

BORHOLE: BR-205  
 CLIENT: CROWS NEST RESOURCES  
 AREA: MERRITT  
 COUNTRY: CANADA  
 DATE LOGGED: 12/11/80

BOREHOLE DATA  
 RECORD NUMBER: 238  
 DEPTH: 238m

COAL LITHOLOGY LOG  
 LOG NO: 371  
 LOG DATE: 11/11/80  
 LOG TIME: 09:00  
 LOG BY: J. J. J.

SONDE TYPE: 160B  
 COAL COMBINATION: 160B  
 LOG SITE: GAMMA RAY  
 CALIPER: 1.11

OPERATION DATA  
 OPERATOR: J. J. J.  
 SUPERVISOR: J. J. J.  
 WITNESSES: J. J. J.

**EQUIPMENT AND RECORDING DATA**

LOG	SONDE	EQUIPMENT	CALIBRATOR	LOG TAPED	TAPING	PANEL	CAL COEFF	DEPTHS	SEAM LOG RUN
					RECORD SPEED	SPEED SECS	NORM	FROM TO	MIRAL
GAMMA RAY	160B		371	Y	9	D 9	1	1.6 238	0 238
DENSITY			0028	0040	Y	9	D 9	+3 6.9	238 C 238
CALIPER					Y	9	D 9		238 0 238

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

FROM	TO	INTERVAL	INTERNAL TOTAL
1.60m	1.14m		
1.47m	1.09m		
1.3m	5m		1.8m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE	DETAIL SCALE
18	N-N	100:1	
	F.E.	100:1	
	Sonic	100:1	

REMARKS

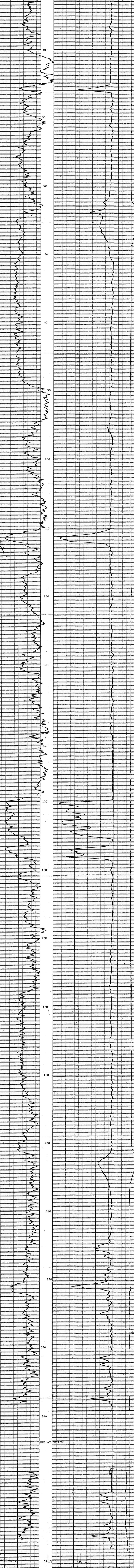
**B.P.B. COAL LITHOLOGY LOG**  
**CALIBRATION DATA**

JIG No	VALUE	JIG CAL DATE	SPAN	VALUE	SDU @	54th	5th
371	5.20 2 DIAM	11/11/80	6000	340	6.9	61.6	8.0

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
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HOLE SIZE CORRECTION DATA

RECORD SPEED	RECORD SPEED	RECORD SPEED	RECORD SPEED	RECORD SPEED	RECORD SPEED	RECORD SPEED	RECORD SPEED	RECORD SPEED	RECORD SPEED
125	130	135	140	145	150	155	160	165	170



**GAMMA RAY** DEPTH **BULK DENSITY** CALIPER INCHES

BORHOLE: BR-205 AREA: MERRITT  
 CLIENT: CROWS NEST RESOURCES COUNTRY: CANADA

**COAL LITHOLOGY LOG**





Merritt 80 (3)A  
RN 305

**COAL QUALITY LOG**

**COAL QUALITY LOG**

**SONDE TYPE:**  
COAL COMBINATION SONDE

**LOG SUITE:**  
GAMMA RAY  
L.S. DENSITY

BOREHOLE RM-205  
CLIENT CROWS NEST RESOURCES  
AREA MERRITT  
COUNTRY CANADA  
DATE LOGGED 12 11/80

DEPTH SCALE 20 : 1  
2 OF 6 LOGS

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

COAL COMBINATION SONDE  
LOG TAPPING PANEL OFF  
LOG SPEED 2000 RPM  
GAMMA 1 2 3 4 5 6 7 8 9 10  
L.S. DENSITY 1 2 3 4 5 6 7 8 9 10

