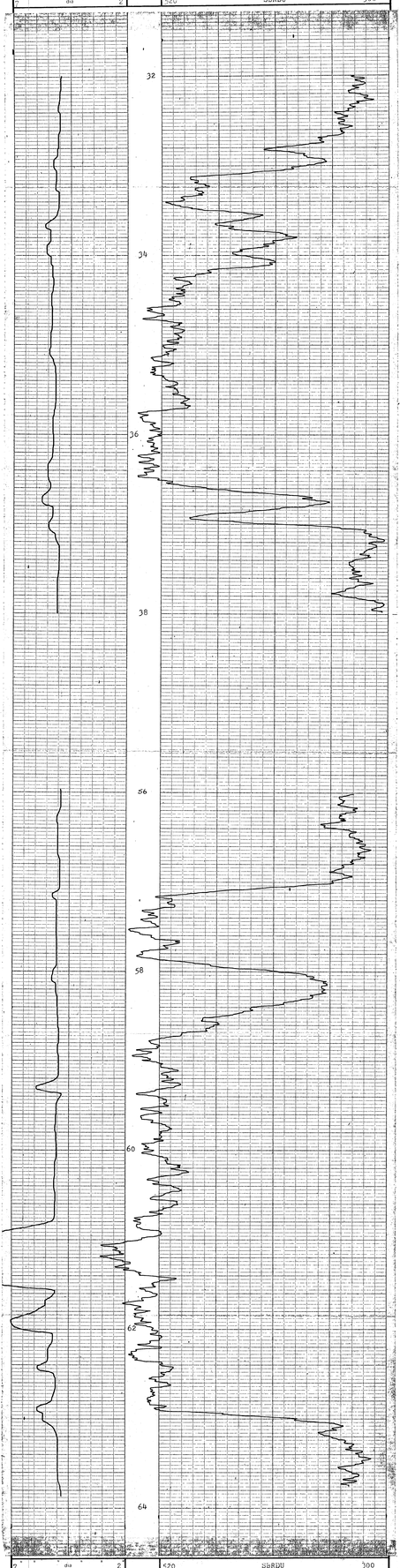
B P B SEAM THICKNESS LOG



BOREHOLE 80978 — AREA SAXON
CLIENT DENISON — COUNTRY CDN.

SEAM THICKNESS LOG

MY88002R

BPB

BOREHOLE 50928
CLIENT DENISON
AREA SAXON
COUNTRY CDN.
DATE LOGGED 12/9/78
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	SPEED	PANEL	NORM
GAMMA RAY	1	2	2	1.4
L.S. DENSITY	1	2	2	5.44

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	63.6	38
TO	66	32
INTERVAL	2.6	6
FROM		
TO		
INTERVAL		

REMARKS

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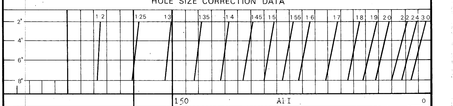
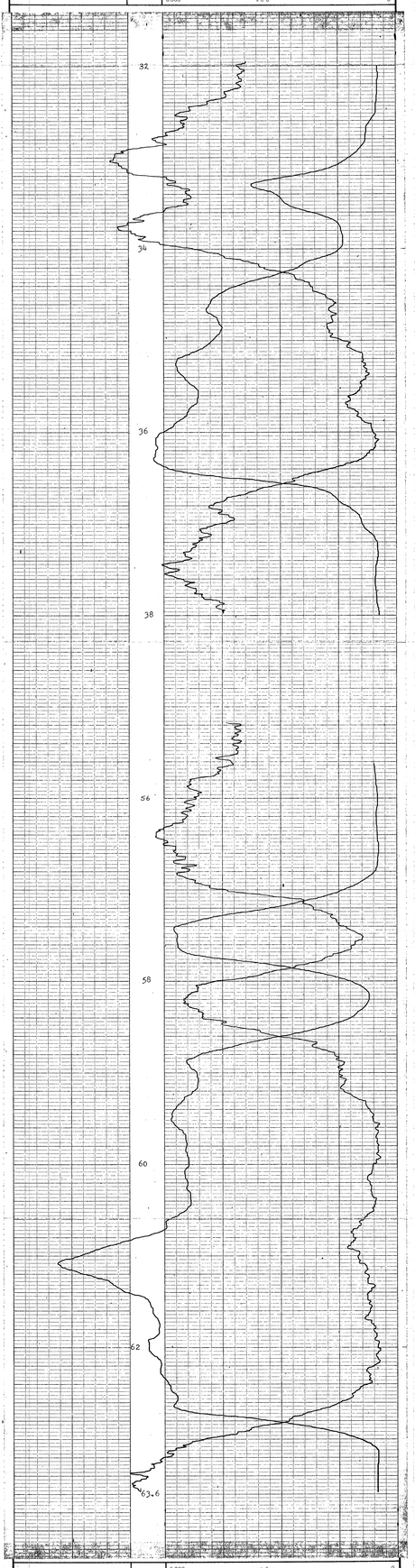
BPB COAL QUALITY LOG

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 50928
CLIENT DENISON
AREA SAXON
COUNTRY CDN.

COAL QUALITY LOG

COMPANY DENTSON
BOREHOLE R0978
STATE SAXON
COUNTRY GDR.

HIGH RESOLUTION DENSITY

Permanent Datum ____ Elev. ____ m.
Log measured from Ground Level m. above P.D.
Drilling measured from " " m. above P.D.

GR/RSF E N
Run No. 1
Depth Driller 2045
Depth Logger 2033
Last Reading 55
Interval Measured 33
Casing Size 6
Casing Driller
Depth Logger 2045
Depth Reached 2045
Bottom Driller 2045
Bottom Logger 2045
Top Log Int. Axis
Fluid Level
Max. Rec. Temp. 2045
Equip. No. 1
Location 2.1/2" to 2.45
Recorded By
Witnessed

Date 13/5/78

Rm/Rs Viscosity
Sample No.
Source of Sample
Rm @ Meas.Temp. @ °F @ °F
Rmf @ Meas.Temp. @ °F @ °F
Rmc @ Meas.Temp. @ °F @ °F
Source: Rmf Rmc
Rm @ BHT @ °F @ °F
Rmf @ BHT @ °F @ °F
Rmc @ BHT @ °F @ °F

Bit Size 2 7/8" to 2.45
Type Fluid in Hole 2 1/2" to 2.45
Dens. Visc.
pH Fluid Loss ml
Rm @ Meas.Temp. @ °F @ °F
Rmf @ Meas.Temp. @ °F @ °F
Rmc @ Meas.Temp. @ °F @ °F
Source: Rmf Rmc
Rm @ BHT @ °F @ °F
Rmf @ BHT @ °F @ °F
Rmc @ BHT @ °F @ °F

Recorded By 2.1/2" to 2.45
Witnessed

Void here

REMARKS

Changes in Mud Type or Additional Samples
Date Sample No.
Depth - Driller
Type Fluid in Hole
Dens. Visc.
pH Fluid Loss ml
Source of Sample
Rm @ Meas.Temp. @ °F @ °F
Rmf @ Meas.Temp. @ °F @ °F
Rmc @ Meas.Temp. @ °F @ °F
Source: Rmf Rmc
Rm @ BHT @ °F @ °F
Rmf @ BHT @ °F @ °F
Rmc @ BHT @ °F @ °F

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
4	HRD	eccentralised	

Logging Data

Log	Depths From	Depths To	Speed m/min	T.C. sec	Norm.	Borehole	Source No.
HRD	64	32	24	1		90	9

DEPTHS

HIGH RESOLUTION DENSITY

10500 CPS 6500

32
34
36
38
56
58
60
62
64

DEPTHS

10500 CPS 6500

HIGH RESOLUTION DENSITY

COMPANY DENTSON
BOREHOLE R0978
STATE SAXON
COUNTRY GDR.

