



PE-Burnt River 8157A

BOREHOLE BR-50
CLIENT TECH-COMP

AREA Burnt River
COUNTRY CANADA
DATE LOGGED 14/09/80

DEPTH SCALE
1 OF 2 LOGS

COAL LITHOLOGY LOG

PERMANENT DATUM	7.00	8.00
ELEVATION OF P.D.	888	ORILLER
MEASUREMENTS FROM	7.75	ZADPT.
DEPTH REACHED	77m	
CASING SIZE	1 1/4" TO 4" 2	TO
BIT SIZES	3 10 4 10 4 10 4 10	TO
CASING SIZES	1 1/4" TO 4 1/2" 2	TO

SONDE TYPE

COAL COMBINATION SONDE	
SONDE	
VISCOSITY	
TEMP. AT NEAR WELD	
BHT	

LOG SUITE

GAMMA RAY	
U.S. DENSITY	
CALIPER	

489

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE												
LOG	EQUIPMENT			TAPING		PANEL		CAL COEFF	DEPTHS		SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT/REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL
GAMMA RAY	110	5845	510AC	Y	9m/m	D	4m/m	1	1.4	21	0	21
U.S. DENSITY			530SD	Y	9m/m	D	9m/m	1	6.5	21	0	21
CALIPER												

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

FROM	-	INTERVAL	
TO	-	TOTAL	
INTERVAL			

ADDITIONAL SONDES RUN				REMARKS	
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER	TO
204	NEUT-DN-NEUT-ON				

LOGGED IN MUDS - CALIPER NOT PLAYED OUT

BPB COAL LITHOLOGY LOG

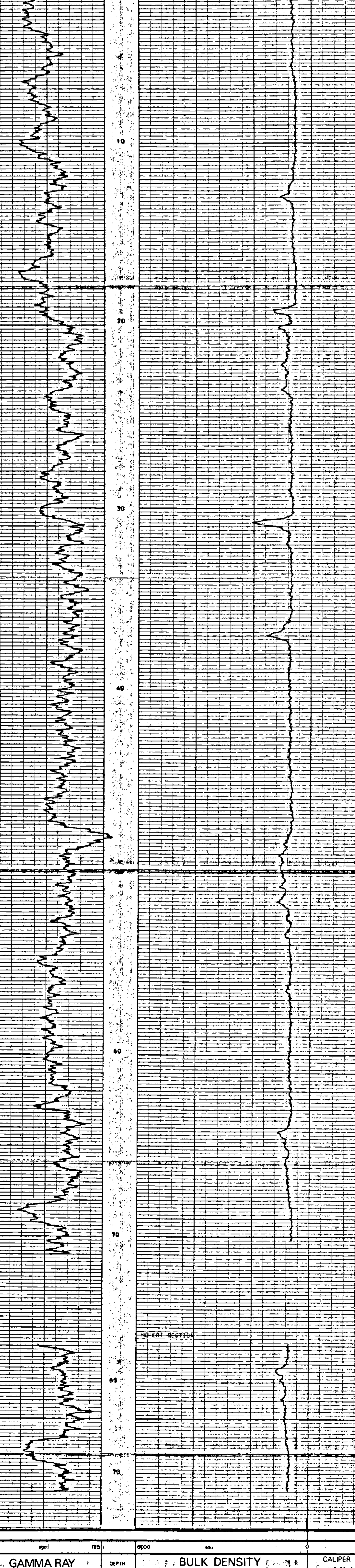
CALIBRATION DATA

JIG No 367	VALUES 12 @ 12 DIAM	JIG CAL DATE 7/06/80	JIG VALUE 530SD	SOU @	g/cm ³	ms	cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No 0338	SPAN 3000	NORM	6.5	ms	cps

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

HOLE SIZE CORRECTION DATA

2	12	125	13	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	CALIPER
		g/cm ³	INCHES



BOREHOLE BR-50 AREA Burnt River
CLIENT TECH-COMP COUNTRY CANADA

COAL LITHOLOGY LOG



NEUTRON-NEUTRON LOG

BOREHOLE BR-50
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 14/08/88

DEPTH SCALE
200-1

2 OF 2 LOGS

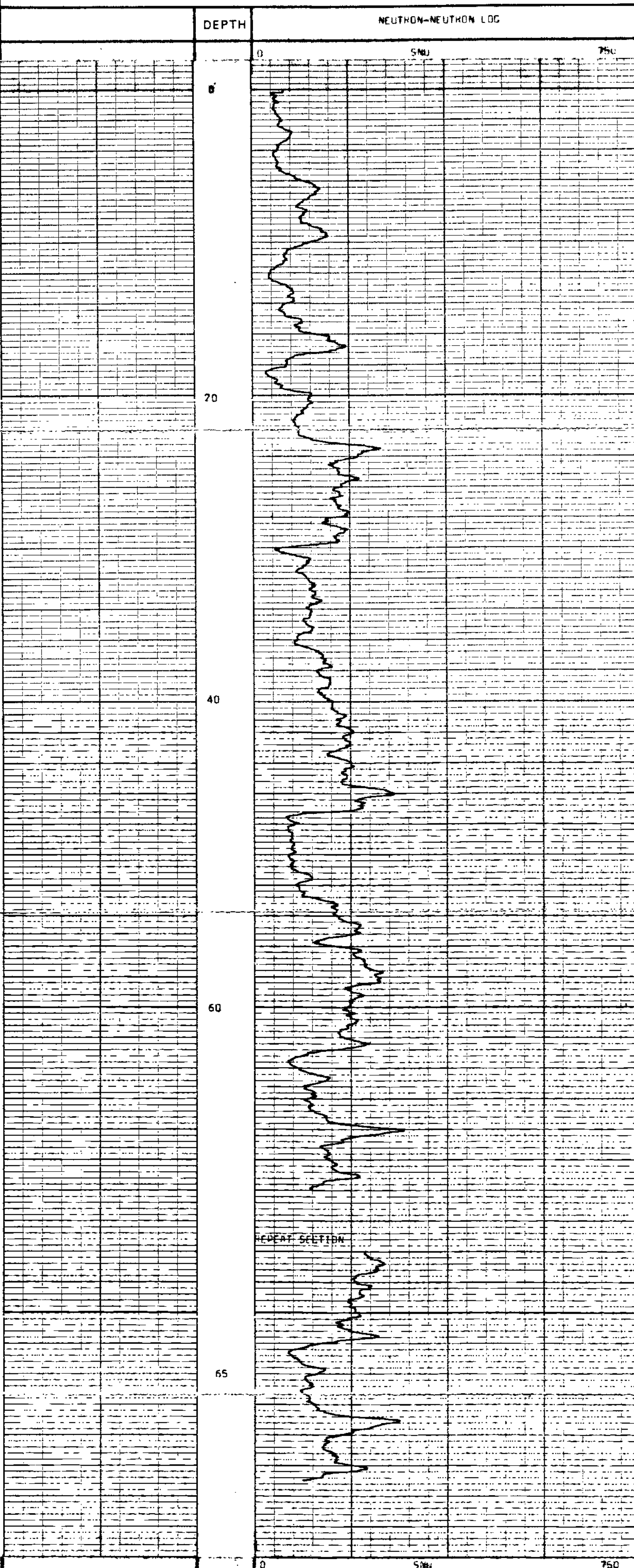
BOREHOLE DATA REFER TO LITHOLOGY LOG
OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	CAT
LOG	RECORD DIRECTLY	T C	NORM
TAPERED	RECORD REFLAT	SPEED SECS	
Y	9m/m	2	9m/m
		1	6.9

REMARKS
LOGGED IN NODS

489



DEPTH	NEUTRON-NEUTRON LOG



BOREHOLE BR-50
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA



PC - Burnt River 80(3)A

BOREHOLE AN-51
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 19/08/80

DEPTH SCALE
2001

1 OF 4 LOGS

COAL

LITHOLOGY

LOG

SONDE TYPE
COAL
COMBINATION
SONDE

LOG SUITE
GAMMA RAY
L.S. DENSITY
CALIPER

BOREHOLE DATA
PERMANENT DIALUM 2001
ELEVATION OF P.D. 1707
MAGNETIC STRONG 9.8
DEPTH REACHED 109m
CASING SHOE 5m
BIT SIZES 1 1/2" TO 1 3/4"
CASING SIZES 1 3/4" TO 5m

FLUID DATA
NATURE WATER
SG 1.0
LEVEL 107
VISCOSITY 100
PH 7.5

OPERATION DATA
FIRST READING 107m
LAST READING 107m
INTERVAL LOGGED 0
UNIT-TRUCK No 46/25
ENGINEER F.C. PHILLIPS
WITNESS

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EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE													
LOG	EQUIPMENT			TAPING			PANEL			DEPTHS		SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT/REPLAY	SPEED	TC SECS	NORM	FROM	TO		INTERVAL
GAMMA RAY	110	5845			9m/m	R	9m/m	1	-	1.42	107	0	107
L.S. DENSITY			510API	Y	9m/m	R	9m/m	3	6.5	-	107	0	107
CALIPER			530SDU	Y	9m/m	R	9m/m	3	6.5	-	107	0	107

LOGGED IN RDS CALIPER NOT PLUMED UNIT IN GENERAL

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

FROM	107m	75m	46m	INTERVAL TOTAL
TO	97m	72m	41m	
INTERVAL	10m	5m	5m	24m

ADDITIONAL SONDES RUN				REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	
204	NEUTRON			LOGGED IN RDS CALIPER IN TACT ONLY

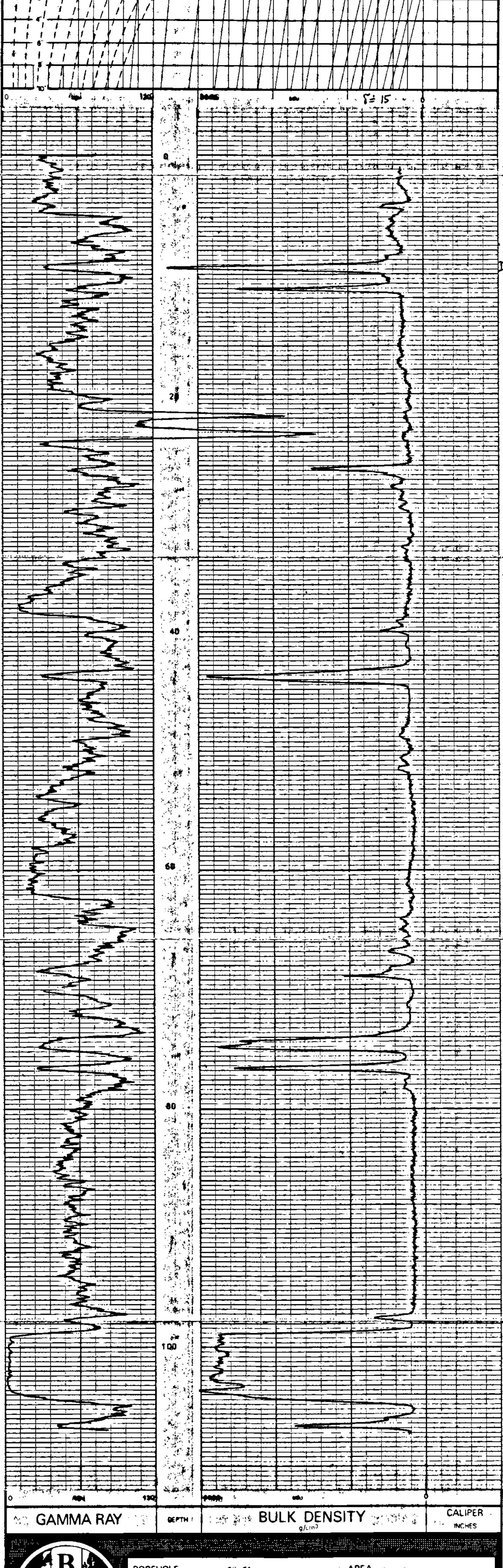
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367	VALUES 10 12 DIAM	JIG CAL DATE 17/06/80	JIG VALUE 530SDU @	g/cm ³	ms	cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No 338	SPAN 2500	NORM SDU - 6.5	ms	cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE AN-51 AREA BURNT RIVER
CLIENT TECH-CORP COUNTRY CANADA
COAL LITHOLOGY LOG





R-Burnt River 6033A B2 51

W. THOMAS W. J. ...

BOREHOLE BR-31
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 19/08/80

DEPTH SCALE
0 or 1 LOGS

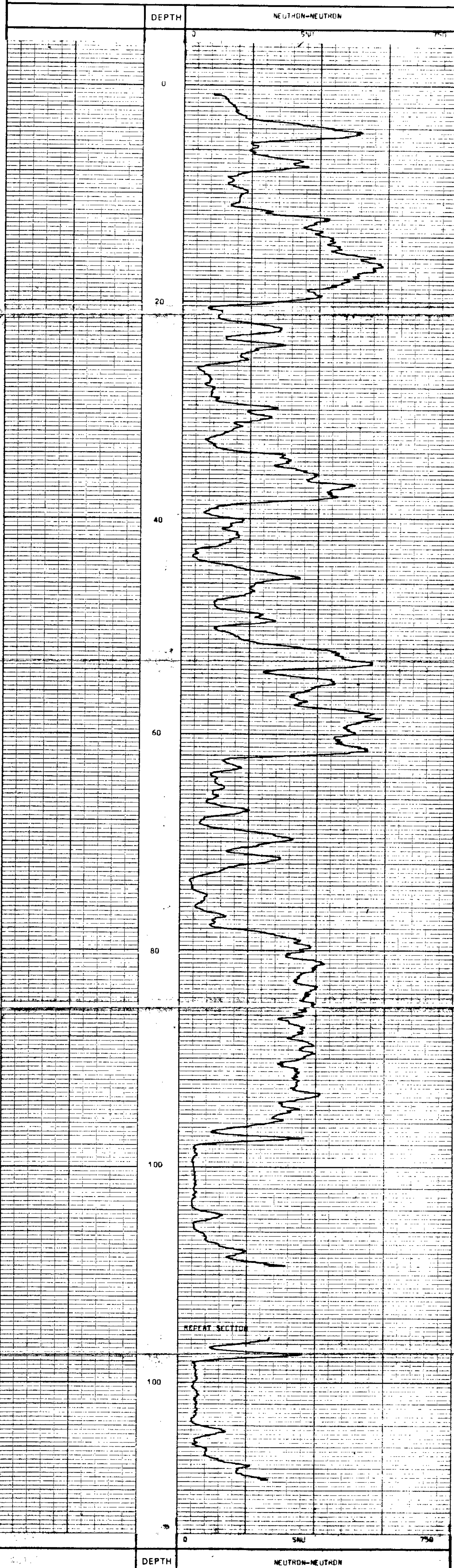
BOREHOLE DATA REFER TO LITHOM DTA LOG

OPERATION DATA REFER TO LITHOM DTA LOG

EQUIPMENT AND RECORDING DATA

LOGS	TAPPING		PANEL		CAL	
	LOG RECORD	LOG RECORD	SPEED	SPEED	SCS	NORM
	Y	3m/m	Y	3m/m	Y	.DZ

REMARKS
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BOREHOLE BR-31 AREA BURNT RIVER
CLIENT TECH-CORP COUNTRY CANADA



BR-51
TECH-CORP
AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 19/08/80

BOREHOLE BR-51
CLIENT TECH-CORP
AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 19/08/80

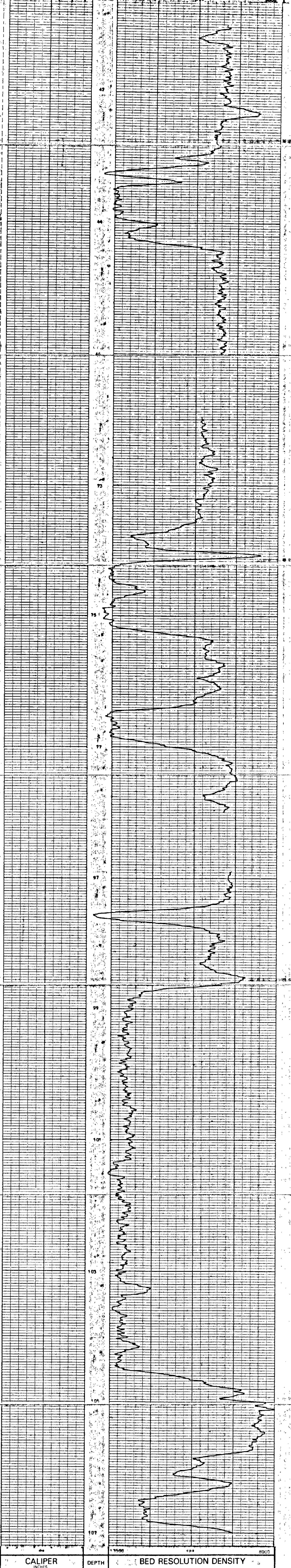
SEAM THICKNESS LOG
THICKNESS LOG
SEAM THICKNESS LOG

SEAM THICKNESS LOG
THICKNESS LOG
SEAM THICKNESS LOG

SEAM THICKNESS LOG
THICKNESS LOG
SEAM THICKNESS LOG

SEAM THICKNESS LOG
THICKNESS LOG
SEAM THICKNESS LOG

B P B SEAM THICKNESS LOG



CALIPER INCHES

BOREHOLE BR-51
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA

SEAM THICKNESS LOG

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BOREHOLE _____
 CLIENT _____

AREA
 COUNTRY
 DATE LOGGED

DEPTH SCALE
 791.1
 OF 1000

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

COAL QUALITY LOG

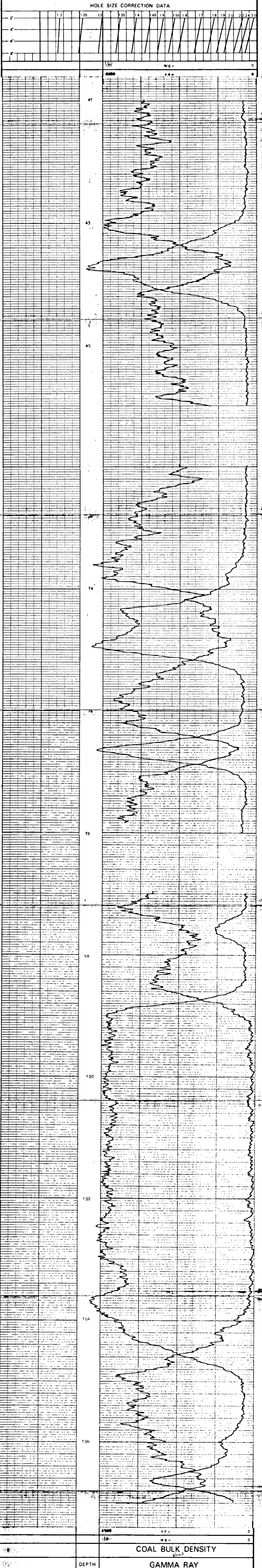
SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

COAL QUALITY LOG INTERVALS

FROM	1.7m	2.0m	4.1m
TO	2.0m	2.3m	4.4m
INTERVAL	0.3m	0.3m	0.3m
FROM			
TO			
INTERVAL			
VAL TOTAL			

BPB COAL QUALITY LOG



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BOREHOLE BP-52(DEC)REV 01/80

CLIENT TECH-CON

AREA BUNT RIVER

COUNTRY CANADA

DATE LOGGED 31/08/90

DEPTH SCALE 5001

LOG COAL

LITHOLOGY COAL

SONDE TYPE DLK-3EL

COAL COMBINATION SONDE

LOG SUITE GAMMA RAY

GAMMA RAY LS DENSITY

LS DENSITY CALIPER

OPERATION DATA

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EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE		EQUIPMENT		TAPING		PANEL		CAL COEFF		DEPTHS			SEAM LOG RUN	
LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL	START	STOP
GAMMA RAY	11U	5A45	5104P	Y	9m/m	D	9m/m	1	-	1.42	108	0	108	
LS DENSITY			5305DU	Y	9m/m	D	9m/m	.3	6.5	-	108	0	108	
CALIPER				Y	9m/m	D	9m/m	.3	-	-	108	0	108	

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)					INTERVAL TOTAL
FROM	105m	82m	54m		
TO	96m	76m	50m		
INTERVAL	9m	6m	4m		19m

ADDITIONAL SONDES RUN					REMARKS
SONDE	LOG	GENERAL SCALE	DETAIL LOG	SCALE LOG	
	NEUTRIN				REFER TO ADDITIONAL HEADINGS
	F.E				

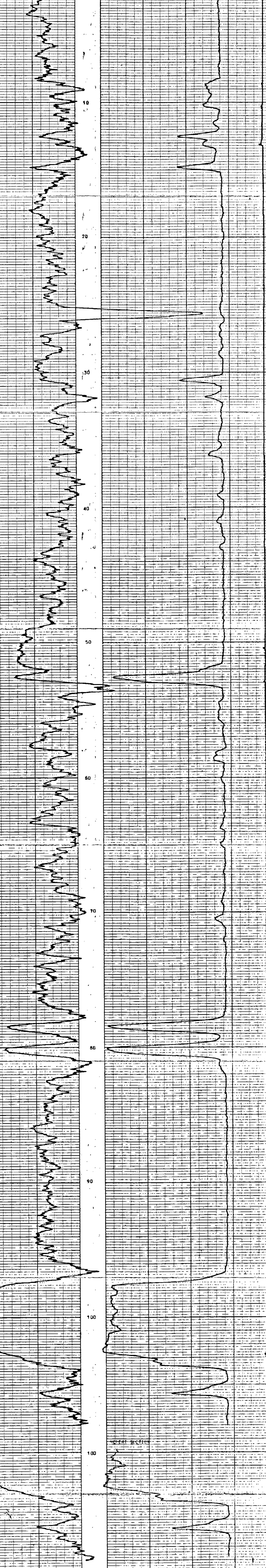
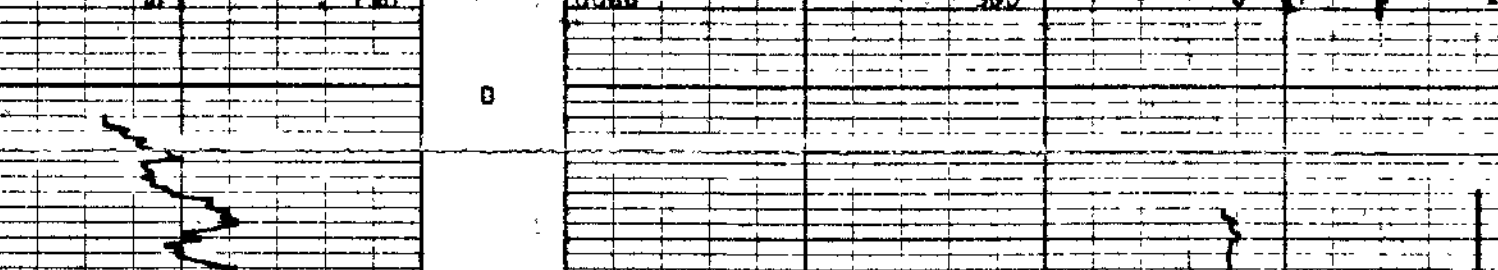
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367	VALUE 5104	12 DIAM	JIG CAL DATE 17/06/80	JIG VALUES 5305DU @	g/cm ³	2	ms	480	cps
JIG MARK SHOWN AT ABOVE VALUE			JIG No 1338	SPAN 6000	NORM	6.5	ms	890	cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA

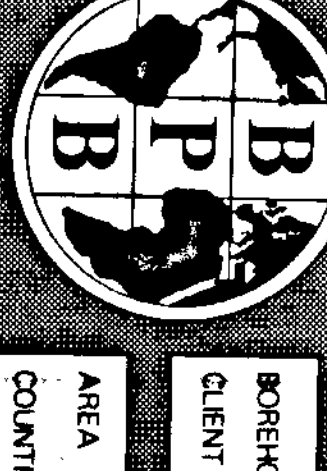


GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE BP-52(DEC)REV 01/80 AREA BUNT RIVER
 CLIENT TECH-CON COUNTRY CANADA

COAL LITHOLOGY LOG



COAL LITHOLOGY LOG

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

BOREHOLE DATA
 BOREHOLE: BR-52 (DEEPENED)
 CLIENT: TECH-CONS
 AREA: BURNT RIVER
 COUNTRY: CANADA
 DATE LOGGED: 31/08/80
 DEPTH SCALE: 100'
 OF SLOGS: 0

FLUID DATA
 NATURE: SU UC-CEL
 VISCOSITY: SU UC-CEL
 PH: SU UC-CEL
 TEMPERATURE: SU UC-CEL
 OPERATION DATA:
 TEST BEARING: 1.09t
 TEST RANGE: 1.02m
 INTERVAL LOGGED: 1.02m
 ANT. TRACK No: 46/24
 LOGGERS: S.B.
 WITNESSES:

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT	TAPING	PANEL	CAL COEFF	DEPTHS	SEAM LOG RUN						
SONDE	SOURCE	LOG TAPED	RECORD SPEED	DIRECT/REPLAY	SPEED	F.C. SECS	NORM	FROM	TO	INTERVAL		
GAMMA RAY	110	5RA4	510AP1	Y	3m/m	D	3m/m	1	1.42	108	0	108
L.S. DENSITY			5305DU	Y	3m/m	D	3m/m	.3	6.5	108	0	108
CALIPER			SIDEWALL POSITION	Y	9m/m	D	9m/m	.3	-	108	0	108

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

FROM	105m	82m	54m	INTERVAL TOTAL
TO	96m	76m	50m	
INTERVAL	9m	6m	4m	17m

ADDITIONAL SONDES RUN

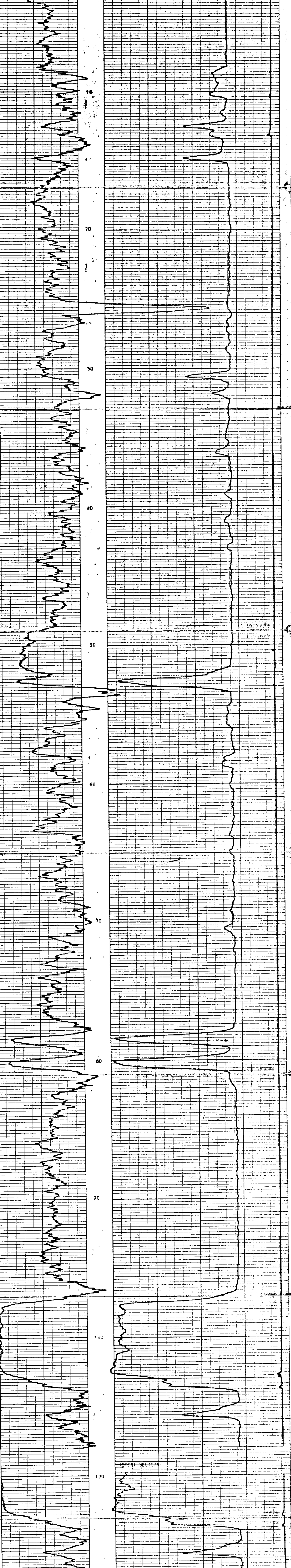
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS
	NEUTRON			
	F.E			

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367	VALUE 51 (12 DIAM)	JIG CAL DATE 17/06/80	JIG VALUES 5305DU @	g/cm ³	2	ms AHI	cps
JIG MARK SHOWN AT ABOVE VALUE +		JIG No 7336	SPAN 6000	NORM	6.5	ms BHI	cps

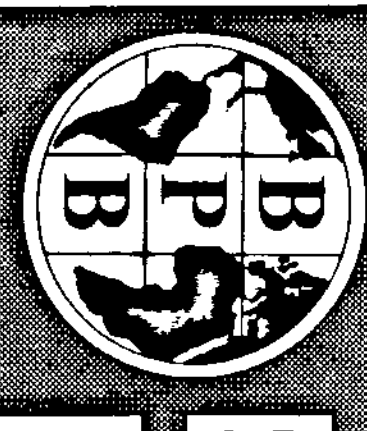
GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

BOREHOLE: BR-52 (DEEPENED) AREA: BURNT RIVER
 CLIENT: TECH-CONS COUNTRY: CANADA





COAL LITHOLOGY LOG

SONDE TYPE
COAL COMBINATION SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY
CALIPER

BOREHOLE DATA
 PERMANENT DATA: S-42(OPENED)
 ELEVATION OF P.D.: 571.77
 MEASUREMENTS FROM: 51
 DEPTH REACHED: 109m
 CASING SHOE: 109m
 BIT SIZES: 1 1/8" TO 2", 2" TO 2 1/4", 2 1/4" TO 3", 3" TO 3 1/2", 3 1/2" TO 4"
 CASING SIZES: 1" TO 1 1/2", 1 1/2" TO 2"

CLIENT: TECH-CORP
AREA: Burnt River
COUNTRY: CANADA
DATE LOGGED: 31/08/80
DEPTH SCALE: 0-100
LOGS: 1 OF 4 LOGS

OPERATION DATA
 NATURE OF TEST: CHECK-OUT
 LEVEL: 60 Dimensions
 VISCOSITY: _____
 RIM AT MEAS. TEMP: _____
 BHT: _____

FLUID DATA
 FIRST READING: 1.08m
 LAST READING: 0
 INTERVAL LOGGED: 1.08m
 UNIT-TRUCK No: 46/24
 ENGINEER: R. C. BIRCHM
 WITNESS: _____

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EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT		TAPING			PANEL		CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS		NORM	FROM	TO	
GAMMA RAY	110	5845										
L.S. DENSITY												
CALIPER												

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

FROM	105m	82m	54m	INTERVAL TOTAL
TO	96m	76m	50m	
INTERVAL	9m	6m	4m	19m

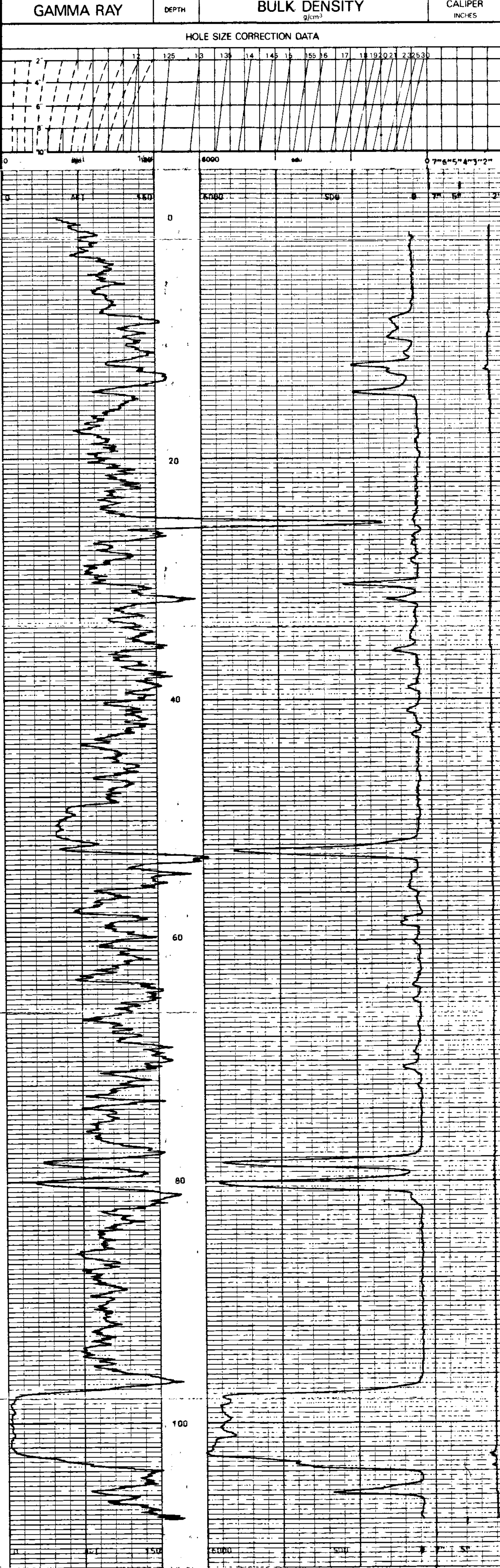
ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAILED SCALE LOG	REFER TO ADDITIONAL READINGS
	HEULTON			
	F.E.			

REMARKS

BPB COAL LITHOLOGY LOG CALIBRATION DATA

JIG No 367	VALUE 1.0 @ 2" DIAM	JIG CAL DATE 17/06/80	JIG VALUE 5305080 @	g/cm ³	2 ms 480 cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No 0338	SPAN 6000	NORM 6.5	4 ms 890 cps



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE: B-52(OPENED) **AREA:** BURNT RIVER
CLIENT: TECH-CORP **COUNTRY:** CANADA

COAL LITHOLOGY LOG



BOREHOLE BR-52(DEEPEMED)
CLIENT TECH-COOP

AREA BURNT RIVER
COUNTRY CANADA

DATE LOGGED 31/08/80

DEPTH SCALE
1 OF 5 LOGS

COAL

LITHOLOGY

LOG

SONDE TYPE

COAL COMBINATION SONDE

LOG SLIT
GAMMA RAY
L.S DENSITY
CALIPER

BOREHOLE DATA

PERMANENT DATA
ELEVATION OF P.O. 808
MAGNETIC CORRECTION 0
DEPTH REACHED 109m
CASING SHOE 109m
BIT SIZES 1 1 1/2 TO 1 1/4, 2 TO 1 1/2
CASING SIZES 1 1/2 TO 1 1/4, 2 TO 1 1/2

FLUID DATA

NATURE OF FLUID
TEMPERATURE 60
LEVEL
VISCOSITY
RHO AT PRESSURE
BHT

OPERATION DATA

FIRST READING 108m
LAST READING 108m
INTERVAL LOGGED 4 1/2
UNIT - TRUCK No
ENGINEER
WITNESS

489

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE														
LOG	EQUIPMENT			TAPING			PANEL		CAL COEFF	DEPTHS			SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT OF REPLAY	SPEED	TC SECS		FROM	TO	INTERVAL		
GAMMA RAY	110	5A45		Y	9m/m	H	9m/m	1	-	1.42	108	0	108	
L.S DENSITY			5305DU	Y	9m/m	H	9m/m	.3	6.5	-	108	0	108	
CALIPER		SIDEWALL POSITION		Y	9m/m	H	9m/m	.3	-	-	108	0	108	

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)				INTERVAL TOTAL
FROM	TO	INTERVAL		
105m	82m	54m		19m
96m	76m	50m		
	9m	6m	4m	

ADDITIONAL SONDES RUN				REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	
	REUTHEN			REFER TO ADDITIONAL HEADINGS
	F.E.			

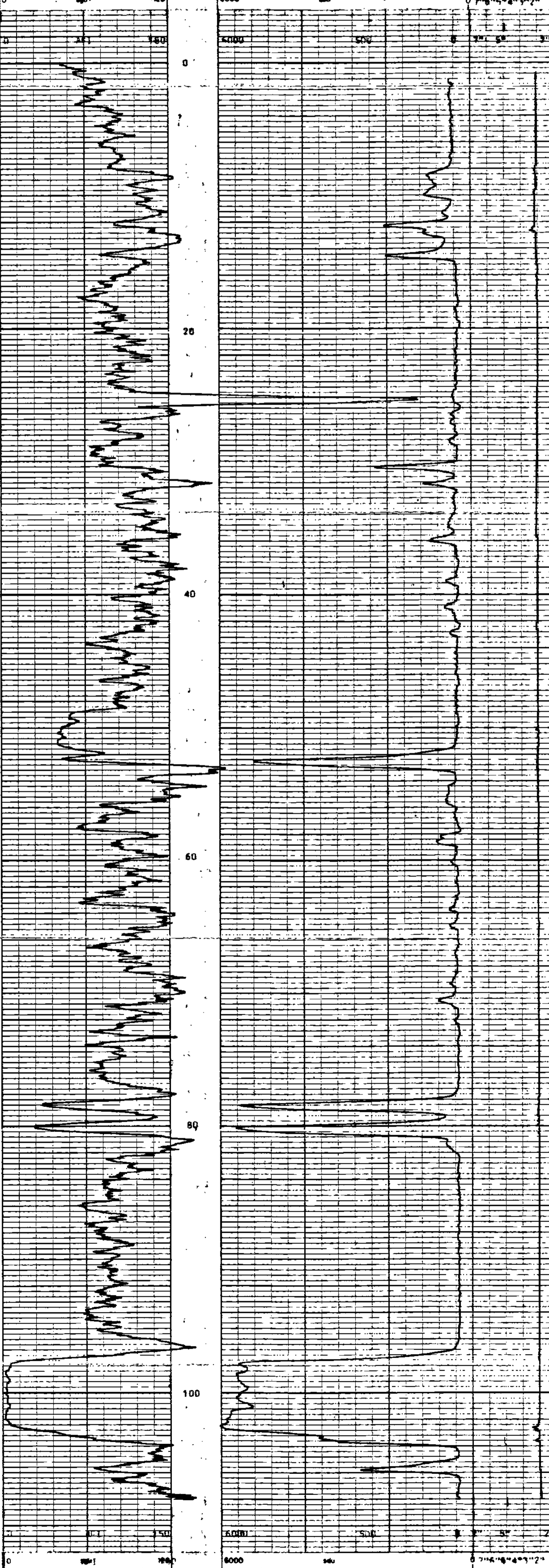
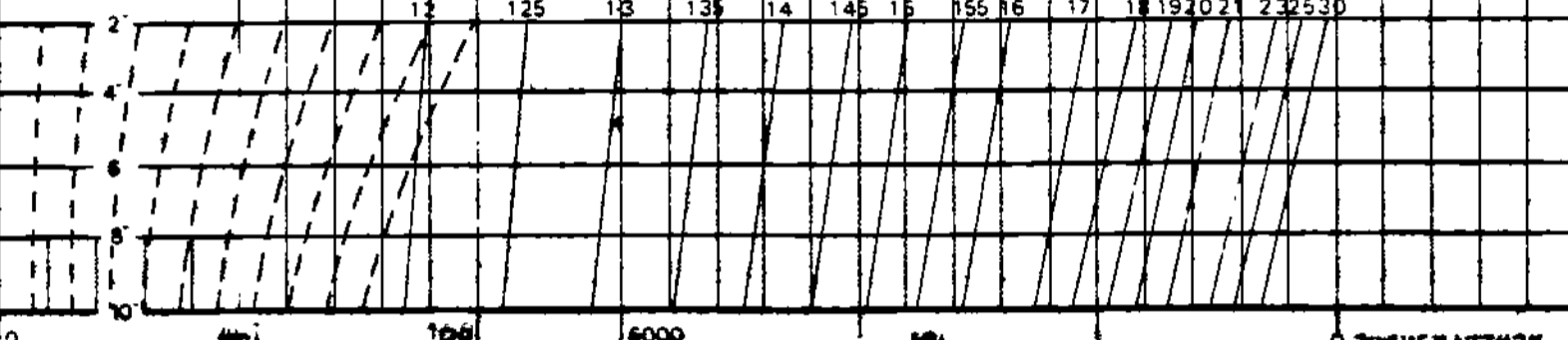
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367	VALUE 0.001 2 DIAM	JIG CAL DATE 17/06/80	JIG VALUE 5305DU @	g/cm ³	2 ins 480 cps
JIG MARK SHOWN AT ABOVE VALUE +		JIG No 0338	SPAN 6000	NORM 6.5	4 ins 890 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE BR-52(DEEPEMED) AREA BURNT RIVER
CLIENT TECH-COOP COUNTRY CANADA

COAL LITHOLOGY LOG



PR-Burnt River SOL3DA BR 52

LOG SUITE
GAMMA RAY
L.S DENSITY
CALIPER

SONDE TYPE
COAL COMBINATION
SONDE

COAL LITHOLOGY LOG

BOREHOLE BH-52(DEEPENED)
CLIENT TECH-CORP
AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 11/06/80
DEPTH SCALE 2001'

BOREHOLE DATA
PERMANENT DATUM 3-CHAND L.F.F.L.
ELEVATION OF P.D. 470.0
WASURMINTSFROM 315
DEPTH REACHED 109m 357ft.
CASING SHOE 109m 357ft.
BIT SIZES 1 NC3 TO 1 1/2 TO 2 TO 3 TO 4 TO 5 TO 6 TO 7 TO 8 TO 9 TO 10 TO 11 TO 12 TO 13 TO 14 TO 15 TO 16 TO 17 TO 18 TO 19 TO 20 TO 21 TO 22 TO 23 TO 24 TO 25 TO 26 TO 27 TO 28 TO 29 TO 30 TO 31 TO 32 TO 33 TO 34 TO 35 TO 36 TO 37 TO 38 TO 39 TO 40 TO 41 TO 42 TO 43 TO 44 TO 45 TO 46 TO 47 TO 48 TO 49 TO 50 TO 51 TO 52 TO 53 TO 54 TO 55 TO 56 TO 57 TO 58 TO 59 TO 60 TO 61 TO 62 TO 63 TO 64 TO 65 TO 66 TO 67 TO 68 TO 69 TO 70 TO 71 TO 72 TO 73 TO 74 TO 75 TO 76 TO 77 TO 78 TO 79 TO 80 TO 81 TO 82 TO 83 TO 84 TO 85 TO 86 TO 87 TO 88 TO 89 TO 90 TO 91 TO 92 TO 93 TO 94 TO 95 TO 96 TO 97 TO 98 TO 99 TO 100 TO 101 TO 102 TO 103 TO 104 TO 105 TO 106 TO 107 TO 108 TO 109 TO 110 TO 111 TO 112 TO 113 TO 114 TO 115 TO 116 TO 117 TO 118 TO 119 TO 120 TO 121 TO 122 TO 123 TO 124 TO 125 TO 126 TO 127 TO 128 TO 129 TO 130 TO 131 TO 132 TO 133 TO 134 TO 135 TO 136 TO 137 TO 138 TO 139 TO 140 TO 141 TO 142 TO 143 TO 144 TO 145 TO 146 TO 147 TO 148 TO 149 TO 150 TO 151 TO 152 TO 153 TO 154 TO 155 TO 156 TO 157 TO 158 TO 159 TO 160 TO 161 TO 162 TO 163 TO 164 TO 165 TO 166 TO 167 TO 168 TO 169 TO 170 TO 171 TO 172 TO 173 TO 174 TO 175 TO 176 TO 177 TO 178 TO 179 TO 180 TO 181 TO 182 TO 183 TO 184 TO 185 TO 186 TO 187 TO 188 TO 189 TO 190 TO 191 TO 192 TO 193 TO 194 TO 195 TO 196 TO 197 TO 198 TO 199 TO 200 TO 201 TO 202 TO 203 TO 204 TO 205 TO 206 TO 207 TO 208 TO 209 TO 210 TO 211 TO 212 TO 213 TO 214 TO 215 TO 216 TO 217 TO 218 TO 219 TO 220 TO 221 TO 222 TO 223 TO 224 TO 225 TO 226 TO 227 TO 228 TO 229 TO 230 TO 231 TO 232 TO 233 TO 234 TO 235 TO 236 TO 237 TO 238 TO 239 TO 240 TO 241 TO 242 TO 243 TO 244 TO 245 TO 246 TO 247 TO 248 TO 249 TO 250 TO 251 TO 252 TO 253 TO 254 TO 255 TO 256 TO 257 TO 258 TO 259 TO 260 TO 261 TO 262 TO 263 TO 264 TO 265 TO 266 TO 267 TO 268 TO 269 TO 270 TO 271 TO 272 TO 273 TO 274 TO 275 TO 276 TO 277 TO 278 TO 279 TO 280 TO 281 TO 282 TO 283 TO 284 TO 285 TO 286 TO 287 TO 288 TO 289 TO 290 TO 291 TO 292 TO 293 TO 294 TO 295 TO 296 TO 297 TO 298 TO 299 TO 300 TO 301 TO 302 TO 303 TO 304 TO 305 TO 306 TO 307 TO 308 TO 309 TO 310 TO 311 TO 312 TO 313 TO 314 TO 315 TO 316 TO 317 TO 318 TO 319 TO 320 TO 321 TO 322 TO 323 TO 324 TO 325 TO 326 TO 327 TO 328 TO 329 TO 330 TO 331 TO 332 TO 333 TO 334 TO 335 TO 336 TO 337 TO 338 TO 339 TO 340 TO 341 TO 342 TO 343 TO 344 TO 345 TO 346 TO 347 TO 348 TO 349 TO 350 TO 351 TO 352 TO 353 TO 354 TO 355 TO 356 TO 357 TO 358 TO 359 TO 360 TO 361 TO 362 TO 363 TO 364 TO 365 TO 366 TO 367 TO 368 TO 369 TO 370 TO 371 TO 372 TO 373 TO 374 TO 375 TO 376 TO 377 TO 378 TO 379 TO 380 TO 381 TO 382 TO 383 TO 384 TO 385 TO 386 TO 387 TO 388 TO 389 TO 390 TO 391 TO 392 TO 393 TO 394 TO 395 TO 396 TO 397 TO 398 TO 399 TO 400 TO 401 TO 402 TO 403 TO 404 TO 405 TO 406 TO 407 TO 408 TO 409 TO 410 TO 411 TO 412 TO 413 TO 414 TO 415 TO 416 TO 417 TO 418 TO 419 TO 420 TO 421 TO 422 TO 423 TO 424 TO 425 TO 426 TO 427 TO 428 TO 429 TO 430 TO 431 TO 432 TO 433 TO 434 TO 435 TO 436 TO 437 TO 438 TO 439 TO 440 TO 441 TO 442 TO 443 TO 444 TO 445 TO 446 TO 447 TO 448 TO 449 TO 450 TO 451 TO 452 TO 453 TO 454 TO 455 TO 456 TO 457 TO 458 TO 459 TO 460 TO 461 TO 462 TO 463 TO 464 TO 465 TO 466 TO 467 TO 468 TO 469 TO 470 TO 471 TO 472 TO 473 TO 474 TO 475 TO 476 TO 477 TO 478 TO 479 TO 480 TO 481 TO 482 TO 483 TO 484 TO 485 TO 486 TO 487 TO 488 TO 489 TO 490 TO 491 TO 492 TO 493 TO 494 TO 495 TO 496 TO 497 TO 498 TO 499 TO 500 TO 501 TO 502 TO 503 TO 504 TO 505 TO 506 TO 507 TO 508 TO 509 TO 510 TO 511 TO 512 TO 513 TO 514 TO 515 TO 516 TO 517 TO 518 TO 519 TO 520 TO 521 TO 522 TO 523 TO 524 TO 525 TO 526 TO 527 TO 528 TO 529 TO 530 TO 531 TO 532 TO 533 TO 534 TO 535 TO 536 TO 537 TO 538 TO 539 TO 540 TO 541 TO 542 TO 543 TO 544 TO 545 TO 546 TO 547 TO 548 TO 549 TO 550 TO 551 TO 552 TO 553 TO 554 TO 555 TO 556 TO 557 TO 558 TO 559 TO 560 TO 561 TO 562 TO 563 TO 564 TO 565 TO 566 TO 567 TO 568 TO 569 TO 570 TO 571 TO 572 TO 573 TO 574 TO 575 TO 576 TO 577 TO 578 TO 579 TO 580 TO 581 TO 582 TO 583 TO 584 TO 585 TO 586 TO 587 TO 588 TO 589 TO 590 TO 591 TO 592 TO 593 TO 594 TO 595 TO 596 TO 597 TO 598 TO 599 TO 600 TO 601 TO 602 TO 603 TO 604 TO 605 TO 606 TO 607 TO 608 TO 609 TO 610 TO 611 TO 612 TO 613 TO 614 TO 615 TO 616 TO 617 TO 618 TO 619 TO 620 TO 621 TO 622 TO 623 TO 624 TO 625 TO 626 TO 627 TO 628 TO 629 TO 630 TO 631 TO 632 TO 633 TO 634 TO 635 TO 636 TO 637 TO 638 TO 639 TO 640 TO 641 TO 642 TO 643 TO 644 TO 645 TO 646 TO 647 TO 648 TO 649 TO 650 TO 651 TO 652 TO 653 TO 654 TO 655 TO 656 TO 657 TO 658 TO 659 TO 660 TO 661 TO 662 TO 663 TO 664 TO 665 TO 666 TO 667 TO 668 TO 669 TO 670 TO 671 TO 672 TO 673 TO 674 TO 675 TO 676 TO 677 TO 678 TO 679 TO 680 TO 681 TO 682 TO 683 TO 684 TO 685 TO 686 TO 687 TO 688 TO 689 TO 690 TO 691 TO 692 TO 693 TO 694 TO 695 TO 696 TO 697 TO 698 TO 699 TO 700 TO 701 TO 702 TO 703 TO 704 TO 705 TO 706 TO 707 TO 708 TO 709 TO 710 TO 711 TO 712 TO 713 TO 714 TO 715 TO 716 TO 717 TO 718 TO 719 TO 720 TO 721 TO 722 TO 723 TO 724 TO 725 TO 726 TO 727 TO 728 TO 729 TO 730 TO 731 TO 732 TO 733 TO 734 TO 735 TO 736 TO 737 TO 738 TO 739 TO 740 TO 741 TO 742 TO 743 TO 744 TO 745 TO 746 TO 747 TO 748 TO 749 TO 750 TO 751 TO 752 TO 753 TO 754 TO 755 TO 756 TO 757 TO 758 TO 759 TO 760 TO 761 TO 762 TO 763 TO 764 TO 765 TO 766 TO 767 TO 768 TO 769 TO 770 TO 771 TO 772 TO 773 TO 774 TO 775 TO 776 TO 777 TO 778 TO 779 TO 780 TO 781 TO 782 TO 783 TO 784 TO 785 TO 786 TO 787 TO 788 TO 789 TO 790 TO 791 TO 792 TO 793 TO 794 TO 795 TO 796 TO 797 TO 798 TO 799 TO 800 TO 801 TO 802 TO 803 TO 804 TO 805 TO 806 TO 807 TO 808 TO 809 TO 810 TO 811 TO 812 TO 813 TO 814 TO 815 TO 816 TO 817 TO 818 TO 819 TO 820 TO 821 TO 822 TO 823 TO 824 TO 825 TO 826 TO 827 TO 828 TO 829 TO 830 TO 831 TO 832 TO 833 TO 834 TO 835 TO 836 TO 837 TO 838 TO 839 TO 840 TO 841 TO 842 TO 843 TO 844 TO 845 TO 846 TO 847 TO 848 TO 849 TO 850 TO 851 TO 852 TO 853 TO 854 TO 855 TO 856 TO 857 TO 858 TO 859 TO 860 TO 861 TO 862 TO 863 TO 864 TO 865 TO 866 TO 867 TO 868 TO 869 TO 870 TO 871 TO 872 TO 873 TO 874 TO 875 TO 876 TO 877 TO 878 TO 879 TO 880 TO 881 TO 882 TO 883 TO 884 TO 885 TO 886 TO 887 TO 888 TO 889 TO 890 TO 891 TO 892 TO 893 TO 894 TO 895 TO 896 TO 897 TO 898 TO 899 TO 900 TO 901 TO 902 TO 903 TO 904 TO 905 TO 906 TO 907 TO 908 TO 909 TO 910 TO 911 TO 912 TO 913 TO 914 TO 915 TO 916 TO 917 TO 918 TO 919 TO 920 TO 921 TO 922 TO 923 TO 924 TO 925 TO 926 TO 927 TO 928 TO 929 TO 930 TO 931 TO 932 TO 933 TO 934 TO 935 TO 936 TO 937 TO 938 TO 939 TO 940 TO 941 TO 942 TO 943 TO 944 TO 945 TO 946 TO 947 TO 948 TO 949 TO 950 TO 951 TO 952 TO 953 TO 954 TO 955 TO 956 TO 957 TO 958 TO 959 TO 960 TO 961 TO 962 TO 963 TO 964 TO 965 TO 966 TO 967 TO 968 TO 969 TO 970 TO 971 TO 972 TO 973 TO 974 TO 975 TO 976 TO 977 TO 978 TO 979 TO 980 TO 981 TO 982 TO 983 TO 984 TO 985 TO 986 TO 987 TO 988 TO 989 TO 990 TO 991 TO 992 TO 993 TO 994 TO 995 TO 996 TO 997 TO 998 TO 999 TO 1000

FLUID DATA
NATURE OIL
ESTIMATE 60 Ohm-meters

OPERATION DATA
FIRST READING 1.08m
LAST READING 1.08m
INTERVAL LOGGED 1.08m
UNIT-TRUCK No 46/24
ENGINEER H. T. BRADY
WITNESS

489

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM	CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR								FROM	TO	INTERVAL	
GAMMA RAY	110	5R45	510AP1	Y	9m/m	R	9m/m	1	-	1.42	108	0	108	
			510SDU	Y	9m/m	R	9m/m	.3	6.5	-	108	0	108	
L.S DENSITY				Y	9m/m	R	9m/m	.3	-	-	108	0	108	
CALIPER				Y	9m/m	R	9m/m	.3	-	-	108	0	108	

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

FROM	TO	INTERVAL
105m	82m	54m
96m	76m	50m
9m	6m	4m
TOTAL		
19m		

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
	WELDON				
	F.E.				

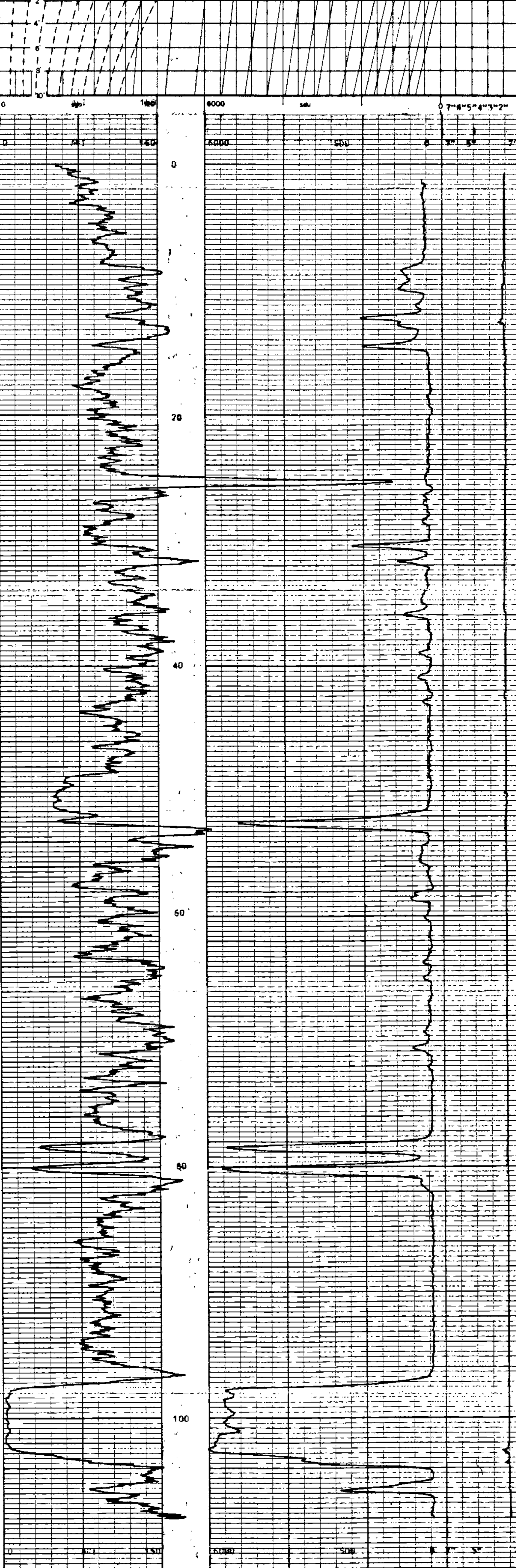
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 357	VALUES 1 (1) 2 DIAM	JIG CAL DATE 17/06/80	JIG VALUE 510SDU @	g/cm ³	2 ins 48(1) cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No 0338	SPAN 6000	NORM CPS 6.5	4 ins 89(1) cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE BH-52(DEEPENED) AREA BURNT RIVER
CLIENT TECH-CORP COUNTRY CANADA

COAL LITHOLOGY LOG



B.P.S. Burnt River 80 (3) A 82 S1

COAL LITHOLOGY LOG

LOG SUITE
GAMMA RAY
L.S. DENSITY
CALIPER

SONDE
COMBINATION
COAL

BOREHOLE		R-52 (DEEP NO. 2)	
CLIENT		TECH-CO	
COUNTRY		CANADA	
DATE LOGGED		31/08/81	
DEPTH SCALE		1001	
LOG NO.		489	

BOREHOLE DATA									
REMANENTUAL	ROUND LEVEL	DEPTH REACHED	LOG NO.	LOG SUITE	LOG DATE	LOG TIME	LOG LOCATION	LOG SURFACE	LOG DEPTH
1	1	1001	489	GAMMA RAY	31/08/81	10:00	1001	1001	1001

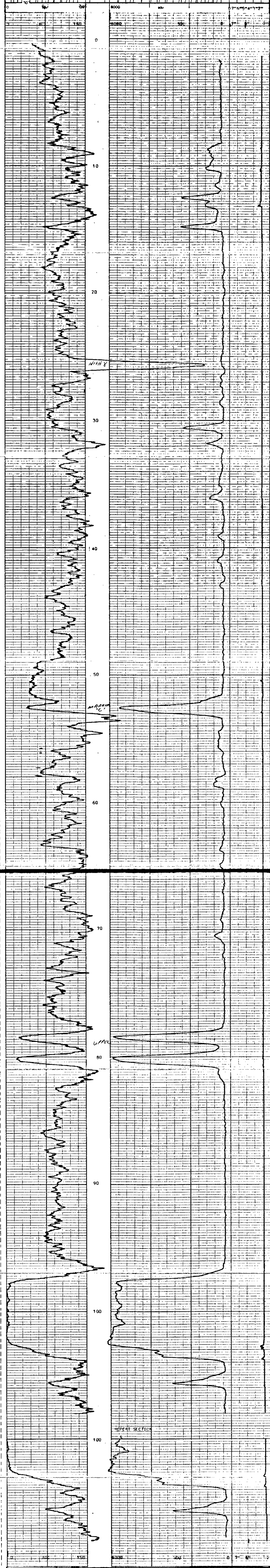
FLUID DATA									
DATE	TIME	DEPTH	TEMPERATURE	PRESSURE	PH	RESISTIVITY	LOG NO.	LOG SUITE	LOG DATE

OPERATION DATA									
LOG SUITE	LOG DATE	LOG TIME	LOG LOCATION	LOG SURFACE	LOG DEPTH	LOG NO.	LOG SUITE	LOG DATE	LOG TIME
GAMMA RAY	31/08/81	10:00	1001	1001	1001	489	GAMMA RAY	31/08/81	10:00

EQUIPMENT AND RECORDING DATA									
LOG	EQUIPMENT	TAPING	PANEL	CAL COEFF	DEPTHS	SEAM LOG RUN			
110	KA45	LOG TAPE	1	1.42	108 0 108				

CALIBRATION DATA									
JIG No	VALUE	LOG DIAM	JIG CAL DATE	JIG VALUES	LOG DIAM	LOG NO.	LOG SUITE	LOG DATE	LOG TIME
367	51.0	12	17/06/80	53050	12	489	GAMMA RAY	31/08/81	10:00

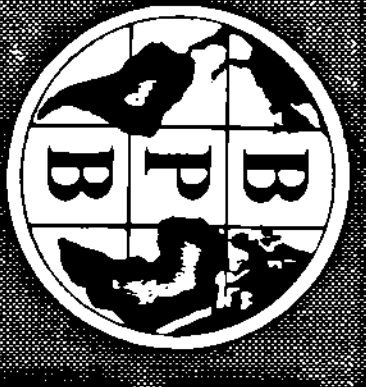
GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

BOREHOLE	R-52 (DEEP NO. 2)	AREA	BURNT RIVER
CLIENT	TECH-CO	COUNTRY	CANADA

COAL LITHOLOGY LOG



RR-Burnt River 80(3)A R2 S2

BOREHOLE BR-52 (DEEPEMED)
 CLIENT TECH-CORP
 AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 21/08/80

COAL LITHOLOGY LOG

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

BOREHOLE DATA

PERMANENT DATUM	SECTION 11
ELEVATION OF P.D.	1110.00
MEASUREMENT FROM	0.1
DEPTH REACHED	108m
CASING SHADE	1011
BIT SIZES	1 NO.3 TO GL. 2 TO TO
CASING SIZES	1 NW TO 1011 2 TO

FLUID DATA

NATURE	WATER
ST. C. S. T. V.	40.0m - meters
EVEL	
VISCOSITY	
Run at mass temp	
BHT	

OPERATION DATA

FIRST READING	1.00m
LAST READING	1.00m
INTERVAL LOGGED	1.00m
UNIT-TRUCK No	45/24
ENGINEER	S. L. BURNETT
WITNESS	

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EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT		TAPING			PANEL		CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C SECS		NORM	FROM	TO	
	110	SA45										
GAMMA RAY			Y	9m/m	K	9m/m	1	-	1.42	108	0	108
L.S. DENSITY			Y	9m/m	K	9m/m	.3	6.5	-	108	0	108
CALIPER	SIDEWALL POSITION		Y	9m/m	K	9m/m	.3	-	-	108	0	108

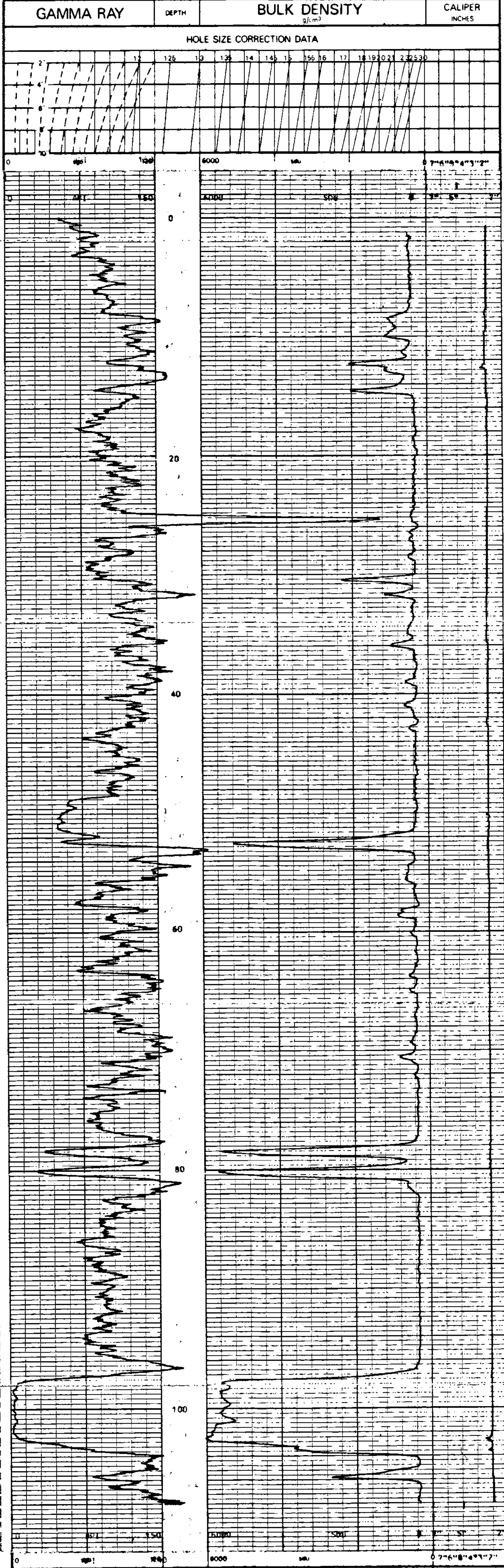
COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)

FROM	105m	82m	54m
TO	96m	76m	50m
INTERVAL	9m	6m	4m
INTERVAL TOTAL	19m		

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS	REMARKS
	NEUTRON				
	F.E.				