COAL QUALITY LOG INTERVALS  
FROM 1.60m 1.14m  
TO 1.47m 1.09m  
INTERVAL 1.13m 5m

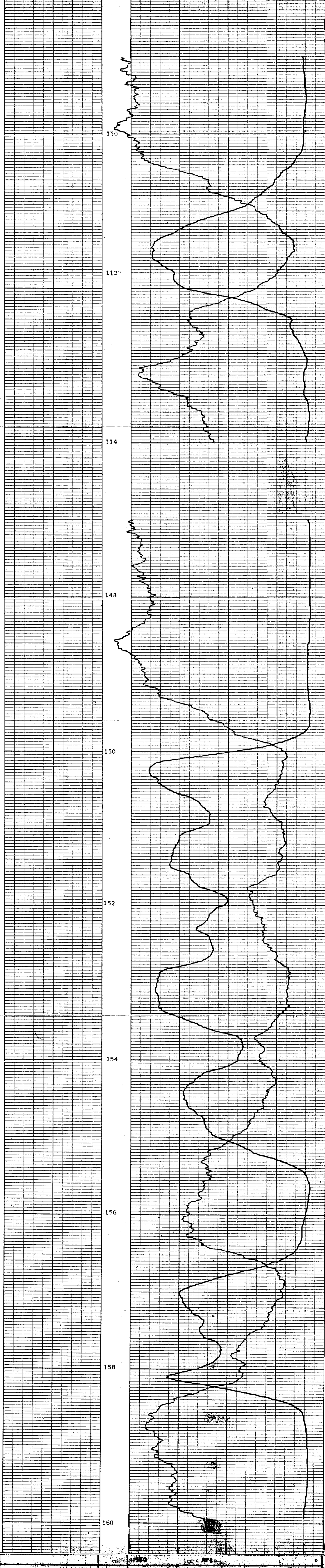
162

**B P B COAL QUALITY LOG**

DEPTH GAMMA RAY  
COAL BULK DENSITY g/cm<sup>3</sup>

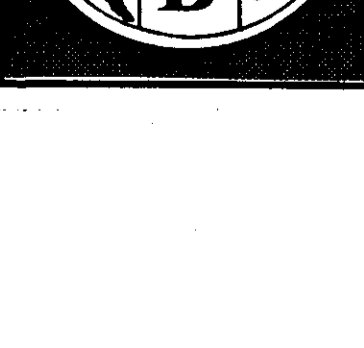
HOLE SIZE CORRECTION DATA

2'	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
----	-----	------	-----	------	-----	------	-----	------	-----	-----	-----	-----	-----	-----	-----	-----



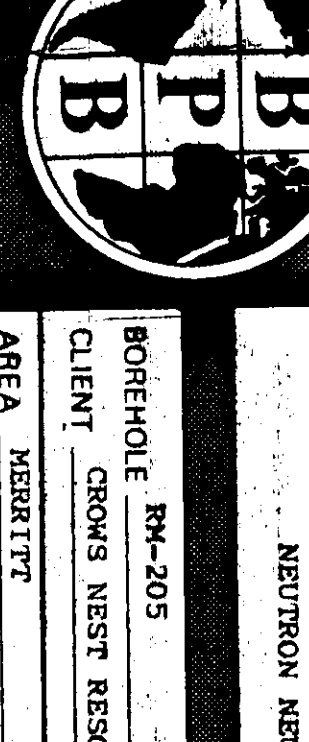
DEPTH GAMMA RAY  
COAL BULK DENSITY g/cm<sup>3</sup>

BOREHOLE RM-205  
CLIENT CROWS NEST RESOURCES  
AREA MERRITT  
COUNTRY CANADA



**COAL QUALITY LOG**

16088 1/81



N. Merritt 803618A P. 255

NEUTRON NEUTRON LOG

(8)

BOREHOLE: RN-205  
 CLIENT: CROWS NEST RESOURCES  
 AREA: MERRITT  
 COUNTRY: CANADA

DATE LOGGED: 12/1/90  
 4. of 6. LOGS

BOREHOLE DATA

FORMATION: GROUND LEVEL  
 LOCATION: F.P. 8. P.S. 0.01  
 DEPTH FROM: 0.1  
 DEPTH TO: 240  
 DEPTH TO: 240  
 DEPTH TO: 240  
 DEPTH TO: 240  
 DEPTH TO: 240  
 DEPTH TO: 240

LOGGING SPEED: 6.3/10  
 LOGGING RATE: 6.3/10  
 LOGGING RATE: 6.3/10  
 LOGGING RATE: 6.3/10  
 LOGGING RATE: 6.3/10  
 LOGGING RATE: 6.3/10

NAME: DU  
 SURVEY: 1.31  
 DATE: 3M  
 VISCOSITY: 100:1  
 TEMPERATURE: 1.0  
 PRESSURE: 3.0  
 DEPTH: 240  
 OPERATOR: ZDB  
 INSTRUMENT: 240  
 ANTENNA LOGGED: 31  
 FRONTIER: N.H.

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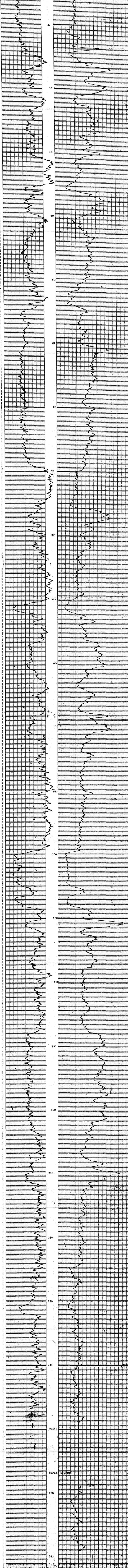
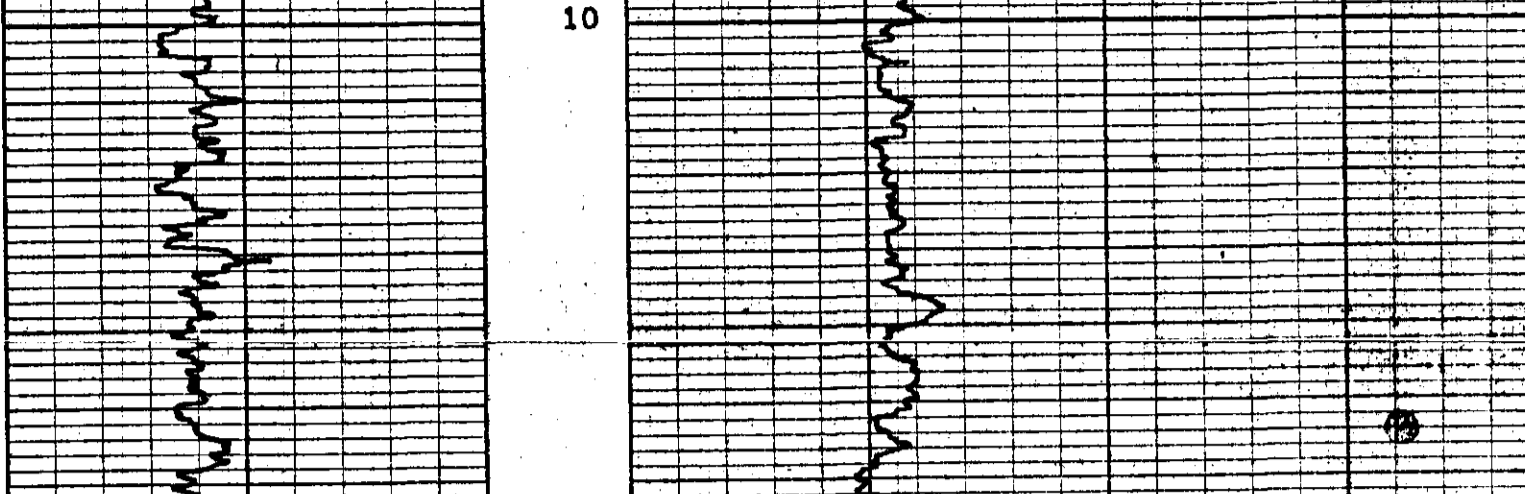
EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT	TAPING	PANEL	CAL	DEPTHS
SONDE	SOURCE	RECORD	DIRECT	COEFF	TO
		SPEED	TO		FROM
N-N	1B	2479	175	Y	9
Gamma	160B	371	371	Y	9