MF 18 5589 9

B P B

COAL LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY, LS DENSITY, CALIPER

BOREHOLE R1078 AREA SAXON

CLIENT DENISON COUNTRY CDN.

DATE LOGGED 15/8/78

1.0 m TIE LOGS

DEPTH SCALE 200:1

Re-Saxon 78(3)A R1078

BOREHOLE DATA

PERMANENT DATUM Ground Level

ELEVATION OF P.D.

	RT	B/B	DRILLER
X-RAY READINGS FROM		G.L.	
DEPTH DRILLED		73.5	
DEPTH LOGGED		73	23.5
CASING SHOE			23

BIT SIZES			CASING SIZES		
3	5 1/2"	2.5	1	12 7/8"	2.5
1	6 1/2"	73	1	6 1/2"	2.5
			2		4
			2		23

TO
TO
TO

FLUID DATA

	RT	B/B	DRILLER
NATURE	AIR		
S.G.			
LEVEL	19.2		
VISCOSITY			
PH			
BHT (state time since circ.)			

OPERATION DATA

	RT	B/B	DRILLER
FIRST READING	21		
LOGGING SPEED			
INTERVAL LOGGED	21		
UNIT - TRUCK No.	24/34		
ENGINEER	J.H.		
WITNESS	J.F.		

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EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT: SONDE	SOURCE	CALIBRATOR	TAPING: LOG TAPED	RECORD SPEED	DIRECT or REPLAY	PANEL: SPEED	T.C. SECS	NORM	CAL COEFF	DEPTHS: FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY	134		400api	Y	9	D	9	1	1.4		71	0	71	
L.S. DENSITY			100	Y	9	D	9	1/3	5.5					
CALIPER	SIDEWALL POSITION			Y	9	R	9	1/3						

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

FROM	68 47	INTERVAL TOTAL
TO	63 36	
INTERVAL	5 11	= 16

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
90	HRD		20:1

REFER TO ADDITIONAL HEADINGS

REMARKS

B PB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No VALUE 4080 2" DIAM.

JIG MARK SHOWN AT ABOVE VALUE = 3.33

JIG CAL. DATE 15/8/78 JIG VALUE 4950 SDU @ g/cm³

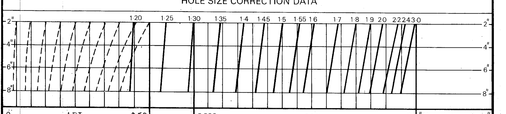
JIG No SPAN 6000 NORM SDU/CPS = 5.5

7 ins 898 cps

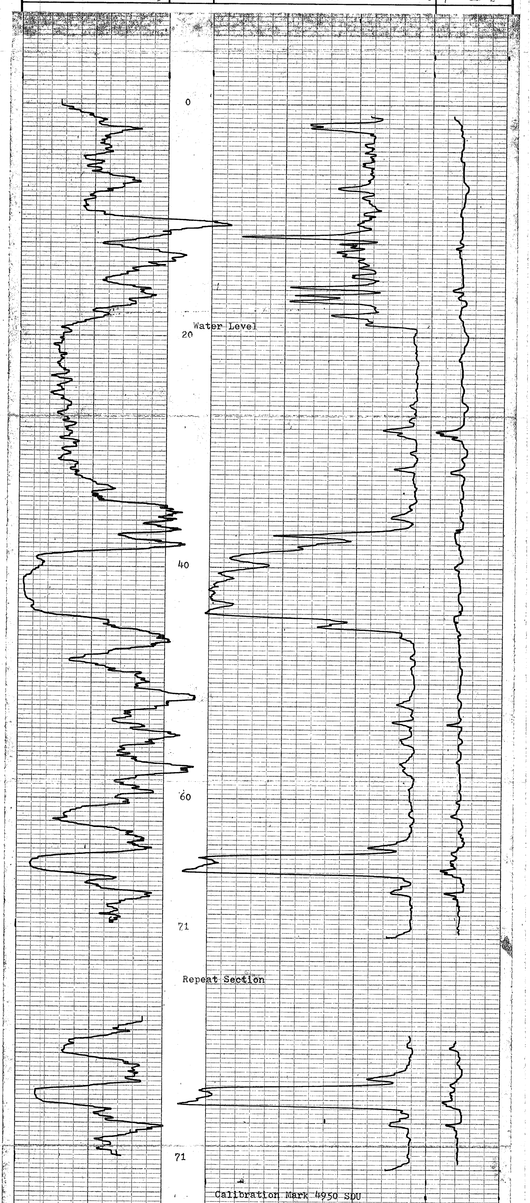
2 ins 476 cps

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA



0 API 150 | 6.000 s.d.u. 0 | 7 dia. 2"



0 API 150 | 6.000 s.d.u. 0 | 7 dia. 2"

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

B P B

BOREHOLE R1078 AREA SAXON

CLIENT DENISON COUNTRY CDN.

COAL LITHOLOGY LOG

MY 880028

Pr - SAXON 78(3)A. R1078

BPB

BOREHOLE R1078
CLIENT DENISON

AREA SAXON
COUNTRY CDN.
DATE LOGGED 15-8-78

DEPTH SCALE 20:1
3 cm = 10.00

SEAM THICKNESS LOG

LOG SUITE: CALIPER
B.R. DENSITY

SONDE TYPE: COAL COMBINATION SONDE

BOREHOLE DATA — REFER TO LITHOLOGY LOG

OPERATION DATA — REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	SIDEWALL POSITION			
	CALIPER	RECORDING	PARAMETER	PANEL
CALIPER	100	2	2	100
B.R. DENSITY	Y	2	1	1.675

SURFACE SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

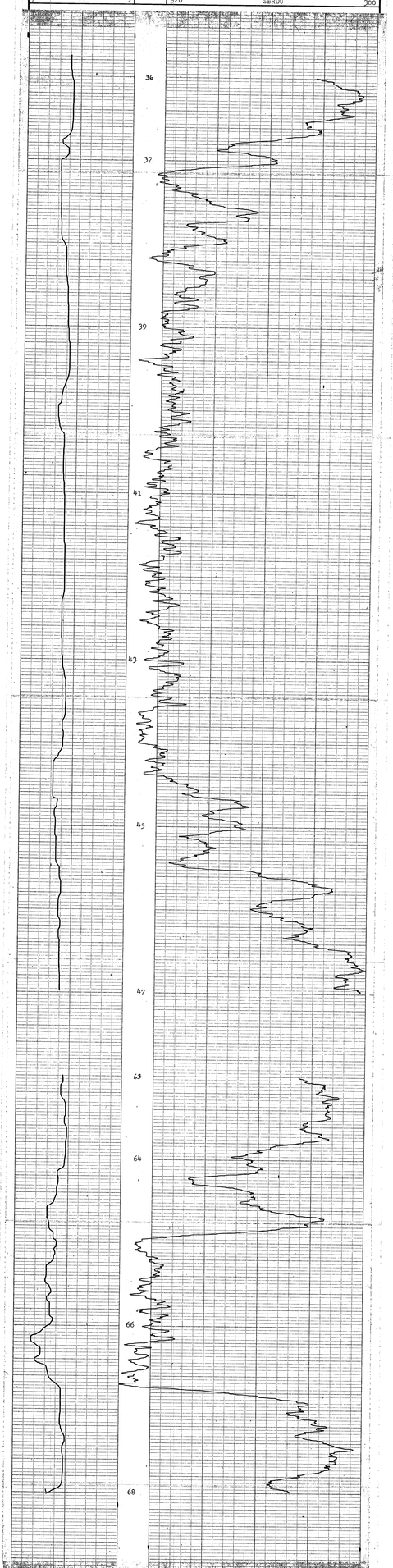
	INTERVAL	TOTAL
FROM	63.36	
TO	63.36	
INTERVAL	5.11	
FROM		
TO		
INTERVAL		

REMARKS

629

B P B SEAM THICKNESS LOG

CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 dia 2		520 SBRDU 300



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 dia 2		520 SBRDU 300

BPB

BOREHOLE R1078 — AREA SAXON
CLIENT DENISON — COUNTRY CDN.