BPB COAL LITHOLOGY LOG CALIBRATION DATA

JIG No 367	VALUE 10.0 @ 2 DIAM	JIG CAL DATE 17/06/80	JIG VALUE 53050 @ 2	g/cm ³	2 ins 480 cps
JIG MARK SHOWN AT ABOVE VALUE +		JIG No 0338	SPAN 6000	NORM 6.5	4 ins 890 cps



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



BOREHOLE BR-52 (DEEPEMED) AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA

COAL LITHOLOGY LOG



Pe-Burnt River 801304

NEUTRON-NEUTRON LOG

BOREHOLE B-52 (DEFENCE)
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 3/09/80

DEPTH SCALE
100

2 OF 4 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

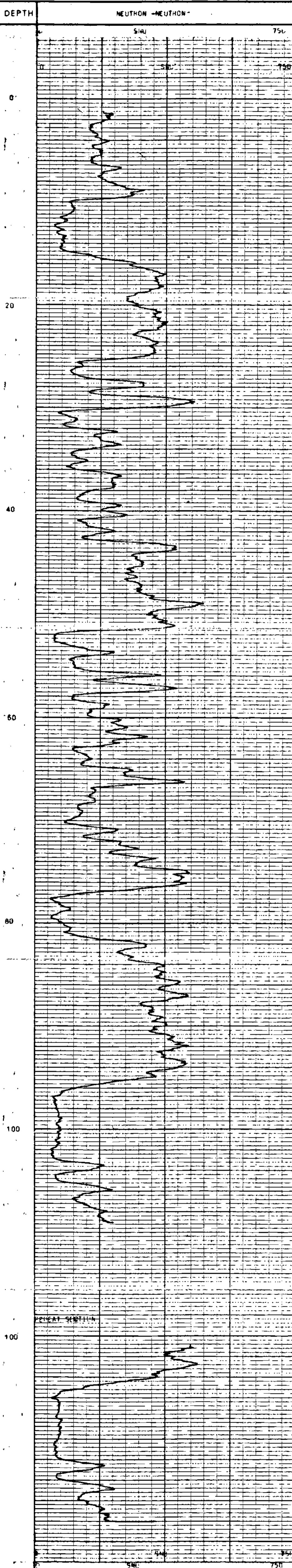
OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPPING	PANEL	CAL
LOG	LOG RECORDING SPEED T/C	NOMI	
NEUTRON	5m/m	0	9m/m 1 .82

REMARKS

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BOREHOLE B-52 (DEFENCE) AREA BURNT RIVER
CLIENT TECH-CORP COUNTRY CANADA



R-Burnt River 50632A p. 5

489 RECESSED ELECTRIC LOG

BOREHOLE RR-52(DEEPEMED)

CLIENT TECH-CORP

AREA BURNT RIVER

COUNTRY CANADA

DATE LOGGED 31/08/80

1 OF 5 LOGS

DEPTH SCALE

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

LOG TAPING PANEL CABLE

LOG RECORDING SPEED SECS 1.5 ROOM

LOG TAPING SPEED REV/AV 50/10

LOG TAPING SPEED SECS 1.5 ROOM

LOG TAPING SPEED SECS 1.5 ROOM

LOG TAPING SPEED SECS 1.5 ROOM

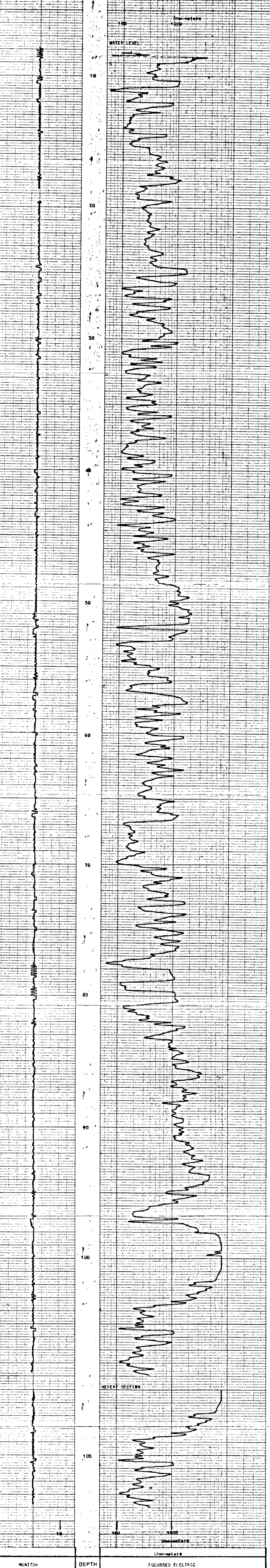
LOG TAPING SPEED SECS 1.5 ROOM

LOG TAPING SPEED SECS 1.5 ROOM

LOG TAPING SPEED SECS 1.5 ROOM

REMARKS

MINILOG OPEN OPERATES WITH OVERLOAD OVERLOAD OCCURS AT VERY SHALLOW BOUNDARIES AND VERY HIGH RESISTIVITIES



REMARKS

MINILOG OPEN OPERATES WITH OVERLOAD OVERLOAD OCCURS AT VERY SHALLOW BOUNDARIES AND VERY HIGH RESISTIVITIES

BOREHOLE RR-52(DEEPEMED)

CLIENT TECH-CORP

AREA BURNT RIVER

COUNTRY CANADA



P2-River River BC30A 00-1



BOREHOLE: BR-5210111.M.J
 CLIENT: TECH-CORP

AREA: BURNING MOUNTAIN
 COUNTRY: CANADA
 DEPTH SCALE: 7011.1
 DATE LOGGED: 4 OF 5 LOGS

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

COAL QUALITY LOG

SONDE TYPE: _____
 COAL COMBINATION SONDE: _____
 LOG SUITE: _____
 GAMMA RAY _____
 L S DENSITY _____

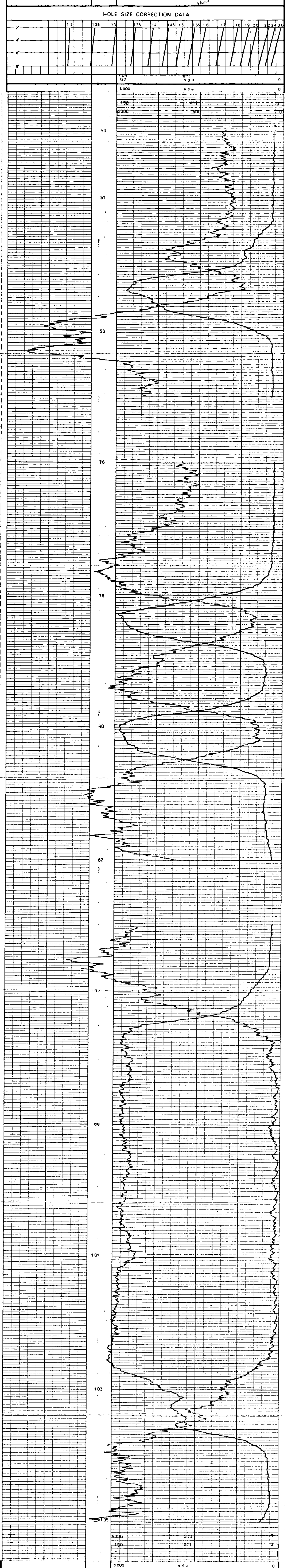
LOG TAPPING PANEL COIL
 LOG RECORDING SPEED T.C. NORM
 LOG LABEL SPEED REPEAT SECS. NORM
 LOG V. m/m. 3.0/1.0 1.0
 LOG S. m/m. 3.0/1.0 3.0
 LOG F. m/m. 3.0
 LOG SOURCE SONDE AND CALIBRATION: REFER TO LITHOLOGY LOG

COAL QUALITY LOG INTERVALS

FROM	118m	82m	144m
TO	120m	79m	51m
INTERVAL	2m	3m	93m
FROM	9m	5m	4m
TO			
INTERVAL			
REMARKS			

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B P B COAL QUALITY LOG



COAL BULK DENSITY g/cm³
 GAMMA RAY
 DEPTH



BOREHOLE: BR-5210111.M.J
 CLIENT: TECH-CORP

AREA: BURNING MOUNTAIN
 COUNTRY: CANADA

COAL QUALITY LOG

MT 4800 B

Pr. River 80(3)A . 2057



BOREHOLE BR 52107 (21/03/03)
 CLIENT IFC-531C
 AREA GUANT 21/VEP
 COUNTRY CANADA
 DATE LOGGED 31/28/AD
 DEPTH SCALE 2 : 1
 OF LOGS

SEAM THICKNESS LOG

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

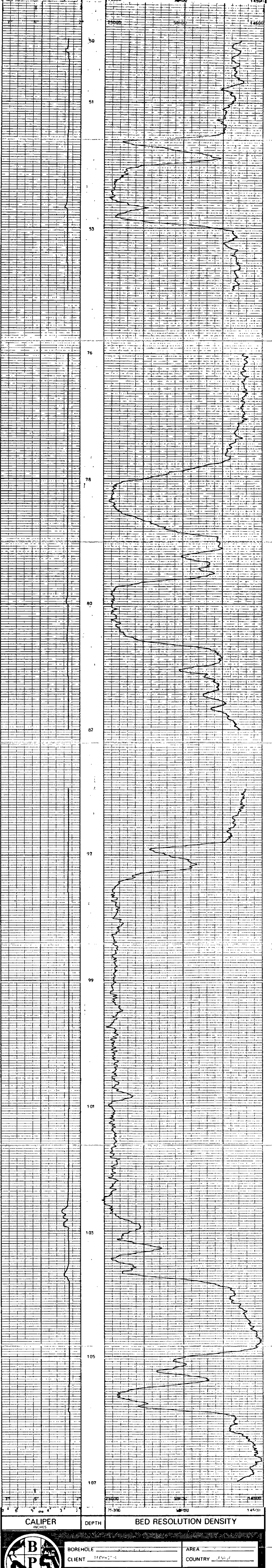
SONDE TYPE:
 COAL
 COMBINATION SONDE

LOG SUITE
 CALIPER
 BR DENSITY

SEAM THICKNESS LOG INTERVALS

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B P B SEAM THICKNESS LOG





PR-Burnt River 88(3)A

BR-52

LOG SUITE
GAMMA RAY
L.S. DENSITY
CALIPER

SONDE TYPE
COAL
COMBINATION
SONDE

COAL
LITHOLOGY
LOG

BOREHOLE	BR-52	AREA	BURNT RIVER	DEPTH SCALE	200:1
CLIENT	TECH-CORP	COUNTRY	CANADA	DATE LOGGED	21/08/80
PERMANENT DATUM		ELEVATION OF P.D.		BORNEHOLE DATA	
MEASUREMENTS FROM		DEPTH REACHED		DRILLER	
CASING SHOE		CASING SIZES		BIT SIZES	
NATURE		LEVEL		VISCOSITY	
SG		Rin at meas temp		BHT	
OPERATION DATA					
FIRST READINGS					
LAST READINGS					
INTERVAL LOGGED					
JMT-TRUCK No					
ENGINEER					
WITNESS					

EQUIPMENT AND RECORDING DATA														
COAL COMBINATION SONDE														
LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF		DEPTHS		SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL		
GAMMA RAY	110	5845	510AP1	Y	9m/m	R	9m/m	1	-	1.42	54	D	54	
L.S. DENSITY			5305DU	Y	9m/m	R	9m/m	.3	6.5	-	54	D	54	
CALIPER	SIDEWALL POSITION			LOGGED IN HOLES			CALIPER ON TAPE ONLY							
COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)														
FROM											INTERVAL		TOTAL	
TO														
INTERVAL														
ADDITIONAL SONDES RUN						REMARKS								
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS		LOGGED IN HOLES CALIPER ON TAPE ONLY								
NEUTRON														

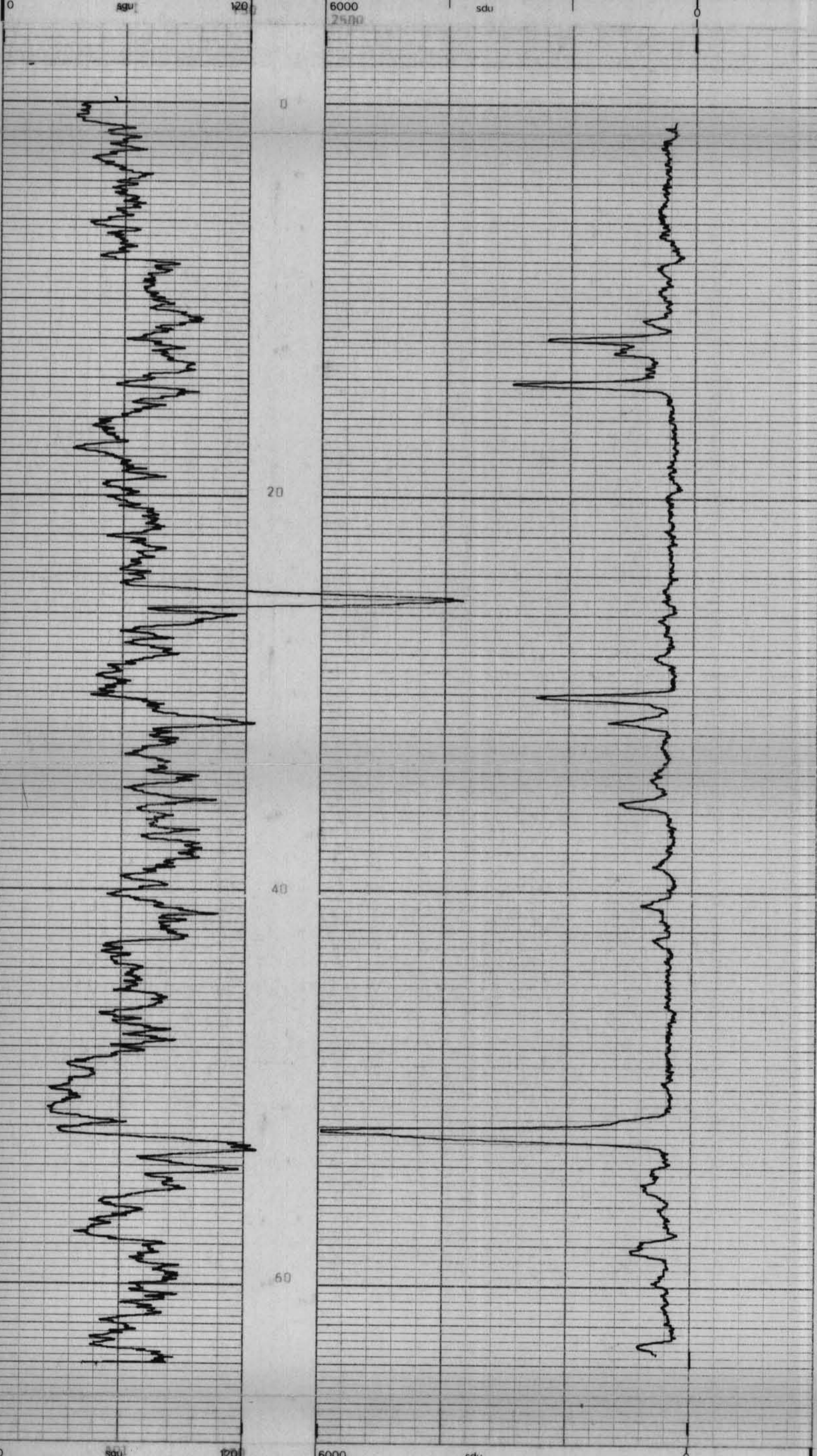
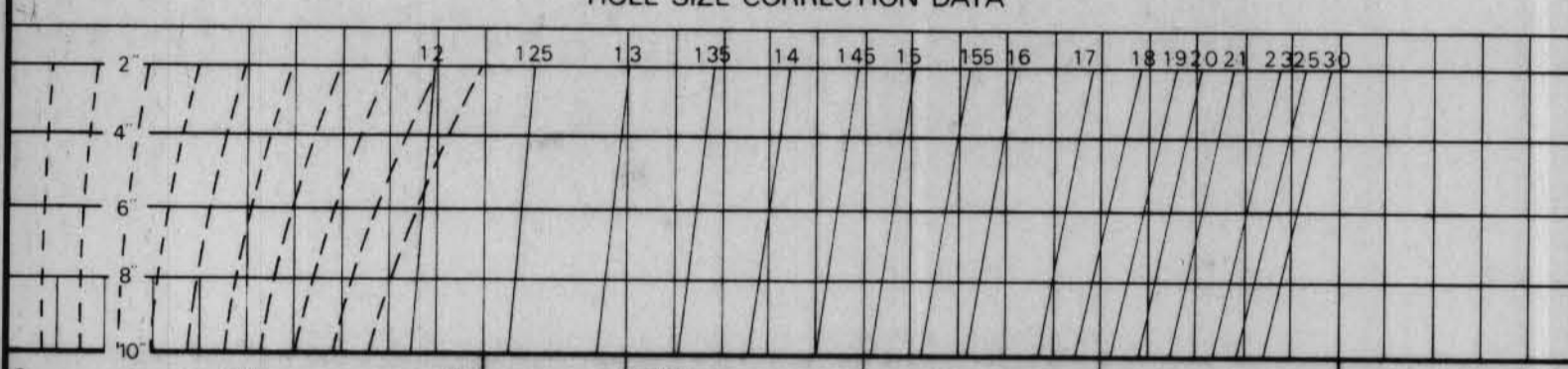
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367	VALUE 51 @ 2 DIAM	JIG CAL DATE 17/06/80	JIG VALUE 5305DU @	g/cm ³	ins	cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No 0338	SPAN 2500	NORM SDU CPS 6.5	ins	cps

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



BOREHOLE BR-52 AREA BURNT RIVER
CLIENT TECH-CORP COUNTRY CANADA

COAL LITHOLOGY LOG



72-Burnt River 80637A 6252

NEUTRON-NEUTRON LOG

BOREHOLE BR-52
CLIENT TECH-CORP

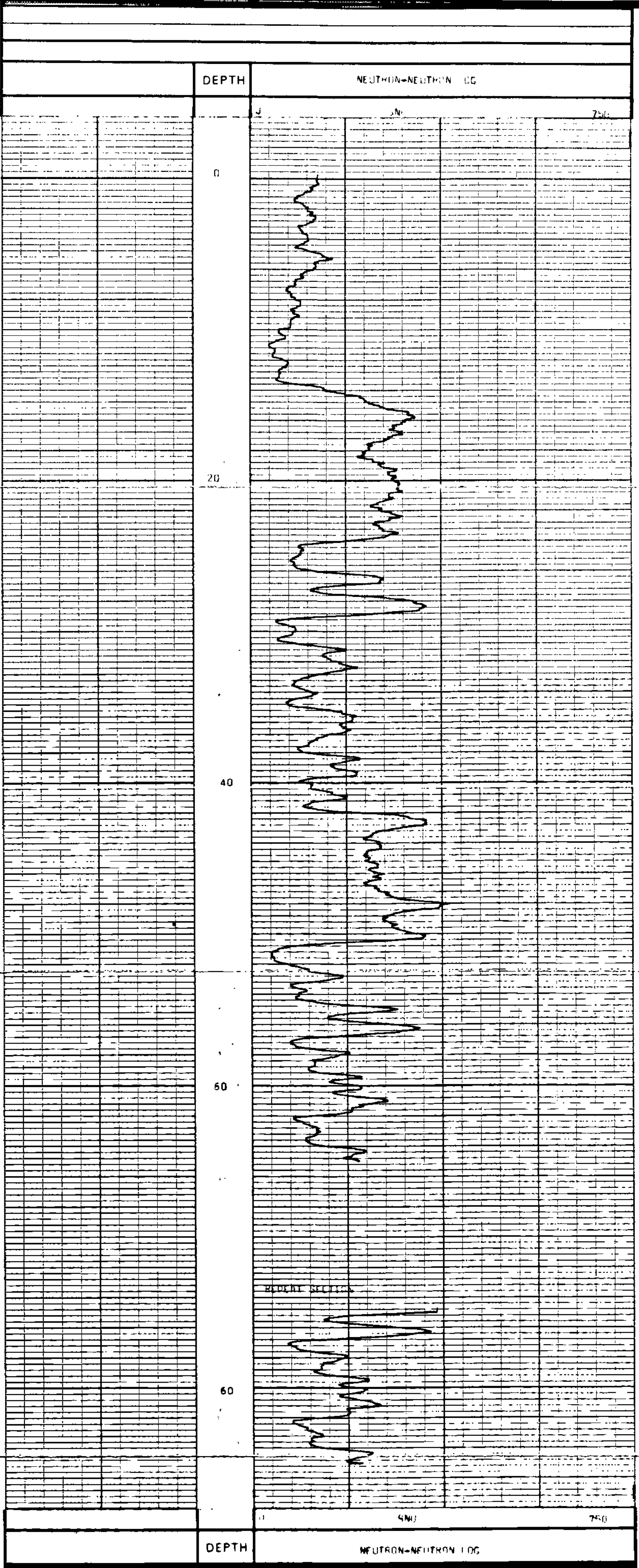
AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 21/08/80

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

EQUIPMENT AND RECORDING DATA

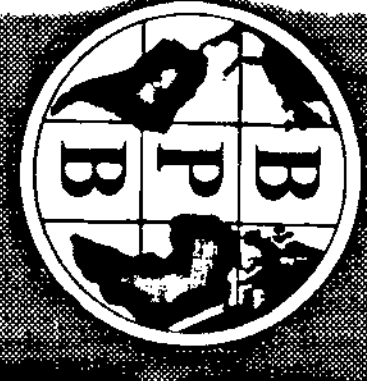
LOG NO.	TAPING	PANEL	CAL
LOG TAPED	RECORDING SPEED	T.C. SECS	COEFF
9m/4	9m/4	1.82	
SPD	204	SHEET	6787

REMARKS
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BOREHOLE	BR-52	AREA	BURNT RIVER
CLIENT	TECH-CORP	COUNTRY	CANADA





COAL LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY L.S. DENSITY CALIPER

BOREHOLE: BR-53

CLIENT: TECH-CLINT

AREA: BOUNT RIVER

COUNTRY: CANADA

DATE LOGGED: 23/08/80

OF 4 LOGS

BOREHOLE DATA

PERMANENT DATUM: SURFACE LEVEL

ELEVATION OF P.D.: 2000

MEASUREMENTS FROM: SURFACE

DEPTH REACHED: 90m

CASING SHOE: 30m

BIT SIZES: 1 1 1/2" TO 2" 2" TO 3" 3" TO 4" 4" TO 5" 5" TO 6" 6" TO 7" 7" TO 8" 8" TO 9" 9" TO 10"

CASING SIZES: 1 4" TO 3 1/2" 2" TO 3"

FLUID DATA

NATURE: WATER

SG:

LEVEL:

VISCOSITY:

PH:

OPERATION DATA

FIRST READING: 30m

LAST READING: 90m

INTERVAL LOGGED: 90m

UNIT-TRUCK No: 46724

ENGINEER: C. J. ...

WITNESS:

489

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE													
LOG	EQUIPMENT			TAPING			PANEL		CAL COEFF	DEPTHS		SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS		NORM	FROM		TO
GAMMA RAY	110	...	510AP1	Y	9m/m	H	9m/m	1	-	1.42	90	0	90
L.S. DENSITY			530S01	Y	9m/m	R	9m/m	.3	6.5	-	90	0	90
CALIPER		SIDEWALL POSITION											

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

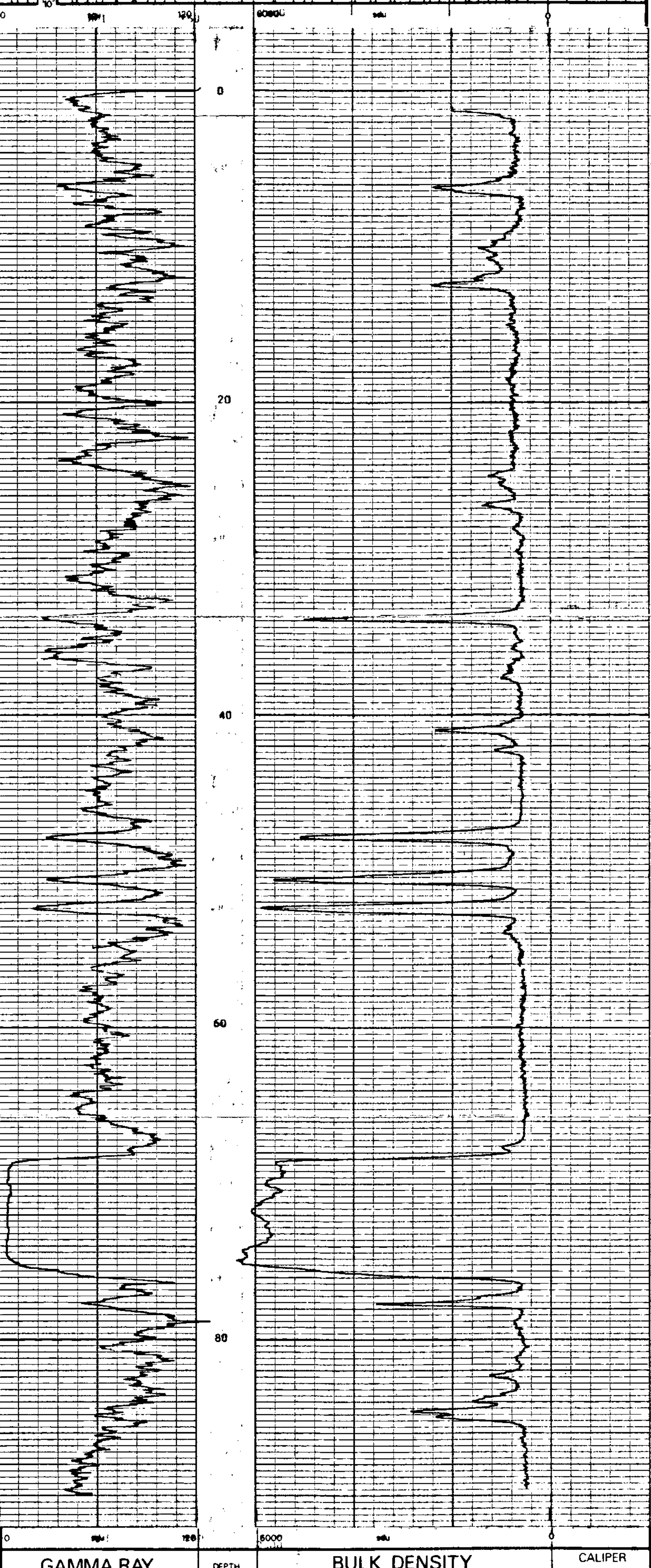
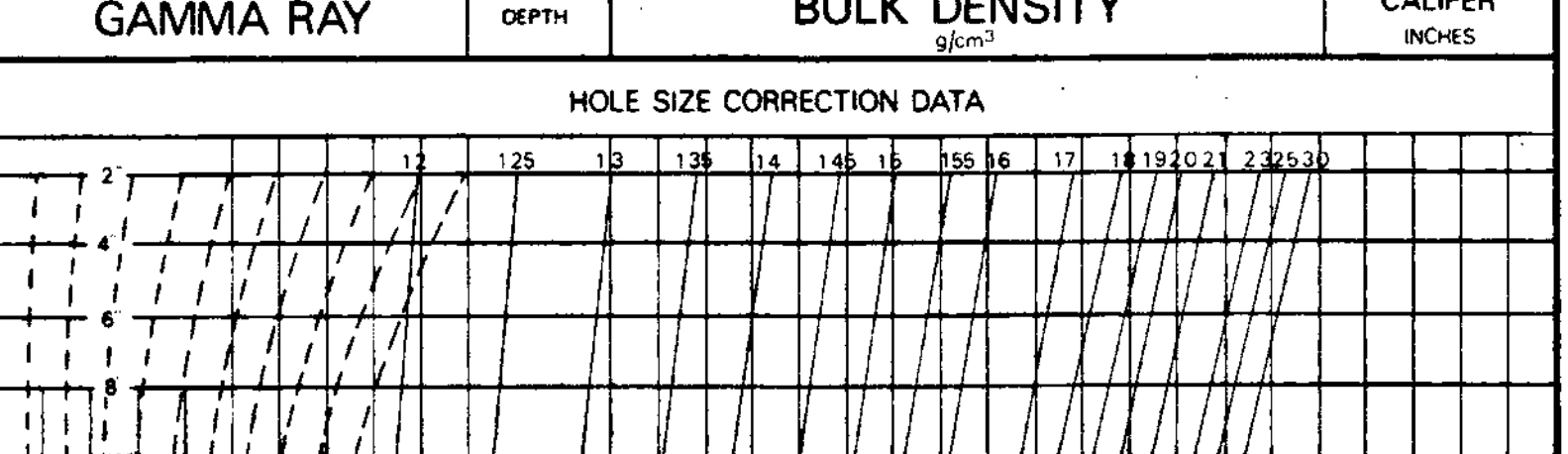
FROM	77m	54m		INTERVAL TOTAL
TO	67m	46m		
INTERVAL	10m	8m		18m

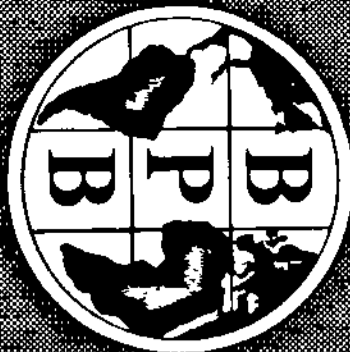
ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
NEUTRON					LOGGED IN ROADS CALIPER NOT PLAYED OUT IN GENERAL

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367	VALUE 51 @ 2" DIAM	JIG CAL DATE 17/06/80	JIG VALUE 530S01 @	g/cm ³	ins	cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No U338	SPAN 2500	NORM	6.5	cps





W. L. S. M. T. S. N.

BOREHOLE BR-53

CLIENT TECH-CORP.

AREA BURNT RIVER

COUNTRY CANADA

DATE LOGGED 23/JB/AU

DEPTH SCALE
100%*

2 OF 4 LOGS

BOREHOLE DATA

REFER TO LITHOLOGY LOG

OPERATION DATA

REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

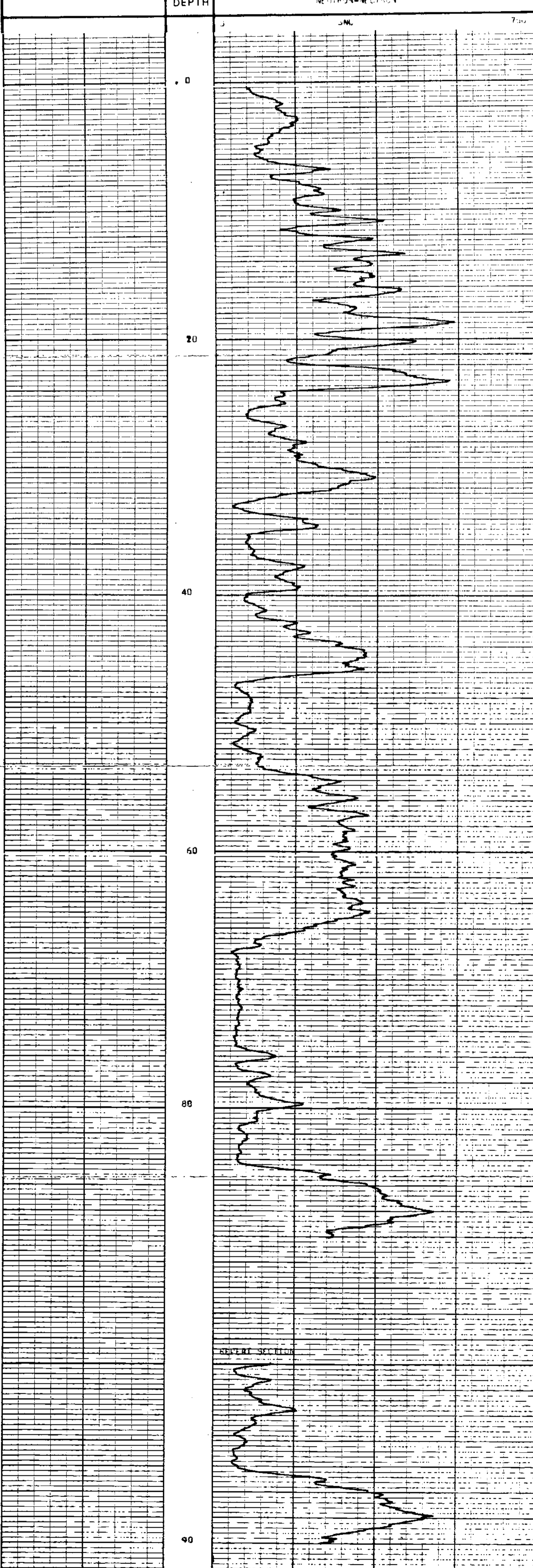
LOG	TAPING	RECORDING	PANEL	CAT.
	TAPED	DIRECT	T.C.	COEFF.
	SPEED	SPEED	SECS	NORM.
	REPLA	REPLA		
1	Y	Y	9m/1	H2
2				
3				
4				
5				
6				
7				
8				
9				
10				

REMARKS

489

NEUTRON-NEUTRON

DEPTH



NEUTRON-NEUTRON

DEPTH

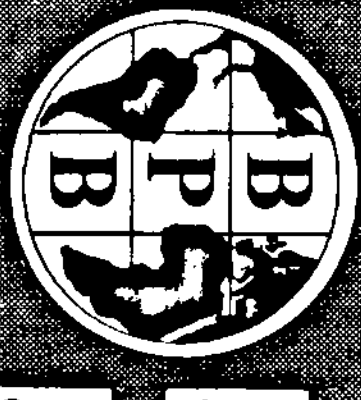
AREA BURNT RIVER

COUNTRY CANADA

BOREHOLE BR-53

CLIENT TECH-CORP.





BOREHOLE BH-53
 CLIENT TECH-CORP

AREA Burnt River
 COUNTRY CANADA

DATE LOGGED 23/09/20

DEPTH SCALE
 0-1

3 OF 2 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

SEAM THICKNESS LOG

COAL COMBINATION SONDE

LOG TAPPING PANEL
 LOG RECORD SPEED (SPEED) TC (NORM)
 CALIPER LABEL SPEED REPEAT (SPEED) SECS. (NORM)
 CALIPER X 1.67m M.I. (LIVE) L. 3m/d 3 6.9
 BRKNSN Y 3m/d 1 3m/d 1 3m/d 1 3m/d 1

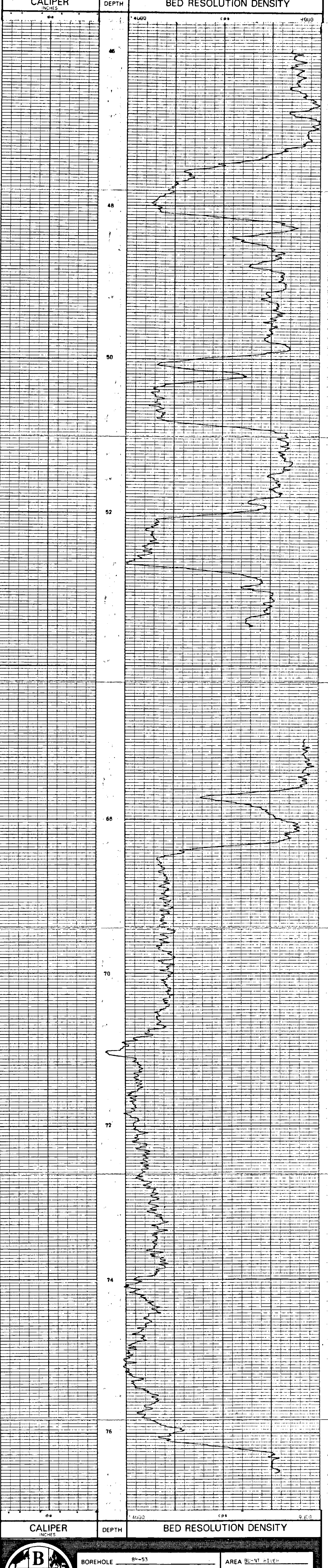
SONDE TYPE:
 COAL
 COMBINATION SONDE

SEAM THICKNESS LOG INTERVALS

LOG SUITE:
 CALIPER
 BR DENSITY

489

B P B SEAM THICKNESS LOG



CALIPER INCHES DEPTH BED RESOLUTION DENSITY cps

BOREHOLE BH-53 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA

SEAM THICKNESS LOG



BOREHOLE B-53
 CLIENT TECH-50-C

AREA BUNT RIVER
 COUNTRY CANADA

DATE LOGGED 23/08/80

DEPTH SCALE
 80g

A or A LOGS

COAL QUALITY LOG

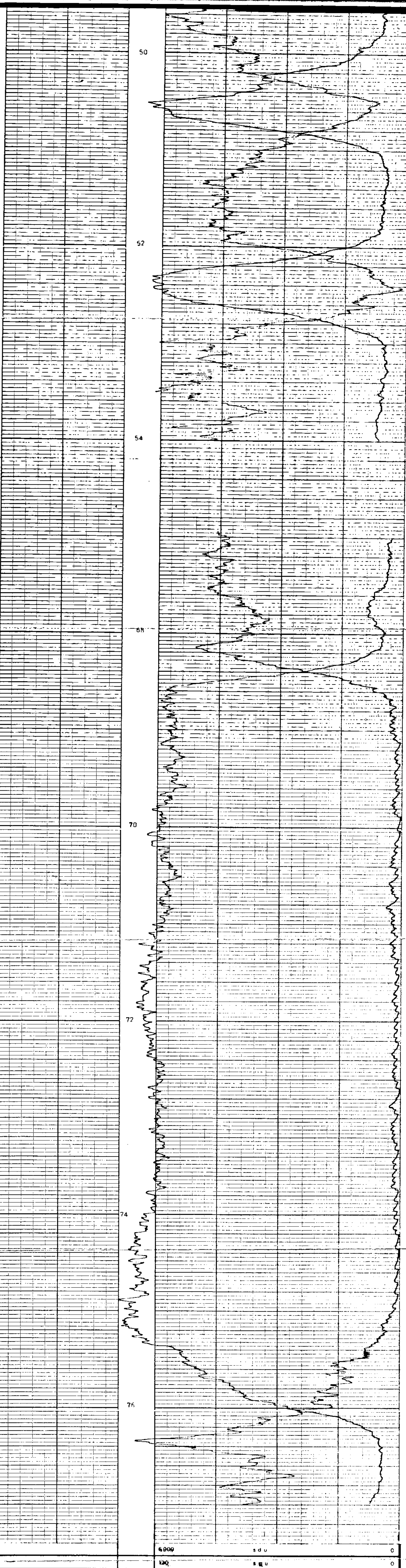
BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE
 LOG TAPPING SIDEWALL POSITION
 LOG TAPPING SPEED OF LOG PANEL COEFF
 GAMMA RAY 3m/m 1 1.42
 LS DENSITY 3m/m 1 1.42

SONDE TYPE
 COAL COMBINATION SONDE
 LOG SUITE
 GAMMA RAY
 LS DENSITY

COAL QUALITY LOG INTERVALS
 FROM 77m 54m
 TO 80m 49m
 INTERVAL 10m 4m
 INTER VAL TOTAL INTERVAL

489



COAL BULK DENSITY g/cm^3
 GAMMA RAY
 DEPTH

BOREHOLE B-53 AREA BUNT RIVER
 CLIENT TECH-50-C COUNTRY CANADA

COAL QUALITY LOG





PR-Burnt River 80237A An 24

LOG SUITE:
 GAMMA RAY
 L.S DENSITY
 CALIPER

SONDE TYPE:
 COAL
 COMBINATION
 SONDE

COAL LITHOLOGY LOG

BOREHOLE BR-54
CLIENT TECH-CDHP
AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 24/08/80
DEPTH SCALE 100ft
 of 4 LOGS

BOREHOLE DATA
 PERMANENT DATUM
 ELEVATION OF P.D.
 MEASUREMENTS FROM
 DEPTH REACHED
 CASING SHOE
 BIT SIZES
 CASING SIZES
FLUID DATA
 NATURE
 SG
 LEVEL
 VISCOSITY
 Run at meas temp
 BHT
OPERATION DATA
 FIRST READING
 LAST READING
 INTERVAL LOGGED
 UNIT-TRUCK NO
 ENGINEER
 WITNESS

489

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE														
LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL	
	110	5845												
GAMMA RAY			510ADP1	Y	9m/m	Q	9m/m	1	-	1.42	44	0	44	
L.S DENSITY			530SDU	Y	9m/m	Q	9m/m	.3	6.5	-	44	0	44	
CALIPER	SIDEWALL POSITION	LOGGED IN RODS CALIPER NOT PLAYED OUT IN GENERAL												

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

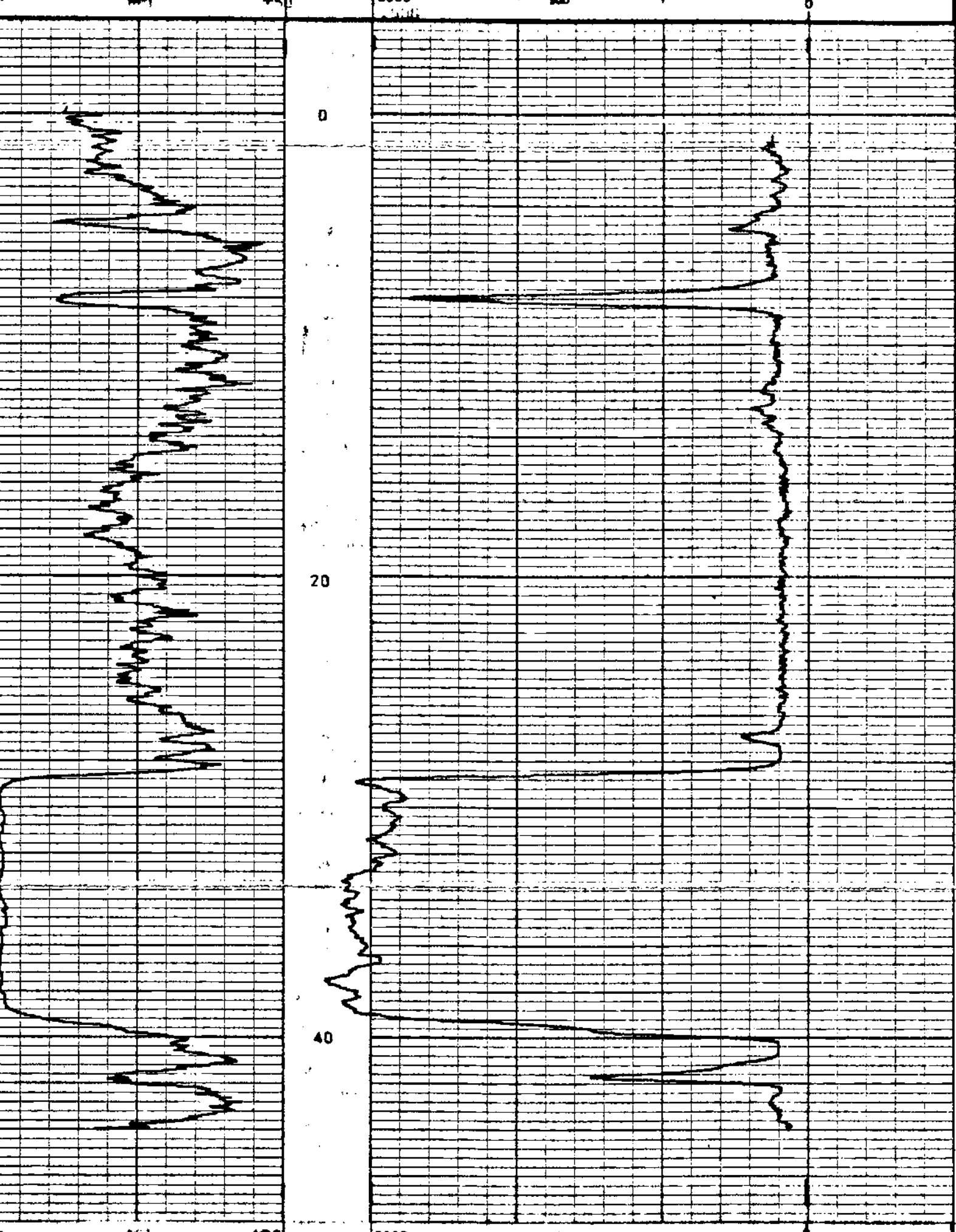
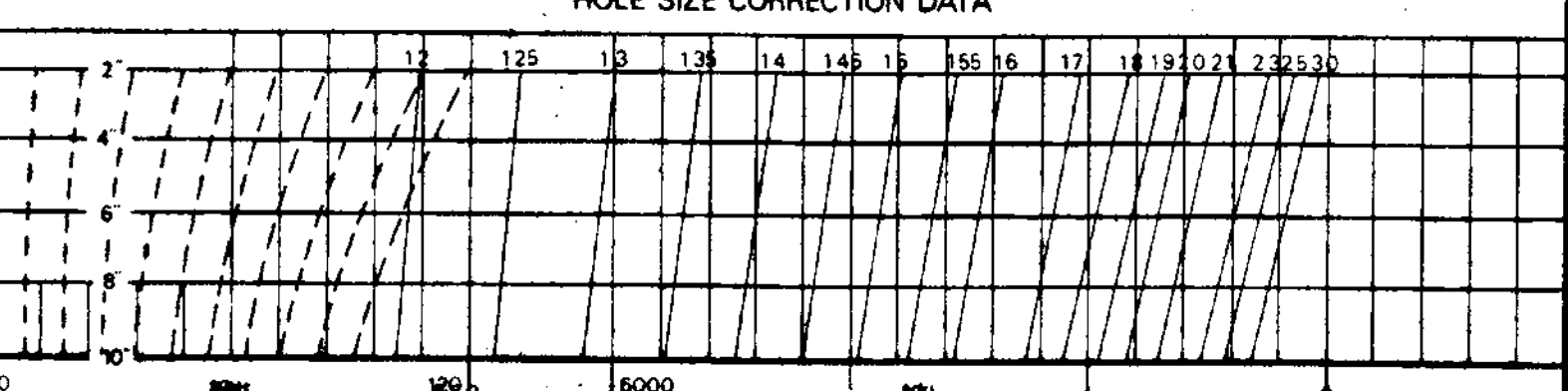
FROM	42m	INTERVAL TOTAL
TO	27m	
INTERVAL		15m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
NEUTRON					LOGGED IN RODS CALIPER NOT PLAYED OUT IN GENERAL

BPB COAL LITHOLOGY LOG CALIBRATION DATA

JIG No 367	VALUE 51 @ 12 DIAM	JIG CAL DATE 17/06/80	JIG VALUES 3050.0 DU @	g/cm ³	ins	cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No 0338	SPAN 2500	NORM	SDU CPS = 6.5	ins cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------



BOREHOLE BR-54 **AREA** BURNT RIVER
CLIENT TECH-CDHP **COUNTRY** CANADA

COAL LITHOLOGY LOG



NEUTRON-NEUTRON LOG

BOREHOLE BR-54
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 24/08/80

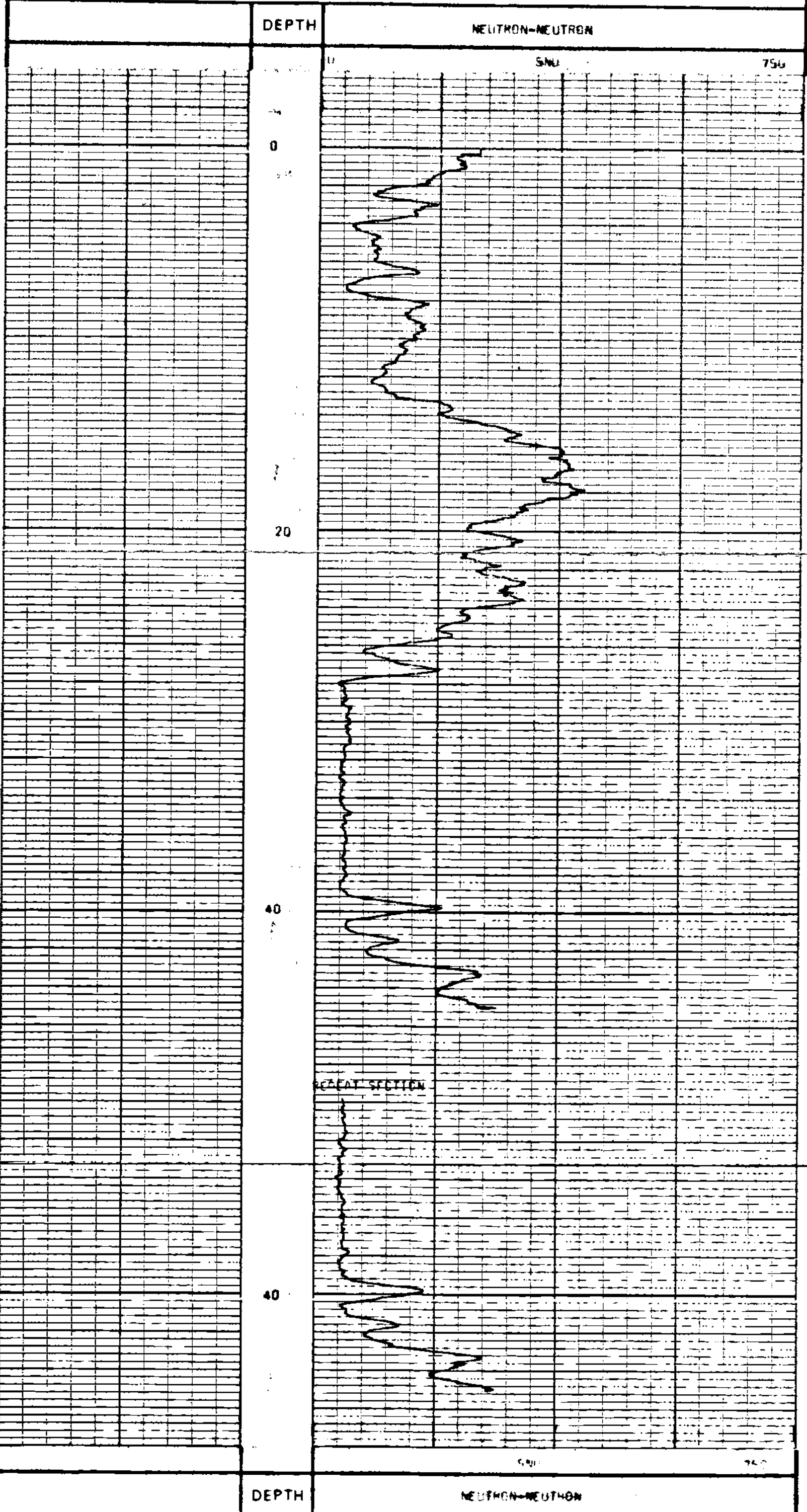
DEPTH SCALE
 7000' 1'

2 OF 4 LOGS

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

LOG	TAPING	RECORDING	PANEL	CAL
	LOG TAPED	DIRECT REPLAY	T/C SPEED SECS	COEFF
LITHOLOGY	Y	9m/m	D	9m/m
				1
				.92

REMARKS
489



BOREHOLE BR-54
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA



COAL QUALITY LOG

SONDE TYPE:
COAL COMBINATION SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY

BOREHOLE BK-54
CLIENT TFCM-CJRP
AREA GRANT AREA
COUNTRY CANADA
DATE LOGGED 24/08/90
DEPTH SCALE 2011
3 OF 4 LOGS

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

COAL COMBINATION SONDE
SIDEWALL POSITION
LOG TAPPING PANEL COAL CORE
LOG RECORDING SPEED SCS NORM
GAMMA RAY
L.S. DENSITY
SOURCE SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

COAL QUALITY LOG INTERVALS
FROM 4.2m
TO 2.7m
INTERVAL 1.2m
FROM
TO
INTERVAL
REMARKS

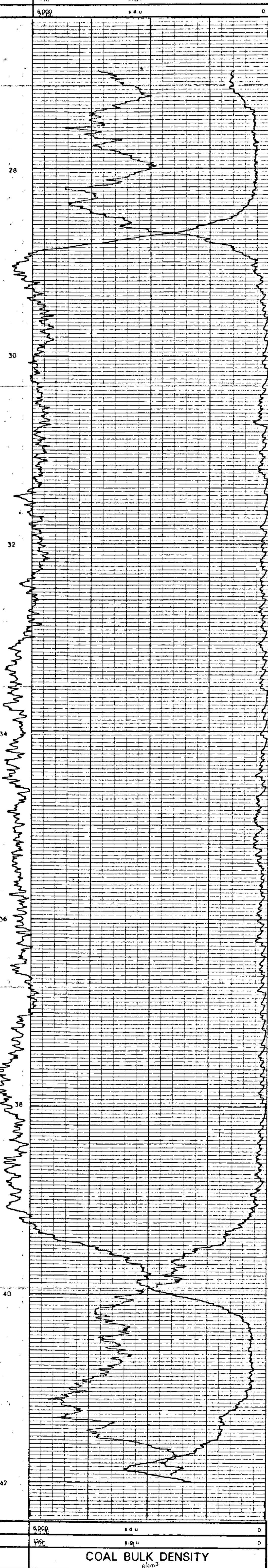
LOGGED IN CODE
489

B P B COAL QUALITY LOG

DEPTH GAMMA RAY
COAL BULK DENSITY g/cm^3

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
----	-----	------	-----	------	-----	------	-----	------	-----	-----	-----	-----	-----	-----	-----	-----

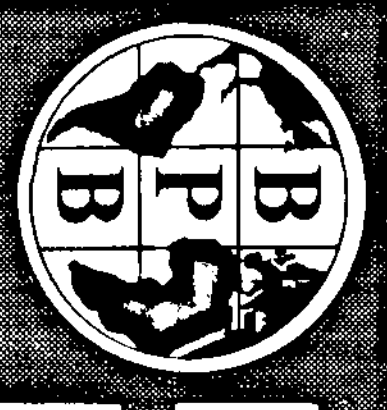


DEPTH GAMMA RAY
COAL BULK DENSITY g/cm^3

BOREHOLE BK-54 AREA GRANT AREA
CLIENT TFCM-CJRP COUNTRY CANADA

COAL QUALITY LOG





SEAM THICKNESS LOG

SONDE TYPE: _____
 COAL COMBINATION SONDE: _____
 LOG SUITE: _____
 CALIPER: _____
 BR DENSITY: _____

BOREHOLE: Bh-54
 CLIENT: TECH-CORP
 AREA: BURNT RIVER
 COUNTRY: CANADA
 DATE LOGGED: 24/08/80

DEPTH SCALE: 70.1
 4 OF 4 LOGS

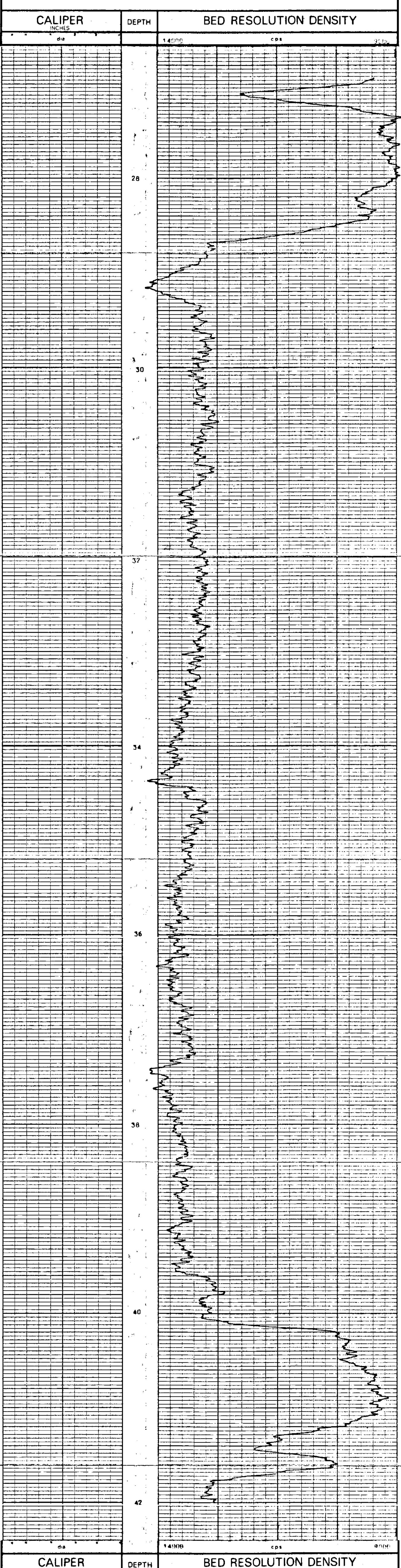
BOREHOLE DATA: REFER TO LITHOLOGY LOG
 OPERATION DATA: REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA: _____

COAL COMBINATION SONDE: _____
 LOG: _____
 TAPPING: _____
 LOG RECORDING SPEED: _____
 TAPED SPEED: _____
 CALIPER: _____
 BR DENSITY: _____

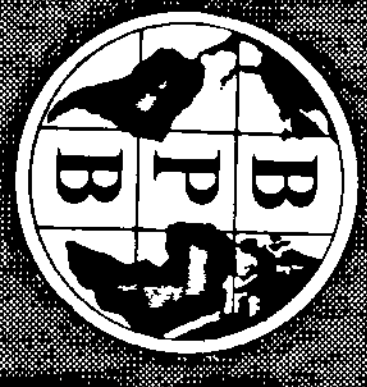
SEAM THICKNESS LOG INTERVALS:
 FROM: 4.2m
 TO: 27m
 INTERVAL: 15m
 TO: _____
 INTERVAL: _____
 TOTAL: _____
 REMARKS: _____

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B P B SEAM THICKNESS LOG



BOREHOLE: Bh-54
 CLIENT: TECH-CORP
 AREA: _____
 COUNTRY: CANADA
SEAM THICKNESS LOG



P-R-Bount River 80(3)A BZ 55

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY
 CALIPER

SONDE TYPE:
 COAL
 COMBINATION
 SONDE

COAL
LITHOLOGY
LOG

BOREHOLE DATA
 PERMANENT DATALOG
 ELEVATION OF P.D.
 MASS/PERMANENTSONOM
 DEPTH REACHED
 CASING SIZE
 BIT SIZES
 CASING SIZES
 FLUID DATA

BOREHOLE DATA
 PERMANENT DATALOG
 ELEVATION OF P.D.
 MASS/PERMANENTSONOM
 DEPTH REACHED
 CASING SIZE
 BIT SIZES
 CASING SIZES
 FLUID DATA

OPERATION DATA
 FIRST READING
 LAST READING
 INTERVAL LOGGED
 UNIT-TRUCK NO.
 ENGINEER
 WITNESS

489

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE												
LOG	EQUIPMENT			TAPING			PANEL		CAL COEFF	DEPTHS		SEAM LOG RUN
	SONDE	SOURCE	CALBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS		NORM	FROM	
GAMMA RAY	110	1.045										
L.S. DENSITY			510/11	Y	3m/m		3m/m	1	-	1.42	1.06	1.16
CALIPER			530/50	Y	3m/m		3m/m	3	6.5	-	1.06	1.16

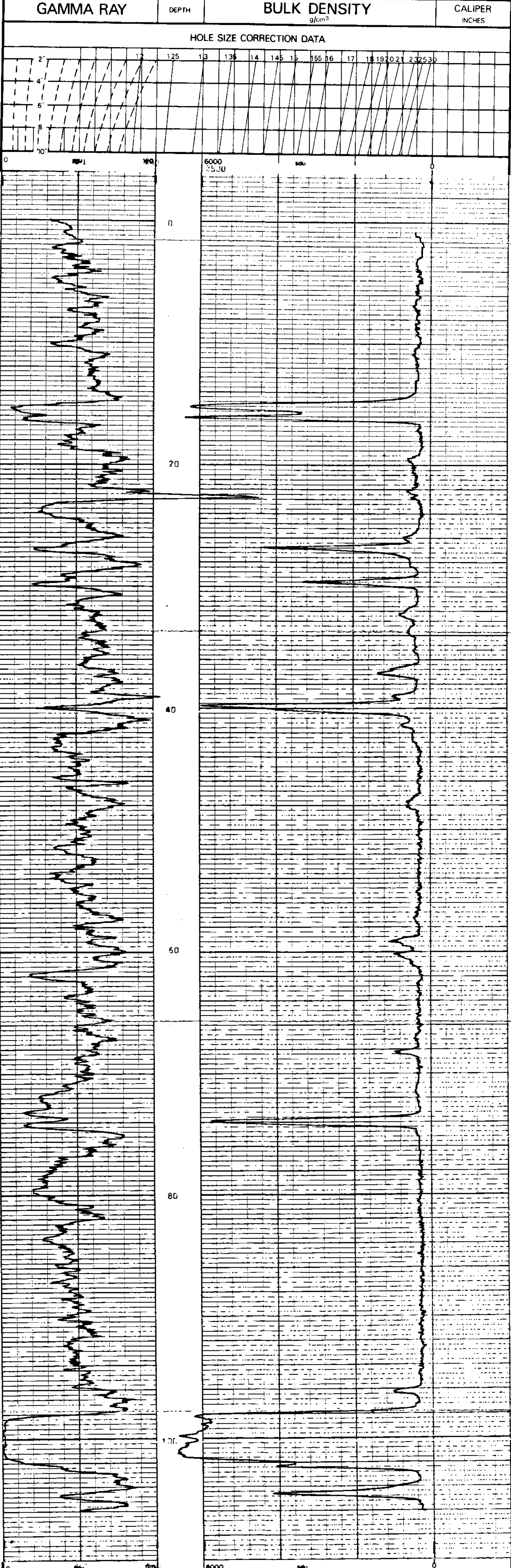
COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)

FROM	TO	INTERVAL
1.05m	1.8m	
9.4m	1.3m	
1.2m	1.3m	

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
MF LITHO					LOGGED IN THIS CALIPER ON FAULT ONLY

BPB COAL LITHOLOGY LOG
CALIBRATION DATA

JIG No 367	VALUE 1.045 @ 2" DIAM	JIG CAL DATE 17/06/80	JIG VALUE 5305 BDU @	g/cm ³	ins	cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No 03318	SPAN 2500	NORM	SDU	CPS 6.5



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



BOREHOLE _____ **AREA** _____
CLIENT _____ **COUNTRY** _____

COAL LITHOLOGY LOG



R-Burnt River SD(3)A 3-5-68

NEUTRON-NEUTRON LOG

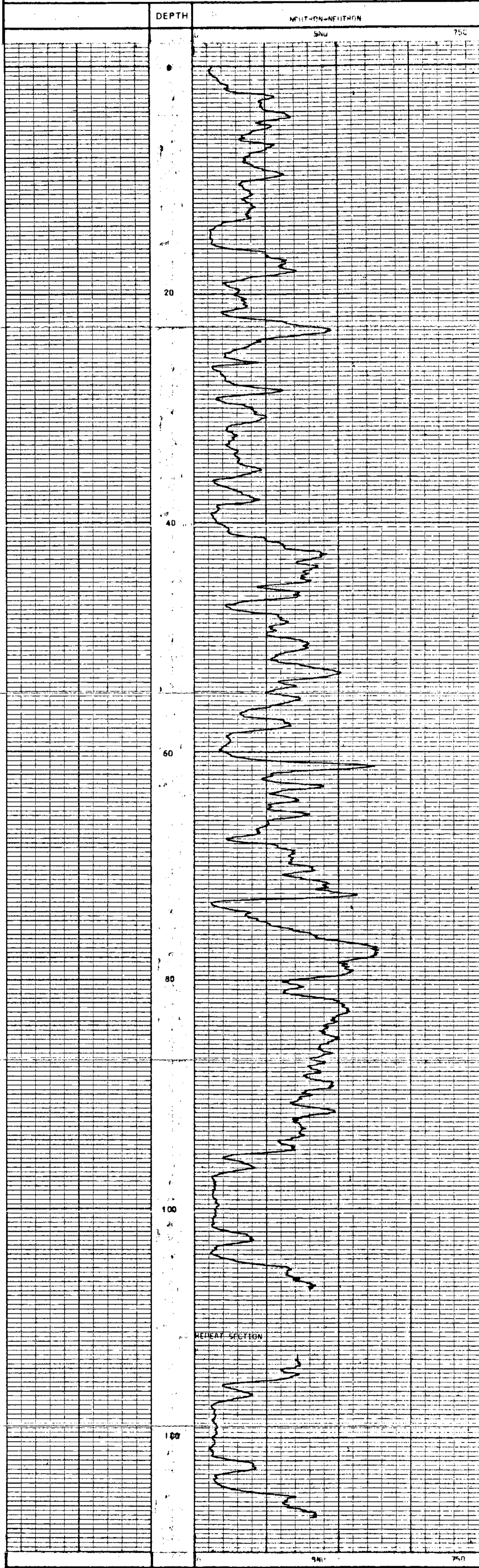
BOREHOLE BR-55
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 26/08/80
DEPTH SCALE 2 OF 4 LOGS

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

LOG	TAPING	PANEL	CAT				
LOG	RECORDING	T.C	COEFF				
TABED	SPEED	RELEV	SPEED				
			SECS				
			NORM				
FLUORIN	Y	9M/A	D	9M/A	1	A2	
SONDE	NO	112	SURF	77B			

REMARKS
LOGGED IN LOGS
489



BOREHOLE BR-55
CLIENT TECH-CORP
AREA BURNT RIVER
COUNTRY CANADA



COAL QUALITY LOG

SONDE TYPE:
COAL COMBINATION SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY

BOREHOLE _____
CLIENT _____

AREA _____
COUNTRY Canada

DATE LOGGED 1/19/74

DEPTH SCALE
7.4"

3 OF 4 LOGS

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

COAL COMBINATION SONDE
LOG TAPPING PANEL CASE
LOG RECORDING SPEED SECS NORM
GAMMA RAY SPEED SECS NORM
L.S. DENSITY

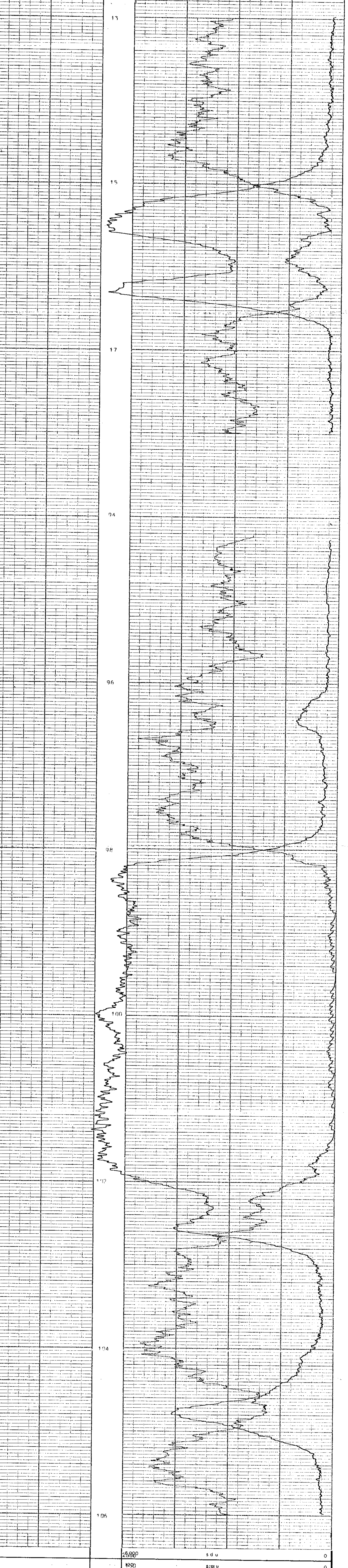
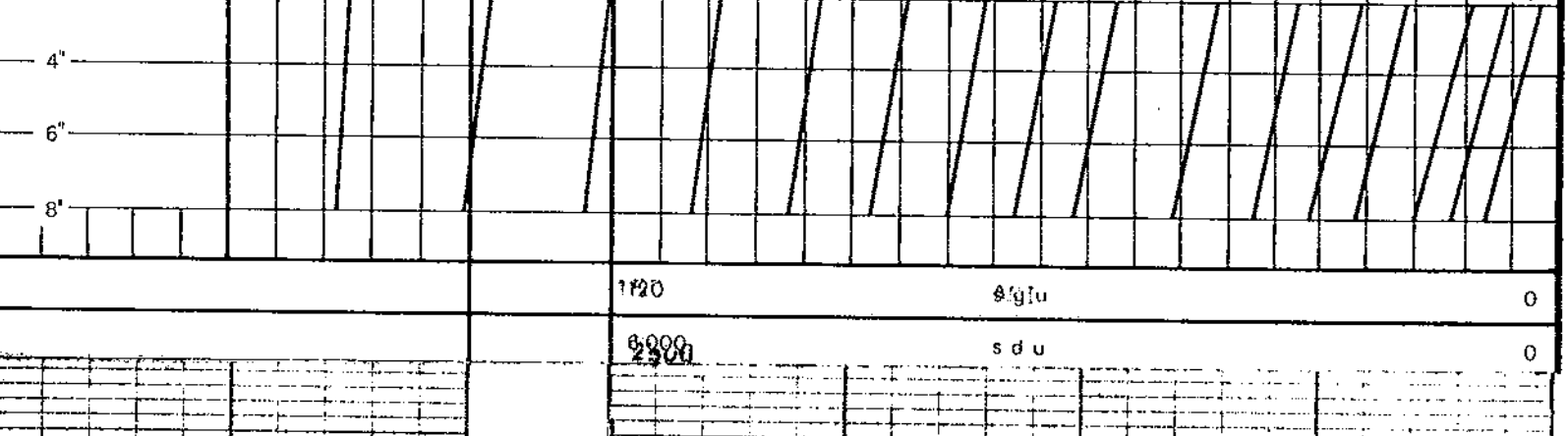
COAL QUALITY LOG INTERVALS
FROM _____ TO _____
INTERVAL _____
TOTAL _____

489

B P B COAL QUALITY LOG

DEPTH _____ GAMMA RAY
COAL BULK DENSITY g/cm^3

HOLE SIZE CORRECTION DATA



DEPTH _____ GAMMA RAY
COAL BULK DENSITY g/cm^3



BOREHOLE H-55 AREA Burnt End
CLIENT BPB COUNTRY Canada
COAL QUALITY LOG



BOREHOLE # 35
CLIENT TECH-HIGH

AREA BURNT RIVER DEPTH SCALE
COUNTRY CANADA

DATE LOGGED 25/09/80

SEAM THICKNESS LOG

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

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	TAPING	SIDEWALL POSITION	PANEL	COEFF.
LOG RECORD SPEED	100			
CALIBER LABEL	100			
BR DENSITY	1	100	1.3	1.3

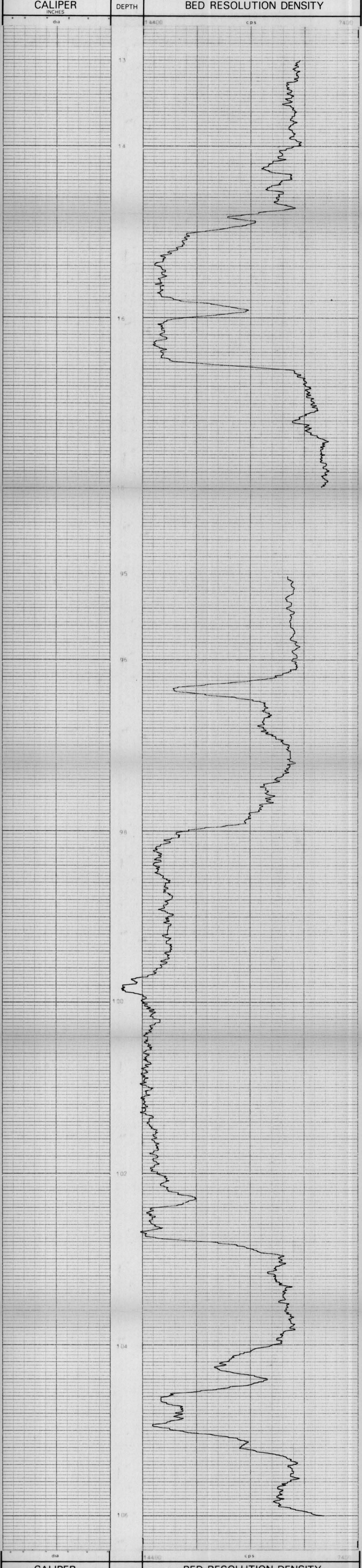
SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: CALIBER BR DENSITY

SEAM THICKNESS	LOG INTERVALS
FROM 1.05m	1.3m
TO 9.4m	1.3m
INTERNAL FROM 1.2m	5m
TO	
INTERNAL TOTAL	± 1.7m

489

B P B SEAM THICKNESS LOG



CALIBER INCHES	DEPTH	BED RESOLUTION DENSITY
----------------	-------	------------------------

BOREHOLE # 35 AREA BURNT RIVER
CLIENT TECH-HIGH COUNTRY CANADA

SEAM THICKNESS LOG





PR-Burnt River 803/A BR 56

CONC LITHOLOGICAL LOG

BOREHOLE BR-56
 CLIENT TECH-CORP
 AREA BURNT RIVER DEPTH SCALE 200' 1
 COUNTRY CANADA
 DATE LOGGED 29/08/80 1 OF 4 LOGS

BOREHOLE DATA

PERMANENT DATUM GROUND LEVEL
 ELEVATION OF P.D. SPROCKED LEVEL
 MEASUREMENTS FROM SL DRILLER
 DEPTH REACHED 55m 187ft.
 CASING SHOE 24ft.

