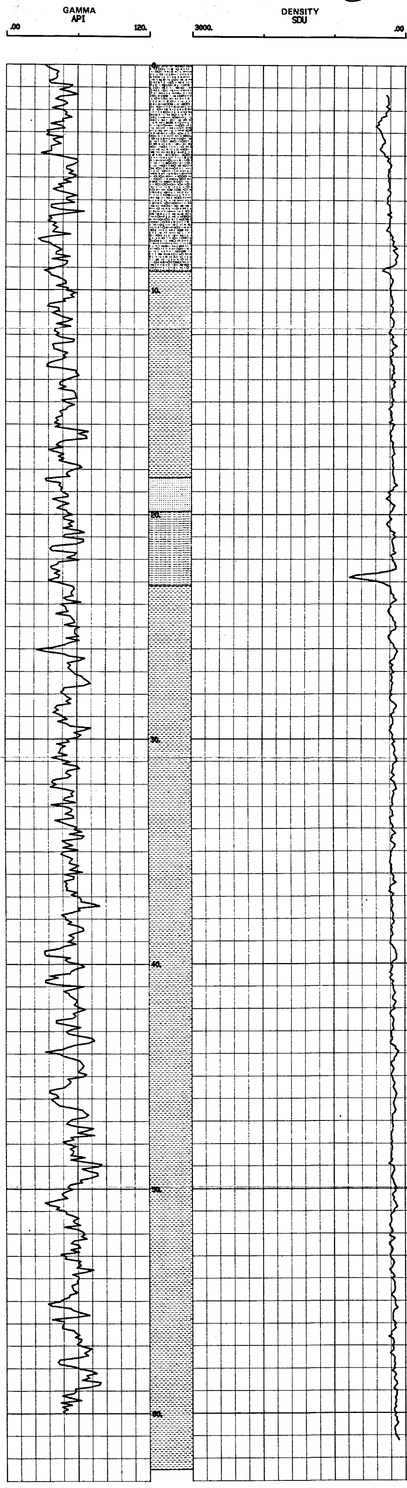
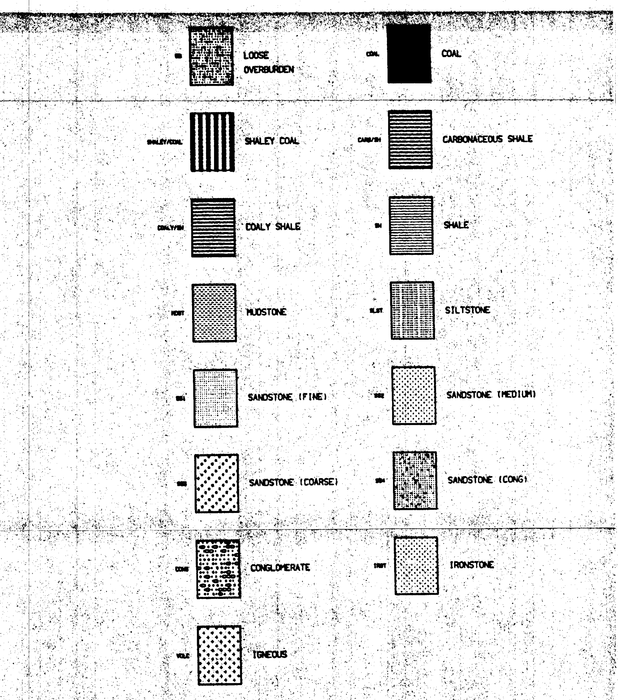
TK-Telkwa 83G/a

TELKWA PROJECT 239

DRILL HOLE #350 (1)





239

TK-TELKWA 83(3)A

BOREHOLE	[illegible] 350 (2)
CLIENT	[illegible]
AREA	[illegible]
COUNTRY	[illegible]
DATE LOGGED	[illegible]
DEPTH SCALE	1:100

BOREHOLE DATA

PERMANENT DATUM	[illegible]
ELEVATION OF P.D.	
DRILLER	
MEASUREMENTS FROM	[illegible]
DEPTH REACHED	[illegible]
CASING SHOE	[illegible]
BIT SIZES	1 [illegible] TO [illegible] 2 [illegible] TO [illegible]
	3 [illegible] TO [illegible] 4 [illegible] TO [illegible]
CASING SIZES	1 [illegible] TO [illegible] 2 [illegible] TO [illegible]
	1 [illegible] TO [illegible] 2 [illegible] TO [illegible]

FLUID DATA

NATURE	[illegible]
S.G.	[illegible]
LEVEL	[illegible]
VISCOSITY	[illegible]
Pm at meas. temp	[illegible]
BH T	[illegible]

OPERATION DATA

DIST. READING	[illegible]
LAST READING	[illegible]
INTERVAL LOGGED	[illegible]
UNIT + TRUCK No.	[illegible]
ENGINEER	[illegible]
WITNESS	[illegible]

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS			
	SONDE	SOURCE	CALIBRATOR	LOG TAPE ID	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM		FROM	TO	INTERVAL	
[illegible]	[illegible]		[illegible]	Y	[illegible]	[illegible]	[illegible]	1		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Y	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
506	[illegible]	100:1	

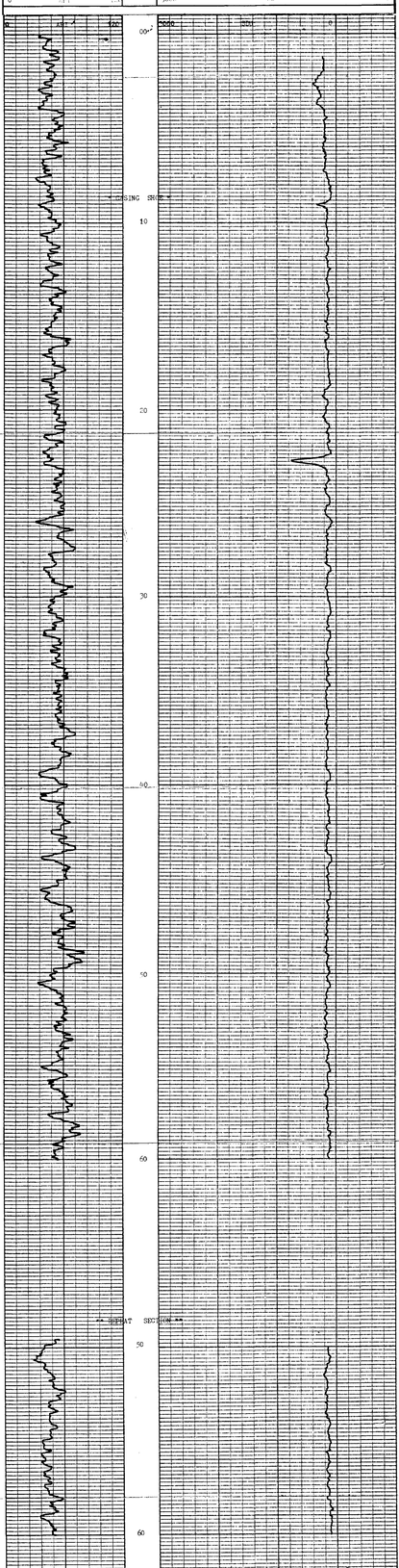
REFER TO ADDITIONAL HEADINGS

REMARKS

NOTE: [illegible] TO [illegible] FOR [illegible]

[illegible]

GAMMA RAY	DEPTH	LONG SPACED DENSITY
0 API 1.0		3000 [illegible] 0



GAMMA RAY	DEPTH	LONG SPACED DENSITY
0 API 1.0		3000 [illegible] 0

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

MY 93160 B

TK - TELKWA 83(3)A

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GAMMA RAY
&
NEUTRON-NEUTRON
(THROUGH RODS)

BOREHOLE TW83D-350 (3)

CLIENT CROWS NEST RESOURCES LTD.

AREA TELKWA

COUNTRY CANADA

DATE LOGGED AUG. 14/83

DEPTH SCALE 100:1

2 OF 2 LOGS

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

EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL			CAL COEFF
	LOG TAPED	RECORD SPEED	DIRECTS REPLAY	SPEED	T.C. SECS	NORM	
GAMMA	Y	9	R	9	1		1.00
N-N	Y	9	D	9	1	-	
		SCALE NO	506	SCALE NO	2429		

REMARKS

NOTE UNUSUAL SCALES TO COMPENSATE FOR DRILL ROD EFFECT.

BOREHOLE TW83D-350

CLIENT CROWS NEST RESOURCES LTD.

AREA TELKWA

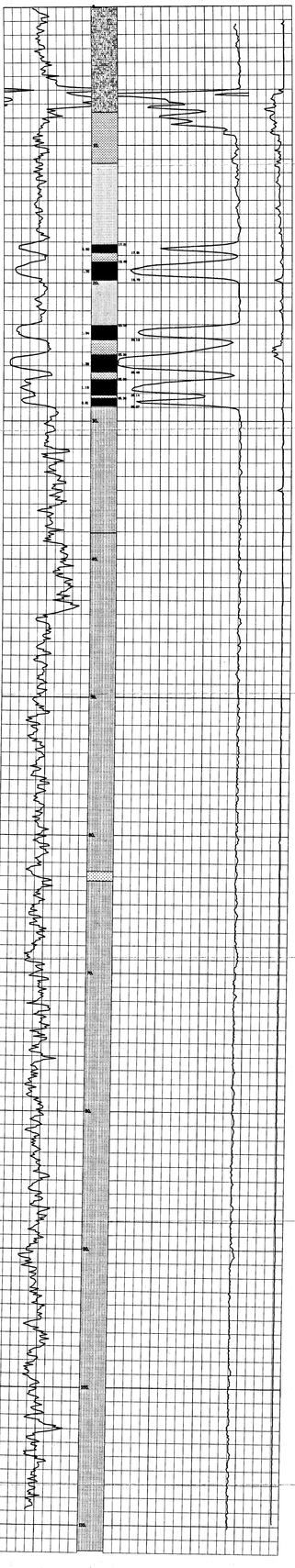
COUNTRY CANADA

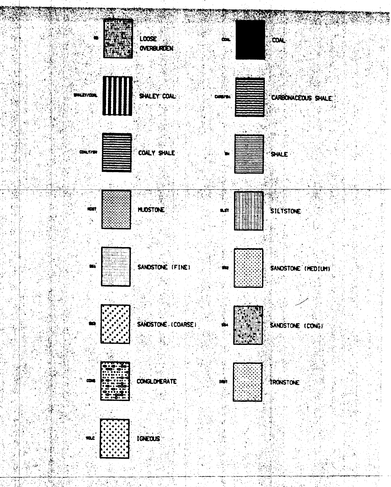
TK - TELKWA 83/3A

TELKWA PROJECT 239

DRILL HOLE #351 (1)

GAMMA API .00 150. | DENSITY SGU 2000. | CALIPER INCHES .00 7.00 8.00





SEAM THICKNESS LOG

BOREHOLE 14-1350-5-1 (2)
CLIENT GOLDEN WEST RESOURCES LTD.
AREA TOLMAN
COUNTRY CANADA
DATE LOGGED 26 JULY 84
CAL. LOGS
SPECIFICATION NO.

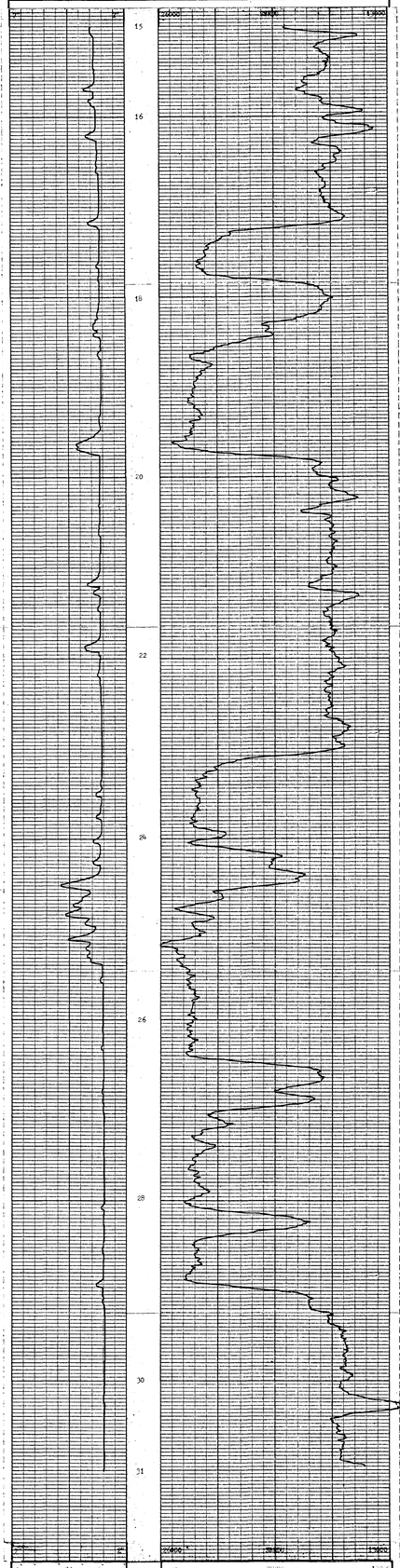
SONDE TYPE
COAL COMBINATION SONDE
LOG SUITE
CALIPER
BR DENSITY

SEAM THICKNESS LOG INTERVALS
REFER TO LITHOLOGY LOG
FROM / TO / THICKNESS / REMARKS

BOREHOLE DATA
REFER TO LITHOLOGY LOG
OPERATION DATA
EQUIPMENT AND RECORDING DATA
COAL COMBINATION SONDE
LOG | DEPTH | CALIPER | BR DENSITY | SIDEWALL POSITION
PASS | DEPTH | CALIPER | BR DENSITY | SIDEWALL POSITION

B P B SEAM THICKNESS LOG

CALIPER INCHES | DEPTH | BED RESOLUTION DENSITY



CALIPER INCHES | DEPTH | BED RESOLUTION DENSITY

BOREHOLE 14-1350-5-1
CLIENT GOLDEN WEST RESOURCES LTD.
AREA TOLMAN
COUNTRY CANADA

SEAM THICKNESS LOG

MY85003E

IM 23D-121 CG2

BPB

COAL QUALITY LOG

BOREHOLE	[illegible]-361 (3)
CLIENT	[illegible]
AREA	[illegible]
COUNTRY	[illegible]
DATE LOGGED	[illegible]
DEPTH SCALE	1 OF 1 LOGS

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

SIDEWALL POSITION

LOG	TAKING	PAINTED	CALIPER
GAMMA RAY			
L.S. DENSITY			
SOURCE SONDE AND CALIBRATION			

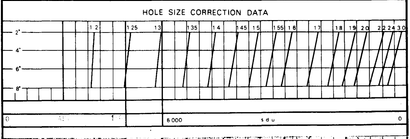
COAL QUALITY LOG INTERVALS	
FROM	
TO	
INTERVAL	
REMARKS	

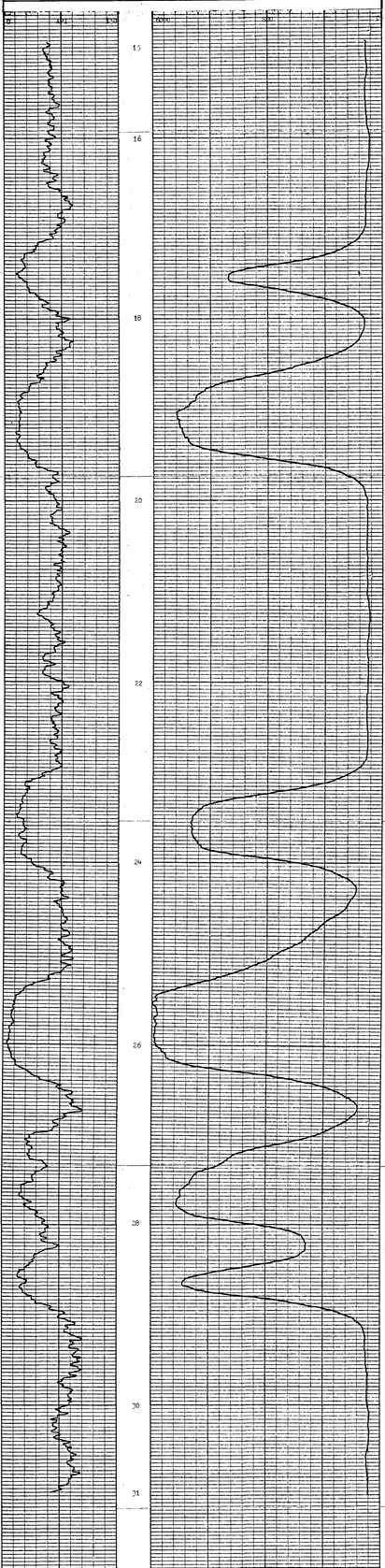
SONDE TYPE	
COAL COMBINATION SONDE	
LOG SUITE	
GAMMA RAY	
L.S. DENSITY	

BPB COAL QUALITY LOG

	DEPTH	
GAMMA RAY		COAL BULK DENSITY g/cm³

HOLE SIZE CORRECTION DATA





GAMMA RAY		COAL BULK DENSITY g/cm³
	DEPTH	

BPB

BOREHOLE [illegible] 1	AREA [illegible]
CLIENT [illegible]	COUNTRY [illegible]

COAL QUALITY LOG

IK - Tekum 83(3)A

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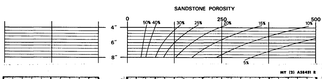
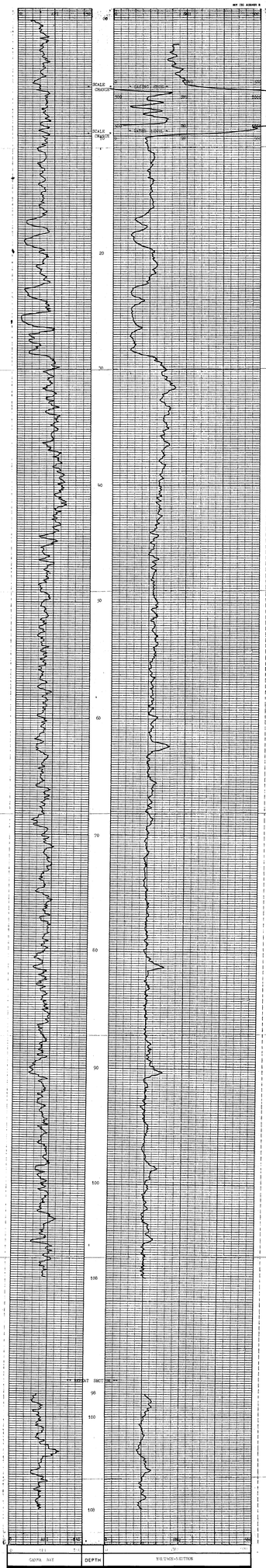
T.K. Tetuna 25/3/A

BOREHOLE	TWPD-30 (4)
CLIENT	CRIMS WEST BOUNDARY LTD.
AREA	TEXAS
COUNTRY	CANADA
DATE LOGGED	2/11/83
DATE LOGGED	2/11/83
DATE LOGGED	2/11/83

DATA BLT	
DEPTH	
METRES-SECTION	





BOREHOLE	TWPD-30
CLIENT	CRIMS WEST BOUNDARY LTD.
AREA	TEXAS
COUNTRY	CANADA

TK-Telcwa 82(3)A

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BOREHOLE 351 (S)

CLIENT

AREA

COUNTRY

DATE LOGGED

DEPTH SCALE

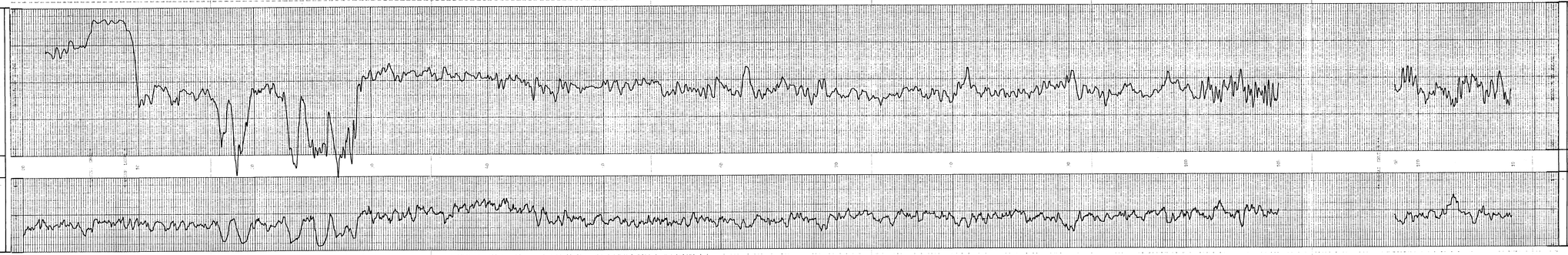
OF LOGS

BOREHOLE DATA	REFER TO	LOG
OPERATION DATA	REFER TO	LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING		PANEL		AN LOCK
LOG LENGTH	RECORDING SPEED	TAPING SPEED REF.	SPEED	T.V. MON.	NORM

REMARKS



DEPTH

BOREHOLE

CLIENT

AREA

COUNTRY

IK - TEBONA 83(6)A

239

BPB

BOREHOLE 31

CLIENT

AREA

COUNTRY

DATE LOGGED

DEPTH SCALE

1 OF 1000

MULTI-CHANNEL SONIC LOG

BOREHOLE DATA

TOWNSHIP/CITY/AP		
COUNTY/PARISH		
STATE/PROVINCE		
COUNTRY		
DATE LOGGED		
LOCATION		
ELEVATION		
DATUM		
DRILLING FLUID		
DRILLING FLUID LEVEL		
DRILLING FLUID WEIGHT		
DRILLING FLUID VISCOSITY		
DRILLING FLUID PH		
DRILLING FLUID RESISTIVITY		
DRILLING FLUID TEMPERATURE		
DRILLING FLUID LOSS		
DRILLING FLUID SOURCE		
DRILLING FLUID SAMPLE		
DRILLING FLUID CHLORIDES		
DRILLING FLUID CALCIUM		
DRILLING FLUID SULPHATES		
DRILLING FLUID PH		
DRILLING FLUID RESISTIVITY		
DRILLING FLUID TEMPERATURE		
DRILLING FLUID LOSS		
DRILLING FLUID SOURCE		
DRILLING FLUID SAMPLE		
DRILLING FLUID CHLORIDES		
DRILLING FLUID CALCIUM		
DRILLING FLUID SULPHATES		

FLUID DATA

VISCOSITY		
PH		
RESISTIVITY		
TEMPERATURE		
LOSS		
SOURCE		
SAMPLE		
CHLORIDES		
CALCIUM		
SULPHATES		

OPERATION DATA

CASING SIZE	
CASING DEPTH	
TUBING SIZE	
TUBING DEPTH	
LAST CASING	
LAST TUBING	
LAST PACKER	
LAST BRIDGE PLUG	
LAST CEMENT	
LAST PERFORATION	
LAST TEST	
LAST FLOW TEST	
LAST PRESSURE TEST	
LAST ACID JOB	
LAST FRACTURE	
LAST SHOT	
LAST CORE	
LAST DST	
LAST SWC	
LAST DIP	
LAST CALIPER	
LAST GAMMA RAY	
LAST NEUTRON	
LAST DENSITY	
LAST SONIC	
LAST TEMPERATURE	
LAST RESISTIVITY	
LAST SPONTANEOUS POTENTIAL	
LAST CHLORIDES	
LAST CALCIUM	
LAST SULPHATES	
LAST PH	
LAST RESISTIVITY	
LAST TEMPERATURE	
LAST LOSS	
LAST SOURCE	
LAST SAMPLE	
LAST CHLORIDES	
LAST CALCIUM	
LAST SULPHATES	

EQUIPMENT AND RECORDING DATA

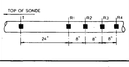
SONDE No. 305

	TRANSDUCER ARRANGEMENT			CENTRALISERS SET TO				DIAMETER					
				GENERAL LOGGING		DETAIL LOGGING		DATA RECORDED			DATA DISPLAYED		
	RECEIVER PAIRS	SPACING R1-R2	SPACING R1-T	SPEED	TC SECS	SPEED	TC SECS	FROM	TO	INTERVAL	FROM	TO	INTERVAL
CHANNEL 1	R1 - R2	8"	24"	-	-			1.0	1	1.0	1.0	1.0	1.0
CHANNEL 2	R2 - R4	16"	32"	-	-			1.0	1	1.0			
CHANNEL 3	R1 - R4	24"	24"	-	-			1.0	1	1.0	1.0	1.0	1.0
CHANNEL 4	R2 - R4	8"	40"	-	-			1.0	1	1.0			

DETAIL ZONES DISPLAYED (SEE RELEVANT LOG)

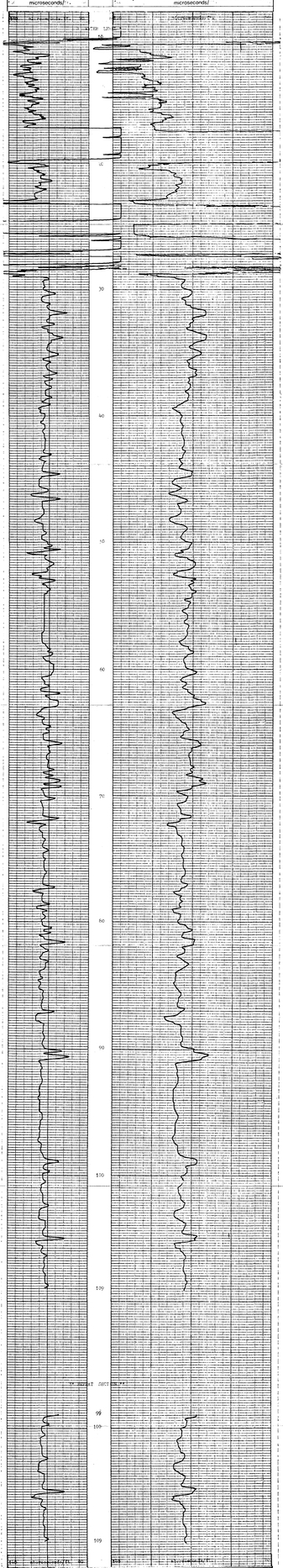
FROM		INTERVAL TOTAL
TO		
INTERVAL		

TOP OF SONDE



REMARKS

CHANNEL 1	DEPTH	CHANNEL
INTERVAL TRANSIT TIME microseconds/ft		INTERVAL TRANSIT TIME microseconds/ft



microseconds/ft	DEPTH	microseconds/ft
CHANNEL 1		CHANNEL

BPB

BOREHOLE

AREA

CLIENT

COUNTRY

MC SONIC LOG

TW-Telkwa 83(3)a

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DIPMETER ANALYSIS

CLIENT___
BOREHOLE_
AREA_____
COUNTRY__

CROWS NEST RESOURCES
TW 83D-351 (7)
TELKWA, B.C.
CANADA

DATE LOGGED.....15-AUG-83
DATE PROCESSED..23-AUG-83

COMMENTS.....