SEAM THICKNESS LOG

MY 88003 R

COAL QUALITY LOG

BOREHOLE B1028
CLIENT DENISON
AREA SAXON
COUNTRY CDN.
DATE LOGGED 15/8/78
DEPTH SCALE 2 : 1

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

LOG	SAMPLE POSITION	SIDEWALL POSITION
GAMMA RAY		
CALIBRATION		
COAL QUALITY		
LOG		

COAL QUALITY LOG INTERVALS — REFER TO LITHOLOGY LOG

FROM	68.57	
TO	68.96	
VOL.	0.39	
PRIORITY	4	
PRIORITY	1	
POSITION		INTER. VOL.
REMARKS		1.16

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

K.L. STAGON 7/8/79. R.L. 07B

629

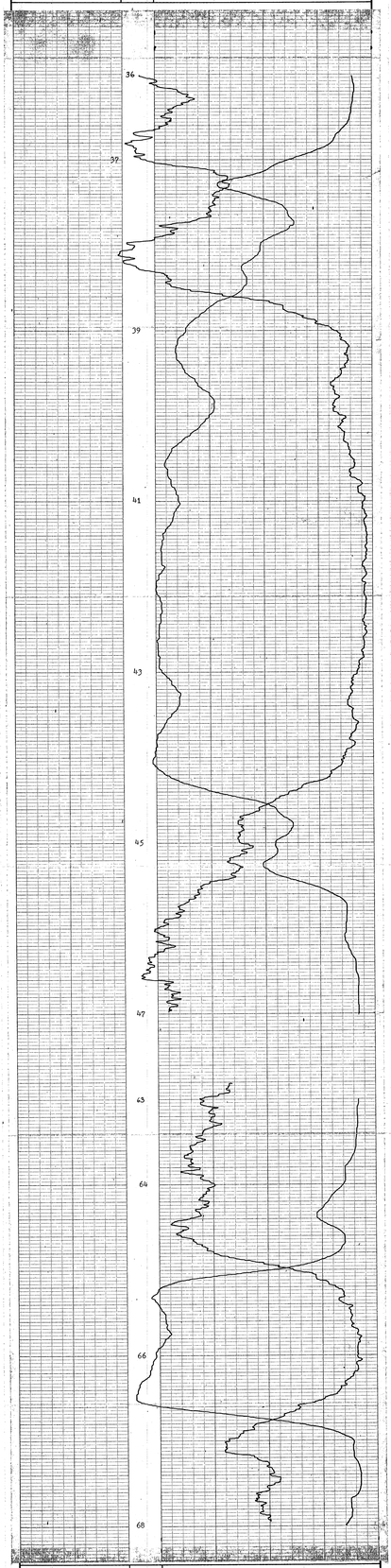
BPB COAL QUALITY LOG

DEPTH	0	GAMMA RAY	0
		COAL BULK DENSITY g/cm³	

HOLE SIZE CORRECTION DATA

	1.2	1.25	1.3	1.35	1.4	1.45	1.5	1.55	1.6	1.7	1.8	1.9	2.0	2.2	2.4	2.6
3"																
4"																
6"																
8"																

	150	API	0
	6.000	g/cm³	0



	6.000	g/cm³	0
	150	API	0
		COAL BULK DENSITY g/cm³	
DEPTH	0	GAMMA RAY	

BOREHOLE B1028 — AREA SAXON
CLIENT DENISON — COUNTRY CDN.

COAL QUALITY LOG

COMPANY: DENISON
BOREHOLE: R1078
STATE: SASKN
COUNTRY: CDN

HIGH RESOLUTION DENSITY

Permanent Datum: Ground Level
Log Measured from: KB
Drilling measured from: KB

m. Above P.D.
m. Above P.D.

Run No. | Date | Time
1 | 24/8/84 | 1400

Depth-Driller: 6500
Depth-Logger: 6500
Btm. Log Interval: 6500
Top Log Interval: 6000
Casing-Driller: 244 @ 11
Casing-Logger: 244 @ 11
Bit Size: 7 7/8"
Type Fluid in Hole: Gel Chem
Dens.: 1.14
Visc.: 44
pH: 10.5
Fluid Loss: 4.8 ml
Source of Sample: Circ
Rm @ Meas. Temp.: 0.75 @ 24°C
Rmf @ Meas. Temp.: 0.65 @ 24°C
Rmc @ Meas. Temp.: 1.0 @ 24°C
Source: Rmf: Rmc:
Rm @ BHT: @ °C
Rmf @ BHT: @ °C
Rmc @ BHT: @ °C

Time Since Circ.: 14 hrs
Max. Rec. Temp.: 24 °C
Equip. No.: 1404
Location: 1-24-34-24
Recorded By: [illegible]
Witnessed By: [illegible]

Run No. | Bore-Hole Record | Casing Record
1 | Bit No. 3 | Size 9 5/8" | Wgt. 36.0 | From KB | To 244

Calculated Cement Top: 1400
Measured Cement Top:

Equipment Data

Run No.	Tool Type	Tool Position	Other
4	HRD	eccentralised	

Logging Data

Log	Depths From	Depths To	Speed	F.C.	Norm.	Several	Source No.
HRD	68	36	24	1		90	9

REMARKS

Changes in Mud Type or Additional Samples

Date	Sample No.

Scale Changes

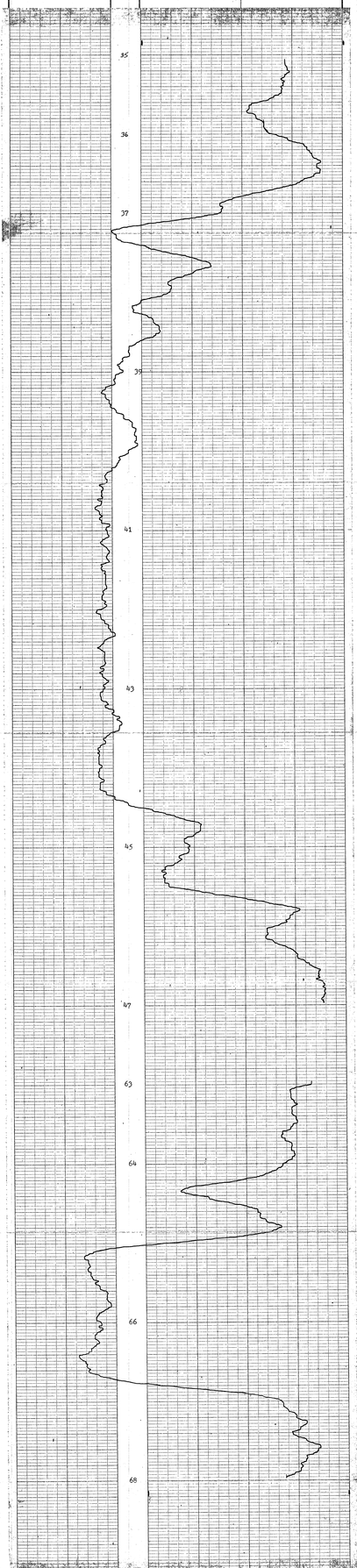
Type Log	Depth	Scale Up Hole	Scale Down

R1078

DEPTHS

HIGH RESOLUTION DENSITY

10500 CPS 6500



DEPTHS

10500 CPS 6500

HIGH RESOLUTION DENSITY

COMPANY: DENISON
BOREHOLE: R1078
STATE: SASKN
COUNTRY: CDN

MT. OF SASK.