BIT SIZES 1 NUS TO TD 2 TO
 3 TO 4 TO
 CASING SIZES 1 NW TO 24ft. 2 TO

FLUID DATA

NATURE QUICK SET
 SG
 LEVEL
 VISCOSITY
 Rim at meas temp
 BHT

OPERATION DATA

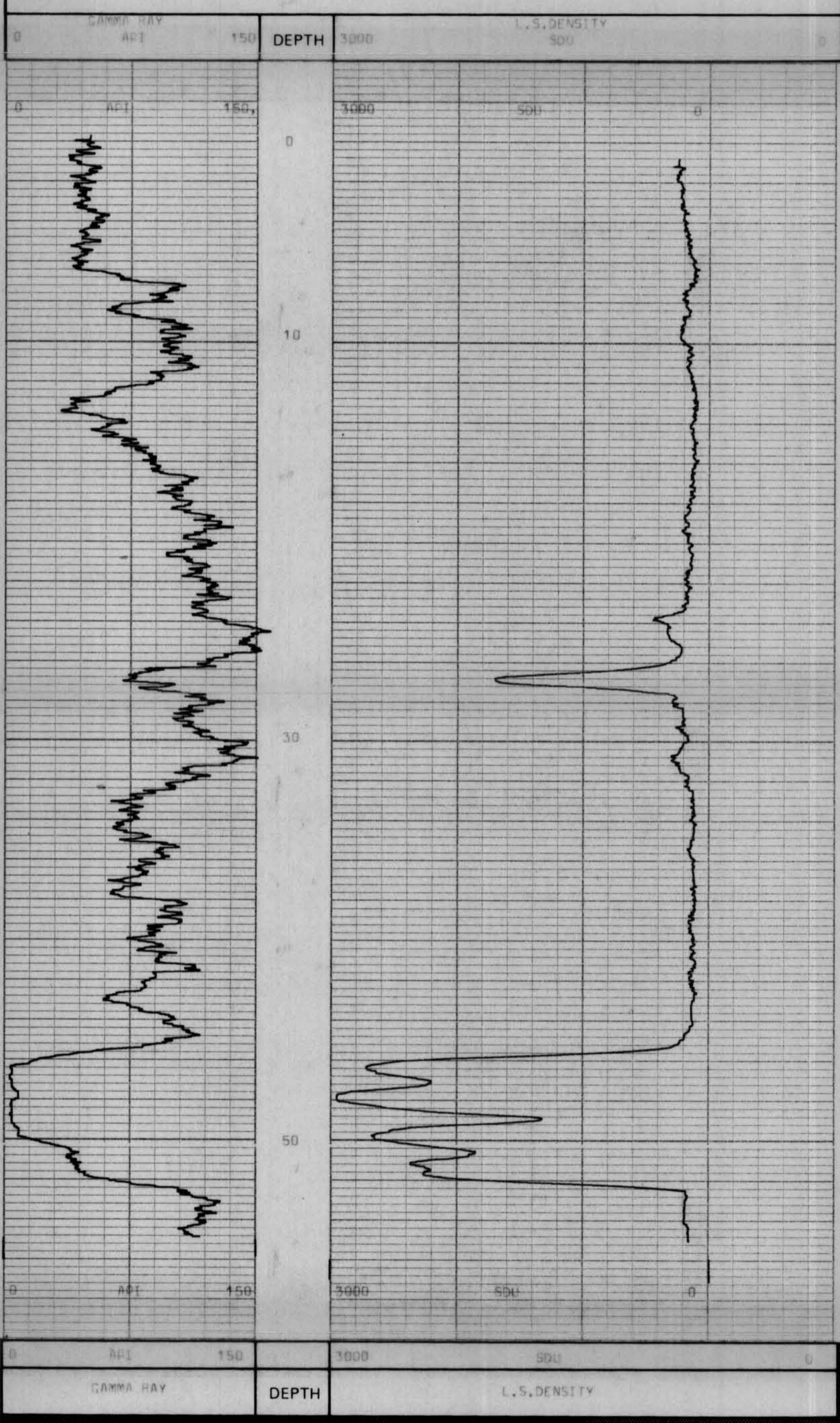
FIRST READING 55m
 LAST READING 0
 INTERVAL LOGGED 55m
 UNIT - TRUCK No 45/300BRADER
 ENGINEER RB/DP
 WITNESS

489

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS		
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL
GAMMA	110	-	510API	Y	9m/m	H	9m/m	1	-	1.42	55	0	55
LSD	110	5945	5305DU	Y	9m/m	R	9m/m	.3	6.5	-	55	0	55
CALIPER	140	-		Y	9m/m	R	9m/m	.3	-	-	55	0	55

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
NEUTRON					LOGGED IN RODS CALIPER ON TAPE ONLY



BOREHOLE BR-56 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA



NEUTRON-NEUTRON LOG

BOREHOLE BR-56
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 29/09/80

DEPTH SCALE
 200.1

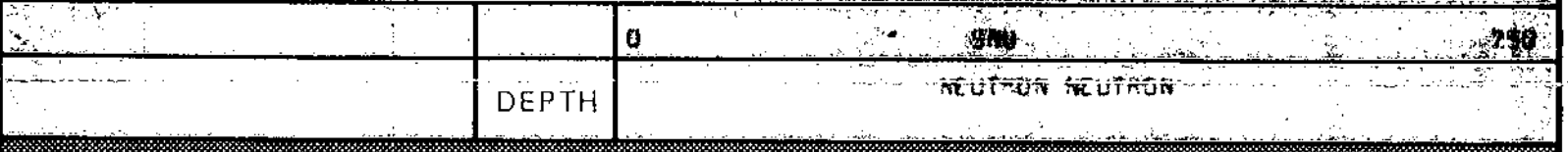
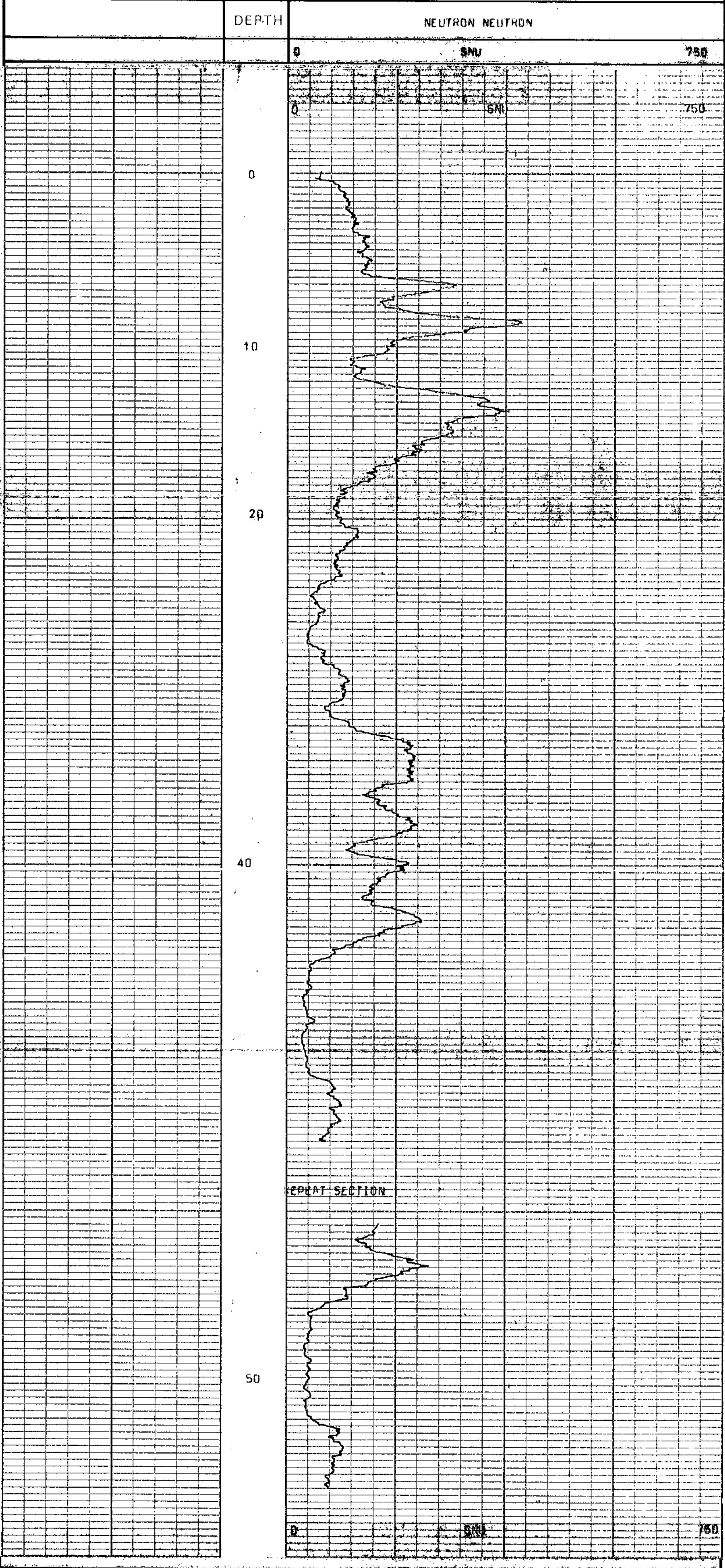
2 OF 4 LOGS

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

LOG	TAPPING	PANEL	CAL. COEFF.
LOG TAPED	RECORD DIRECTION	T.C. NORM	
NEUTRON Y	9m/m	D	9m/m 1
			5.9
			-

REMARKS
 LOGGED IN ROOS

489



BOREHOLE <u>BR-56</u>	AREA <u>BURNT RIVER</u>
CLIENT <u>TECH-CORP</u>	COUNTRY <u>CANADA</u>





CORE QUALITY LOG

BOREHOLE BR-56
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 29/09/80

DEPTH SCALE
20:1

3 OF 4 LOGS

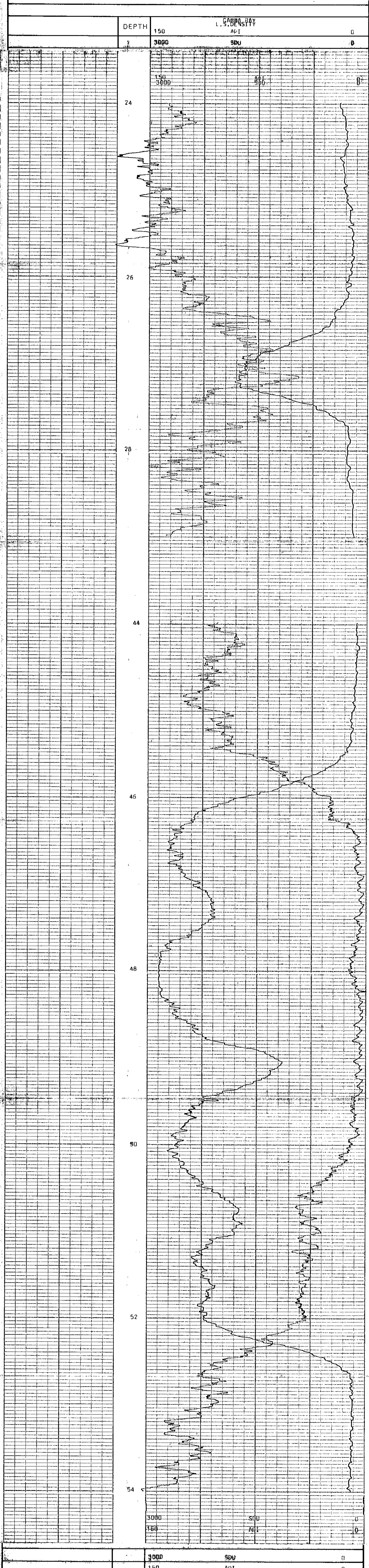
BOREHOLE DATA REFER TO LITHOLOGY LOG
OPERATION DATA REFER TO LITHOLOGY LOG
EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	CAL COEFF
LOG	RECORDING SPEED	AT & NORM	
UNIT	RECORDING SPEED	SECS	1.42
Y	3m/m	H	3m/m
H	3m/m	T	5.5
5.5			

SCOUT 110 SURF 5845

REMARKS
LUGGED IN HOUS

489



DEPTH	150	SDU	0
		API DENSITY	0



BOREHOLE BR-56
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA



BOREHOLE BH-56
 CLIENT TECH-LOG

AREA BURNT RIVER
 COUNTRY CANADA

DATE LOGGED 28/08/80

4 OF 4 LOGS

DEPTH SCALE
 20:1

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
 SIDEWALL POSITION
 LOG TAPPING PANEL CORE
 LOG SPEEDS REPEAT SPEEDS NORM
 CALIPER V 3m/m ON TAPC 10m V
 B.R. DENSITY V 3m/m 1 0.7 -

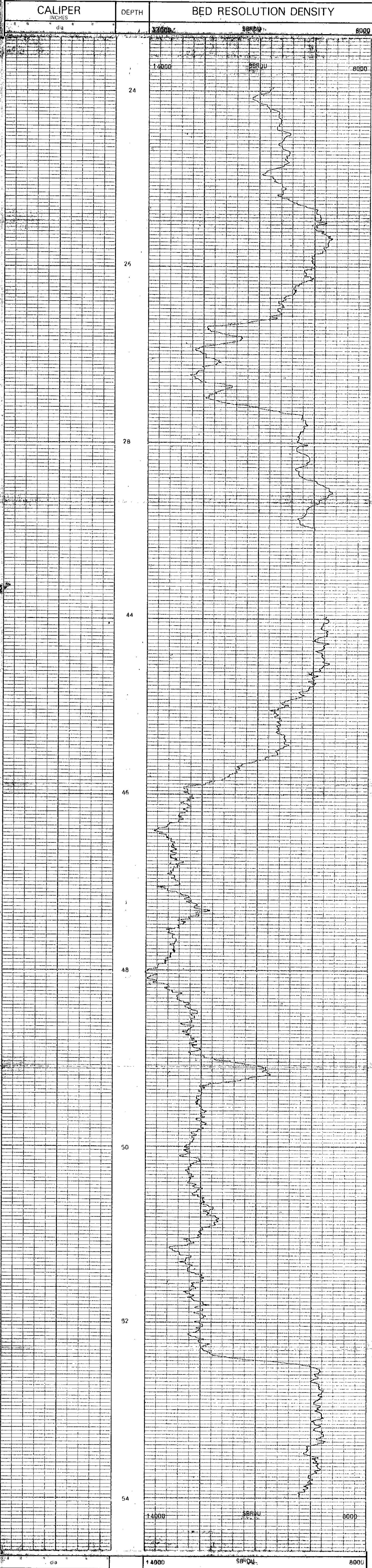
SEAM THICKNESS LOG INTERVALS

FROM	5.4m	2.9m
TO	4.4m	2.4m
INTERVAL	1.0m	0.5m
FROM		
TO		
INTERVAL		
TOTAL		

REMARKS
 LOGGED IN HDDS
 CALIPER ON TAPC ONLY

489

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
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BOREHOLE BH-56 AREA BURNT RIVER
 CLIENT TECH-LOG COUNTRY CANADA

SEAM THICKNESS LOG



Pr-Saint River (2)(3)A

BR57

BOREHOLE BR-57
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 30/08/80

DEPTH SCALE
 200:1
 1 OF 5 LOGS

COAL LITHOLOGY LOG

SONDE TYPE
 COAL COMBINATION
 SONDE

LOG SUITE
 GAMMA RAY
 L.S. DENSITY
 CALIPER

BOREHOLE DATA

PERMANENT DATUM GROUND LEVEL
 ELEVATION OF P.D. BPB
 MEASUREMENTS FROM GL
 DEPTH REACHED 39m 131ft.
 CASING SHOE 3.3m
 BIT SIZES 1 N03 TO TD 2 TO
 3 TO 4 TO
 CASING SIZES 1 TO 1.3m 2 TO

FLUID DATA

NATURE QUICK-GEL
 SG NO SAMPLE
 LEVEL
 VISCOSITY
 Rm at meas. temp
 BHT

OPERATION DATA

FIRST READING 38m
 LAST READING 0
 INTERVAL LOGGED 38m
 UNIT-TRUCK No 45/76
 ENGINEER CF/RB
 WITNESS

489

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM		FROM	TO	INTERVAL	
GAMMA RAY	110	5845	51QAPI	Y	1m/m	R	9m/m	1	-	1.42	38m	0	38m	
L.S. DENSITY			530SDU	Y	1m/m	R	9m/m	.3	6.5	-	38m	0	38m	
CALIPER				Y	9m/m	R	9m/m	.3	-	-	38m	0	38m	

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

FROM	28m	INTERVAL TOTAL	
TO	20m		
INTERVAL	8m		8m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
	NEUTRON				
	F.E.				

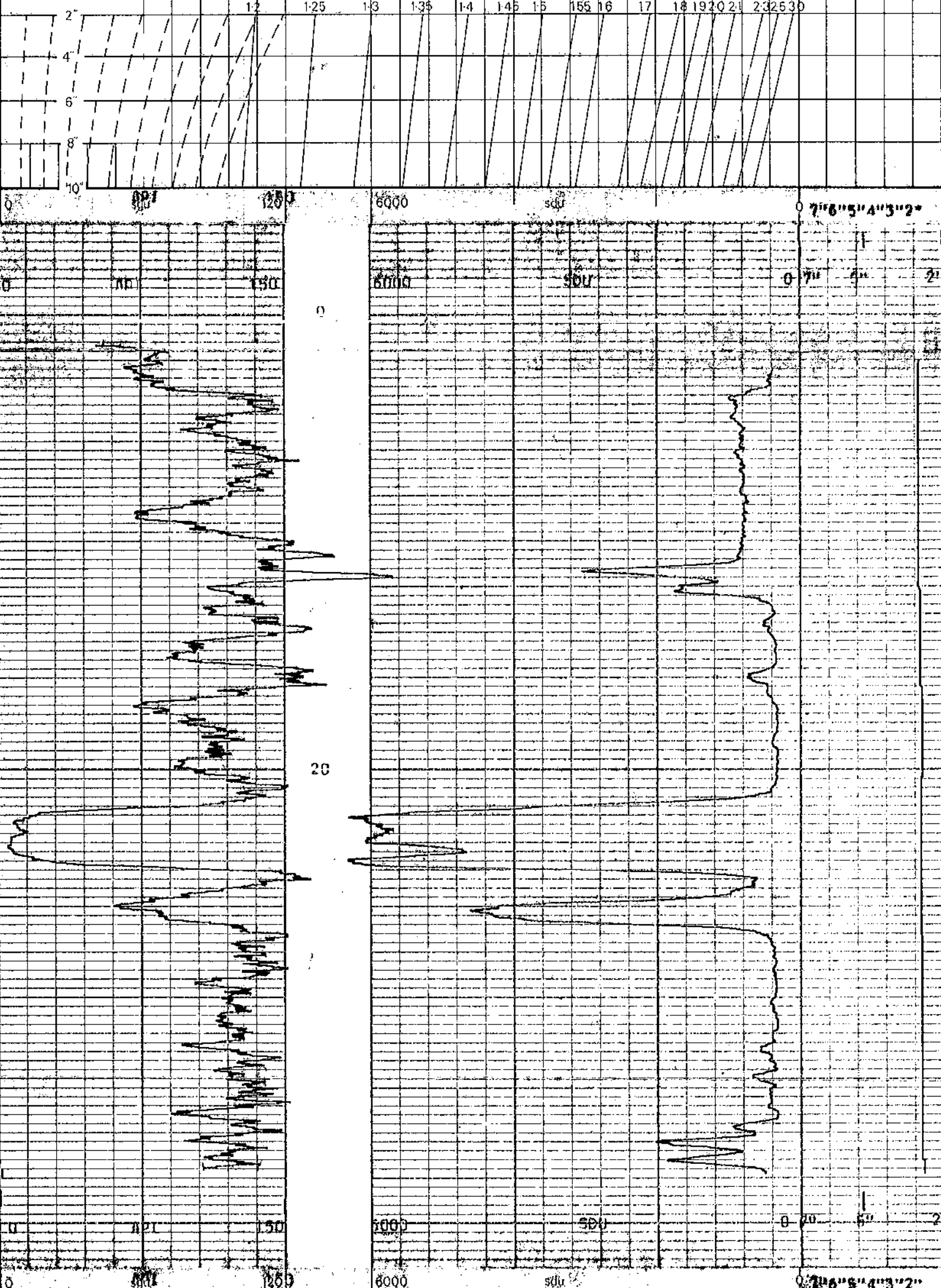
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. <u>367</u>	VALUE <u>51 @ 2" DIAM</u>	JIG CAL DATA <u>7/06/80</u>	JIG VALUE <u>530SDU @</u>	g/cm ³	<u>7</u> ins <u>890</u> cps
JIG MARK SHOWN AT ABOVE VALUE +		JIG No. <u>0338</u>	SPAN <u>6000</u>	NORM <u>SDU = 6.5</u>	<u>2</u> ins <u>480</u> cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE BR-57 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA

COAL LITHOLOGY LOG



METHOD-NEUTRON LOG

BOREHOLE BR-57
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 10/09/80

DEPTH SCALE
2 OF 5 LOGS

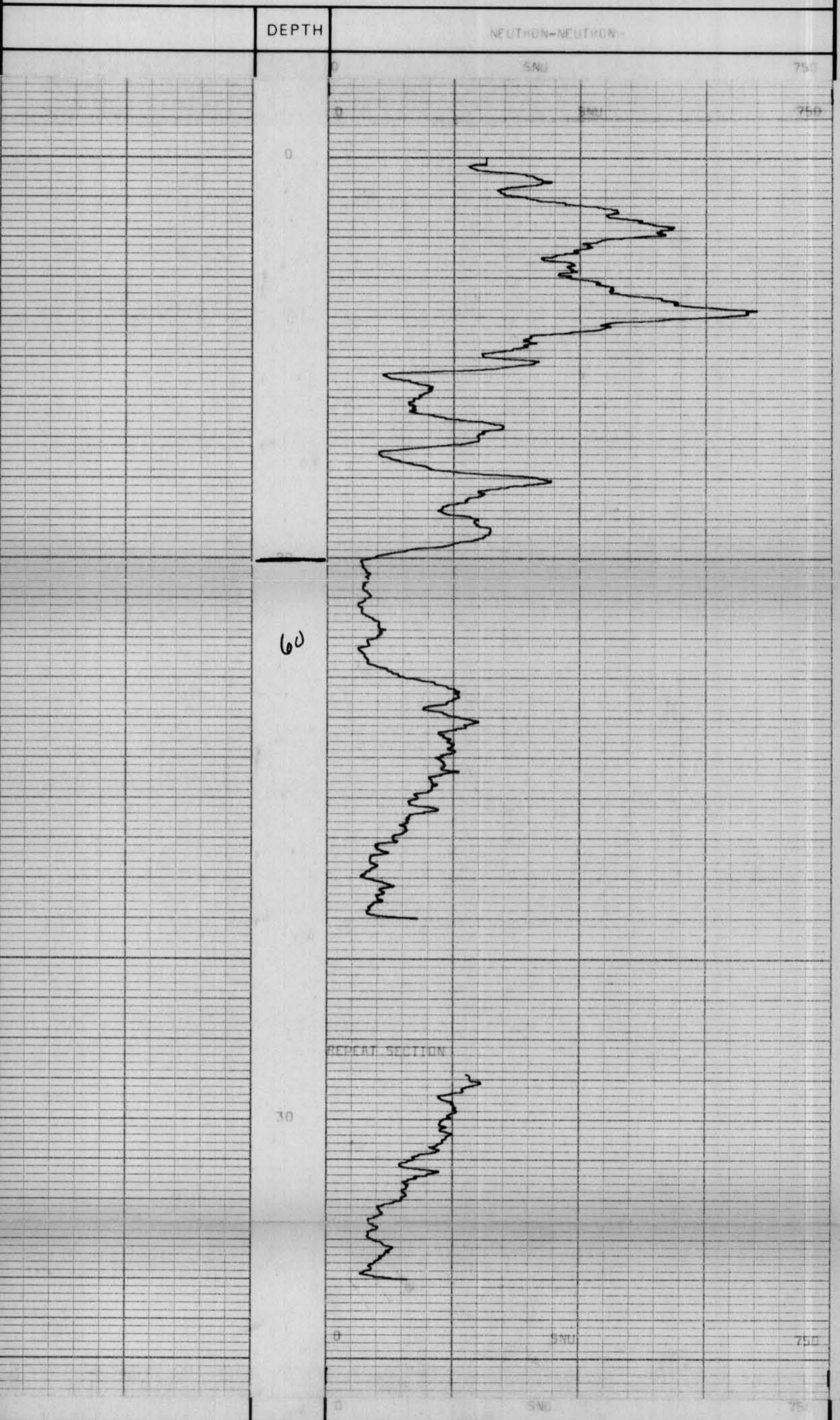
BOREHOLE DATA REFERR TO LITHOL LOG
OPERATION DATA REFERR TO LITHOL LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING		PANEL		CAL COEFF
	LOG TAPED	RECORD DIRECTION	SPEED REPLAY	T C SECS	
NEUTRON	Y	D	9m/m	1	.82
		SOURCE NO	294	SOURCE NO	678

REMARKS

489



BOREHOLE BR-57
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA



FOCUSSED ELECTRIC LOG

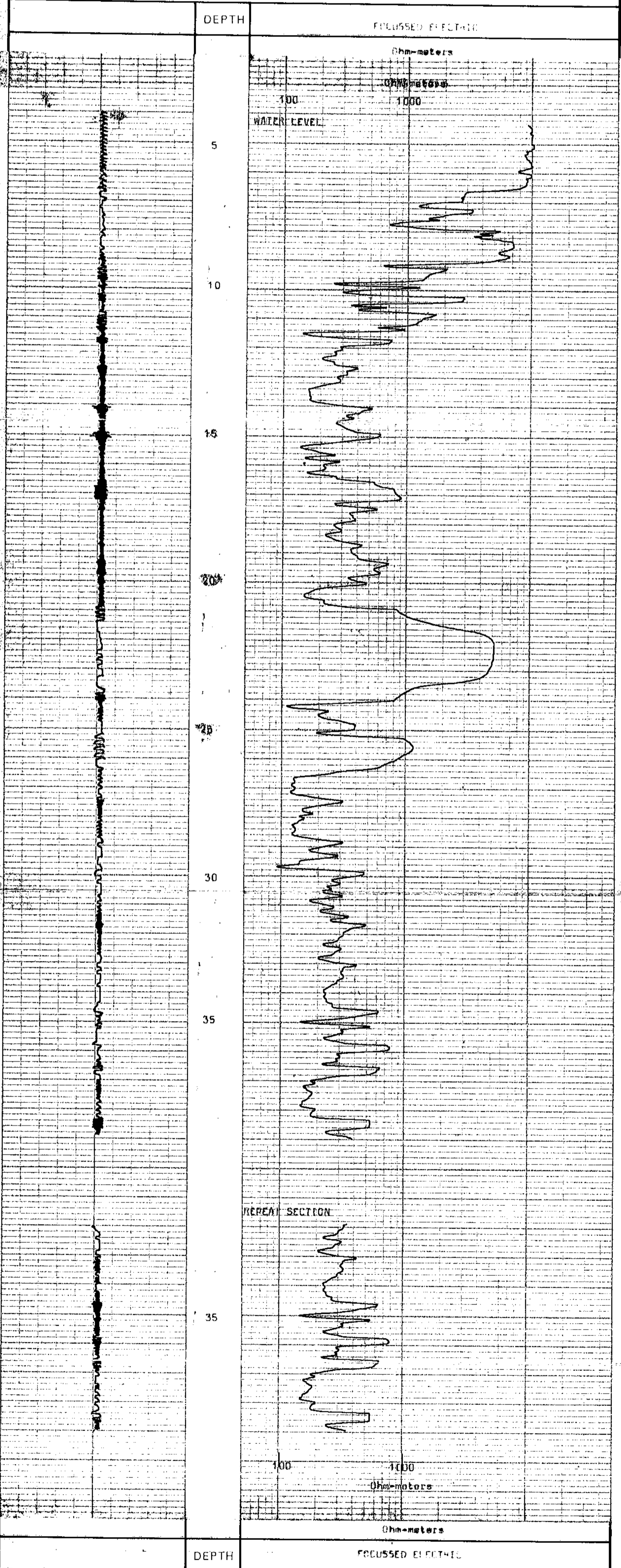
BOREHOLE BH-57
 CLIENT TECH-CORP
489

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 30/08/80
 DEPTH SCALE 100:1
 3 OF 5 LOGS

BOREHOLE DATA REFER TO 11TH01.DSY LOG
 OPERATION DATA REFER TO 11TH01.JTY LOG
 EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	CAT				
LOG	RECORD	T.C.	COEFF				
F.E.	TAPE	SPEED	SECS				
	REPLAY	SECS	NORM				
	Y	bm/m	D	5m/m	.3	-	-

REMARKS
 MONITOR FOR DEVIATES WITH OVERLOAD
 INTERMEDIATE OCCURS WITH SHARP BOUNDARIES
 AND VERY HIGH RESISTIVITIES



BOREHOLE BH-57 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA

R2-Burnt River 80(3)A BR 57



BOREHOLE BR-57
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 30/08/80

DEPTH SCALE
20
4 OF 5 LOGS

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

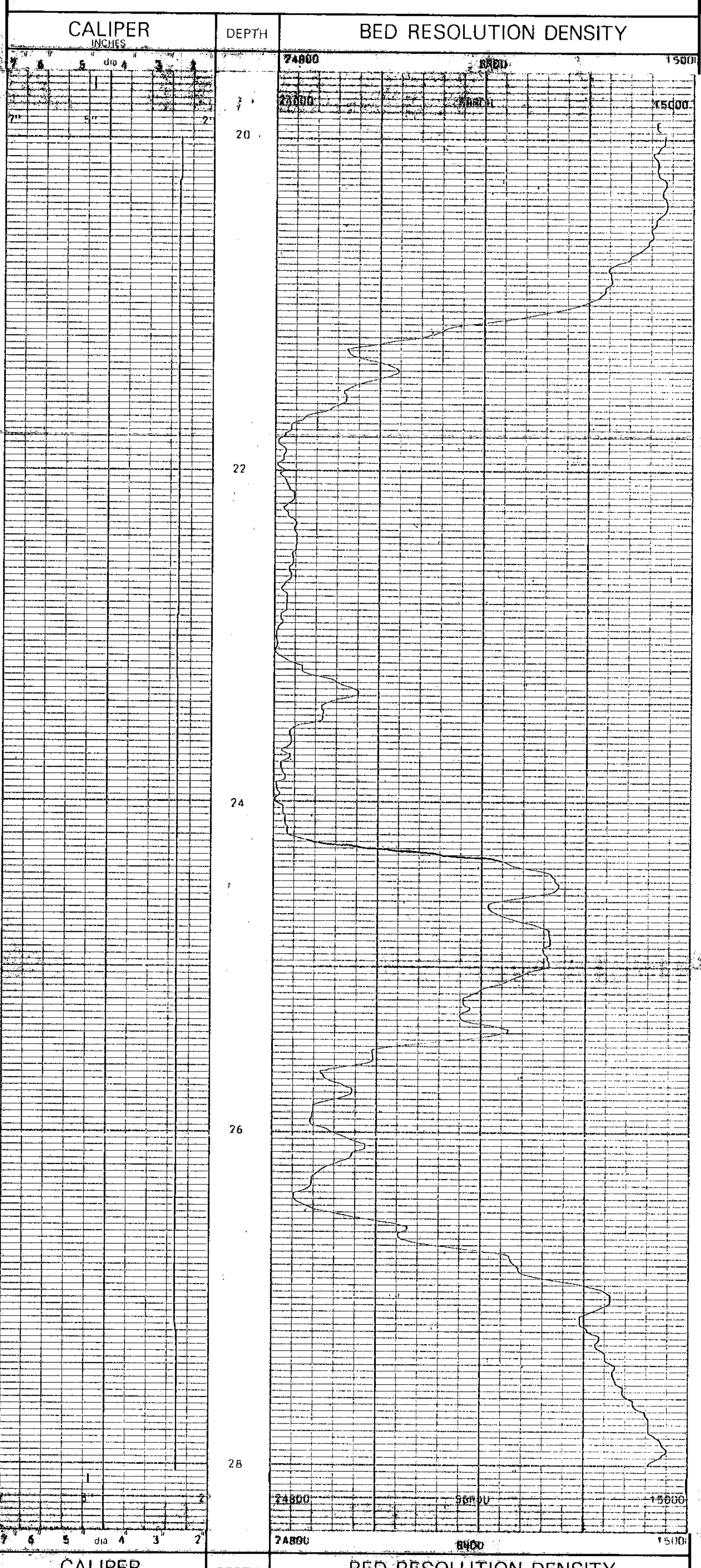
SEAM THICKNESS LOG

SONDE TYPE:
 COAL
 COMBINATION SONDE

LOG SUITE:
 CALIPER
 BR DENSITY

LOG	TAPING	PANEL	CAL
	LOG LABEL	RECORD DIRECT	SPEED
	CALIPER	Y	9m/m
	BR DENSITY	Y	9m/m
		H	3m/m
		H	.3
		H	6.9
		H	-

B P B SEAM THICKNESS LOG



CALIPER INCHES DEPTH BED RESOLUTION DENSITY



BOREHOLE BR-57
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA

SEAM THICKNESS LOG

489



COAL QUALITY LOG

LOG SUITE:
GAMMA RAY
L.S. DENSITY

SONDE TYPE:
COAL COMBINATION SONDE

BOREHOLE _____
CLIENT _____

AREA BURNT RIVER
COUNTRY CANADA

DATE LOGGED 19/09/80

DEPTH SCALE
20:1

1 OF 5 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	TAPING	SIDEWALL POSITION	NOTE
GAMMA	LOG RECORDING SPEED 1.0	PANEL	
L.S. DENSITY	TABED REPLAY SPEED SECS 1		
			1.42

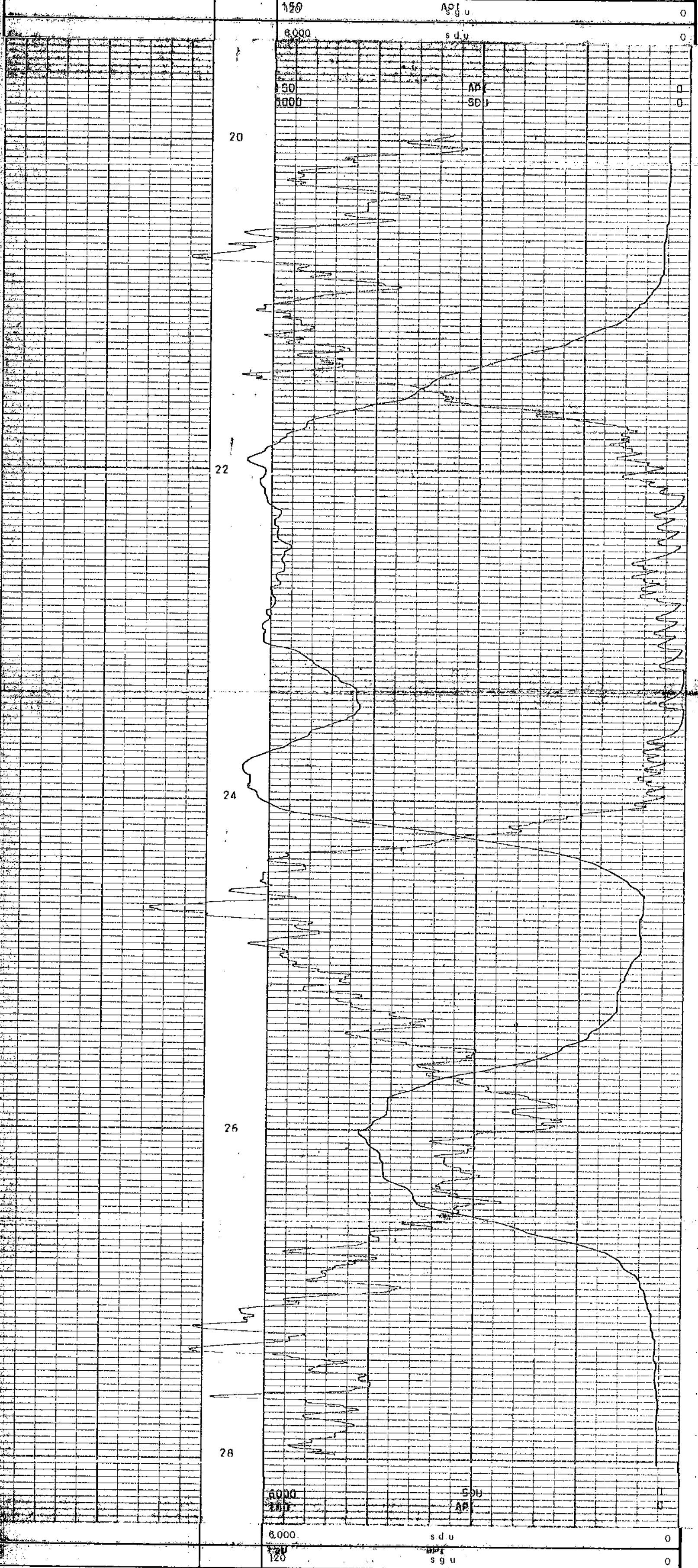
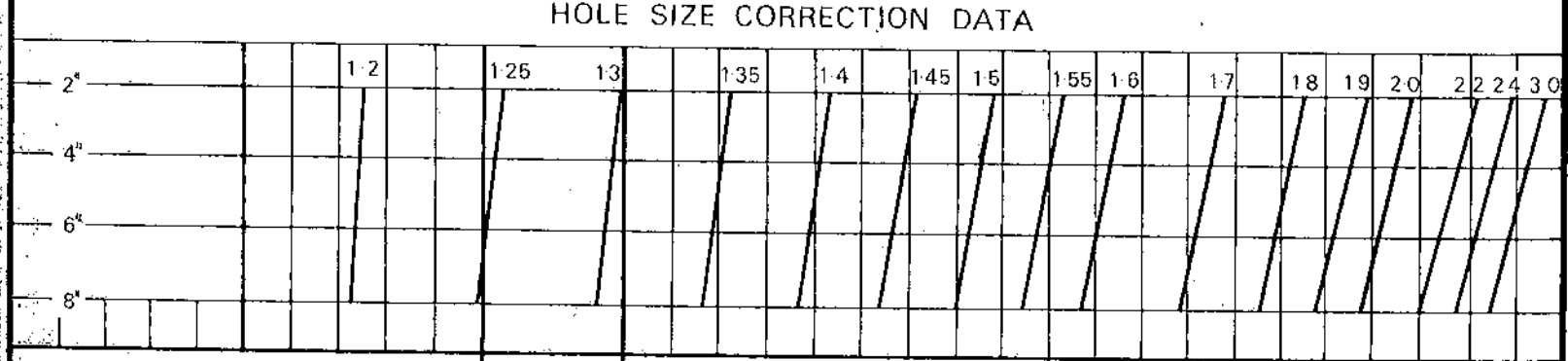
COAL QUALITY LOG INTERVALS

FROM	TO	INTERVAL	INTERVAL TOTAL
2.4m	2.0m	8m	8m

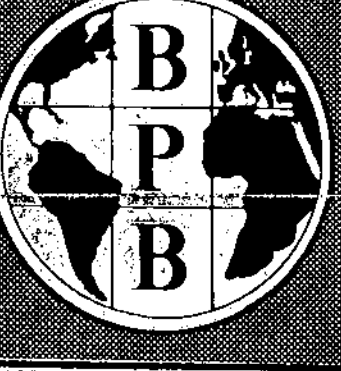
4189

B P B COAL QUALITY LOG

DEPTH	GAMMA RAY	COAL BULK DENSITY
		g/cm ³



DEPTH	GAMMA RAY	COAL BULK DENSITY
		g/cm ³



BOREHOLE BH-57
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA

COAL QUALITY LOG



Pr. Burnt River (3)A BR 58

BOREHOLE BR-58(OPEN HOLE)
CLIENT TECH-CONC

AREA BURNT RIVER
COUNTRY CANADA
DEPTH SCALE 200' x 1

DATE LOGGED 05/09/80
OF LOGS 5

COAL

LITHOLOGY

LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY L.S. DENSITY CALIPER

OPERATION DATA
FIRST READING 112m
LAST READING 0
INTERNAL LOGGED 112m
UNIT-TRUCK No 46/2
ENGINEER H. C. BAHARAH
WITNESS

489

PERMANENT DATUM CHINA LEVEL
ELEVATION OF P.D. 878
MEASUREMENT SYSTEM CL
DEPTH REACHED 113m
CASING SHOE 10ft.
BPT SIZES 1 NDS TO 1D 2 TO
3 TO 4 TO
CASING SIZES 1 1 1/2 TO 10ft 2 TO

FLUID DATA
NATURE GULF WATER
SG NO SAND F
LEVEL
VISCOSITY
Rm at meas temp
BHT

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE													
LOG	EQUIPMENT			TAPING			PANEL		CAL COEFF		SEAM LOG RUN		
	SONDE	SOURCE	CAUBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM	FROM	TO	INTERVAL	
	110	5845			9m/m	R	9m/m	1	-	1.4	112	0	112
GAMMA RAY			510001	Y	9m/m	R	9m/m	1	-	1.4	112	0	112
L.S. DENSITY			5305DU	Y	9m/m	R	9m/m	3	6.8	-	112	0	112
CALIPER	SIDEWALL POSITION			Y	9m/m	R	9m/m	3	-	-	112	0	112

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

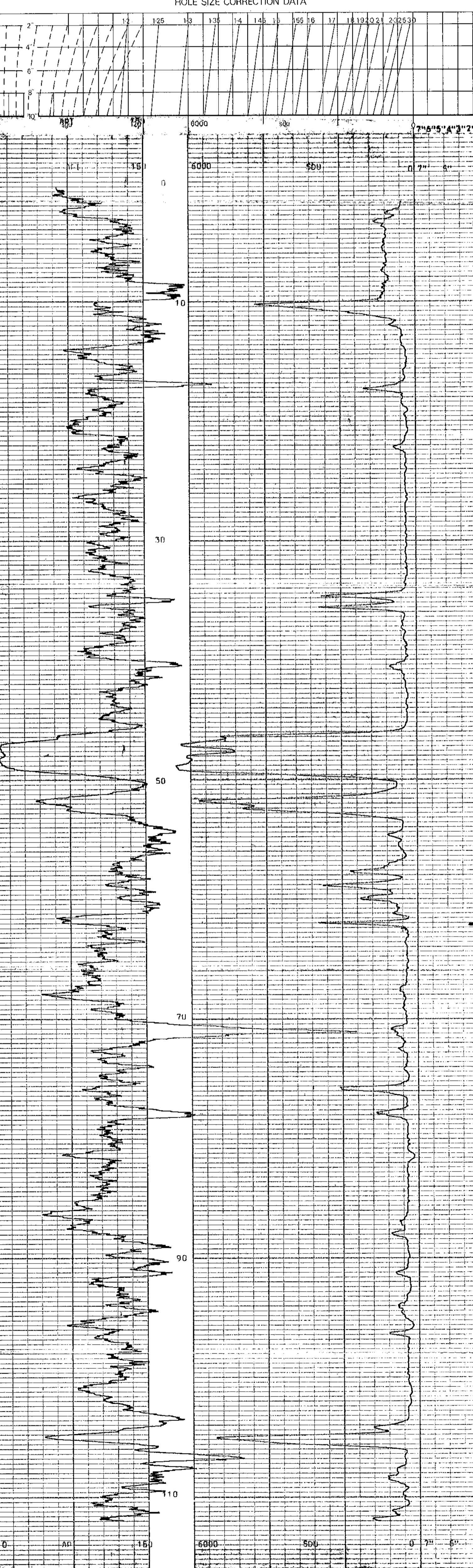
FROM	TO	INTERVAL	INTERVAL TOTAL
107m	55m		
103m	45m		
4m	10m		14m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
	NEUTRON				
	F.E.				

BPB COAL LITHOLOGY LOG
CALIBRATION DATA

JIG No 367	VALUE 510001	DIAM	JIG CAL DATE 17/06/80	JIG VALUE 5305DU	g/cm ³	2 ins 480	cps
JIG MARK SHOWN AT ABOVE VALUE -			JIG No 033A	SPAN 6000	NORM	SDU = 6.8	7 ins 890

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------

BOREHOLE BR-58(OPEN HOLE) AREA BURNT RIVER CANADA
CLIENT TECH-CONC COUNTRY

COAL LITHOLOGY LOG





NEUTRON-NEUTRON LOG

BOREHOLE BR-58(OPEN HOLE)

CLIENT TECH-CORP

AREA BURNT RIVER

COUNTRY CANADA

DATE LOGGED 03/09/86

7 OFS LOGS

DEPTH SCALE 2000 FT

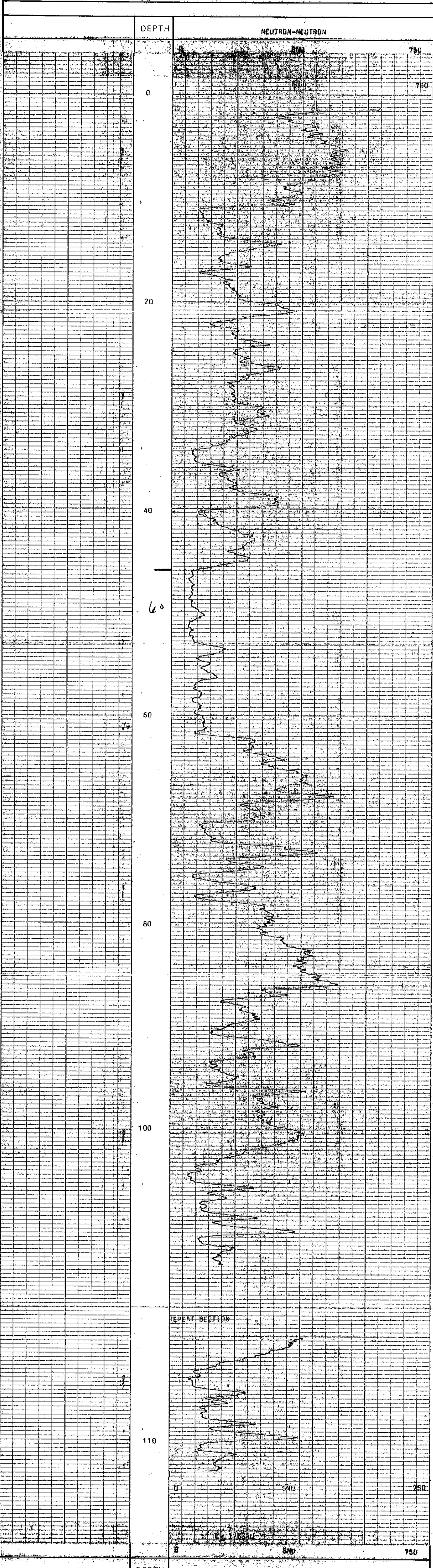
BOREHOLE DATA REFER TO LITHOLOG

OPERATION DATA REFER TO LITHOLOG

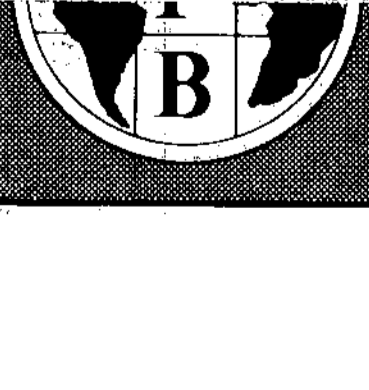
EQUIPMENT AND RECORDING DATA

LOG	FLAPPING	PANEL	CA
LOG RECORDING SPEED	1%	NORM	
LOG SPEED REPLAY	900/h	1	83
RECORDING	2	900/h	0
SOND	204	SOND	6787

REMARKS
489

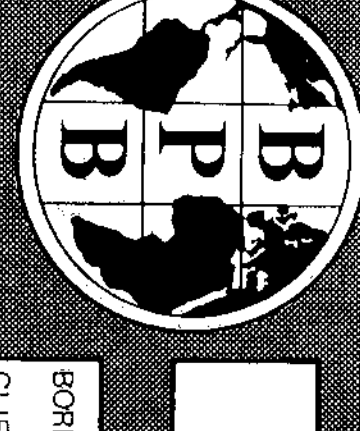


DEPTH NEUTRON-NEUTRON



BOREHOLE BR-58(OPEN HOLE)
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA



FOCUSSED ELECTRIC LOG

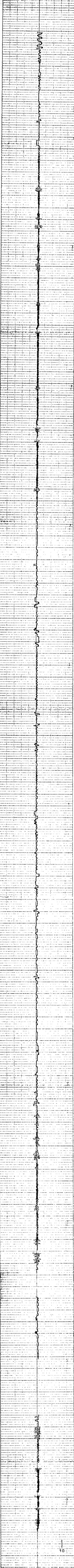
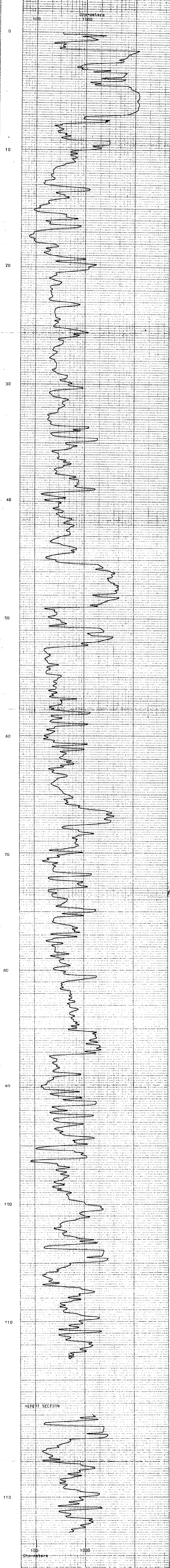
BOREHOLE 3R-58
 CLIENT TECH-EUMF
489

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 03/09/80
 I. OF. 5.1065

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

EQUIPMENT AND RECORDING DATA

LOG	TAPPING	PANEL	DATE
LOG	RECORDING	SPEED	1.5
F.E.	Y	5m/m	0
		5m/m	.3
REMARKS			
MONITOR GEN OPERATES WITH GIELEQAD			
OVERTRIP OCCURS AT SHARP BOUNDARIES			
AND VERY HIGH RESISTIVITIES			





BOREHOLE BR-58(OPEN HOLE)
 CLIENT TECH-COMP

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 03/09/90

DEPTH SCALE
20:1
4 OF 5 LOGS

COAL QUALITY LOG

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

SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

COAL QUALITY LOG INTERVALS

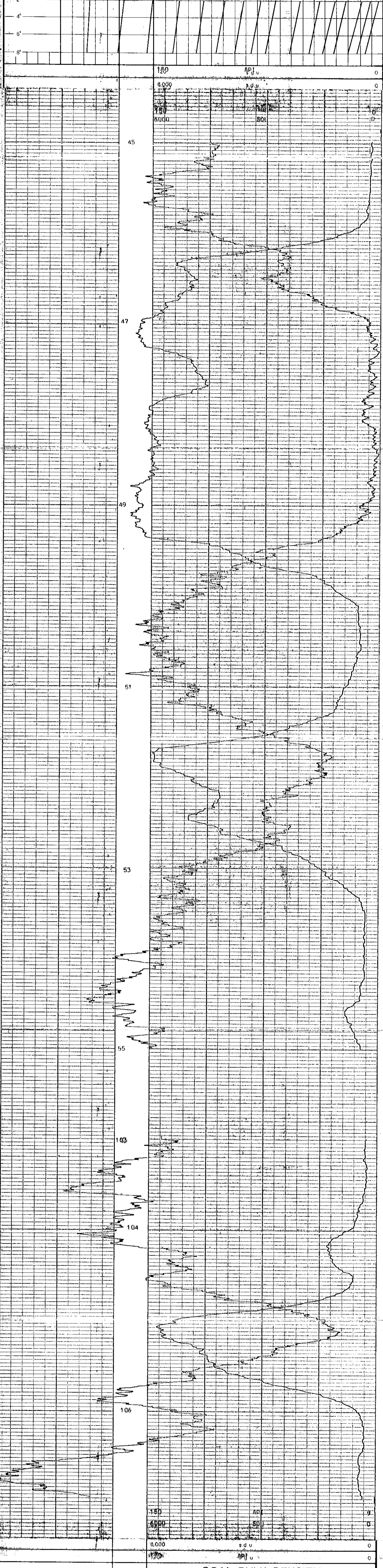
FROM	107m	55m
TO	103m	45m
INTERVAL	4m	10m
FROM		
TO		
INTERVAL		
REMARKS		

489

B P B COAL QUALITY LOG

DEPTH
 GAMMA RAY
 COAL BULK DENSITY g/cm^3

HOLE SIZE CORRECTION DATA



DEPTH
 GAMMA RAY
 COAL BULK DENSITY g/cm^3

BOREHOLE BR-58(OPEN HOLE) AREA BURNT RIVER
 CLIENT TECH-COMP COUNTRY CANADA

COAL QUALITY LOG





PR-Burnt River 8(3)A BR 58

NEUTRON-NEUTRON

BOREHOLE 9H-58

CLIENT TECH-CORP

AREA BURNT RIVER

COUNTRY CANADA

DATE LOGGED 02/09/90

DEPTH SCALE
2001

2 OF 4 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

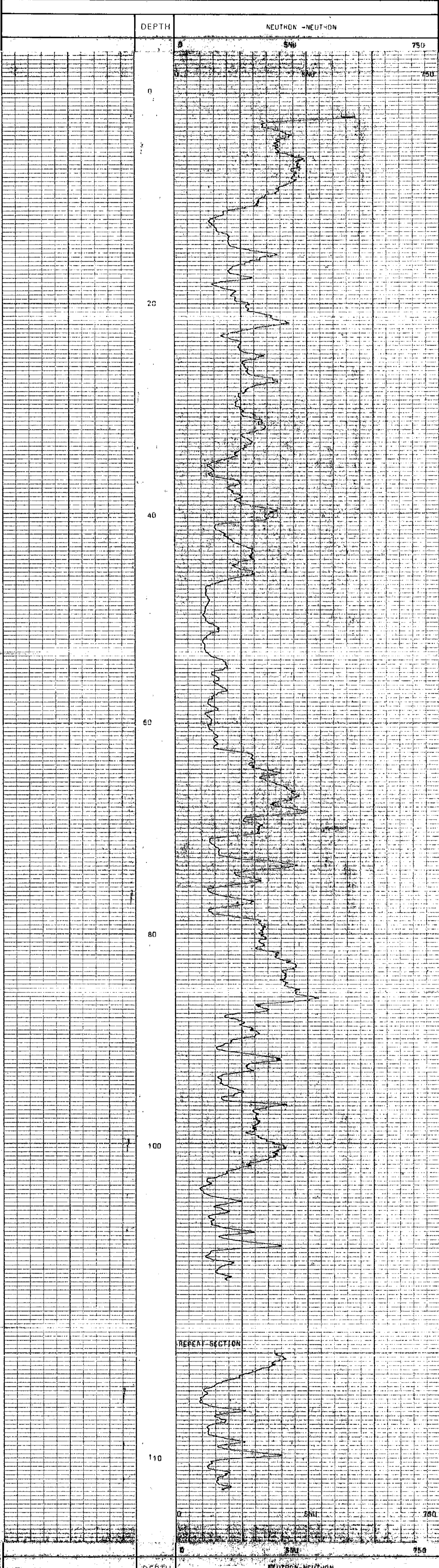
EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	DATE
LOG	LOG	LOG	LOG
TABO	RECORD	SPEED	T.C. NORM
NEUTRON	9m/m	D	9m/h 1 .82

REMARKS

LOGGED IN 7005

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BOREHOLE BR-58

CLIENT TECH-CORP

AREA BURNT RIVER

COUNTRY CANADA



BOREHOLE 8H-58
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA

DATE LOGGED 02/09/80
 DEPTH SCALE 20:1

3 OF 4 LOGS

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

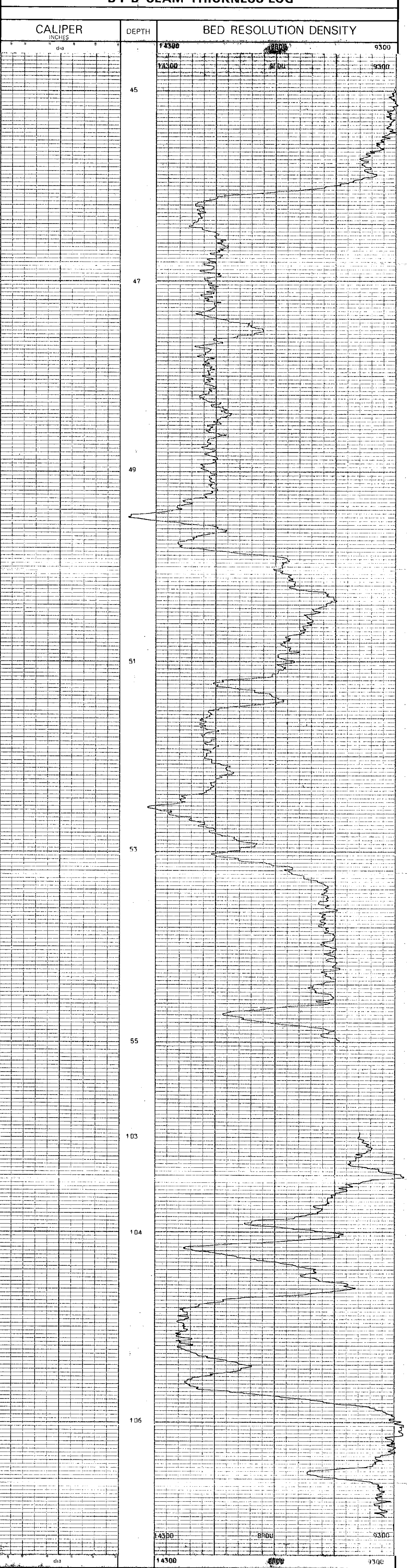
SEAM THICKNESS LOG

SONDE TYPE: COAL COMBINATION SONDE
 SEAM THICKNESS LOG INTERVALS

LOG SUITE:
 CALIPER
 BR DENSITY

REMARKS
489

B P B SEAM THICKNESS LOG



CALIPER INCHES DEPTH BED RESOLUTION DENSITY

BOREHOLE 8H-58 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA

SEAM THICKNESS LOG





BOREHOLE BH-58(OPEN-HOLE)
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA

DATE LOGGED 03/29/88

SEAM THICKNESS LOG

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

COAL COMBINATION SONDE
 SONDE TYPE: COAL COMBINATION SONDE

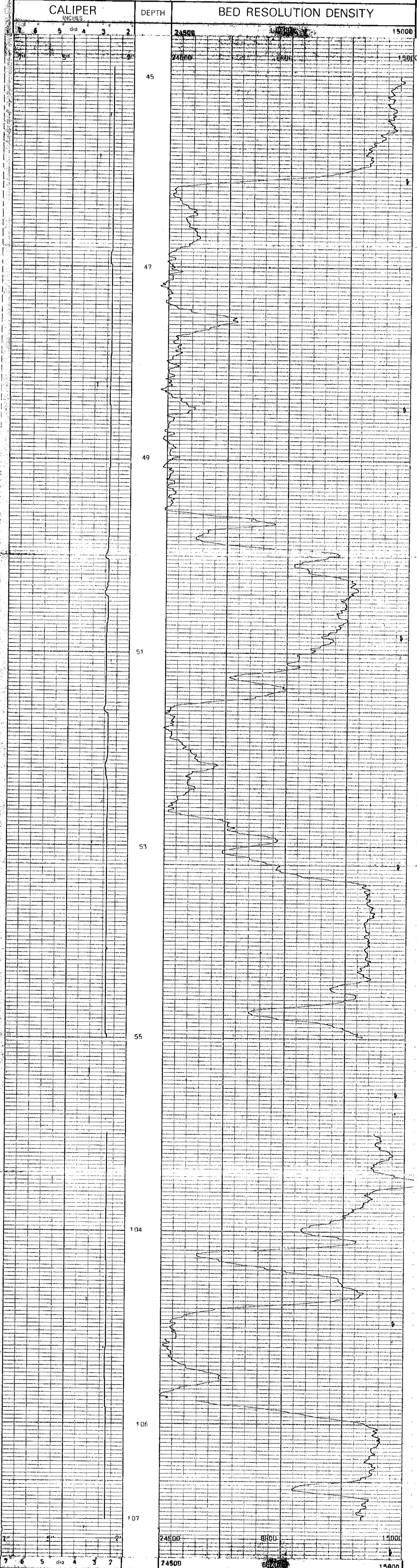
LOG SUITE:
 CALIPER
 BR DENSITY

LOG	TAPPING	LOG RECORDING	PANEL	COAL
		SPEED	SPEED	
		REPLA	SECS	NORM
CALIPER	Y	3m/h	3	-
BR DENSITY	Y	3m/h	3	-

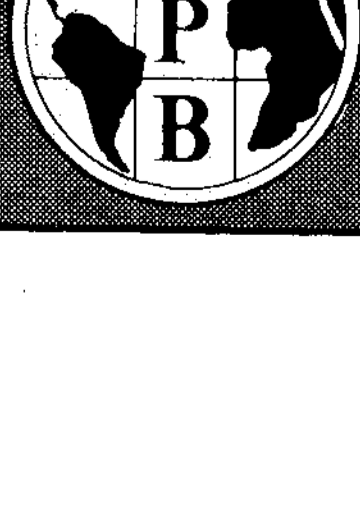
SEAM THICKNESS LOG INTERVALS
 FROM 1.07m TO 5.5m
 INTERVAL 4m

489

B P B SEAM THICKNESS LOG



CALIPER INCHES DEPTH BED RESOLUTION DENSITY



BOREHOLE BH-58(OPEN-HOLE) AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA
SEAM THICKNESS LOG



PR-Burnt River 50(3)A BR 58

CLIENT TECH-CORP

BOREHOLE BR-58
 CLIENT TECH-CORP
 AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 02/09/80

BOREHOLE DATA

PERMANENT DATUM GROUND LEVEL
 ELEVATION OF P.D. GROUND LEVEL
 MEASUREMENTS FROM CL
 DEPTH REACHED 113m
 CASING SHOE 10ft.
 BIT SIZES 1 1 1/2 TO 2 TO
 3 TO 4 TO
 CASING SIZES 1 1/2 TO 10ft 2 TO

FLUID DATA

NATURE QUICK-CEL
 S.G. NO SAMPLE
 LEVEL
 VISCOSITY
 PH at meas. temp
 PH T

OPERATION DATA

FIRST READING 111m
 LAST READING 0
 INTERNAL LOGGED 111m
 UNIT-TRUCK NO 46/24
 ENGINEER P. E. BRYAN
 WITNESS

489

EQUIPMENT AND RECORDING DATA

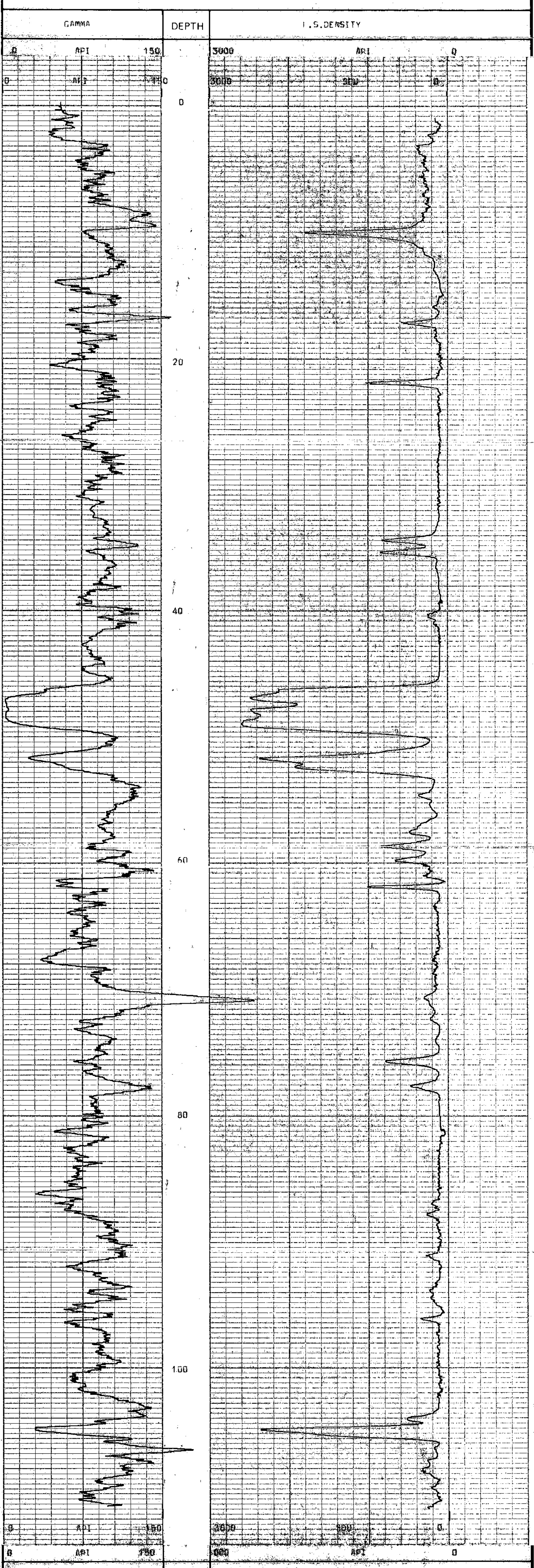
LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS		
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECTOR REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL
GAMMA	110	-	510API	Y	9m/m	R	9m/m	1	-	1.42	111	0	111
L.S.D.	110	5848	5305DU	Y	9m/m	R	9m/m	.3	6.5	-	111	0	111
CALIPER	110	-	-	Y	9m/m								

ADDITIONAL SONDES RUN

REMARKS

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS
	NEUTRON			

LOGGED IN HOODS CALIPER NOT PLAYED OUT IN GENERAL



BOREHOLE BR-58
 CLIENT TECH-CORP
 AREA BURNT RIVER
 COUNTRY CANADA



Re-Burnt River 807 JA 93 02

COM. QUANTITY 1.00

BOREHOLE BH-58
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA

DATE LOGGED 07/09/80
 1 OF 4 LOGS

BOREHOLE DATA

PERMANENT DATUM 11.00
 ELEVATION OF P.O. 11.00
 MEASUREMENTS FROM 0.00
 DEPTH REACHED 11.3m
 CASING SHOE 1.00 TO 2.00
 BIT SIZES 3 TO 4
 CASING SIZES 1 TO 2

FLUID DATA

NATURE SOIL-CLAY
 S.G. 2.65
 LEVEL 11.00
 VISCOSITY
 PH 7.5

OPERATION DATA

FIRST READING 11.00
 LAST READING 9.00
 INTERVAL LOGGED 11.1m
 UNIT - TRUCK NO 46/24
 ENGINEER M. S. SMITH
 WITNESS

489

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS		
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT/REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL
AMMA	110	-	510AP1	Y	3m/m	H	3m/m	1	-	1.42	107	105	2m
L.S.D.	110	5845	530SD1	Y	3m/m	H	3m/m	3	6.5	-	"	"	"

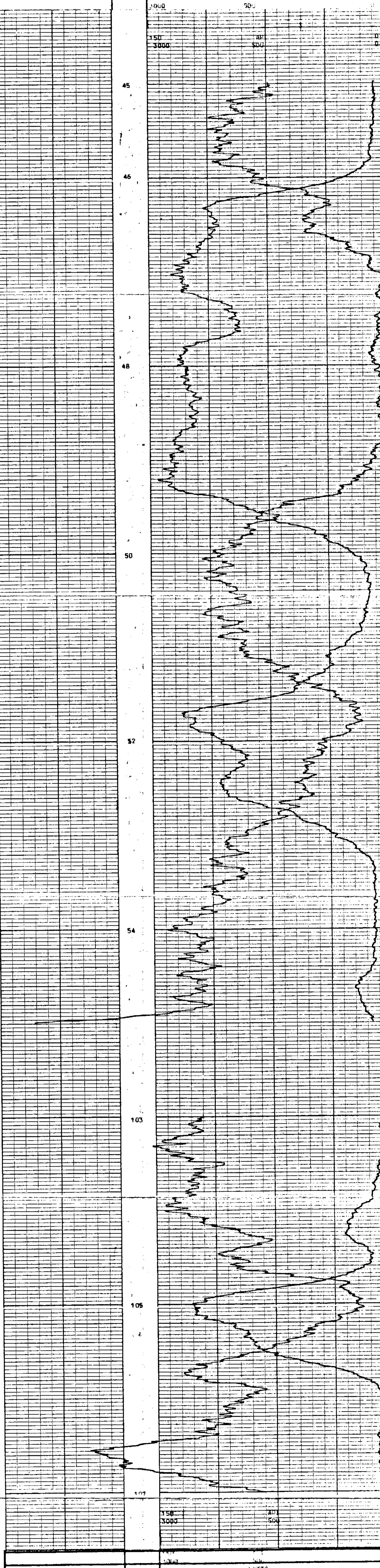
ADDITIONAL SONDES RUN

REMARKS

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS
	NEUTRON			

LOGGED IN HOUS

DEPTH L.S. DENSITY



DEPTH L.S. DENSITY



BOREHOLE BH-58
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA



22-Burnt River SD/378 - Bw-48

BOREHOLE Bw-48
 CLIENT TECH-CORP
 AREA Burnt River
 COUNTRY CANADA
 DATE LOGGED 14/08/80
 DEPTH SCALE 1:30:1
 LOSS 1.0%

COAL
LITHOLOGY
LOG

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

BOREHOLE DATA

PERMANENT DATUM	SYDNEY LEVEL
ELEVATION OF P.D.	510.00 M
DEPTH REACHED	62m
MEASUREMENTS FROM	U/L
CASING SHOE	22m
BIT SIZES	1 1/4" TO 1/2"
CASING SIZES	1" TO 2 1/2"

FLUID DATA

NATURE	---
SG	---
LEVEL	---
VISCOSITY	---
Temp. at meas. temp	---
BAIT	---

OPERATION DATA

FIRST READING	67m
LAST READING	62m
INTERVAL LOGGED	6m
UNIT TRUCK NO.	46725
ENGINEER	T. BAHRMANN
WITNESS	---

489

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT/REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL	
GAMMA RAY	WINKY HOLE			Y	9m/m	D	9m/r	1	-	-	62	0	62	
L.S. DENSITY				Y	9m/m	D	9m/r	.3	-	-	62	0	62	
CALIPER	SIDEWALL POSITION			Y	9m/m	D	9m/r	.3	-	-	62	0	62	