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
160B	CCS	100:1	20:1
	F.B.	100:1	
	Sonic	100:1	

REFER TO ADDITIONAL HEADINGS

Gamma Ray	DEPTH	Neutron
0	API	150
		SNU
		400



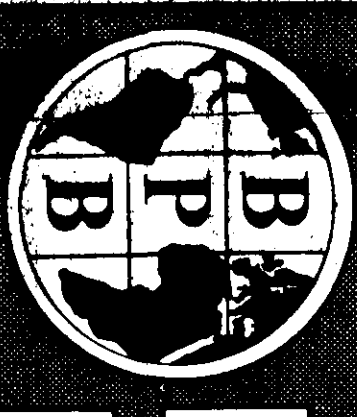
REPEAT SECTION

DEPTH	Gamma Ray	Neutron
230	150	300
240	150	300

Gamma Ray      DEPTH      Neutron

B.P. logo

BOREHOLE: RN-205  
 CLIENT: CROWS NEST RESOURCES  
 AREA: MERRITT  
 COUNTRY: CANADA



M. Merritt 80 (3) A  
RM 205

BOREHOLE RM-205  
CLIENT CROWS NEST RESOURCES

AREA MERRITT  
COUNTRY CANADA

DATE LOGGED 12/11/80  
3 of 6 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

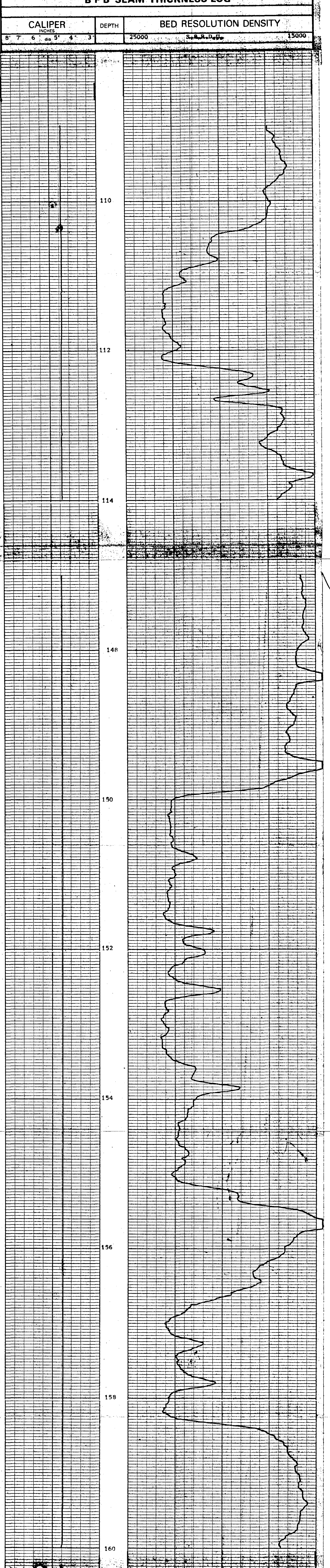
LOG

SEAM THICKNESS LOG INTERVALS  
FROM 1.60m TO 1.47m  
INTERNAL 1.14m TO 1.09m

SEAM THICKNESS LOG INTERVALS

LOG SUITE  
CALIPER  
B.R. DENSITY

**B P B SEAM THICKNESS LOG**



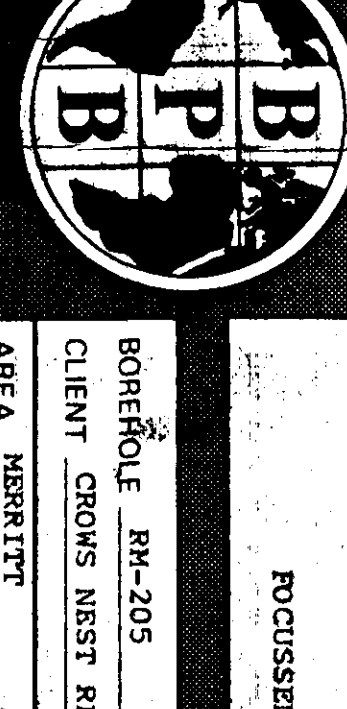
CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
8 7 6 5 4 3	25000	15000