Mr. Simon 7/8/78 (2.7.78

COAL LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY L.S. DENSITY CALIPER

BPB

BOREHOLE B1328
CLIENT DENTSON
AREA SAXON
COUNTRY CDN.
DATE LOGGED 19/8/78
1 or 2 RUN LOGS
DEPTH SCALE 200:1

BOREHOLE DATA
PERMANENT DATUM: Ground level
ELEVATION OF P.D.
MEASUREMENTS FROM: BPB
DEPTH REACHED: 64.0
DRILLER: 64.0

CASING SIZES	1	2	3	4
	16" dia	6" dia	5 1/2" dia	
BIT SIZES		6"	5 1/2"	
CASING SHOE		2.6	45	
	2	2	2	2
	FROM	TO	TO	TO

FLUID DATA
MIXTURE: AIR
S.G.: 1.0
LEVEL: Sm
VISCOSITY
PH or mem sonde
RM @ °F

OPERATION DATA
FIRST READING
LAST READING
RECORDED BY: SC
UNIT - TRUCK No: 24/34
ENGINEER: I.L.
WITNESS: J.F.

139 679

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT: SONDE	SOURCE	CALIBRATOR	TAPING: LOG TAPED	RECORD SPEED	DIRECT or REPLAY	PANEL: SPEED	T.C. SECS	NORM	CAL COEFF	DEPTHS: FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY	134		400cps	Y	9	D	9	1	1.4		56	0		
L.S. DENSITY		1.5 gm/cc	100	Y	9	D	9	1/3	5.5					
CALIPER	SIDEWALL POSITION			Y	9	R	9	1/3						

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

FROM	52.42	INTERVAL TOTAL
TO	49.13	
INTERVAL	3.29	32

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
90	HRD		20:1

REFER TO ADDITIONAL HEADINGS

REMARKS

B P B COAL LITHOLOGY LOG

CALIBRATION DATA

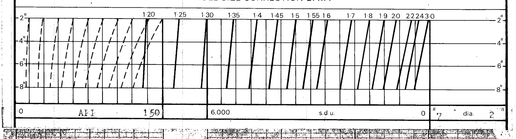
JIG No. VALUE 400 @ 2" DIAM.
JIG MARK SHOWN AT ABOVE VALUE = 2.32

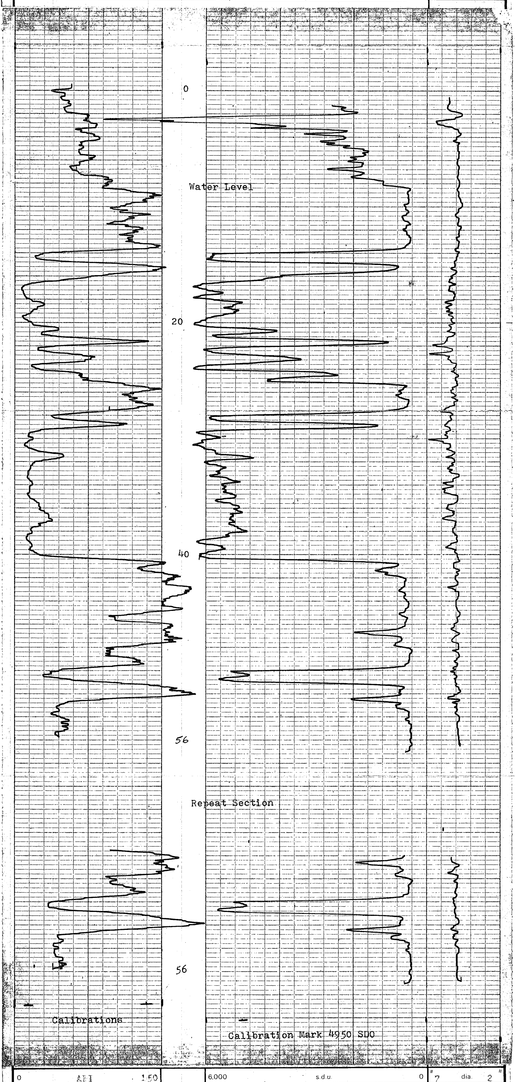
JIG CAL DATE 15/8/78 JIG VALUE 4950 SDU @ gl cm³
JIG No 100 SPAN 6000 NORM 5.5

2 ins 476 cps
7 ins 893 cps

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA





0 AIR 150 | 6.000 s.d.u. 0 | 7 dia 2

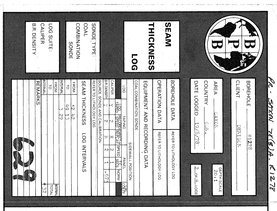
GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

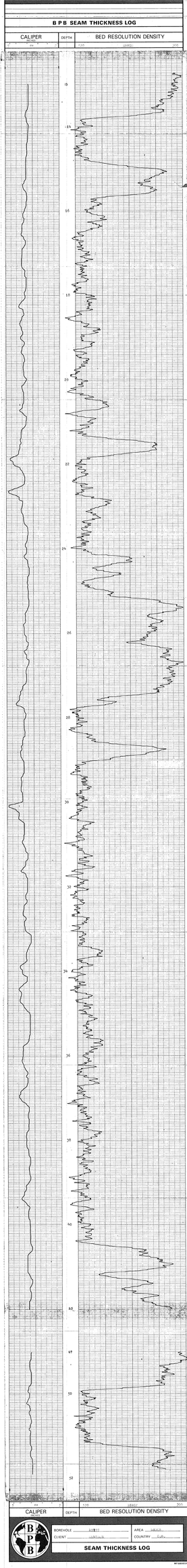
BPB

BOREHOLE B1328 AREA SAXON
CLIENT DENTSON COUNTRY CDN.