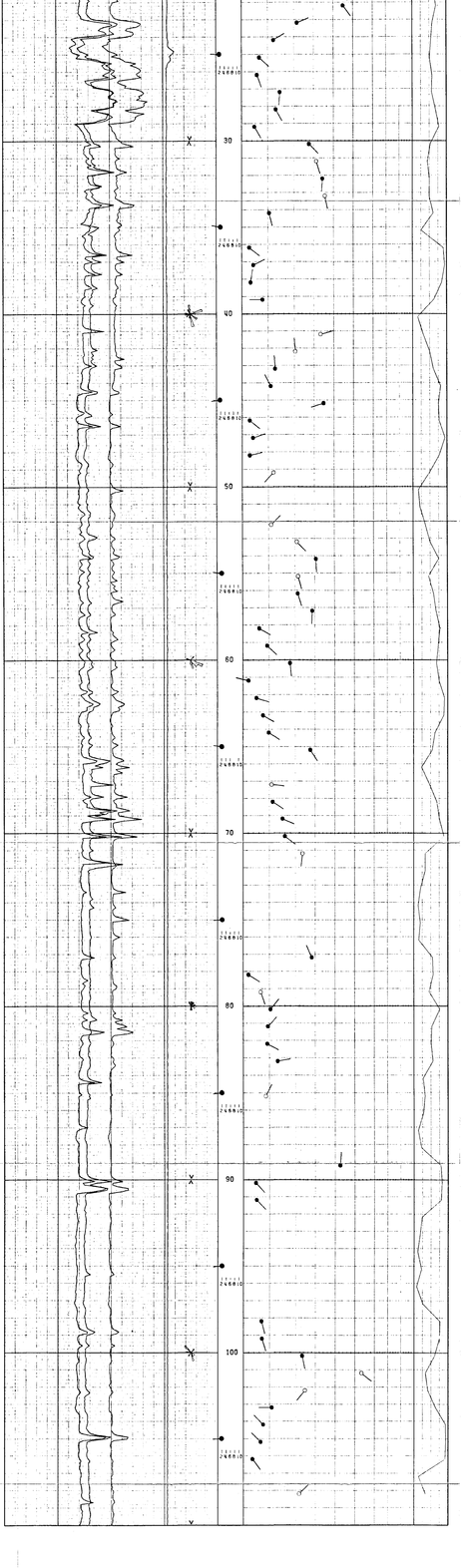
INTERPRETATION PARAMETERS

STEP 1.00M.
INTERVAL 2.00M.
SEARCH ANGLE 80.
DECLINATION 26.0 EAST
DEPTH RANGE 7.30 - 110.00M.
DATE PROCESSED 23-AUG-83

AVERAGE BOREHOLE DEVIATION & DIRECTION
PLOTTED EVERY 10.0M.

ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES,
.1" RADIUS PER DIP ARROW DISPLAYED

LEGEND:
GOOD (+0.50)
FAIR (+0.30)



Tel - Telkwa 82/3/4

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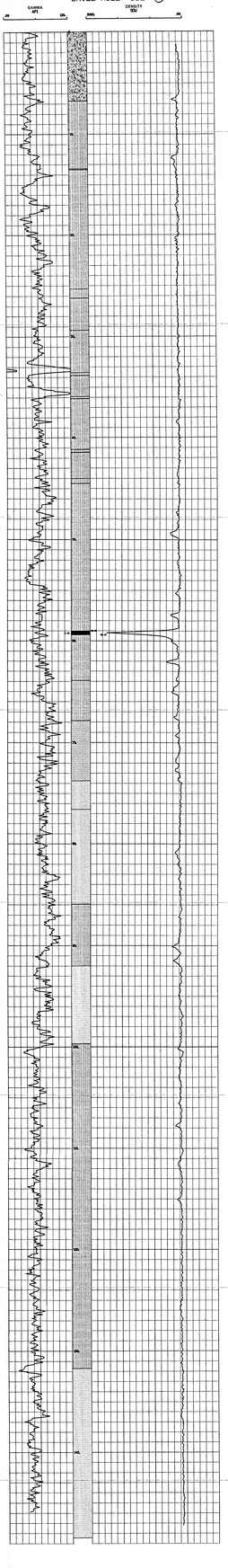
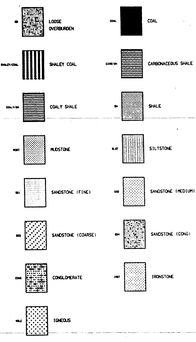
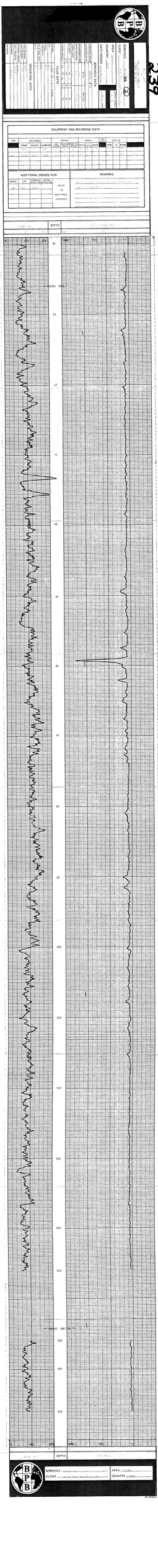
TELKWA PROJECT

DRILL HOLE #352 (1)






BPB
BOREHOLE
COUNTRY
DATE LOGGED
OPERATOR DATA
FIELD DATA
EQUIPMENT AND RECORDING DATA
ADDITIONAL SONDES RUN
REMARKS
DEPTH
BOREHOLE
CLIENT
AREA
COUNTRY

1M 83D-325- BAD

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1 K- TELKWA 83(3)A

SEAM THICKNESS LOG

BOREHOLE TW83D-352 (3)
CLIENT CROWS NEST RESOURCES LTD.

AREA TELKWA
COUNTRY CANADA
DATE LOGGED AUG. 17/83

DEPTH SCALE 20:1

2 OF 4 LOGS

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: CALIPER B.R. DENSITY

BOREHOLE DATA — REFER TO LITHOLOGY LOG

OPERATION DATA — REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

SIDEWALL POSITION

LOG	TAPING: LOG TAPED	TAPING: RECORD SPEED	TAPING: DIRECT or REPLAY	PANEL: SPEED	PANEL: TC SECS	PANEL: NORM	CAL COEFF
CALIPER	Y						
BR DENSITY	Y	2	R	2	.3	8.16	

SOURCE SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

FROM		
TO		
INTERVAL		
FROM	61m	INTERVAL
TO	58m	TOTAL
INTERVAL	3m	=

REMARKS

NOTE UNUSUAL SCALE TO COMPENSATE FOR DRILL ROD EFFECT.

B P B SEAM THICKNESS LOG

CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
" " " dia " " "		13000 SBRD 9000

" " " dia " " "		13000 SBRDU 9000
CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY

BOREHOLE TW83D-352
CLIENT CROWS NEST RESOURCES LTD.
AREA TELKWA
COUNTRY CANADA

SEAM THICKNESS LOG

MY 88002 R

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GAMMA RAY
NEUTRON-NEUTRON
TRANSMISSION

BOREHOLE DATA 4

CLIENT CBS/SCI SOCIETY

AREA NORM

COUNTRY GREECE

DATE LOGGED 6-10-1993

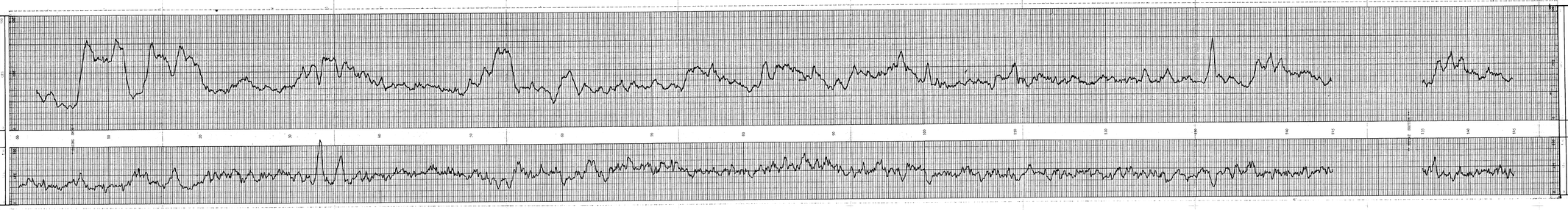
BOREHOLE DATA

OPERATION DATA

EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL		
	LOG	SPEED	DEPTH	SPEED	DEPTH	

REMARKS



BOREHOLE
CLIENT

TK - TELKWA 83(3)A

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TM83D-352 C02

BPB

BOREHOLE TW83D-352 5

CLIENT CROWS NEST RESOURCES LTD.

AREA TELKWA

COUNTRY CANADA

DATE LOGGED AUG. 17/83

DEPTH SCALE 20:1

3 OF 4 LOGS

COAL QUALITY LOG

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

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

SIDEWALL POSITION

LOG	TAPING: LOG TAPED	TAPING: RECORD SPEED	TAPING: DIRECT or REPLAY	PANEL: SPEED	PANEL: T.C. SECS	PANEL: NORM	CAL COEFF
GAMMA RAY	Y	2	R	2	1		1.63
LS DENSITY	Y	2	R	2	.3	1.83	

SOURCE SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

COAL QUALITY LOG INTERVALS

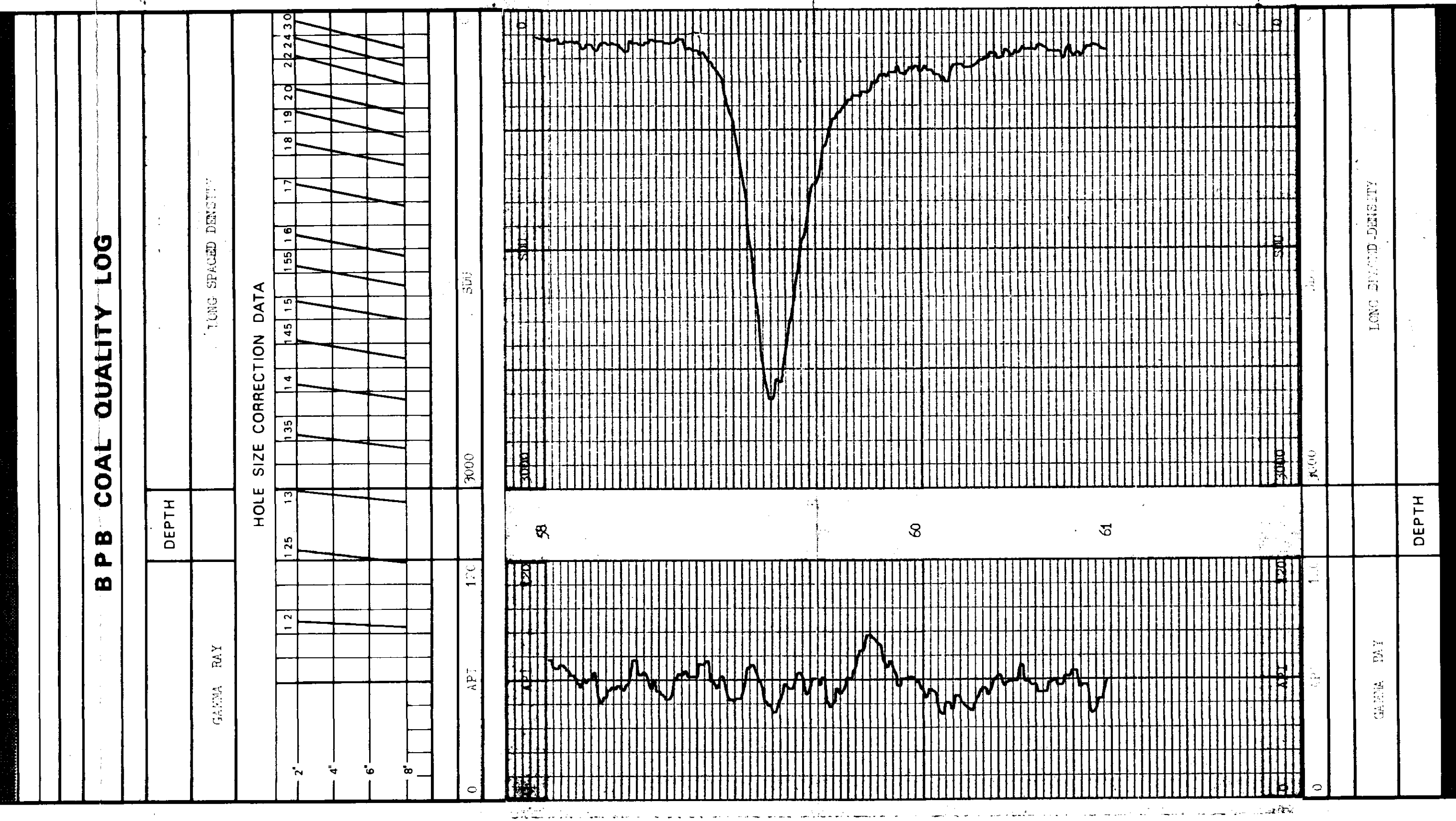
FROM		
TO		
INTERVAL		
FROM	61m	INTERVAL TOTAL
TO	58m	
INTERVAL	3m	

LOG SUITE: GAMMA RAY L.S. DENSITY

REMARKS

NOTE UNUSUAL SCALES TO COMPENSATE FOR DRILL ROD EFFECT.

B P B COAL QUALITY LOG



BOREHOLE TW83D-352

CLIENT CROWS NEST RESOURCES LTD.

AREA TELKWA

COUNTRY CANADA

COAL QUALITY LOG

MY 88002 R

Tec. Telkwa 88(3)a

TELKWA PROJECT

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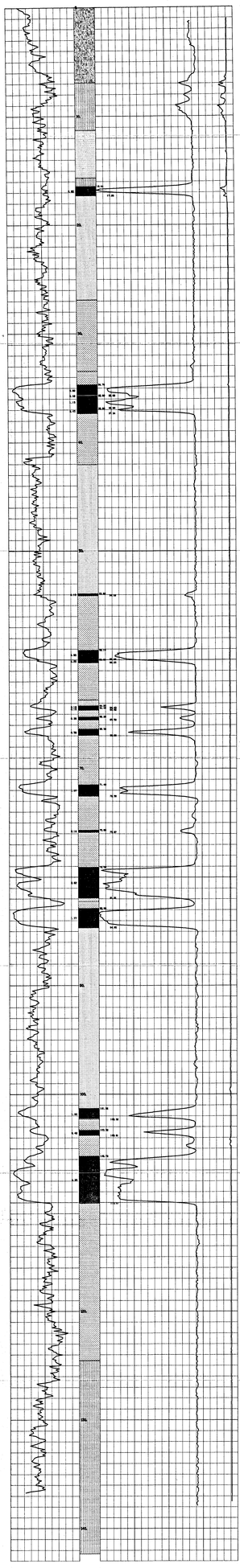
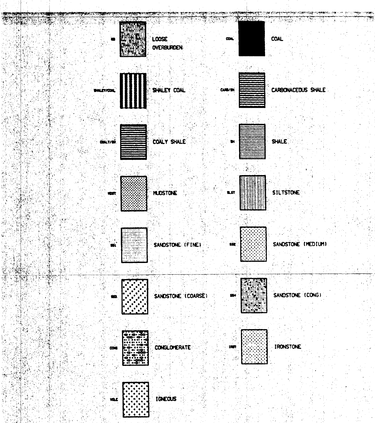
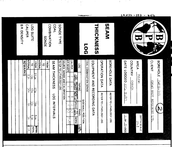
DRILL HOLE #353 ①

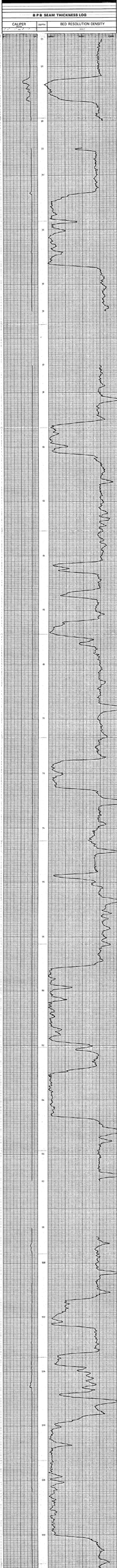






B P B SEAM THICKNESS LOG

CALIPER | DEPTH | BED RESOLUTION DENSITY



CALIPER | DEPTH | BED RESOLUTION DENSITY

B P B

SEAM THICKNESS LOG

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COAL QUALITY LOG

WORKING	[illegible]
STATE	[illegible]
COUNTY	[illegible]
MAP LOCATION	[illegible]

DRILLING DATA	[illegible]
OPERATION DATA	[illegible]
EQUIPMENT AND INSTRUMENT DATA	[illegible]

LOGGING TYPE	[illegible]
COMMENTS	[illegible]
LOG DATE	[illegible]
LOGGING DIST.	[illegible]

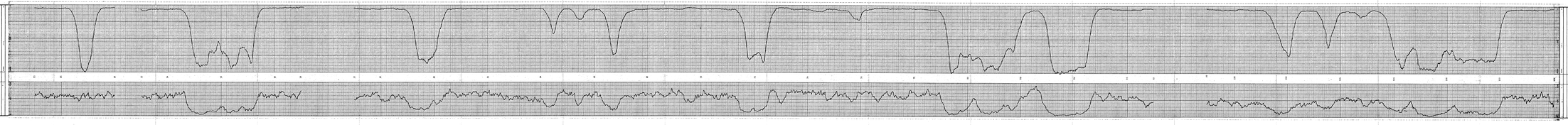
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

COAL QUALITY - LOG INTERVALS

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

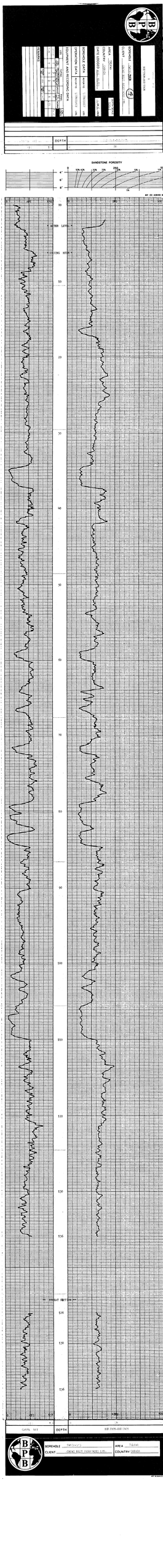
B P B COAL QUALITY LOG

COAL BLACKNESS



COAL BLACKNESS

B P B COAL QUALITY LOG



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BPB

BOREHOLE 2DC-1-2DB 4

CLIENT ONGC SECT PERIOD LTD.

AREA TRIAKI

COUNTRY OMAN

DATE LOGGED 6-2-1990

BOREHOLE DATA

OPERATION DATA

COMPANY AND RECORDING DATA

DEPTH

SANDSTONE POROSITY

4" 6" 8"

0 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% 110% 120% 130% 135% 140% 150% 160% 170% 180% 190% 200%

1% 2% 3% 4% 5% 6% 7% 8% 9% 10% 11% 12% 13% 14% 15% 16% 17% 18% 19% 20%

WATER LEVEL

CASING BOTTOM

0 10 20 30 40 50 60 70 80 90 100 110 120 130 135 140 150 160 170 180 190 200

GAMMA RAY

DEPTH

BOREHOLE 2DC-1-2DB

CLIENT ONGC SECT PERIOD LTD.

AREA TRIAKI

COUNTRY OMAN

Tk. Telkwa 85(3)h

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BOREHOLE 253 (5)

CLIENT

AREA

COUNTRY

DATE LOGGED

SITE DATE

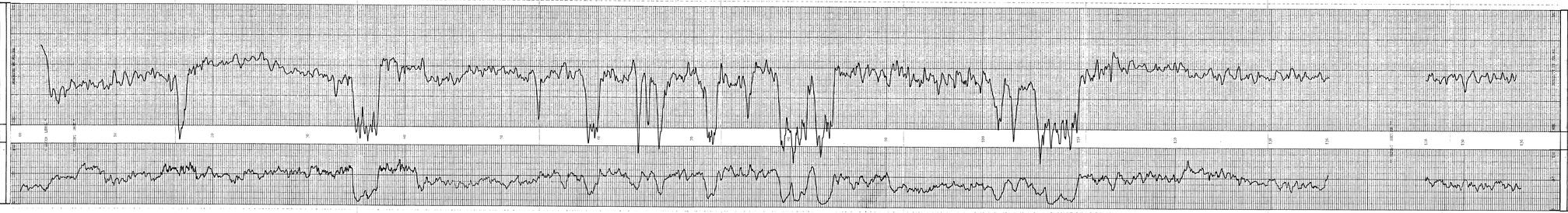
BOREHOLE DATA

OPERATION DATA

EQUIPMENT AND RECORDING DATA

LOG	CAPACITY	PANEL	DEPTH

REMARKS

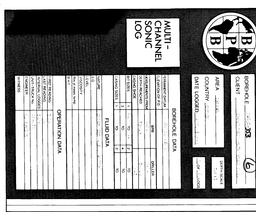


BOREHOLE

CLIENT

AREA

COUNTRY



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EQUIPMENT AND RECORDING DATA

SONDE No.