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

FROM	62m	38m	14m	
TO	54m	33m	8m	
INTERVAL	8m	5m	6m	INTERVAL TOTAL 19m

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS	REMARKS
NEUTRON					WINKY HOLE SINGLE FUNCTION SONDES

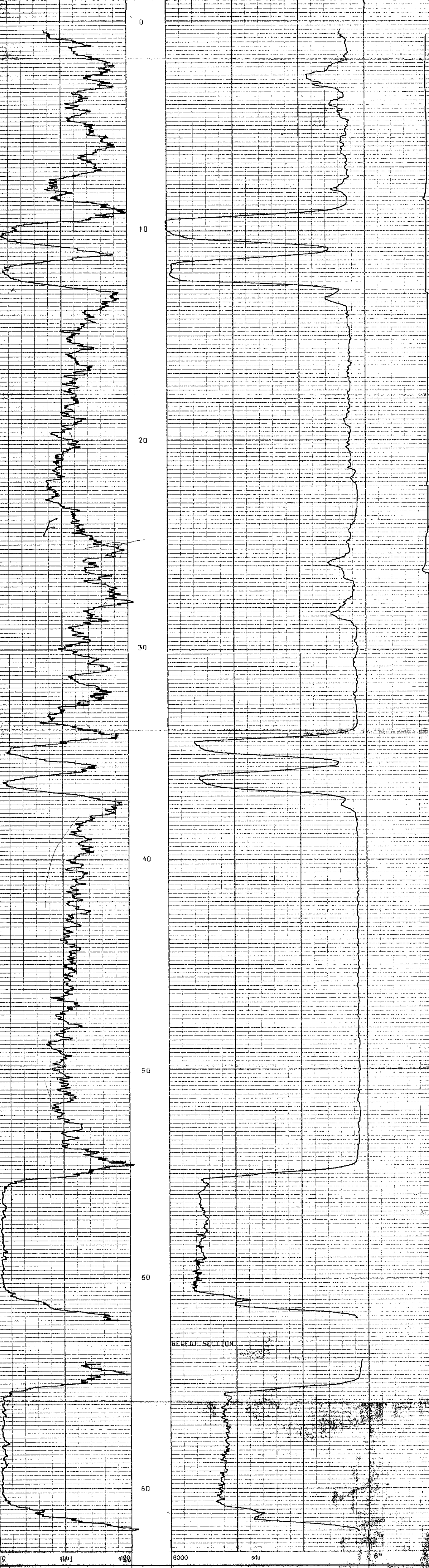
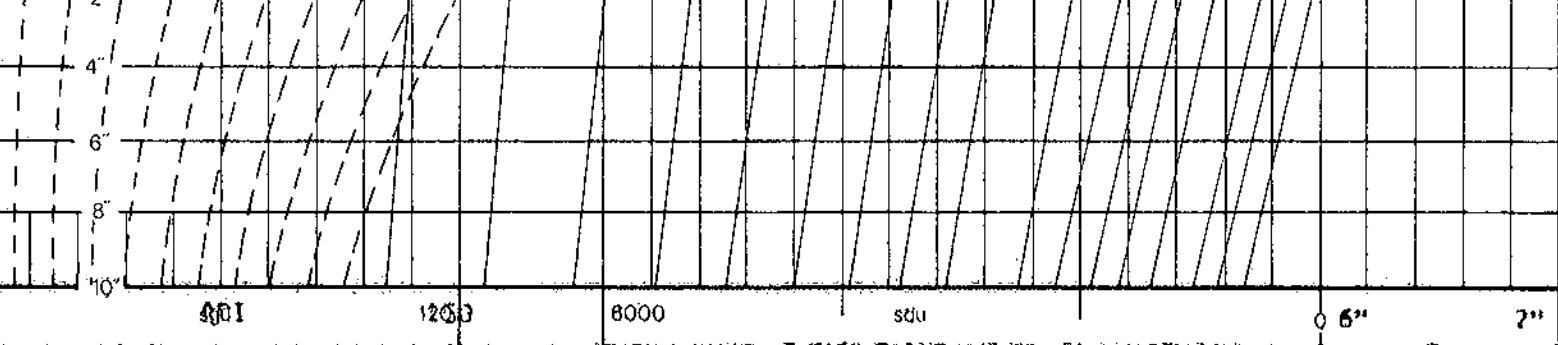
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. *	VALUE * @ 2" DIAM	JIG CAL DATE *	JIG VALUE *	SDU @	g/cm ³	2 ins	460 cps
JIG MARK SHOWN AT ABOVE VALUE *		JIG No. *	SPAN 6000	NORM	SDU =	6 ins	720 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



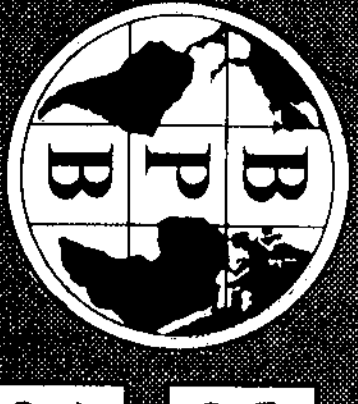
REPEAT SECTION

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
------------------	-------	--	--------------------------



BOREHOLE Bw-48 AREA Burnt River
 CLIENT TECH-CORP COUNTRY CANADA

COAL LITHOLOGY LOG



Fireburn River 80/219 83-48

BOREHOLE Bw-48
 CLIENT TECH-CORP
 AREA BURNT HILL
 COUNTRY CANADA
 DATE LOGGED 14/08/90
 DEPTH SCALE 1:30:1
 LOGS 1 OF 4 LOGS

COAL
LITHOLOGY
LOG

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

BOREHOLE DATA
 PERMANENT DATUM 5' SURFACE LEVEL
 ELEVATION OF F.O. 5' SURFACE LEVEL
 MEASUREMENTS FROM _____
 DEPTH REACHED 62m
 CASING SHOE _____
 BIT SIZES 1 1/4" TO 1/2"
 CASING SIZES 3" TO 2"

FLUID DATA
 NATURE _____
 SG _____
 LEVEL _____
 VISCOSITY _____
 Ref. at meas. temp _____
 BIT _____
 OPERATION DATA
 FIRST READING 5.7m
 LAST READING _____
 INTERVAL LOGGED 62m
 UNIT-TRUCK No. 45/25
 ENGINEER A.C. SHAW
 WITNESS _____

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EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE		EQUIPMENT		TAPING		PANEL		CAL COEFF		DEPTHS		SEAM LOG RUN
LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT FOR REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL
GAMMA RAY	WINKY HOLE			Y	3m/m	D	9m/r	1	-	62	0	62
L.S. DENSITY				Y	3m/m	D	9m/r	3	-	62	0	62
CALIPER	SIDEWALL POSITION			Y	3m/m	D	9m/r	3	-	62	0	62

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

FROM	52m	38m	14m	INTERVAL TOTAL
TO	54m	33m	8m	
INTERVAL	8m	5m	6m	19m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
NEUTRON					WINKY HOLE SINGLE FUNCTION SONDES

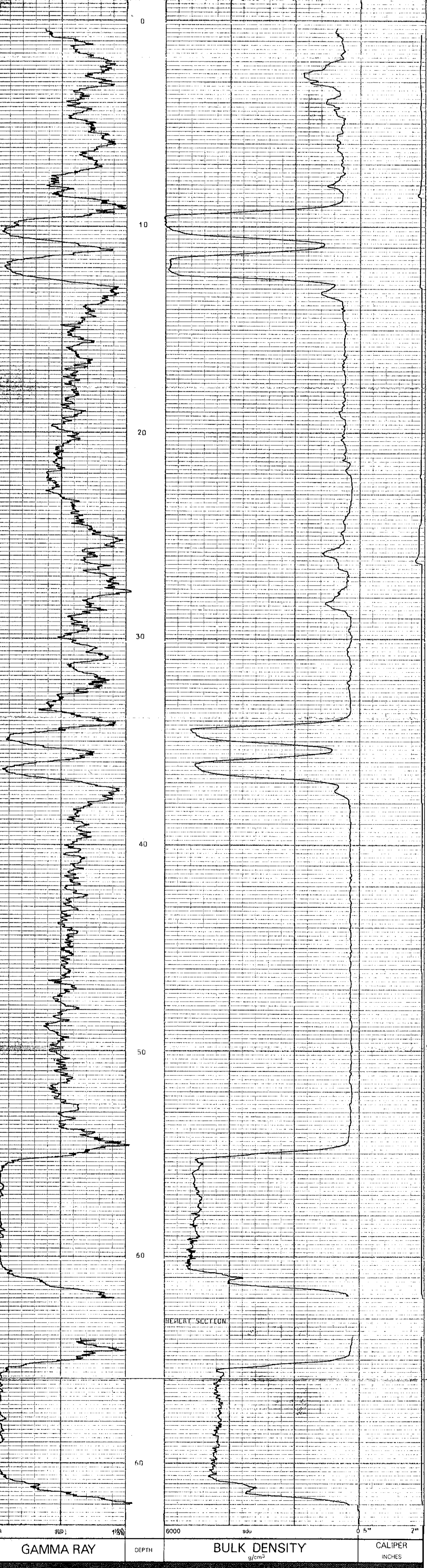
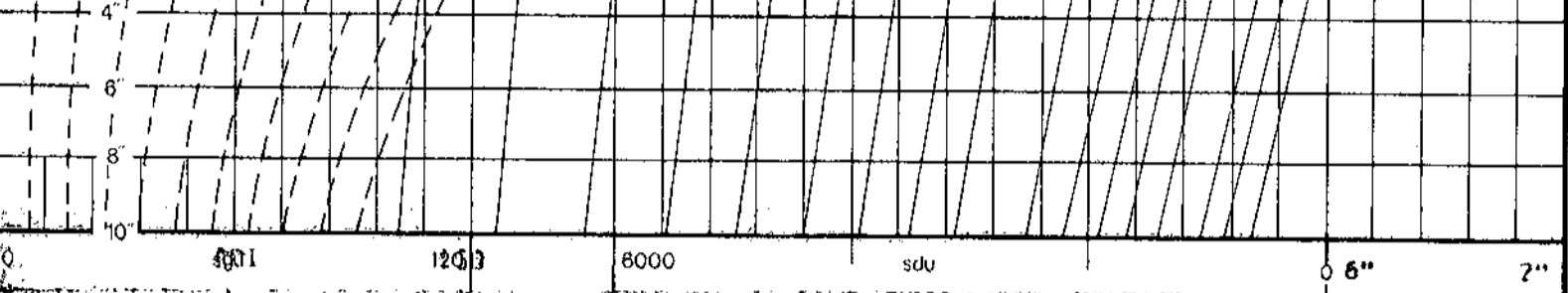
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. _____ VALUE @ 2" DIAM _____ JIG CAL DATE _____ JIG VALUE _____ SDU @ _____ g/cm³ _____ 2 ins. 460 cps
 JIG MARK SHOWN AT ABOVE VALUE _____ JIG No. _____ SPAN 6000 _____ NORM _____ SDU @ _____ 6 ins. 720 cps

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

HOLE SIZE CORRECTION DATA



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

BOREHOLE Bw-48 AREA BURNT HILL
 CLIENT TECH-CORP COUNTRY CANADA



B2-Burnt River 8231A BW 48

SONDE TYPE:
COAL COMBINATION SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY
CALIPER

COAL LITHOLOGY LOG

BOREHOLE DATA

BOREHOLE: BW-48
CLIENT: TECH-CORP
AREA: BURNT RIVER
COUNTRY: CANADA
DATE LOGGED: 14/08/80

DEPTH SCALE: 200:1
1 OF 4 LOGS

PERMANENT DATUM GROUND LEVEL
ELEVATION OF P.D. SURROUND LEVEL
MEASUREMENTS FROM CL DBLLER
DEPTH REACHED 52m CL
CASING SHOE 2ft.

BIT SIZES
1 1/4" TO 1" TO 2"
3 TO 4" TO
CASING SIZES 1 TO 2"

FLUID DATA

NATURE: WATER
SG: _____
LEVEL: _____
VISCOSITY: _____
Pen at meas. temp: _____
RHT: _____

OPERATION DATA
FIRST READING: 62m
LAST READING: D
INTERNAL LOGGED: 62m
UNIT-TRUCK No: 46/25
ENGINEER: R. C. BRADY
WITNESS: _____

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EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECTOR/REPLAY	SPEED	FC SECS	NORM		FROM	TO	INTERVAL	
WINKY	HOLES	SINGLE	FUNCTION	SONDES										
GAMMA RAY				Y	9m/m	R	9m/m	1	-	-	62m	0	62m	
L.S. DENSITY				Y	9m/m	R	9m/m	1	-	-	62m	0	62m	
CALIPER	SIDEWALL POSITION			Y	9m/m	R	9m/m	.3	-	-	62m	0	62m	

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

FROM	62m	30m	14m	INTERVAL TOTAL
TO	54m	33m	8m	
INTERVAL	8m	5m	6m	19m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
NEUTRON					WINKY HOLE SINGLE FUNCTION SONDES

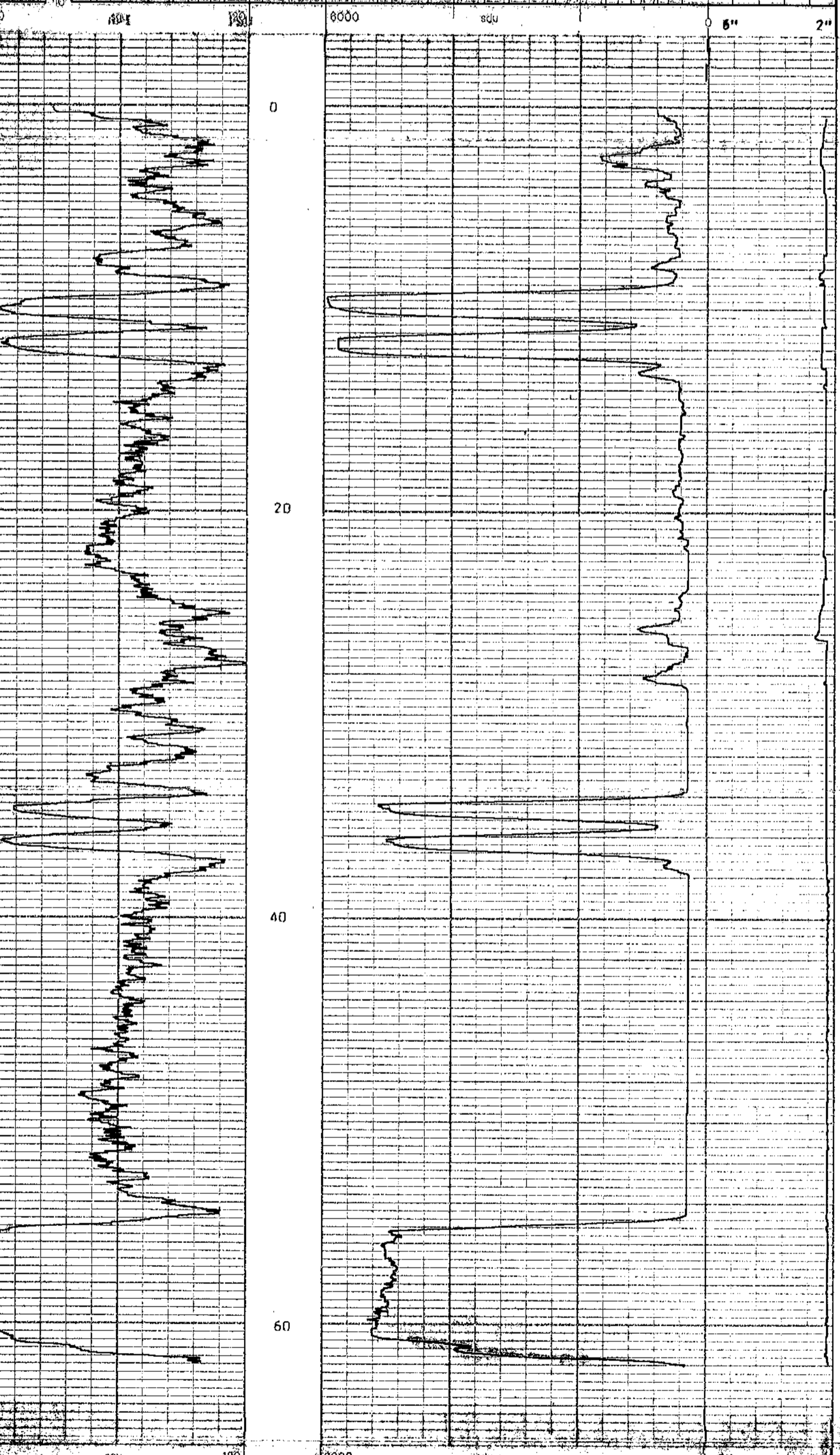
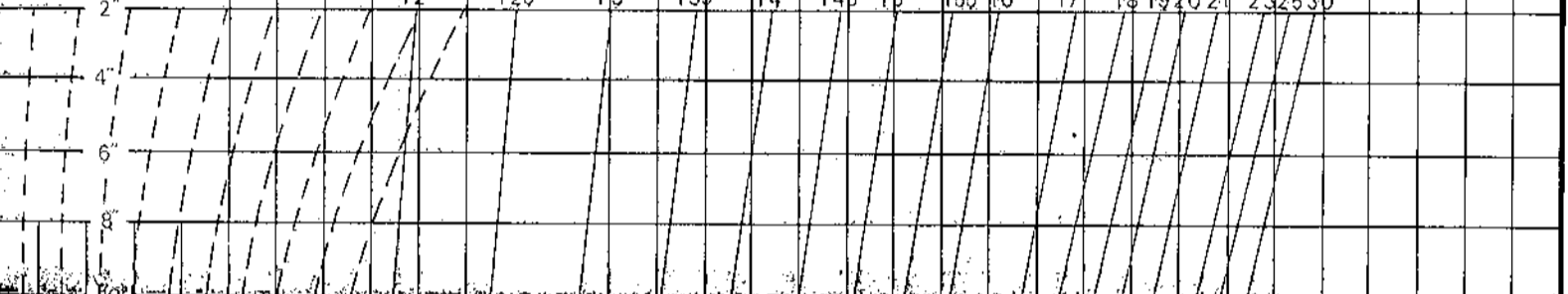
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. VALUE @ 2" DIAM	JIG CAL DATE	JIG VALUE	SDU @	g/cm ³	2 ins 460 cps
JIG MARK SHOWN AT ABOVE VALUE	JIG No	SPAN	NORM	SDU = CPS	6" ins 720 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------



BOREHOLE: BW-48 AREA: BURNT RIVER
CLIENT: TECH CORP COUNTRY: CANADA

COAL LITHOLOGY LOG



P2-Burnt River 80319 GW 48

NEUTRON-NEUTRON LOG

BOREHOLE BR-48

CLIENT TECH-CORP

AREA BURNT RIVER

COUNTRY CANADA

DATE LOGGED 14/08/88

2 OF 4 LOGS

DEPTH SCALE 200:1

BOREHOLE DATA REFER TO LITHOLOG

OPERATION DATA REFER TO LITHOLOG

EQUIPMENT AND RECORDING DATA

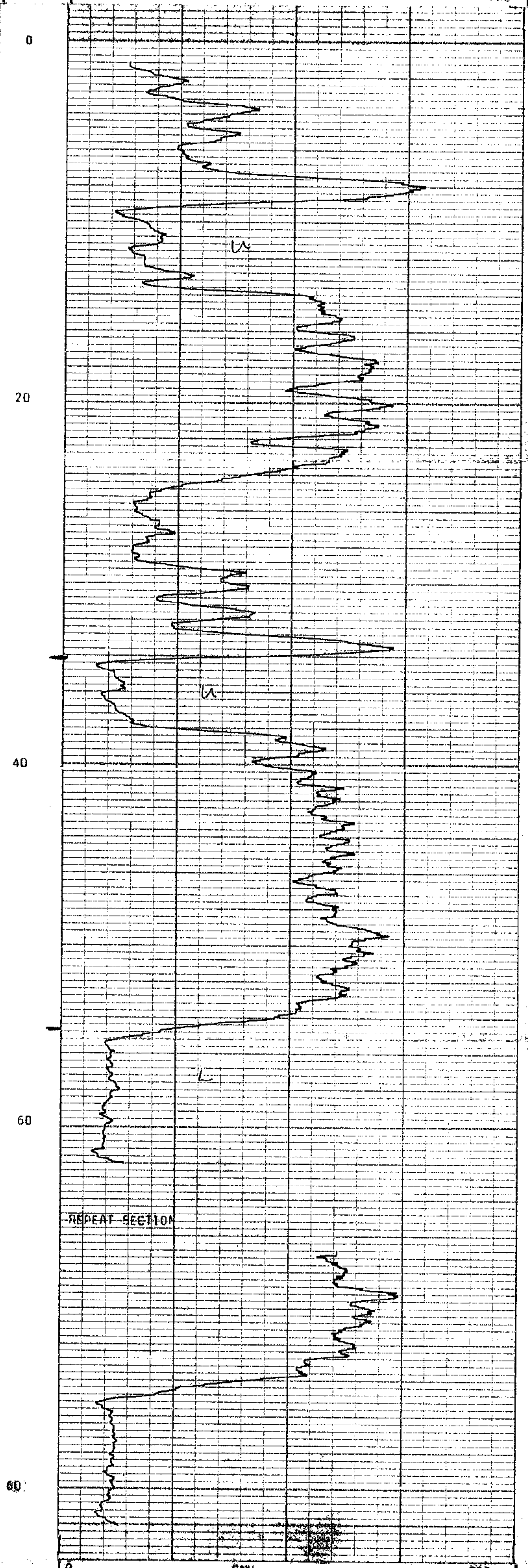
LOG	TAPPING	RECORDING	PANEL	T.C.	NORM	DATE
LOG TAPED	LOG TAPED	RECORDING SPEED	PANEL	T.C.	NORM	
NEUTRON	v	9m/m	3	9m/m	1	.92

REMARKS

WINKY HOLE SINGLE FUNCTION SONDES

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NEUTRON-NEUTRON LOG



NEUTRON-NEUTRON LOG

BOREHOLE BR-48
 CLIENT TECH-CORP
 AREA BURNT RIVER
 COUNTRY CANADA





P12-Burnt River 806379 RW 48

NEUTRON-NEUTRON LOG

BOREHOLE BR-48

CLIENT TECH-CORP

AREA BURNT RIVER

COUNTRY CANADA

DATE LOGGED 14/08/80

DEPTH SCALE 200:1

2 OF 4 LOGS

BOREHOLE DATA

REFER TO LITHOLOG

OPERATION DATA

REFER TO LITHOLOG

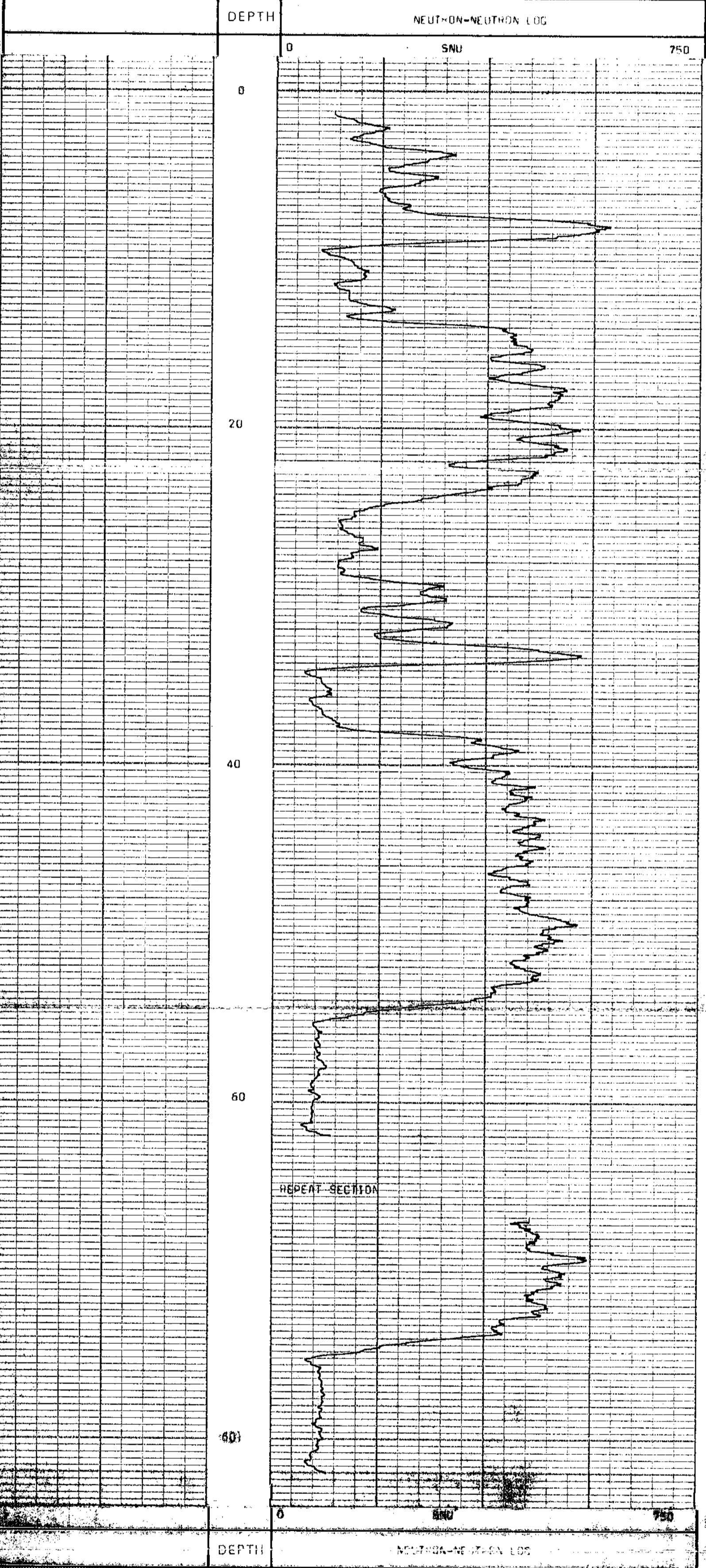
EQUIPMENT AND RECORDING DATA

LOG	TAPING	RECORDING	PANEL	COIL			
LOG TAPED	DIRECT SPEED	REVERSE SPEED	T/C SECS	NORM			
NEUTRON	Y	9m/m	3	9m/m	1	.82	-
SONDE NO		204	SOURCE NO		6787		

REMARKS WINKY HOLE SINGLE FUNCTION SONDES

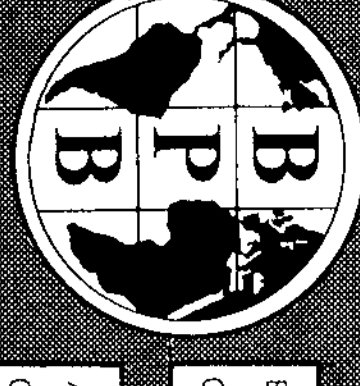
489

NEUTRON-NEUTRON LOG



BOREHOLE	BR-48	AREA	BURNT RIVER
CLIENT	TECH-CORP	COUNTRY	CANADA





P2 Bunt River (B) Bw 48

BOREHOLE Bw-48
CLIENT TECH-COMP

AREA BUNT RIVER
COUNTRY CANADA

DATE LOGGED 11/09/01

DEPTH SCALE
201

SEAM THICKNESS LOG

SEAM THICKNESS LOG INTERVALS

SEAM THICKNESS LOG INTERVALS

SEAM THICKNESS LOG INTERVALS

SEAM THICKNESS LOG INTERVALS

SEAM THICKNESS LOG INTERVALS

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

COAL COMBINATION SONDE

COAL COMBINATION SONDE

COAL COMBINATION SONDE

LOG TAPPING PANEL OPER
LOG RECORDING SPEED (CPS) NORM
CALIPER / 3m/ft 3 5.9

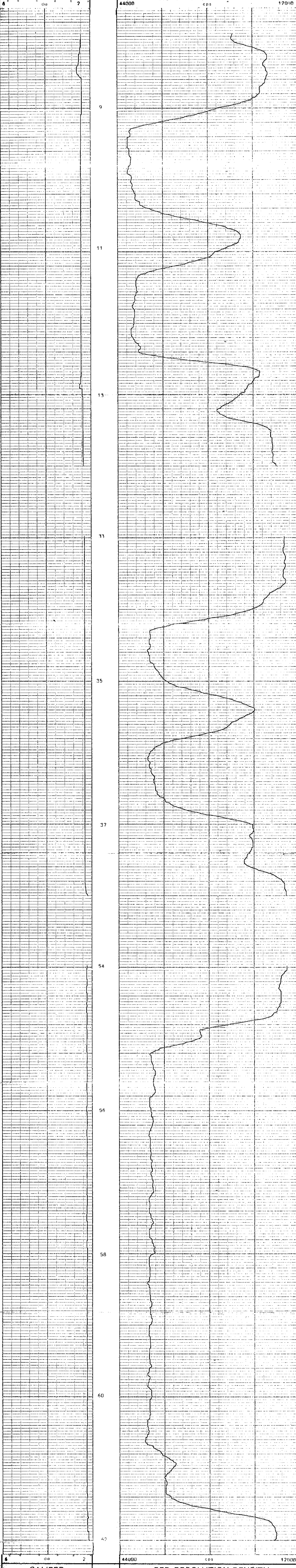
BR DENSITY 1 5.9

SOURCE SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

REFER TO LITHOLOGY LOG

B P B SEAM THICKNESS LOG



CALIPER INCHES DEPTH BED RESOLUTION DENSITY cps

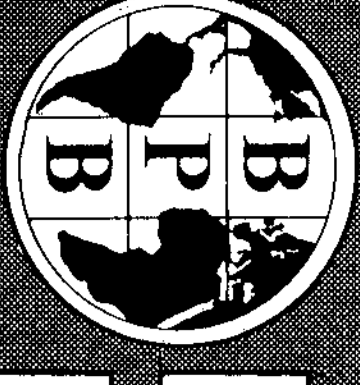
BOREHOLE Bw-48 AREA BUNT RIVER
 CLIENT TECH-COMP COUNTRY CANADA

SEAM THICKNESS LOG



489

P72-Burnt River 80(3)A SWJ 48



SEAM THICKNESS LOG

SONDE TYPE: _____
 COAL COMBINATION SONDE _____
 LOG SUITE: _____
 CALIPER _____
 BR. DENSITY _____

BOREHOLE BW-48
 CLIENT TECH-CORP
 AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 14/02/80
 DEPTH SCALE 20:1
 1 OF 4 LOGS

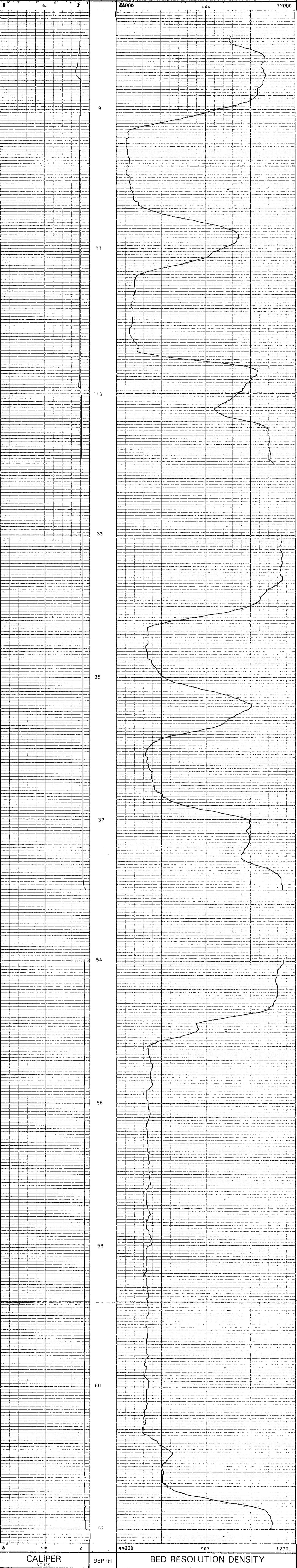
BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE _____
 LOG _____
 LOG RECORDING SPEED _____
 CALIPER _____
 BR DENSITY _____
 SOURCE SONDE AND CALIBRATION _____
 REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS
 FROM 5.2m TO 7.9m 1 Am
 TO 5.4m 3.3m 8m
 INTERVAL FROM 8m TO 5m
 FROM _____ TO _____
 INTERVAL TOTAL ± 9m
 REMARKS _____
 WILKIN HILL STIMULI FLUORESCENCE

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B P B SEAM THICKNESS LOG



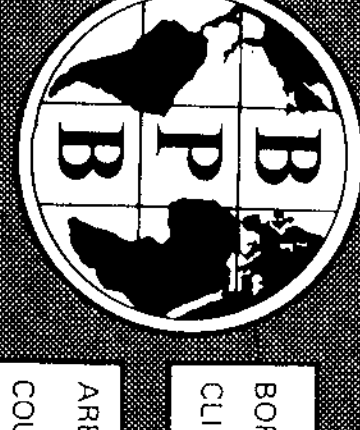
CALIPER INCHES DEPTH BED RESOLUTION DENSITY cps

BOREHOLE BW-48 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA

SEAM THICKNESS LOG



72-Burnt River 80131 48



BOREHOLE BA-4R
 CLIENT FECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA

DATE LOGGED _____

4 OF 4 LOGS

COAL QUALITY LOG

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

LOG

SONDE TYPE _____
 COAL COMBINATION _____
 SONDE _____

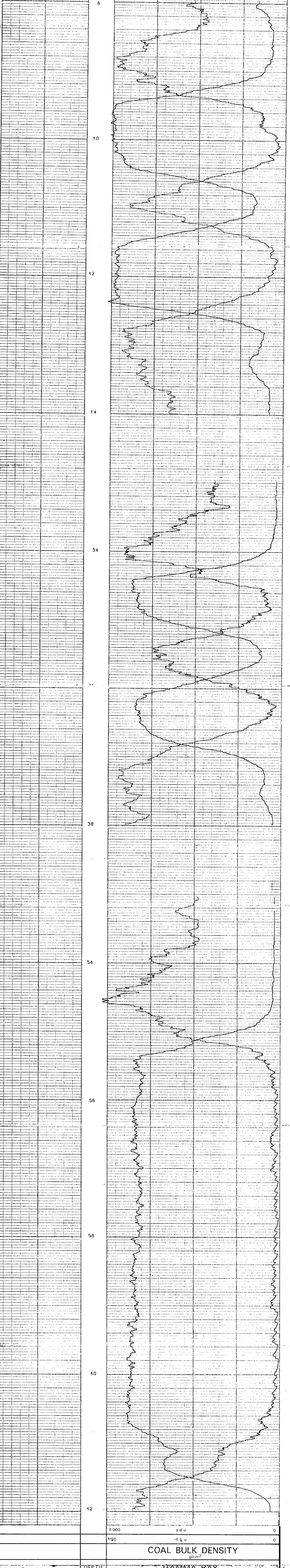
LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

B P B COAL QUALITY LOG

DEPTH _____ GAMMA RAY
 COAL BULK DENSITY g/cm^3

HOLE SIZE CORRECTION DATA

2"	1.26	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
----	------	-----	------	-----	------	-----	------	-----	-----	-----	-----	-----	-----	-----	-----

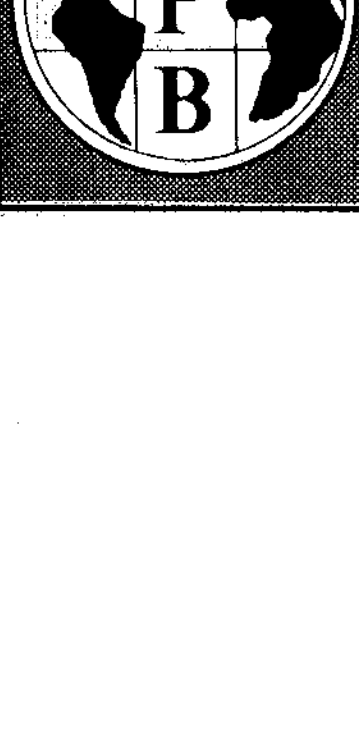


COAL BULK DENSITY g/cm^3

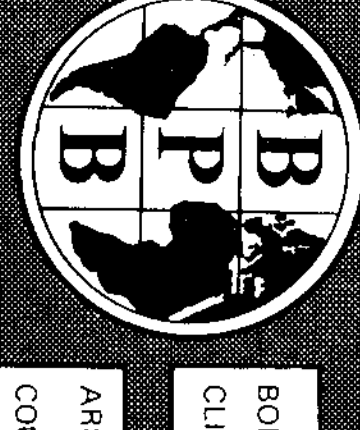
GAMMA RAY

BOREHOLE BA-4R AREA BURNT RIVER
 CLIENT FECH-CORP COUNTRY CANADA

COAL QUALITY LOG



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BOREHOLE _____
 CLIENT _____

AREA _____
 COUNTRY _____
 DATE LOGGED _____

DEPTH SCALE
 1 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

SONDE TYPE: _____
 COAL COMBINATION: _____
 SONDE: _____

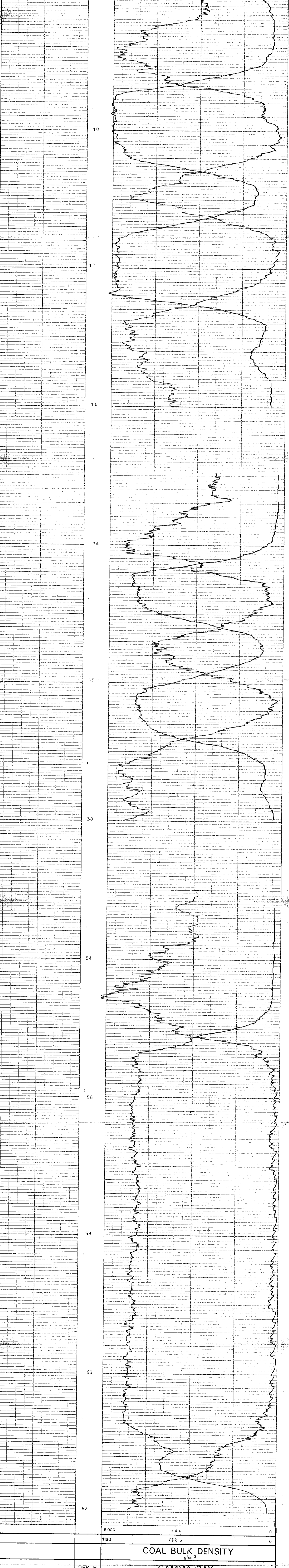
LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

B P B COAL QUALITY LOG

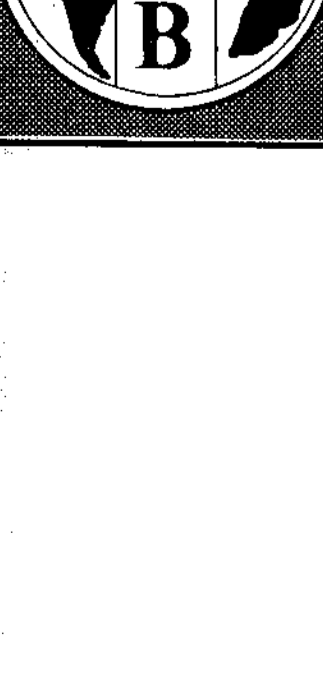
DEPTH _____ GAMMA RAY
 COAL BULK DENSITY g/cm^3

HOLE SIZE CORRECTION DATA

2'	125	13	135	14	145	15	155	16	17	18	19	20	22	24	30
----	-----	----	-----	----	-----	----	-----	----	----	----	----	----	----	----	----



COAL BULK DENSITY g/cm^3
 GAMMA RAY



BOREHOLE RW-48 AREA BURNT RIVER
 CLIENT TECH-CO-IL COUNTRY LAWADE

COAL QUALITY LOG

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BPB Run # 80309 BU49

BOREHOLE BU-49
 CLIENT TECH-LOG

AREA BURNT HILL
 COUNTRY CANADA

DATE LOGGED 29/06/80
 DEPTH SCALE 1 OF 2 LOGS

COAL LITHOLOGY LOG

SONDE TYPE
 COAL COMBINATION
 SONDE

LOG SUITE
 GAMMA RAY
 L.S. DENSITY
 CALIPER

PERMANENT DATUM
 ELEVATION OF P.D. 380 METER LEVEL

MEASUREMENTS FROM BT DRILLER

DEPTH REACHED 3.0m 37 FT.

CASING SHOE 5 FT.

BIT SIZES
 1 1 1/2 TO 1 1/2 TO
 2 1 1/4 TO 1 1/4 TO
 3 1 1/8 TO 1 1/8 TO
 4 1 1/8 TO 1 1/8 TO
 5 1 1/8 TO 1 1/8 TO

CASING SIZES
 1 TO
 2 TO

FLUID DATA

NATURE

SG

LEVEL

VISCOSITY

Rm at meas temp

BH I

OPERATION DATA

FIRST READING 3.0m

LAST READING 3.0m

INTERVAL LOGGED 1.0m

UNIT-TRUCK No 24/46

ENGINEER S.C. SANDER

WITNESS

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EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE														
LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CAIBRATOR	LOG TAPED	RECORD SPEED	DIRECT OF REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL	
GAMMA RAY	WINKIE HOLE	SINGLE FUNCTION SONDE		Y	9m/m	0	9m/m	1	-	-	29.5	0	29.5	
L.S. DENSITY				Y	9m/m	0	9m/m	.3	-	-	30	0	30	
CALIPER	SIDEWALL POSITION			Y	9m/m	0	9m/m	.3	-	-	29.5	0	29.5	

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

FROM		INTERVAL
TO		TOTAL
INTERVAL		

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
WINKIE HOLE	SINGLE FUNCTION SONDE				WINKIE HOLE SINGLE FUNCTION SONDE

BPB COAL LITHOLOGY LOG

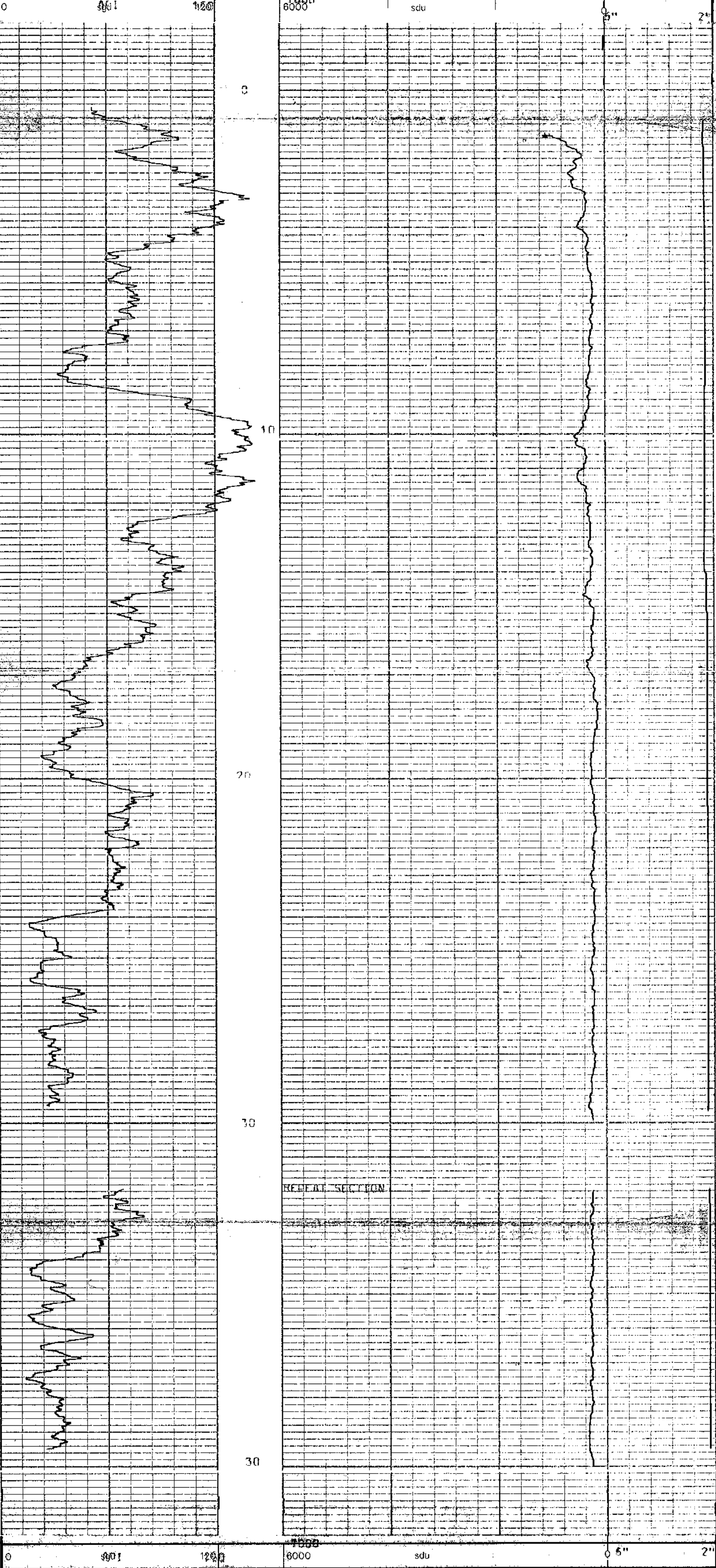
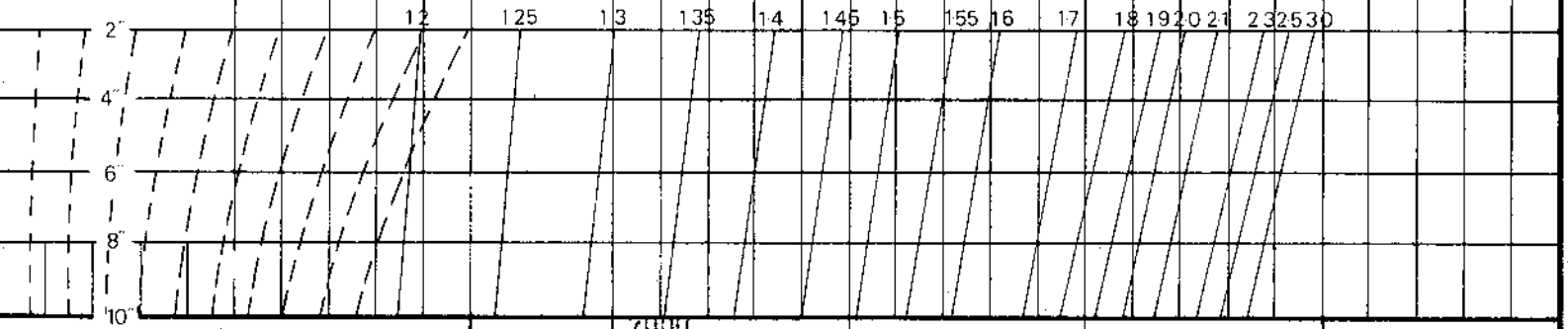
CALIBRATION DATA

JIG No	VALUE @ 2" DIAM	JIG CAL DATE	JIG VALUE	SDU @	g/cm ³	2 ins 46" cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No	SPAN	NORM	SDU =	7 ins 72" cps

SINGLE FUNCTION SONDES

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------



BOREHOLE BU - 49 AREA BURNT HILL
 CLIENT TECH-LOG COUNTRY CANADA

COAL LITHOLOGY LOG



PR-Burnt River 80(3)A B/L49

BOREHOLE BW-49
 CLIENT _____

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 23/09/80

DEPTH SCALE
 200:1
 1 OF 2 LOGS

COAL
LITHOLOGY
LOG

SONDE TYPE:
 COAL
 COMBINATION
 SONDE

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY
 CALIPER

BOREHOLE DATA
 PERMANENT DATUM 5.0000 (LEVEL)
 ELEVATION OF P.O. 5.0000 (LEVEL)
 MEASUREMENTS FROM BPB DRILLER
 DEPTH REACHED 3.0m 9.7ft.
 CASING SHOE _____
 BIT SIZES 1 1X TO 1D 2 TO _____
 CASING SIZES 1 3 TO 4 TO _____
 2 2 TO _____

FLUID DATA
 NATURE WATER
 SG _____
 LEVEL _____
 VISCOSITY _____
 Rhn at meas temp _____
 BHT _____

OPERATION DATA
 FIRST READING 3.0m
 LAST READING 0
 INTERVAL LOGGED 30m
 UNIT-TRUCK No. 24/46
 ENGINEER R. C. BARRER
 WITNESS _____

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EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING		PANEL			CAL. COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS		NORM	FROM	TO	
	<u>WINKIE</u>	<u>HOLE</u>	<u>SINGLE FUNCTION</u>	<u>SONDES</u>									
GAMMA RAY				Y	9m/m	H	9m/m	1	-	-	29.5	0	29.5
L.S. DENSITY				Y	9m/m	H	9m/m	.3	-	-	30	0	30
CALIPER	<u>SIDEWALL POSITION</u>			Y	9m/m	H	9m/m	.3	-	-	29.5	0	29.5

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

FROM	TO	INTERVAL TOTAL

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
<u>NEUTRON-NEUTRON</u>					<u>WINKIE HOLE SINGLE FUNCTION SONDES</u>

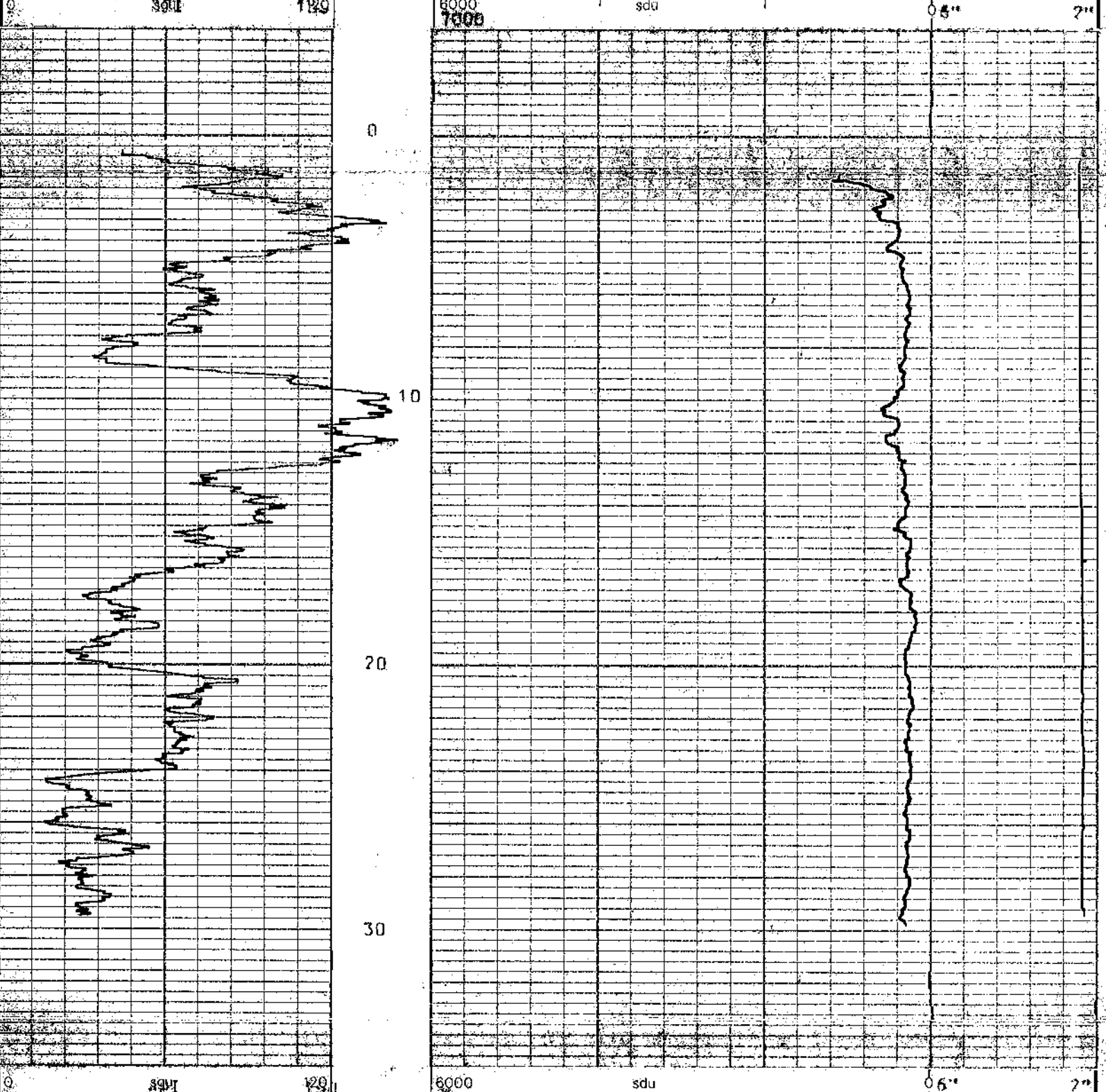
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. _____	VALUE @ 2" DIAM _____	JIG CAL DATE _____	JIG VALUE _____	SDU @ _____	g/cm ³ <u>2</u>	ins <u>460</u>	cps _____
JIG MARK SHOWN AT ABOVE VALUE - _____		JIG No. _____	SPAN _____	NORM <u>SDU =</u>	g/cm ³ <u>6</u>	ins <u>720</u>	cps _____

SINGLE FUNCTION SONDES

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
HOLE SIZE CORRECTION DATA			



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES



BOREHOLE BW-49 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA

COAL LITHOLOGY LOG



PP-Burnt River 80(3)A BU 49

NEUTRON-NEUTRON LOG

BOREHOLE BW-49

CLIENT TECH-CORP

AREA BURNT RIVER

COUNTRY CANADA

DATE LOGGED 23/08/80

DEPTH SCALING 298:1

2 OF 2 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

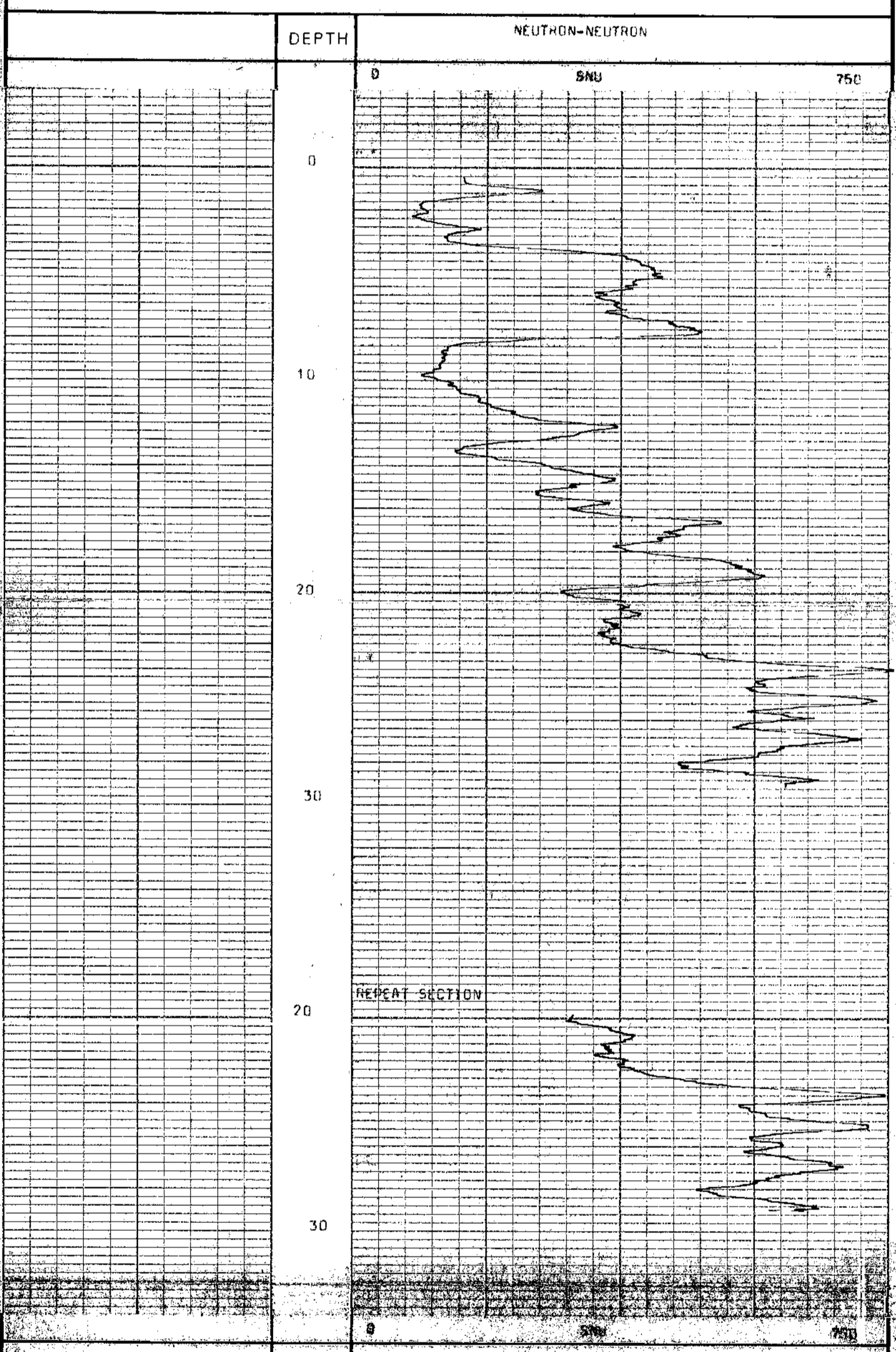
OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	DATE
LOG TAPE	RECORD DIRECTOR	T.C. SECS	NORM
NEUTRON	Y	9m/m	D
		9m/n	1
			.82
			-

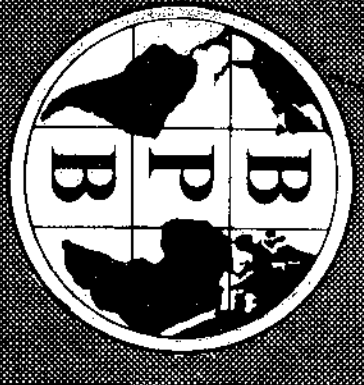
REMARKS

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BOREHOLE BW-49
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA



AP - Burnt River 50(3)A RW 4-9

BOREHOLE 9A-49
 CLIENT TECH-CORP

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 23/08/80

DEPTH SCALE 100:1
 1 OF 2 LOGS

COAL LITHOLOGY LOG

SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 GAMMA RAY
 L.S DENSITY
 CALIPER

BOREHOLE DATA

PERMANENT DATUM SURFACE LEVEL
 ELEVATION OF P.D. SURROUND LEVEL
 MEASUREMENTS FROM SURFACE LEVEL
 DEPTH REACHED 30m 97ft.
 CASING SHOE 5ft.
 BIT SIZES 1 4x TO 2 TO
 3 TO 4 TO
 CASING SIZES 1 TO 2 TO

FLUID DATA

NATURE WATER
 SG
 LEVEL
 VISCOSITY
 H₂O at meas. temp
 BH T

OPERATION DATA

FIRST READING 3.0m
 LAST READING 3
 INTERVAL LOGGED 3.0m
 UNIT-TRUCK No 24/46
 ENGINEER R. C. BARRER
 WITNESS

489

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE																
LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS		SEAM LOG RUN			
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM		FROM	TO		INTERVAL		
GAMMA RAY L.S DENSITY CALIPER	WINKIE HOLE		SINGLE	FUNCTION	SONDES		9m/m	D	9m/m	1	-	-	29.5	0	29.5	
							9m/m	D	9m/m	.3	-	-	30	0	30	
	SIDEWALL POSITION						9m/m	D	9m/m	.3	-	-	29.5	0	29.5	

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

FROM	TO	INTERVAL	INTERVAL TOTAL

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
NEUTRON-NEUTRON					WINKIE HOLE SINGLE FUNCTION SONDES

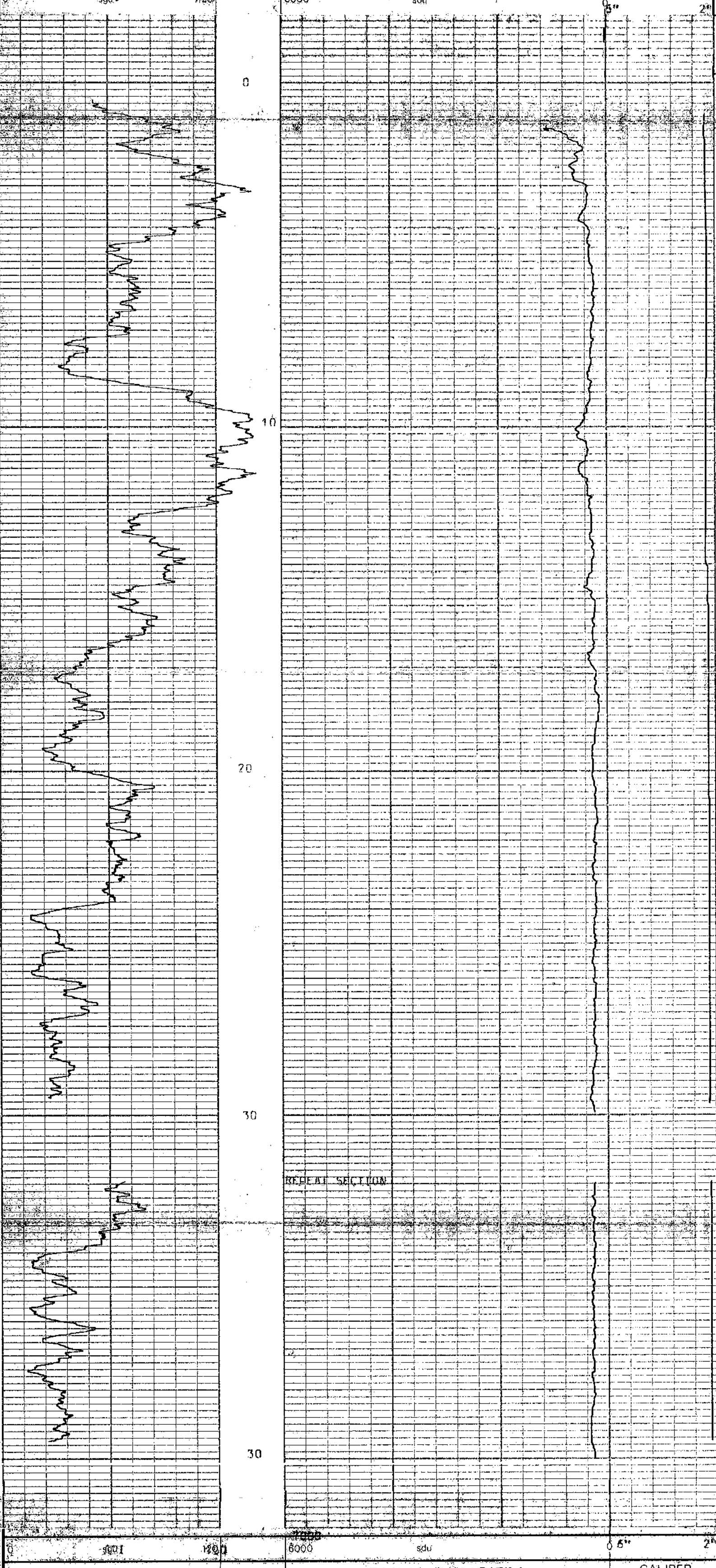
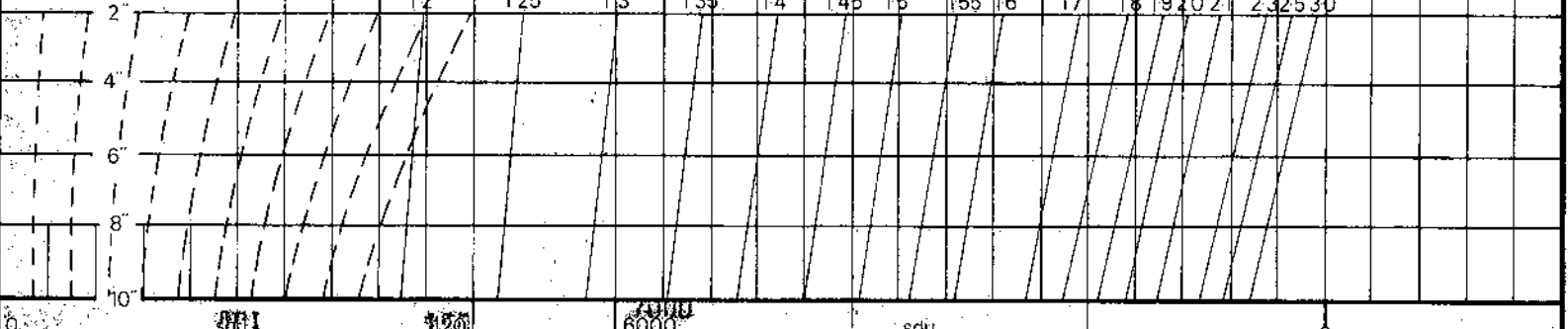
BPB COAL LITHOLOGY LOG CALIBRATION DATA

JIG No.	VALUE @ 2" DIAM	JIG CAL. DATE	JIG VALUE	SDU @	g/cm ³	2 ins.	460 cps.
JIG MARK SHOWN AT ABOVE VALUE -		JIG No.	SPAN	NORM	SDU =	7 ins.	720 cps.