COAL LITHOLOGY LOG

MY 88003 R





CALIPER
DEPTH
BED RESOLUTION DENSITY
SEAM THICKNESS LOG

PR - SAXON 78(3)A   R1278

BPB

COAL QUALITY LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY, L.S. DENSITY

BOREHOLE: R1278
CLIENT: DENISON
AREA: SAXON
COUNTRY: CDN.
DATE LOGGED: 19/8/78
DEPTH SCALE: 20:1
3 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: LOG TAPED	RECORD SPEED	DIRECT or REPLAY	PANEL: SPEED	T.C. SECS	NORM.	CAL COEFF
GAMMA RAY	Y	2	R	24	2	1.4	
L.S. DENSITY	Y	2	R	24	1	5.5	

SOURCE, SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

COAL QUALITY LOG INTERVALS

FROM	TO	INTERVAL	FROM	TO	INTERVAL	INTERVAL TOTAL
52.42	49.13	3.29				3.29

REMARKS

629

BPB COAL QUALITY LOG

	DEPTH	GAMMA RAY
		COAL BULK DENSITY g/cm³

HOLE SIZE CORRECTION DATA

	1·2	1·25	1·3	1·35	1·4	1·45	1·5	1·55	1·6	1·7	1·8	1·9	2·0	2·2	2·4	3·0
2"																
4"																
6"																
8"																

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

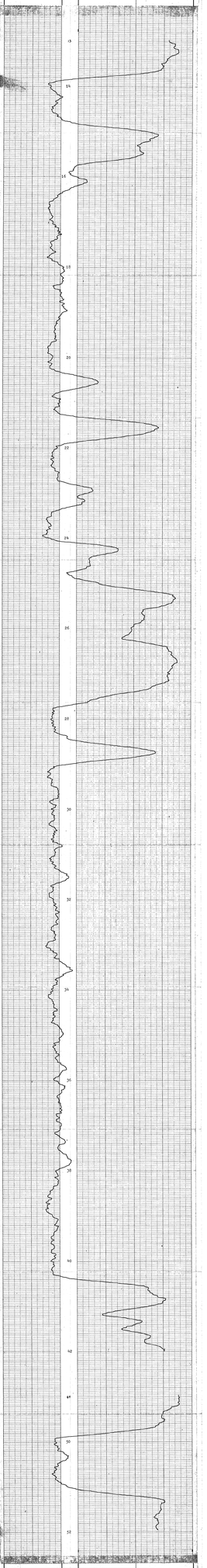
BOREHOLE: R1278   AREA: SAXON
CLIENT: DENISON   COUNTRY: CDN.

COAL QUALITY LOG

MY 88002 R

Schlumberger
HIGH RESOLUTION DENSITY
CONTROL
Recorded Before
Run No.
Date
Depth Driller
Depth Logger
Bottom Logged Interval
Top Logged Interval
Type Fluid in Hole
Salinity, PPM Cl
Density
Level
Max. Recorded Temp.
Estimated Bott. Hole Temp.
Equipment Number
Location
Recorded By
Witnessed By
Run Number
Bit Size
Type Log
Depth-Driller
Depth-Logger
Bottom Logged Interval
Top Logged 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
Rm @ BHT
Rmf @ BHT
Rmc @ BHT
Time Since Circ.
Max. Rec. Temp.
Equip. Location
Recorded By
Witnessed By
RIG
TIME
MAX REC. TEMP. °F
EQUIP. AT WELL
TRUCK
UNIT NUMBER
LOCATION
RECORDED BY
WITNESSED BY

REMARKS
Changes in Real Type or Astronomic Scenario
Date | Sample No. | From | To
Type Fluid in Hole
Type Fluid in Hole
Viscosity | P.H.
Fluid Loss
Source of Sample
Rm @ Meas. Temp. @ °F | @ °F
Rmf @ Meas. Temp. @ °F | @ °F
Rmc @ Meas. Temp. @ °F | @ °F
Source: Rmf | Rmc
Rm @ BHT @ °F | @ °F
Rmf @ BHT @ °F | @ °F
Rmc @ BHT @ °F | @ °F
Name Changes
From | Log | Depth | Name by Hole | To | Scale
Equipment Data
Tool No. | Tool Type | Size | Material | Clone
9 | MSD | arrentrallast
Logged Data
Log | Depths | Speed | C | North | Scale | Source No.
From | To
4300 | 2.4 | 1.3 | 2.4 | 1 | 50 | 9



COMPANY: SCHLUM
BOREHOLE: BIAFF
STATE: GABON
COUNTRY: COM
Film

COAL LITHOLOGY LOG

BPB

SONDE TYPE: COAL COMBINATION SONDE

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

BOREHOLE
CLIENT: DENISON — R137P
AREA: SASKATCHEWAN
COUNTRY: CANADA
DATE LOGGED: 24/8/78
1 cps SCALE: 2000 c
DEPTH SCALE: 200 ft

BOREHOLE DATA

PERMANENT DATUM: GROUND LEVEL
ELEVATION OF P.D.: 1692'
DEPTH DRILLED: DRILLER 103' / LOGGER 103'
RECORDED BY: BPB
CASING SHOE: 3.5
CASING SIZES: 1 6 1/2" @ 103.5 | 2 4 1/2" @ 3.5 | 3 | 4 | TO
BIT SIZES: 1 6 1/2" | 2 | 3 | 4 | TO

FLUID DATA

NATURE: AIR
LEVEL: 1.0
VISCOSITY: 24
Rm AT MEAS. TEMP.:
BHT:

OPERATION DATA

RUN NUMBER: 1
DATE: 24/8/78
UNIT - TRUCK No.: 24/34
TIME ON BOTTOM: 2.45
TIME OFF BOTTOM: 3.45
WITNESS: 6.21
FIRST READING: 101
LAST READING: 103
INTERVAL LOGGED: 103
SPEED: 30

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 REPLAY	SPEED	SECS NORM		FROM	TO	INTERVAL
GAMMA RAY	134		400 API	Y	9	D	9	1 1.4		101	0	
L.S. DENSITY		M4541	100	Y	9	D	9	1/ 5.				
CALIPER	SIDEWALL POSITION			Y	9	R	9	1/				

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

FROM	68	INTERVAL TOTAL
TO	55	
INTERVAL	13	13

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE	DETAIL LOG SCALE
90	NRD		20:1

REFER TO ADDITIONAL HEADINGS

REMARKS

B P B COAL LITHOLOGY LOG

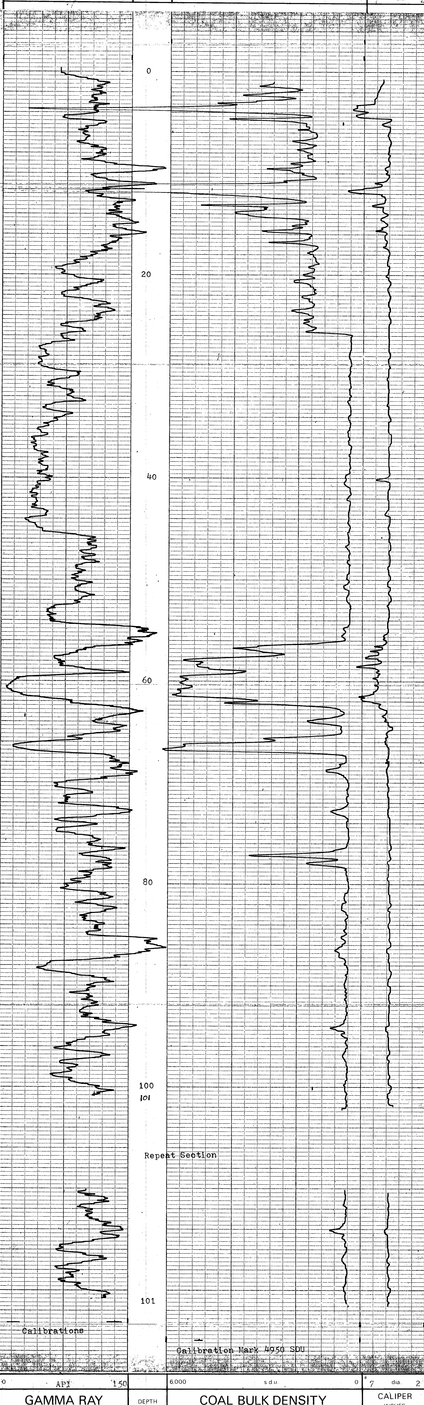
CALIBRATION DATA

JIG No. — VALUE 1000 @ 2" DIAM.
JIG MARK SHOWN AT ABOVE VALUE = 5.73
JIG CAL. DATE 15/8/78 JIG VALUE 1.950 SG/cc g/cm³ — 2 ins 898 cps
JIG No. — SPAN 6000 NORM 350 = 5.5 — 2 ins 476 cps

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA

0 — API — 150 | 6.000 — s d u — 0 | 7 — dia — 2



0 — API — 150 | 6.000 — s d u — 0 | 7 — dia — 2

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm³	CALIPER INCHES

BPB

BOREHOLE R137P — AREA SASKATCHEWAN
CLIENT DENISON — COUNTRY CDN.