CENTRALISERS SET TO

DIAMETER

	TRANSDUCER ARRANGEMENT	GENERAL LOGGING SPEED	DETAIL LOGGING SPEED	DATA RECORDED FROM	DATA RECORDED TO	DATA DISPLAYED FROM	DATA DISPLAYED TO
	TRANSMITTER / RECEIVER SPACING	TYPE OF RUN	TO SECS	TO SECS	INTERVAL	INTERVAL	INTERVAL
CHANNEL 1	R1 - R2	6"	24"	-	-	1	1
CHANNEL 2	R2 - R3	12"	30"	-	-	1	1
CHANNEL 3	R1 - R3	18"	36"	-	-	1	1
CHANNEL 4	R2 - R4	6"	42"			1	1

DETAIL OVER OVERLAND SEE FIELD LOG

FROM

TO

INTERVAL

INTERVAL 10ft

REMARKS

TOP OF SONDE

R1 R2 R3 R4

18" 6" 6" 6"

CHANNEL 1

INTERVAL TRANSIT TIME

50 microseconds/ft 100

DEPTH

CHANNEL 4

INTERVAL TRANSIT TIME

50 microseconds/ft 100

50 microseconds/ft 100

DEPTH

microseconds

CHANNEL 1

CHANNEL 4

BOREHOLE

AREA

CLIENT

COUNTRY

MC SONIC LOG

Tk. Telkwa 83(3)A

DIPMETER ANALYSIS

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CLIENT CROWS NEST RESOURCES
BOREHOLE TW 83D-353 (7)
AREA TELKWA, B.C.
COUNTRY CANADA

DATE LOGGED.....18-AUG-83
DATE PROCESSED..23-AUG-83

COMMENTS.....

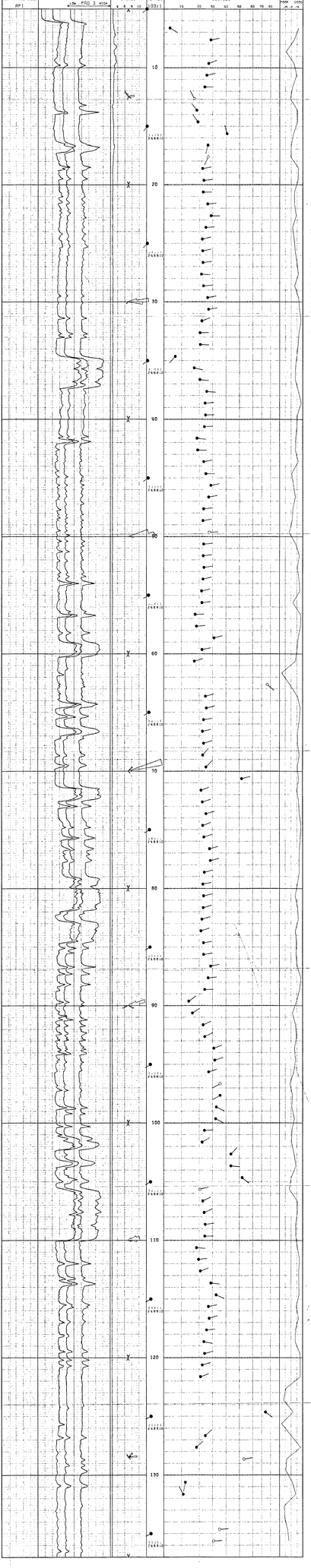
INTERPRETATION PARAMETERS

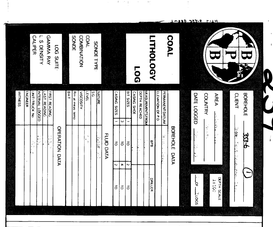
STEP 1.00M. DECLINATION 26.0 EAST
INTERVAL 2.00M. DEPTH RANGE 5.00 - 137.00M.
SEARCH ANGLE 80. DATE PROCESSED 23-AUG-83

AVERAGE BOREHOLE DEVIATION & DIRECTION
MANIFESTED EVERY 10.0M.

NOTE DIAGRAMS SEGMENTED EVERY TEN DEGREES.
1" RADIUS PER DIP MARKER DISPLAYED

LEGEND:
GOOD (+0.50)
FAIR (+0.30)





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12 Feb 1985

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT			TAPING			PANEL		LOG TO	DEPTHS	
	SONDE	SOURCE	ALIBRATOR	LOG (UPPER)	RECORDING (LOWER)	METER	TYPE	S.L. NORM.	FROM	TO	SEAM LOG RUN NORMAL
GAMMA RAY											
DENSITY											
CALIPER											

COAL SEAM/STRATA FOR THICKNESS LOG INTERVALS (Refer to Interval No)

																								INTERVAL TOTAL
FROM																								
TO																								
INTERVAL																								

ADDITIONAL SONDES RUN

SONDE	LOG	TAPING (UPPER)	TAPING (LOWER)	METER	REMARKS

REMARKS

TO ADDITIONAL HEADINGS

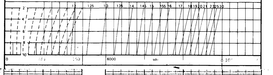
BPB COAL LITHOLOGY LOG

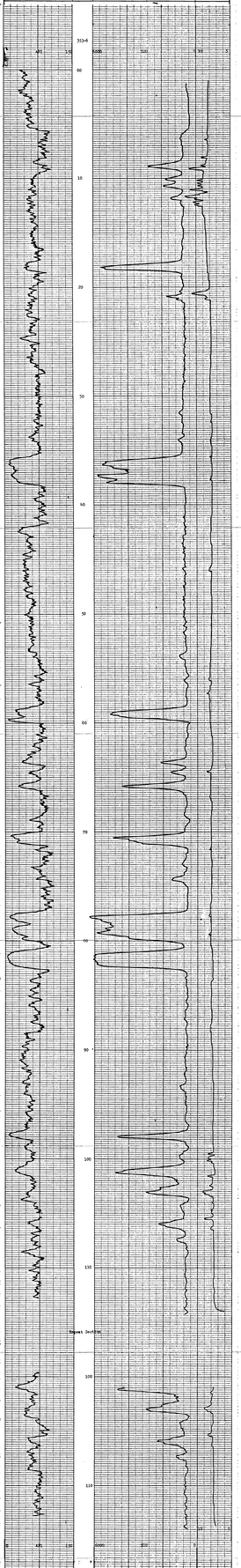
CALIBRATION DATA

AS No.	VALUE @	SHAPE	AS VALUE	@	UNITS		
AS MARK SHOWN AT ABOVE VALUE			AS No.	SPANS	NORM		

GAMMA RAY — DEPTH — BULK DENSITY — CALIPER INCHES

HOLE SIZE CORRECTION DATA





GAMMA RAY — DEPTH — BULK DENSITY — CALIPER INCHES

BPB

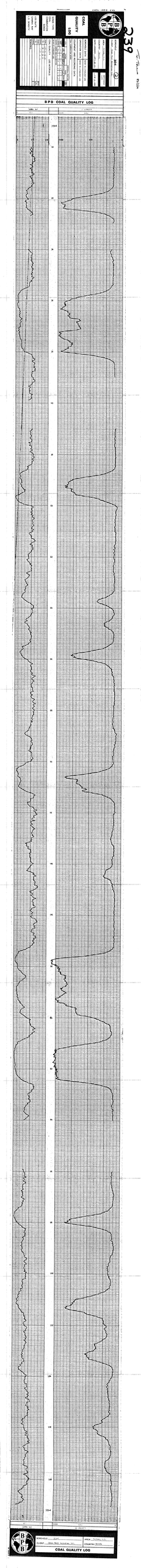
BOREHOLE

AREA

CLIENT

COUNTRY

COAL LITHOLOGY LOG


COAL QUALITY LOG
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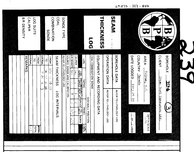
BPB COAL QUALITY LOG
COAL QUALITY LOG



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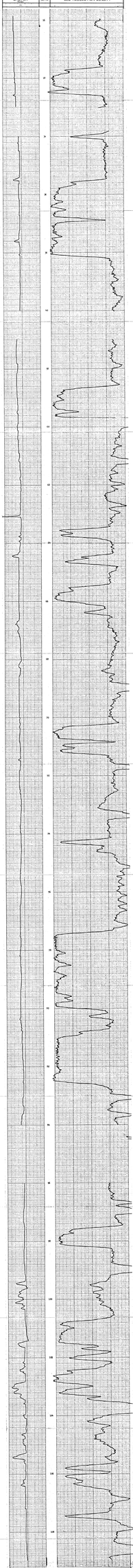
B P B SEAM THICKNESS LOG

CALIPER	DEPTH	BED RESOLUTION DENSITY
INCHES		



CALIPER	DEPTH	BED RESOLUTION DENSITY
INCHES		

B P B

BOREHOLE — Fluid: _____ AREA — Township, Range: _____

COMPANY — Former Name, Incorporation Info.: _____ COUNTY — Location: _____

SEAM THICKNESS LOG

Tk. Telkwa 83/3A

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DIPMETER ANALYSIS

CLIENT CROWS NEST RESOURCES
BOREHOLE 353-6 (4)
AREA TELKWA B.C.
COUNTRY CANADA

DATE LOGGED.....19-SEP-83
DATE PROCESSED..28-SEP-83

COMMENTS.....

HOLE DEVIATED BEYOND TOOL SPECIFICATIONS BELOW 50M.

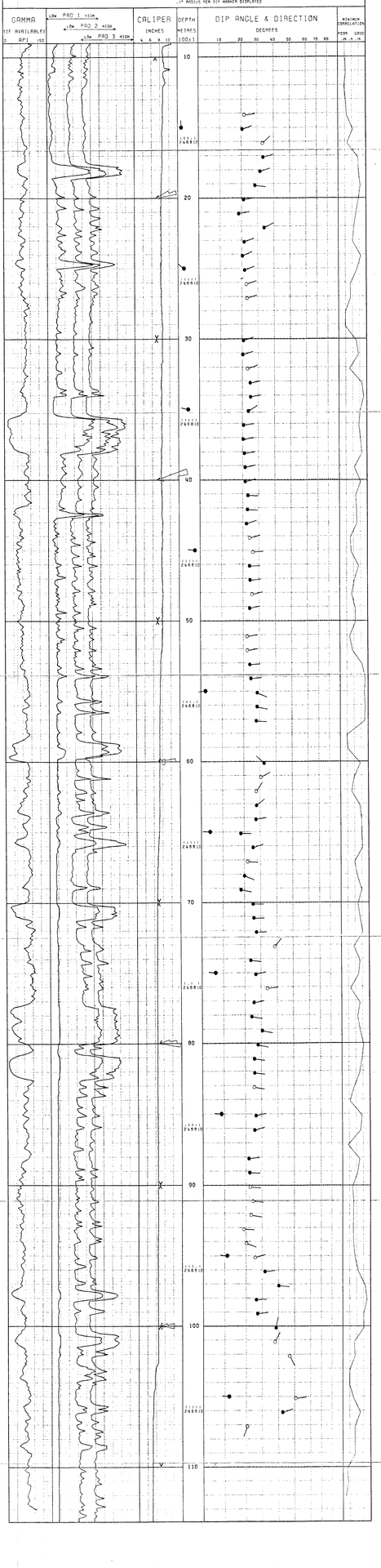
INTERPRETATION PARAMETERS

STEP 1.00M. DECLINATION 26.0 EAST
INTERVAL 2.00M. DEPTH RANGE 9.00 - 113.50M.
SEARCH ANGLE 50. DATE PROCESSED 28-SEP-83

AVERAGE BOREHOLE DEVIATION & DIRECTION ANNOTATED EVERY 10.0M.

ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES, .1" RADIUS PER DIP MARKER DISPLAYED

LEGEND:
GOOD (+0.50)
FAIR (+0.30)



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1x - Telkwa 83(3)A

COAL LITHOLOGY LOG

BPB

SONDE TYPE:	COAL COMBINATION SONDE
LOG SUITE:	GAMMA RAY, L.S. DENSITY, CALIPER
BOREHOLE	TW83-354 (1)
CLIENT	Crows Nest Resources Ltd.
AREA	Telkwa B.C
COUNTRY	Canada
DATE LOGGED	[illegible] Dec/83
DEPTH SCALE	1:100
	1 OF 4 LOGS

BOREHOLE DATA

PERMANENT DATUM	Ground Level	
ELEVATION OF P.D.		
MEASUREMENTS FROM	G.L.	
	BPB	DRILLER
DEPTH REACHED	162.3m	162.5m
CASING SHOE	15.0m	15.6m
BIT SIZES	1 N? TO 162	2 TO
	3 TO	4 TO
CASING SIZES	1 3" TO 15	2 TO

FLUID DATA

NATURE	Water [illegible] water
S.G.	N/A
LEVEL	0.0m
VISCOSITY	N/A
Rm at meas. temp.	N/A
B.H.T.	N/A

OPERATION DATA

FIRST READING	160.0m
LAST READING	00.0m
INTERVAL LOGGED	160.0m
UNIT-TRUCK No.	U21/V218
ENGINEER	W.A.C.C
WITNESS	

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE 1018

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	
	101F	863												
GAMMA RAY			367	Y	9m/m	D	9m/m	1	-	1.54	160	00	160	
L.S. DENSITY	SIDEWALL POSITION		0538	Y	9m/m	D	9m/m	.?	7.20	-	160	00	160	
CALIPER			7"..2"	Y	9m/m	D	9m/m	.?	-	-	159	00	160	

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

FROM	138.0m 117.0m	INTERVAL TOTAL
TO	134.0m 106.0m	
INTERVAL	4.0m 11.0m	15.0m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
216	N/N	1:100	
227	Vert	CGS	
	Dip	1:100	

REFER TO ADDITIONAL HEADINGS

REMARKS

Hole was making a small amount of water

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. 60 VALUE @ 2" DIAM.	JIG CAL. DATE ?/11/83	JIG VALUE ? SDU @ g/cm³	2" ins. ?5 cps
JIG MARK SHOWN AT ABOVE VALUE - XO.1	JIG No. 0338	SPAN 6,000 NORM SDU/CPS = ?	7" ins. 72.4 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

HOLE SIZE CORRECTION DATA

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

BPB

BOREHOLE TW83-354 AREA Telkwa B.C

CLIENT Crows Nest Resources Ltd. COUNTRY Canada

COAL LITHOLOGY LOG

MY A50261 R

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BPB

BOREHOLE Tw 95-34 (2)
CLIENT Crows Nest Resources Ltd.
AREA Tulameen B.C.
COUNTRY Canada
DATE LOGGED 2-Dec-95
REPRODUCED 1:20
2 OF 3 LOGS

COAL QUALITY LOG

BOREHOLE DATA — REFER TO LITHOLOGY LOG
OPERATION DATA — REFER TO LITHOLOGY LOG
EQUIPMENT AND RECORDING DATA
COMB. COMBINATION SONDE — OVERALL POSITION

LOG	RUN	DATE	RECORDED	DEPTH (Driller)	DEPTH (Logger)	CASING (Driller)	CASING (Logger)	BOTTOM LOGGED INTERVAL	TOP LOGGED INTERVAL	SONDE TYPE	SONDE SERIAL NO.	SONDE DIAMETER	SONDE POSITION	SOURCE TYPE	SOURCE SERIAL NO.	SOURCE STRENGTH
GAMMA RAY	1	2-Dec-95	1300	166.08	166.08	0	0	166.08	0	COMB.	1	3.5	CENTRE			
L.S. DENSITY	1	2-Dec-95	1300	166.08	166.08	0	0	166.08	0	COMB.	1	3.5	CENTRE	Cs	1	10 mCi

COAL QUALITY LOG INTERVALS

	FROM	TO
1	0	166.08
2		
3		
4		
5		

REMARKS

LOG SUITE
GAMMA RAY
L.S. DENSITY

SONDE TYPE
COAL COMBINATION SONDE

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 2.3 2.5

0 API 150 — 6.000 g/cm³ 0

106 108 110 112 114 116 117 134 136 138

0 API 150 — 6.000 g/cm³ 0

GAMMA RAY — COAL BULK DENSITY g/cm³

DEPTH

BPB

BOREHOLE Tw 95-34
CLIENT Crows Nest Resources Ltd.
AREA Tulameen B.C.
COUNTRY Canada

COAL QUALITY LOG

SEAM THICKNESS LOG

BPB

BOREHOLE Tek-1-354 (3)
CLIENT Crow's Nest Resources Ltd.
AREA Tolsen Bay
COUNTRY Canada
DATE LOGGED 2/Dec/83
RUN NO. 1
DEPTH DRILLER 1100'
DEPTH LOGGER

BOREHOLE DATA — REFER TO LITHOLOGY LOG

OPERATION DATA — REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

	LOG	RUN NO.	DEPTH DRILLER	DEPTH LOGGER	TOP LOGGED INTERVAL	BOTTOM LOGGED INTERVAL	CASING DRILLER	CASING LOGGER	BIT SIZE
CALIPER	3DC	1	1100'		SURFACE	1100'	8 5/8"		7 7/8"
BR DENSITY	3DD	1	1100'		1000'	1100'			

CDA COMBINATION SONDE

SPECIAL(S) POSITION

	MEAS. FROM	RECORDED ABOVE PERM. DATUM	LOG MEASURED FROM	DRILLING MEASURED FROM
CALIPER	KB	20'	KB	KB
BR DENSITY	KB	20'	KB	KB

SEAM THICKNESS LOG INTERVALS — REFER TO LITHOLOGY LOG

	FROM	TO
CALIPER	1000'	1100'
BR DENSITY	1000'	1100'

REMARKS

RUN NO. 1 | BOTTOM 1100' | TOP 1000'

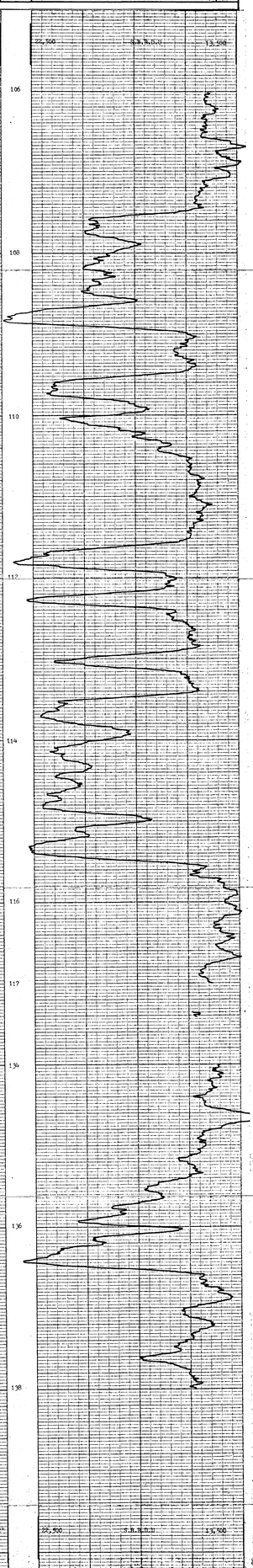
SONDE TYPE
COAL COMBINATION SONDE

LOG SUITE
CALIPER
BR DENSITY

B P B SEAM THICKNESS LOG

CALIPER INCHES | DEPTH | BED RESOLUTION DENSITY

6" 16" | 100' 1000 | S.R.R.D.U. | 22,500 13,500



CALIPER INCHES | DEPTH | BED RESOLUTION DENSITY

6" 16" | 100' 1000 | S.R.R.D.U. | 22,500 13,500

BPB

BOREHOLE Tek-1-354 (3)
CLIENT Crow's Nest Resources Ltd.
AREA Tolsen Bay
COUNTRY Canada

SEAM THICKNESS LOG

MY880025

TK-Return 83(3)a

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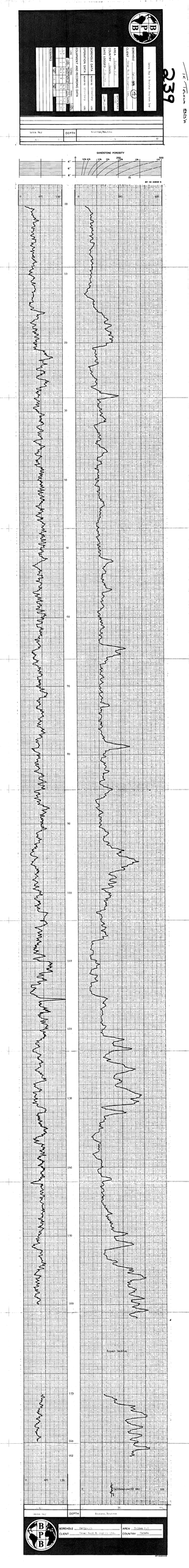

BPB
Schlumberger
Schlumberger Well Services Inc
COMPANY
WELL
FIELD
COUNTY
STATE
LOCATION
OTHER SERVICES
SECTION
TOWNSHIP
RANGE
PERMANENT DATUM
ELEV.
LOG MEASURED FROM
DRILLING MEASURED FROM
DATE
RUN NO.
DEPTH-DRILLER
DEPTH-LOGGER
BTM. LOG INTERVAL
TOP LOG INTERVAL
CASING-DRILLER
CASING-LOGGER
BIT SIZE
TYPE FLUID IN HOLE
DENSITY
VISCOSITY
PH
FLUID LOSS
SOURCE OF SAMPLE
RM @ MEAS. TEMP.
RMF @ MEAS. TEMP.
RMC @ MEAS. TEMP.
SOURCE: RMF RMC
RM @ BHT
TIME SINCE CIRC.
TIME SINCE CIRCULATION
MAX. REC. TEMP.
EQUIPMENT NO.
LOCATION
RECORDED BY
WITNESSED BY
Gamma Ray
DEPTH
Scintillations/Sec
SANDSTONE POROSITY
Sandstone Porosity
Gamma Ray
DEPTH
Scintillations/Sec
BOREHOLE
CLIENT
AREA
COUNTRY

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DIPMETER ANALYSIS

CLIENT CROWS NEST RESOURCES
BOREHOLE TW-83D-354 (5)
AREA TELKWA, B.C.
COUNTRY CANADA

DATE LOGGED.....07-DEC-83
DATE PROCESSED..10-JAN-84

COMMENTS.....

RESULTS MAY BE ADVERSELY AFFECTED BY EXCESSIVE TOOL ROTATION.

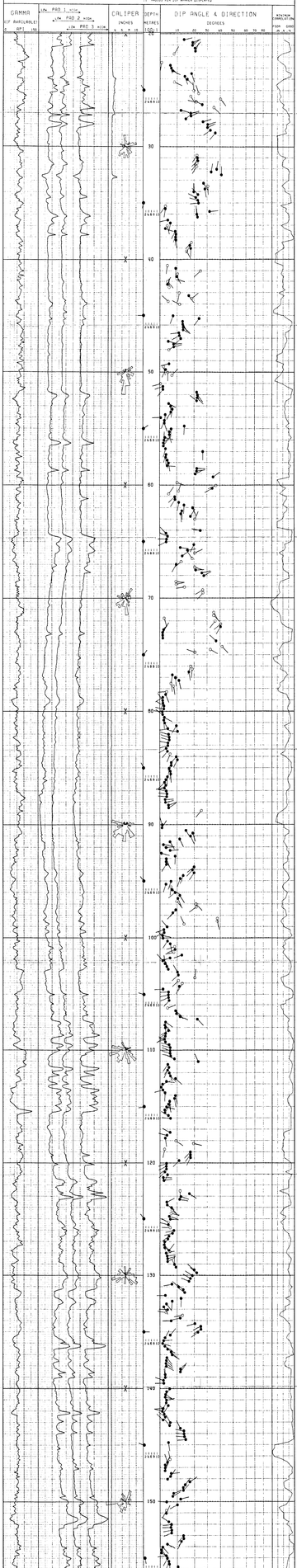
INTERPRETATION PARAMETERS

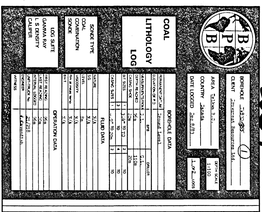
STEP 0.25M. DECLINATION 26.0 EAST
INTERVAL 1.00M. DEPTH RANGE 18.90 - 150.80M.
SEARCH ANGLE 50. DATE PROCESSED 10-JAN-84

AVERAGE SAMPLING DEVIATION & DIRECTION ANALYSIS EVERY 10.0M.