BOREHOLE RM-205  
CLIENT CROWS NEST RESOURCES

AREA MERRITT  
COUNTRY CANADA

**SEAM THICKNESS LOG**



M - Month 08/01A R12005

FOCUSED ELECTRIC LOG

BOREHOLE RM-205  
CLIENT CROWS NEST RESOURCES  
AREA HERRITT  
COUNTRY CANADA

DATE LOGGED 12/11/90  
5 of 6 LOGS

BOREHOLE DATA  
FORMATION (DEPTH) 8.8  
ELEVATION (FT) 3  
DEPTH REACHED 239m  
CABLES USED 1.5 1.7 2.0 6.5 1.9 3.8 2.3 1.9  
CABLES SIZES 1 6 1.6 6.5 2

VALUES  
SOIL 1.43 ST/SEC  
VELOCITY 1.6 OHM METERS  
TEMPERATURE 23.9m  
UNIT WEIGHT 3.5 VZ7  
UNIT - BLOCK NO. N.H.

OPERATION DATA  
LOG RECORDED BY  
LOG RECORDED DATE  
LOG RECORDED TIME

FLUID DATA  
LOG RECORDED BY  
LOG RECORDED DATE  
LOG RECORDED TIME

WITNESSES  
N.H.

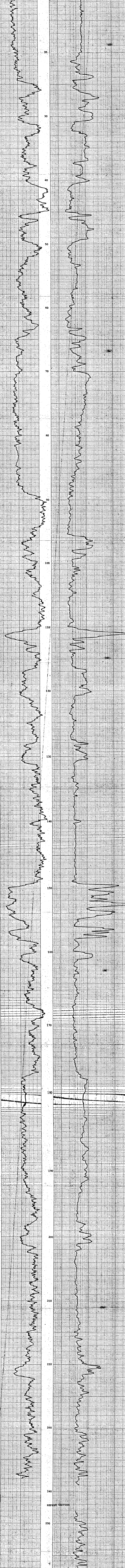
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EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT	TAPING	PANEL	CAL	DEPTHS
SONDE	SOURCE	LOG	NO	TYPE	FROM
F 2.4	160B	Y	5	d	239
Gamma	160B	Y	9	R	0

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REMARKS
160B	CCS	100m	20m	REFER TO ADDITIONAL HEADINGS
18	N-N	100m		
	Sonic	100m		

Gamma Ray DEPTH Focused electric  
0 API 150 5 ohm metres 5000

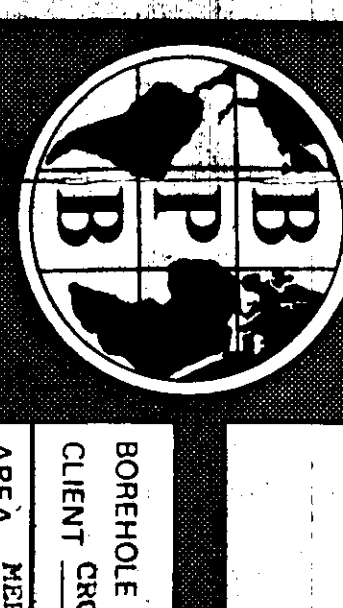


0 API 150 5 ohm metres 5000

DEPTH







SONIC LOG (213)

BOREHOLE RM-206  
 CLIENT CROWS NEST RESOURCES  
 AREA HERRITT  
 DEPTH SCALE 100 FT  
 COUNTRY CANADA  
 DATE LOGGED 17/1/80  
 5.0" 6. LOGS

BOREHOLE DATA  
 PERMANENT/TEMP GROUND LEVEL  
 ELEVATION TO " " DILLER  
 MGS/REMARKS FROM G.L. G.L.  
 DEPTH REACHED 188m 188m  
 CASING SHOE 6.5m 6.5m  
 BIT SIZES 1 6 1/2, 2 5/8, 3 5/8, 4 1/2, 5 1/2, 6 1/2, 7 1/2, 8 1/2, 9 1/2, 10 1/2, 11 1/2, 12 1/2, 13 1/2, 14 1/2, 15 1/2, 16 1/2, 17 1/2, 18 1/2  
 CASING SIZES 1 6 1/2, 2 5/8, 3 5/8, 4 1/2, 5 1/2, 6 1/2, 7 1/2, 8 1/2, 9 1/2, 10 1/2, 11 1/2, 12 1/2, 13 1/2, 14 1/2, 15 1/2, 16 1/2, 17 1/2, 18 1/2

FLUID DATA  
 NATURE  
 PRESSURE  
 TEMPERATURE  
 VISCOSITY  
 DENSITY  
 OPERATIONAL DATA  
 TEST BEARING 188m  
 TEST BEARING 10m  
 ANTENNA LOGGED 158m  
 UNIT - TRUCK NO. 35 V27  
 ENGINEER N.H.  
 WITNESS