SINGLE FUNCTION SONDES

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------

HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------



BOREHOLE 9A - 49 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA

COAL LITHOLOGY LOG



NEUTRON-NEUTRON LOG

PR-Burnt River (023)A BW-49

BOREHOLE BW-49

CLIENT TECH-CORP

AREA BURNT RIVER

COUNTRY CANADA

DATE LOGGED 23/08/80

DEPTH SCALE
200ft

2 OF 2 LOGS

BOREHOLE DATA

REFER TO LITHOLOGY

LOGS

OPERATION DATA

REFER TO LITHOLOGY

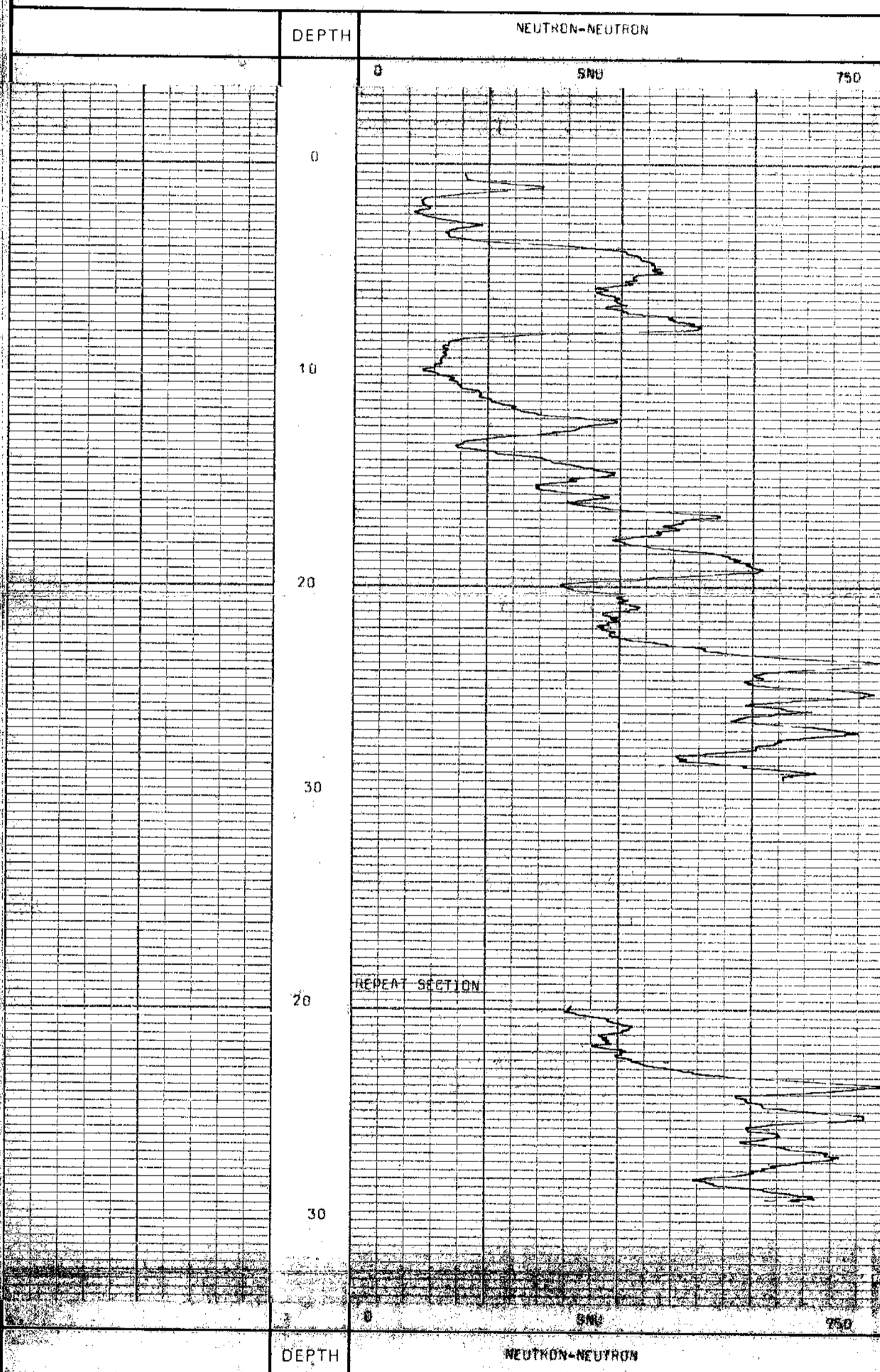
LOGS

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	CAT. COEFF.
LOG TAPED	RECORD SPEED	DIRECTOR SPEED	T.C. SECS
NEUTRON Y	9m/h	D	9m/h 1 .82
SONDE NO	204	SOURCE b/r/r	

REMARKS

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BOREHOLE BW-49

CLIENT TECH-CORP

AREA BURNT RIVER

COUNTRY CANADA



PE-Burnt River BW 50

LOG SUITE
 GAMMA RAY
 L.S. DENSITY
 CALIPER

SONDE TYPE:
 COAL
 COMBINATION
 SONDE

COAL LITHOLOGY LOG

BOREHOLE DATA
 BOREHOLE: BW-50
 CLIENT: TECH-CORP
 AREA: BURNT RIVER
 COUNTRY: CANADA
 DATE LOGGED: 26/09/80
 DEPTH SCALE: 200:1
 1 OF 4 LOGS

BOREHOLE DATA
 PERMANENT DATUM: SURROUND LEVEL
 ELEVATION OF P.D.: 200.00
 MEASUREMENTS FROM: 01
 DEPTH REACHED: 25m
 CASING SHOE: 15ft.
 BIT SIZES: 1 1/4 TO 2 TO 3 TO 4 TO
 CASING SIZES: 1 TO 2 TO
 NATURE: WATER
 LEVEL: 1
 VISCOSITY: 1
 B.H.T.: 1
 OPERATION DATA
 FIRST READING: 2.4m
 LAST READING: 0
 INTERVAL LOGGED: 2.4m
 UNIT-TRUCK No.: 46/24
 ENGINEER: H. F. BARRAH
 WITNESS: **489**

EQUIPMENT AND RECORDING DATA

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	
	WINKIE HOLE	SINGLE	FUNCTION	SONDES										
GAMMA RAY				Y	9m/m	R	9m/m	1	-	-	24m	0	24m	
L.S. DENSITY				Y	9m/m	R	9m/m	.3	-	-	24m	0	24m	
CALIPER	SIDEWALL POSITION			Y	9m/m	R	9m/m	.3	-	-	24m	0	24m	

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

FROM	25m	INTERVAL TOTAL
TO	16m	
INTERVAL	9m	9m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
NEUTRON					WINKIE HOLE SINGLE FUNCTION SONDES

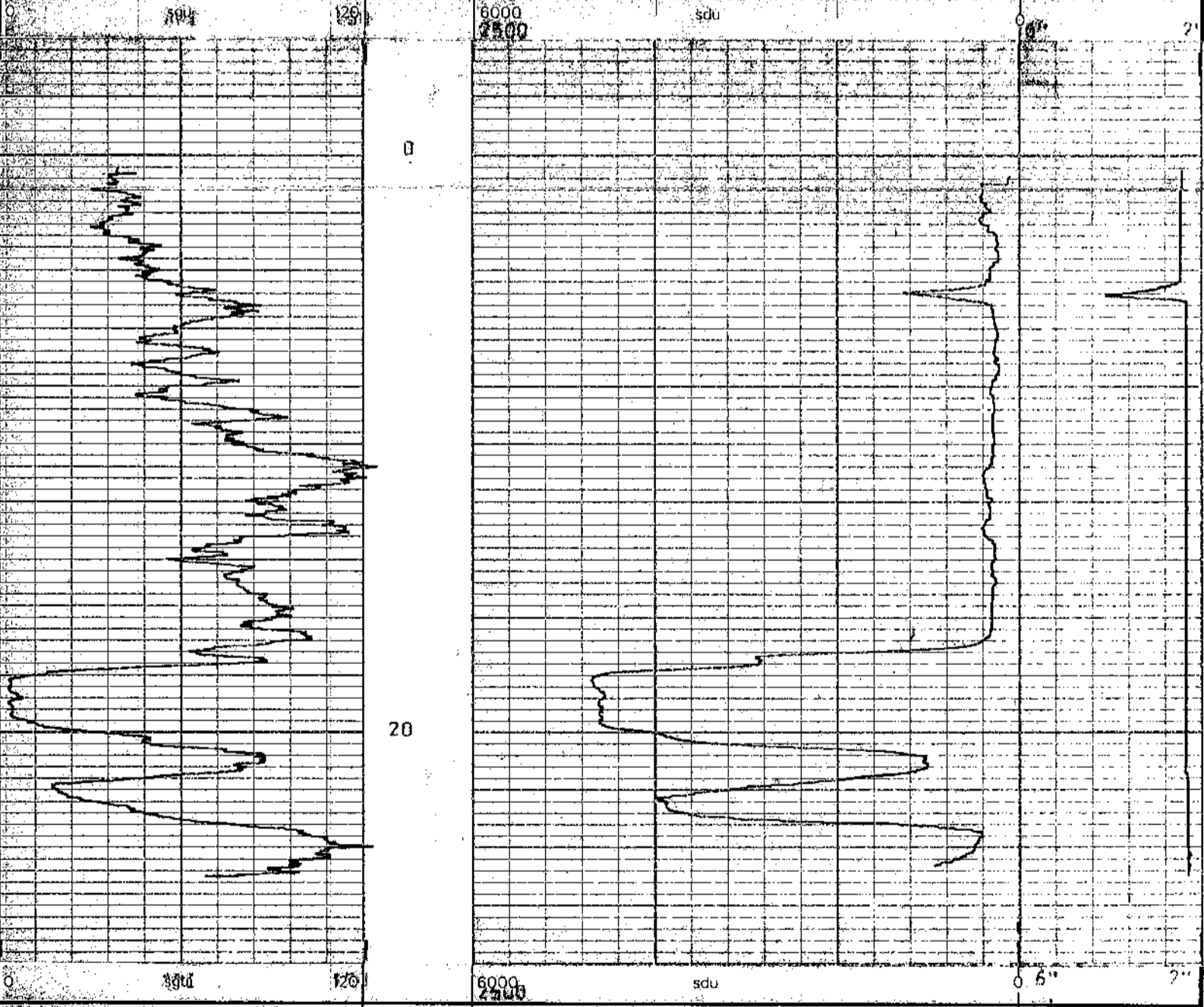
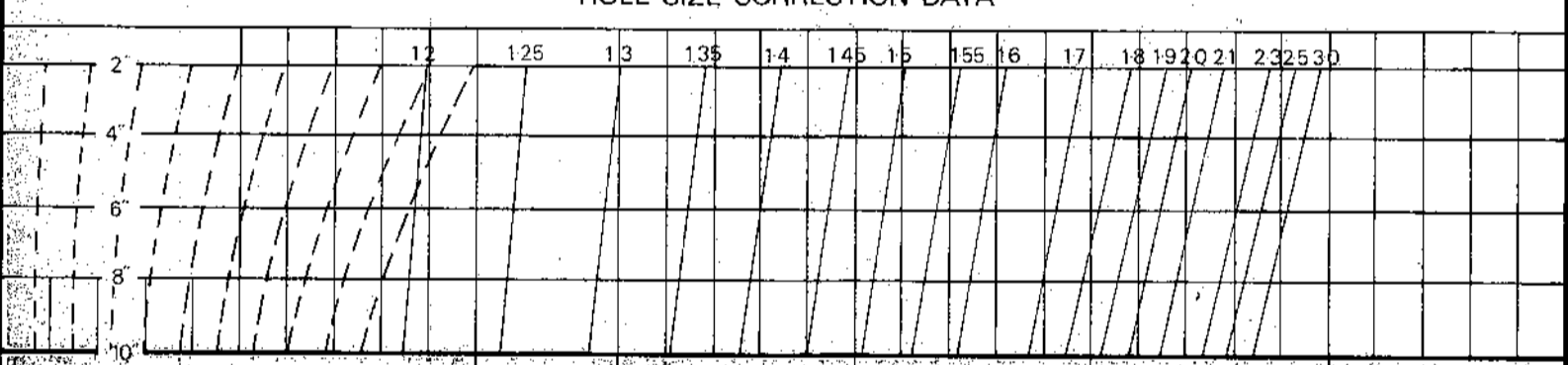
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No.	VALUE @ 2" DIAM	JIG CAL DATE	JIG VALUE	SDU @	g/cm ³	2 ins.	460 cps
JIG MARK SHOWN AT ABOVE VALUE +		JIG No.	SPAN	NORM	SDU =	6 ins.	720 cps

WINKIE HOLE SINGLE FUNCTION SONDES

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------



BOREHOLE: BW-50 AREA: BURNT RIVER
 CLIENT: TECH-CORP COUNTRY: CANADA

COAL LITHOLOGY LOG

P2-Burnt River 80(3)A BWS2



NEUTRON NEUTRON LOG

BOREHOLE BW-50
 CLIENT TECH-CORP

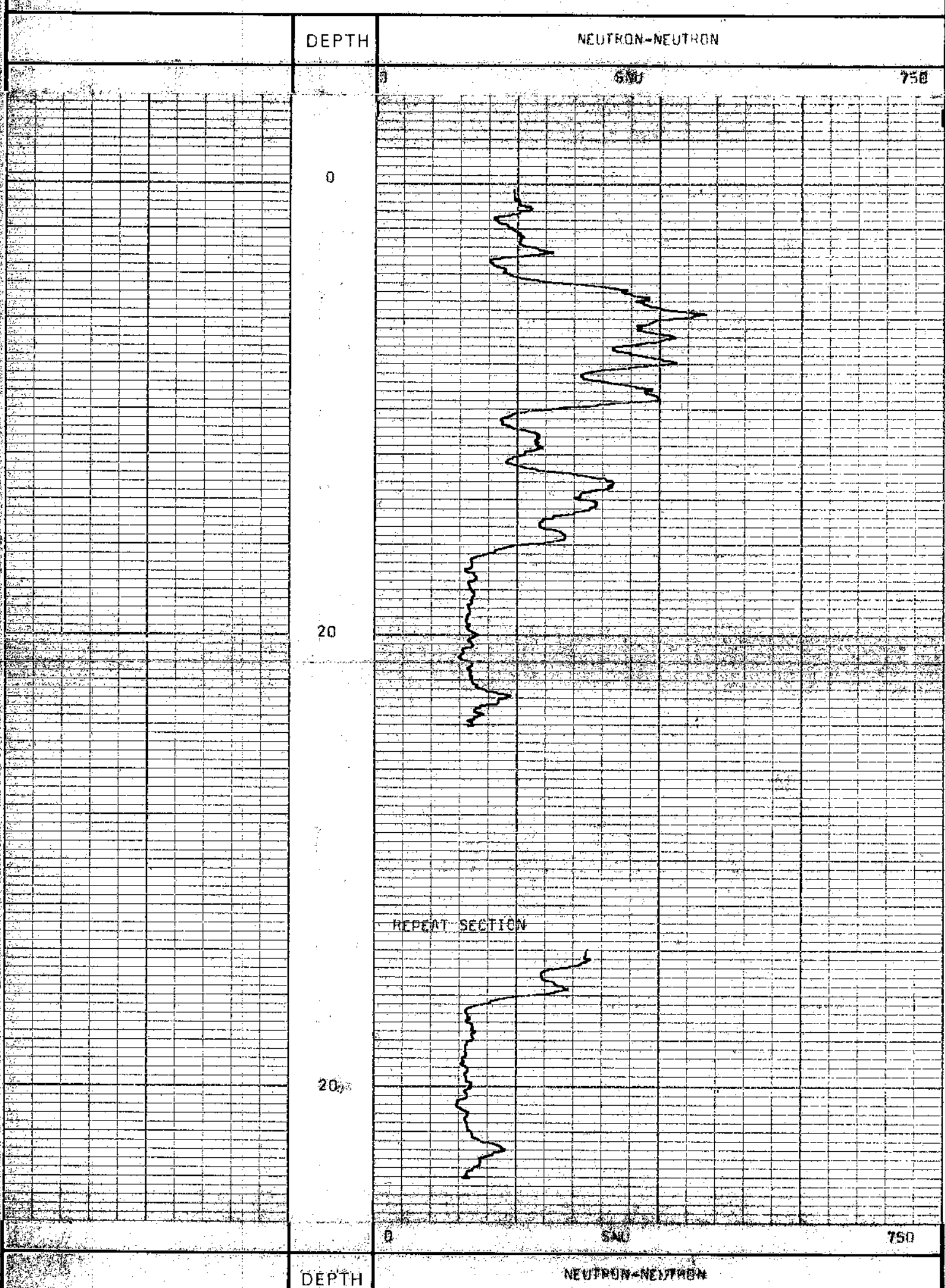
AREA RIBANT RIVER DEPTH SCALE: 200:1
 COUNTRY CANADA
 DATE LOGGED 26/08/80 2 OF 4 LOGS

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

EQUIPMENT AND RECORDING DATA

LOG	TAPING	RECORD DIRECT	SPEED	L.C.	NORM	CAL	COEFF
NEUTRON Y	9m/m	D	9m/m	1	B2	-	
	SOURCE	Z04	SOURCE	6787			

REMARKS
489



BOREHOLE BW-50 AREA RIBANT RIVER
 CLIENT TECH-CORP COUNTRY CANADA



Pr-Burnt River 80(3)A 8w 5D

SEAM THICKNESS LOG

SONDE TYPE: _____
 COAL COMBINATION: _____
 SONDE: _____

LOG SUITE:
 CALIPER
 B.R. DENSITY

BOREHOLE: _____
 CLIENT: _____

AREA: BURNT RIVER
 COUNTRY: CANADA
 DATE LOGGED: 26/09/30

DEPTH SCALE: 20:1
 1 OF 4 LOGS

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

LOG	TAPPING	PANEL	COAL
LOG RECORD	DIRECT	TO	NORM
TAPED	SPEED	REPLAY	
CALIPER	3m/m	3m/m	3
B.R. DENSITY	3m/m	3m/m	3

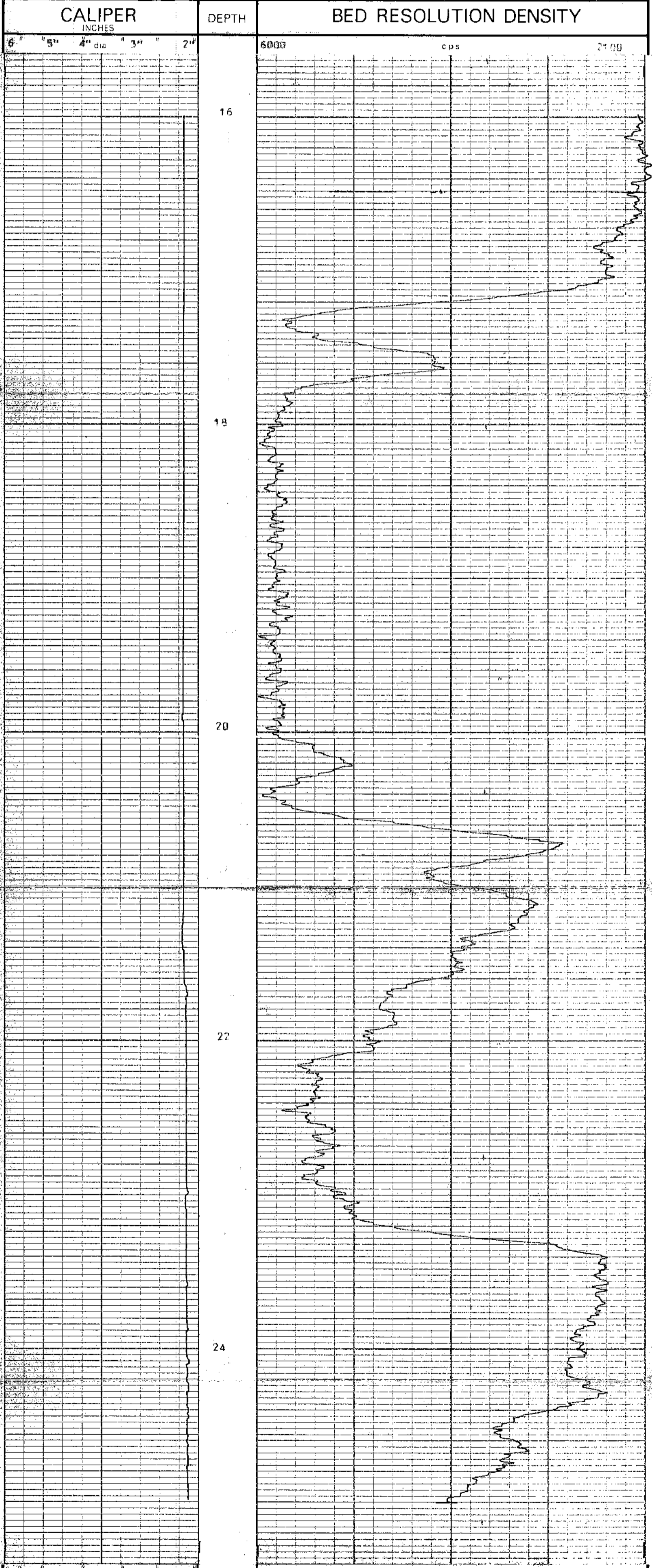
SOURCE: SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

FROM	TO	INTERVAL	INTERNAL TOTAL
2.38	1.63	2.38	489

REMARKS: _____

B P B SEAM THICKNESS LOG



CALIPER INCHES: 6" 5" 4" dia 3" 2"
 DEPTH: 16 18 20 22 24
 BED RESOLUTION DENSITY: 6000 cps 2100

BOREHOLE: BW-50
 CLIENT: TECH-CORE
 AREA: BURNT RIVER
 COUNTRY: CANADA

SEAM THICKNESS LOG





PA-Burnt River 82131A-BW-50

BOREHOLE BW-50
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 26/JUN/90

DEPTH SCALE 20:1
4 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

LOG TABBING SIDEWALL POSITION
LOG RECORDING SPEED SECS NORM
GAMMA RAY Y 3m/m 1 3m/ft .3

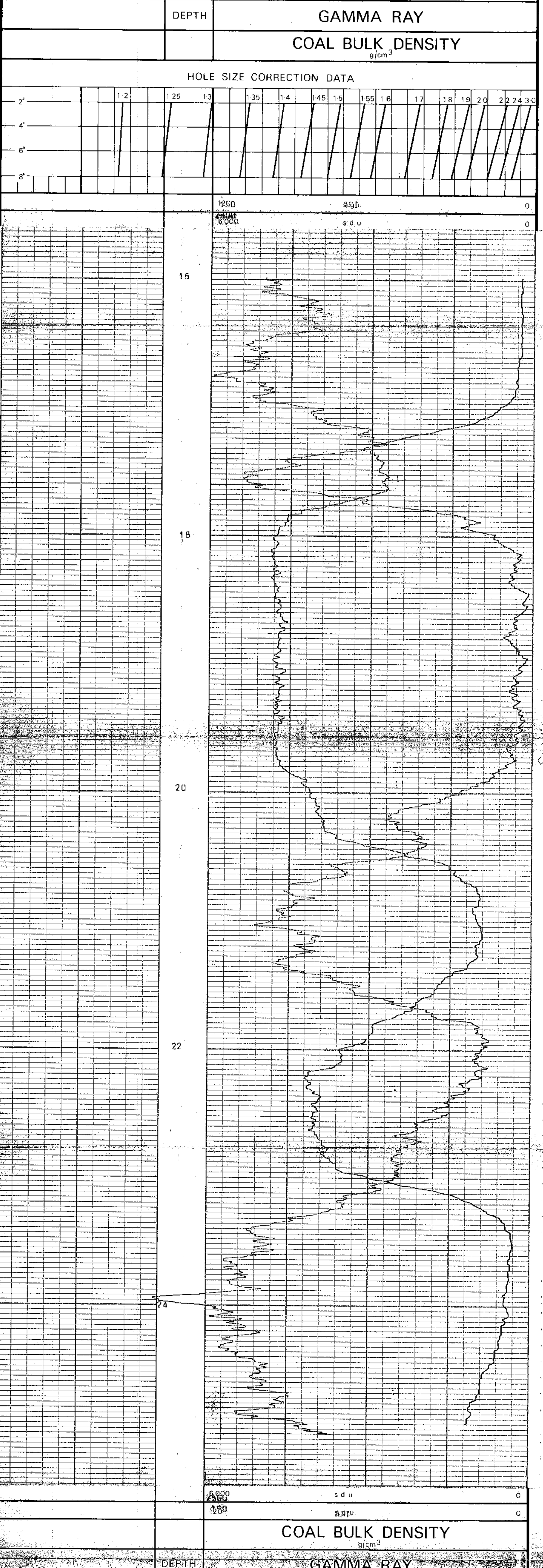
SONDE TYPE: COAL COMBINATION SONDE
COAL QUALITY LOG INTERVALS

FROM 2.5m TO 1.5m
INTERVAL 9m

LOG SUITE: GAMMA RAY
L.S. DENSITY

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B P B COAL QUALITY LOG



COAL BULK DENSITY (g/cm³)

GAMMA RAY

DEPTH

BOREHOLE BW-50 AREA BURNT RIVER
CLIENT TECH-CORP COUNTRY CANADA

COAL QUALITY LOG





Pre-Burnt River 80(3)A BWS0

SONDE TYPE:
COAL
COMBINATION
SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY
CALIPER

COAL LITHOLOGY LOG

BOREHOLE DATA

PERMANENT DATUM: GROUND LEVEL
ELEVATION OF P.D.: GROUND LEVEL
MEASUREMENTS FROM: CL
DEPTH REACHED: 25m
CASING SHOE: 157ft.

BIT SIZES: 1 1/4" TO 1/2"
CASING SIZES: 1 1/2" TO 1 1/8"

AREA: BLUNT RIVER
COUNTRY: CANADA
DATE LOGGED: 26/05/80

DEPTH SCALE: 100:1
1 OF 4 LOGS

BOREHOLE DATA

CLIENT: TECH-CORP
BOREHOLE: BWS0

FLUID DATA

NATURE: AIR
SG: 1.0
LEVEL: 0
VISCOSITY: 0
Rm at 70 deg: 0
BHT: 0

OPERATION DATA

FIRST READING: 24m
LAST READING: 24m
INTERVAL LOGGED: 46/24
UNIT-TRUCK No: 46/24
ENGINEER: R. C. BATHAM
WITNESS:

489

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL	
GAMMA RAY	WINKIE HOLE	SINGLE FUNCTION		Y	9m/m	D	9m/m	1	-	-	24m	0	24m	
L.S. DENSITY				Y	9m/m	D	9m/m	.3	-	-	24m	0	24m	
CALIPER	SIDEWALL POSITION			Y	9m/m	D	9m/m	.3	-	-	24m	0	24m	

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

FROM	25m	INTERVAL TOTAL
TO	16m	
INTERVAL	9m	9m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
NEUTRON					WINKIE HOLE SINGLE FUNCTION SONDES

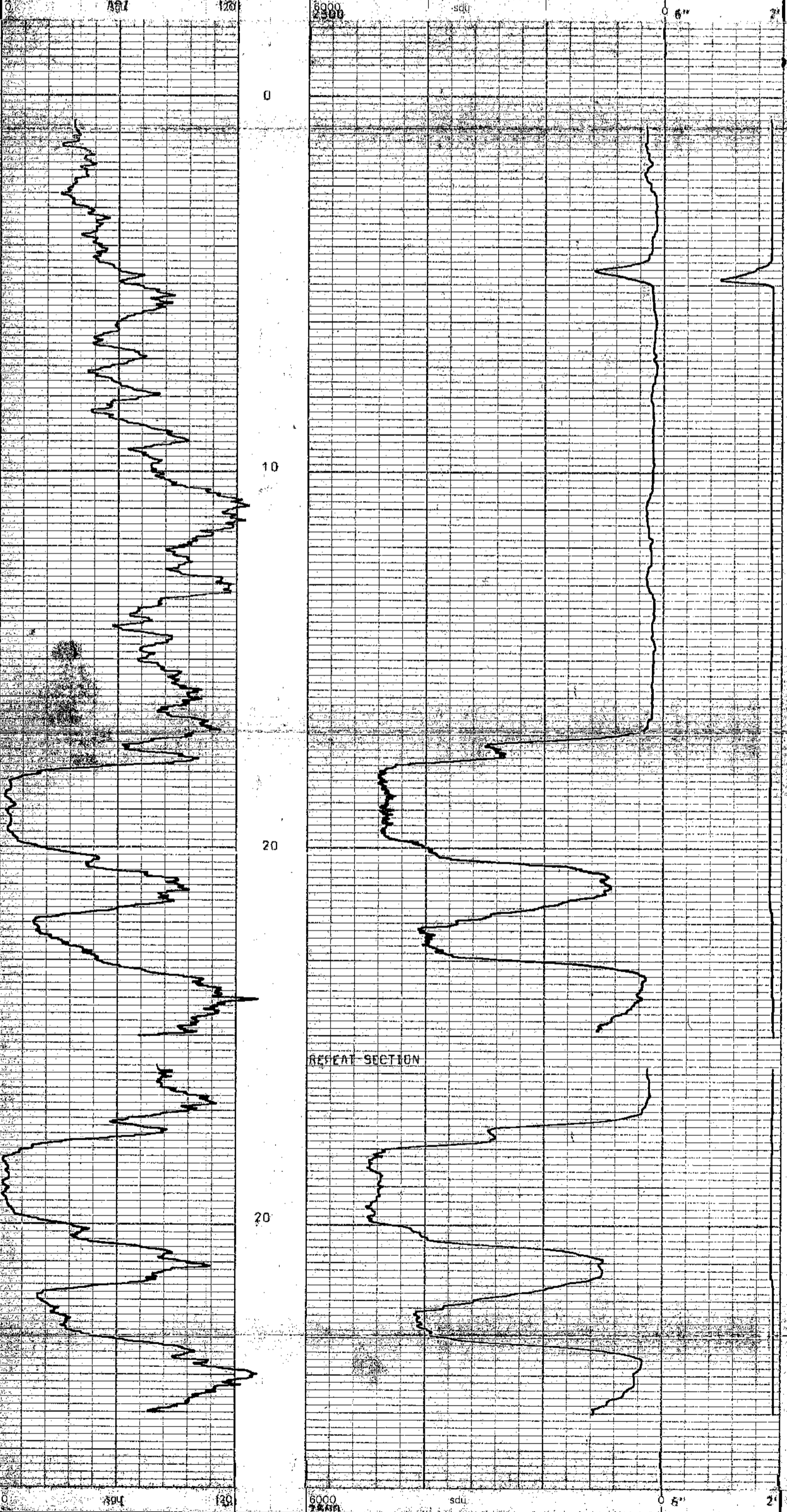
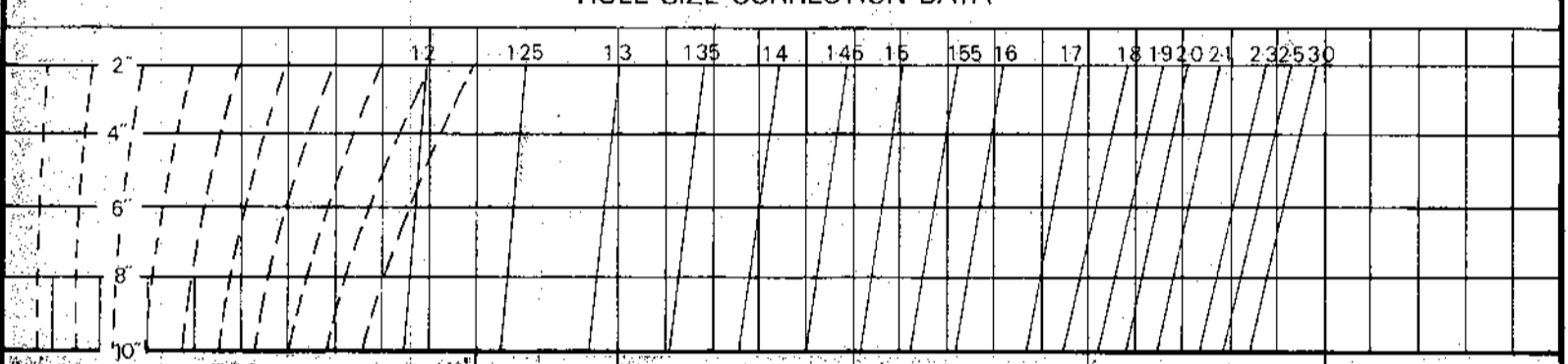
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No	VALUE @ 2" DIAM	JIG CAL DATE	JIG VALUE	SDU @	g/cm ³	2 ins	460 cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No	SPAN	NORM SDU =		6 ins	720 cps

WINKIE HOLE SINGLE FUNCTION SONDES

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



BOREHOLE: BWS0 AREA: BLUNT RIVER
CLIENT: TECH-CORP COUNTRY: CANADA

COAL LITHOLOGY LOG



P2-Burnt River BW-50

BOREHOLE _____
CLIENT _____

AREA QUINT
COUNTRY CANADA
DATE LOGGED 26/08/20

DEPTH SCALE
100:1

5 OF 5 LOGS

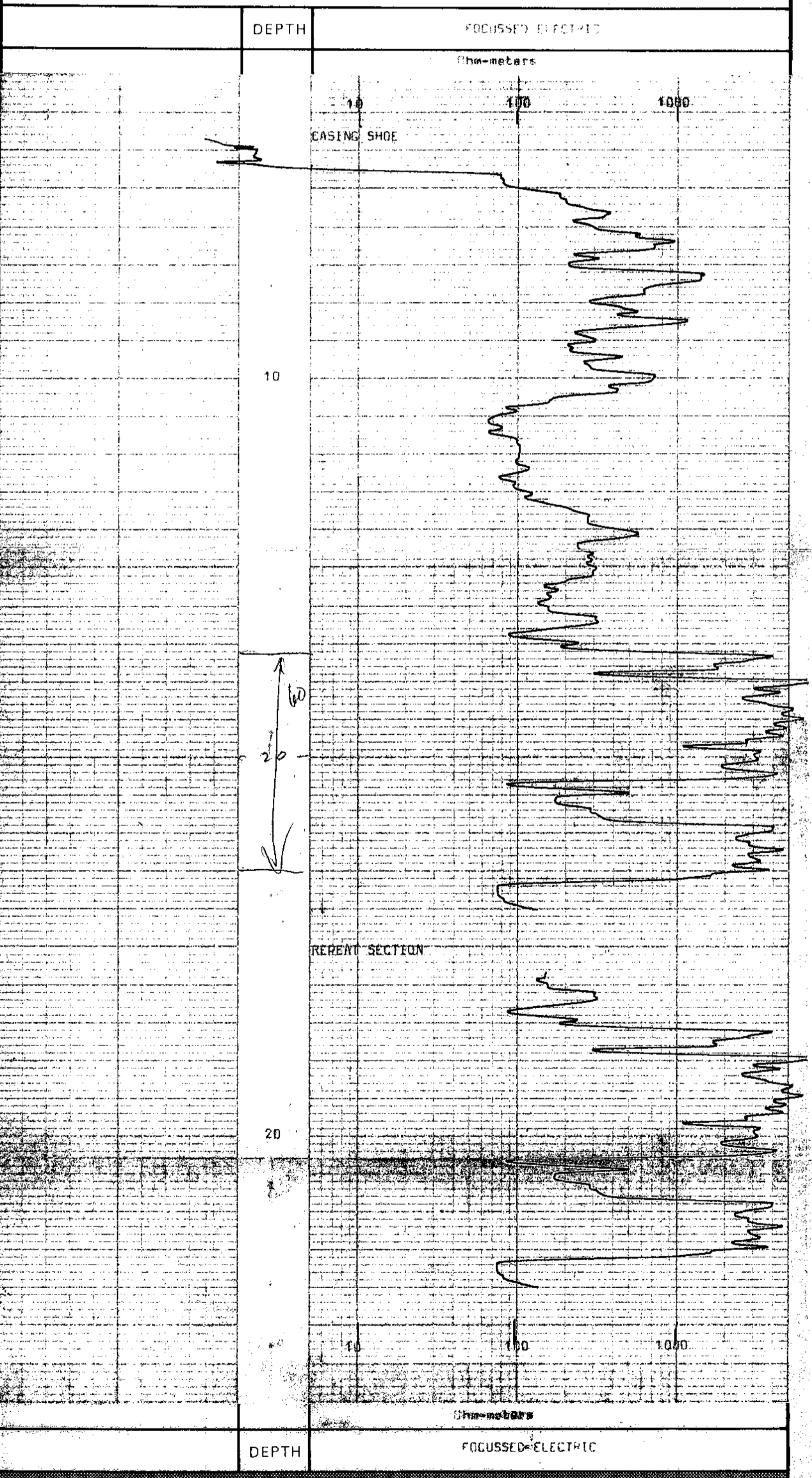
BOREHOLE DATA REFER TO _____ LOG
OPERATION DATA REFER TO _____ LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING			PANEL			CAL COEFF
	LOG TAPED	RECORDING SPEED	DIRECTOR RELAY	SPEED SECS	T.C SECS	NORM	
FE	Y	5m/m		5m/4	7	-	

REMARKS

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BOREHOLE BW-50
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA



Pr-Burnt River 801339 Bw 51

COAL LITHOLOGY LOG

BOREHOLE BW-51
 CLIENT TECH-CORE
 AREA BURNT RIVER DEPTH SCALE 200:1
 COUNTRY CANADA
 DATE LOGGED 09/09/80 1 OF 4 LOGS

PERMANENT DATUM GROUND LEVEL
 ELEVATION OF P.D. GROUND LEVEL
 MEASUREMENTS FROM LT DRILLER ML
 DEPTH REACHED 30m 102ft.
 CASING SHOE 1.4m
 BIT SIZES 1 AX TO 1D 2 TO TO
 3 TO 4 TO
 CASING SIZES 1 TO 2 TO

FLUID DATA
 NATURE
 S.G.
 LEVEL
 VISCOSITY
 Rm at meas. temp
 B.H.T.

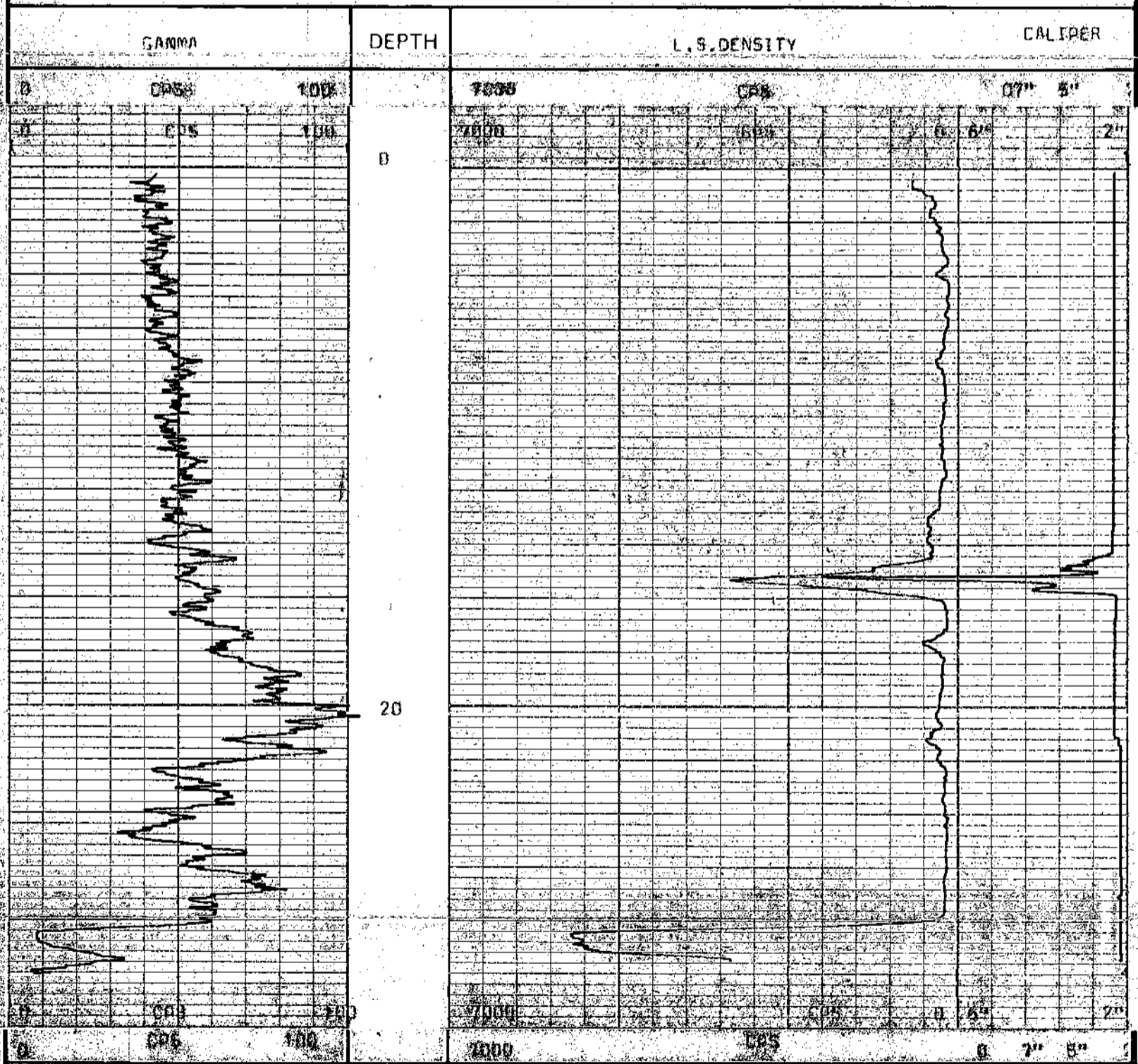
OPERATION DATA
 FIRST READING 29.5m
 LAST READING 0
 INTERVAL LOGGED 29.5m
 UNIT - TRUCK No 45/24
 ENGINEER R.C. BARRAR
 WITNESS

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EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS		
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C SECS	NORM		FROM	TO	INTERVAL
GAMMA	68	-	-	Y	9m/m	R	9m/m	1	-	-	29.5	0	29.5
L.S.D.	68	8706	-	Y	9m/m	R	9m/m	3	-	-	29.5	0	29.5
CALIPER	58	-	-	Y	9m/m	R	9m/m	3	-	-	29.5	0	29.5

ADDITIONAL SONDES RUN					REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG			
04	NEUTRON					WINKIE HOLES SINGLE FUNCTION SONDES



BOREHOLE BW-51 AREA BURNT RIVER
 CLIENT TECH-CORE COUNTRY CANADA



PZ-Sunt Key 80(3)AW 51

CUAL LITHOLOGY LOG

BOREHOLE BW51
 CLIENT TECH-CORP
 AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 09/09/80

DEPTH SCALE
 100:1

BOREHOLE DATA
 PERMANENT DATUM GROUND LEVEL
 ELEVATION OF P.O. GROUND LEVEL
 MEASUREMENTS FROM B P B DRILLER
 DEPTH REACHED 29.5m
 CASING SHOE 4m
 BIT SIZES
 1 AX TO TD 2 TO
 3 TO 4 TO
 CASING SIZES 1 TO 2 TO

FLUID DATA
 NATURE
 S.G.
 LEVEL
 VISCOSITY
 Rm at meas. temp.
 B.H.T.

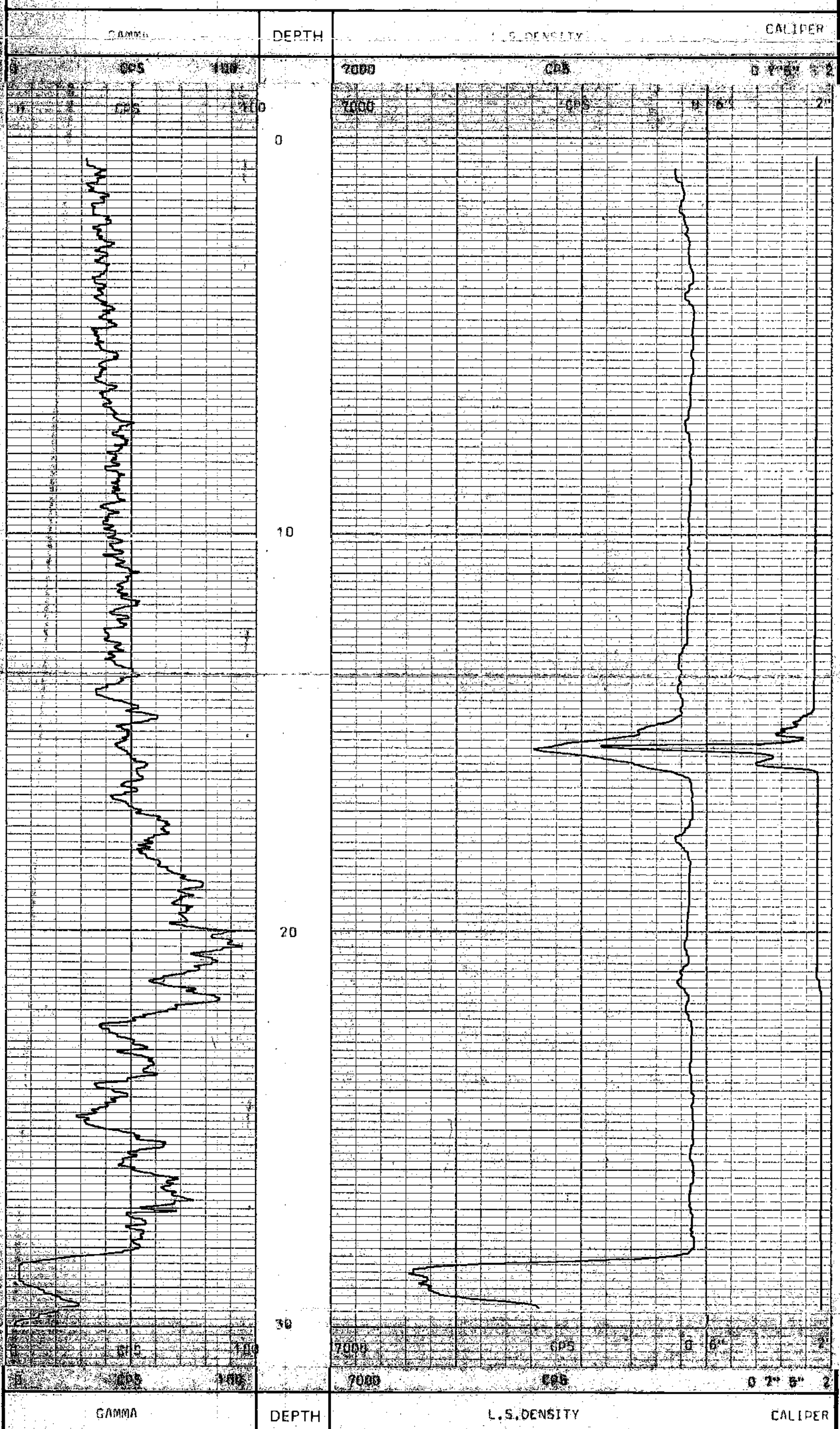
OPERATION DATA
 FIRST READING 29.5m
 LAST READING n
 INTERVAL LOGGED 29.5m
 UNIT-TRUCK NO 46724
 ENGINEER R. C. SARHAN
 WITNESS

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EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS		
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL
GAMMA	68	-	-	Y	9m/m	D	9m/m	1	-	-	30	0	30
L.S.D.	68	8705	-	Y	9m/m	D	9m/m	.3	-	-	30	0	30
CALIPER	58	-	-	Y	9m/m	D	9m/m	.3	-	-	29.5	0	29.5
WINKIE HOLE SINGLE FUNCTION SONDES													

ADDITIONAL SONDES RUN					REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG			
204	NEUTRON					WINKIE HOLE SINGLE FUNCTION SONDES



BOREHOLE BW51 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA



P2-Burnt River 8230 ABW 51

SEAM THICKNESS LOG

SONDE TYPE:
COAL
COMBINATION
SONDE

LOG SUITE:
CALIPER
BR. DENSITY

BOREHOLE EW-51
CLIENT TECH-CORP

AREA BURNT RIVER DEPTH SCALE 20:1

COUNTRY CANADA DATE LOGGED 09/09/80 3 OF 4 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE: _____
SIDEWALL POSITION _____

LOG	TAPING	RECORD DIRECT	PANEL	COAL
CALIPER	TAPED	SPEED	SECS	TYPE
Y	Y	3m/m	H	3
Y	Y	3m/m	H	3

SOURCE: SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

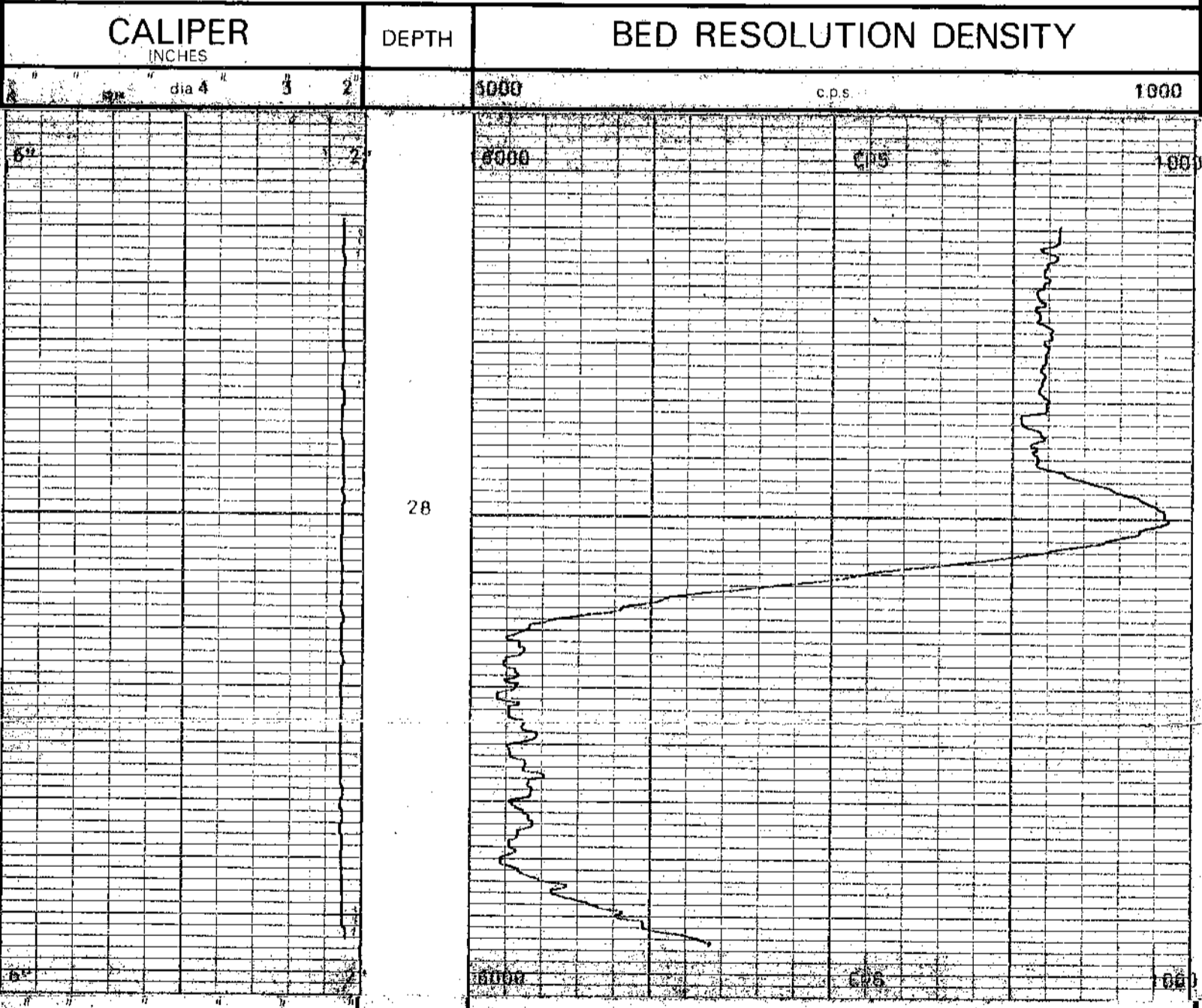
SEAM THICKNESS LOG INTERVALS

FROM 29.5m
TO 27m
INTERVAL 2.5m

REMARKS
WINKIE HOLES SINGLE FUNCTION SONDES

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B P B SEAM THICKNESS LOG



CALIPER INCHES DEPTH BED RESOLUTION DENSITY



BOREHOLE EW-51
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA

SEAM THICKNESS LOG



Pz-Burnt-River 82359 BW 51

NEUTRON-NEUTRON LOG

BOREHOLE BW 51
CLIENT TECH-CORP

AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 09/09/80

DEPTH SCALE
200:1

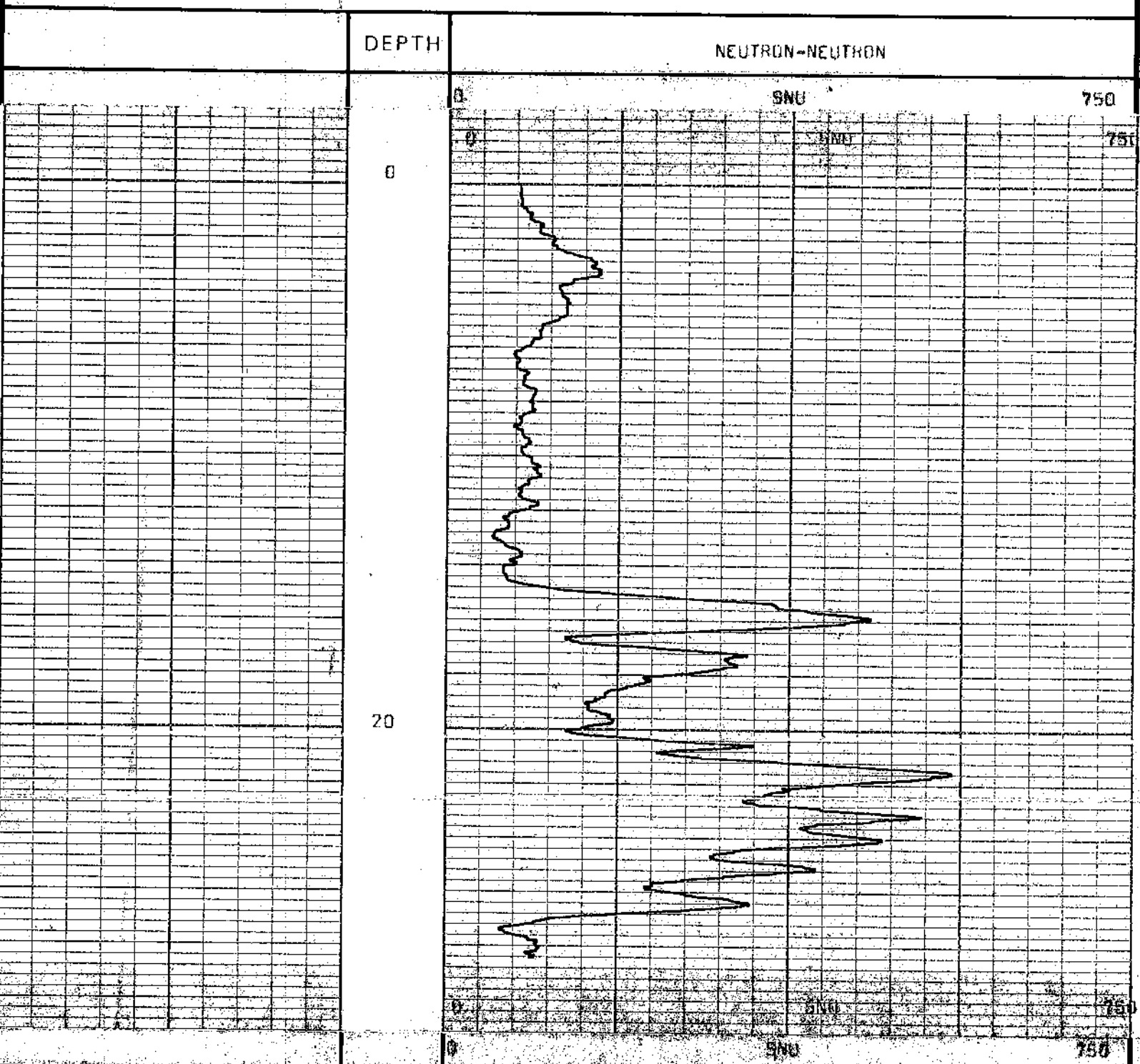
2 OF 4 LOGS

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

EQUIPMENT AND RECORDING DATA

LOG	TAPING	RECORD DIRECTOR	SPEED	T.C. SECS	NORM	CAL. COEFF.
LOG TAPED	Y	9m/m	D	9m/m	1	.83
EUTRON						
		SONDE 204		SONDE 079		

REMARKS
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DEPTH NEUTRON-NEUTRON

BOREHOLE BW 51 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA





72-Burnt River 80309 BWS1

COAL QUALITY LOG

BOREHOLE BW-51 DEPTH SCALE 20:1
 CLIENT TECH-CORP
 AREA BURNT RIVER COUNTRY CANADA
 DATE LOGGED 09/09/80 4 OF 4 LOGS

BOREHOLE DATA

PERMANENT DATUM GROUND LEVEL
 ELEVATION OF P.D. GROUND LEVEL
 MEASUREMENTS FROM JL DRILLER JL
 DEPTH REACHED 30m 102ft
 CASING SHOE 14m
 BIT SIZES 1 1 1/2 TO 1D 2 TO TO
 2 3 TO 4 TO TO
 CASING SIZES 1 2 TO 2 TO TO

FLUID DATA

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

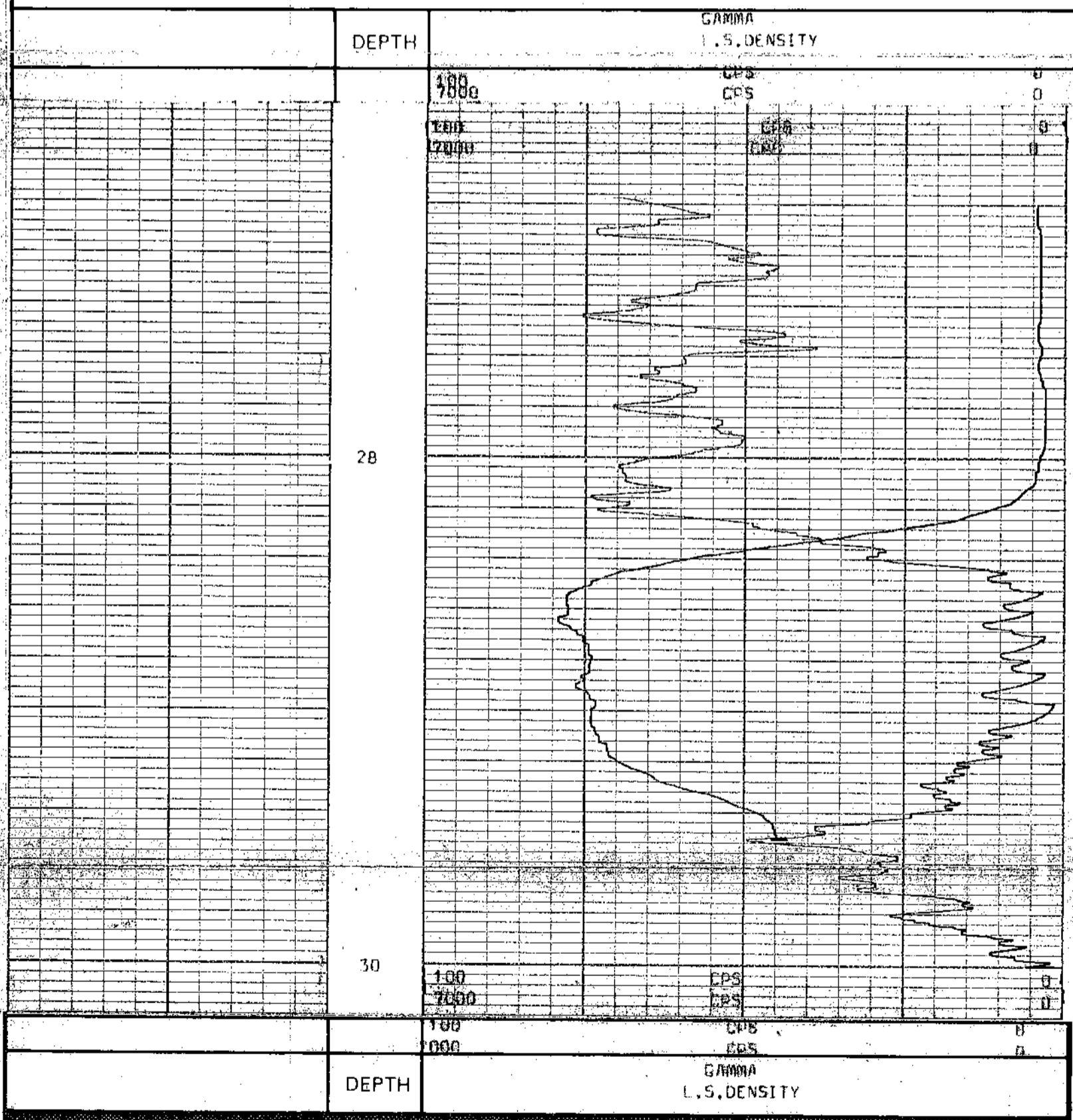
OPERATION DATA

FIRST READING 29.5m
 LAST READING 3
 INTERVAL LOGGED 29.5m
 UNIT-TRUCK No 46/24
 ENGINEER H.C. BARTMAN
 WITNESS _____

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS		
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM		FROM	TO	INTERVAL
GAMMA	68	-	-	Y	3m/m	R	3m/m	1	-	-	29.5	0	29.5
L.S.D.	68	8705	-	Y	3m/m	R	3m/m	.3	-	-	29.5	0	29.5

ADDITIONAL SONDES RUN					REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG			
	NEUTRON					WINKIE HOLES SINGLE FUNCTION SONDES



BOREHOLE BW-51 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA



2-Burnt River 8023A BW 51

SONDE TYPE:
COAL COMBINATION
SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY
CALIPER

COAL
LITHOLOGY
LOG

BOREHOLE BW-54
CLIENT TECK CORP
AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 200280
DEPTH SCALE 100:1
1 of 1 LOGS

BOREHOLE DATA
PERMANENT DUM/SECTION 1 LEVEL
ELEVATION OF P.D. GROUND LEVEL
MEASUREMENTS/SPAN BRB DRILLER GL
DEPTH REACHED 3.3m GL
CASING SHOE 3.3m
BIT SIZES 1 AX TO TD 2 TO
3 TO 4 TO
CASING SIZES 1 TO 2 TO

FLUID DATA
NATURE WATER
SG
LEVEL
VISCOSITY
Part. at mess. temp
PH

OPERATION DATA
FIRST READING 3.3m
LAST READING 0.0m
INTERVAL LOGGED 3.3m
UNIT-TRUCK No. 46/26
ENGINEER MS/3C
WITNESS

489

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE													
LOG	EQUIPMENT			TAPING			PANEL		CAL. COEFF.	DEPTHS		SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT/REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL	
GAMMA RAY	82			Y	9	R	9	1	-	1.5	33m	00m	33m
L.S. DENSITY				Y	9	R	9	3	-	-	33m	00m	33m
CALIPER	SIDEWALL POSITION												

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

FROM	TO	INTERVAL	TOTAL

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
					SINGLE FUNCTION SONDES/WINKLE HOLES

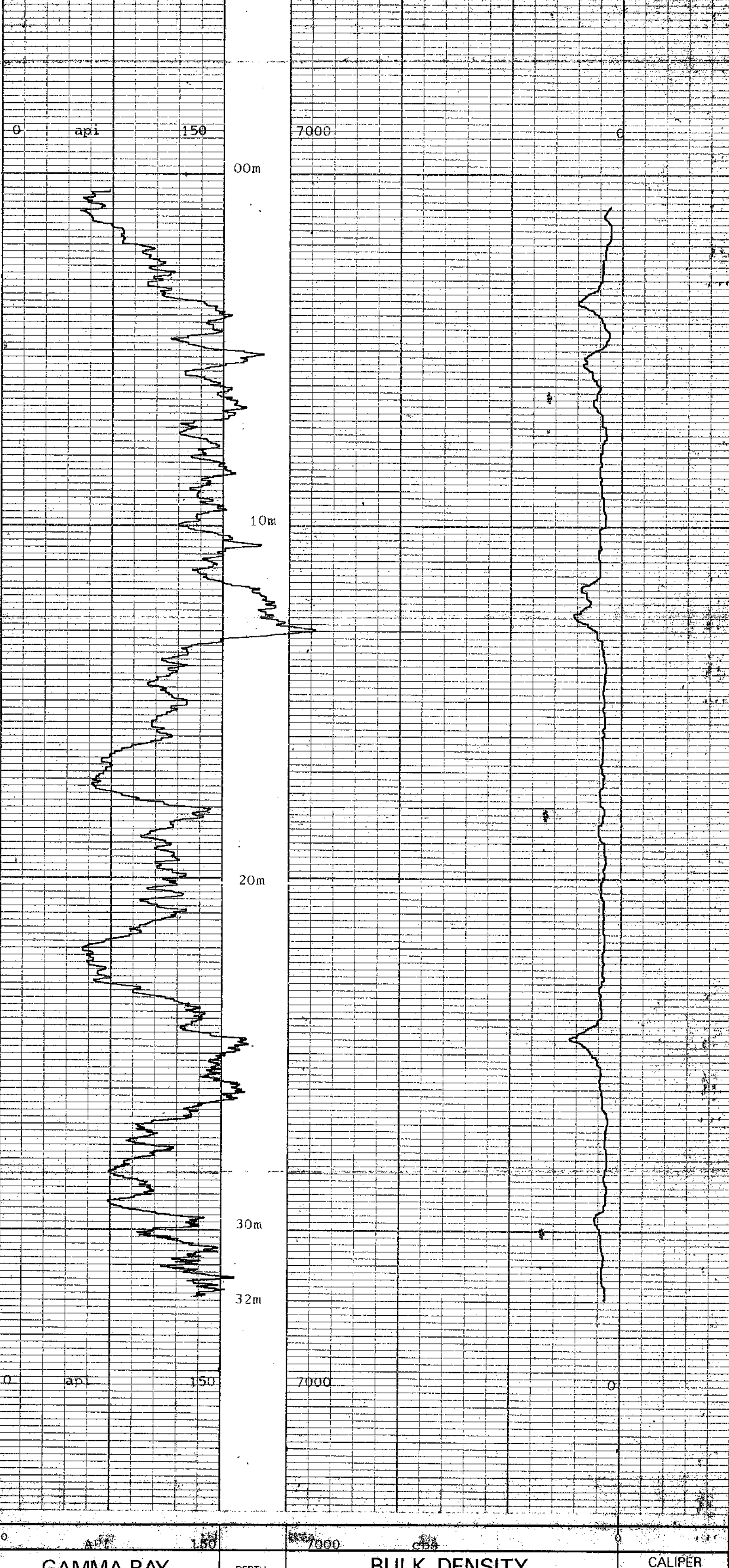
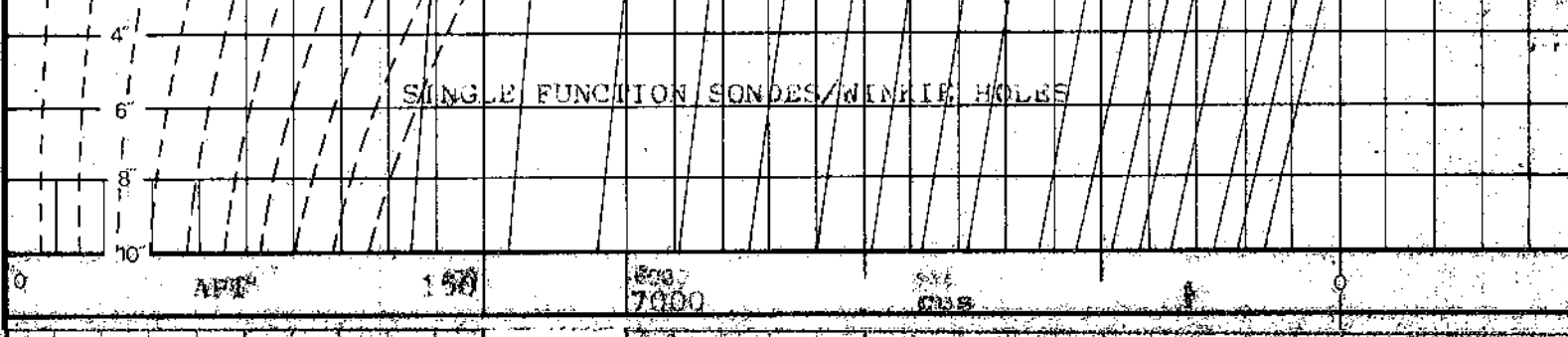
BPB COAL LITHOLOGY LOG
CALIBRATION DATA

JIG No.	VALUE @ 2" DIAM.	JIG CAL DATE	JIG VALUE	SDU @	g/cm ³	ins.	cps
JIG MARK SHOWN AT ABOVE VALUE		JIG No.	SPAN	NORM	SDU =	ins.	cps

SINGLE FUNCTION SONDES/WINKLE HOLES

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

BOREHOLE BW-54 AREA BURNT RIVER
CLIENT TECK-CORP COUNTRY CANADA

COAL LITHOLOGY LOG





PR-Burnt River 80(3)19 B-10 51

COAL
LITHOLOGY
LOG

LOG SUITE:
GAMMA RAY
L.S. DENSITY
CALIPER

SONDE TYPE:
COAL
COMBINATION
SONDE

BOREHOLE DATA
PERMANENT DATUM _____
GROUND LEVEL _____
ELEVATION OF P.D. _____
SURROUND LEVEL _____
MEASUREMENTS FROM _____
DEPTH REACHED 32.30m
CASING SHOE 32.31m
BIT SIZES 1 AX TO TD 2 TO TO
3 TO TO 4 TO TO
CASING SIZES 1 TO TO 2 TO TO

BOREHOLE BM-55
CLIENT PECK-CORP
AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 20 OCT 1980
DEPTH SCALE 100:1
1 OF 3 LOGS

OPERATION DATA
FIRST READING 3.2m
LAST READING 0.0m
INTERVAL LOGGED 3.2m
UNIT-TRUCK No. 46/26
ENGINEER JC/NK
WITNESS

489

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL. COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM		FROM	TO	INTERVAL	
GAMMA RAY	R2			Y	9	D	9	1		1.5	32	00	32m	Y
L.S. DENSITY				Y	9	D	9	1/3			32	00	32m	Y
CALIPER	SIDEWALL POSITION													

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

FROM	32m	INTERVAL TOTAL	
TO	28m		
INTERVAL	04m		04m

ADDITIONAL SONDES RUN					REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG			
R2	BRD	20.1	20.1			

BPB COAL LITHOLOGY LOG

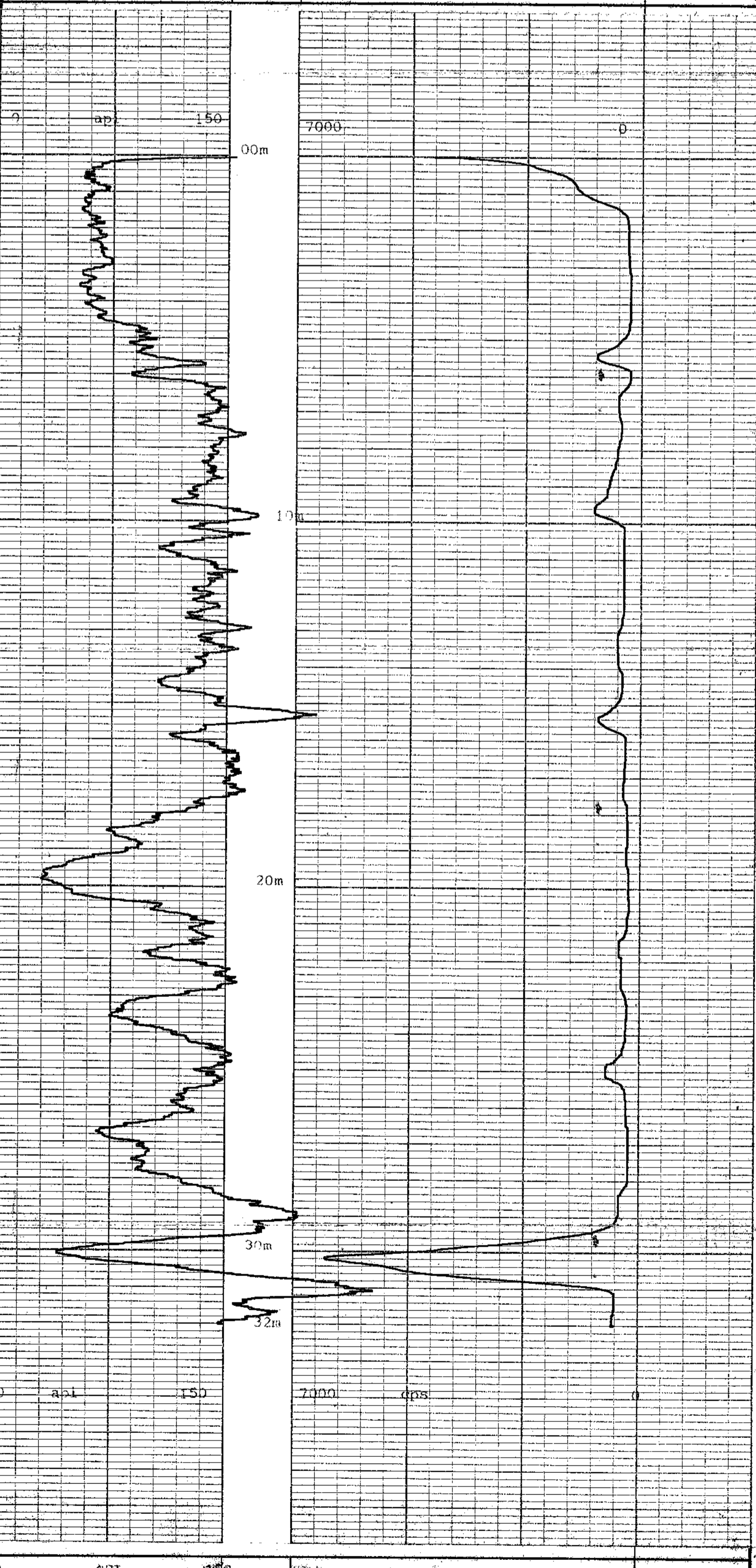
CALIBRATION DATA

JIG No.	VALUE @ 2" DIAM.	JIG CAL. DATE	JIG VALUE	SDU @	g/cm ³	ins.	cps.
JIG MARK SHOWN AT ABOVE VALUE -		JIG No.	SPAN	NORM	SDU = CPS	ins.	cps.