NOTE: SINGLING MODULATED EVERY TEN DEGREES. 1" RADIUS PER DIP MARKER DISPLAYED

LEGEND:
GOOD (+0.50)
FAIR (+0.50)





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EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE IFLO

LOG	EQUIPMENT			TUNNEL			PANEL		%	DEPTHS		SCAN LOG SCALE
RUN	SONDE	SOURCE	DETECTOR	LOG SPEED	MEASURED DIST BETWEEN SOURCE & DET. (m)	DATE	LOG SPEED	SCAN	ROM	TO	SCAN	FROM TO
1	2	3	4	5	6	7	8	9	10	11	12	13
LIVING ROOM		CS137	302	Y	06.74	0	06.74	1	1.35	---	20.	00. 3%
Kitchen		CS137	1010	Y	06.74	0	06.74	1	---	7.35	20.	00. 3%
Cellar	DENSITY NEUTRON	CS137	1010	Y	06.74	0	06.74	1	---	---	20.	00. 3%

COAL SEAM / FLOOR MARKER LOG INTERVALS (from ref. to relevant log)

FROM	INTERVAL
TO	TOTAL
INTERVAL	

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL DATA ON LOG HEADING	DETAIL
215	9-8	11100	----

REFER TO ADDITIONAL HEADINGS

REMARKS

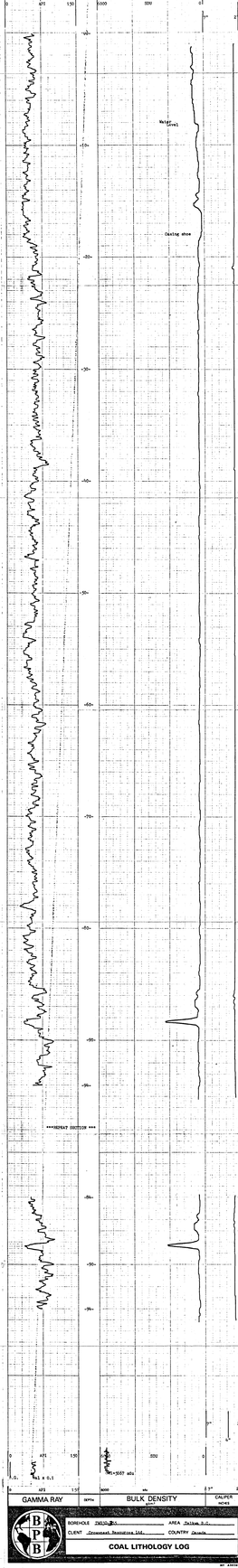
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

At Hi	wcf = @ 2 secs	At Hi ---- 1117/63 Pt Hi/Lo 5600 100 cps	2 = 20% ---cps
At BARK SHOWN AT ABOVE VALUE @ 0.0		At Lo 2230 SPAN 6000 ---- ZERO 200 = 2.0%	2 = 100 ---cps

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER INCHES

HOLE SIZE CORRECTION DATA



***REPEAT SECTION ***

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER INCHES

BPB

BOREHOLE 2W30-BK AREA Tulsa, B.C.

CLIENT Provincial Resources Ltd. COUNTRY Canada

COAL LITHOLOGY LOG

BPI 4301B-A

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Tx-Telkum 83 (3)a

Acoustic Bay
Sonoco-Sonoco

BOREHOLE [illegible] 335 (2)

CLIENT [illegible]

AREA [illegible]

COUNTRY [illegible]

DATE LOGGED [illegible]

DEPTH SCALE 1:100

BOREHOLE DATA — REFER TO [illegible] 100

OPERATION DATA — REFER TO [illegible] 100

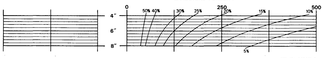
EQUIPMENT AND RECORDING DATA — REFER TO [illegible] 100

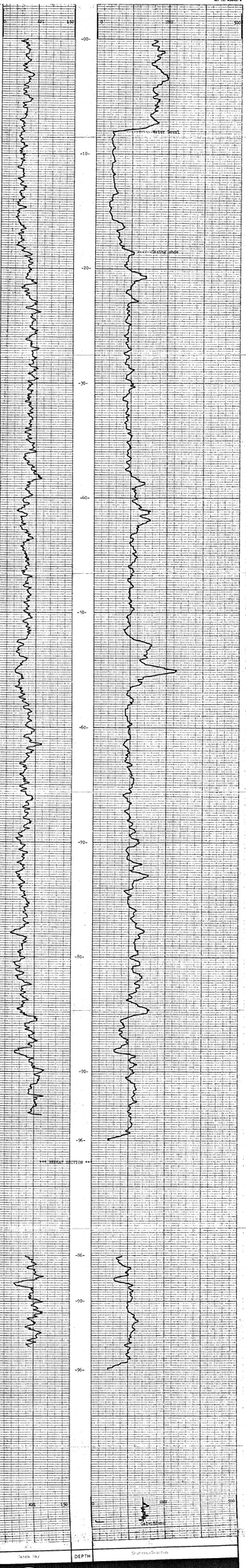
LOG	SPEED	PRIMARY	SECONDARY	TRANS.	SCALE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

REMARKS

DEPTH	

SANDSTONE POROSITY





Acoustic Bay | DEPTH | Sonoco-Sonoco

BOREHOLE [illegible]

CLIENT [illegible]

AREA [illegible]

COUNTRY [illegible]

Gamma Ray-Neutron-Density (Compact Hole)

BOREHOLE TW30-306
CLIENT Crows Nest Resources Ltd.
COUNTRY Canada
DATE LOGGED 30-Dec-85
RUN NO. One
DEPTH-DRILLER 1,000
DEPTH-LOGGER 1,000
BTM. LOG INTERVAL 1,000
TOP LOG INTERVAL 0
CASING-DRILLER 10 3/4 @ 0
CASING-LOGGER 10 3/4 @ 0
BIT SIZE 9 7/8
TYPE FLUID IN HOLE Water
DENSITY 8.4
VISCOSITY 26
PH 7.0
FLUID LOSS 0
SOURCE OF SAMPLE Pit
RM @ MEAS. TEMP. 0.1 @ 70
RMF @ MEAS. TEMP. 0.1 @ 70
RMC @ MEAS. TEMP. 0.1 @ 70
SOURCE OF RMF & RMC Measured
RM @ BHT 0.1 @ 70
TIME SINCE CIRC. 12 hrs
MAX. REC. TEMP. 70
EQUIP. LOCATION Kamloops
RECORDED BY Hall
WITNESSED BY Mr. Bell

EQUIPMENT AND RECORDING DATA
Gamma Ray-Neutron-Density (Compact Hole)
Type Log Gamma Ray-Neutron-Density (Compact Hole)
Run No. One
Date 30-Dec-85
Depth-Driller 1,000
Depth-Logger 1,000
Bottom Log Interval 1,000
Top Log Interval 0
Type Fluid in Hole Water
Salinity, PPM Cl 0
Density / Viscosity 8.4 / 26
Fluid Loss 0
Source of Sample Pit
Rm @ Meas. Temp. 0.1 @ 70
Rmf @ Meas. Temp. 0.1 @ 70
Rmc @ Meas. Temp. 0.1 @ 70
Source of Rmf & Rmc Measured
Rm @ BHT 0.1 @ 70
Time Since Circ. 12 hrs
Max. Rec. Temp. 70
Equip. Location Kamloops
Recorded By Hall
Witnessed By Mr. Bell

BOREHOLE RECORD
Bit No. 1 | From 0 | To 1,000 | Size 9 7/8
CASING RECORD
No. 1 | Size 10 3/4 | Wgt. 32.75 | Grade K-55 | From 0 | To 1,000

BOREHOLE DATA
Density 0 1,000
OPERATION DATA
Density 0 1,000

Gamma Ray | DEPTH | Long Spaced Density
API 120 | 1,000 SDU 0

Gamma Ray | DEPTH | Long Spaced Density
API 120 | 1,000 SDU 0

Casing Shoe

Repeat Section

Calibrator=5963 BD.3

BOREHOLE TW30-306
CLIENT Crows Nest Resources Ltd.
AREA Tulsem B.C.
COUNTRY Canada

239

HK-TELKWA 83(3)A

BPB

BOREHOLE TWB3D-356 (2)

CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C

COUNTRY Canada

DATE LOGGED 9/Dec/83

DEPTH SCALE 1:20

2 OF 4 LOGS

COAL QUALITY LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY L.S. DENSITY

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

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

SIDEWALL POSITION

LOG	TAPING			PANEL		CAL. CODES
	LOG TAPED	RECORDING SPEED	RECORDING DEPTH	SPEED	SCS	NORM
GAMMA RAY	Y	2m/m	R	2m/m	2	1.63
LS DENSITY	Y	2m/m	R	2m/m	1	7.47

SOURCE SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

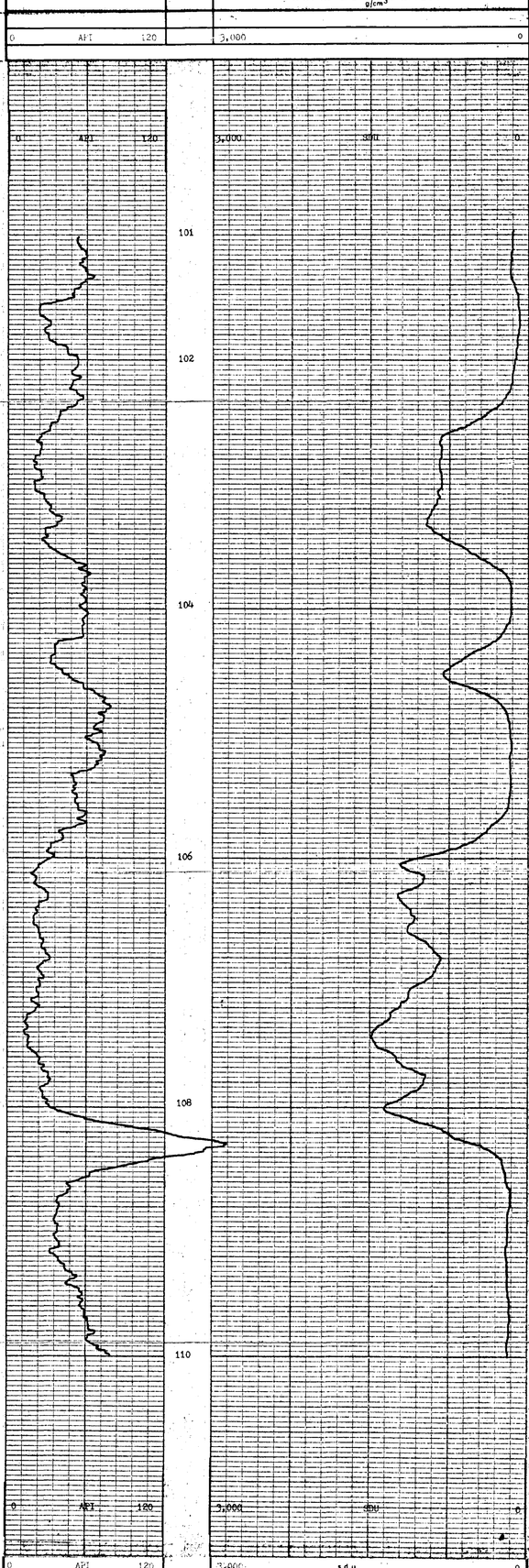
COAL QUALITY LOG INTERVALS

FROM	110.0m	
TO	101.0m	
INTERVAL	9.0m	
FROM		INTERVAL
TO		VAL
INTERVAL		TOTAL
		9.0

REMARKS

Scales adjusted to compensate for drill rod effect.

BPB COAL QUALITY LOG



BPB

BOREHOLE TWB3D-356

AREA Telkwa B.C

CLIENT Crows Nest Resources Ltd.

COUNTRY Canada

COAL QUALITY LOG

MY 88002 R

239 - TK- TELKWA 83(3)A

BPB

BOREHOLE TWB3D-356 (3)
CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C
COUNTRY Canada
DATE LOGGED 9/Dec/83

DEPTH SCALE 1:20
1 OF 4 LOGS

SEAM THICKNESS LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: CALIPER B.R. DENSITY

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

LOG	TAPING			SIDEWALL POSITION		
	LOG TAPED	RECORD SPEED	DIRECT SPEED	PANEL SPEED	NORM	CORR
CALIPER	Y	2m/m	R	2m/m	.5	7.94
B.R. DENSITY	Y	2m/m	R	2m/m	.5	7.94

SOURCE SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

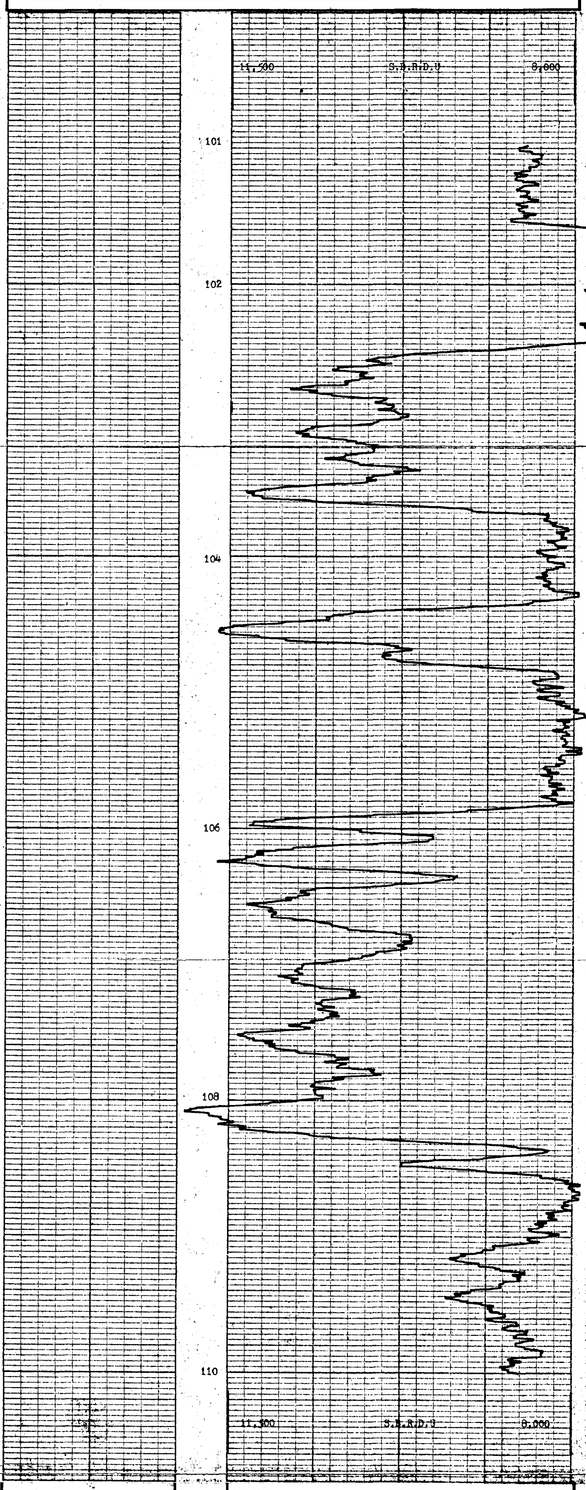
SEAM THICKNESS LOG INTERVALS

FROM	110.0m		
TO	101.0m		
INTERVAL	9.0m		
FROM		INTERVAL	
TO		TOTAL	
INTERVAL			9

REMARKS
Caliper log not displayed, as logged through drill rods.

B P B SEAM THICKNESS LOG

DEPTH	BED RESOLUTION DENSITY
	11,500 S.B.R.D.U 8,000



DEPTH	BED RESOLUTION DENSITY
	11,500 S.B.R.D.U 8,000

BPB

BOREHOLE TWB3D-356
CLIENT Crows Nest Resources Ltd.
AREA Telkwa B.C
COUNTRY Canada

SEAM THICKNESS LOG

MY 88002 R

239

1 : 1 Scale

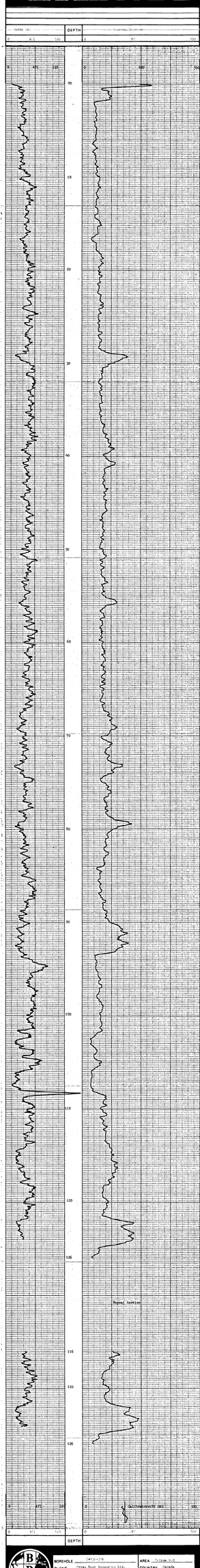
Gamma Ray & Neutron/Neutron Log
(Through Drill Rods)

BOREHOLE: TW90-36 (4)
CLIENT: Cross Rock Resources Ltd.

AREA: Trillium B.C.
COUNTRY: Canada
DATE LOGGED: 20-Jan-1990

LOGGING UNIT: 1000 - 1100

BOREHOLE DATA	HOLE DIA: 0.0 to 0.0	MM
	CASING DIA: 0.0 to 0.0	MM
OPERATION DATA	RIG: 0.0 to 0.0	MM
	MAX. DEPTH: 0.0 to 0.0	MM
COMPANY AND RECORDING DATA		
OPERATOR:		
RECORDER:		
REMARKS:		



BOREHOLE: TW90-36
CLIENT: Cross Rock Resources Ltd.
AREA: Trillium B.C.
COUNTRY: Canada

Density Log
Long-Spaced Sonde

WELL	10-35-049-24W4
FIELD	Joarcam
COUNTY OR OFFSHORE LOCATION	
AREA	Alberta
STATE OR PROVINCE	
COMPANY OR CLIENT	Crescent Resources Ltd.

API SERIAL NO.	
SECTION	35
TOWNSHIP	49
RANGE	24 W4
PERMANENT DATUM	G.L.
ELEVATION	2160
LOG MEASURED FROM	K.B.
DRILLING MEASURED FROM	K.B.
ELEVATION K.B.	2170
ELEVATION D.F.	
ELEVATION G.L.	2160

RUN	DATE	DEPTH DRILLER	DEPTH LOGGER	BTM. LOG INTERVAL	TOP LOG INTERVAL
ONE	26-Sep-84	1110	1110	1110	00

CASING RECORD

	SIZE	WGT.	GRADE	FROM	TO
SURF. STRING	8 5/8	24	J-55	0	115
PROD. STRING	5 1/2	15.5	J-55	0	1110

FLUID DATA

TYPE FLUID IN HOLE	Gel Chem
DENSITY	10.0
VISCOSITY	50
PH	9.0
FLUID LOSS	6.0
SOURCE OF SAMPLE	Flowline
RM @ MEAS. TEMP.	1.0 @ 20
RMF @ MEAS. TEMP.	1.0 @ 20
RMC @ MEAS. TEMP.	1.0 @ 20
SOURCE RMF	RMC
RM @ BHT	0.5 @ 40
TIME SINCE CIRC.	3 hrs
MAX. REC. TEMP.	40
EQUIP. LOCATION	Edmonton
RECORDED BY	R. Brandon
WITNESSED BY	

EQUIPMENT AND RECORDING DATA

LOG TYPE	EQUIPMENT SONDE	EQUIPMENT SOURCE	EQUIPMENT CALIBRATION	TAPING UNIT NO.	TAPING RECORDING DETECTOR	PANEL SPEED	PANEL SCALE	DEPTHS FROM	DEPTHS TO	DEPTHS DRILLER'S
Gamma	331	1001	901	9	9674	9	9674	1	115	00
LSD	331	1001	0963	9	9674	9	9674	1	1110	00

ADDITIONAL SONDES RUN

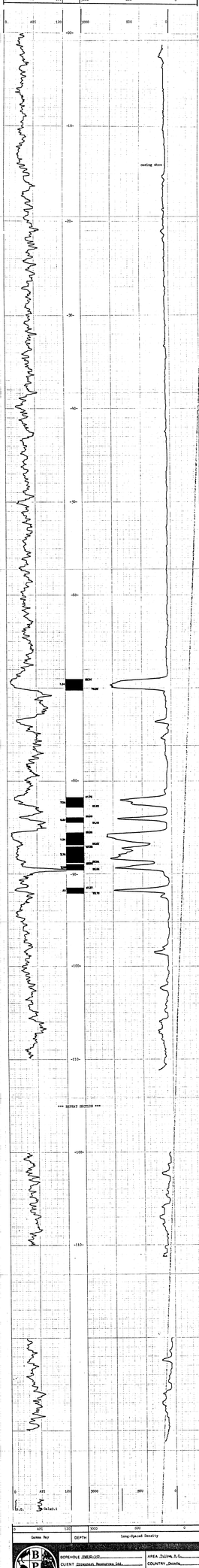
SONDE TYPE	LOCATION (C/M/U/D/C/A/T/N)
FDL	B/B

ENTER TO ADDITIONAL HEADINGS

REMARKS

Hole blocked logged this info

Gamma Ray	DEPTH	Long-Spaced Density
0 API 120		3000 SDU 0



Gamma Ray	DEPTH	Long-Spaced Density
0 API 120		3000 SDU 0

BORE-HOLE RECORD 331

CLIENT Crescent Resources Ltd.

AREA Joarcam, Alta.