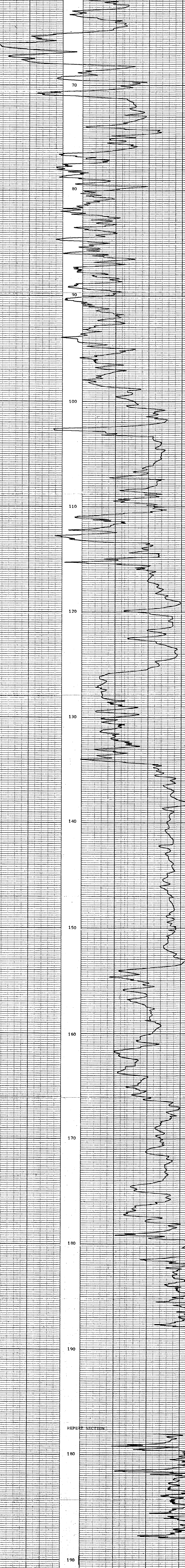
162

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT	TAPING	PANEL	CAL COEFF	DEPTHS
Sonic	SONIC SOURCE	RECORD SPEED 9 D	9 1		FROM 188 TO 158

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
160B	CCS	100:1	20:1		
18	N-N	100:1			
	F.R.	100:1			

DEPTH 140 micro sec. per foot 40



DEPTH 140 micro sec. per foot 40

BOREHOLE RM-206  
 CLIENT CROWS NEST RESOURCES  
 AREA HERRITT  
 COUNTRY CANADA







SONDE TYPE:  
COAL COMBINATION:  
SONDE

LOG SUITE:  
GAMMA RAY  
L.S. DENSITY

COAL QUALITY LOG

BOREHOLE RM-206  
CLIENT CROWS NEST RESOURCES  
AREA MERRITT  
COUNTRY CANADA  
DATE LOGGED 17/11/80  
DEPTH SCALE 2011  
2 OF 6 LOGS

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

COAL COMBINATION SONDE  
LOG TAPPING PANEL  
GAMMA RAY SPEED 2 4 6 9 1.5  
L.S. DENSITY 1.50  
SOURCE SONDE AND CALIBRATION  
REFER TO LITHOLOGY LOG

COAL QUALITY LOG INTERVALS

FROM 136m 70m  
TO 125m 63m  
INTERVAL 11m 7m

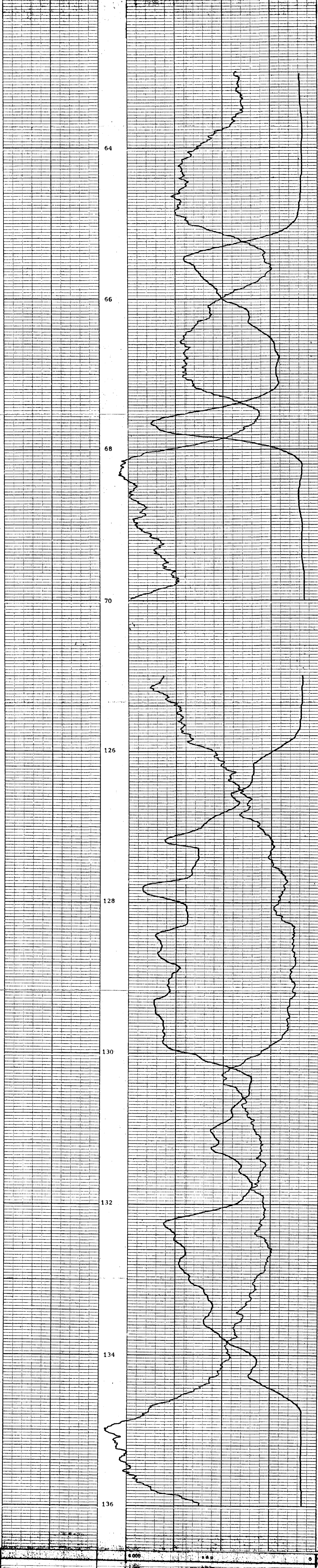
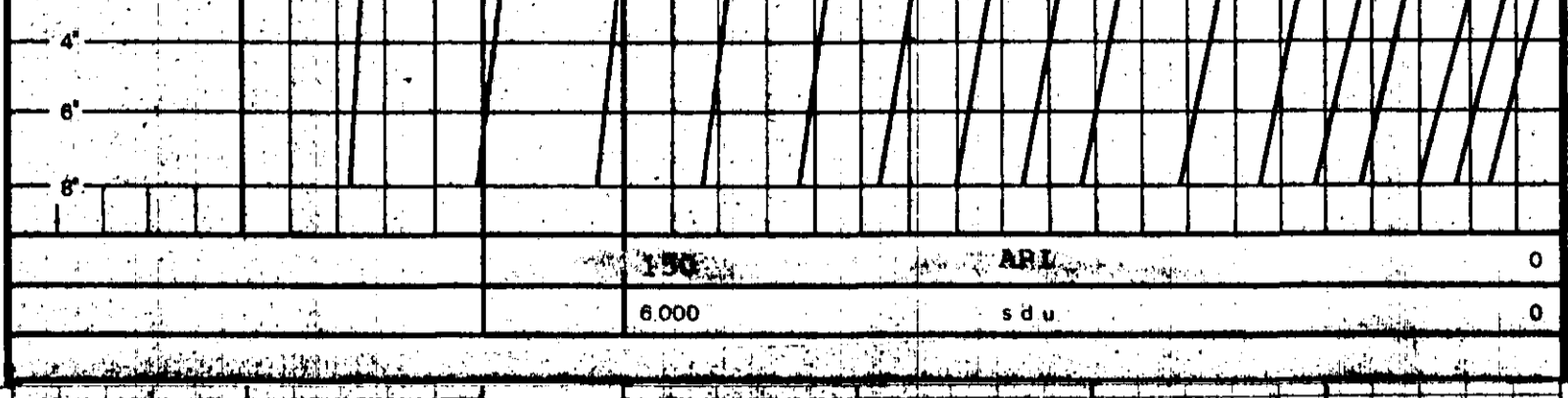
INTERVAL  
VAL TOTAL  
170m