SINGLE FUNCTION SONDES/WINKLE HOLE

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

HOLE SIZE CORRECTION DATA

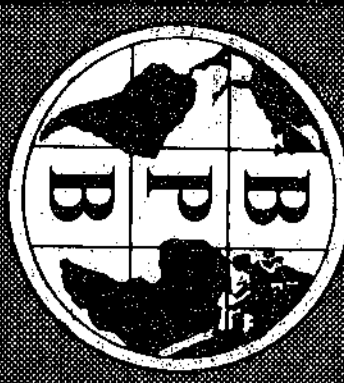


GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



BOREHOLE BM-55
CLIENT PECK CORP
AREA BURNT RIVER
COUNTRY CANADA

COAL LITHOLOGY LOG



PR-Record 2100-20181A BW 54

COAL LITHOLOGY LOG

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

BOREHOLE: BW-54
CLIENT: TECK CORP
AREA: JURNI RIVER
COUNTRY: CANADA
DATE LOGGED: 20CT80
DEPTH SCALE: 100:1
LOG SCALE: 1 OF 1 LOGS

BOREHOLE DATA	
PERMANENT PLUM	GROUND LEVEL
ELEVATION OF P.D.	GROUND LEVEL
WAS PERMANENT FROM	DRILLER
DEPTH REACHED	3.3m
CASING SHOE	3.3m
BIT SIZES	1 AX TO 17 2 TO 3 TO 4 TO 2 TO
CASING SIZES	1 TO 2 TO
FLUID DATA	
NATURE	WATER
SG	
LEVEL	
VISCOSITY	
PH AT PRESS. TEMP	
BH T.	
OPERATION DATA	
FIRST READING	3.3m
LAST READING	0.0m
INTERVAL LOGGED	3.3m
UNIT-TRUCK NO.	45/26
ENGINEER	MR/BC
WITNESS	

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EQUIPMENT AND RECORDING DATA														
COAL COMBINATION SONDE														
LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECTOR REPLAY	SPEED	TC SECS	NORM	CAL COEFF	DEPTHS FROM	TO	INTERVAL	SEAM LOG RUN
GAMMA RAY	82			Y	9	R	9	1	-	1.5	3.3m	0.0m	3.3m	
L.S. DENSITY				Y	9	R	9	.3	-	-	3.3m	0.0m	3.3m	
CALIPER	SIDEWALL POSITION													
COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)														
FROM											INTERVAL			
TO											TOTAL			
INTERVAL														
ADDITIONAL SONDES RUN						REMARKS								
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS		SINGLE FUNCTION SONDES/WINKLE HOLES								

BPB COAL LITHOLOGY LOG

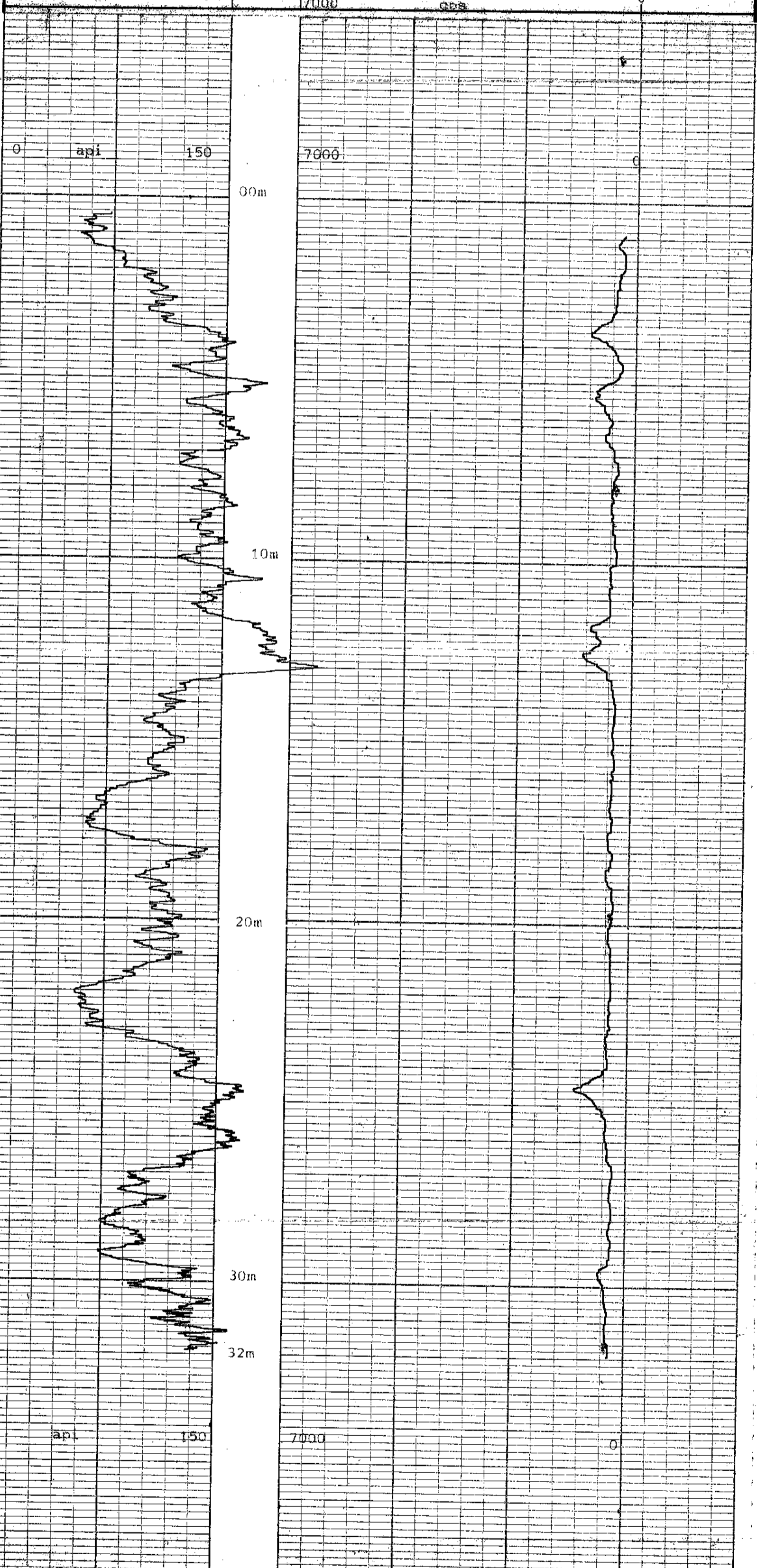
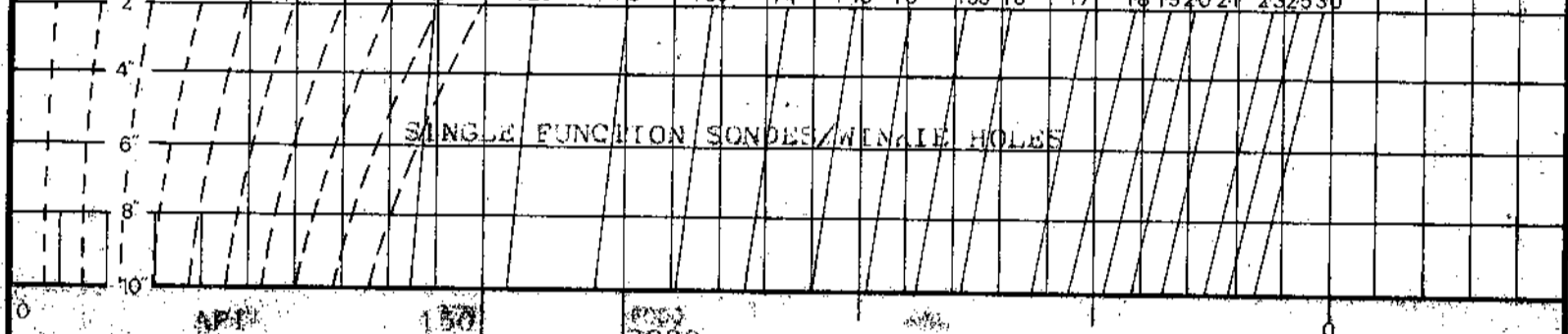
CALIBRATION DATA

JIG No.	VALUE	@ 2" DIAM.	JIG CAL. DATE	JIG VALUE	SDU @	g/cm ³	ins.	cps.
JIG MARK SHOWN AT ABOVE VALUE -			JIG No.	SPAN	NORM	SDU - CPS	ins.	cps.

SINGLE FUNCTION SONDES/WINKLE HOLES

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
------------------	-------	--	--------------------------



BOREHOLE: BW-54 **AREA:** JURNI RIVER
CLIENT: TECK-CORP **COUNTRY:** CANADA

COAL LITHOLOGY LOG



R2-Burnt River 80 (3) 9 BW 55

BOREHOLE BW-55
 CLIENT TECK-CORP

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 20CT80

DEPTH SCALE
 100:1
 1 or 3 LOGS

COAL LITHOLOGY LOG

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

BOREHOLE DATA

PERMANENT DATUM GROUND LEVEL
 ELEVATION OF P.D. BPB
 MEASUREMENT FROM 3L
 DEPTH REACHED 32.30m
 CASING SHOE 32.31m

BIT SIZES: 1 AX TO TD 2 TO TO
 3 TO TO 4 TO TO
 CASING SIZES: 1 TO TO 2 TO TO

FLUID DATA

NATURE WATER
 SG LEVEL
 VISCOSITY Temp at meas temp
 BHT Temp

OPERATION DATA

FIRST READING 32m
 LAST READING 00m
 INTERVAL LOGGED 32m
 UNIT-TRUCK No 46726
 ENGINEER JC/MR
 WITNESS 489

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL	
GAMMA RAY	82			Y	4	D	9	1		1.5	32	00	32m	Y
L.S. DENSITY				Y	9	D	9	1/3			32	00	32m	Y
CALIPER	SIDEWALL POSITION													

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

FROM	32m	INTERVAL TOTAL	
TO	28m		
INTERVAL	04m		04m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
82	HRD	20.1	20.1		

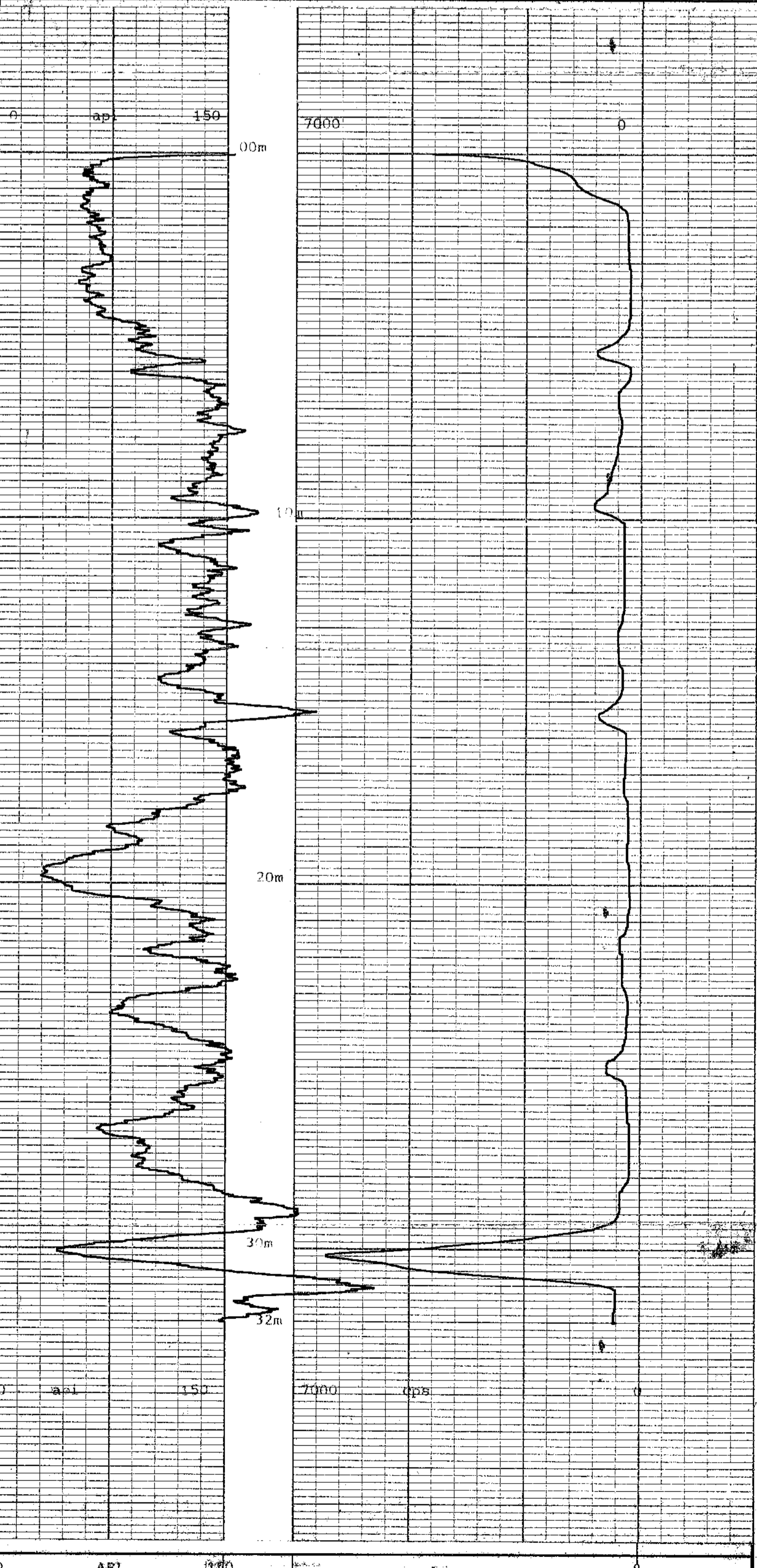
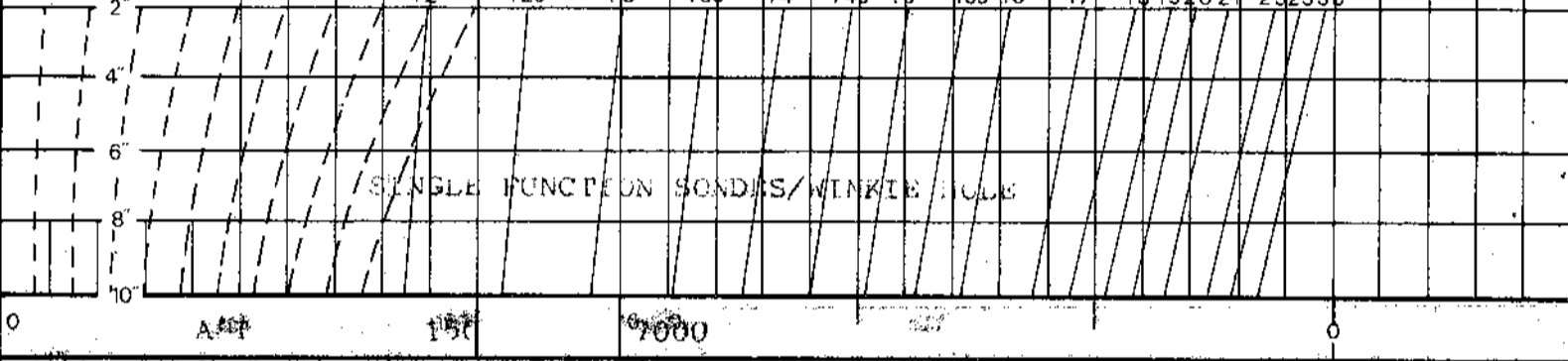
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No.	VALUE @ 2" DIAM	JIG CAL DATE	JIG VALUE	SDU @	g/cm ³	ins.	cps.
JIG MARK SHOWN AT ABOVE VALUE -		JIG No.	SPAN	NORM	SDU CPS	ins.	cps.

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
------------------	-------	--	--------------------------



BOREHOLE BW 55 AREA BURNT RIVER
 CLIENT TECK CORP COUNTRY CANADA

COAL LITHOLOGY LOG



PR-Burnt River col. 517 - BW 55

BOREHOLE BW-55
 CLIENT TECK-CORP

AREA BURNT RIVER DEPTH SCALE 20:1
 COUNTRY CANADA

DATE LOGGED 22oct80 2 OF 3 LOGS

SEAM THICKNESS LOG

SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 CALIPER
 BR. DENSITY

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

COAL COMBINATION SONDE:
 LOG TAPING LOG RECORD DIRECT SPEED TO CAL COEFF.
 CALIPER TAPED SPEED REPLAY SECS NORM
 BR DENSITY γ 3m/m γ 3m/m 1/B

SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

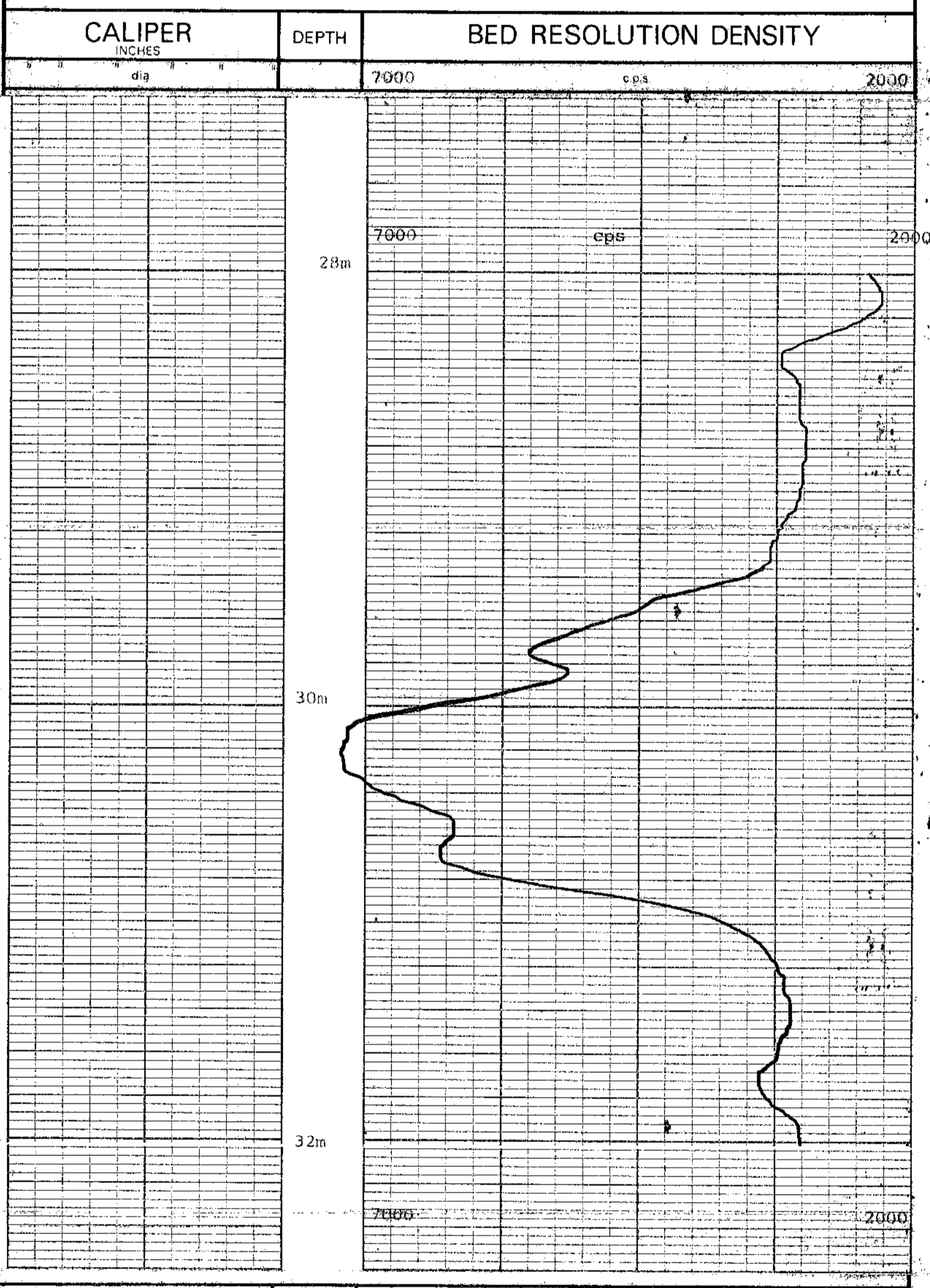
FROM 3.2m
 TO 2.9m
 INTERVAL 0.4m

FROM
 TO
 INTERVAL
 REMARKS

single function sondes
 winkie hole

489

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
dia		7000 cps 2000



BOREHOLE BW-55 AREA BURNT RIVER
 CLIENT TECK CORP COUNTRY CANADA

SEAM THICKNESS LOG

R2-Burnt River 82(3)A BW 55



BOREHOLE BW-55
 CLIENT TECK CORP

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 02oct80

DEPTH SCALE 20:1
 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
 LOG TAPPING SIDEWALL POSITION
 LOG RECORD T.C. COAL
 TAPED SPEED REPLAY SPEED SECS NORM
 GAMMA RAY Y 3 F 3 2
 LS DENSITY Y 3 F 3 1

SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

COAL QUALITY LOG INTERVALS
 FROM 32m
 TO 28m
 INTERVAL 04m
 FROM
 TO
 INTERNAL VAL TOTAL
 INTERVAL # 04m
 REMARKS
 single function sondes

489

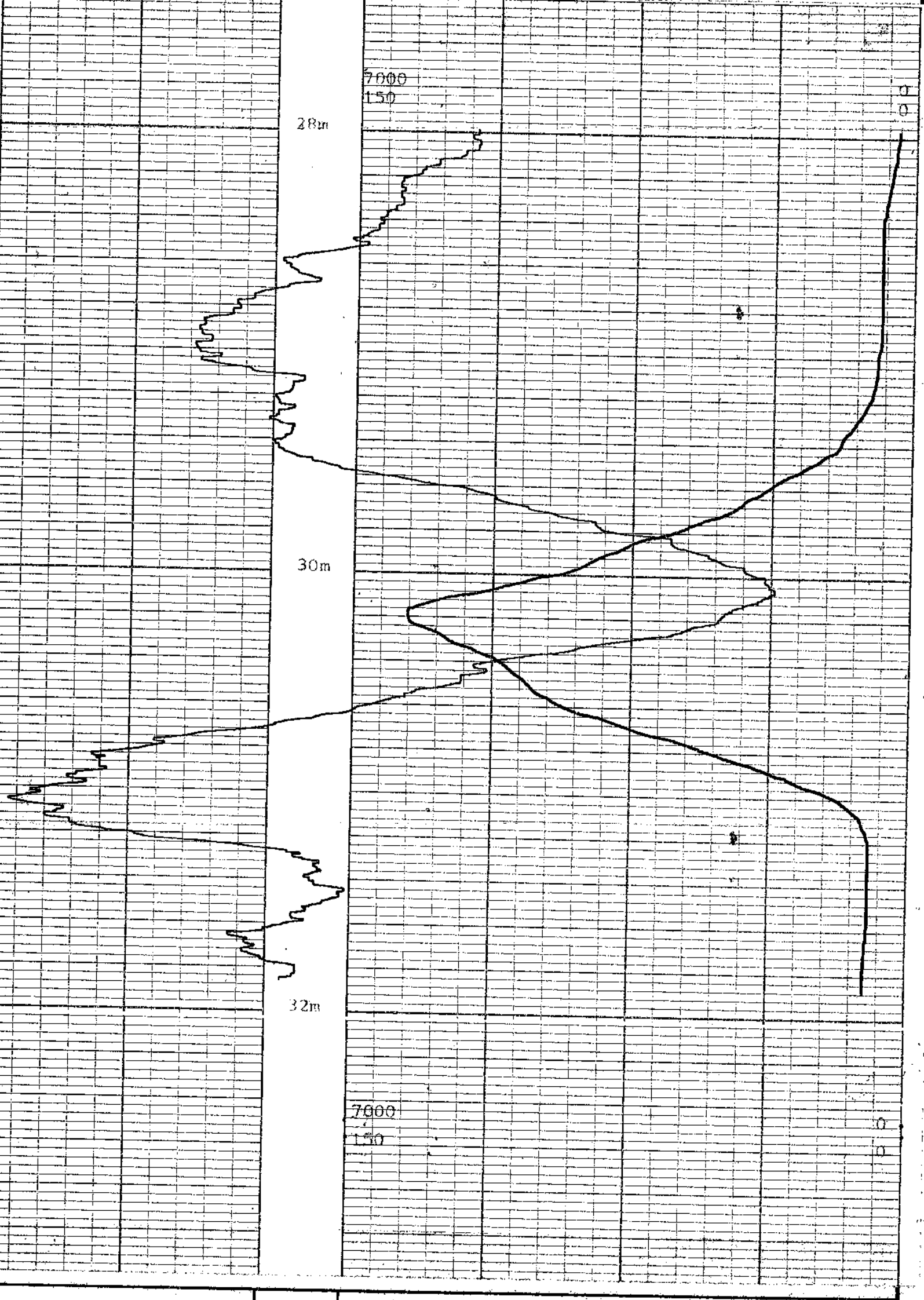
BPB COAL QUALITY LOG

DEPTH GAMMA RAY
 COAL BULK DENSITY
 g/cm³

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
4"																
6"																
8"																

150 g/cc
 7000 cps
 0
 0



1000 g/cc
 150 cps
 0
 0

DEPTH GAMMA RAY
 COAL BULK DENSITY
 g/cm³



BOREHOLE BW 55 AREA BURNT RIVER
 CLIENT TECK CORP COUNTRY CANADA

COAL QUALITY LOG



FR-2 Burnt River 201354 BJS

BOREHOLE BW-55
 CLIENT TECK-CORP

AREA BURNT RIVER
 COUNTRY CANADA
 DATE LOGGED 22 OCT 80

DEPTH SCALE
 20:1
 2 OF 3 LOGS

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

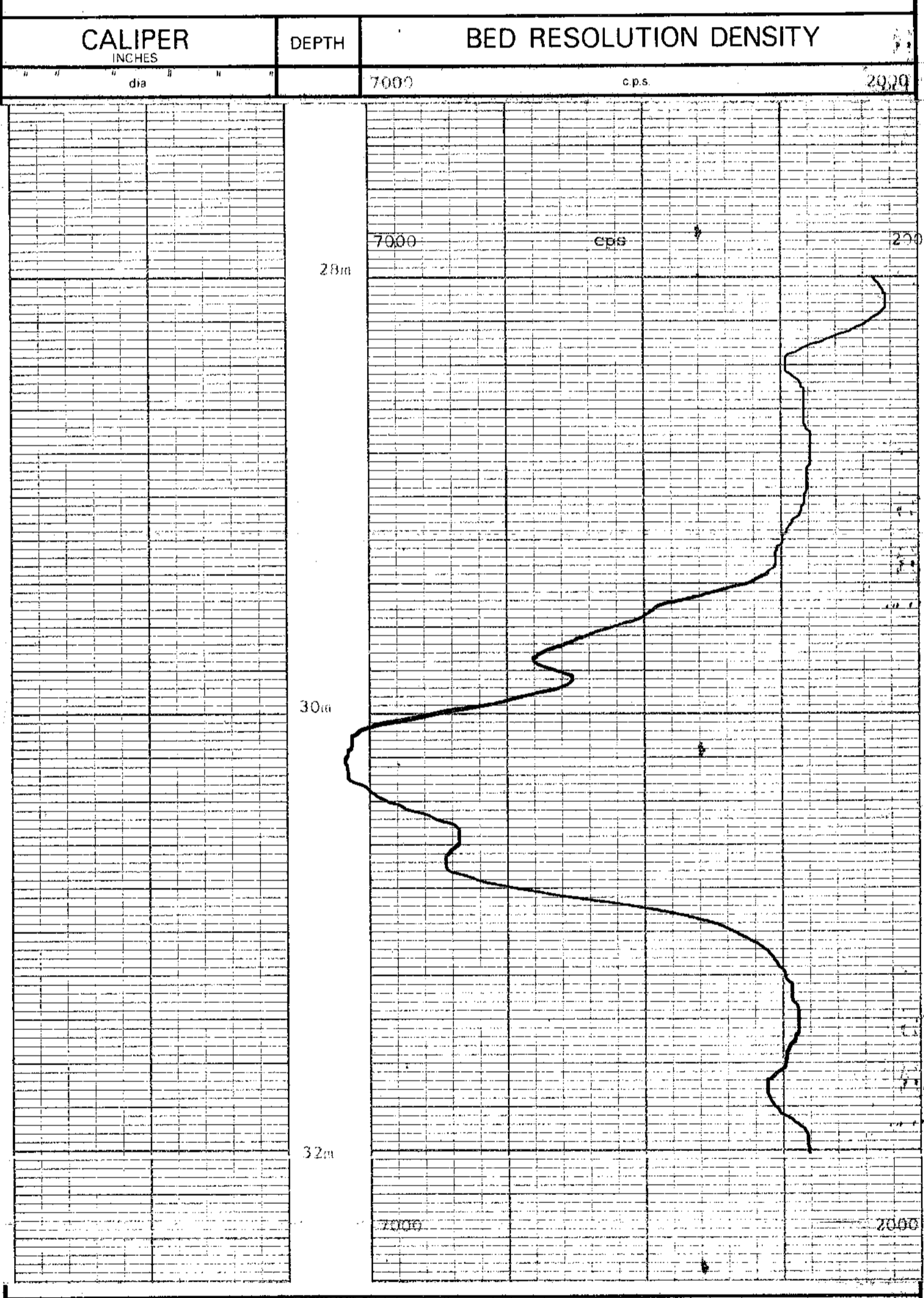
EQUIPMENT AND RECORDING DATA
 COAL COMBINATION SONDE
 LOG TAPING PANEL COEFF
 LOG RECORD SPEED 1/3
 LOG SPEED REPLAY 1/3
 CALIPER 3m/ft 1/3
 BR DENSITY 3m/ft 1/3
 SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS
 FROM 32m
 TO 28m
 INTERVAL 0.4m

LOG SUITE:
 CALIPER
 BR DENSITY

Single function sondes
 Winkie hole
489

B P B SEAM THICKNESS LOG

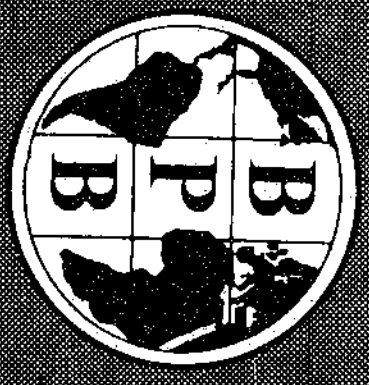


CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
" " " " " "		7000 cps 2000

BOREHOLE BW-55 AREA BURNT RIVER
 CLIENT TECK CORP COUNTRY CANADA

SEAM THICKNESS LOG





P2-Burnt River (063) B&W 55

BOREHOLE JM-55
CLIENT TECK CORP

AREA BURNT RIVER
COUNTRY CANADA
DEPTH SCALE 2011

DATE LOGGED 02oct80
3 of 3 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

LOG	TAPING	RECORD	RECORD	SPEED	SECS	NORM	PANEL	COIL
GAMMA RAY	TAPER	SPEED	REPEAT	REPEAT	SECS	NORM		
Y	3	3	3	3	2			
Y	3	3	3	3	1			

SOURCE: SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

COAL QUALITY LOG INTERVALS

FROM 3.2m
TO 2.8m
INTERVAL 0.4m

FROM
TO
INTERVAL
VAL TOTAL
± 0.4m

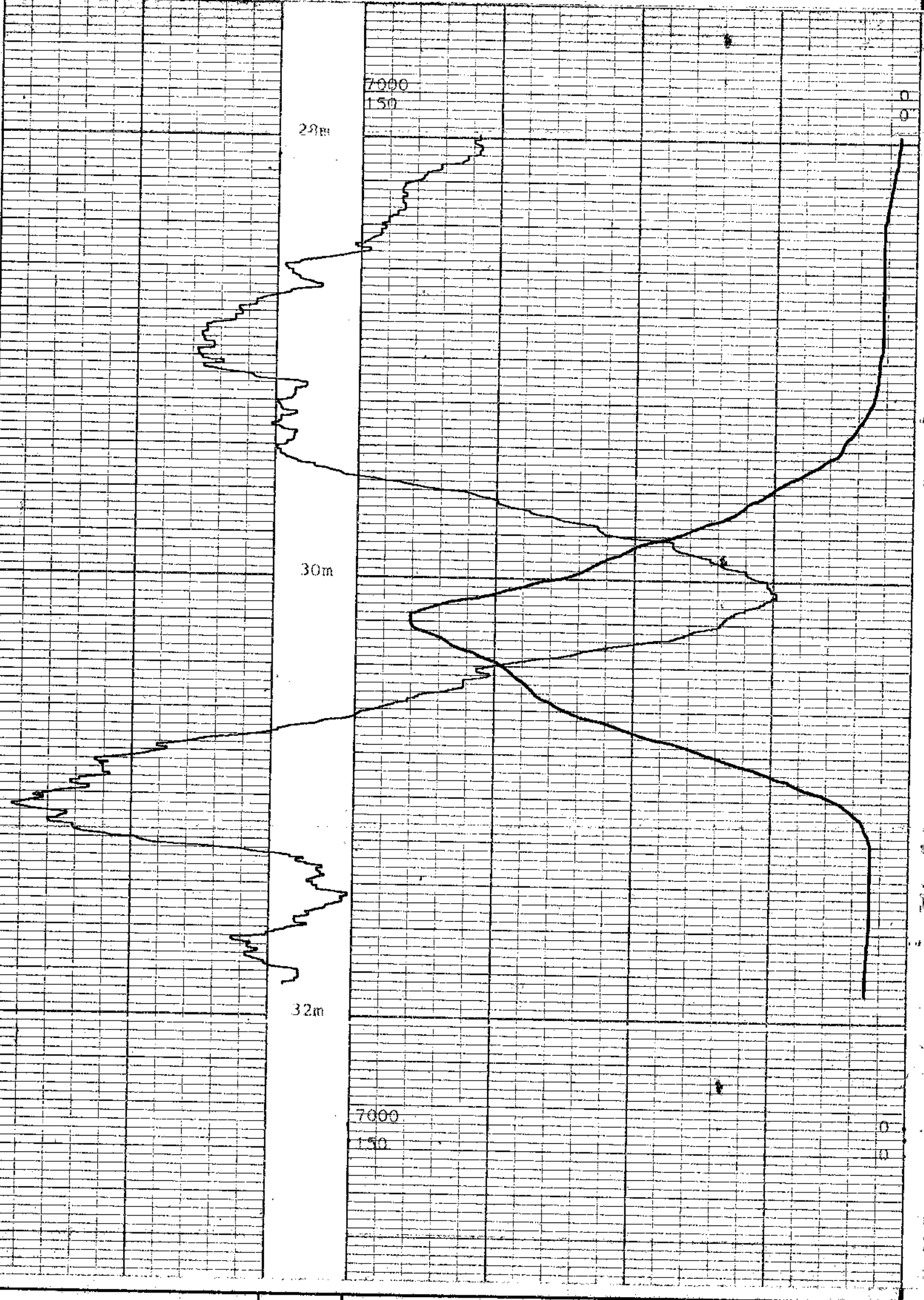
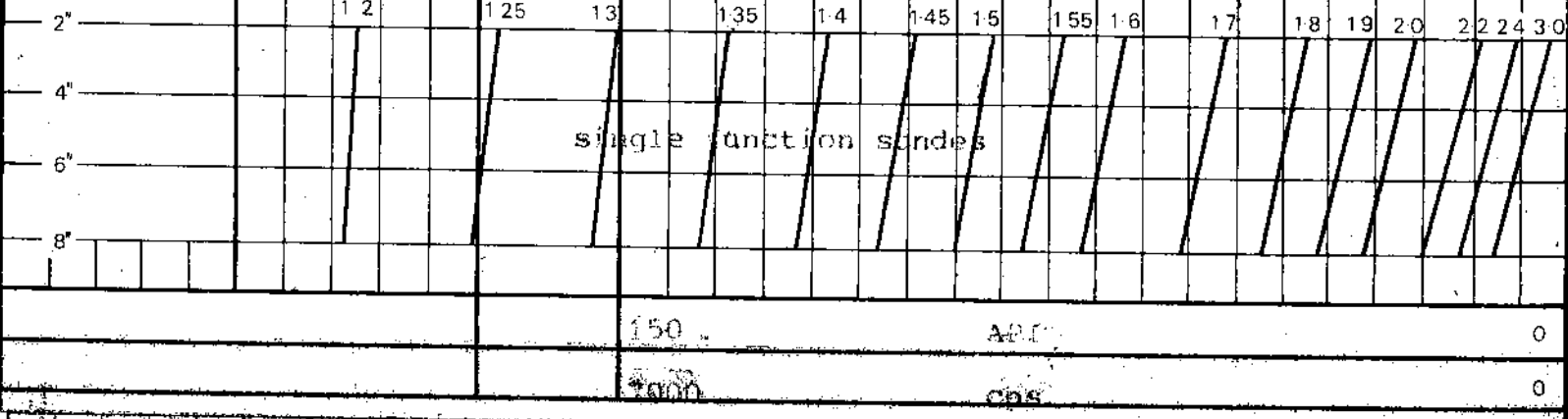
REMARKS
Single function sondes

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B P B COAL QUALITY LOG

DEPTH	GAMMA RAY	COAL BULK DENSITY
		g/cm ³

HOLE SIZE CORRECTION DATA



DEPTH	GAMMA RAY	COAL BULK DENSITY
		g/cm ³



BOREHOLE JM-55
CLIENT TECK CORP

AREA BURNT RIVER
COUNTRY CANADA

COAL QUALITY LOG

MT 88002 R



Pr-Burnt River 8(C)19 BW 56

SONDE TYPE:
COAL
COMBINATION
SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY
CALIPER

COAL
LITHOLOGY
LOG

BOREHOLE 3W-56
CLIENT TRUCK CORP

AREA BURNT RIVER
COUNTRY CANADA
DATE LOGGED 200480

DEPTH SCALE
100.1

LOG 3 LOGS

BOREHOLE DATA

PERMANENT DATUM GROUND LEVEL
ELEVATION OF P.D. 8PB
MEASUREMENTS FROM 31
DEPTH REACHED 25.4m 82 FT
CASING SHOE

BIT SIZES
1 - AX TO TD 2 TO TO
3 TO 4 TO TO
CASING SIZES 1 TO 2 TO TO

FLUID DATA
NATURE water
SG
LEVEL
VISCOSITY
Rm at meas. temp.
B.H.T.

OPERATION DATA
FIRST READING 25m
LAST READING 0.1m
INTERVAL LOGGED 25m
UNIT-TRUCK No 46/26
ENGINEER MT/DC
WITNESS

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL. COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CAIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL	
GAMMA RAY	82			Y	9m/ft	D	9	1	-	1	25m	00m	25m	
L.S. DENSITY				Y	9m/ft	D	9	.3	-	-	24m	00m	24m	
CALIPER	SIDEWALL POSITION													

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

FROM	22m	INTERVAL TOTAL
TO	17m	
INTERVAL	05m	05m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
82	3RD		20		SINGLE FUNCTION SONDES WINKLE HOLE

BPB COAL LITHOLOGY LOG

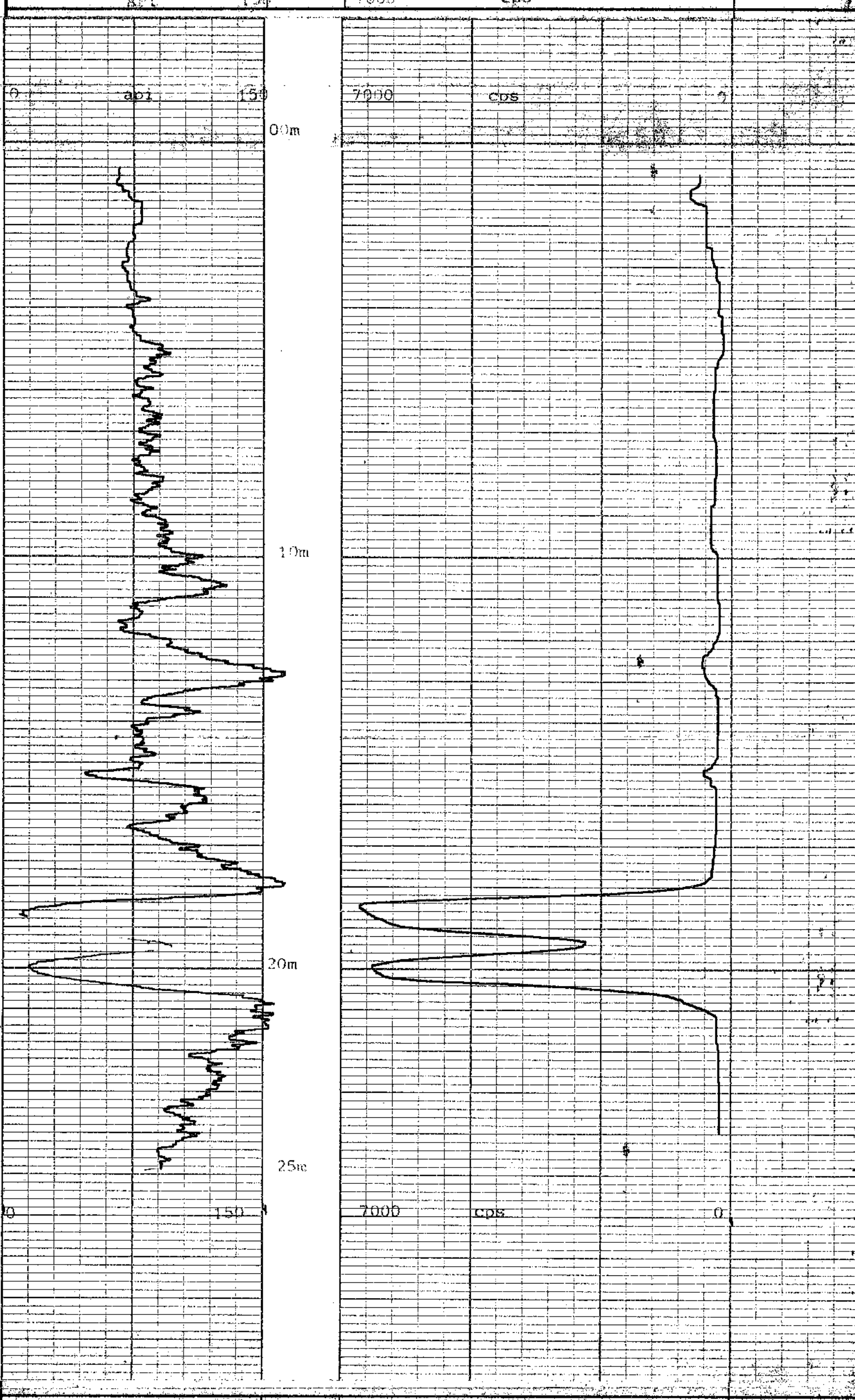
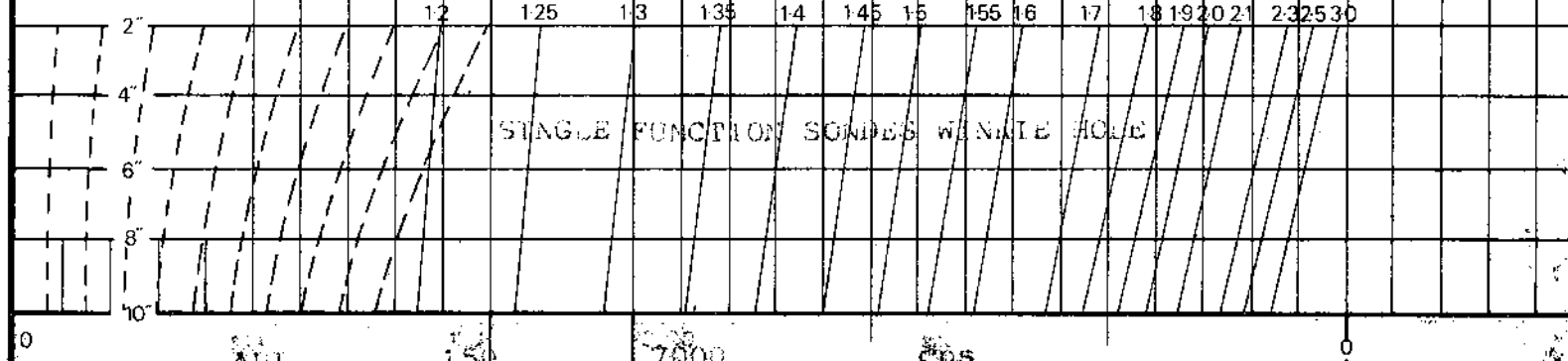
CALIBRATION DATA

JIG No.	VALUE @ 2" DIAM.	JIG CAL. DATE	JIG VALUE	SDU @	g/cm ³	ins.	cps.
JIG MARK SHOWN AT ABOVE VALUE		JIG No.	SPAN	NORM	SDU	ins.	cps.

SINGLE FUNCTION SONDES WINKLE HOLE

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA

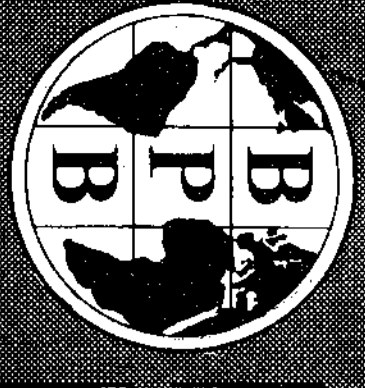


GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE 3W-56 AREA BURNT RIVER
CLIENT TRUCK CORP COUNTRY CANADA

COAL LITHOLOGY LOG



20-SWIFT RIVER 8063A
02 44

BOREHOLE SH-44
CLIENT TECK-CORP

AREA Swift River
COUNTRY Canada

DATE LOGGED 11/07/80

DEPTH SCALE
200:1

LOG SCALE
100:1

COAL
LITHOLOGY
LOG

SONDE TYPE
COAL
COMBINATION
SONDE

LOG SUITE
GAMMA RAY
L.S. DENSITY
CALIPER

BOREHOLE DATA

PERMANENT DATUM	750 JING F EVEL
ELEVATION OF P.D.	GROUND LEVEL
MEASUREMENT SYSTEM	BPB
DEPTH REACHED	48.30m
CASING SHOE	29.1 ft
BIT SIZES	1 1/4" TO 2 1/4" 2 1/4" TO 1 1/2" TO 1 1/8"
CASING SIZES	1 1/2" TO 2 1/4" 2 1/4" TO 1 1/2" TO 1 1/8"

FLUID DATA

NATURE	Quick Sell
SG	
LEVEL	
VISCOSITY	
Pin at meas. temp	
BIT	

OPERATION DATA

FIRST READING	8.7m
LAST READING	13.7m
INTERVAL LOGGED	4.7m
UNIT-TRUCK NO.	2474E
ENGINEER	MR/BL
WITNESS	

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EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL		CAL COEFF	DEPTHS			SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT OR REPLAY	SPEED	TC SECS		NORM	FROM	TO		INTERVAL
CCS	119	5845												
GAMMA RAY			510ADU	Y	9m/m	H	9m/m	1	-	1.5	87m	100m	87m	Y
L.S. DENSITY			5305DU	Y	9m/m	H	9m/m	1/3	6.7	-	88m	01m	87m	Y
CALIPER				Y	9m/m	H	9m/m	1/3	-	-	88m	01m	87m	Y

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

FROM	43m	INTERVAL TOTAL
TO	30m	
INTERVAL	13m	13m

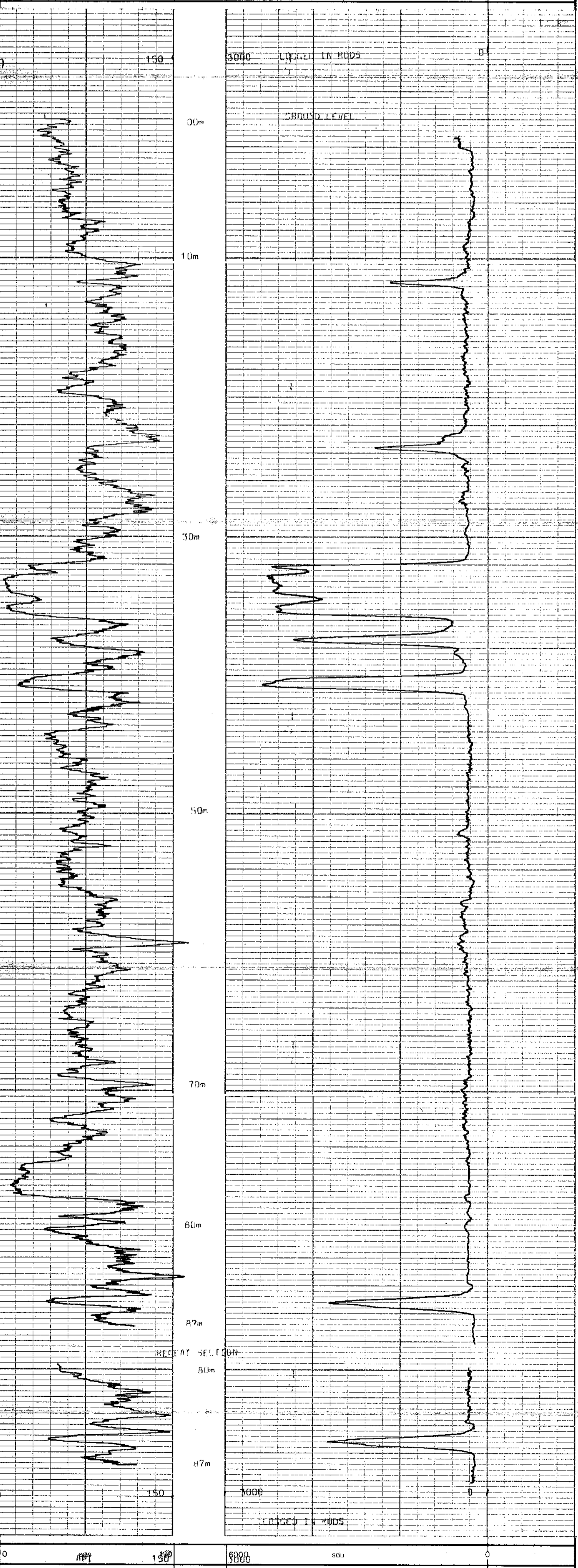
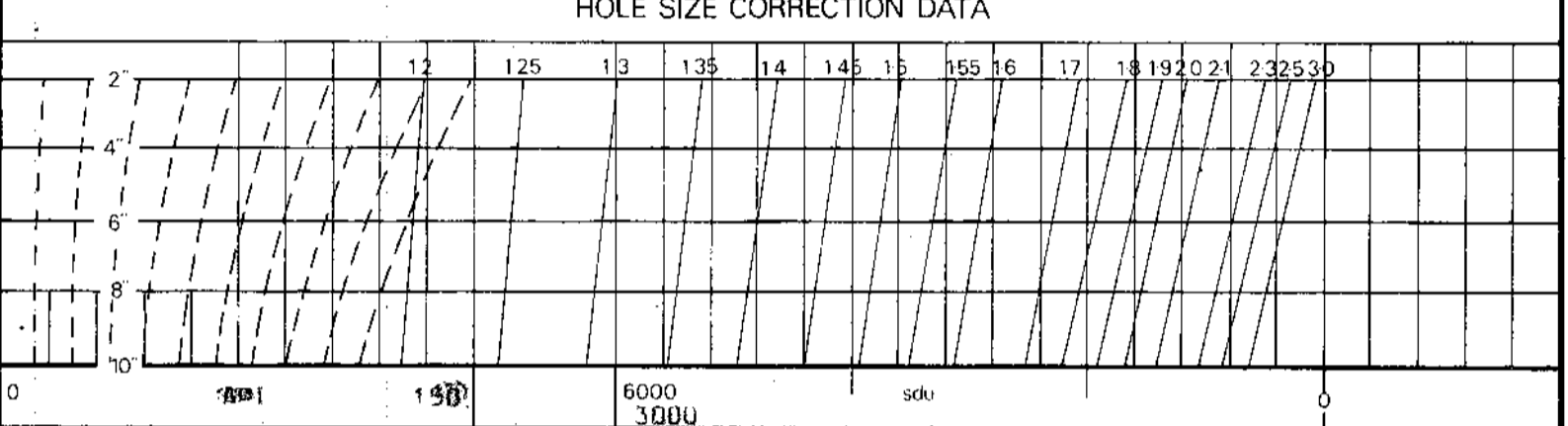
ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
204	N-N	200,1			LOGGED IN BUDS AND SCALE 3000-0

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. 367	VALU@ @ 2" DIAM	JIG CAL DATE 7/06/80	JIG VALU@ 530	SDU @	g/cm ³	Ans. 472	cps
JIG MARK SHOWN AT ABOVE VALUE - x0.1		JIG No 0338	SPAN 3000	NORM	SDU CPS 6.7	7 ins 940	cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------



BOREHOLE SH-44 AREA Swift River
CLIENT Teck-Corp COUNTRY Canada

COAL LITHOLOGY LOG

B2-Bunt River 00(3)A BR 44



SEAM THICKNESS LOG

SONDE TYPE: _____
 COAL COMBINATION: _____
 LOG SUITE: _____
 CALIPER: _____
 BR DENSITY: _____

BOREHOLE Br 44
 CLIENT TECK-CORP.

AREA Sunt river
 COUNTRY Canada

DATE LOGGED 12/07/96
 LOGS 2 05

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE _____

LOG _____ TAPPING _____ SIDEWALL POSITION _____

CALIPER _____ LOG RECORD DIRECT SPEED _____ PANEL _____ CODE _____

BR DENSITY _____ LOG SPEED REPLAY SPEED _____ NORM _____

SOURCE SONDE AND CALIBRATION _____

REFER TO LITHOLOGY LOG

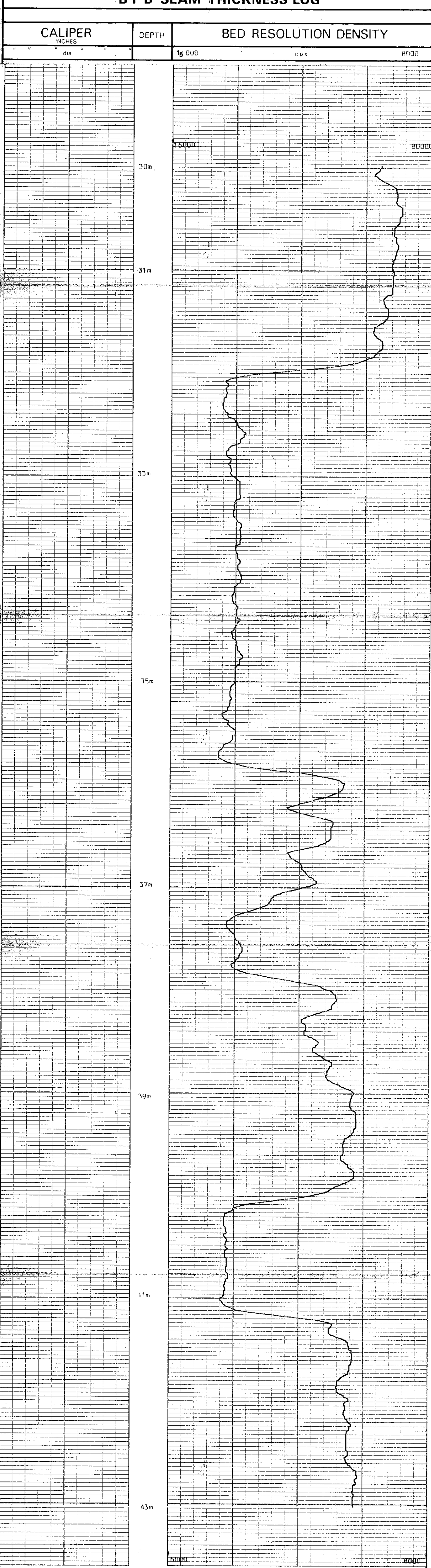
SEAM THICKNESS LOG INTERVALS

FROM	4.3m
TO	3.0m
INTERVAL	1.3m
FROM	
TO	
INTERVAL	
TOTAL	1.3m

LOGS IN HOLE

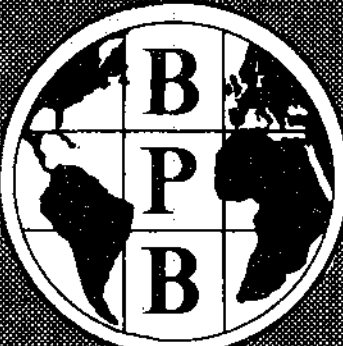
489

B P B SEAM THICKNESS LOG

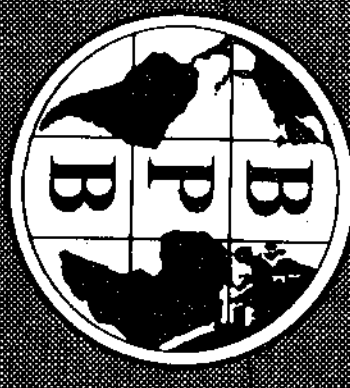


CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
dia		cps
		16000

BOREHOLE Br-44 AREA Sunt river
 CLIENT TECK-CORP. COUNTRY Canada



SEAM THICKNESS LOG



BOREHOLE BR-44
 CLIENT Teck-1015

AREA Burnt River
 COUNTRY Canada
 DATE LOGGED 13/07/80

DEPTH SCALE 201.1
 1 OF 5 LOGS

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

COAL QUALITY LOG

SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

LOG TAPING PANEL COAL CORE
 LOG RECORD ENERGY SPEED INCRM
 TAPED SPEED HEADY SECS NORM
 GAMMA RAY 3m/m 2 1.5
 L.S. DENSITY 3m/m 1 6.7

SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

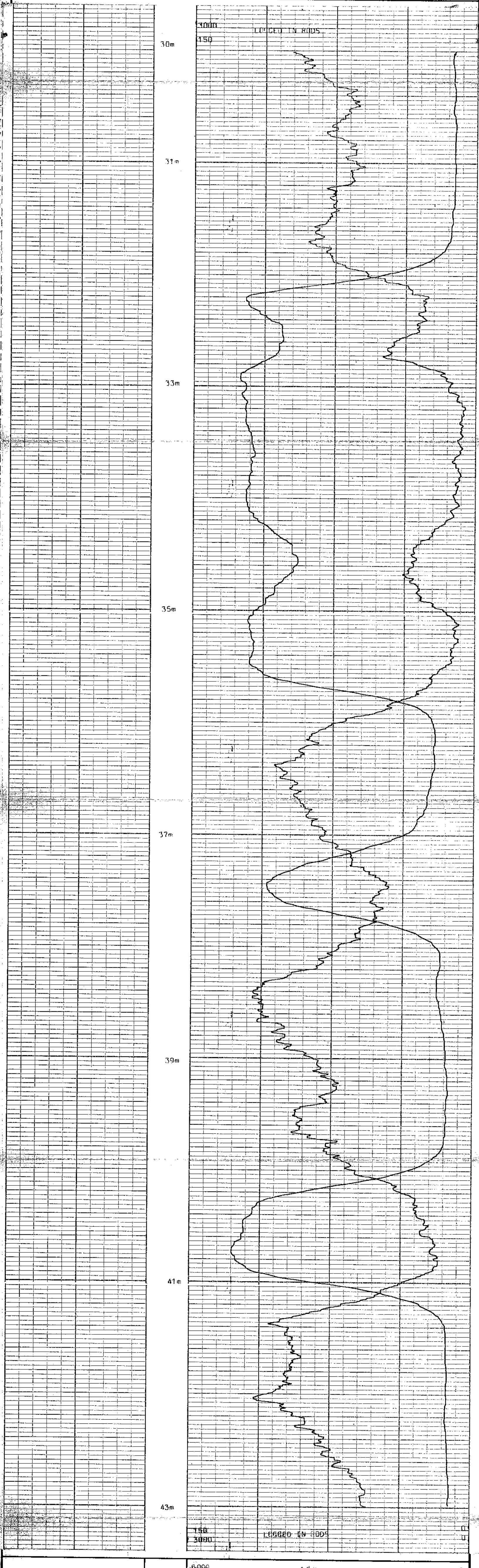
COAL QUALITY LOG INTERVALS

FROM	4.3m
TO	4.0m
INTERVAL	1.3m
FROM	
TO	
INTERVAL	
INTERVAL TOTAL	1.3m

REMARKS
 489
 LOGGED IN RODS 150 5.1M E 3501-0

B P B COAL QUALITY LOG

DEPTH	GAMMA RAY
	COAL BULK DENSITY g/cm ³
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
4"	
6"	
8"	
	1.56 1.60
	1.600 1.600



	1.600 1.600	0
	1.56 1.60	0
	COAL BULK DENSITY g/cm ³	
DEPTH	GAMMA RAY	

BOREHOLE BR-44
 CLIENT Teck-Corp
 AREA Burnt River
 COUNTRY Canada

COAL QUALITY LOG





PR-Burnt River-80331A BR44

NEUTRON-NEUTRON LOG

BOREHOLE BR-44

CLIENT Teck-Corp

AREA Burnt River

COUNTRY Canada

DATE LOGGED 13/07/80

DEPTH SCALE
200' 1

4 OF 5 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

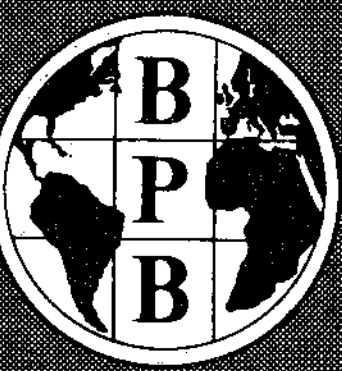
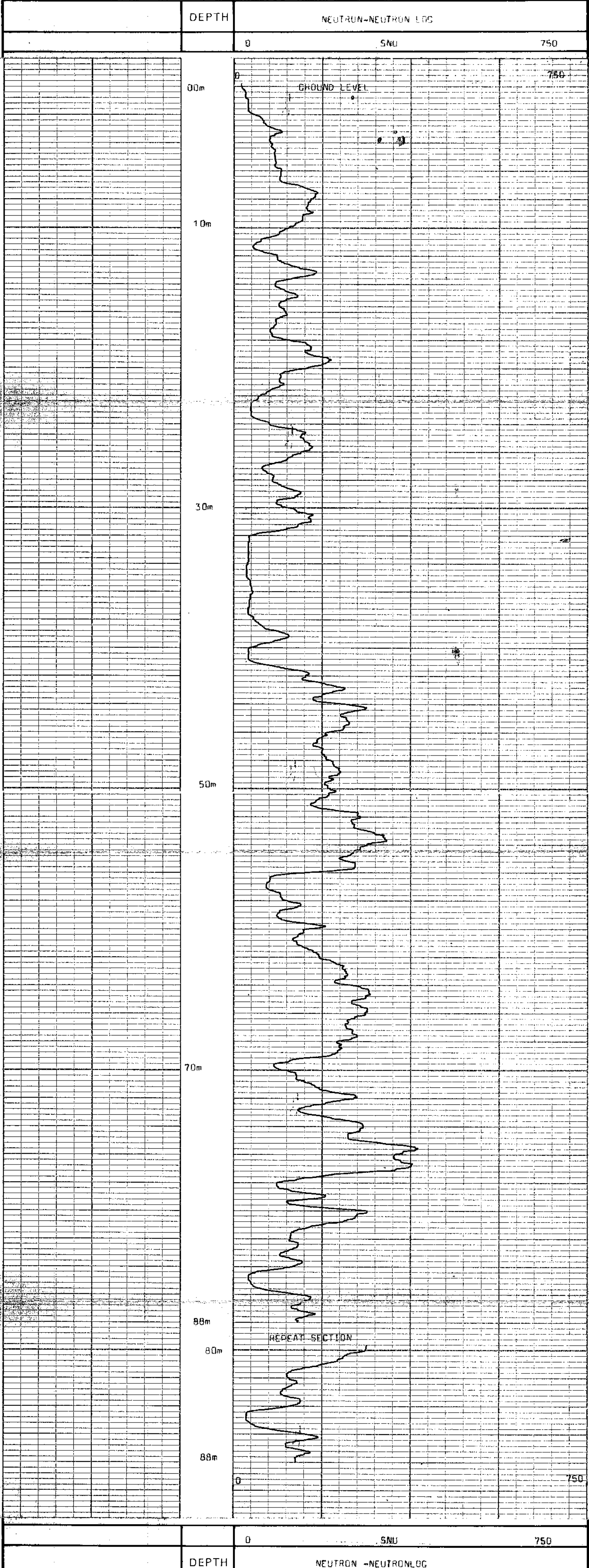
OPERATION DATA REFER TO " LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	CAL				
	LOG RECORDING SPEED f.c. TAPED SPEED REPLAY SECS	NORM	COEFF				
N-N	Y	9m/m	D	9m/m	1	.82	-

REMARKS

LOGGED IN RUDS
489



BOREHOLE BR-44
CLIENT Teck_corp

AREA Burnt River
COUNTRY Canada



PZ-Burnt River 80(3) A

BR-45

BOREHOLE BR-45
 CLIENT TECK-CORP
 AREA BURNT RIVER
 COUNTRY Canada
 DATE LOGGED 19/07/80

DEPTH SCALE 200:1
 1.0' - 5.00'S

COAL LITHOLOGY LOG

SONDE TYPE
 COAL COMBINATION
 SONDE

LOG SUITE
 GAMMA RAY
 L.S. DENSITY
 CALIPER

PERMANENT DATUM GROUND LEVEL
 ELEVATION OF P.D. GROUND LEVEL
 DEPTH REACHED 91.34m
 DEPTH TO 300ft
 BIT SIZES 1 HQ TO 34FE 2 HQ TO 1D
 CASING SIZES 1 H TO 34FE 2 H TO 1D

FLUID DATA

OPERATION DATA

489

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE														
LOG	EQUIPMENT			TAPING			PANEL		CAL. COEFF	DEPTHS		SEAM LOG RUN		
	SONDE	SOURCE	CALIBRATOR	LOG TAPE	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C. SECS	NORM	FROM	TO	INTERVAL		
CCS	11B	5845												
GAMMA RAY			5100PT	Y	9m/m	R	9m/n	1	-	1.5	90m	00m	90m	Y
L.S. DENSITY			5305DU	Y	9m/m	R	9m/n	1/3	6.7	-	91m	01m	90m	Y
CALIPER				Y	9m/m	R	9m/n	1/3	-	-	91m	01m	90m	

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

FROM	72m	30m		
TO	67m	24m		
INTERVAL	05m	06m		11m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
204	N-N	200:1			LOGGED IN RODS LSD SCALE 3000-050U

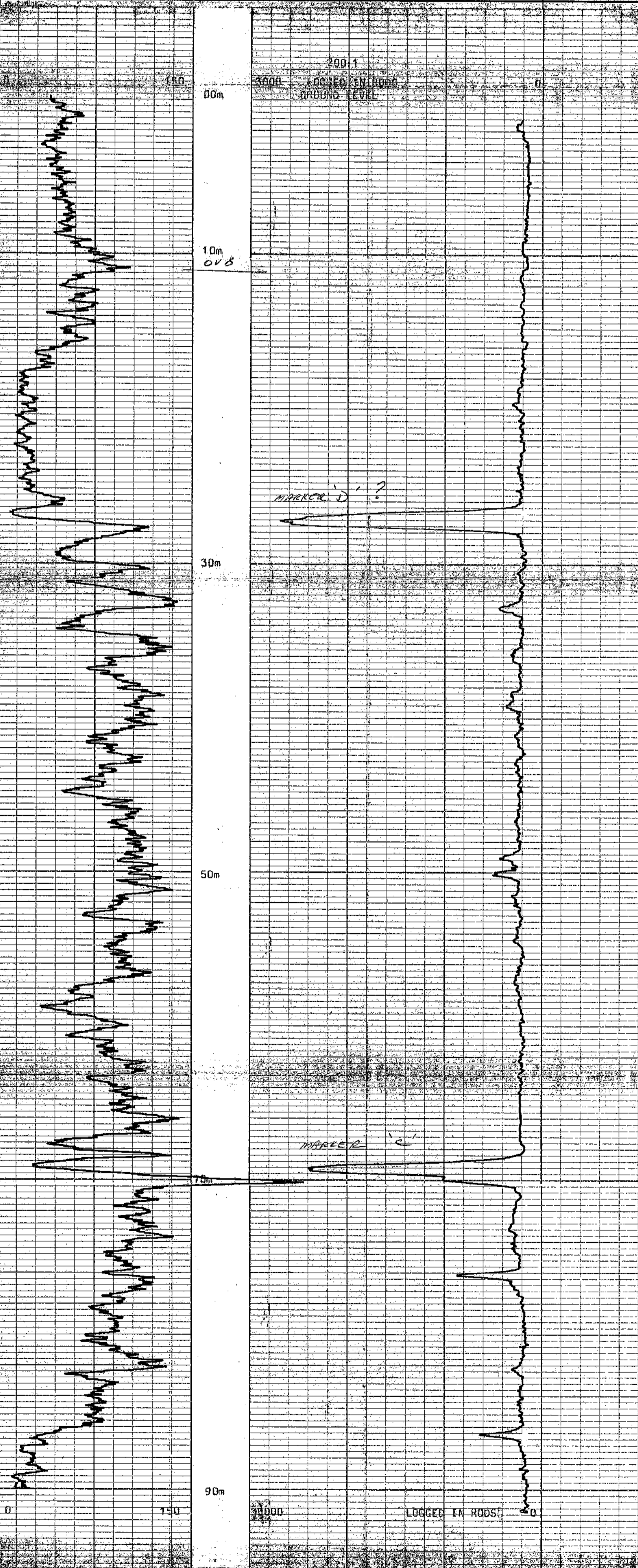
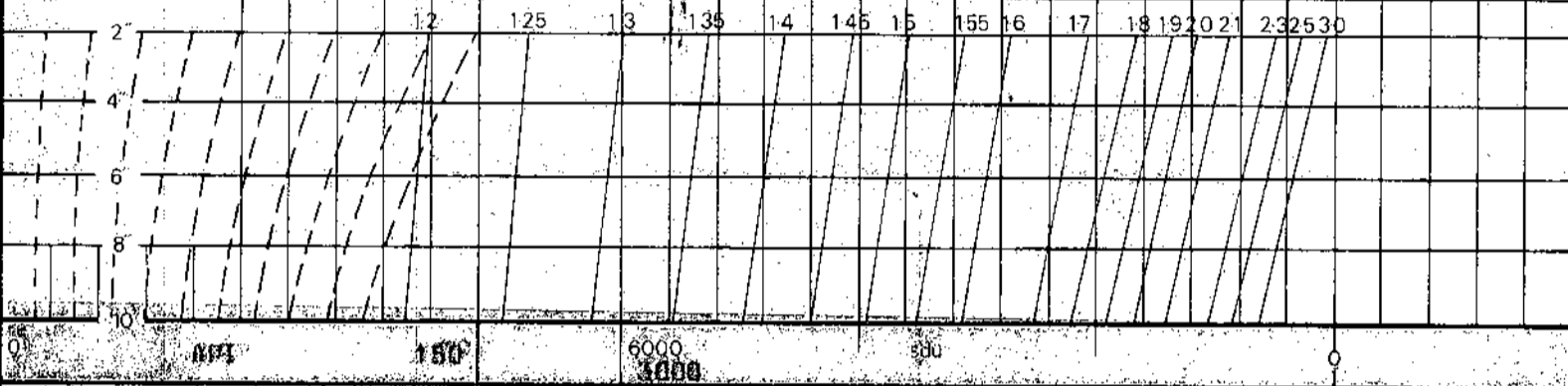
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367 VALUE 510 @ 2" DIAM JIG CAL DATE 17/06/80 JIG VALUE 530 SDU @ g/cm³ ins cps
 JIG MARK SHOWN AT ABOVE VALUE - x0.1 JIG No 0338 SPAN 3000 NORM SDU CPS -6.7 ins cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------



BOREHOLE BR-46 AREA BURNT RIVER
 CLIENT TECK CORP COUNTRY CANADA

COAL LITHOLOGY LOG



PR-Burnt River 80C33A BR 45

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

COAL LITHOLOGY LOG

BOREHOLE: BR-45
 CLIENT: TECK-CORP
 AREA: Burnt River
 COUNTRY: Canada
 DATE LOGGED: 16/07/80

PERMANENT DATUM: CHOUIN 1.15E1
 ELEVATION OF P.D.: SPURD LEVEL
 MEASUREMENT FROM: BRB
 DEPTH REACHED: 94.50m
 CASING SHOE: 44ft
 BIT SIZES: 1 1/2" TO 4 1/2" 2 1/2" TO 10"
 CASING SIZES: 1 1/2" TO 4 1/2" 2 1/2" TO 10"

FLUID DATA
 NATURE: Quick-Cel
 SG:
 LEVEL:
 VISCOSITY:
 Run at meas. temp:
 BH 1:

OPERATION DATA
 FIRST READING: 9.1m
 LAST READING: 9.3m
 INTERVAL LOGGED: 9.3m
 UNIT-TRUCK No: 45/2A
 ENGINEER: M/BP
 WITNESS:

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EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE														
LOG	EQUIPMENT			TAPING			PANEL		CAL. COEFF	DEPTHS			SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT/REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL		
CCS	118	5845												
GAMMA RAY			510API	Y	9m/m	R	9m/m	1	-	1.5	93m	00m	93m	Y
L.S. DENSITY			530SDU	Y	9m/m	R	9m/m	1/3	6.7	-	94m	01m	93m	Y
CALIPER				Y	9m/m	R	9m/m	1/3	-	-	94m	01m	93m	-

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

FROM	TO	INTERVAL	SEAM LOG RUN
90m	53m		
80m	48m		
10m	05m		
			INTERVAL TOTAL: 15m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
204	N-N	200±1			LOGGED IN RODS LSD SCALE 3000=0

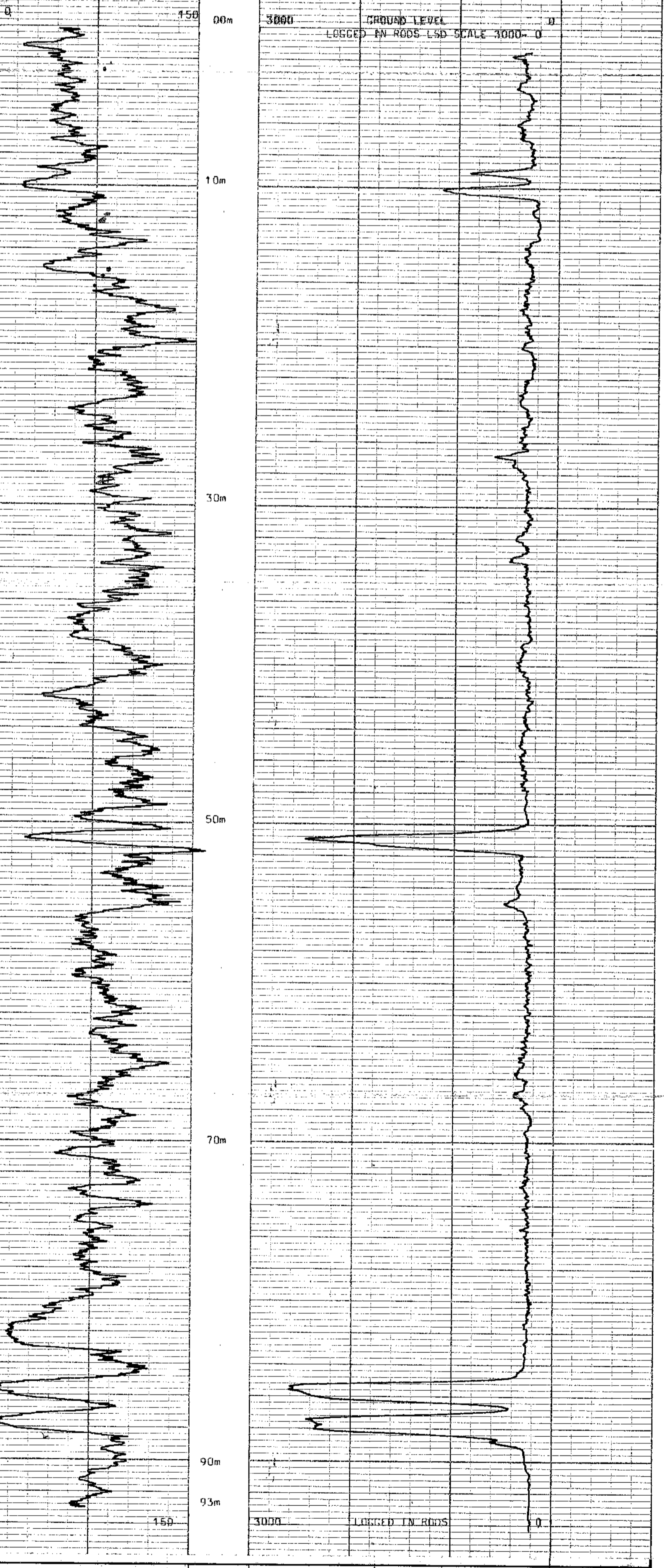
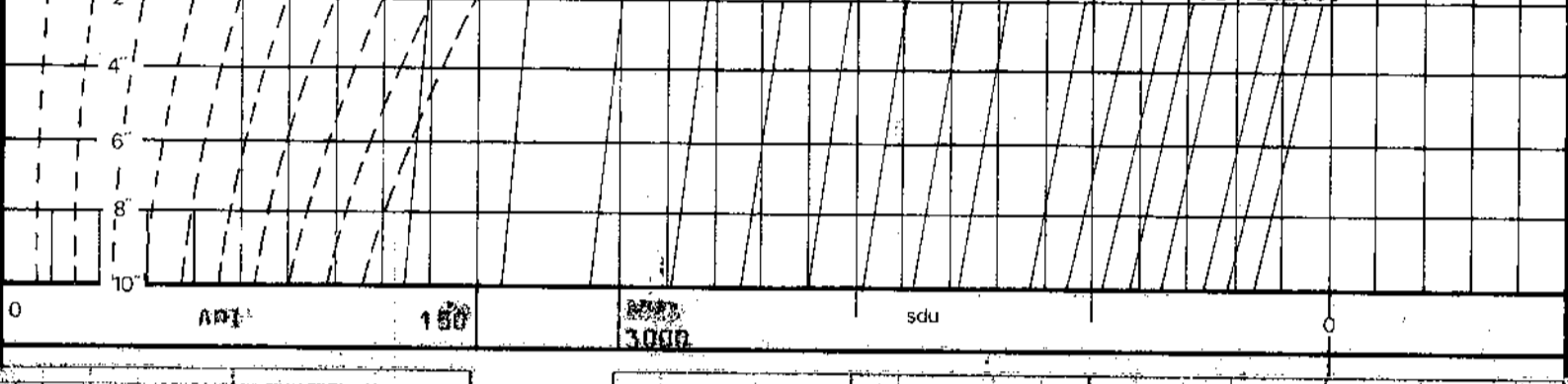
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. <u>367</u>	VALUE <u>518</u> 2" DIAM	JIG CAL DATE <u>17/06/80</u>	JIG VALUE <u>538</u> SDU @ <u>g/cm³</u>	ins.	cps.
JIG MARK SHOWN AT ABOVE VALUE <u>-x0.1</u>		JIG No. <u>0338</u>	SPAN <u>3000</u> NORM <u>SDU</u> <u>CPS</u> <u>6.7</u>	ins.	cps.