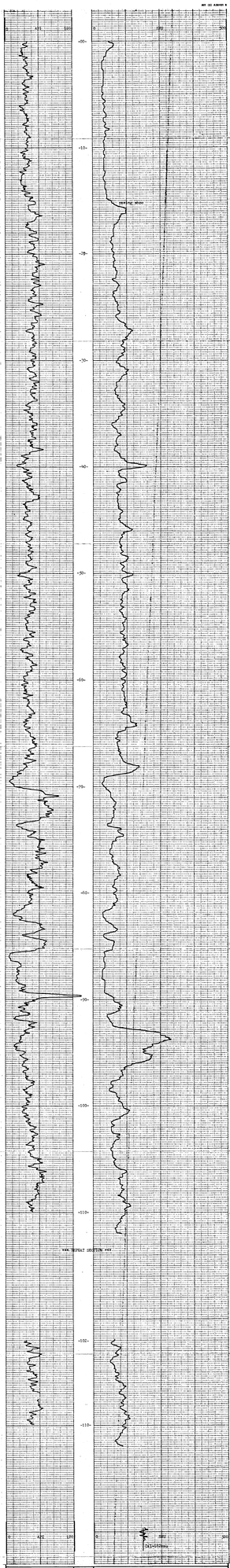
COUNTRY Canada

239

K-1 Lithology

Service Company	Dresser Atlas
BOREHOLE Number	2
CLIENT Stonewall Petroleum Ltd.	
AREA Southern Alberta	
COUNTY Canada	
DATE LOGGED Dec. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31 1980	
BOREHOLE DATA	Bottom 1 of 2
DEPTH DATA	Bottom 1 of 2
EQUIPMENT AND RECORDING DATA	
OPERATING DATA	
REMARKS	

Service Company	DEPTH	Sonic-Sandstone



Service Company	DEPTH	Sonic-Sandstone

BOREHOLE Tenneco 2	AREA Alberta S.E.
CLIENT Stonewall Petroleum Ltd.	COUNTRY Canada

239

1K-Telkwa 83(3)A

SEAM THICKNESS LOG

BOREHOLE TW83D-357 (3)

CLIENT Crowsnest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

DATE LOGGED Dec 10/83

DEPTH SCALE 1:20

1 OF 4 LOGS

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: CALIPER, B.R. DENSITY

BOREHOLE DATA — REFER TO LITHOLOGY LOG

OPERATION DATA — REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	LOG TAPED	RECORD SPEED	DIRECT OR REPLAY	SPEED	TC SECS	NORM	CAL COEFF
CALIPER	Y	2m/m	R	2m/m	.3	---	---
B.R. DENSITY	Y	2m/m	R	2m/m	.3	7.9	---

SOURCE SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

INTERVAL	FROM	TO
1	94.21	80.67

INTERVAL TOTAL: 14.0m

REMARKS

Hole blocked logged thru rods

**Scales changed too compensate for effect of drill rod **

B P B SEAM THICKNESS LOG

	DEPTH	BED RESOLUTION DENSITY
		13000 SBRDU 7500

	DEPTH	BED RESOLUTION DENSITY
		13000 SBRDU 7500

BOREHOLE TW83D-357

CLIENT Crowsnest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

SEAM THICKNESS LOG

MY 88002 R

239

K-18-A-14 83/10

BOREHOLE [illegible] (4)

CLIENT [illegible]

AREA [illegible]

COUNTRY Canada

DATE LOGGED [illegible]

DEPTH SCALE 1:100

LOG No. [illegible]

COAL QUALITY LOG

LOG

LOG	TRACK	SCALE	LOG
GAMMA RAY	1	0 - 120 API	
COAL BULK DENSITY	2	2.0 - 3.0 g/cm³	

SONDE TYPE
COAL COMBINATION SONDE

LOG SUITE
GAMMA RAY
L.S. DENSITY

BOREHOLE DATA — REFER TO LITHOLOGY LOG

OPERATION DATA — REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

LOG	LOG NO.	TRACK	SCALE	POSITION	LOG
GAMMA RAY	[illegible]	1	0 - 120 API	[illegible]	
COAL BULK DENSITY	[illegible]	2	2.0 - 3.0 g/cm³	[illegible]	

SONDE	SERIAL NO.	CALIBRATION
COAL COMBINATION SONDE	[illegible]	[illegible]

COAL QUALITY LOG INTERVALS

FROM	TO	REMARKS
[illegible]	[illegible]	
[illegible]	[illegible]	

REMARKS

Log Suite Modified from [illegible]

* * Log Suite Modified from [illegible]

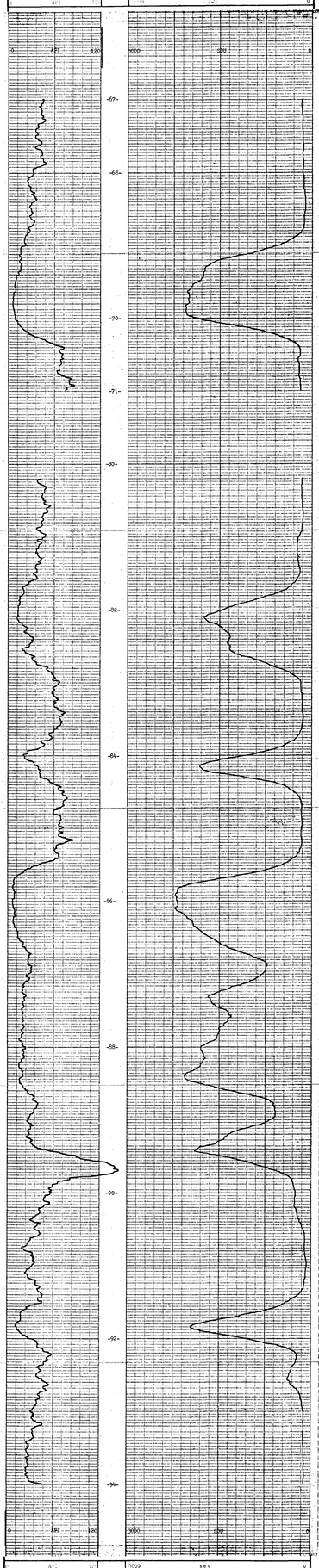
Log Suite Modified from [illegible]

Log Suite Modified from [illegible]

Log Suite Modified from [illegible]

Log Suite Modified from [illegible]

BPB COAL QUALITY LOG



Gamma Ray		Low-Gamma Density
		COAL BULK DENSITY g/cm³
	DEPTH	GAMMA RAY

BOREHOLE [illegible] | AREA [illegible]

CLIENT Government Resources Ltd. | COUNTRY Canada

COAL QUALITY LOG

239

BPB

Scale 1" = 100' Long-Spaced Density

BOREHOLE TWIN-328

CLIENT Geothermal Resources Ltd.

COUNTY Skeena

DATE LOGGED 24-JUL-81

RUN NO. ONE

DEPTH-DRILLER 1100

DEPTH-LOGGER 1100

BTM. LOG INTERVAL 1100

TOP LOG INTERVAL 0

CASING-DRILLER 13 3/8" @ 0

CASING-LOGGER 13 3/8" @ 0

BIT SIZE 12 1/4"

TYPE FLUID IN HOLE Water

DENSITY 8.4

VISCOSITY 28

PH 7

FLUID LOSS 0

SOURCE OF SAMPLE Circ.

RM @ MEAS. TEMP. 1.2 @ 20°C

RMF @ MEAS. TEMP. 1.0 @ 20°C

RMC @ MEAS. TEMP. 1.4 @ 20°C

SOURCE OF RMF & RMC Calc.

RM @ BHT 0.6 @ 60°C

TIME SINCE CIRC. 24 hrs.

MAX. REC. TEMP. 60°C

EQUIP. LOCATION 3206

RECORDED BY A. Bannerman

WITNESSED BY Client

OPERATION DATA

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			DEPTHS		
LOG	BOND	SONDE SOURCE	CALIBRATOR	TYPE CALIB.	MEASURED CALIB.	MEAS. PITCH	SPEED	F.C. CTS	NORM	FROM	TO	METRIC
Gamma Ray	101		303	Y	Gs/s	0	Gs/s	1	---	1,09	100.00	100m
Long-Spaced Density	101		3063	03301	Y	Gs/s	0	Gs/s	3	7.30	---	1,09	100.00	100m

ADDITIONAL SONDES RUN

BOND	LOG	STARTING DEPTH	FINISHING DEPTH
217	B-R	11100	

REFER TO ADDITIONAL HEADINGS

REMARKS

Hole blocked logged thru rods

Fluids changed due loss-effect of drill rod **

Gamma Ray	DEPTH	Long-Spaced Density
API 120	3000	2000 0

0 API 120

casing shoe

-10-

-20-

-30-

-40-

-50-

-60-

-70-

-80-

-90-

-100-

-103-

*** REPEAT SECTION ***

-93-

-100-

-103-

0 API 120

3000

2000 0

Gamma Ray

DEPTH

Long-Spaced Density

BPB

BOREHOLE TWIN-328

CLIENT Geothermal Resources Ltd.

AREA Skeena B.C.

COUNTRY Canada

239

1K-1 Tanna Sa(a)

Tanna Bay
Sonic-Neutron

BOREHOLE 3 (2)
CLIENT Trowbridge Resources

AREA Tanna Sa
COUNTRY Canada
DATE LOGGED 1-10-1990

SCALE 1:100 DATE 1-10-1990

BOREHOLE DATA — REPORTED 1 of 2 — 100
OPERATION DATA — REPORTED 1 of 2 — 100
EQUIPMENT AND RECORDING DATA

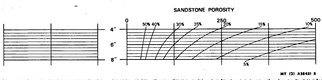
LOG	SPEED	FRAME	FRAME	LOG
100	1	100	100	100

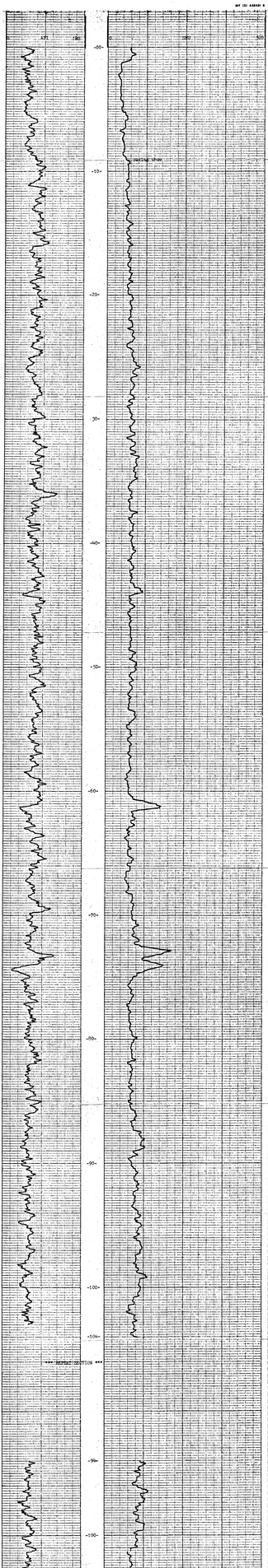
ABOVE	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1

REMARKS
1. Data Tanna Sa(a) Sonic Neutron
2. Data Tanna Sa(a) Sonic Neutron
3. Data Tanna Sa(a) Sonic Neutron
4. Data Tanna Sa(a) Sonic Neutron
5. Data Tanna Sa(a) Sonic Neutron
6. Data Tanna Sa(a) Sonic Neutron
7. Data Tanna Sa(a) Sonic Neutron
8. Data Tanna Sa(a) Sonic Neutron

Tanna Bay	DEPTH	Sonic-Neutron
Ar.		

SANDSTONE POROSITY





Ar.		Sc.
Tanna Bay	DEPTH	Sonic-Neutron

BOREHOLE Tanna Sa
CLIENT Trowbridge Resources Ltd.
AREA Tanna Sa
COUNTRY Canada

237

WELL	
FIELD	
COUNTY	
STATE	
LOCATION	
SERVICE ORDER	
RUN NO.	
DATE	
TYPE LOG	
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	
TIME SINCE CIRC.	
MAX. REC. TEMP.	
EQUIP. LOCATION	
RECORDED BY	
WITNESSED BY	

OPERATION DATA

RUN NO.	
TYPE LOG	
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	
TIME SINCE CIRC.	
MAX. REC. TEMP.	
EQUIP. LOCATION	
RECORDED BY	
WITNESSED BY	

FIELD DATA

RUN NO.	
TYPE LOG	
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	
TIME SINCE CIRC.	
MAX. REC. TEMP.	
EQUIP. LOCATION	
RECORDED BY	
WITNESSED BY	

SERVICE ORDER	
RUN NO.	
DATE	
TYPE LOG	
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	
TIME SINCE CIRC.	
MAX. REC. TEMP.	
EQUIP. LOCATION	
RECORDED BY	
WITNESSED BY	

WELL
FIELD
COUNTY
STATE
LOCATION
SERVICE ORDER
RUN NO.
DATE
TYPE LOG
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
RM @ BHT
TIME SINCE CIRC.
MAX. REC. TEMP.
EQUIP. LOCATION
RECORDED BY
WITNESSED BY

SCHLUMBERGER WELL SURVEYING CORPORATION

SCALE NO.

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT		TAPES			PANEL			CAL.	DEPTH		REMARKS
SONDE	SERIAL	LOCATION & TRUCK	LOG	CORRECTION		SELECTOR			MODE	FROM	TO	
				MEAS.	APPLIED	MEAS.	SELECTOR	APPLIED				
Gamma	105	0001	303	0	Dp/N	0	Dp/N	0	1	0.00	120.00	0.00
LSS	105	0001	0238	0	Dp/N	0	Dp/N	0	2	0.00	120.00	0.00

ADDITIONAL SONDES RUN

SONDE	LOG	LOGGING SPEED & DIRECTION
217	B-E	1/120

REMARKS

RUN TO ADDITIONAL HEADINGS

Side logged Gate data

Scale changed due low drift mud effect.

Gamma Ray	DEPTH	Long-Spaced Density
API		
0 120	1000	2000 0

0 API 120 1000 2000 0

-10-

-20-

-30-

-40-

-50-

-60-

-70-

-80-

-90-

-100-

-110-

-120-

-130-

*** REPEAT SECTION ***

-100-

-130-

0 API 120 1000 2000 0

0 API 120 1000 2000 0

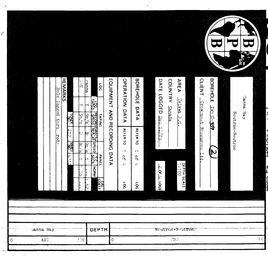
Gamma Ray | DEPTH | Long-Spaced Density

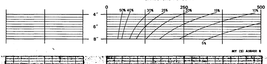
BOREHOLE ...(NEW)328...

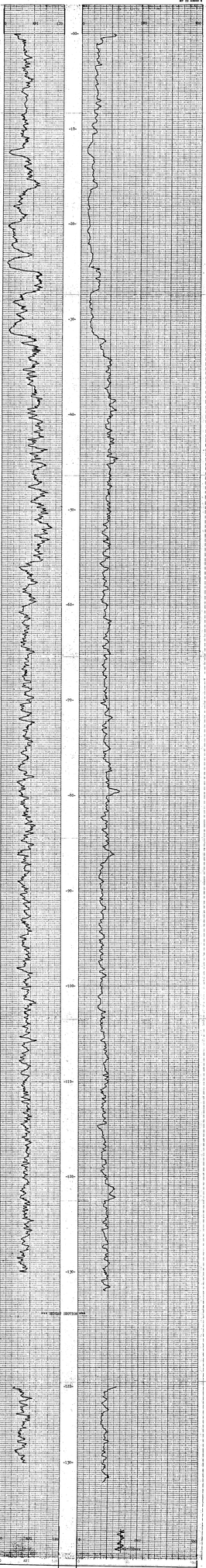
CLIENT Consumers Resources Ltd.

AREA Dalton, B.C.

COUNTRY Canada


239
BPB
RUN No.
DEPTH
Structural section
BOREHOLE
CLIENT
AREA
COUNTRY


SANDSTONE POROSITY
0
50% 40% 30% 20% 10% 0%
4"
6"
8"


API GR API
0
150
-10-
-20-
-30-
-40-
-50-
-60-
-70-
-80-
-90-
-100-
-110-
-120-
-130-
-140-
-150-
RUN No.
DEPTH
Structural section
BOREHOLE
CLIENT
AREA
COUNTRY

2239

BPB

SEAM THICKNESS LOG

BOREHOLE No. 239 (2)
CLIENT Powergen Development Ltd.
AREA Tilbury Area
COUNTRY Essex
DATE LOGGED 21st Jan 1991
— OPEN HOLE —
CASED HOLE

BOREHOLE DATA
DEPTH TO DRILLER
DEPTH TO LOGGER
CASING: SIZE / TYPE / FROM / TO
BIT SIZE / FROM / TO

OPERATION DATA
RECORDED BY
WITNESSED BY

EQUIPMENT AND RECORDING DATA
LOG COMBINATION SONDE
SERIAL No.
CALIBRATION: BEFORE / AFTER
LOGGING SPEED
TIME CONSTANT
DEPTH CONTROL

SONDE TYPE
COAL COMBINATION SONDE

LOG SUITE
CALIPER
BR DENSITY

SEAM THICKNESS LOG INTERVALS

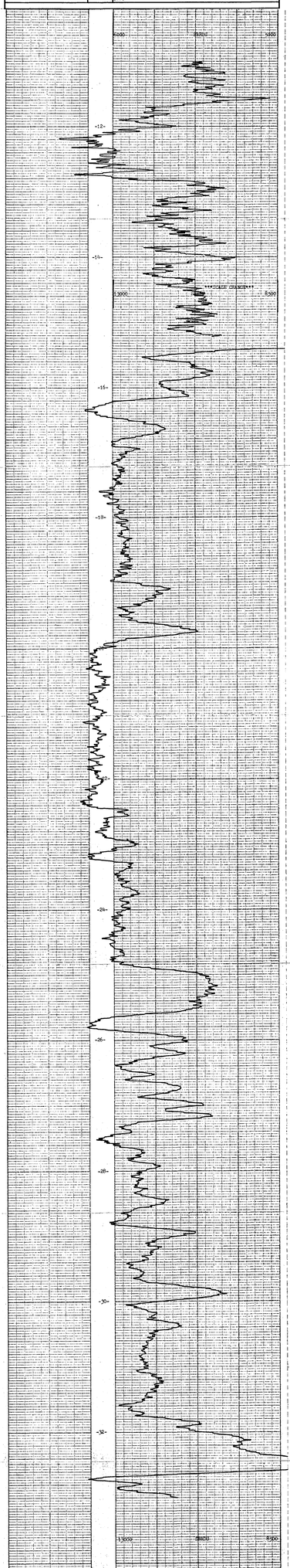
	FROM	TO	THICKNESS
TOP SEAM			
BOTTOM SEAM			
TOP SEAM			
BOTTOM SEAM			
TOP SEAM			
BOTTOM SEAM			

REMARKS

Tilbury Area

BPB SEAM THICKNESS LOG

DEPTH	BED RESOLUTION DENSITY
	LOW HIGH



DEPTH	BED RESOLUTION DENSITY
	LOW HIGH

BOREHOLE 239 (2)
CLIENT Powergen Development Ltd.
AREA Tilbury Area
COUNTRY Essex

SEAM THICKNESS LOG

MY 88003 B

239

BPB

COAL QUALITY LOG

SONDE TYPE: COAL CONSERVATION SONDE

LOG SUITE: COAL QUALITY / L.S. DENSITY

REMARKS: Recorded with Schlumberger Equipment

BOREHOLE DATA — DRILLER'S DEPTH 1100 — LOGGER'S DEPTH 1100

OPERATION DATA — RIG TIME 12 HOURS / 1.00

EQUIPMENT AND RECORDING DATA

LOG	TOOL	SERIAL NO.	DIAMETER	DENSITY	MATRIX	MUD	MUD FILTRATE	MUD CAKE	TEMP.	TIME SINCE CIRC.	MAX. REC. TEMP.	EQUIP. LOCATION	RECORDED BY	WITNESSED BY
1ST														
2ND														

COAL QUALITY LOG INTERVALS

	FROM	TO	BOREHOLE RECORD	CASING RECORD
1				
2				
3				

BOREHOLE TRIM-109

CLIENT Transcontinental Resources Ltd.

COUNTRY Canada

DATE LOGGED 26-7-79

RUN ONE

DEPTH DRILLER 1100

DEPTH LOGGER 1100

BTM. LOG INTERVAL 1100

TOP LOG INTERVAL 0

CASING-DRILLER 0

CASING-LOGGER 0

BIT SIZE 8 3/4

TYPE FLUID IN HOLE Gel Chem

DENSITY 9.2

VISCOSITY 40

PH 9.5

FLUID LOSS 6.4

SOURCE OF SAMPLE Flowline

RM @ MEAS. TEMP. .75 @ 70

RMF @ MEAS. TEMP. .60 @ 70

RMC @ MEAS. TEMP. 1.0 @ 70

SOURCE OF RMF & RMC Measured

RM @ BHT .45 @ 120

TIME CIRCULATION STOPPED 12:00

TIME LOGGER ON BOTTOM 16:00

UNIT NUMBER 1

RECORDED BY J. Mc Arthur

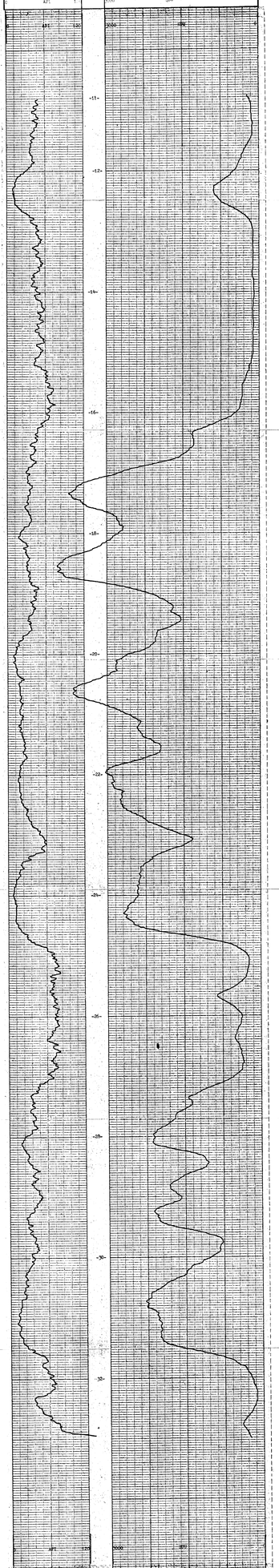
WITNESSED BY Mr. A. Mc Gill

BPB COAL QUALITY LOG

Gamma Ray — API — 0 — 120

DEPTH

Low-Spaced Density — GSU — 3000 — 2000



Gamma Ray — API — 0 — 120

DEPTH

Low-Spaced Density — GSU — 3000 — 2000

BPB

BOREHOLE TRIM-109

CLIENT Transcontinental Resources Ltd.

AREA Tilma S.D.

COUNTRY Canada

COAL QUALITY LOG

239

COAL LITHOLOGY LOG

BPB

WELL NAME
LOCATION
CONTRACTOR
DATE

DRILLING MEASURED FROM
ELEVATION
PERMANENT DATUM
LOG MEASURED FROM
DRILLING MEASURED FROM

CASING RECORD
SIZE
DEPTH
BOREHOLD RECORD
BIT
FROM
TO
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

EQUIPMENT AND RECORDING DATA

RUN NUMBER	DATE	CASING (DRILLER)	LOGGED INTERVAL (DRILLER)	TYPE LOG	SPEED	TYPE & SERIAL NO. OF TRANSMITTER	TYPE & SERIAL NO. OF RECEIVER	TYPE & SERIAL NO. OF RECORDER	RECORDED BY

REMARKS: (RIG TIMES, WEATHER, STANDBY, FLUID LOSS, RECORDED BY, WITNESSED BY)

RUN	
TIME	
MAX. REC. TEMP.	
EQUIP. LOCATION	
RECORDED BY	
WITNESSED BY	

ADDITIONAL SONDES RUN

RUN	LOG	LOGGED INTERVAL (DRILLER)

REMARKS

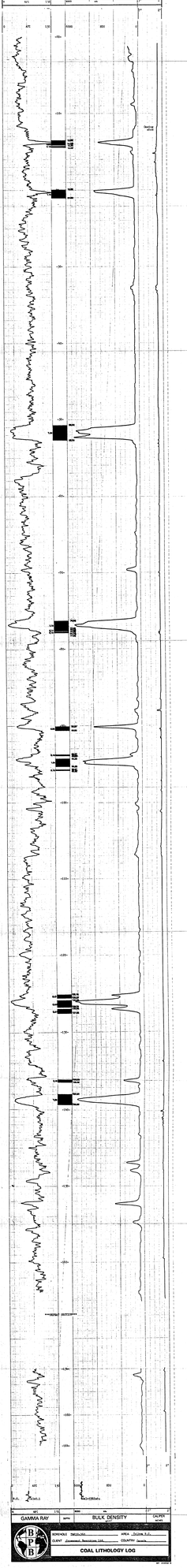
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

GR TOOL SERIAL NO.	GR CALIBRATOR SERIAL NO.	DENSITY TOOL SERIAL NO.	DENSITY CALIBRATOR SERIAL NO.
GR TOOL SENSITIVITY	GR CALIBRATOR VALUE	DENSITY SENSITIVITY	DENSITY CALIBRATOR VALUE

GAMMA RAY | GAPI | BULK DENSITY | CALIPER INCHES

HOLE SIZE CORRECTION DATA



GAMMA RAY | GAPI | BULK DENSITY | CALIPER INCHES

BPB

SCHEDULE No. [illegible]
AREA [illegible]
CLIENT Commercial Resources Ltd.
COUNTY/STATE [illegible]

COAL LITHOLOGY LOG

239

Gamma Ray
Resistivity-Resistivity

BOREHOLE DWG-1-SEA (2)

CLIENT Consumers' Resources Ltd.

AREA Tricline Fall

COUNTRY Canada

DATE LOGGED December 31, 1980

BOREHOLE DATA	Water Mud Lithology	100
OPERATION DATA	Water Mud Lithology	100

EQUIPMENT AND RECORDING DATA

	Unit	Length	Weight	Diameter	Length	Weight	Diameter
		1.00	1.00	1.00	1.00	1.00	1.00
		1.00	1.00	1.00	1.00	1.00	1.00
		1.00	1.00	1.00	1.00	1.00	1.00
		1.00	1.00	1.00	1.00	1.00	1.00

REMARKS

Gamma Ray

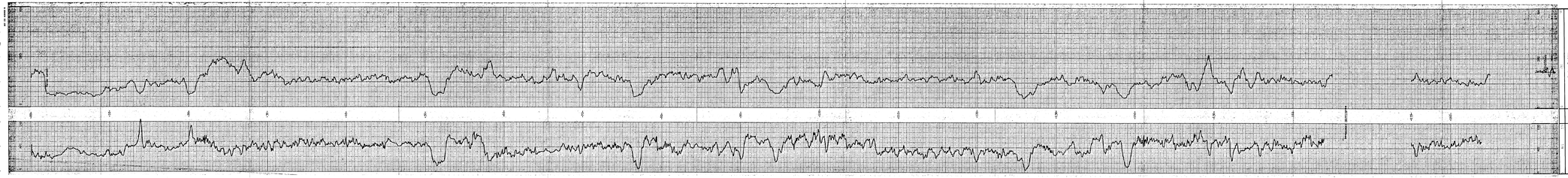
Resistivity Resistivity

DEPTH

Gamma Ray

Resistivity Resistivity

DEPTH



Gamma Ray

Resistivity Resistivity

DEPTH

Gamma Ray

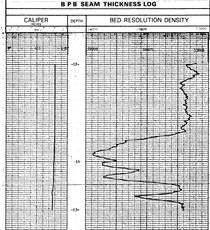
BOREHOLE DWG-1-SEA (2)

CLIENT Consumers' Resources Ltd.