COAL LITHOLOGY LOG

MY 80003 B

PR- SAXON 78(3)A. R1378

BPB

BOREHOLE R1378
CLIENT DENISON

AREA SAXON
COUNTRY CDN.
DATE LOGGED 24/8/78

DEPTH SCALE 20:1

2 OF 4 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. COEFF.
	LOG TAPED	RECORD SPEED	DIRECTOR REPLAY	SPEED	T.C. SECS.	NORM	
CALIPER	Y	2	R	2	1		
B.R. DENSITY	Y	2	R	2	1	.679	

SOURCE, SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

SEAM THICKNESS LOG INTERVALS

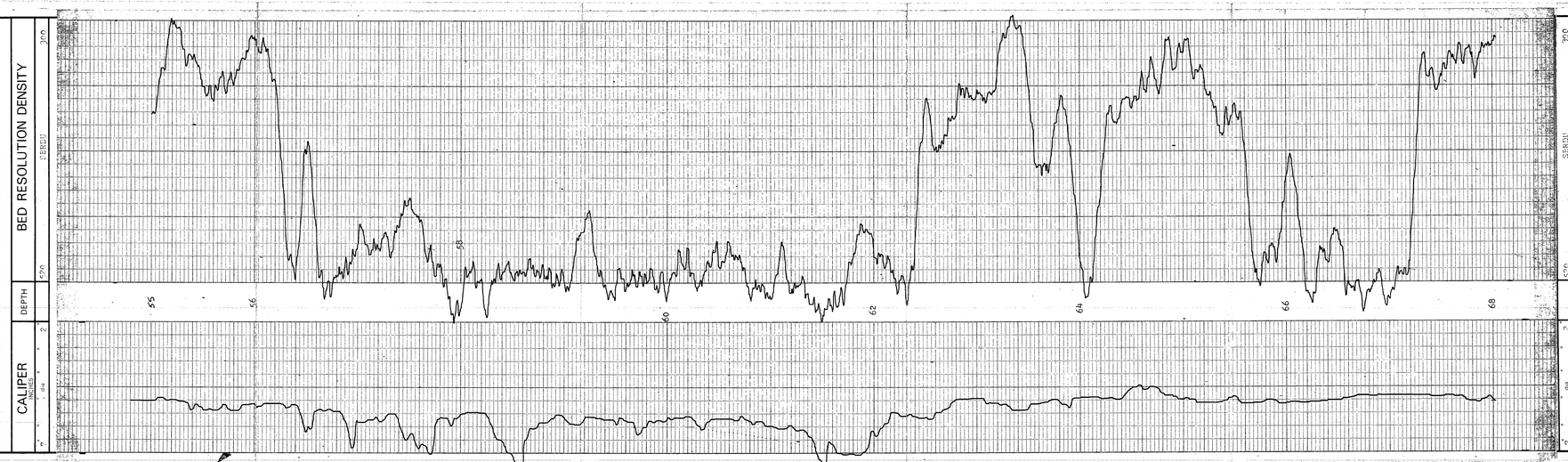
FROM	68	
TO	55	
INTERVAL	13	
FROM		INTERVAL
TO		TOTAL
INTERVAL		±13

LOG SUITE: CALIPER B.R. DENSITY

REMARKS

629

B P B SEAM THICKNESS LOG



BED RESOLUTION DENSITY
SERDU
300
520
DEPTH
CALIPER
INCHES
2
dia
?

BOREHOLE R1378
CLIENT DENISON

AREA SAXON
COUNTRY CDN.

SEAM THICKNESS LOG

BPB

BPB

COAL QUALITY LOG

BOREHOLE	R1378
CLIENT	DENISON
AREA	SAXON
COUNTRY	CDN.
DATE LOGGED	24/5/79
DEPTH SCALE	20:1
LOGS	2 of 4 LOGS

Re- SAXON 78(3)A. R1378

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

LOG	TAPING	PRINTING	SCRIBING	PANEL	SCALE
GAMMA RAY					50 c/s
COAL BULK DENSITY					1 g/cm³

SONDE	SERIAL NO.	DETECTOR SPACING (cm)	SCALE	SENSITIVITY	SCALE
GAMMA RAY	V	2	2	1	0.5
L.S. DENSITY	V	2	2	1	0.5

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY L.S. DENSITY

COAL QUALITY LOG INTERVALS

	FROM	TO	INTERVAL TOTAL
	55	56	1
	13	55	42

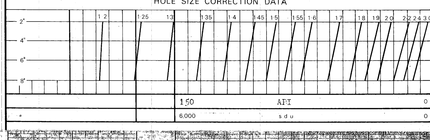
REMARKS

629

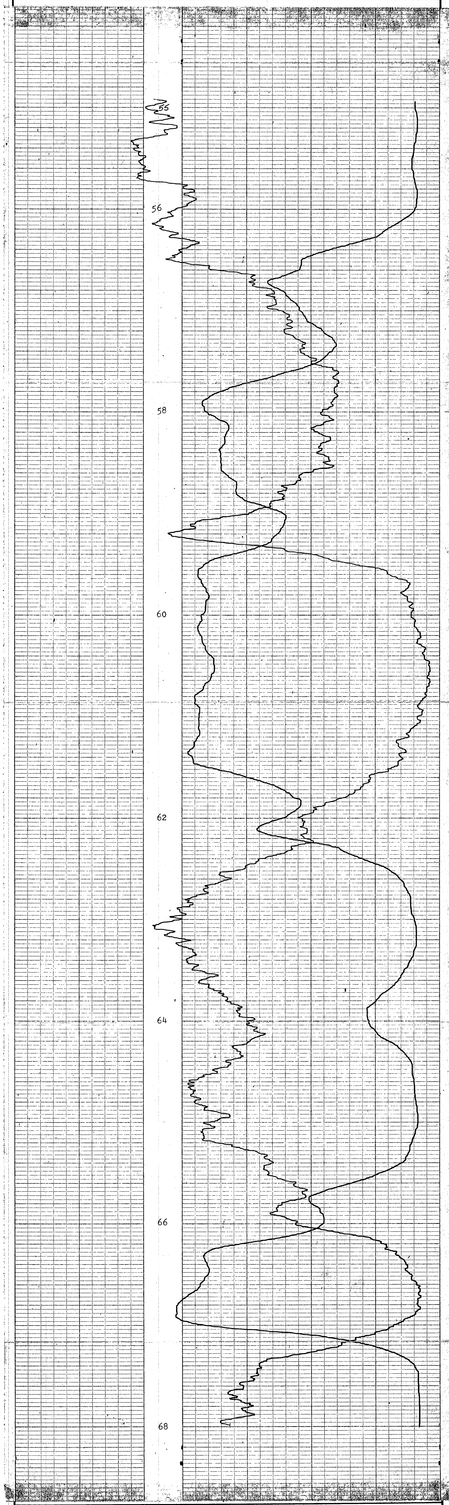
BPB COAL QUALITY LOG

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 R1378	AREA SAXON
CLIENT DENISON	COUNTRY CDN.