GAMMA RAY	DEPTH	BULK DENSITY <u>g/cm³</u>	CALIPER INCHES
-----------	-------	--------------------------------------	----------------

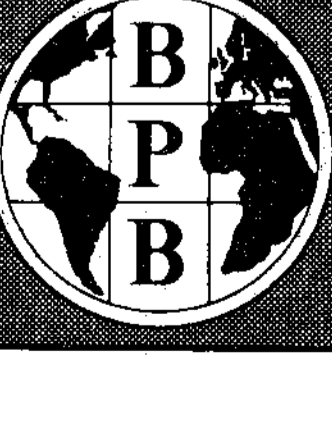
HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY <u>g/cm³</u>	CALIPER INCHES
-----------	-------	--------------------------------------	----------------

BOREHOLE: BR-45 AREA: Burnt River
 CLIENT: TECK-CORP COUNTRY: Canada

COAL LITHOLOGY LOG



P2-Saint-River 803)A BR-45



SEAM THICKNESS LOG

BOREHOLE BR-45
 CLIENT Teck-Com
 AREA Burnt River
 COUNTRY Canada
 DATE LOGGED 16/02/90
 2 of 5 LOGS

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

COAL COMBINATION SONDE
 SEAM THICKNESS LOG INTERVALS

LOG TAPPING PANEL COAL COMBINATION SONDE
 LOG RECORD SPEED SEC NORM
 CALIPER 1/8 3m/d 1/8 7.65
 BR DENSITY 1.35
 SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

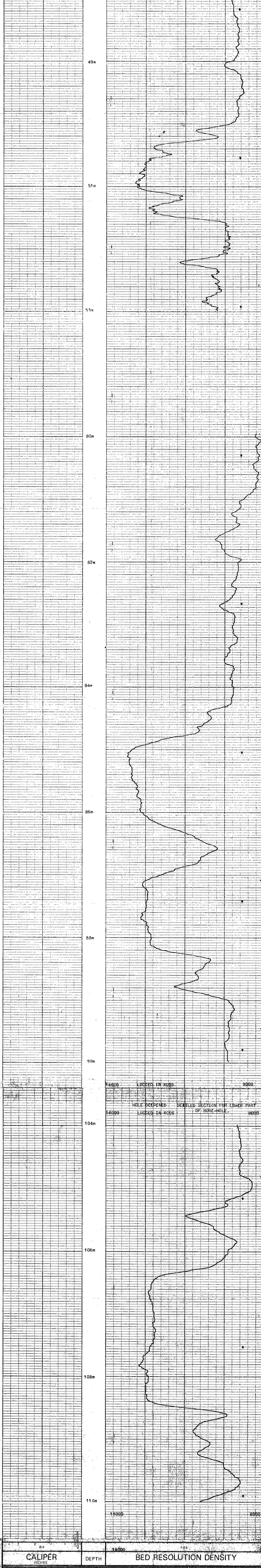
SEAM THICKNESS LOG INTERVALS

FROM	50m	53m
TO	50m	48m
INTERNAL	10m	0.5m
FROM		
TO		
INTERNAL		
TOTAL		1.5m

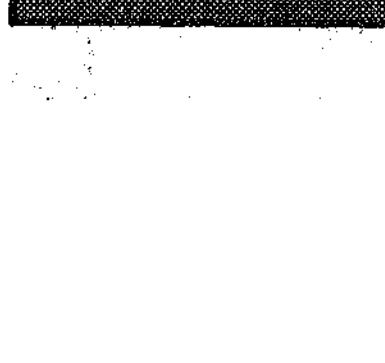
REMARKS
 4 BRDGED, I.M. BDD'S

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B P B SEAM THICKNESS LOG



CALIPER INCHES DEPTH BED RESOLUTION DENSITY



BOREHOLE BR-45
 CLIENT Teck-Comp
 AREA Burnt River
 COUNTRY Canada

SEAM THICKNESS LOG

BR 45



COAL QUALITY LOG

COAL QUALITY LOG

BOREHOLE BR-45
 CLIENT Tack-Corp
 AREA Burnt River
 COUNTRY Canada
 DATE LOGGED 12/27/80
 DEPTH SCALE 20' 1
 1 OF 5 LOGS

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

LOGGING TAPPING PANEL SIDEWALL POSITION
 LOG SPEED 1500 RPM
 LOG DEPTH 1500
 LOG REVERSE SPEED 1500 RPM
 LOG REVERSE DEPTH 1500
 LOG SPEED REVERSE 1500 RPM
 LOG DEPTH REVERSE 1500
 LOG SPEED 1500 RPM
 LOG DEPTH 1500
 LOG REVERSE SPEED 1500 RPM
 LOG REVERSE DEPTH 1500

SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 GAMMA RAY
 LS DENSITY

FROM 91m TO 80m
 INTERVAL 1m

INTERNAL VAL TOTAL 15m

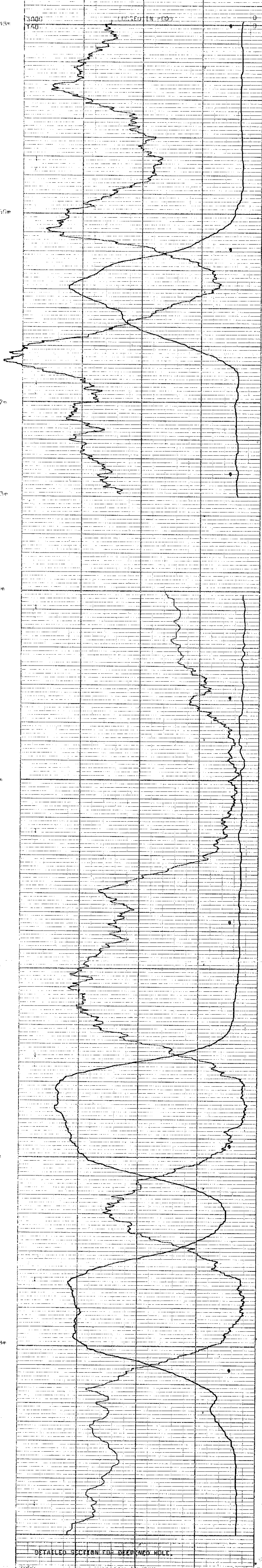
REMARKS
 LOGGED IN HOLES
 DETAILED SECTION FOR DEEPEMED BORE-HOLE

B P B COAL QUALITY LOG

DEPTH
 GAMMA RAY
 COAL BULK DENSITY ρ_{cm^3}

HOLE SIZE CORRECTION DATA

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
4"															
6"															
8"															



50	ndr	0
50	APL	0

COAL BULK DENSITY ρ_{cm^3}

GAMMA RAY

DEPTH

BOREHOLE BR-45
 CLIENT Tack-Corp
 AREA Burnt River
 COUNTRY Canada

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PR-Burnt River 80(3)A BR-45

NEUTRON-NEUTRON LOG

BOREHOLE BR-45

CLIENT Teck_Corp

AREA Burnt River

COUNTRY Canada

DATE LOGGED 16/07/80

A OF 5 LOGS

DEPTH SCALE 200+1

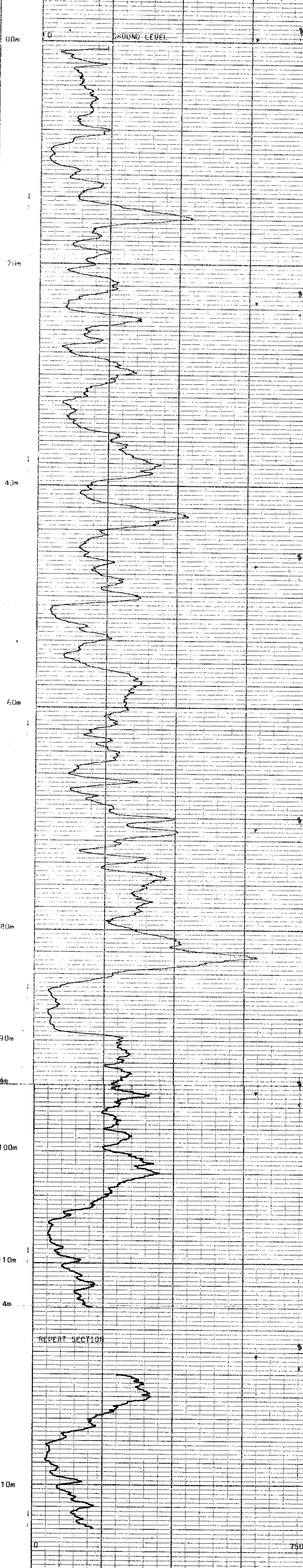
BOREHOLE DATA REFER TO LITHOLOGY LOG
OPERATION DATA REFER TO ** LOG
EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	CASE
LOG	RECORD DIRECTOR	T.C	NORM
N-N	TAPED	SPEED	REPLAY
Y	9m/m	D	9m/m
		1	.82

REMARKS
 9.4m
 9.0m
 9.4m LOGGED IN HOBS

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DEPTH	NEUTRON-NEUTRON LOG	SNM	750
00m		0	750

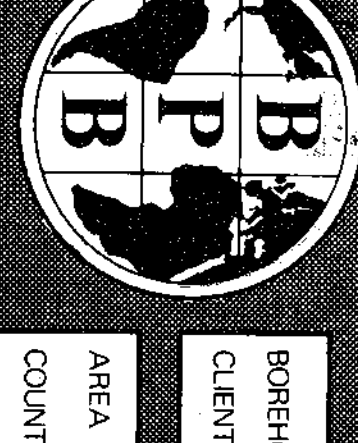


DEPTH	NEUTRON-NEUTRON LOG	SNM	750
		0	750



BOREHOLE BR-45
 CLIENT Teck_Corp

AREA Burnt River
 COUNTRY Canada



COAL LITHOLOGY LOG

LOG

SONDE TYPE: COAL COMBINATION SONDE

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

CLIENT: TCK-CORP

BOREHOLE: BH-45

AREA: BUNT STIVER

COUNTRY: Canada

DATE LOGGED: 12/07/80

SEAM SCALE: 100'

LOG SCALE: 1 OF 5 LOGS

BOREHOLE DATA

ELEMENT/DATA	FORMULA / UNIT	VALUE
ELEVATION OF P.D.	CHORD AND ELEV	
WASHER/DRILLER	CL	DRILLER
DEPTH REACHED	94.80	711 FT
CASING SIZE	44.075	
BIT SIZE	1 HQ 10 3/4 2 IN 70 T.D.	
ROD SIZE	3 TO 4 1/2 2 TO 3	
CASING SIZE	1 H TO 4 1/2 2 TO 3	

FLUID DATA

NAME	Druck Gel
LEVEL	
VISCOSITY	

OPERATION DATA

FIRST READING	93m
LAST READING	90m
INTERVAL LOGGED	93m
UNIT TRACK No.	46/24
ENGINEER	mp/56
WITNESS	

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EQUIPMENT AND RECORDING DATA

LOG	COAL COMBINATION SONDE			TAPING		PANEL		CAL COEFF		DEPTHS		SEAM LOG RUN		
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT/REPLAY	SPEED	TC SECS	NORM	FROM	TO		INTERVAL	
CCS	118	5845												
GAMMA RAY			10m	Y	9m/m	D	9m/m	1	-	1.5	9.3m	00m	9.3m	Y
L.S. DENSITY			5305DU	Y	9m/m	D	9m/m	1/3	6.7	-	9.4m	01m	9.3m	Y
CALIPER				Y	9m/m	D	9m/m	1/3	-	-	9.4m	01m	9.3m	

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

FROM	93m	53m	INTERVAL TOTAL
TO	80m	48m	
INTERVAL	1.0m	0.5m	# 15m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS	REMARKS
204	N-N	20011			LOGGED IN RIGS LOG SCALE 3000-0

BPB COAL LITHOLOGY LOG

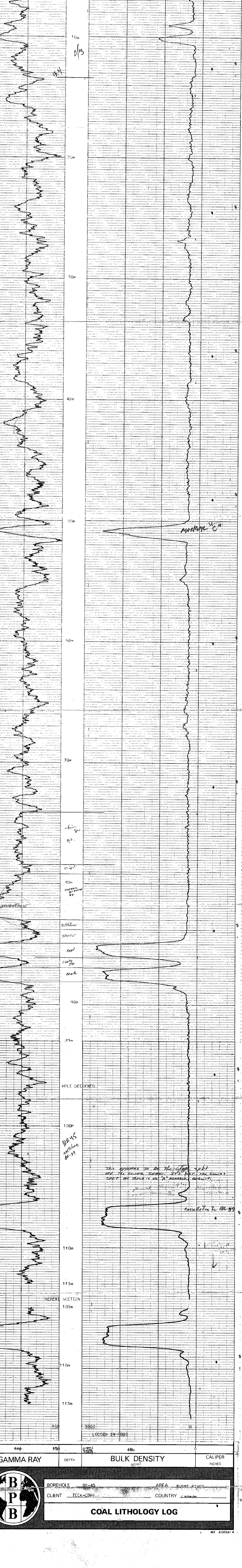
CALIBRATION DATA

JIG No	167	VALUE	510 @ 2 DIAM	JIG CAL DATE	17/06/80	JIG VALUE	630	SDU @	g/cm ³	ins	cps	
JIG MARK SHOWN AT ABOVE VALUE	x0.1			JIG No	0378	SPAN	3000	NORM	SDU	5.7	ins	cps

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

HOLE SIZE CORRECTION DATA

DEPTH (m)	DEPTH (ft)	APPROX. DIAM (mm)	APPROX. DIAM (in)
0	0	125	5
10	33	125	5
20	66	125	5
30	99	125	5
40	132	125	5
50	165	125	5
60	198	125	5
70	231	125	5
80	264	125	5
90	297	125	5
100	330	125	5
110	363	125	5
120	396	125	5
130	429	125	5
140	462	125	5
150	495	125	5



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



PR-Summit River 80(3)M-GR 46

LOG SUITE:
GAMMA RAY
L.S. DENSITY
CALIPER

SONDE TYPE:
COAL
COMBINATION
SONDE

COAL
LITHOLOGY
LOG

BOREHOLE BR-46 ANGLE HOLE
CLIENT Teck-CORP
AREA Burnt River
COUNTRY Canada
DATE LOGGED 21/07/80
DEPTH SCALE 100:1
1 OF 4 LOGS

BOREHOLE DATA	
PERMANENT DATUM	GROUND LEVEL
ELEVATION OF P.D.	GROUND LEVEL
MEASUREMENTS FROM	BPB ORILLER
DEPTH REACHED	GROUND LEVEL 52 feet
CASING SHOE	
BIT SIZES	1 HQ TO 2 NG TO 10
CASING SIZES	3 TO 4 TO 2 TO
FLUID DATA	
NATURE	Quick Uet
SG	
LEVEL	
VISCOSITY	
Rm at meas temp	
BHT	
OPERATION DATA	
FIRST READING	14.5M
LAST READING	11.5M
INTERVAL LOGGED	11.5M
UNIT-TRUCK No	46/24
ENGINEER	BC/HR
WITNESS	

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EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE														
LOG	EQUIPMENT			TAPING			PANEL		CAL COEFF	DEPTHS			SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS		NORM	FROM	TO		INTERVAL
CCS	118	5845												
GAMMA RAY			510AD1	Y	9m/m	D	9m/m	1	-	1.5	13.5m	02m	11.5m	Y
L.S. DENSITY			530SDU	Y	9m/m	D	9m/m	1/3	6.7	-	14.5m	03m	11.5m	Y
CALIPER	SIDEWALL POSITION			Y	9m/m	D	9m/m	1/3	-	-	14.5m	03m	11.5m	

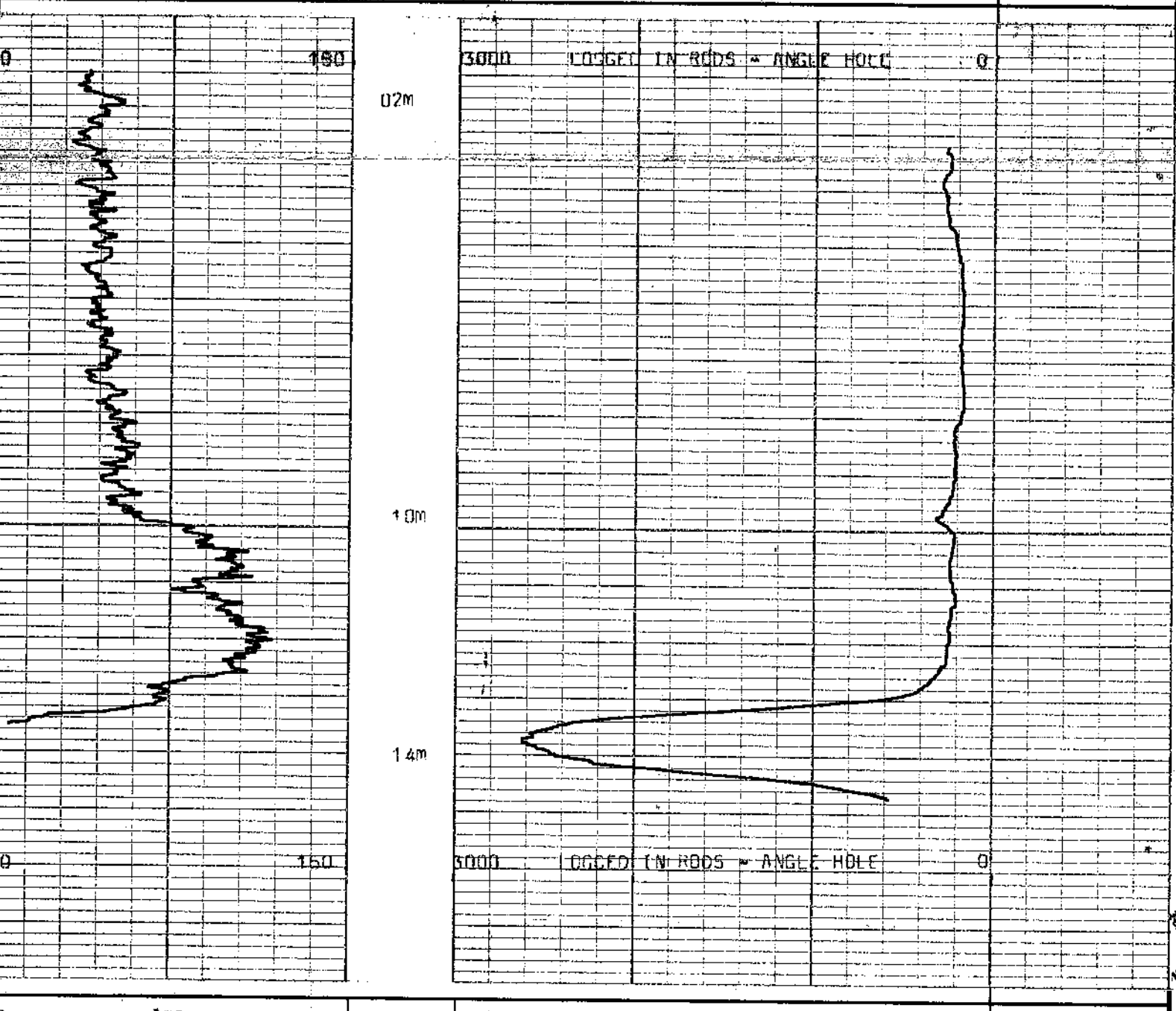
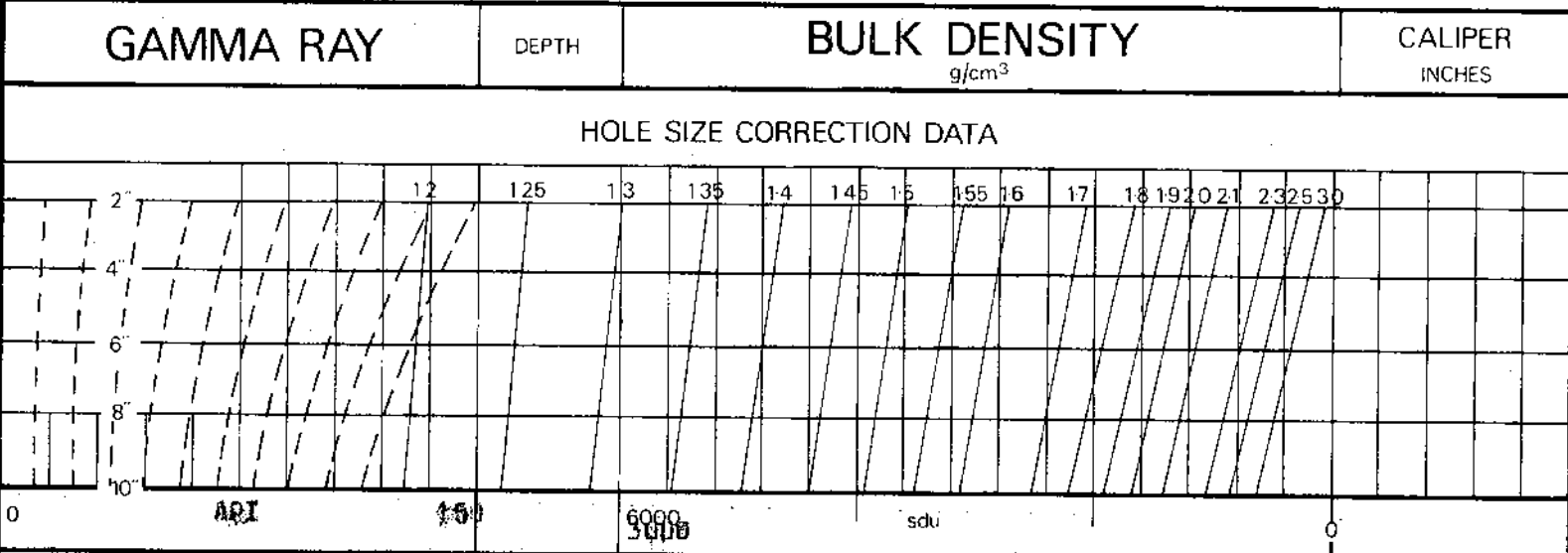
COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)			
FROM	14.5m		INTERVAL TOTAL
TO	11m		
INTERVAL	3.5m		3.5m

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
204	N-N	200,1			LOGGED IN ROOS LSO SCALE 3000-0 ANGLE HOLE

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367	VALUE 51 (@ 2" DIAM)	JIG CAL DATE 17/06/80	JIG VALUES 30	SDU @	g/cm ³	ins.	cps
JIG MARK SHOWN AT ABOVE VALUE = x0.1		JIG No 0338	SPAN 3000	NORM	SDU = 6.7	ins.	cps



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

BOREHOLE BR-46 ANGLE HOLE AREA Burnt River
CLIENT Teck-CORP COUNTRY Canada

COAL LITHOLOGY LOG



PR-Burnt River 82(3)A BR 46



SEAM THICKNESS LOG

SONDE TYPE:
COAL
COMBINATION
SONDE

LOG SUITE:
CALIPER
B.R. DENSITY

BOREHOLE BR-46
CLIENT Teck-CORP

AREA Burnt River
COUNTRY Canada

DATE LOGGED 21/07/80

DEPTH SCALE 20:1
2 OF 4 LOGS

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

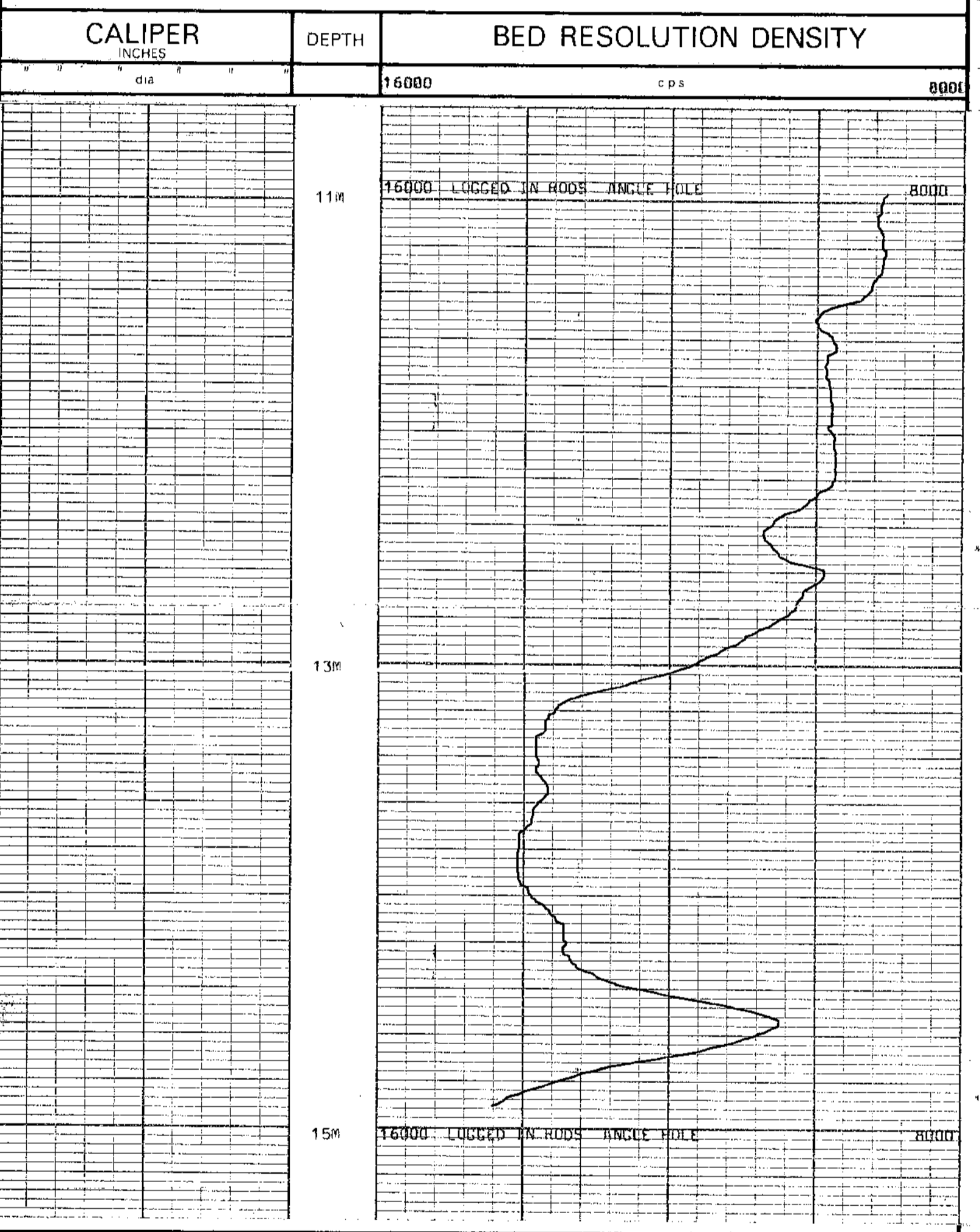
COAL COMBINATION SONDE:
SIDEWALL POSITION:
LOG TAPING PANEL COEFF
LOG RECORDING SPEED TC
TAPED SPEED RELAY SECS INORM
CALIPER
BR DENSITY v 3m/m 4 3m/m 1/3 7.85
SOURCE SONDE AND CALIBRATION
REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

FROM 14.5M
TO 11M
INTERVAL 3.5M
FROM
TO
INTERVAL
REMARKS
LOGGED IN HOOPS
ANGLE HOLE

489

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
" " " dia " "		16000 cps 8000



BOREHOLE BR-46
CLIENT Teck-Corp
AREA Burnt River
COUNTRY Canada

SEAM THICKNESS LOG



PR-Burnt River 80(3)A BR 44

BOREHOLE BR-46
CLIENT TECK-CORP

AREA Burnt River
COUNTRY Canada
DATE LOGGED 21/07/80

DEPTH SCALE 20:1
3 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

COAL QUALITY LOG INTERVALS

LOG TAPPING LOG RECORD DIRECTION OF TAPPING

LOG	TAPPING	LOG RECORD DIRECTION OF TAPPING	PANEL	CABLE
GAMMA RAY	Y	3m/m	R	3m/m
L.S. DENSITY	Y	3m/m	R	3m/m

SOURCE: SONDE AND CALIBRATION

REFER TO LITHOLOGY LOG

COAL QUALITY LOG INTERVALS

FROM	14.5M		
TO	11 M		
INTERVAL	3.5M		
FROM		INTERVAL	
TO		TOTAL	
INTERVAL		TOTAL	

REMARKS

LOGGED IN HQDS L50 SCALE 3000-0

ANGLE HOLE

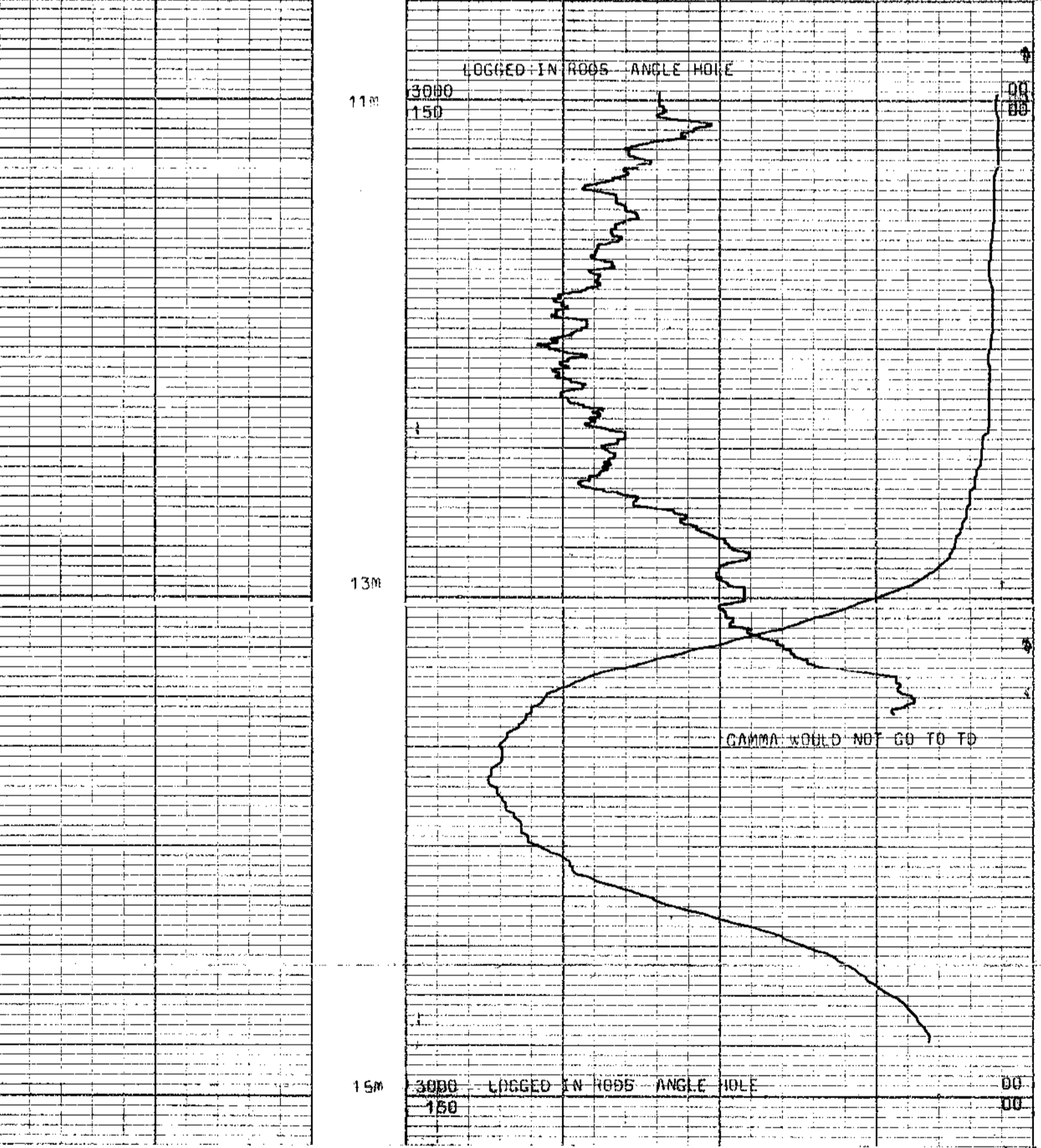
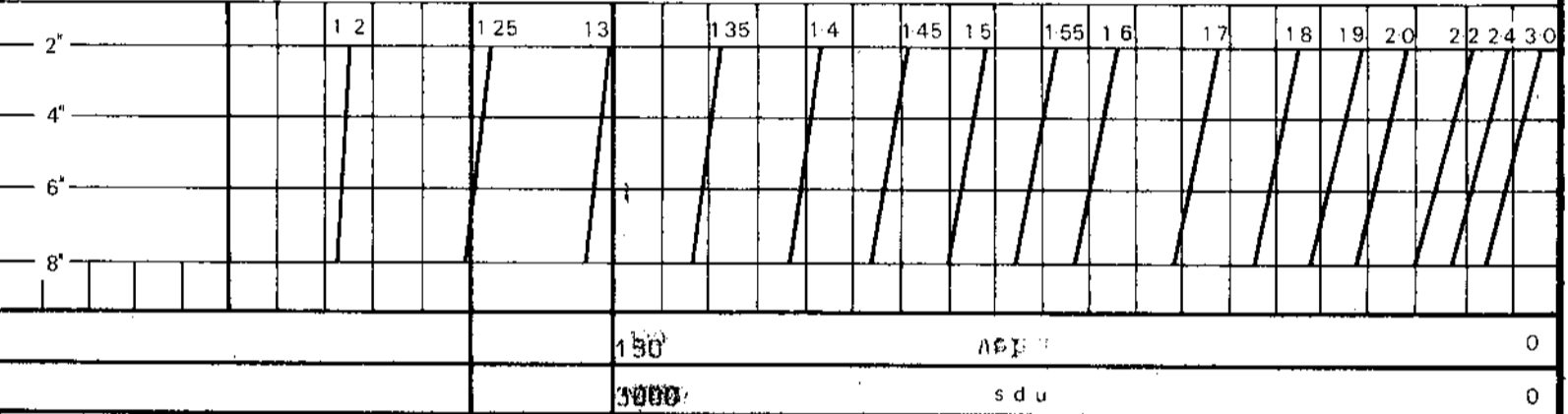
B P B COAL QUALITY LOG

DEPTH

GAMMA RAY

COAL BULK DENSITY g/cm^3

HOLE SIZE CORRECTION DATA



DEPTH

GAMMA RAY

COAL BULK DENSITY g/cm^3



BOREHOLE BR-46 AREA Burnt River

CLIENT TECK-CORP COUNTRY Canada

COAL QUALITY LOG



20-Burnt River 80(3)19 8240

LOG SUITE
GAMMA RAY
L.S. DENSITY
CALIPER

SONDE TYPE
COAL
COMBINATION
SONDE

COAL
LITHOLOGY
LOG

BOREHOLE BH-40
CLIENT Teck-Corp
AREA Burnt River
COUNTRY Canada
DATE LOGGED 27/10/80
DEPTH SCALE 1:100-1
5 OF 5 LOGS

PERMANENT DATUM 5.400m T.E. LEVEL
ELEVATION OF P.D. 5.400m T.E. LEVEL
M.S.L. FROM 0.0
DEPTH REACHED 66.60m
CASING SHOE 22.55m
BIT SIZES 1 1 1/2 TO 2 1/2
2 3 TO 4
3 TO 4
CASING SIZES 1 1/2 TO 2 1/2
NATURE OF FLUID DATA
SG
LEVEL
VISCOSITY
Temp at meas. temp
BHT
OPERATION DATA
FIRST READING 5.7m
LAST READING 67m
INTERVAL LOGGED 2.4/85
LIMIT-TRUCK No.
ENGINEER
WITNESS

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EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE				TAPING			PANEL		CAL COEFF		DEPTHS			SEAM LOG RUN
LOG	SONDE	EQUIPMENT	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT OF REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL		
CCS	118	5845												
GAMMA RAY			51001	Y	9m/m	D	9m/m	1	-	1.5	67m	00m	67m	Y
L.S. DENSITY			53050U	Y	9m/m	D	9m/m	1/3	6.8	-	68m	01m	67m	Y
CALIPER		SIDEWALL POSITION		Y	9m/m	D	9m/m	1/3	-	-	68m	01m	67m	

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

FROM	50m	INTERVAL	
TO	40m	TOTAL	
INTERVAL	10m		= 10m

ADDITIONAL SONDES RUN				REMARKS	
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS	
204	N-N	200:1			LOGGED IN HODS LSD SCALE 3000-0500

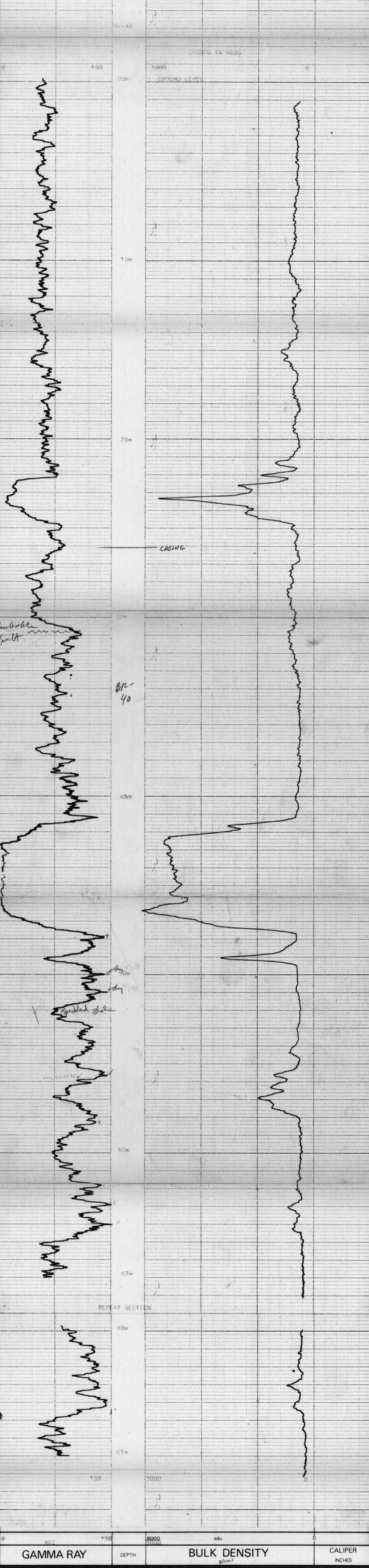
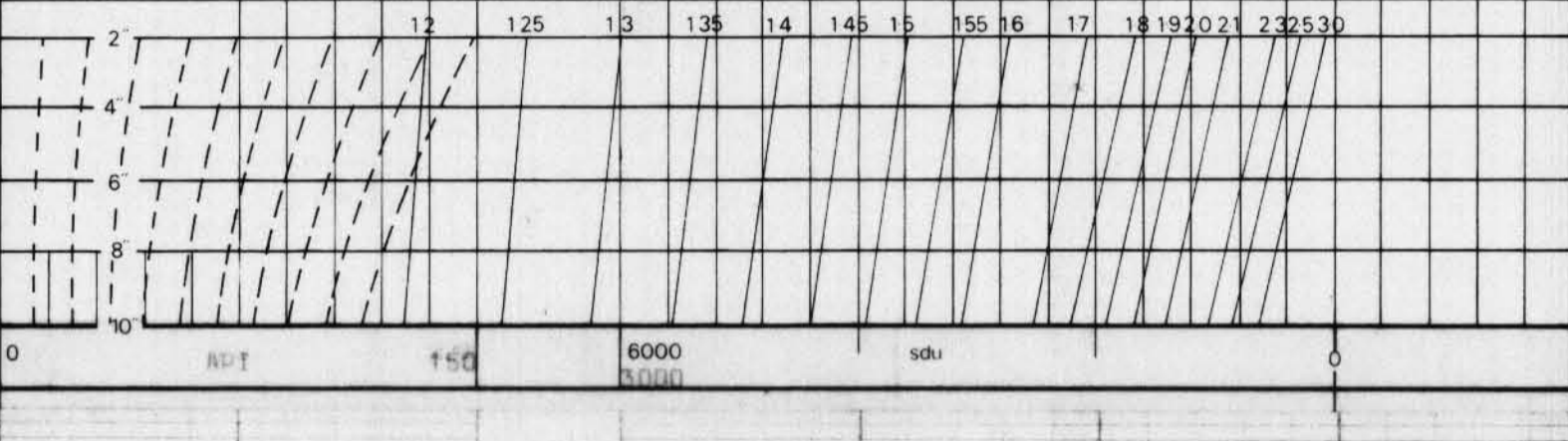
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367	VALUE 51 @ 2" DIAM	JIG CAL DATE 17/06/80	JIG VALUE 530	SDU @ g/cm ³	7 ins	340 cps
JIG MARK SHOWN AT ABOVE VALUE = 0.1		JIG No 0338	SPAN 3000	NORM SDU CPS = 6.8	2 ins	472 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE Burnt River BR-40 AREA Burnt River
CLIENT Teck-Corp COUNTRY Canada

COAL LITHOLOGY LOG



P2-Burnt River 80(C3)A 0441

SONDE TYPE:
COAL
COMBINATION
SONDE

COAL
LITHOLOGY
LOG

LOG SUITE:
GAMMA RAY
L. S. DENSITY
CALIPER

BOREHOLE BH-41
CLIENT TECK-CORP
AREA Burnt River
COUNTRY Canada
DATE LOGGED 02/03/80
DEPTH SCALE 200:1
1 OF 4 LOGS

BOREHOLE DATA
PERMANENT DATUM Ground Level
ELEVATION OF P.D. BPB
MEASUREMENTS FROM U.L.L.
DEPTH REACHED 83.80m 278 ft.
CASING SHOE
BIT SIZES MD 1 HQ 10-42ft 2 HQ TO TD
CASING SIZES 1 H TO 42ft 2 TO

FLUID DATA
NATURE Water-Cel
SG
LEVEL
VISCOSITY
Rate of meas. Temp
BH1

OPERATION DATA
FIRST READING 82
LAST READING U
INTERVAL LOGGED 82m
UNIT-TRUCK No. 46/24
ENGINEER M/1/80
WITNESS

489

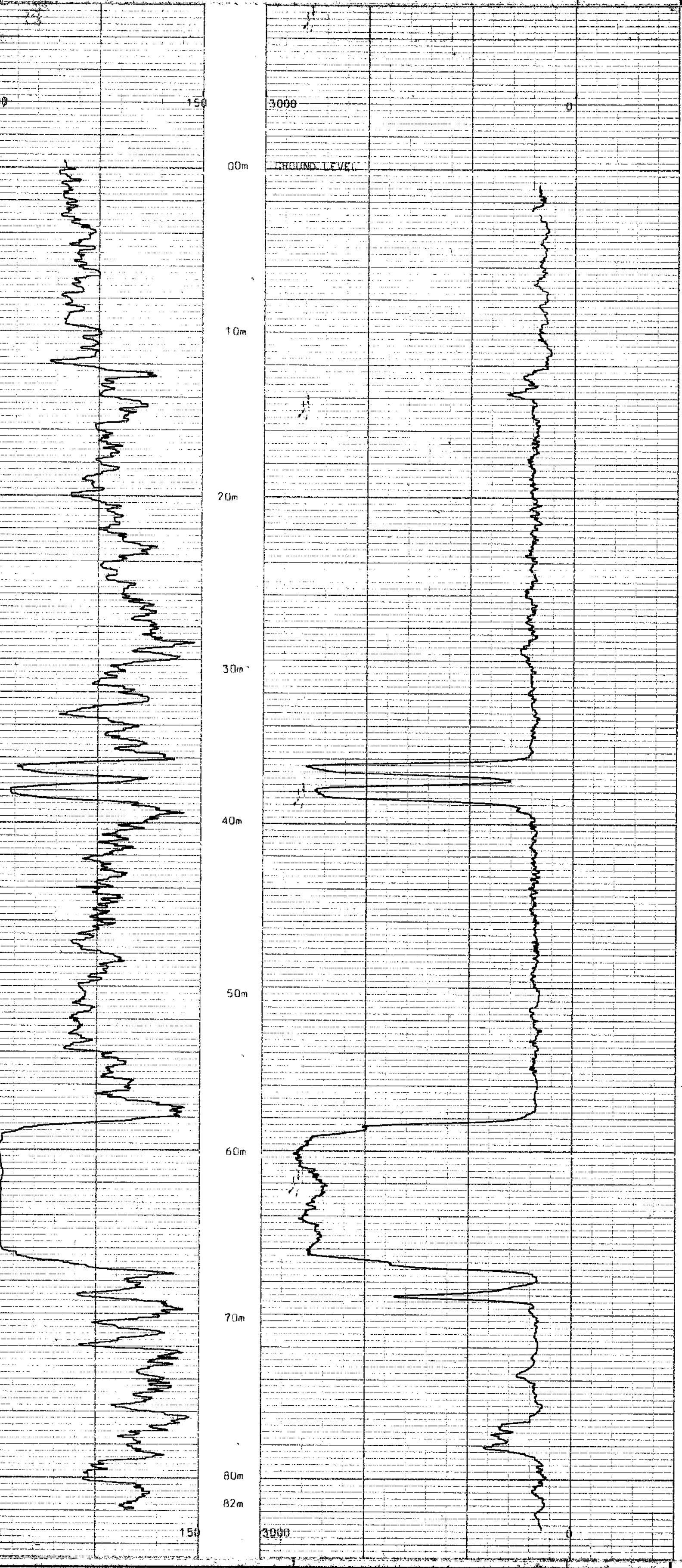
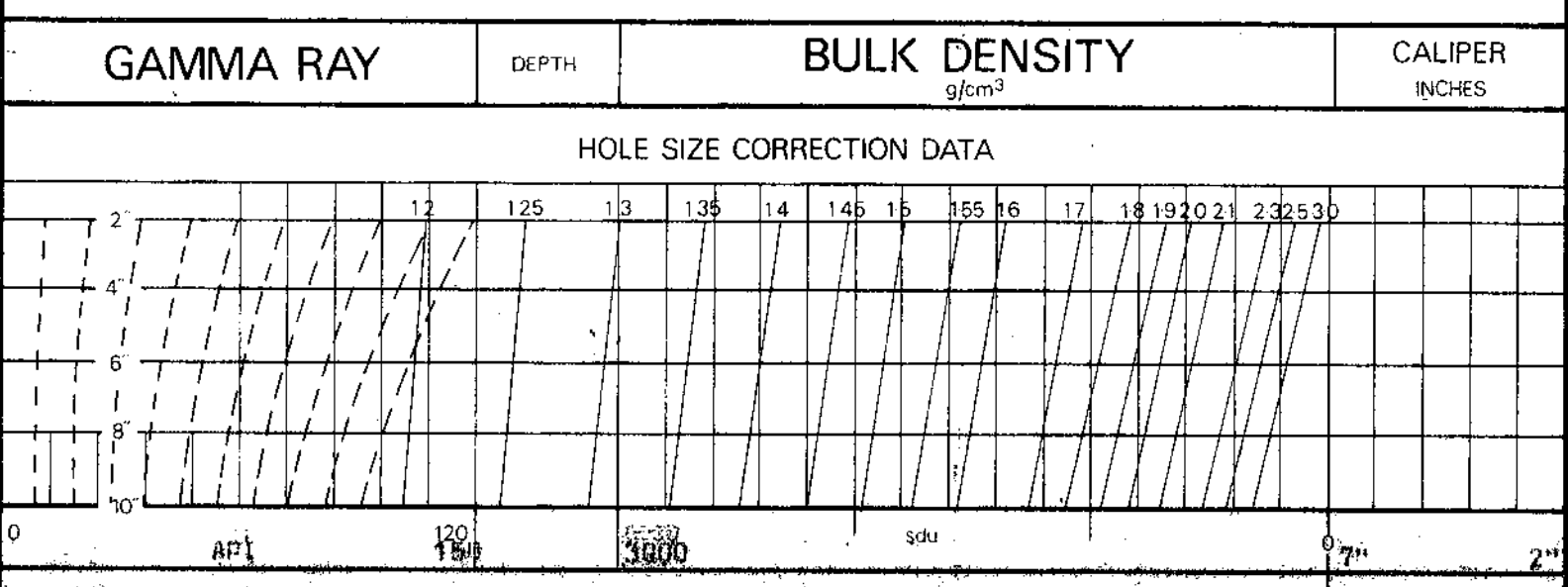
EQUIPMENT AND RECORDING DATA														
COAL COMBINATION SONDE														
LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS		SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT OF REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL	
CCS	118	5845												
GAMMA RAY			510AF I	Y	9m/m	D	9m/n	1	-	1.5	82m	0m	82m	
L.S. DENSITY			530sdu	Y	9m/m	D	9m/n	1/3	6.8	-	83m	01m	82m	
CALIPER				Y	9m/m	D	9m/n	1/3	-	-	83m	01m	82m	

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)			
FROM	TO	INTERVAL	TOTAL
70m	40m		
57m	35m		
13m	05m		18m

ADDITIONAL SONDES RUN				REMARKS	
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO	ADDITIONAL HEADINGS
204	N-N	200:1		REFER TO	LOGGED IN PODS LSD SCALE 3000 0

BPB COAL LITHOLOGY LOG
CALIBRATION DATA

JIG No 367 VALUE 51.0 @ 2" DIAM JIG CAL DATE 7/06/80 JIG VALUE 530 SDU @ g/cm³ 7 ins 940 cps
JIG MARK SHOWN AT ABOVE VALUE -x0.1 JIG No 3338 SPAN 3000 NORM SDU = 6.8 2 ins 472 cps



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE BH-41 AREA Burnt River
CLIENT Teck Corp COUNTRY Canada

COAL LITHOLOGY LOG

Burnt River S O (S) 1A BR 41



BOREHOLE BR-41
CLIENT TECK CORP

AREA Burnt River
COUNTRY Canada
DATE LOGGED 3/07/80

DEPTH SCALE
2 OF 4 LOSS

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 TAPPING PANEL CASE
LOG RECORDING SPEED SCS NORM
GAMMA LABEL 3m/m 1 3m/m 2 1.5
G.SENSITIVITY 3m/m 4 3m/m 1 6.8

SONDE TYPE:
COAL COMBINATION SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY

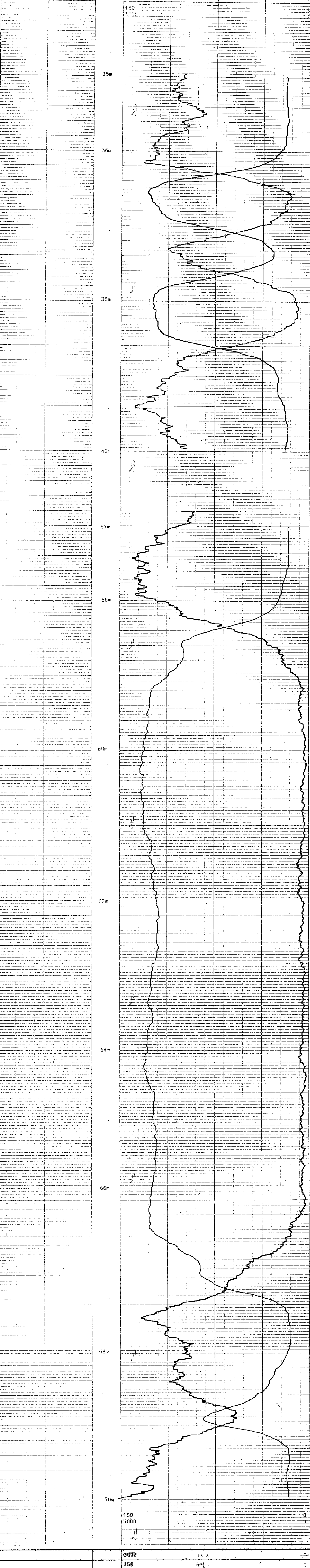
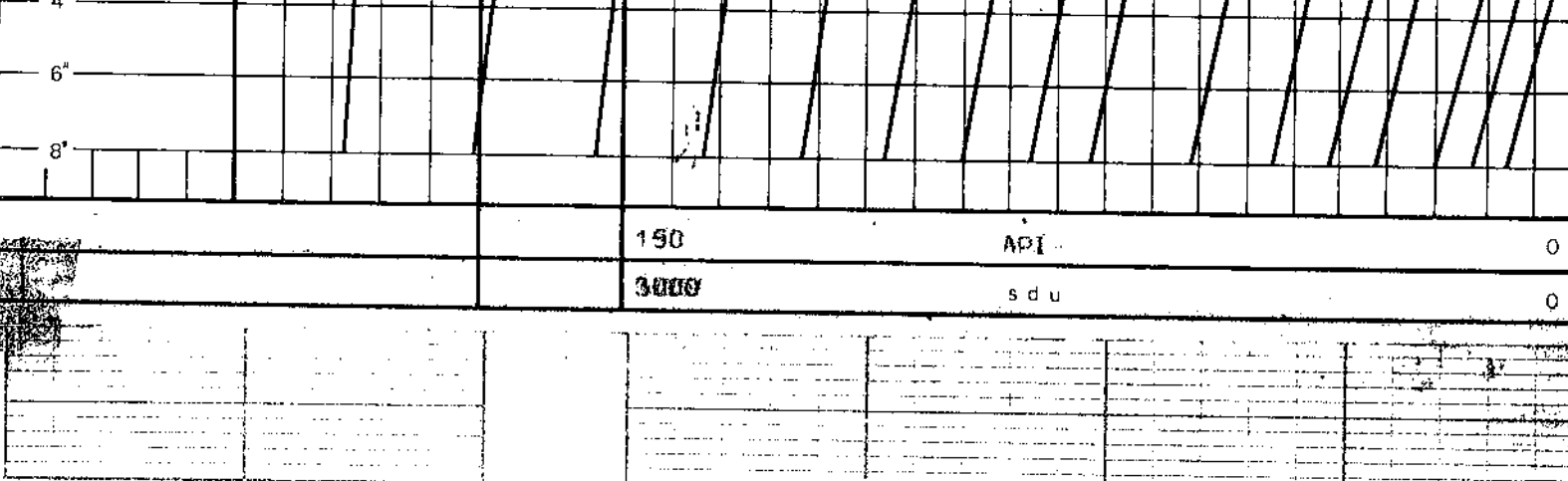
FROM 21m TO 41m
INTERNAL 13m 05m
FROM TO
INTERNAL VAL TOTAL
REMARKS
G.SENS. IN LOGS - Check 3m/m - 9

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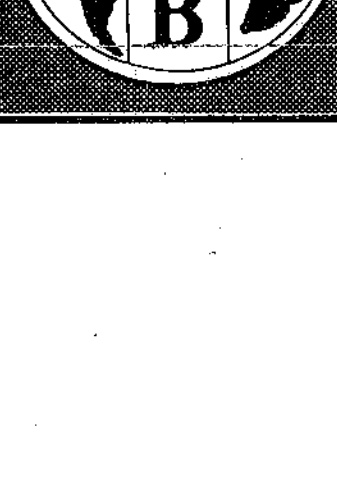
B P B COAL QUALITY LOG

DEPTH	GAMMA RAY
	COAL BULK DENSITY

HOLE SIZE CORRECTION DATA



DEPTH	GAMMA RAY
	COAL BULK DENSITY



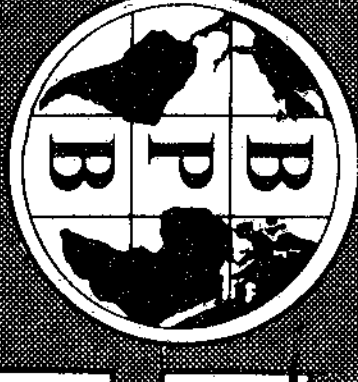
BOREHOLE BR-41
CLIENT TECK CORP

AREA Burnt River
COUNTRY Canada

COAL QUALITY LOG

AM 86002 1

Fr-Burnt River 80/31A BR 44



SEAM THICKNESS LOG

BOREHOLE BR-44
 CLIENT TECK-CORP
 AREA Burnt River
 COUNTRY Canada
 DATE LOGGED 3/07/80
 DEPTH SCALE 20:1
 4 OF 4 LOGS

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

LOG TAPING LOG RECORD SPEED (SPEC. SEC. NOMIN.)
 CALIPER V 1.3m/ft 1.3' .85"
 BR DENSITY V 1.3m/ft 1.3' .85"
 SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

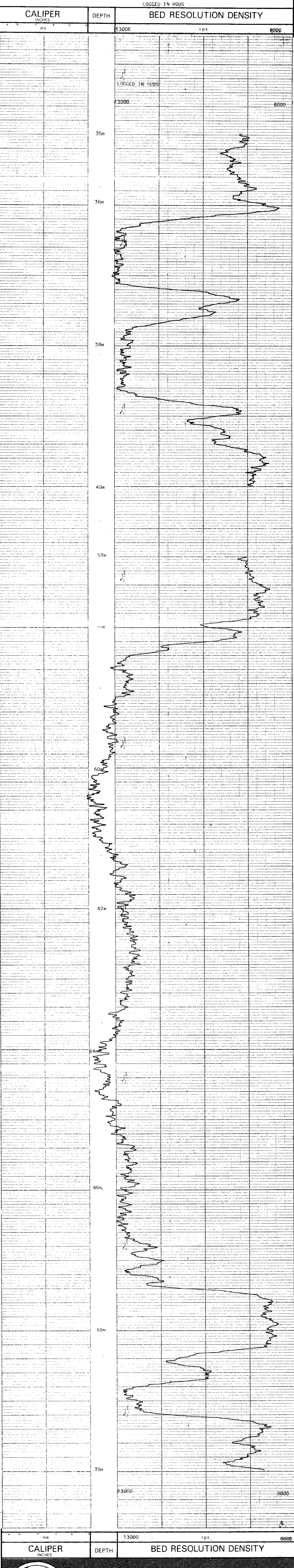
SEAM THICKNESS LOG INTERVALS

FROM	70m	40m
TO	57m	35m
INTERVAL	13m	05m
FROM		
TO		
INTERVAL		
TOTAL		

REMARKS
 LOGGED IN #005

B P B SEAM THICKNESS LOG

LOGGED IN #005



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY

BOREHOLE BR-44
 CLIENT TECK-CORP
 AREA Burnt River
 COUNTRY Canada

SEAM THICKNESS LOG





P2-Burnt River 30135A BR 42

SONDE TYPE:
COAL
COMBINATION
SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY
CALIPER

COAL LITHOLOGY LOG

BOREHOLE BR-42
CLIENT Teck-Corp
AREA Burnt River
COUNTRY Canada
DATE LOGGED 5/31/80
DEPTH SCALE 23m
LOGS 1 of 5

BOREHOLE DATA

PERMANENT DATUM: Ground Level
ELEVATION OF P.O.: 898
MAS SURMOUNTS FROM: J.L.
DEPTH REACHED: 126.6m
CASING SHOES: 418ft

BIT SIZES: 1 HQ TO 53ft, 2 NG TO 101ft, 3 TO 10, 4 TO 10
CASING SIZES: 1 HQ TO 63ft, 2 TO 10

FLUID DATA

NATURE: GULCH-361
LEVEL: 5G
VISCOSITY: Rim at meas temp
PH: 7.1

OPERATION DATA

FIRST READING: 125m
LAST READING: 0m
INTERVAL LOGGED: 125m
UNIT-TRUCK No: 46/24
ENGINEER: M.H./B.L.
WITNESS: **489**

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE													
LOG	EQUIPMENT			TAPING			PANEL		CAL COEFF	DEPTHS		SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL	
GAMMA RAY	118	5845	510A1-1	Y	9m/m	H	9m/h	1	-	1.5	125m	0m	125m
L.S. DENSITY			5305DU	Y	9m/m	H	9m/h	1/3	6.8	-	126m	01m	125m
CALIPER	SIDEWALL POSITION			Y	9m/m	H	9m/h	1/3	-	-	126m	01m	125m