AREA Tricline Fall

COUNTRY Canada

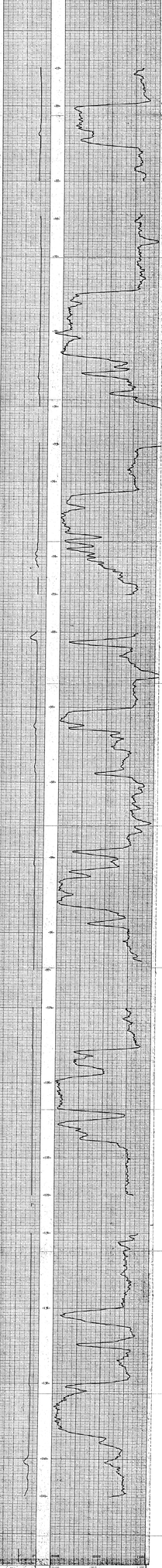
DATE LOGGED December 31, 1980



239

B P B SEAM THICKNESS LOG

CALIPER	DEPTH	BED RESOLUTION DENSITY
6" 16"		GR API 0 150



CALIPER	DEPTH	BED RESOLUTION DENSITY

BOREHOLE
COMPANY
AREA
COUNTRY

SEAM THICKNESS LOG

83(3)A

COAL QUALITY LOG

BOREHOLE ... (4)

CLIENT ... Resources Ltd.

DEPTH SCALE 1:100

4 OF 5 LOGS

BPB COAL QUALITY LOG

	DEPTH	
Gamma Ray		COAL BULK DENSITY g/cm3

HOLE SIZE CORRECTION DATA

0 API 150		6.000 s.d.u. 0

0 API 150		6.000 s.d.u. 0
Gamma Ray		COAL BULK DENSITY g/cm3
	DEPTH	

BOREHOLE TW83D-360

CLIENT Crowsnest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

COAL QUALITY LOG

MY 88002 R

TW. Telkwa 83L/2A

DIPMETER ANALYSIS 239

CLIENT CROWS NEST RESOURCES
BOREHOLE TW-83D-360 (5)
AREA TELKWA, B.C.
COUNTRY CANADA

DATE LOGGED.....13-DEC-83
DATE PROCESSED..06-JAN-84

COMMENTS.....

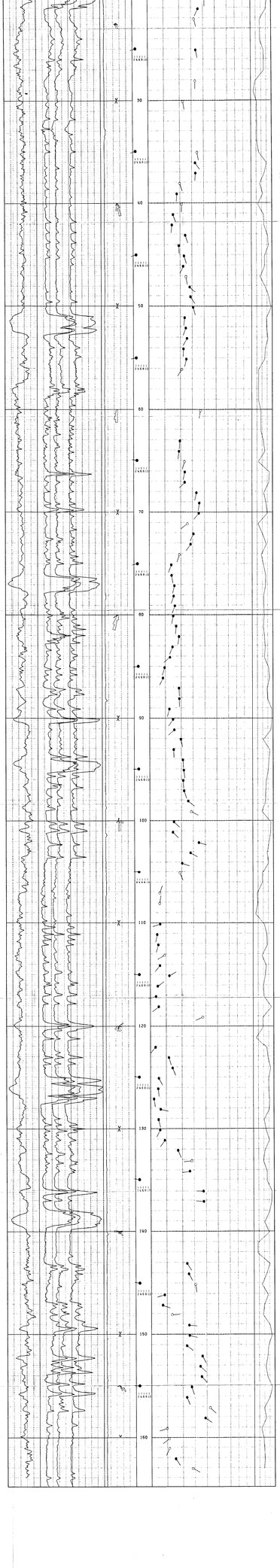
INTERPRETATION PARAMETERS

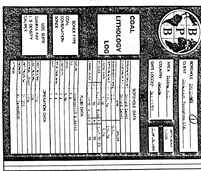
STEP 1.00M. DECLINATION 26.0 EAST
INTERVAL 2.00M. DEPTH RANGE 15.00 - 169.90M.
SEARCH ANGLE 50. DATE PROCESSED 06-JAN-84

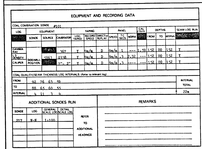
AVERAGE ANNEALED DEVIATION & DIRECTION
MAGNETIC EXCAT 10.0M.

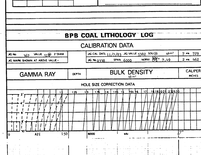
NOTE: ANGLE DEGREES EXCAT TEN DEGREES.
1" RADIUS PER DIP MARKER DISPLAYED

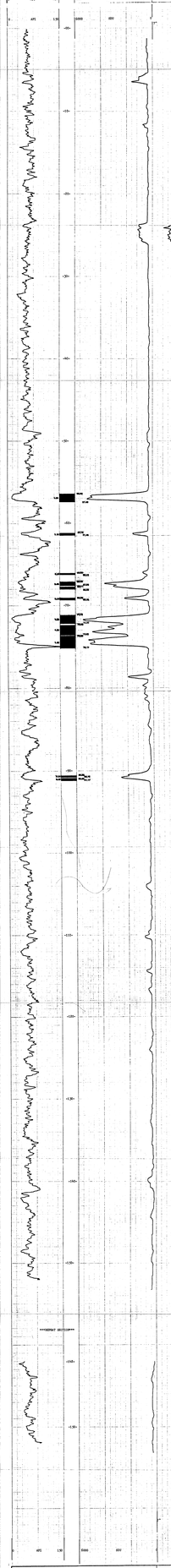
LEGEND:
GRID (10,50)
PAGE (10,25)




BPB
COAL LITHOLOGY LOG
CALIBRATION
DEPTH CONTROL
OPERATING RIG TIMES
ON BOTTOM
OFF BOTTOM
DRILLING DATA
WEIGHT ON BIT
ROTARY SPEED
DRILLING TIME
REMARKS


EQUIPMENT AND RECORDING DATA
COAL FORMATION USED
LOG
SONDE
SERIAL
CHANNELS
NAME
MAKE
SPAN
GAIN
OFFSET
TIME CONSTANT
RUN No.
ADDITIONAL SONDES RUN
REMARKS
TOTAL DEPTH DRILLED
TOTAL LOG


BPB COAL LITHOLOGY LOG
CALIBRATION DATA
GAMMA RAY
BULK DENSITY
CALIPER
HOLE SIZE CORRECTION DATA


GAMMA RAY
BULK DENSITY
CALIPER
BPB COAL LITHOLOGY LOG

239

1K - Telkwa 83(3)a

Gamma Ray
Neutron-Neutron

BOREHOLE TW83-361 (2)

CLIENT Crowsnest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

DATE LOGGED

DEPTH SCALE 1:100

2 OF 2 LOGS

BOREHOLE DATA — REFER TO Lithology LOG

OPERATION DATA — REFER TO Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG	LOG TAPED	TAPING RECORD SPEED	DIRECTION REPLAY	SPEED	PANEL T.C. SECS	NORM	CAL COEFF
Gamma	Y	9m/m	R	9m/m	1	---	1.9
N-N	Y	9m/m	D	9m/m	1	1.02	---

SONDE NO. 212 · SOURCE NO. 12

REMARKS

Gamma Ray	DEPTH	Neutron-Neutron
0 API 150		0 NNU 500

Gamma Ray	DEPTH	Neutron-Neutron

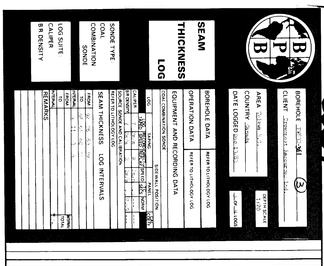
BOREHOLE TW83-361

CLIENT Crowsnest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

MY A58452R



239

BPB SEAM THICKNESS LOG

CALIPER (INCHES)

DEPTH

BED RESOLUTION DENSITY

1.900 2.200 2.500

-55-

-56-

-57-

-58-

-59-

-60-

-61-

-62-

-63-

-64-

-65-

-66-

-67-

-68-

-69-

-70-

-71-

-72-

-73-

-74-

-75-

-76-

-77-

-78-

-79-

-80-

-81-

-82-

-83-

-84-

-85-

-86-

-87-

-88-

-89-

-90-

-91-

-92-

-93-

CALIPER (INCHES)

DEPTH

BED RESOLUTION DENSITY

1.900 2.200 2.500

BOREHOLE

AREA

CLIENT

COUNTRY

SEAM THICKNESS LOG

239

Vic. Plasma Etch

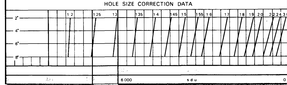
BOREHOLE DELTON 81 (4)
CLIENT Consumers Power Co.
AREA Midland
COUNTY Midland
DATE RECORDED 11-6-80
DEPTH TO BOTTOM 80.0 m
DEPTH TO TOP 0.0 m

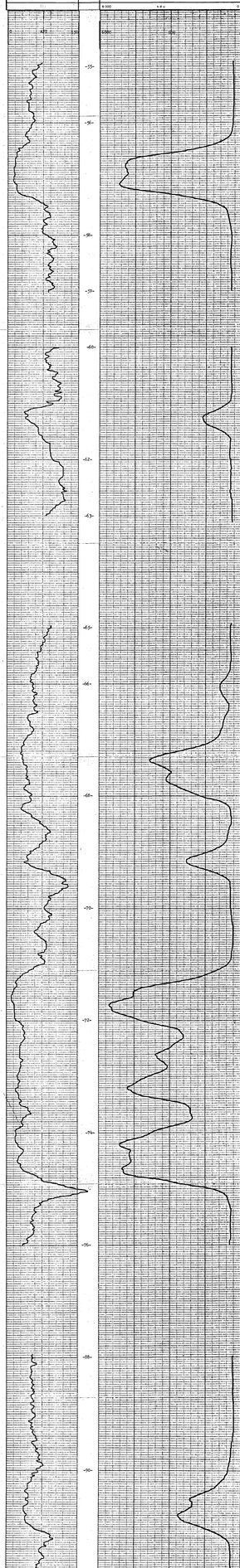
COAL QUALITY LOG

BPB COAL QUALITY LOG

DEPTH	
Gamma Ray	COAL BULK DENSITY g/cm³

HOLE SIZE CORRECTION DATA





Gamma Ray	COAL BULK DENSITY g/cm³
DEPTH	

BOREHOLE Delton 81 | AREA Midland B.C.
CLIENT Consumers Power Co. | COUNTRY Canada

COAL QUALITY LOG

COMPANY	BPB INSTRUMENTS
WELL	Stonewall Resources Inc.
FIELD	Wildcat
COUNTY	Jones
STATE	Texas
API NUMBER	
LOCATION	Abstract 1 Survey A.B.&M.
OTHER SERVICES	
PERMANENT DATUM	Ground Level
ELEV.	1,500
LOG MEASURED FROM	Kelly Bushing
DRILLING MEASURED FROM	Kelly Bushing
ELEV.	K.B. 1,508
	D.F.
	G.L.
DATE	10-31-87
RUN NO.	ONE
DEPTH-DRILLER	5,000
DEPTH-LOGGER	4,998
BTM. LOG INTERVAL	4,998
TOP LOG INTERVAL	3,000
CASING-DRILLER	8 5/8 @ 3,000
CASING-LOGGER	
BIT SIZE	7 7/8
TYPE FLUID IN HOLE	Brine
DENS.	10.0
VISC.	28
PH	10.5
FLUID LOSS	8
SOURCE OF SAMPLE	Pit
RM @ MEAS. TEMP.	.65 @ 70
RMF @ MEAS. TEMP.	.50 @ 70
RMC @ MEAS. TEMP.	.80 @ 70
SOURCE RMF	Measured
SOURCE RMC	Measured
RM @ BHT	.30 @ 140
TIME SINCE CIRC.	12 Hrs.
MAX. REC. TEMP.	140
EQUIP. LOCATION	3404
RECORDED BY	Jim Hall
WITNESSED BY	Mr. Bill Smith

RUN BOREHOLE RECORD

BIT NO.	BIT SIZE	TYPE	FROM	TO
ONE	7 7/8	Reed	3,000	5,000

CASING RECORD

	SIZE	WGT.	GRADE	FROM	TO
SURF. STRING	8 5/8	24	K-55	0	3,000
PROD. STRING					
LINER					

Log Measured from Kelly Bushing, 8 Ft. Above Perm. Datum

Elevation: K.B. 1,508 Ft., D.F. , G.L.

Permanent Datum: Ground Level Elev. 1,500 Ft.

Logging Date: 10-31-87

Run Number: ONE

Depth-Driller: 5,000 Ft.

Depth-Logger: 4,998 Ft.

Bottom Log Interval: 4,998 Ft.

Top Log Interval: 3,000 Ft.

Casing-Driller: 8 5/8 @ 3,000 Ft.

Casing-Logger:

Bit Size: 7 7/8 In.

Type Fluid in Hole: Brine

Density: 10.0 Lb/Gal.

Viscosity: 28 Sec.

pH: 10.5

Fluid Loss: 8 Cc

Source of Sample: Pit

Rm @ Meas. Temp.: .65 @ 70 Deg. F.

Rmf @ Meas. Temp.: .50 @ 70 Deg. F.

Rmc @ Meas. Temp.: .80 @ 70 Deg. F.

Source Rmf: Measured

Source Rmc: Measured

Rm @ BHT: .30 @ 140 Deg. F.

Time Since Circ.: 12 Hrs.

Max. Rec. Temp.: 140 Deg. F.

Equip. Location: 3404

Recorded By: Jim Hall

Witnessed By: Mr. Bill Smith

EQUIPMENT AND RECORDING DATA

RUN	EQUIPMENT		TAPED		PANEL		DATA	
	SONDE	SKID/BELT	Tool Pos.	Tape No.	Channel	Tool Pos.	Tape No.	Scale
Gamma Ray	GRS		Bot.	1	Ch/1	3.5	1	0-200
Long Guard	DIL	2728	Bot.	1	Ch/2	3.5	1	0-2

ADDITIONAL CURVES RUN

SONDE	CURVE	SCALE	REMARKS
SGS	R.A.	0-200	

NOTE TO CUSTOMER REMARKS

Data logged 100% data.

Tools changed due to wiper at 4211.00FT

Gamma Ray: GAPI

Long-Spaced Density: 0 | 1000 | 500 | 0

Short-Spaced Density: 0 | 1000 | 500 | 0

Long-Guard Resistivity: 0.2 | 2000 | 200 | 2

Short-Guard Resistivity: 0.2 | 2000 | 200 | 2

DEPTH: 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 | 2600 | 2700 | 2800 | 2900 | 3000 | 3100 | 3200 | 3300 | 3400 | 3500 | 3600 | 3700 | 3800 | 3900 | 4000 | 4100 | 4200 | 4300 | 4400 | 4500 | 4600 | 4700 | 4800 | 4900 | 5000

Gamma Ray | Long-Spaced Density | Short-Spaced Density | Long-Guard Resistivity | Short-Guard Resistivity

BPB

BORDEAUX INSTRUMENTS

CLIENT: Stonewall Resources Inc.

AREA: Jones B.C.

COUNTY: Jones

239

BPB

Name Rig
Position No. of Shot

BOREHOLE No. 38 (2)

CLIENT BPB Instruments (UK) Limited

AREA Cliffe
COUNTRY Kent
DATE LOGGED 26.11.1980

BOREHOLE DATA Bore to 1.22 m
OPERATION DATA Bore to 1.22 m

EQUIPMENT AND RECORDING DATA

Unit	Type	Serial No.	Calibration Date
Probe	PS.1.B	PB.No.1	
Amplifier	PA.1.B	PB.No.1	
Recorder	PR.1.B	PB.No.1	

REMARKS

Datum 1.22 m

Logged, checked and interpreted in accordance with BPB Instruments (UK) Limited Code of Practice

SENSITIVE PROBE

Scale 1:20

Scale 1:100

Scale 1:20

Scale 1:100

BPB

Name Rig
Position No. of Shot

BOREHOLE No. 38 (2)

CLIENT BPB Instruments (UK) Limited

AREA Cliffe
COUNTRY Kent
DATE LOGGED 26.11.1980

239

SEAM THICKNESS LOG

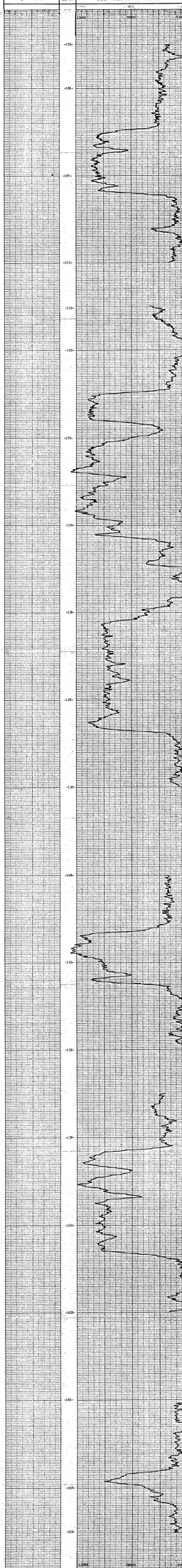
BOREHOLE DATA: BOREHOLE NO. [illegible]
CLIENT: [illegible]
AREA: [illegible]
COUNTRY: [illegible]
DATE LOGGED: [illegible]

LOGGING DATA: WHEN TO LOG DATA: [illegible]
OPERATOR DATA: [illegible]
EQUIPMENT AND RECORDING DATA: [illegible]
COMMENTS: [illegible]

SEAM THICKNESS LOG INTERVALS: [illegible]
SEAM THICKNESS: [illegible]
COAL TYPE: [illegible]
COAL COLOUR: [illegible]
COMMENTS: [illegible]

CALIBRATION: [illegible]
EQUIPMENT: [illegible]
CALIBRATION: [illegible]
BH DENSITY: [illegible]

B P B SEAM THICKNESS LOG



BOREHOLE: [illegible]
CLIENT: Stratabond Resources Inc.
AREA: [illegible]
COUNTRY: Canada
SEAM THICKNESS LOG

239

COAL QUALITY LOG

BORINGS 1 to 30 (4)
CLIENT Canadian Superior
COUNTY Canada
DATE PROCESSED Jan. 1980
R. M. Jones

SCALE TYPE: COAL QUALITY
LOG SUITE: GAMMA RAY
CURVES: GAMMA RAY

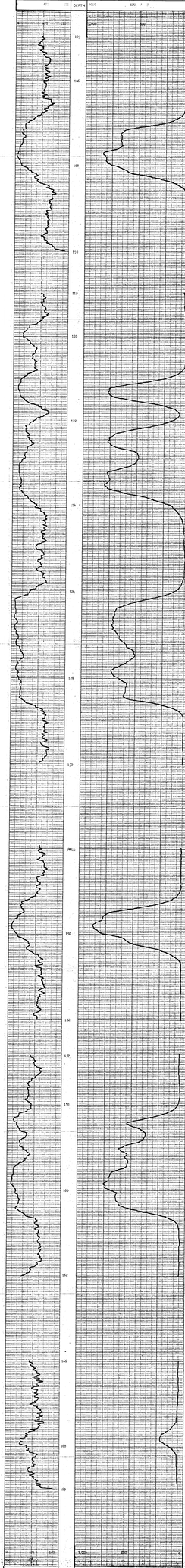
COAL QUALITY LOG INTERVALS
COAL QUALITY LOG INTERVALS

DEPTH	0 to 170
COAL QUALITY	0 to 170
GAMMA RAY	0 to 170

DEPTH SCALE 1 inch = 10 feet
GENERATION DATA 1 inch = 10 feet
EQUIPMENT AND RECORDING DATA

DEPTH	0 to 170
COAL QUALITY	0 to 170
GAMMA RAY	0 to 170

BPB COAL QUALITY LOG



BOREHOLE [illegible]
CLIENT Canadian Superior
AREA [illegible]
COUNTRY Canada

COAL QUALITY LOG

Gamma Ray
Long-Spaced Density

BPB

BOREHOLE TW83D-363 (1)
CLIENT Crowsnest Resources Ltd.
AREA Telkwa B.C.
COUNTRY Canada
DATE LOGGED Jan 14/83

DEPTH SCALE 1:100
1 OF 4 LOGS

BOREHOLE DATA

PERMANENT DATUM	Ground Level	
ELEVATION OF P.D.	Ground Level	
MEASUREMENTS FROM	G.L.	G.L.
	BPB	DRILLER
DEPTH REACHED	150.7m	150.7m
CASING SHOE	15.0m	15.0m
BIT SIZES	1: [illegible] TO 15	2: 3.4" TO TD
	3: TO	4: TO
CASING SIZES	1: [illegible] TO 15	2: TO

FLUID DATA

NATURE	Super Gel-X Water
S.G.	N/A
LEVEL	0.0m
VISCOSITY	N/A
Rm at meas temp	N/A
B H T	N/A

OPERATION DATA

FIRST READING	149.0m
LAST READING	00.0m
INTERVAL LOGGED	149.0m
UNIT-TRUCK No	U21/V218
ENGINEER	W.Cavendish
WITNESS	

EQUIPMENT AND RECORDING DATA

LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T C SECS	NORM	CAL COEFF	FROM	TO	INTERVAL
	101	5863											
G/R	101		367	Y	9m/m	D	9m/m	1	-	1.47	149	00	149
LSD	101		0338	Y	9m/m	D	9m/m	.3	7.34	-	149	00	149

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
217	N/N	1:100	

REFER TO ADDITIONAL HEADINGS

REMARKS

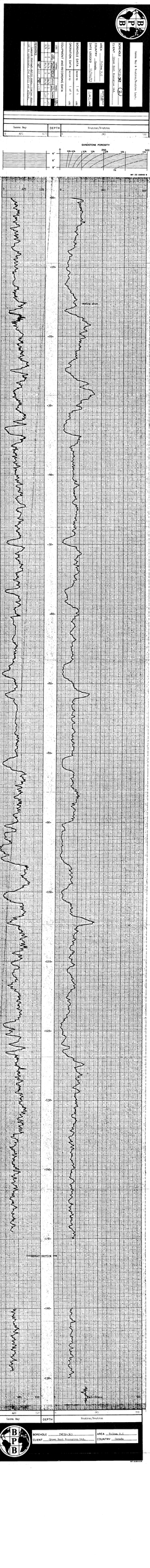
No open hole logs available. Scales changed to compensate for drill rod effect.