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B P B COAL QUALITY LOG

DEPTH GAMMA RAY  
COAL BULK DENSITY  
g/cm<sup>3</sup>

HOLE SIZE CORRECTION DATA



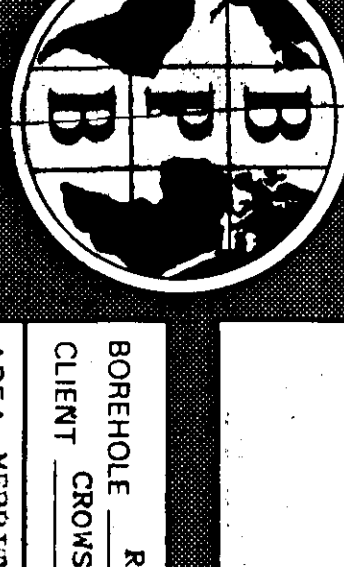
DEPTH GAMMA RAY  
COAL BULK DENSITY  
g/cm<sup>3</sup>

BOREHOLE RM-206  
CLIENT CROWS NEST RESOURCES  
AREA MERRITT  
COUNTRY CANADA

COAL QUALITY LOG



H-vent 80(B)A R.H. 206



FOCUSED ELECTRIC LOG

BOREHOLE RM-206

CLIENT CROWS NEST RESOURCES

AREA HERRITT

COUNTRY CANADA

DATE LOGGED 17/11/90

BOREHOLE DATA

FORMATION (GEOL. LEVEL)  
 ELEVATION OF F.O. 8' 8" 5M/15M  
 DEPTH REACHED 18M 18M  
 CASING SHOE 6.5M 6.5M  
 BIT SIZES 1 6 1/2" 6.5" 2 5 7/8" 1.88  
 CASING SIZES 1 6 1/4" 6.5" 2 4" 10"

FLUID DATA

NATURE QUIK gel

VISCOSITY 1.37 gm/cc

LEVEL 13 QIM METERS 28°C

OPERATION DATA

TEST READING 18MM  
 LAST READING 18MM  
 INTERNAL LOGGED 35 V27  
 UNIT - TRUCK No. N.H.  
 ENGINEER  
 WITNESSES

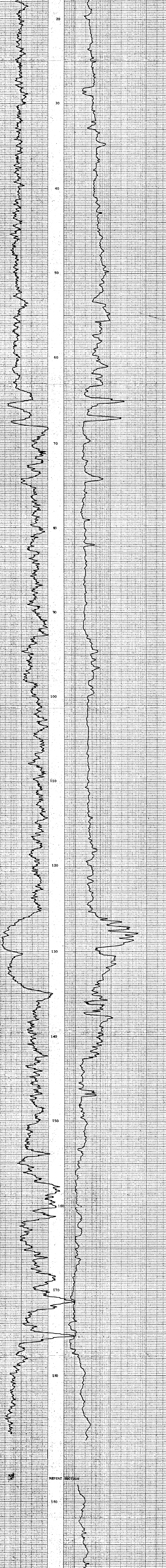
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EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT	LOG TAPING	RECORD DIRECT	PANEL	CAL COEFF	DEPTHS
	SONDE SOURCE CALIBRATOR	TAPER	TYPE	TYPE		FROM TO INTERVAL
F.E		Y	5	R	5	188 8 180
Gamma	160B	Y	9	R	9	1.5 188 0 188

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS	REMARKS
160B	CCS	100:1	20:1		
18	N-N	100:1			
	Sonic	100:1			

Gamma ray	DEPTH	5	5	5000
API			ohm metres	
0	15			



Gamma ray	DEPTH	0	5	5000
API			ohm metres	
130	180			





NEUTRON NEUTRON LOG

BOREHOLE RM-206

CLIENT CROWS NEST RESOURCES

AREA HERRITT

COUNTRY CANADA

DATE LOGGED 17/1/80

REMARKS

ELEVATION OF P.O.

MEASUREMENTS

DEPTH REACHED

BIT SIZES

FLUID DATA

LEVEL

VISCOSITY

R.H.T.