COAL QUALITY LOG

MI 84002 B

DENISON
B1378
SAXON
COUNTRY CDN.

HIGH RESOLUTION DENSITY

Permanent Datum: Ground Level — Elev. — m.
Log measured from: — — m. above P.D.
Drilling measured from: — — m. above K.B.

Rig No. 1 — Date 29/Feb/96 — Run No. 1 — Depth-Driller 2011 — Depth-Logger 2011 — Btm. Log Interval 2010 — Top Log Interval 1400 — Casing-Driller 13 — Casing-Logger 13 — Bit Size 7 7/8 in — Type Fluid in Hole MUD — Dens. — Visc. — pH — Fluid Loss — ml — Source of Sample — Rm @ Meas.Temp — @ °F — Rmf @ Meas.Temp — @ °F — Rmc @ Meas.Temp — @ °F — Source: Rmf — Rmc — Rm @ BHT — @ °F — Rmf @ BHT — @ °F — Rmc @ BHT — @ °F — Time Circulation Stopped 5:45 — Time Logger on Bottom 9:45 — Max. Rec. Temp. 24 °C — Equip. No. & Location 1 — Recorded By — Witnessed By —

Run — Bit From — To — Size — Type — Fluid in Hole — Density — Viscosity — pH — Fluid Loss — Source of Sample — Rm @ Meas. Temp. — Rmf @ Meas. Temp. — Rmc @ Meas. Temp.
1 — 2010 m — 2013 m — 7 7/8 in — MD — MUD — 1.03 — 45 — 9.5 — 4.8 ml — MUD — 1.73 @ 24 °C — 1.45 @ 24 °C — 1.3 @ 24 °C

Time Log Entries

Logged Interval: 2010 m to 1400 m

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
1	HRD	eccentralised	

Logging Data

Log	Depths From	To	Speed	T.C.	Norm.	Towards	Source No.
HRD	68	55	24	1		90	9

Remarks:

Fold Here

DEPTHS

HIGH RESOLUTION DENSITY

10500 CPS 6500

55 56 58 60 62 64 66 68

DEPTHS

10500 CPS 6500

HIGH RESOLUTION DENSITY

COMPANY DENISON
BOREHOLE B1378
STATE SAXON B.C.
COUNTRY CDN.

COAL LITHOLOGY LOG

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

SONDE TYPE: COAL COMBINATION SONDE

BOREHOLE R1478
CLIENT DENISON
AREA SAXON
COUNTRY CDN.
DATE LOGGED 26/8/78
1 OF 1 LOGS
DEPTH SCALE 200ft

BOREHOLE DATA

PERMANENT DATUM: GROUND LEVEL
ELEVATION OF PD: 0
MEASUREMENTS FROM: GL
DEPTH REACHED: 54.5
CASING SHOE: 54.5
BIT SIZES: 1 5 1/2" 54.5 3 / 4 TO
CASING SIZES: 1 5 1/2" 0 2 / 4 TO

FLUID DATA

NATURE: AIR
STG. LEVEL: 0
VISCOSITY: 1.0
WATER or mist/ temp: DRY

OPERATION DATA

FIRST READING: 52.8
LAST READING: 0.0
INTERVAL LOGGED: 52.8
UNIT - TRUCK No.: 25/3½
ENGINEER: L.L.
WITNESS: L.L.

02-Saxon 7123/4 R1478

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT: SONDE	SOURCE	CALIBRATOR	TAPING: LOG TAPED	RECORD SPEED	DIRECT or REPLAY	PANEL: SPEED	T.C. SECS	NORM	CAL COEFF	DEPTHS: FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY	134		400ap	Y	9	D	0	1	1.4		52.8	0		
L.S DENSITY	SIDEWALL POSITION	5851	100	Y	9	D	9	1/3	5.45					
CALIPER				Y	9	R	9	1/3						

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

FROM	26	INTERVAL TOTAL
TO	11	
INTERVAL	15	= 15

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
90	HRD		20:1

REFER TO ADDITIONAL HEADINGS

REMARKS

Hole logged Twice

B P B COAL LITHOLOGY LOG

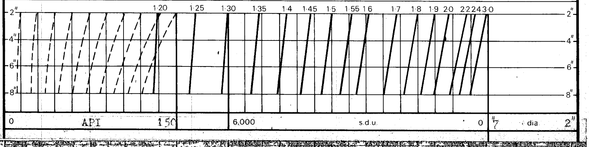
CALIBRATION DATA

JIG No. VALUE 140 @ 2" DIAM.
JIG MARK SHOWN AT ABOVE VALUE = 3.70

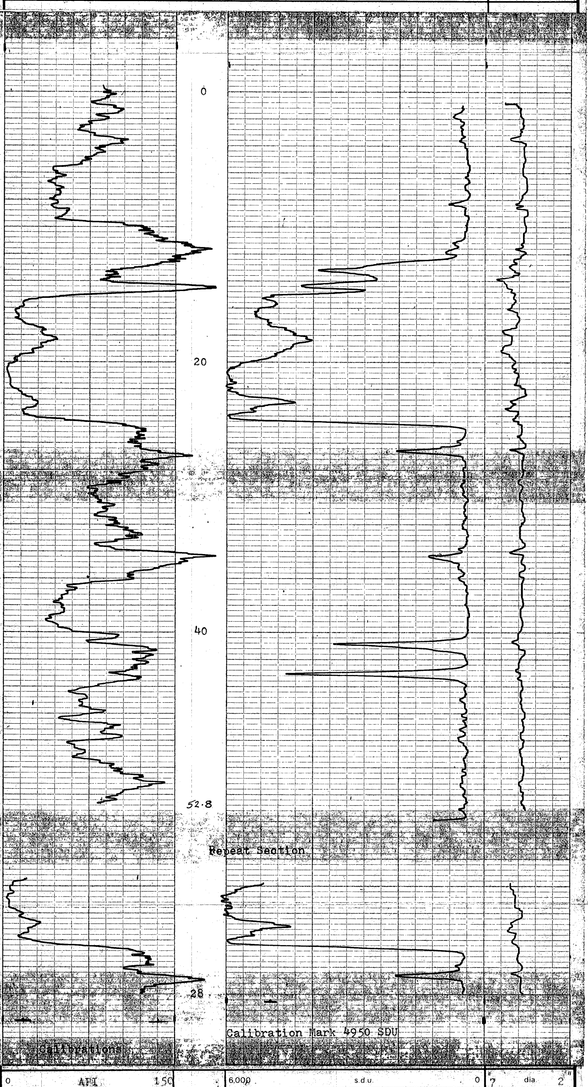
JIG CAL DATE 25/8/78 JIG VALUE 4950 SDU @ glcm³ 7 ins 900 cps
JIG No. 100 SPAN 6000 NORM 5.45 2 ins 476 cps

GAMMA RAY	DEPTH	COAL BULK DENSITY glcm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA



0 API 150 | 6.000 s.d.u. 0 | 7 dia 2"



0 API 150		6.000 s.d.u. 0	7 dia 2"
GAMMA RAY	DEPTH	COAL BULK DENSITY glcm³	CALIPER INCHES

BOREHOLE R1478 AREA SAXON
CLIENT DENISON COUNTRY CDN.