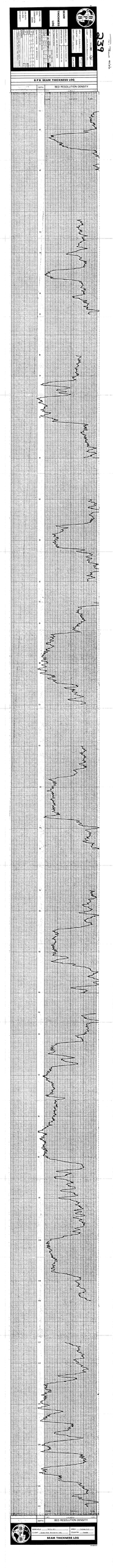
Gamma Ray	DEPTH	Long Spaced Density
0 API 120		3,000 SDU 0

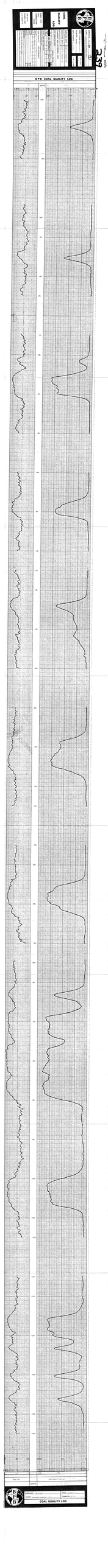
Gamma Ray	DEPTH	Long Spaced Density
0 API 120		3,000 SDU 0

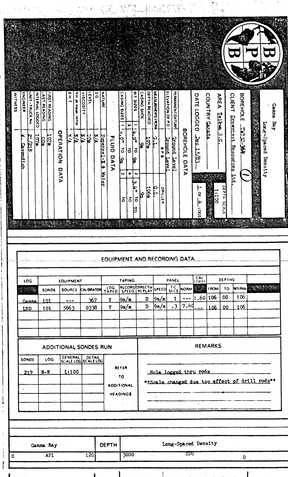
BPB
BOREHOLE TW83D-363
CLIENT Crows Nest Resources Ltd.
AREA Telkwa B.C
COUNTRY Canada

MY 93160 R


BPB
239
Gamma Ray
DEPTH
Neutron/Porosity
API
SANDSTONE POROSITY
HADDOCK
CHALK
CLAY
SANDSTONE
ANHYDRITE
SALT
DOLOMITE
LIMESTONE
COAL
CONTRACTOR DATA
DEPTH CONTROL
LOGGING MEASURED FROM
DRILLING MEASURED FROM
PERMANENT DATUM
ELEVATION
K.B.
D.F.
G.L.
RUN NO.
DATE
TYPE LOG
CASING-DRILLER
CASING-LOGGER
BOTTOM LOGGED INTERVAL
TOP LOGGED INTERVAL
TYPE FLUID IN HOLE
DENSITY
VISCOSITY
PH
FLUID LOSS
SOURCE OF SAMPLE
RM @ MEAS. TEMP.
RMF @ MEAS. TEMP.
RMC @ MEAS. TEMP.
SOURCE OF RMF
SOURCE OF RMC
RM @ BHT
TIME SINCE CIRC.
MAX. REC. TEMP.
EQUIP. LOCATION
RECORDED BY
WITNESSED BY
RIG
Gamma Ray
DEPTH
Neutron/Porosity
API
HADDOCK
CHALK
CLAY
SANDSTONE
ANHYDRITE
SALT
DOLOMITE
LIMESTONE
COAL
FORMATION
CONTRACTOR DATA
DEPTH CONTROL
LOGGING MEASURED FROM
DRILLING MEASURED FROM
PERMANENT DATUM
ELEVATION
K.B.
D.F.
G.L.
RUN NO.
DATE
TYPE LOG
CASING-DRILLER
CASING-LOGGER
BOTTOM LOGGED INTERVAL
TOP LOGGED INTERVAL
TYPE FLUID IN HOLE
DENSITY
VISCOSITY
PH
FLUID LOSS
SOURCE OF SAMPLE
RM @ MEAS. TEMP.
RMF @ MEAS. TEMP.
RMC @ MEAS. TEMP.
SOURCE OF RMF
SOURCE OF RMC
RM @ BHT
TIME SINCE CIRC.
MAX. REC. TEMP.
EQUIP. LOCATION
RECORDED BY
WITNESSED BY
RIG
BOREHOLE
CLIENT
AREA
COUNTRY


239
BPB
BPB SEAM THICKNESS LOG
BED RESOLUTION DENSITY
DEPTH
BED RESOLUTION DENSITY
BPB
SEAM THICKNESS LOG


BPB COAL QUALITY LOG
COAL QUALITY LOG


Gamma Ray
Sonic/Long-Spaced Density
DATE LOGGED: Jan-11/84
AREA: Tolman S.D.
COUNTRY: Canada
BOREHOLE DATA
OPERATION DATA
EQUIPMENT AND RECORDING DATA
ADDITIONAL SONDES RUN
REMARKS
Hole logged thru PDC
*Units changed due to: effect of drill rods**
Gamma Ray
DEPTH
Long-Spaced Density
API
3000
3550
0
120
casing shoe
PREPAY BOTTOM
B.G.
Gamma Ray
DEPTH
Long-Spaced Density
BOREHOLE: IMPERIAL
AREA: Tolman S.D.
CLIENT: Gravmount Resources Ltd.
COUNTRY: Canada

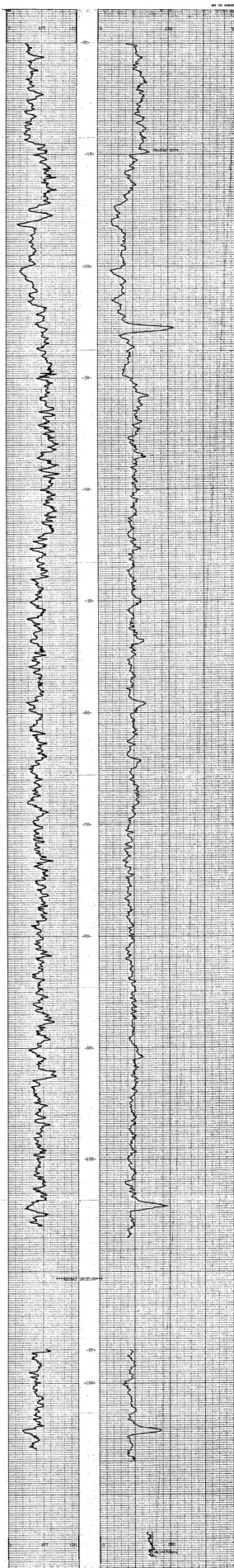
239

Sandstone Porosity

BOREHOLE	2
CLIENT	
AREA	
COUNTRY	
DATE LOGGED	
BOREHOLE DATA	
OPERATION DATA	
EQUIPMENT AND RECORDING DATA	
REMARKS	

DEPTH		

SANDSTONE POROSITY



BOREHOLE	
CLIENT	
AREA	
COUNTRY	

TK - Telkwa 83(3)A

239

BOREHOLE TW83D-364 (3)

CLIENT Crowsnest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

DATE LOGGED Dec 10/83

DEPTH SCALE 1:20

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: LOG TAPED	TAPING: RECORD SPEED	TAPING: DIRECT or REPLAY	PANEL: SPEED	PANEL: T.C. SECS	PANEL: NORM	CAL COEFF
CALIPER							
B R DENSITY	Y	2m/m	R	2m/m	.3	7.94	---

SOURCE, SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: CALIPER, B.R DENSITY

SEAM THICKNESS LOG INTERVALS

FROM	28	
TO	13	
INTERVAL	15	
FROM		INTERVAL TOTAL
TO		
INTERVAL		15m

REMARKS

Hole logged thru drill rods

Scale changed due too effect of drill rods

B P B SEAM THICKNESS LOG

DEPTH | BED RESOLUTION DENSITY

DEPTH | BED RESOLUTION DENSITY

BOREHOLE TW83D-364

CLIENT Crowsnest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

SEAM THICKNESS LOG

MY 88002 R

BPB

BOREHOLE [illegible] (4)
CLIENT Provencat Resources Ltd.
AREA Telkwa S.C.
COUNTRY Canada
DATE LOGGED [illegible]
DEPTH SCALE 1:20
[illegible] OF [illegible] LOGS

COAL QUALITY LOG

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

LOG	TAPING	PROCESSING	PANEL	NORM
GAMMA	[illegible]	[illegible]	[illegible]	[illegible]
S. DENSITY	[illegible]	[illegible]	[illegible]	[illegible]
SOURCE SONDE AND CALIBRATION				

REFER TO LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

COAL QUALITY LOG INTERVALS

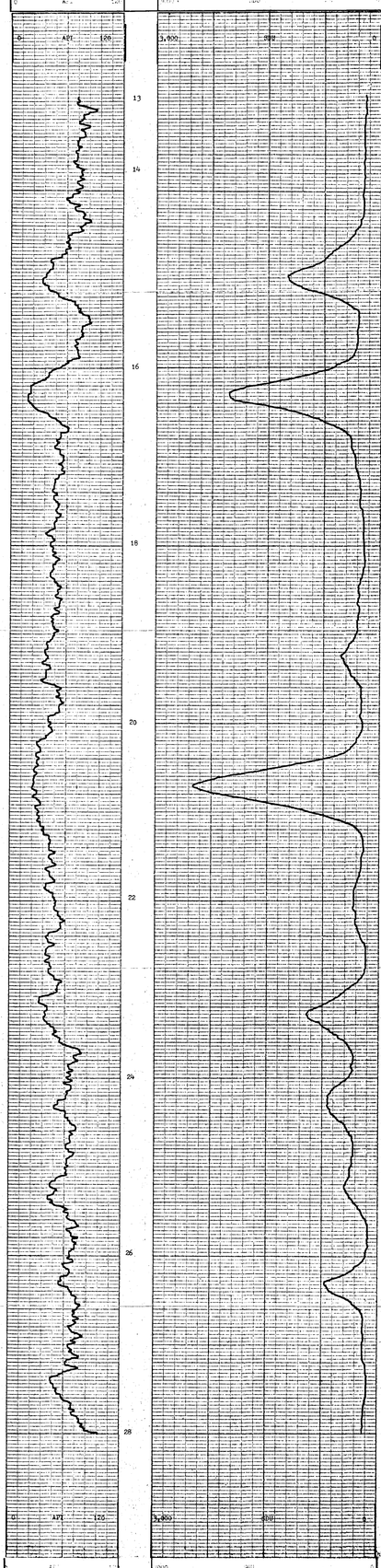
FROM	25		
TO	11		
INTERVAL	15		
FROM			
TO			
INTERVAL			

REMARKS
Hole blocked thru tool.
Hole changed due too effect of drill rods.

LOG SUITE: GAMMA RAY, L.S. DENSITY

BPB COAL QUALITY LOG

Gamma Ray	DEPTH	Long-Spaced Density
0 API 120		3,000 GMU 0



Gamma Ray	DEPTH	Long-Spaced Density
0 API 120		3,000 GMU 0

BPB

BOREHOLE [illegible] AREA Telkwa S.C.
CLIENT Provencat Resources Ltd. COUNTRY Canada

COAL QUALITY LOG

B COORD JM

239

COAL LITHOLOGY LOG

BORHOLE 3E-01

DATE 1-4-85

DRILLER Jones

LOGGER Jones

DRILLING CONTRACTOR Kaiser

DRILLING METHOD Air Rotary

BIT SIZE 8 3/4

CASING SIZE 8 5/8

DRILLING FLUID Air

DRILLING TIME 3 hrs

DRILLING COST $ 1,500

OPERATOR Kaiser

LOGGER'S NAME Jones

SURFACE ELEVATION 5,000

TOTAL DEPTH 1,000

EQUIPMENT AND RECORDING DATA

COAL CONSTRUCTION DATA: Air

CSG.	CLEARANCE			SIZE	FROM	TO	OPTICS			
	SIZE	DEPTH	CEMENTING				FROM	TO	SIZE	TYPE OR MAKE
CASING			NO							
CASING			YES	8 5/8	0	20.0	0.0	20.0	200	Air
CASING			YES	8 5/8	0	20.0	0.0	20.0	200	Air
CASING			YES	8 5/8	0	20.0	0.0	20.0	200	Air
CASING			YES	8 5/8	0	20.0	0.0	20.0	200	Air

COAL CONSTRUCTION TECHNIQUE (DESCRIBE ALL MATERIALS USED)

TYPE			ACTUAL TOTAL
TO			
DETAILS			

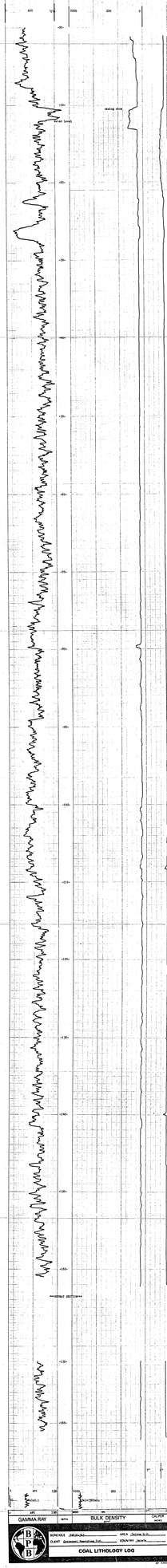
ADDITIONAL SONDES RUN			REMARKS
SONDE	SN	SONDE TO SURFACE	
2112	N/A	1110	
2112	2112	1110	

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

GAMMA RAY: API UNITS	1,000 API	BULK DENSITY: g/cm³	2.0 g/cm³
GAMMA RAY: DEPTH OF CALIBRATION	0 m	BULK DENSITY: DEPTH OF CALIBRATION	0 m
GAMMA RAY: DEPTH OF CHECK (MUST BE 0 m)	0 m	BULK DENSITY: DEPTH OF CHECK (MUST BE 0 m)	0 m

GAMMA RAY	API	BULK DENSITY	g/cm³	CALIPER	INCHES
HOLE SIZE CORRECTION DATA					



GAMMA RAY	API	1,000	BULK DENSITY	g/cm³	2.0	CALIPER	INCHES

BORHOLE 3E-01 AREA Jones S.C.

CLIENT Government Services Inc. STRATUM Jones

COAL LITHOLOGY LOG

Tx. Teluma 83(2)A

239

Name Bay
Beaufort-Westerns

BOREHOLE DATA: SEC (2)

CLIENT: Chevron Overseas Inc.

AREA: Tuktoyaktuk

COUNTRY: Canada

DATE LOGGED: Jan 18 1979

BOREHOLE DATA	REFER TO	Tuktoyaktuk
OPERATION DATA	REFER TO	Tuktoyaktuk

EQUIPMENT AND RECORDING DATA

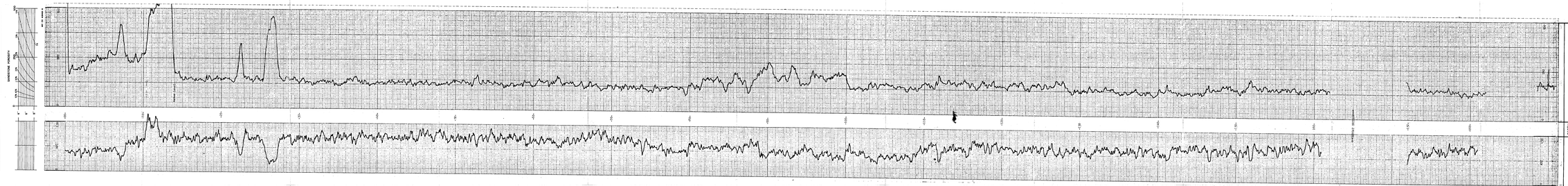
LOG	TYPE	SERIAL NO.	FILE NO.	CODE

REMARKS

Tuktoyaktuk Depth

DEPTH

Ship Way



BOREHOLE DATA

AREA: Tuktoyaktuk

COUNTRY: Canada

DEPTH

TK - TELKWA 83/3/a

239

DIPMETER ANALYSIS

CLIENT CROWS NEST RESOURCES
BOREHOLE TW-83D-365 (3)
AREA TELKWA, B.C.
COUNTRY CANADA

DATE LOGGED.....16-DEC-83
DATE PROCESSED..06-JAN-84

COMMENTS.....

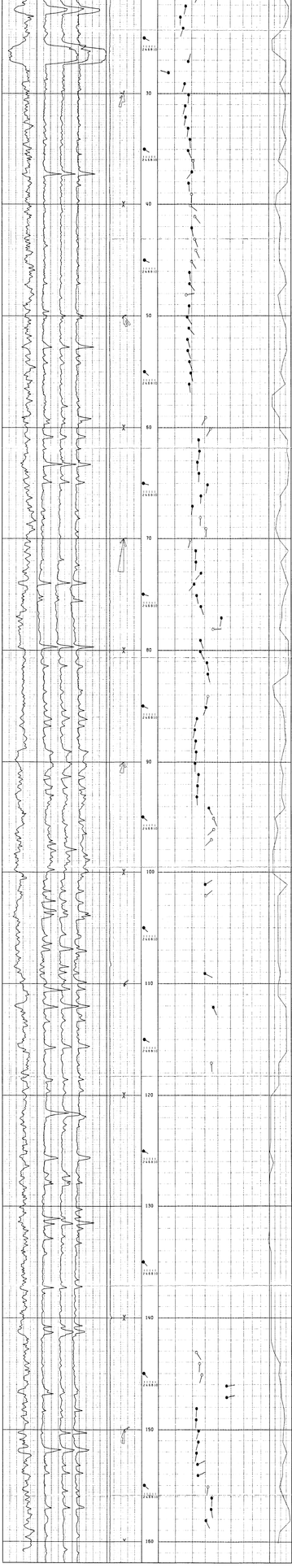
INTERPRETATION PARAMETERS

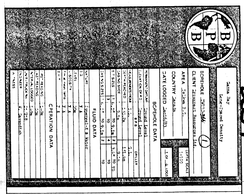
STEP 1.00M. DECLINATION 26.0 EAST
INTERVAL 2.00M. DEPTH RANGE 10.00 - 161.90M.
SEARCH ANGLE 50. DATE PROCESSED 06-JAN-84

AVERAGE BOREHOLE DEVIATION & DIRECTION
RANDOMIZED EVERY 10.0M.

ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES,
1" RADIUS PER DIP ANGLE DISPLACED

LEGEND:
GRID (+0.50)
FROM (+0.20)





EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT		RATIO		PANEL		LOG	DEPTH	
RUN	SONDE	SOURCE	S/M	M/N	SPACING	S/N	SCALE	FROM	TO
Comp	100	500	1	N/A	3	N/A	1	1100.00	100
Log	100	0240	1	N/A	3	N/A	1	1100.00	100

ADDITIONAL SONDES RUN			
SONDE	LOG	SPACING	TOTAL CABLE
217	818	11100	

NOTE TO ADDITIONAL HEADINGS

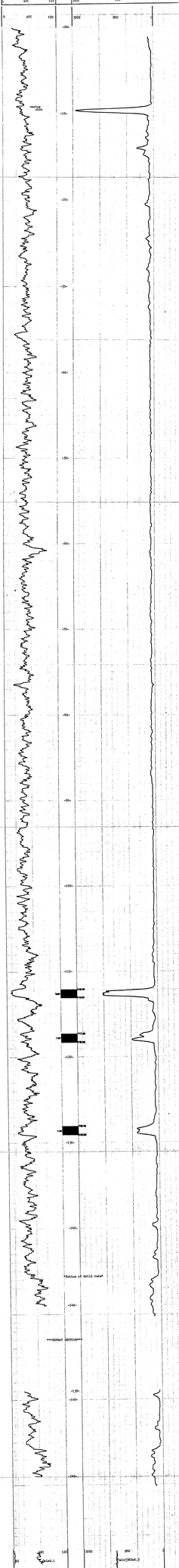
REMARKS

Tele logged this info.

**Tele changed the log effect of drill rate?*

Comp Rep | DEPTH | Long-Spaced Density

0 API 100 | 1000 | 3000



0 API 100 | 1000 | 3000

Calc1=(500x0.1

Calc1=(500x0.3

Comp Rep | DEPTH | Long-Spaced Density

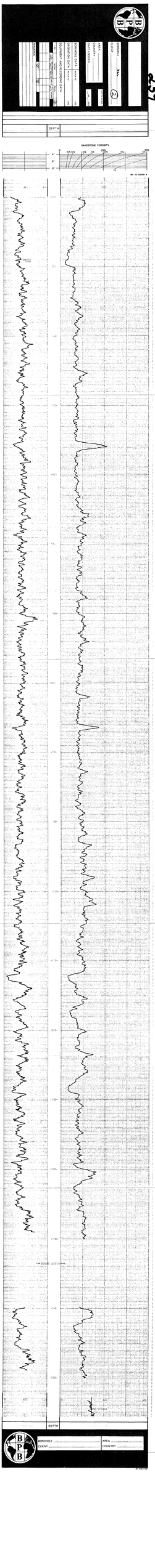
BOREHOLE RECORD

CLIENT Consumers Resources, Inc.

AREA Tulare, S.C.

COUNTRY Canada

© BPB


237
DEPTH
SANDSTONE POROSITY
DEPTH
BOREHOLE
CLIENT
AREA
COUNTRY

239

BPB

BOREHOLE 366 (3)
CLIENT
AREA
COUNTRY
DATE LOGGED
DEPTH SCALE
1 OF 1 LOGS

COAL QUALITY LOG

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

LOG	TAPING	PANEL	CAL	CONTROL
GAMMA RAY	FROM	SPEED	NORM	
L.S. DENSITY	SPEED			

SOURCE SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

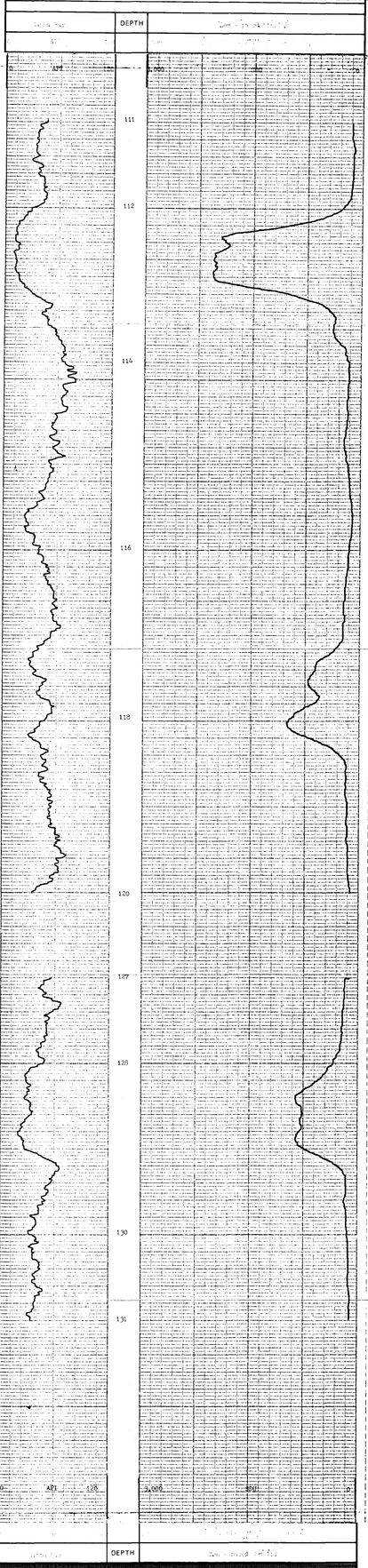
SONDE TYPE
COAL COMBINATION SONDE

LOG SUITE
GAMMA RAY
L.S. DENSITY

COAL QUALITY LOG INTERVALS

FROM			
TO			
VISUAL			
FROM			
TO			
VISUAL			
REMARKS			

BPB COAL QUALITY LOG



BPB

BOREHOLE
CLIENT
AREA
COUNTRY

COAL QUALITY LOG

239

BPB

SEAM THICKNESS LOG

SONDE TYPE
COAL COMBINATION SONDE

LOG SUITE
CALIPER
B.R. DENSITY

BOREHOLE 36 (4)
CLIENT
AREA
COUNTRY
DATE LOGGED

DEPTH SCALE

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

LOG	TIME CONSTANT	LOGGING SPEED	RECORDER SPEED	SIDEWALL POSITION	PANEL
CALIPER					
B.R. DENSITY					

SOURCE SONDE AND CALIBRATION — REFER TO LITHOLOGY LOG

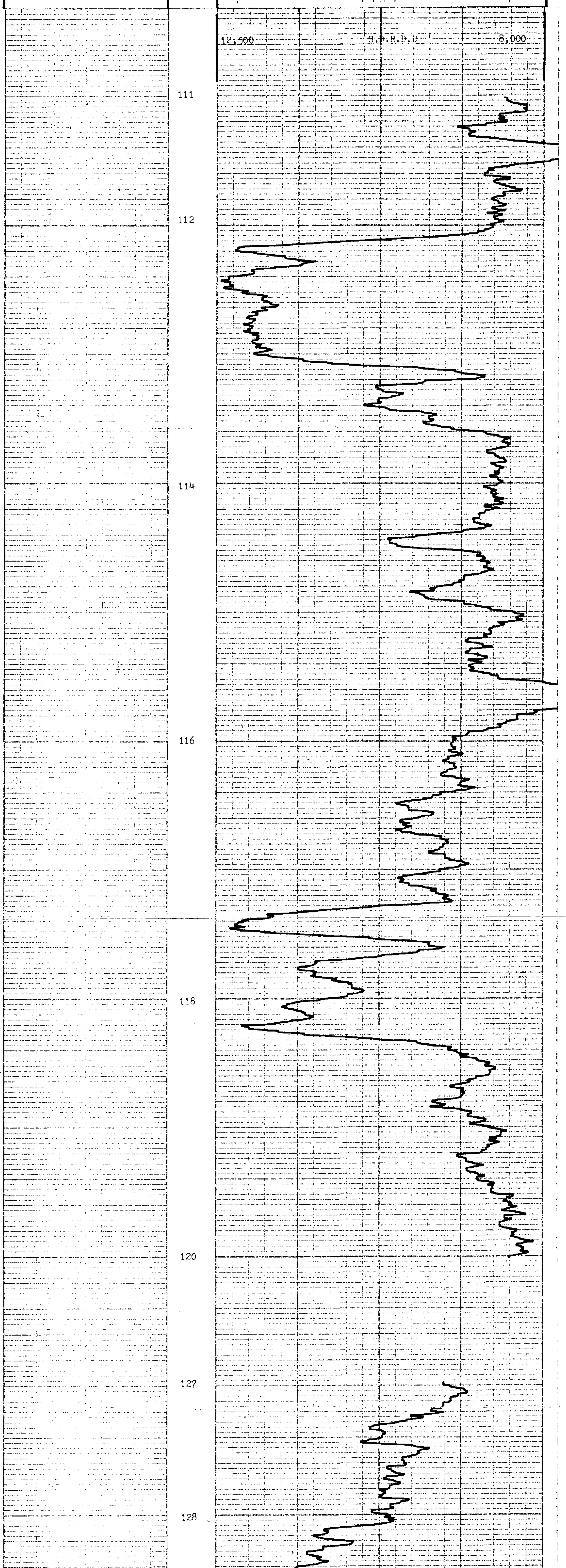
SEAM THICKNESS LOG INTERVALS

FROM	TO	INTERVAL	TOTAL

REMARKS

B P B SEAM THICKNESS LOG

	DEPTH	BED RESOLUTION DENSITY



	DEPTH	BED RESOLUTION DENSITY

BPB

BOREHOLE
CLIENT
AREA
COUNTRY

SEAM THICKNESS LOG

MY 88002 R

BPB COAL LITHOLOGY LOG

WELL NAME	JWCH-3
LOCATION	Tarlton, S.C.
COUNTY	Chester
DATE	10/20/2000
OPERATOR	Jacobs
DRILLER	Jacobs
DRILL RIG	CME 750
DRILL BIT	7 7/8
DRILL FLUID	Air
TOTAL DEPTH	1,150
DATE COMPLETED	10/20/2000