OPERATION DATA

LAST READING

WITNESSES

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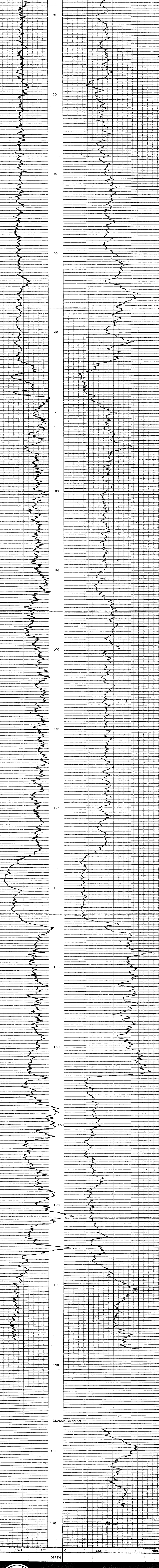
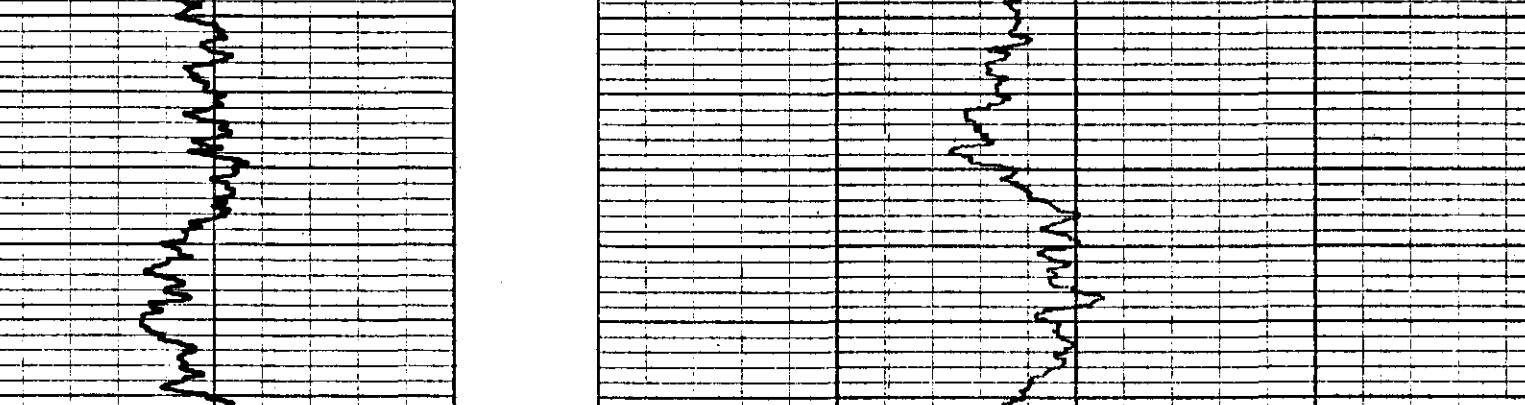
EQUIPMENT AND RECORDING DATA

LOG	SONDE	SOURCE	CALIBRATION	LOG TAPED	RECORD SPEED	DIRECTOR REPLAY	PANEL	T.C. SECS	CAL. COEFF.	DEPTHS	DEPTH
N-N	16	2479	175	Y	9	D.	9	1	7.2	188	179
Gamma	160B		371		9	R	9	1	1.5187	0	187

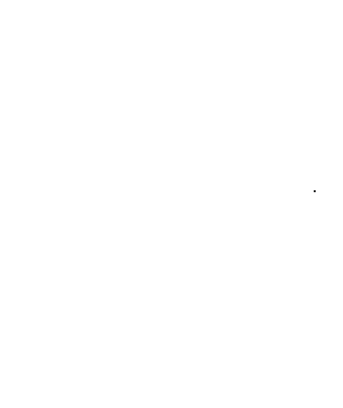
SONDE	LOG	GENERAL SCALE	DETAIL SCALE	LOG	REFER TO ADDITIONAL HEADINGS	REMARKS
160B	CCS	100:1	20:1			
	F.S.	100:1				
	Sonic	100:1				

Gamma ray	DEPTH	Neutron
0	API 150	0
		400

SANDSTONE POROSITY



Gamma ray	DEPTH	Neutron
0	API 150	0
		400



BOREHOLE RM-206  
 CLIENT CROWS NEST RESOURCES

AREA HERRITT  
 COUNTRY CANADA



Merritt 206m R11-206

BOREHOLE RM-206  
CLIENT CROWS NEST RESOURCES

AREA MERRITT  
COUNTRY CANADA

DATE LOGGED 17/11/80

3 of 6 LOGS

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

SEAM THICKNESS LOG

LOG TANKING PANEL COBT  
LOG RECORDING SPEED SECS NORM  
CALIPER X 2 R 2 I 1  
BR BRUSH Y 2 R Z I 1.15

SONDE TYPE)  
COAL COMBINATION  
SONDE

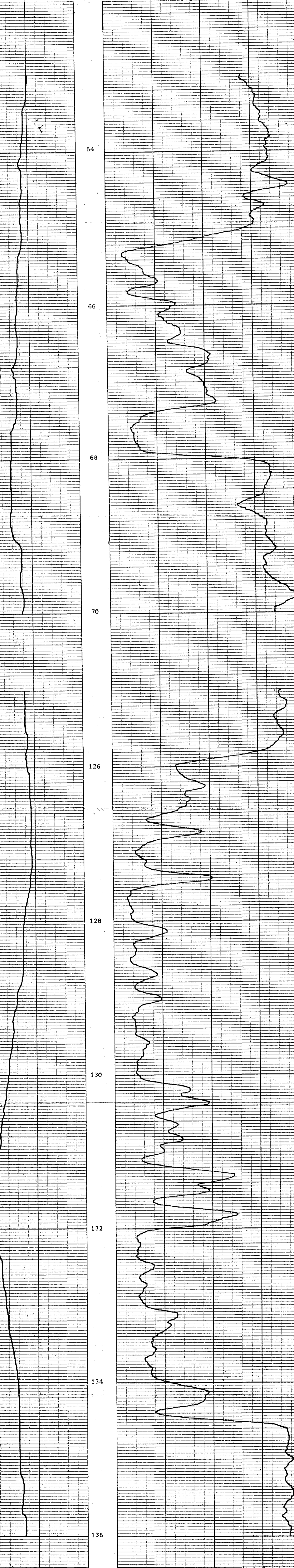
LOGS SUITE  
CALIPER  
BR DENSITY

SEAM THICKNESS LOG INTERVALS  
FROM 136m TO 70m  
TO 125m TO 63m  
INTERVAL 11m TO 7m

REMARKS  
**162**

B PB SEAM THICKNESS LOG

CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
8 7 6 dia 5 4 3	25000	SBRDU 14000