COAL LITHOLOGY LOG

MY 88002R

Pr. Saxon 7/13/2 R14 78

SEAM THICKNESS LOG

BOREHOLE R1428
CLIENT DENISON
AREA SAXON
COUNTRY CAN.
DATE LOGGED 6/8/78
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	TAPING		PANEL	
	LOG	RECORD	SPEED	DOWN
CALIPER	1	2	2	2
BR DENSITY	1	2	2	1
SONDE SPEED	1	2	2	1
SOURCE SONDE AND CALIBRATION	1	2	2	1

SCREWALL POSITION: OPEN / CLOSED / SPEED / DOWN

REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

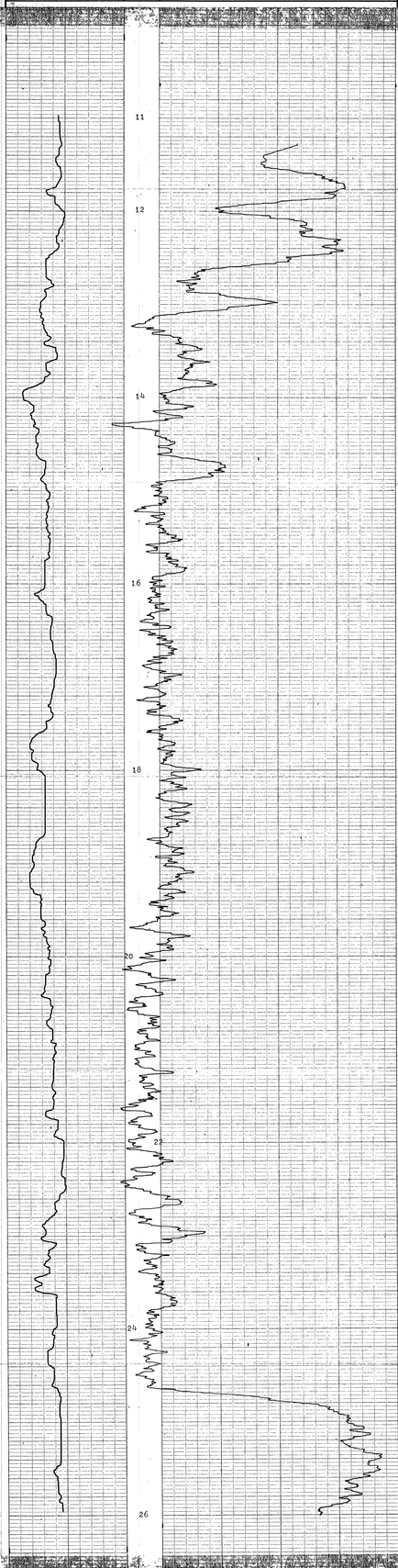
FROM	26		
TO	11		
INTERVAL	15		
FROM		INTERVAL	
TO		TOTAL	
INTERVAL			
REMARKS			

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: CALIPER B.R. DENSITY

629

B P B SEAM THICKNESS LOG



BOREHOLE R1428
CLIENT DENISON
AREA SAXON
COUNTRY CAN.

SEAM THICKNESS LOG

MY 88003 B

COAL QUALITY LOG

BOREHOLE R1078
CLIENT DENISON

AREA SAXON
COUNTRY CDN.
DATE LOGGED 26/8/78

No. OF BL. LOGS 1
DEPTH DRILLER 20.1

SONDE TYPE
COAL COMBINATION SONDE

LOG SUITE
GAMMA RAY
L.S. DENSITY

REMARKS

COAL QUALITY LOG INTERVALS

	FROM	TO
PRIMARY	2.1	11
SECONDARY	11	15

BOREHOLE DATA — REFER TO LITHOLOGY LOG

OPERATION DATA — REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	SERIAL NO.	CALIBRATION	SERIAL NO.	CALIBRATION
GAMMA	1	2	1	2
DENSITY	2	2	2	2
NEUTRON	3	2	3	2

SONDE SERIAL AND CALIBRATION

	SERIAL NO.	CALIBRATION
GAMMA	2.1	1
DENSITY	2.2	1
NEUTRON	2.3	1

RELIEF TO LITHOLOGY LOG

SIDEWALL POSITION

GAMMA	NORMAL
DENSITY	NORMAL
NEUTRON	NORMAL

CALIBRATION

GAMMA	1.5
DENSITY	1.44
NEUTRON	

INTER VAL

1.5

129

Re-Saxon 7/10/14
R1478

BPB COAL QUALITY LOG

DEPTH — GAMMA RAY

COAL BULK DENSITY g/cm^3

HOLE SIZE CORRECTION DATA

2" 4" 6" 8"

1.2 1.25 1.3 1.35 1.4 1.45 1.5 1.55 1.6 1.7 1.8 1.9 2.0 2.2 2.3 2.5

1.50 API 0

6.000 g/cm^3 0

11 12 14 16 18 20 22 24 26

6.000 g/cm^3 0

1.50 API 0

COAL BULK DENSITY g/cm^3

DEPTH — GAMMA RAY

BOREHOLE R1078 | AREA SAXON
CLIENT DENISON | COUNTRY CDN.

COAL QUALITY LOG

BPB INSTRUMENTS

PR-SAXON 78(3)A. R1478

HIGH RESOLUTION DENSITY

COMPANY DENISON
BOREHOLE R1478
STATE SAXON COUNTRY CDN.

Permanent Datum Ground Level Elev. ____ m.
Log measured from " m. above P.D.
Drilling measured from " m. above P.D.

GRID REF. E ____ N ____ R.L. ____

Run No. / Depth Scale	1	20:1			
Date	26/8/78				
First Reading	26				
Last Reading	11				
Interval Measured	15				
Casing BPB					
Casing Driller					
Depth Reached	54.5				
Bottom Driller	54.5				
Mud Nature	AIR				
S.G. / Viscosity					
Bit Size 1	5 1/8 to 54.5		to		to
2	to		to		to
3	to		to		to
Casing Size 1	to		to		to
2	to		to		to
Rm @ Meas Temp.	@		@		@
Rmf @ Meas Temp.	@		@		@
Rmc @ Meas Temp.	@		@		@
BHT					
Operating Time	2 hrs				
Truck No.	26/34				
Recorded By	F.H.				
Witness	J.P.				

629

fold here

REMARKS

Changes in Mud Type or Additional Samples

Date	Sample No.		
Depth - Driller			
Type Fluid in Hole			
Dens.		Visc.	
ph		Fluid Loss	ml
Source of Sample			
Rm @ Meas.Temp.	@ °F	@ °F	
Rmf @ Meas.Temp.	@ °F	@ °F	
Rmc @ Meas.Temp.	@ °F	@ °F	
Source: Rmf	Rmc		
Rm @ BHT	@ °F	@ °F	
Rmf @ BHT	@ °F	@ °F	
Rmc @ BHT	@ °F	@ °F	

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down

Equipment Data

Run No.	Tool Type	Tool Position	Other
1	HRD	eccentralized	

Logging Data

Log	Depths From	Depths To	Speed	T.C.	Norm.	Sensitivity	Source No.
HRD	26	11	2½	1		90	2

HIGH RESOLUTION DENSITY

10500 CPS 6500

DEPTHS

DEPTHS

10500 CPS 6500

HIGH RESOLUTION DENSITY

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BOREHOLE R1478
STATE SAXON
COUNTRY CDN.

MY (8) 58360