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE F_{221}

LOG	EQUIPMENT			DATING			RADIO		DEPTHING							
	SONDE	SERIAL NO.	SCANNING	COAL DENSITY	COAL MOISTURE	SONDE DIAMETER	CALIBRATION	SERIAL NO.	DEPTH							
GAMMA RAY		2	10	5	2a/3a	5	2a/3	5	1,150	50	115	50	115			
CALIPER		2	10	5	2a/3a	5	2a/3	5	1,150	50	115	50	115			
DENSITY	GAMMA	2	10	5	2a/3a	5	2a/3	5	1,150	50	115	50	115			
CALIPER	ROTATION	2	10	5	2a/3a	5	2a/3	5	1,150	50	115	50	115			

TOTAL COAL THICKNESS (CORRECTED FOR INCLINATION)	
FROM	
TO	
INTERVAL	

ADDITIONAL SONDES RUN		
SONDE	LOG	DEPTHS FROM TO (MEASURED)
217	2-D	1,150

REMARKS	
BEGIN	
TO	
ADDITIONAL	
REMARKS	

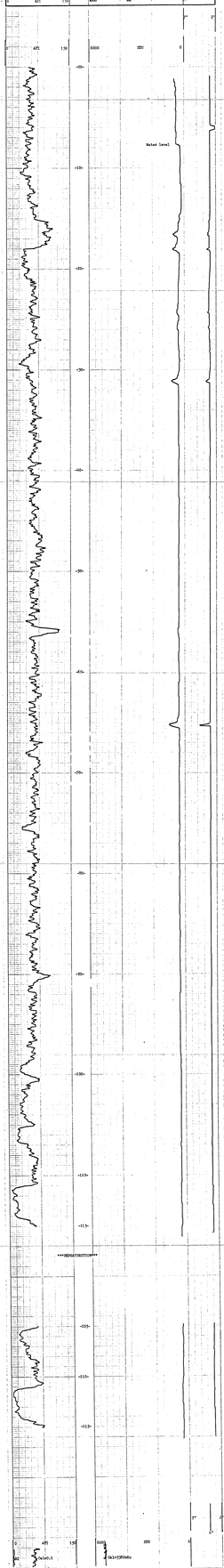
BPB COAL LITHOLOGY LOG

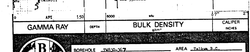
CALIBRATION DATA

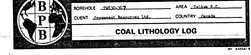
JW No. 3a/3	WELL @ STRAIGHT	JW No. 3a/3	JW No. 3a/3
AS NAME SHOWN AT ABOVE INTERVALS		AS NAME SHOWN AT ABOVE INTERVALS	AS NAME SHOWN AT ABOVE INTERVALS
2 - PA 138	2 - PA 138	2 - PA 138	2 - PA 138

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER INCHES

HOLE SIZE CORRECTION DATA



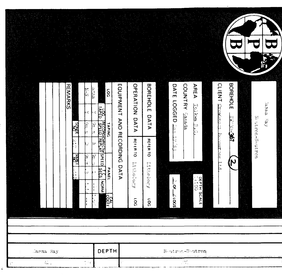




GAMMA RAY	DEPTH	BULK DENSITY	CALIPER INCHES

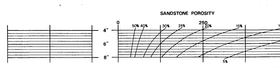
BOREHOLE	JWCH-3
AREA	Tarlton, S.C.
CLIENT	Jacobs Engineering Inc.
COUNTRY	Canada

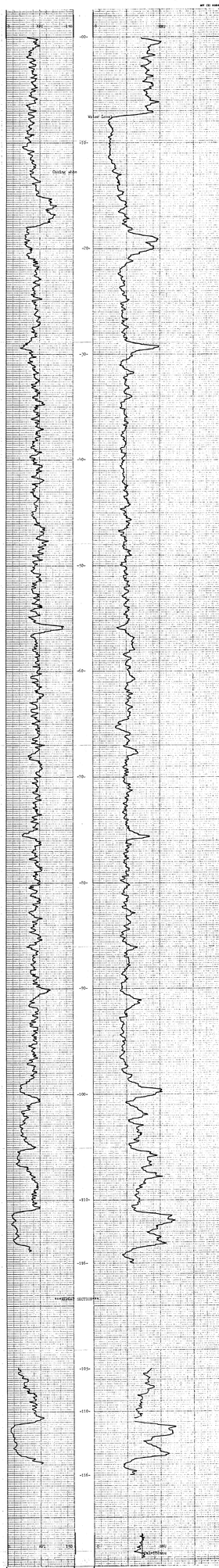
COAL LITHOLOGY LOG

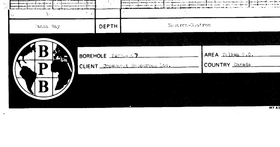


237

T.K. Tatem 83/84







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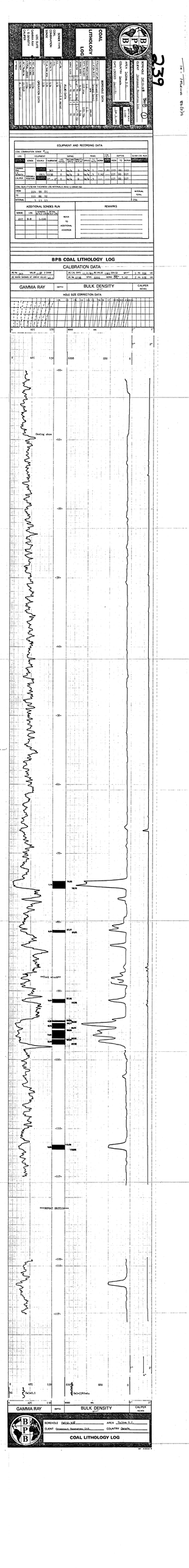
COAL LITHOLOGY LOG

BPB



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Gamma Ray
Neutron-Neutron

BOREHOLE TWP30-X8 (2)
AREA Tribes S.T.
CLIENT Consumers Resources Ltd.
DATE LOGGED Jan 1990
COUNTRY Canada

OPERATION DATA
MEANS Wireline LOG

BOREHOLE DATA
MEANS Wireline LOG

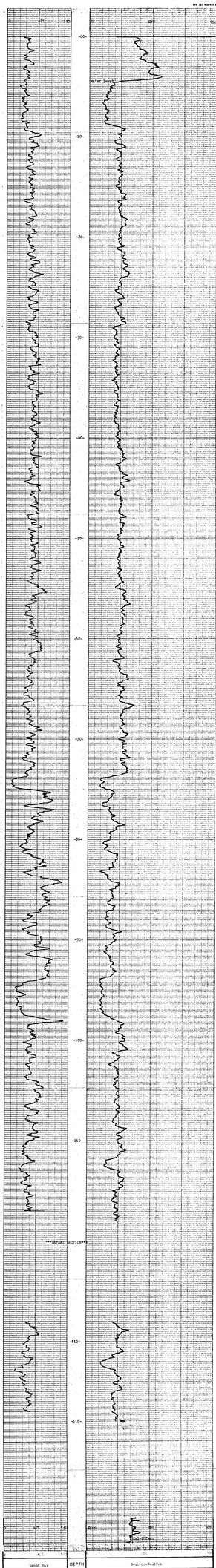
EQUIPMENT AND RECORDING DATA

LOG	TIME CONST.	SPEED	SCALE	SENSITIVITY	
GR					
NN					

REMARKS

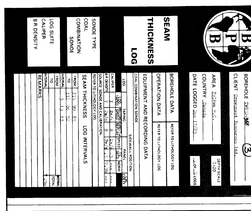
Gamma Ray	DEPTH	Neutron-Neutron	
475		0	500

SANDSTONE POROSITY



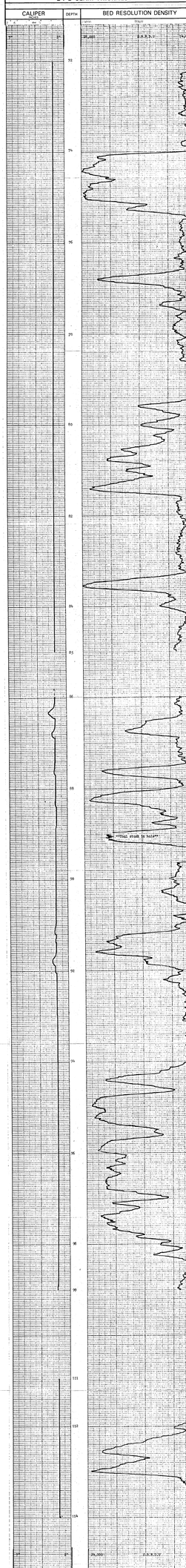
Gamma Ray	DEPTH	Neutron-Neutron	
475		0	500

BOREHOLE TWP30-X8
CLIENT Consumers Resources Ltd.
AREA Tribes S.T.
COUNTRY Canada



B P B SEAM THICKNESS LOG

CALIPER | DEPTH | BED RESOLUTION DENSITY



CALIPER | DEPTH | BED RESOLUTION DENSITY

BOREHOLE No. 3
AREA Eastern
CLIENT Consolidated Bathurst Ltd.
COUNTRY Canada

SEAM THICKNESS LOG

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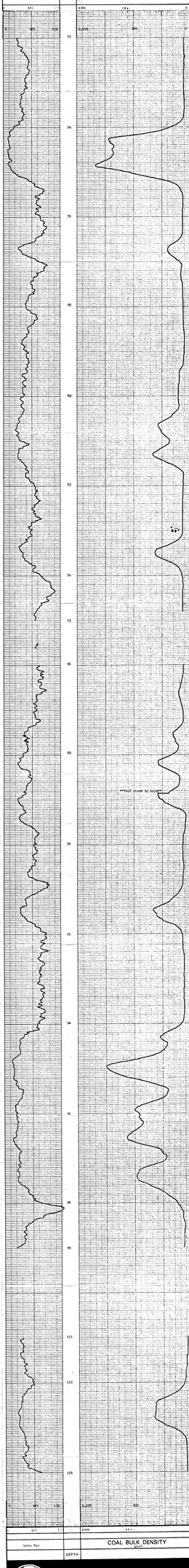
BOREHOLE DATA	WATER TO 1.5 m BELOW G.L.
OPERATION DATA	WATER TO 1.5 m BELOW G.L.
COAL QUALITY LOG INTERVALS	
COAL QUALITY LOG INTERVALS	
RESPONSE TYPE	COAL QUALITY LOG
SOURCE TYPE	COMPENSATED GAMMA RAY
LOG SCALE	1:200
GAMMA RAY	0 - 1000 API
U.S. DENSITY	1.0 - 3.0 g/cm³
REMARKS	

BPB COAL QUALITY LOG

DEPTH	
Gamma Ray	COAL BULK DENSITY g/cm³

HOLE SIZE CORRECTION DATA



Gamma Ray	COAL BULK DENSITY g/cm³
DEPTH	

BOREHOLE 79-03-K-B	AREA Kitsault Valley
CLIENT Consolidated Rexspar Ltd.	COUNTRY Canada

COAL QUALITY LOG

Tx. Telkwa 03Gh

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DIPMETER ANALYSIS

CLIENT CROWS NEST RESOURCES
BOREHOLE TW-83D-369 ①
AREA TELKWA, B.C.
COUNTRY CANADA

DATE LOGGED.....18-DEC-83
DATE PROCESSED..06-JAN-84

COMMENTS.....

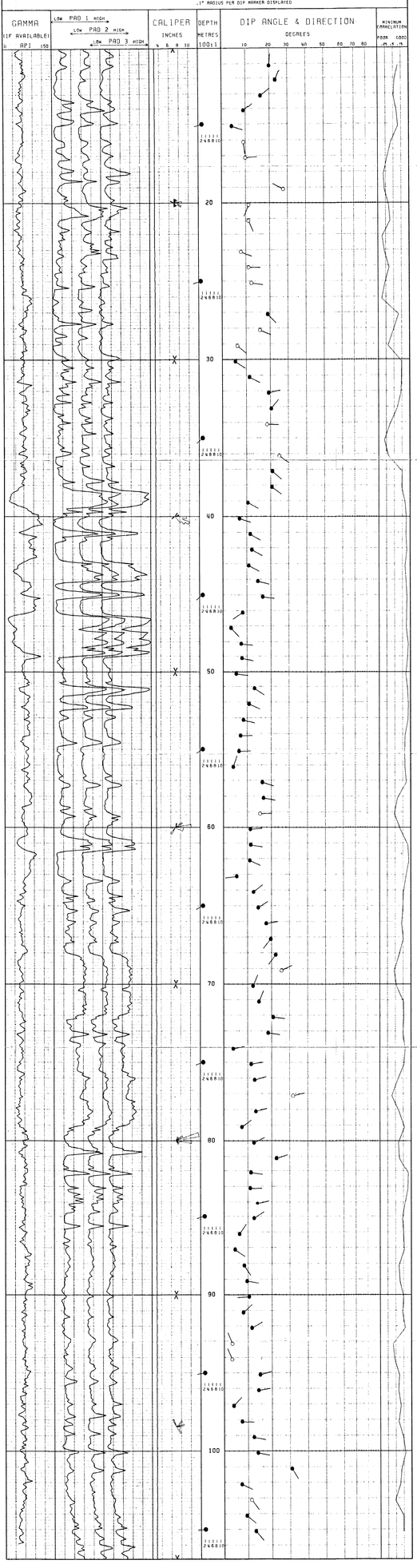
INTERPRETATION PARAMETERS

STEP 1.00M. DECLINATION 26.0 EAST
INTERVAL 2.00M. DEPTH RANGE 10.00 - 106.90M.
SEARCH ANGLE 50. DATE PROCESSED 06-JAN-84

AVERAGE BOREHOLE DEVIATION & DIRECTION ANNOTATED EVERY 10.0M.

ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES. .1" RADIUS PER DIP MARKER DISPLAYED

LEGEND:
GOOD (>0.50)
FAIR (>0.20)



1K- Telkwa 83(3)A

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COAL LITHOLOGY LOG

BOREHOLE TW83D-369 (2)
CLIENT Crowsnest Resources Ltd.
AREA Telkwa B.C.
COUNTRY Canada
DATE LOGGED Dec 18/83
DEPTH SCALE 1:100

BOREHOLE DATA
Ground Level
Ground Level
107.7m
FLUID DATA
Supergel-X & water
OPERATION DATA
W. Cavendish

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE # 101

LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM	CAL COEFF	FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY			367	Y	9m/m	D	9m/m	1	---	1.55	106	00	106	
LS DENSITY	SIDEWALL POSITION	5863	0338	Y	9m/m	D	9m/m	.3	7.27	---	106	00	106	
CALIPER			7" - 2'	Y	9m/m	D	9m/m	.3	---	---	106	00	106	

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

			INTERVAL TOTAL
FROM	63	54	
TO	59	37	
INTERVAL	4	17	21m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
217	N-N	1:100	
227	Dipmeter		

REFER TO ADDITIONAL HEADINGS

REMARKS

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367 VALUE 51 @ 2" DIAM
JIG MARK SHOWN AT ABOVE VALUE x0.1

JIG CAL DATE 11/7/83 JIG VALUE 5382 SDU @ g/cm³
JIG No 0338 SPAN 6000 NORM SDU/CPS 7.24

7 ins 726 cps
2 ins 456 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

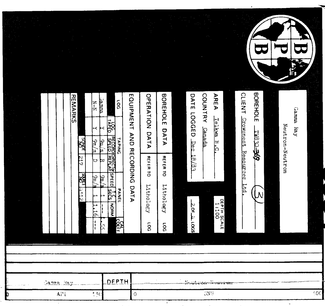
HOLE SIZE CORRECTION DATA

GAMMA RAY	DEPTH	BULK DENSITY g/cm³	CALIPER INCHES

BOREHOLE TW83D-369 AREA Telkwa B.C.
CLIENT Crowsnest Resources Ltd. COUNTRY Canada

COAL LITHOLOGY LOG

MY A50261 R



1K - Tilson 93 G/A

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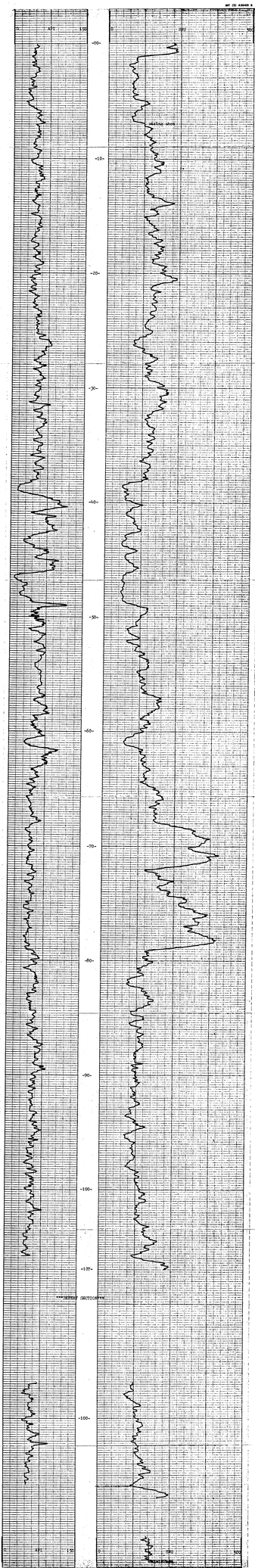
SANDSTONE POROSITY

MP (3) A98481 B



BPB

BOREHOLE TWDD-369

CLIENT Dragonmont Resources Ltd.

AREA Taltson H.D.

COUNTRY Canada

TK - TELKWA 83(3)A

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BPB

BOREHOLE ZKG-D-369 (4)

CLIENT Cominco Resources Ltd.

AREA Telkwa S.G.

COUNTRY Canada

DATE LOGGED Dec 18/83

DEPTH SCALE 1:20

3 OF 3 LOGS

COAL QUALITY LOG

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

SIDEWALL POSITION

LOG	TAPING		PANEL		LOG
	LOG	SPEED	SPEED	SPEED	NORM
SWIFT	1	24/8	8	24/4	---
S.S.DENSITY	1	24/8	8	24/4	1 7.27

SOURCE SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

COAL QUALITY	LOG INTERVALS
FROM	63 50
TO	59 30
INTERVAL	5 17

LOG SUITE: GAMMA RAY, L.S. DENSITY

FROM		INTER VAL
TO		20%
INTERVAL		1:24

REMARKS

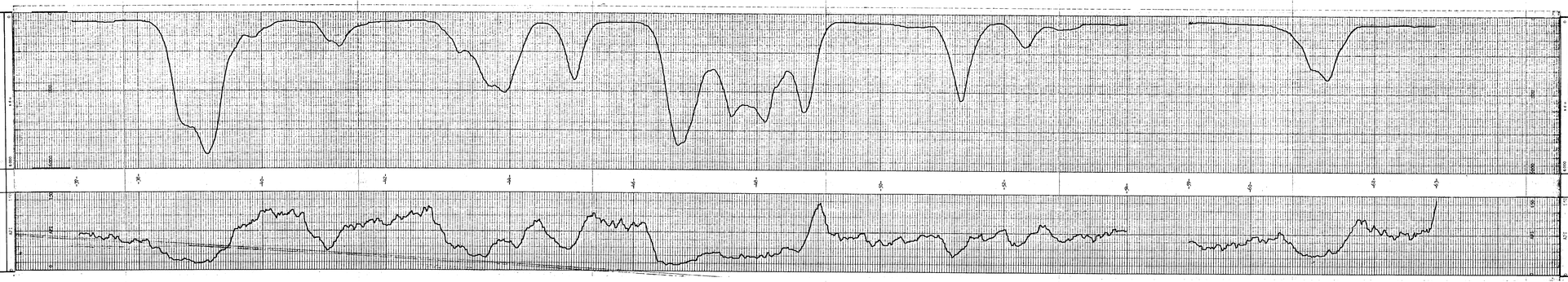
B.P.B. COAL QUALITY LOG

DEPTH

COAL BULK DENSITY g/cm3

HOLE SIZE CORRECTION DATA

Gamma Ray



COAL BULK DENSITY g/cm3

DEPTH

Gamma Ray

BOREHOLE ZKG-D-369

CLIENT Cominco Resources Ltd.

AREA Telkwa S.G.

COUNTRY Canada

COAL QUALITY LOG

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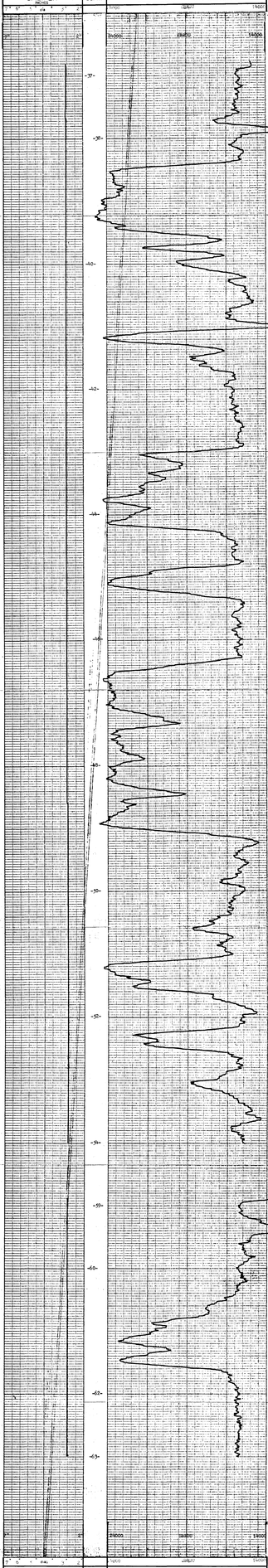
BOREHOLE 2K-30-89 (5)
CLIENT Greenwood Resources Ltd.
AREA Telkwa B.C.
COUNTRY Canada
DATE LOGGED Dec 16/93
SCALE 1:100
SEAM THICKNESS LOG
BOREHOLE DATA
OPERATION DATA
EQUIPMENT AND RECORDING DATA
COAL COMBINATION SONDE
SEAM THICKNESS LOG INTERVALS
SEAM THICKNESS LOG INTERVALS
SONDE TYPE
COAL COMBINATION SONDE
LOG SUITE
CALIPER
B.R. DENSITY
REMARKS

B.P.B. SEAM THICKNESS LOG



BOREHOLE 2K-30-89
CLIENT Greenwood Resources Ltd.
AREA Telkwa B.C.
COUNTRY Canada

SEAM THICKNESS LOG