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
8 7 6 dia 5 4 3	25000	SBRDU 14000



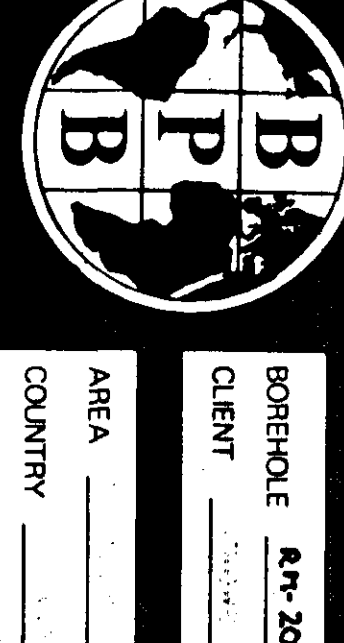
BOREHOLE RM-206  
CLIENT CROWS NEST RESOURCES

AREA MERRITT  
COUNTRY CANADA

SEAM THICKNESS LOG



HG-74B



Client: R1-206  
 Borehole: R1-206  
 Client: (L23)

**COAL**  
 LITHOLOGY LOG

**BOREHOLE DATA**  
 REMARKS/DATA: \_\_\_\_\_  
 DEPTH OF D: \_\_\_\_\_  
 B.P.B. \_\_\_\_\_  
 DRILLER: \_\_\_\_\_

**BOREHOLE DATA**  
 AREA: \_\_\_\_\_  
 COUNTRY: \_\_\_\_\_  
 DATE LOGGED: \_\_\_\_\_

**SONDE TYPE**  
 COAL COMBINATION: \_\_\_\_\_  
 SONDE: \_\_\_\_\_

**LOG SLITS:**  
 GAMMA RAY: \_\_\_\_\_  
 CALIPER: \_\_\_\_\_

**OPERATION DATA**  
 FIRST BEAKING: \_\_\_\_\_  
 LAST LOGGED: \_\_\_\_\_  
 INTERVAL LOG: \_\_\_\_\_  
 LOG NUMBER: \_\_\_\_\_  
 LOG DATE: \_\_\_\_\_

**FLUID DATA**  
 FLUID TYPE: \_\_\_\_\_  
 TEMPERATURE: \_\_\_\_\_  
 PRESSURE: \_\_\_\_\_  
 PH: \_\_\_\_\_

**EQUIPMENT AND RECORDING DATA**

LOG	EQUIPMENT	TAPING	PANEL	CAL	DEPTH	SEAM LOG RUN				
SONDE	SOURCE	CALIBRATOR	LOG TAPE	RECORD SPEED	DIRECT REPLAY	TC SECS	NORM	FROM	TO	INTERVAL
GAMMA RAY	14.011	8.2	2	9	0	9	1	1.1	1.1	1.1
DENSITY	012.4	0.040	2	9	0	9	1	1.1	1.1	1.1
CALIPER	SIDEWALL POSITION	2	9	0	9	1	1	1.1	1.1	1.1

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

FROM	TO	INTERNAL	INTERVAL TOTAL
1.1m	7.0m		
12.5m	7.1m		
1.1m	7m		

**ADDITIONAL SONDES RUN**

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS
14	N-N	100:1		
	E-E	100:1		
	S-S	100:1		

**BPB COAL LITHOLOGY LOG**

**CALIBRATION DATA**

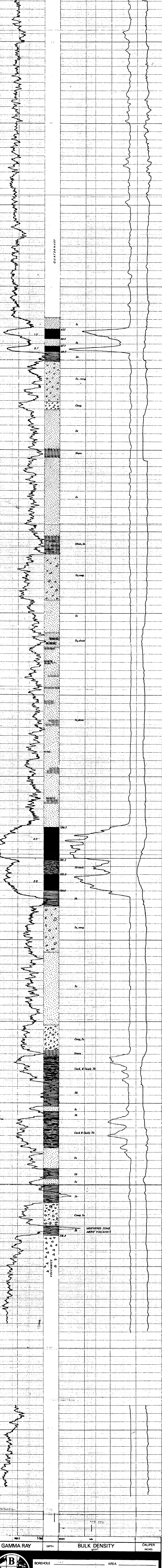
JIG No. 371 VALLE 52.0 2'DIAM  
 JIG MARK SHOWN AT ABOVE VALLE

JIG CAL DATE: 1/27/77 JIG VALLE: 52.0 g/cm<sup>3</sup> 1.14 in. 1.14 cm  
 JIG No. 371-311 SPAN: 1.14 NORM: 0.98 1.14 in. 1.14 cm

**GAMMA RAY**      **DEPTH**      **BULK DENSITY** (g/cm<sup>3</sup>)      **CALIPER** (INCHES)

**HOLE SIZE CORRECTION DATA**

DEPTH (m)	125	130	135	14	145	15	155	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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**GAMMA RAY**      **DEPTH**      **BULK DENSITY** (g/cm<sup>3</sup>)      **CALIPER** (INCHES)

**BOREHOLE** \_\_\_\_\_ **AREA** \_\_\_\_\_  
**CLIENT** \_\_\_\_\_ **COUNTRY** \_\_\_\_\_

**COAL LITHOLOGY LOG**

HG-74B

MT A5031 B