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

FROM	122m	95m	60m	22m	INTERVAL TOTAL
TO	112m	89m	57m	18m	
INTERVAL	10m	06m	03m	04m	23m

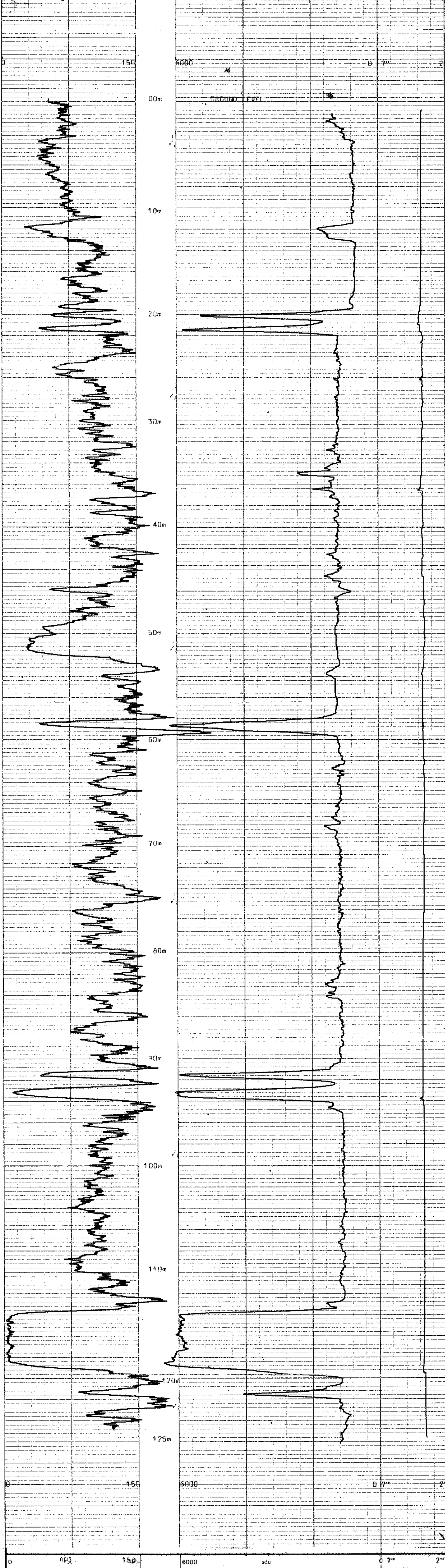
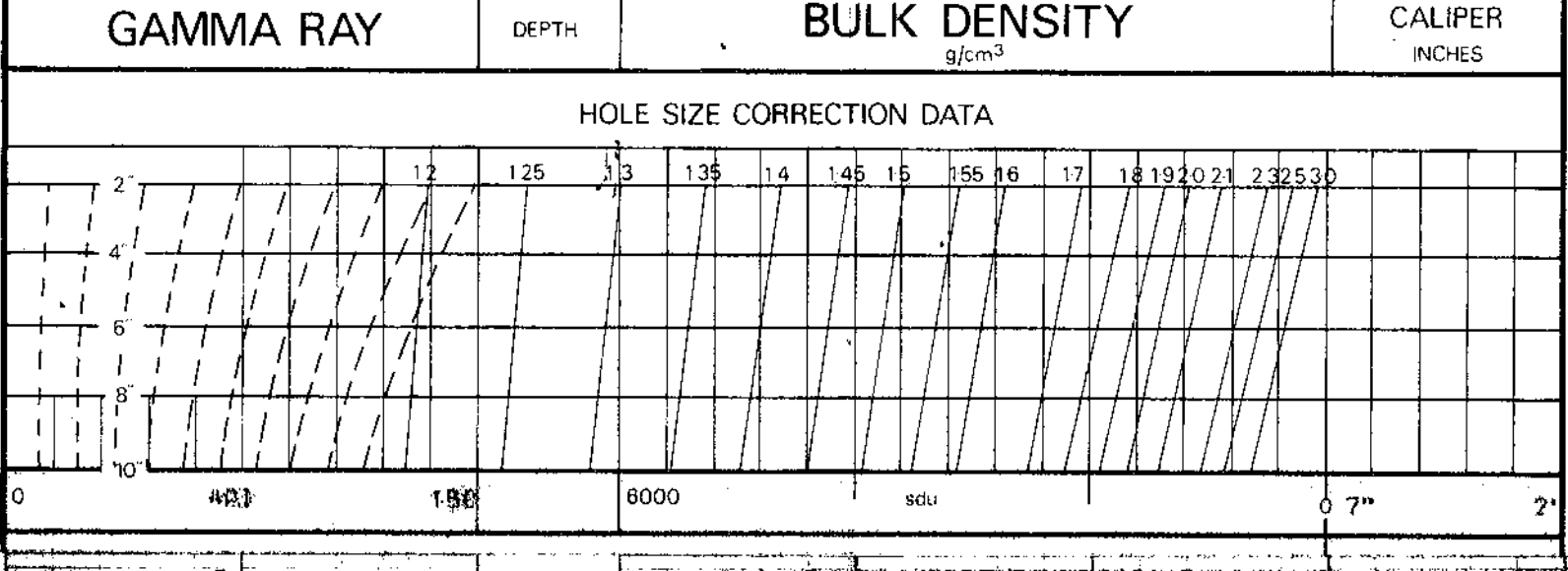
ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO
204	N-N	200,1		ADDITIONAL HEADINGS

REMARKS

BPB COAL LITHOLOGY LOG
CALIBRATION DATA

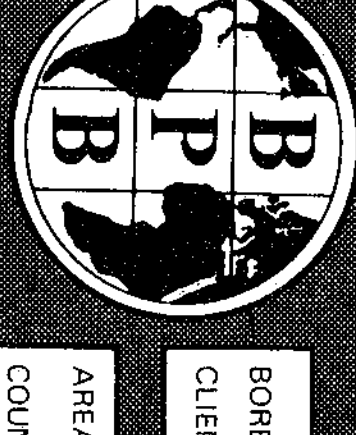
JIG No 367	VALUE 10 @ 2" DIAM	JIG CAL DATE 7/06/80	JIG VALUE 53U	SDU @	g/cm ³	7ms	940 cps
JIG MARK SHOWN AT ABOVE VALUE 4.1		JIG No 0338	SPAN 6000	NORM	SDU CPS 6.8	2ms	472 cps



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE BR-42 **AREA** Burnt River
CLIENT Teck-Corp **COUNTRY** Canada
COAL LITHOLOGY LOG



LOG SUITE
GAMMA RAY
L. S. DENSITY

SONDE TYPE:
COAL COMBINATION
SONDE

COAL QUALITY
LOG

BOREHOLE BK-42
CLIENT Burnt River
AREA Burnt River
COUNTRY Canada
DATE LOGGED 6/07/88
2 of 5 LOGS

BOREHOLE DATA
OPERATION DATA
EQUIPMENT AND RECORDING DATA

LOG TAPPING POINTS
LOG SPEEDS
LOG PRESSURE
LOG TEMPERATURE
LOG RESISTIVITY
LOG SOURCE SONDAS AND CALIBRATION
REFER TO LITHOLOGY LOG

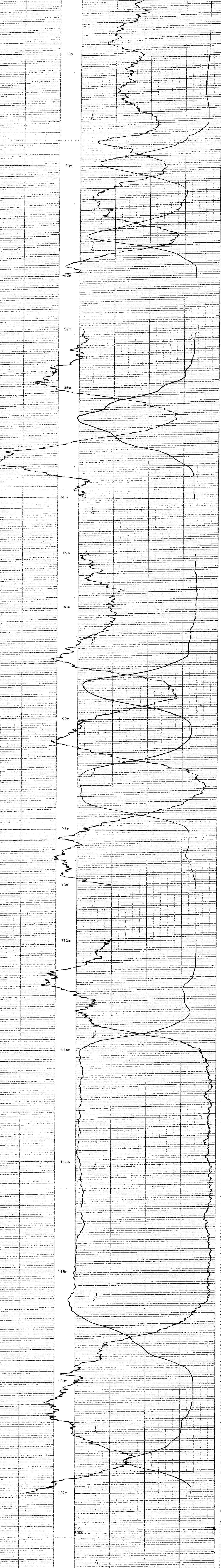
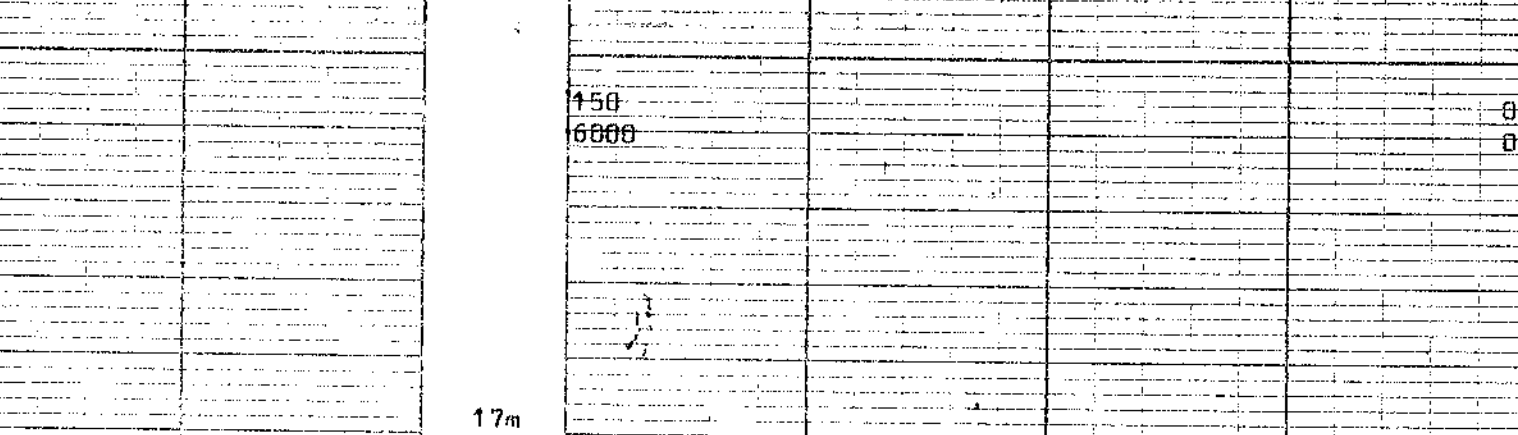
COAL QUALITY LOG INTERVALS
FROM 1.22m 9.5m 6.0m 2.2m
TO 1.22m 9.5m 5.7m 1.8m
INTERVAL 1.0m 0.9m 0.3m 0.4m

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BPPB COAL QUALITY LOG

DEPTH
GAMMA RAY
COAL BULK DENSITY
g/cm³

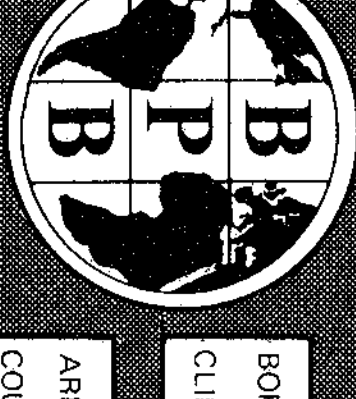
HOLE SIZE CORRECTION DATA



DEPTH
COAL BULK DENSITY
GAMMA RAY



BOREHOLE BK-42
CLIENT Tabk_corp
AREA Burnt River
COUNTRY Canada
COAL QUALITY LOG



BOREHOLE BR-42
CLIENT TECK-CORP

AREA Burnt River
COUNTRY Canada

DATE LOGGED 6/07/80

3.00 - 5.1005

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

SEAM THICKNESS LOG

SONDE TYPE:
COAL
COMBINATION
SONDE

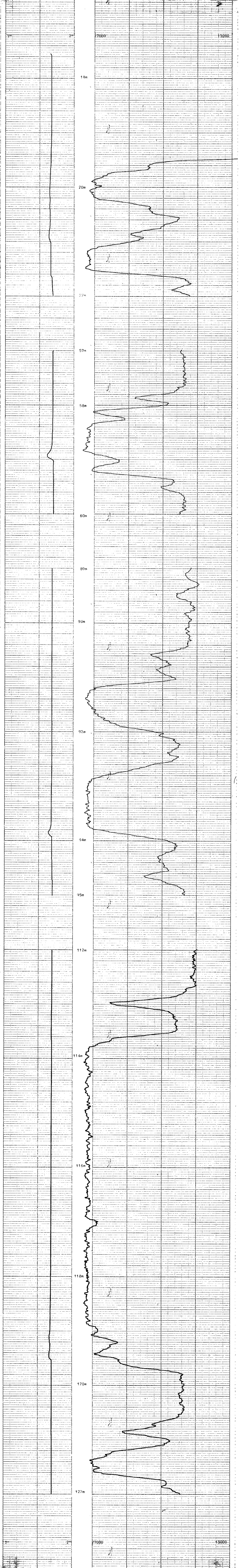
LOG SUITE:
CALIPER
BR DENSITY

SEAM THICKNESS LOG INTERVALS

FROM	122m	95m	60m	22m
TO	112m	89m	57m	18m
INTERVAL	10m	6m	6.5m	0.4m
FROM				
TO				
INTERVAL				
REMARKS				

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B P B SEAM THICKNESS LOG



CALIPER INCHES DEPTH BED RESOLUTION DENSITY cps



BOREHOLE BR-42
CLIENT TECK CORP

AREA Burnt River
COUNTRY Canada

SEAM THICKNESS LOG

Pr-Burnt River 80(3)A SR 42



NEUTRON-NEUTRON LOG

BOREHOLE BR-42

CLIENT TECK-CORP

AREA Burnt River

COUNTRY Canada

DATE LOGGED 6/07/80

DEPTH SCALE
200:1

4 OF 5 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

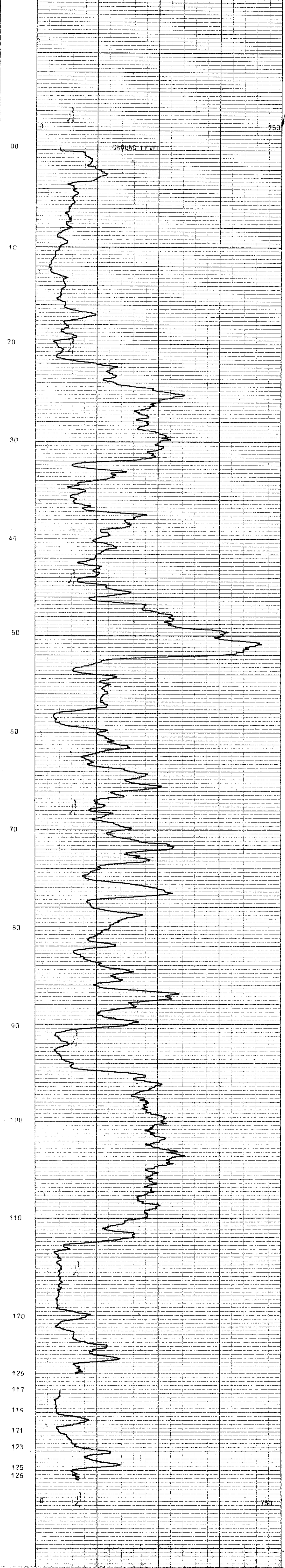
OPERATION DATA REFER TO LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPPING	PANEL	CAL
LOG	RECORD	SPEED	NORM
TAPED	RECORD	RECORD	RECORD
Y	9m/m	D	9m/m
N-N		1	.82
REMARKS		SONDE	214
		NO	NO

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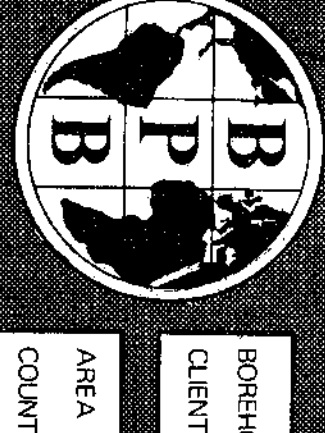
DEPTH NEUTRON-NEUTRON LOG SNV 750



DEPTH NEUTRON-NEUTRON LOG SNV 750



BOREHOLE BR-42 AREA Burnt RIVER
CLIENT TECK-CORP COUNTRY Canada



PR-Bunt River (8053) B.R. 42

LOG SUITE
GAMMA RAY
L.S. DENSITY
CALIPER

SONDE TYPE
COAL
COMBINATION
SONDE

COAL
LITHOLOGY
LOG

COAL

BOREHOLE BK-42
CLIENT TECH CORP
AREA Bunt River
COUNTRY Canada
DATE LOGGED 6/27/88
DEPTH SCALE 100 ft
5' 0" 5' 000

BOREHOLE DATA
PREPARATION BY: T. J. HULL, T. J. ZUBITZ, J. J. COO
ELEVATION OF P.D. BPS
MEASUREMENTS
DEPTH MEASURED
CASING STAGE
BIT SIZES
CASING SIZES
FLUID DATA

OPERATION DATA
FIRST READINGS
LAST READINGS
INITIAL LOGGED
INITIAL FLUX No
ENGINEER
WITNESSES

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EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE													
LOG	EQUIPMENT		CALIBRATION		TAPING		RECORD		PANEL		CAL COEFF		SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL	
CCC	11B	5845			Y		9m/m	R		1.5	125	0	125m
GAMMA RAY				510L:1	Y		9m/m	R		6.8	125	0	125m
DENSITY				5305DU	Y		9m/m	R		1/3	125	0	125m
CALIPER		SIDEWALL POSITION			Y		9m/m	R					

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)					INTERVAL TOTAL
FROM	122m	95m	60m	22m	
TO	112m	89m	57m	18m	
INTERVAL	10m	06m	03m	04m	39m

ADDITIONAL SONDES RUN				REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS
P04	N-N	200:1		

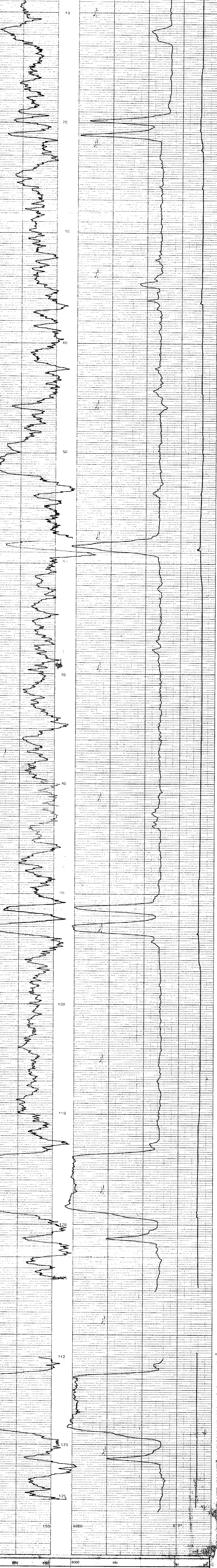
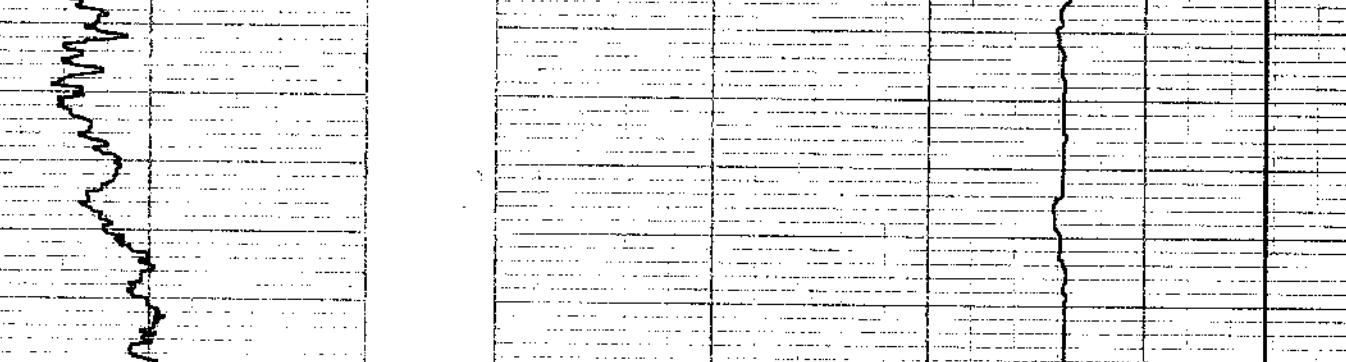
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367	VALUE 510 @ 2 DIAM	JIG CAL DATE 17/06/80	JIG VALUE 530	SDU @ 6.8	g/cm ³ 7.45	940 CPS
JIG MARK SHOWN AT ABOVE VALUE 30.1		JIG No 153A	SPAN	NORM	SDU @ 6.8	7.42 CPS

GAMMA RAY DEPTH BULK DENSITY CALIPER

HOLE SIZE CORRECTION DATA



GAMMA RAY DEPTH BULK DENSITY CALIPER

BOREHOLE	BK-42	AREA	Bunt River
CLIENT	TECH CORP	COUNTRY	Canada

COAL LITHOLOGY LOG





RR-Burnt River 80(3)A BR 43

COAL LITHOLOGY LOG

SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY
 CALIPER

BOREHOLE BR-43
CLIENT TECK CORP

AREA Burnt River
COUNTRY Canada
DATE LOGGED 11/07/80

DEPTH SCALE 200:1
LOGS 2 OF 3

BOREHOLE DATA

PERMANENT DATUM: 51 REF: TO LITHOLOGY LOG
 ELEVATION OF P.D.: 200:1
 MEASUREMENTS FROM: 8+8 DRILLER
 DEPTH REACHED: 45m
 CASING SHOE: 1 TO 2 TO
 BIT SIZES: 3 TO 4 TO
 CASING SIZES: 1 TO 2 TO

FLUID DATA

NATURE: _____
 SG: _____
 LEVEL: _____
 VISCOSITY: _____
 Rm at meas temp: _____
 BHT: _____

OPERATION DATA

FIRST READING: 45m
 LAST READING: 45m
 INTERVAL LOGGED: 45m
 UNIT-TRUCK No: 46/24
 ENGINEER: R/M
 WITNESS: _____

489

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT		TAPING			PANEL		CAL COEFF	DEPTHS			SEAM LOG RUN	
	SONDE	SOURCE	LOG TAPE	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS		NORM	FROM	TO		INTERVAL
	118	5845											
GAMMA RAY			510API	Y	9m/m	D	9m/m	1	-	1.5	45m	0m	45m
L.S. DENSITY			530sdu	Y	9m/m	D	9m/m	1/3	6.7	-	46m	0m	45m
CALIPER				Y	9m/m	D	9m/m	1/3	-	-	46m	0m	45m

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

FROM	TO	INTERVAL TOTAL

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
204	N-N	200:1			LOGGED IN RODS LSD SCALE 3000-0

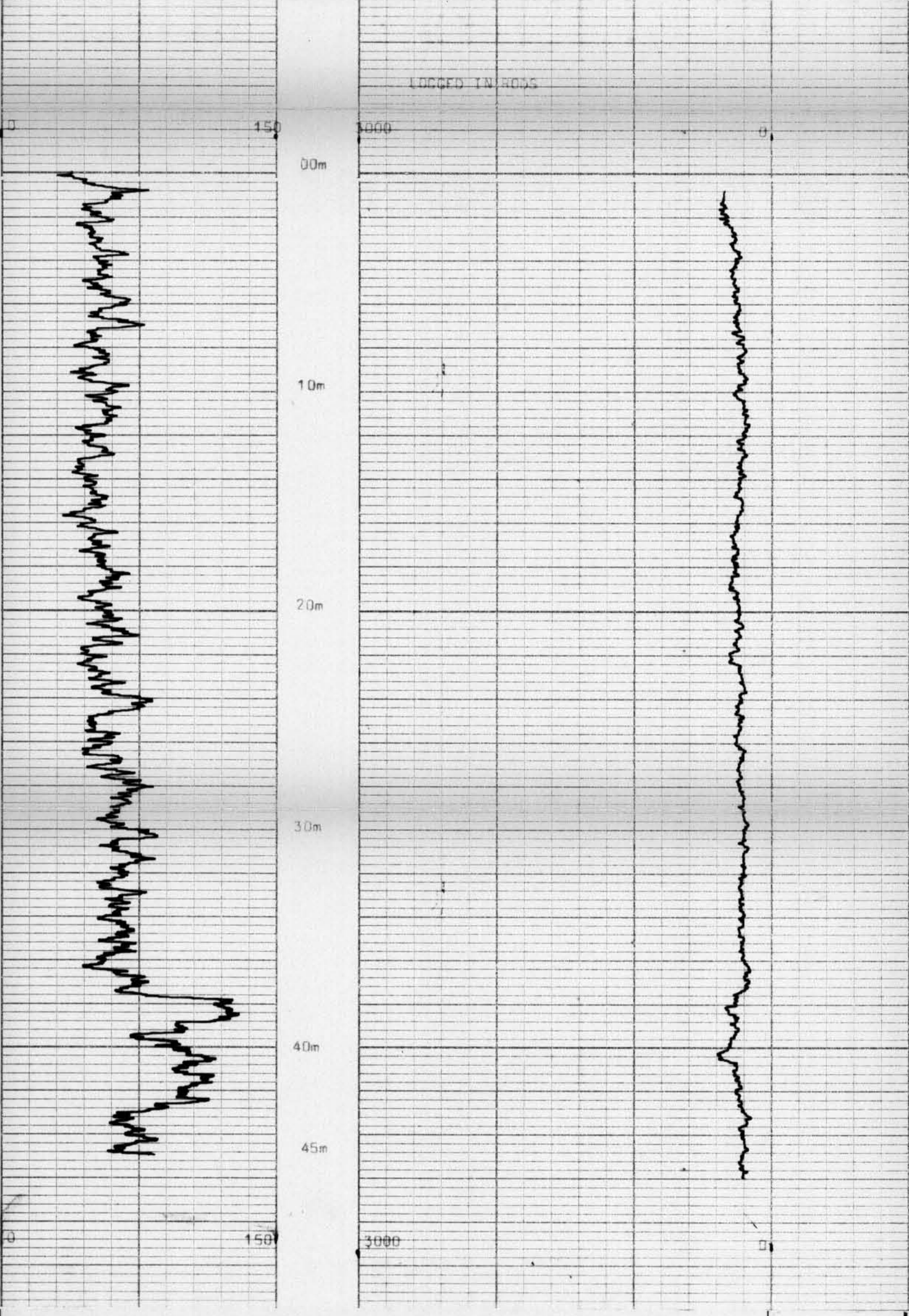
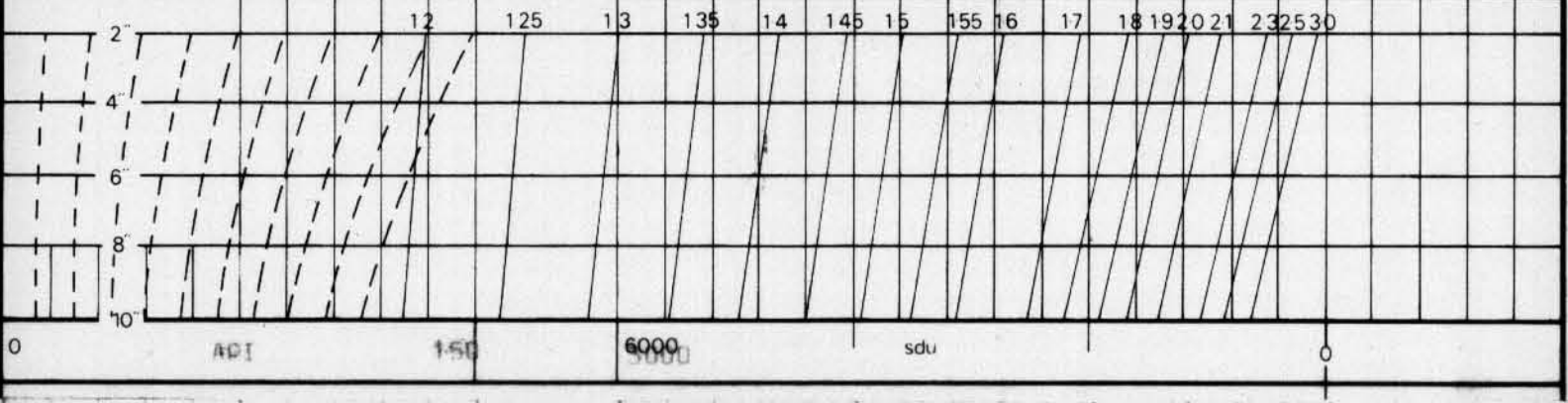
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367 VALUE 10 @ 2" DIAM JIG CAL DATE 10/07/80 JIG VALUE 530 SDU @ g/cm³ 7 ins 1000 cps
 JIG MARK SHOWN AT ABOVE VALUE *0.1 JIG No 0338 SPAN 6000 NORM SDU = 6.7 2 ins 500 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------

BOREHOLE BR-43 **AREA** Burnt River
CLIENT TECK CORP **COUNTRY** Canada

COAL LITHOLOGY LOG





PR-Burnt River 80133A BR 43

VELOCITY-NORTH

BOREHOLE BR-43

CLIENT TECK CORP

AREA Burnt River

COUNTRY Canada

DATE LOGGED 11/07/80

DEPTH SCALE
200:1

3 OF 3 LOGS

BOREHOLE DATA

REFER TO

LOG

OPERATION DATA

REFER TO LITHOLOGY

LOG

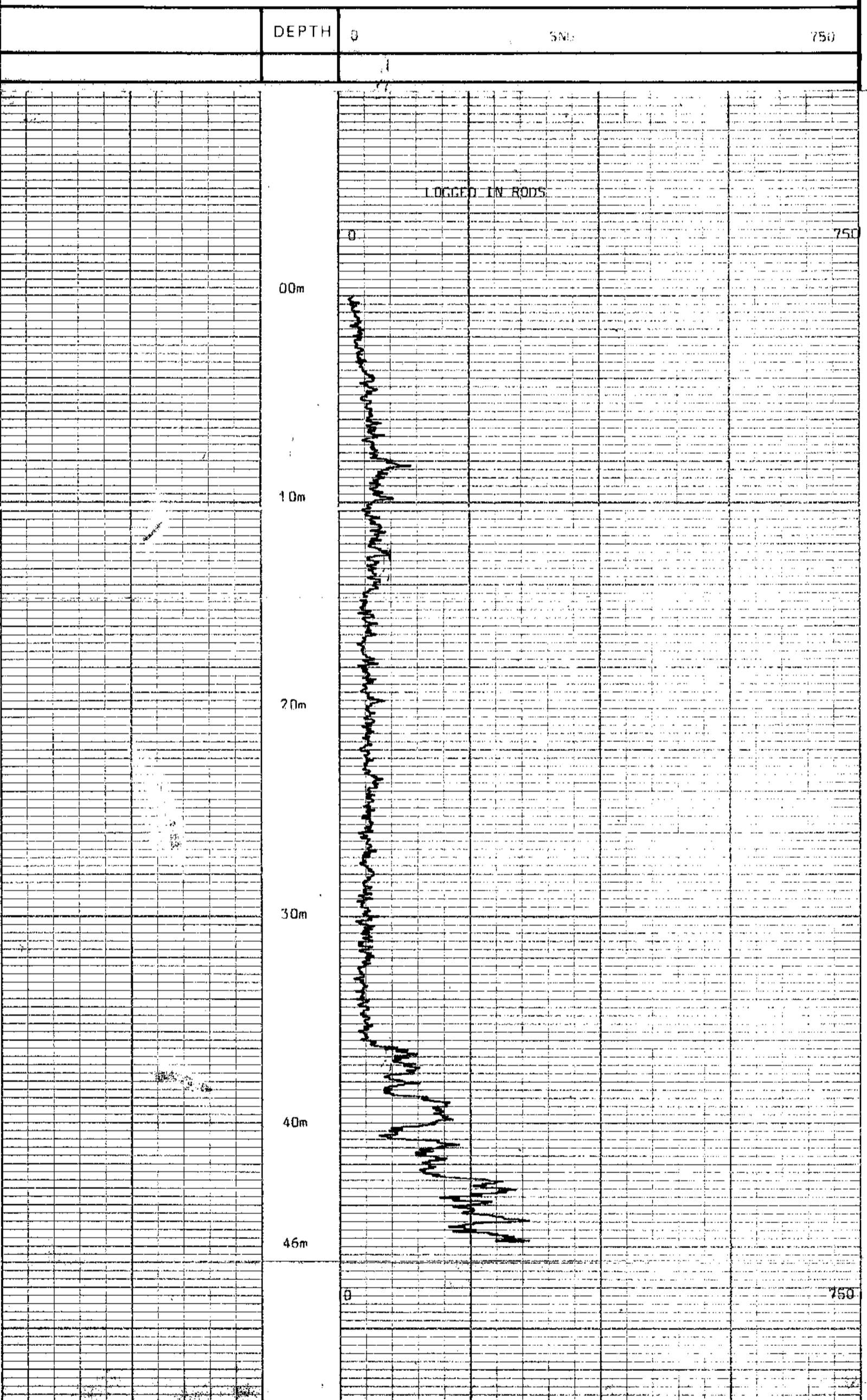
EQUIPMENT AND RECORDING DATA

LOG	TAPING	RECORD DIRECTOR	PANEL	CAL
	TAPED	SPEED REPLAY	T.C. SECS	COEFF
N-N	Y	9m/m	2	9m/m
			1	.82

REMARKS

LOGGED IN RODS

489



DEPTH 0

SNR

750

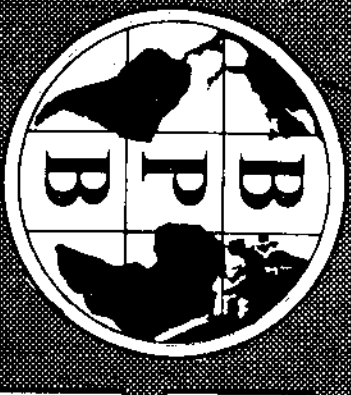


BOREHOLE BR-43

CLIENT TECK CORP

AREA Burnt River

COUNTRY Canada



72-Burnt River 80(3) ABR 29

COAL LITHOLOGY LOG

COAL

SONDE TYPE _____

COAL COMBINATION _____

SONDE _____

LOG SUITE

GAMMA RAY _____

L.S. DENSITY _____

CALIPER _____

BOREHOLE DATA

PERMANENT DATUM _____ REF: TO LITHOLOGY LOG 2001-1

ELEVATION OF P.D. _____

MEASUREMENTS FROM _____

DEPTH REACHED _____

CASING SHOES

1	TO	2	TO
3	TO	4	TO
5	TO	6	TO

CASING SIZES

1	TO	2	TO
3	TO	4	TO
5	TO	6	TO

FLUID DATA

NATURE _____

SG _____

LEVEL _____

VISCOSITY _____

Temp at meas temp _____

BHT _____

OPERATION DATA

FIRST READING _____

LAST READING _____

INTERVAL LOGGED _____

UNIT-TRUCK No _____

ENGINEER _____

WITNESS _____

BOREHOLE 80-29/rep layer at 100:1

CLIENT Tech-Corp

AREA Burnt River

COUNTRY Canada

DATE LOGGED 20/06/89

DEPTH SCALE 100:1

5 OF 5 LOGS

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE		TAPING			PANEL		CAL COEFF		DEPTHS			SEAM LOG RUN
LOG	EQUIPMENT	LOG TAPE	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL		
CCS	118	5845										
GAMMA RAY		510RFI	Y	9m/m	R	9m/g	1	-	1.5	56m	01m	55m
DENSITY		530SDU	Y	9m/m	R	9m/g	1/3	6.8	-	57m	02m	55m
CALIPER	SIDEWALL POSITION		Y	9m/m	R	9m/g	1/3	-	-	57m	02m	56m

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

FROM	TO	INTERVAL	TOTAL

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG

REMARKS

REPLAYED AT 100:1 SCALE

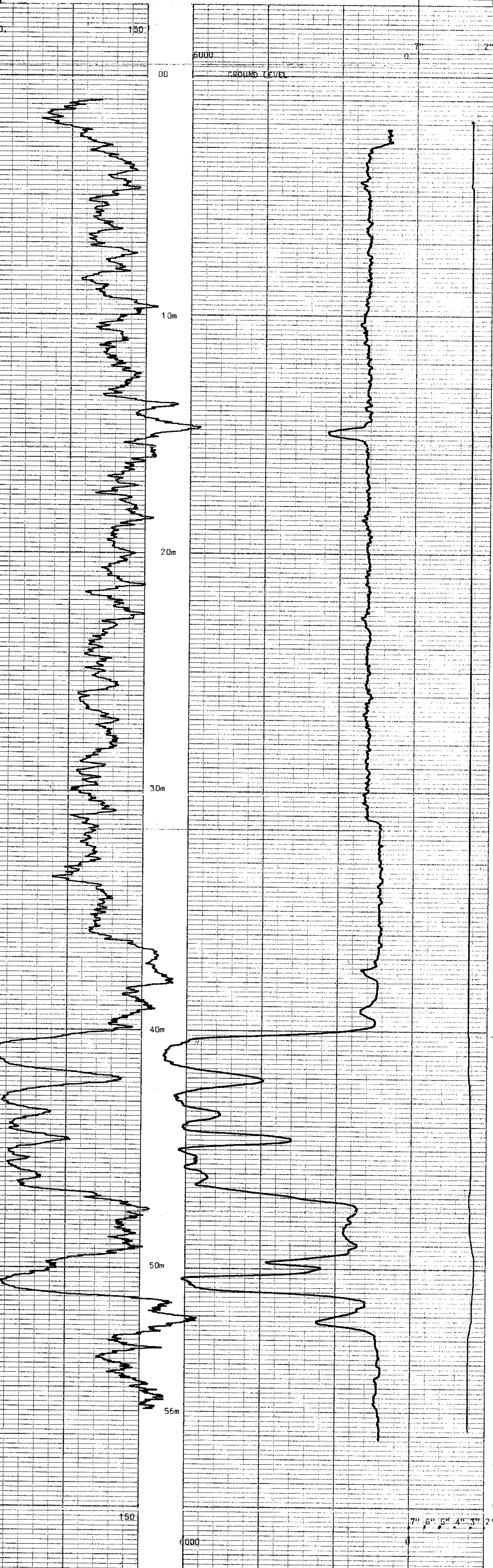
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367	VALUE 53@ 2" DIAM	JIG CAL DATE 17/06/80	JIG VALUE 530	SDU @ g/cm ³	7	ins 04f	cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No 1338	SPAN 6000	NORM	2	ins 472	cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES

HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES



BOREHOLE 80-29/Rep layer at 100:1

CLIENT Tech-Corp

AREA Burnt River

COUNTRY Canada

COAL LITHOLOGY LOG



PE-Burnt River 806314 812 29

LOG SUITE
GAMMA RAY
L.S. DENSITY
CALIPER

COAL
LITHOLOGY
LOG

BOREHOLE AR-29
CLIENT ICK-CO
AREA Burnt River
COUNTRY CANADA
DATE LOGGED 11/07/80
DEPTH SCALE 1 OF 5 LOSS

BOREHOLE DATA
PERMANENTUM 2000
ELEVATION OF P.O. 1000
MAGNETIC DEVIATION 10
DEPTH REACHED 120
CASING SHOE 120
CASING SIZES 1 TO 2
FLUID DATA
NATURE
LEVEL
VISCOSITY
TEMP. AT PRESS. TEMPS.
BHT
OPERATION DATA
FIRST READINGS
LAST READINGS
INTERVAL LOGGED
UNIT-TRIUCK No.
ENGINEER
WITNESS

EQUIPMENT AND RECORDING DATA

Table with columns: LOG, EQUIPMENT, TAPING, PANEL, CAL COEFF, DEPTHS, SEAM LOG RUN. Includes rows for LOGS, GAMMA RAY, L.S. DENSITY, CALIPER.

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log). Includes FROM, TO, INTERVAL, TOTAL columns.

ADDITIONAL SONDES RUN. Includes SONDE, LOG, GENERAL SCALE LOG, DETAIL SCALE LOG, REFER TO ADDITIONAL HEADINGS.

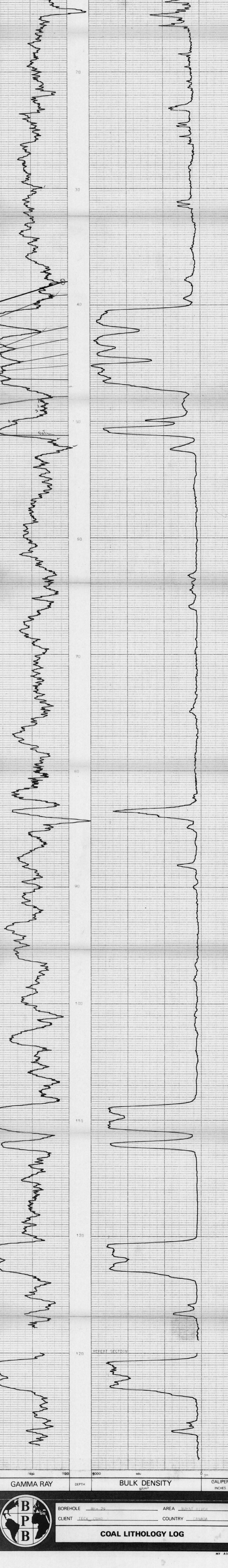
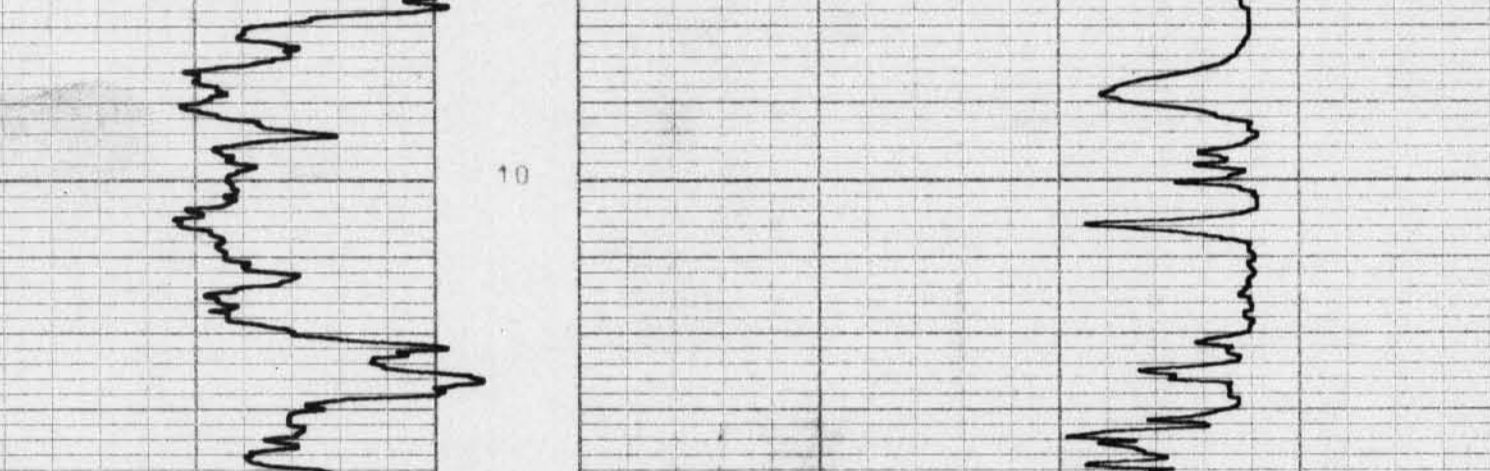
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No. 367, VALUE 1.0 @ 2 DIAM, JIG CAL DATE 17/05/80, JIG VALUE 5.30, SDU @ g/cm3, 7 ins 940 cps, JIG No. 0338, SPAN 6000, NORM SDU = 6.5, 2 ins 472 cps.

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

HOLE SIZE CORRECTION DATA



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



BOREHOLE AR-29 AREA Burnt River
CLIENT ICK-CO COUNTRY CANADA
COAL LITHOLOGY LOG



72-Burnt-Creek 80(S)19 BR 29

BOREHOLE BR-29
CLIENT TECK CORP

AREA ALBERTA
COUNTRY CANADA
DATE LOGGED #12-1-79

DEPTH SCALE 700'
% OF LOGS 5

COAL

LITHOLOGY LOG

LOG

BOREHOLE DATA
PERMANENT DATUM 3000.00
ELEVATION OF P.D. 2100.00
MEASUREMENTS FROM 3000.00
DEPTH REACHED 1224.00
CASING SHOE 1224.00
BIT SIZES 1 3/4" TO 2 1/2"
CASING SIZES 1 1/2" TO 2 1/2"

SONDE TYPE
COAL COMBINATION SONDE

LOG SUITE
GAMMA RAY
L.S. DENSITY
CALIPER

FLUID DATA
NATURE _____
SG _____
LEVEL _____
VISCOSITY _____
Temp at measurement _____
BHT _____

OPERATION DATA
FIRST READING 1274
LAST READING 1274
INTERVAL LOGGED 1274
UNIT-TRUCK No. 489
ENGINEER WJG
WITNESS _____

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL			CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM		FROM	TO	INTERVAL	
GAMMA RAY	5845			y	3	3	3	1		1.5	129m	0m	129m	
L.S. DENSITY				y	3	3	3	3	5 ft		130m	1m	130m	
CALIPER				y	3	3	3	3			130m	0m	130m	

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

FROM	124	113	52	INTERVAL
TO	120	108	40	TOTAL
INTERVAL	4m	5m	12m	

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
734	RA-4	200, 1			

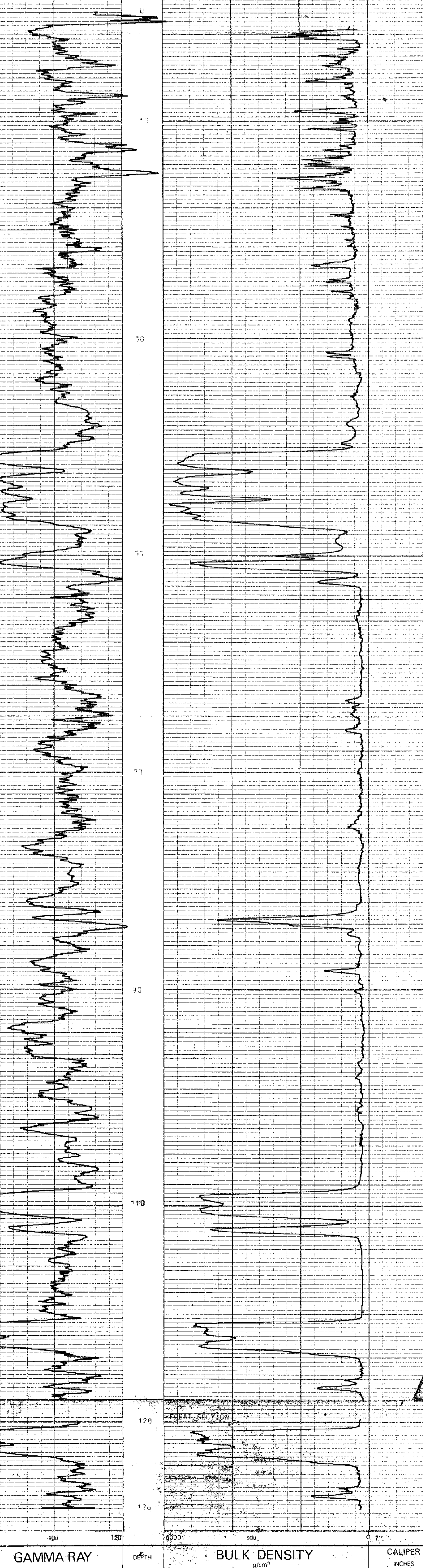
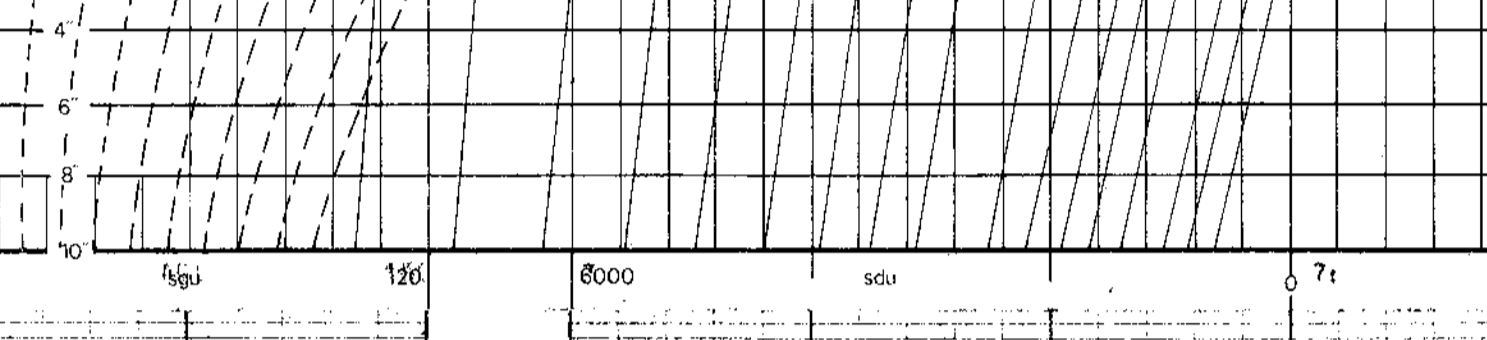
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 167	VALUE 1.1 @ 2" DIAM	JIG CAL DATE 17/06 80	JIG VALUE 530	SDU @ 7 ins 940 cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No 0338	SPAN 5000	NORM CPS = 6.5 7 ins 472 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA

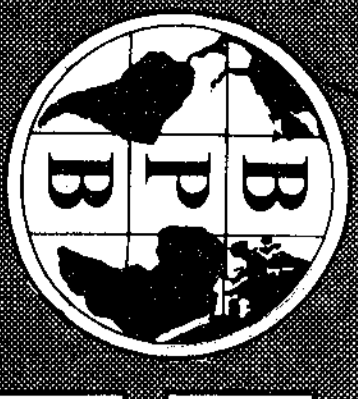


GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE BR-29 AREA ALBERTA
CLIENT TECK CORP COUNTRY CANADA

COAL LITHOLOGY LOG





P2-Burnt River 8063319 BR-30

BOREHOLE BR-30
 CLIENT TECH-CORP

AREA RUPUNT RIVER
 COUNTRY CANADA
 DATE LOGGED 7/08/80

DEPTH SCALE 200 ft
 1 OF 2 LOGS

COAL LITHOLOGY LOG

SONDE TYPE: COAL COMBINATION SONDE

LOG SUITE: GAMMA RAY L.S. DENSITY CALIPER

BOREHOLE DATA
 PERMANENT DATUM: GROUND LEVEL
 ELEVATION OF P.D.: SURROUND LEVEL
 MEASUREMENTS FROM: 90m
 DEPTH REACHED: 302 ft
 CASING SHOE: 24 ft
 BIT SIZES: 1 1 1/2" TO 2 1/2" 2 3/4" TO 4" 4" TO 5" 5" TO 6" 6" TO 7" 7" TO 8" 8" TO 9" 9" TO 10" 10" TO 11" 11" TO 12" 12" TO 14" 14" TO 16" 16" TO 18" 18" TO 20" 20" TO 22" 22" TO 24" 24" TO 26" 26" TO 28" 28" TO 30"

FLUID DATA
 NATURE: _____
 S.G. LEVEL: _____
 VISCOSITY: _____
 Rtm at meas. temp: _____
 BHT: _____

OPERATION DATA
 FIRST READING: 90m
 LAST READING: 0
 INTERVAL LOGGED: 30m
 UNIT-TRUCK NO: 415
 ENGINEER: H. S. Battist
 WITNESS: **489**

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE														
LOG	EQUIPMENT			TAPING			PANEL		CAL COEFF	DEPTHS			SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECTOR REPLAY	SPEED	TC SECS		NORM	FROM	TO		INTERVAL
GAMMA RAY	11C	5845	510AP1	Y	9m/m	K	9m/m	1	-	1.42	90	0	90	
	L.S. DENSITY		5305DU	Y	9m/m	R	9m/m	3	6.5	-	90	0	90	
CALIPER	SIDEWALL POSITION		LOGGED IN HOLES											LOGGED IN GENERAL

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

FROM		INTERVAL TOTAL
TO		
INTERVAL		

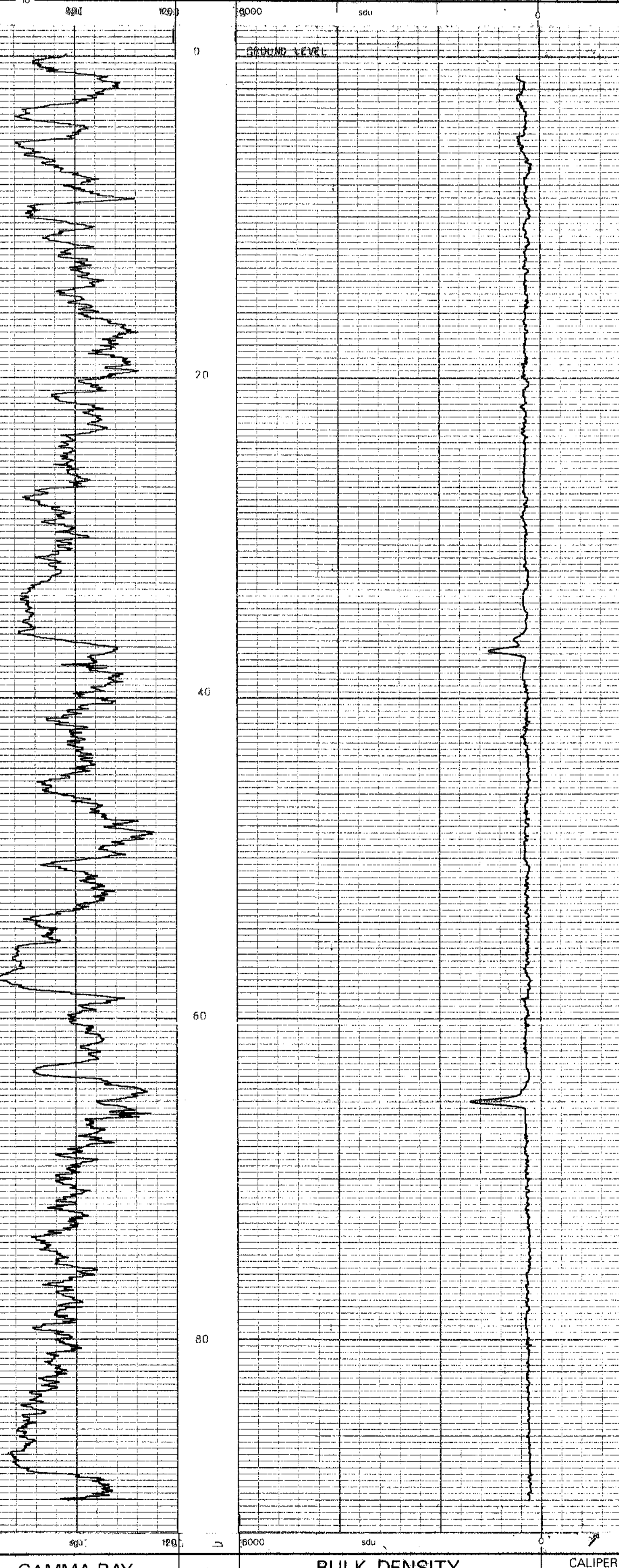
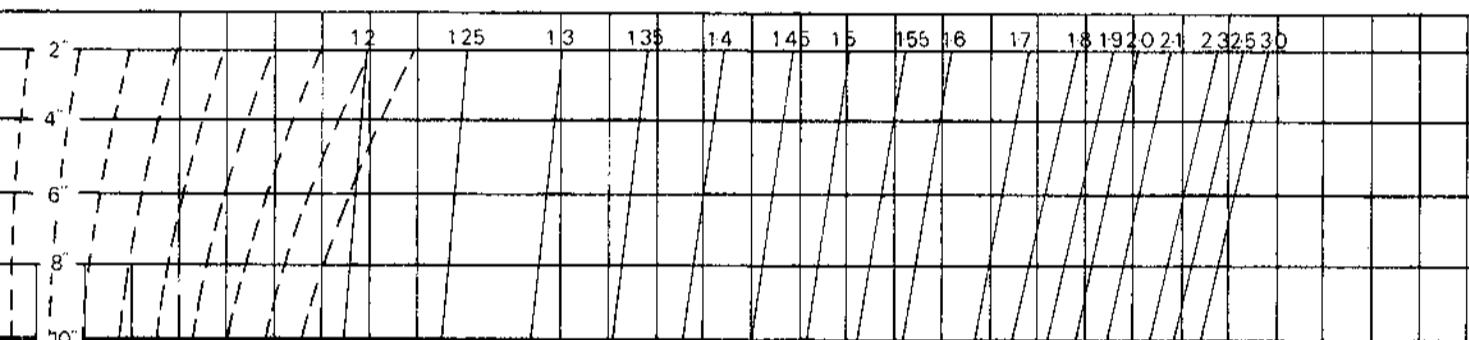
ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
NEUTRON VELOCITY					LOGGED IN HOLES

BPB COAL LITHOLOGY LOG CALIBRATION DATA

JIG No. 367	VALUE 510 @ 2" DIAM	JIG CAL DATE 17/06/80	JIG VALUE 530	SDU @	g/cm ³	ins	cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No. 0338	SPAN 3000	NORM	SDU CPS 6.5	ins	cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE BR-30 AREA RUPUNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA

COAL LITHOLOGY LOG



NEUTRON-NEUTRON LOG

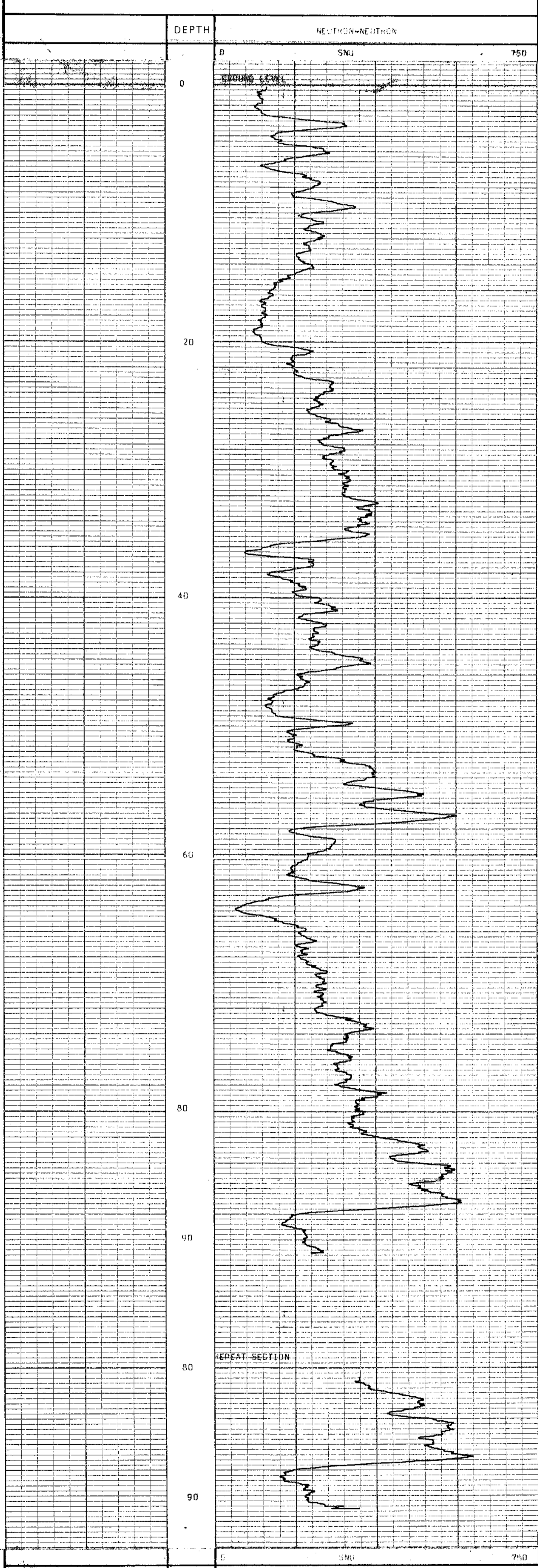
BOREHOLE BR-30
 CLIENT TECH-CORP

AREA BURNT RIVER DEPTH SCALE 200:1
 COUNTRY CANADA
 DATE LOGGED 07/08/80 2 OF 2 LOGS

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

LOG	TAPING	RECORD DIRECTLY	PANEL	CAL			
LOG TAPED	RECORD SPEED	REPLAY SPEED	T.C. SECS	COEFF			
NEUTRON	Y	9m/m	D	9m/m	1	.82	-
SONDE NO.		204	SOURCE		5707		

REMARKS
 LOGGED IN #105
489



BOREHOLE BR 30 AREA BURNT RIVER
 CLIENT TECH-CORP COUNTRY CANADA



BOREHOLE BR-32
 CLIENT TECH-CON

AREA BUJUNT-LUPA
 COUNTRY INDONESIA
 DATE LOGGED 31/07/80

DEPTH SCALE
 270/11

COAL LITHOLOGY LOG

SONDE TYPE 5-1200 31
 COAL COMBINATION 12m
 SONDE
 LOG SUITE
 GAMMA RAY
 U.S. DENSITY
 CALIPER

BOREHOLE DATA
 PERMANENT DATUM
 ELEVATION OF P.D.
 DEPTH REACHED
 CASING SHOE
 CASING SIZES

OPERATION DATA
 FIRST READING
 LAST READING
 INTERVAL LOGGED
 UNIT-TRUCK No
 ENGINEER
 WITNESS

489

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE													
LOG	SONDE	EQUIPMENT	SOURCE	CALIBRATOR	LOG TAPED	TAPPING RECORD SPEED	DIRECT or REPLAY	PANEL SPEED	TC SECS	CAL COEFF	DEPTHS FROM	TO	SEAM LOG RUN
CCS	1111	5845			Y	9m/m	+	9m/m	1	1.42	159	0	159
GAMMA RAY				51044	Y	9m/m	+	9m/m	3	6.5	159	0	159
U.S. DENSITY				530510	Y	9m/m	+	9m/m	3	6.5	159	0	159
CALIPER					Y	9m/m	+	9m/m	3	6.5	159	0	159

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

FROM	TO	INTERVAL	TOTAL
156m	120m	82m	
146m	116m	69m	
10m	4m	13m	27m

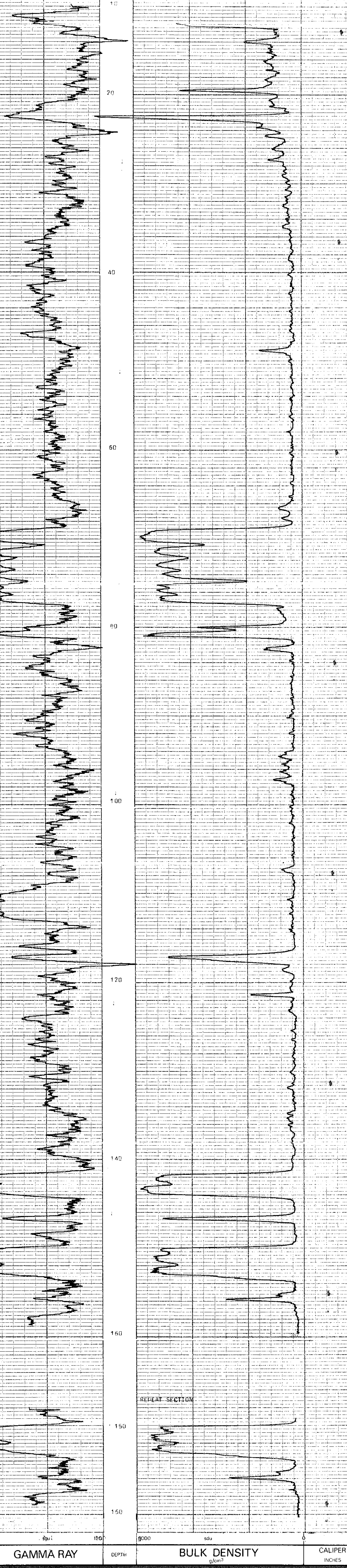
ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 367	VALUES @ 2" DIAM	JIG CAL DATE 17/06/80	JIG VALUE 530	SDU @	g/cm ³	2 ins	480 cps
JIG MARK SHOWN AT ABOVE VALUE -		JIG No 0336	SPAN 3000	NORM	SDU = 6.5	7 ins	890 cps

GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------



GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
-----------	-------	--------------------------------	----------------

BOREHOLE BR-32 AREA BUJUNT-LUPA
 CLIENT TECH-CON COUNTRY INDONESIA

COAL LITHOLOGY LOG





COAL LITHOLOGY LOG

SONDE TYPE
COAL COMBINATION SONDE

LOG SUITE:
GAMMA RAY
L S DENSITY
CALIPER

BOREHOLE DATA

PERMANENTIALUM
ELEVATION OF F.D.
MEASUREMENTS FROM
DEPTH REACHED
CASING SHAPE
BIT SIZES
CASING SIZES

BOREHOLE DATA

PERMANENTIALUM
ELEVATION OF F.D.
MEASUREMENTS FROM
DEPTH REACHED
CASING SHAPE
BIT SIZES
CASING SIZES

BOREHOLE DATA

PERMANENTIALUM
ELEVATION OF F.D.
MEASUREMENTS FROM
DEPTH REACHED
CASING SHAPE
BIT SIZES
CASING SIZES

FLUID DATA

NATURE
SG
LEVEL
VISCOSITY
Rate of mass flow
BHT

OPERATION DATA

FIRST READING
LAST READING
INTERVAL LOGGED
UNIT-TRUCK No
ENGINEER
WITNESS

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE		TAPING			PANEL		CAL COEFF		DEPTHS		SEAM LOG RUN
LOG	EQUIPMENT	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL	
GAMMA RAY	SONDE				9m/m	1	-	11m	00m	11m	
L S DENSITY	SOURCE				9m/m	1 1/2	-	11m	31m	11m	
CALIPER	SIDEWALL POSITION				3m/m	1 1/2	-	11m	31m	11m	

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

FROM	11m	INTERVAL TOTAL	
TO	97m		
INTERVAL	15m		

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		

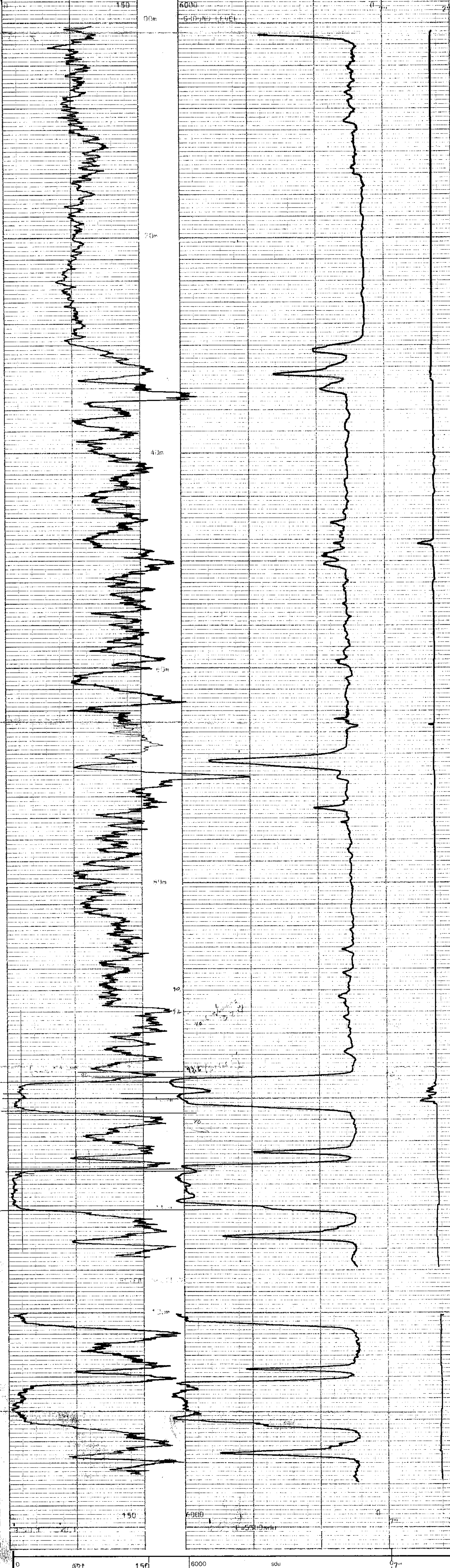
BPB COAL LITHOLOGY LOG CALIBRATION DATA

JIG No 117 VALUE 5.1 @ 2 DIAM JIG CAL DATE 17/06/83 JIG VALUE 5.30 SDU @ 7 ms 340 cps
 JIG MARK SHOWN AT ABOVE VALUE < 0.1 JIG No 0336 SPAN 6UGE NORM SDU @ 6. R 2 ins 472 cps

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

HOLE SIZE CORRECTION DATA

2"	12	125	13	135	14	145	15	155	16	17	18	19	20	21	22	23	24	25	30
----	----	-----	----	-----	----	-----	----	-----	----	----	----	----	----	----	----	----	----	----	----



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



BOREHOLE BR-31 AREA Burnt River
 CLIENT Tech Corp COUNTRY Canada

COAL LITHOLOGY LOG



SEAM THICKNESS LOG

SONDE TYPE: _____
 COAL COMBINATION SONDE _____

LOG SUITE: _____
 CALIPER _____
 BR DENSITY _____

BOREHOLE BR-31
 CLIENT Teck Corp

AREA Autaliver
 COUNTRY Canada
 DATE LOGGED 27/06/2011

DEPTH SCALE 20.1
 2 OF 4 LOGS

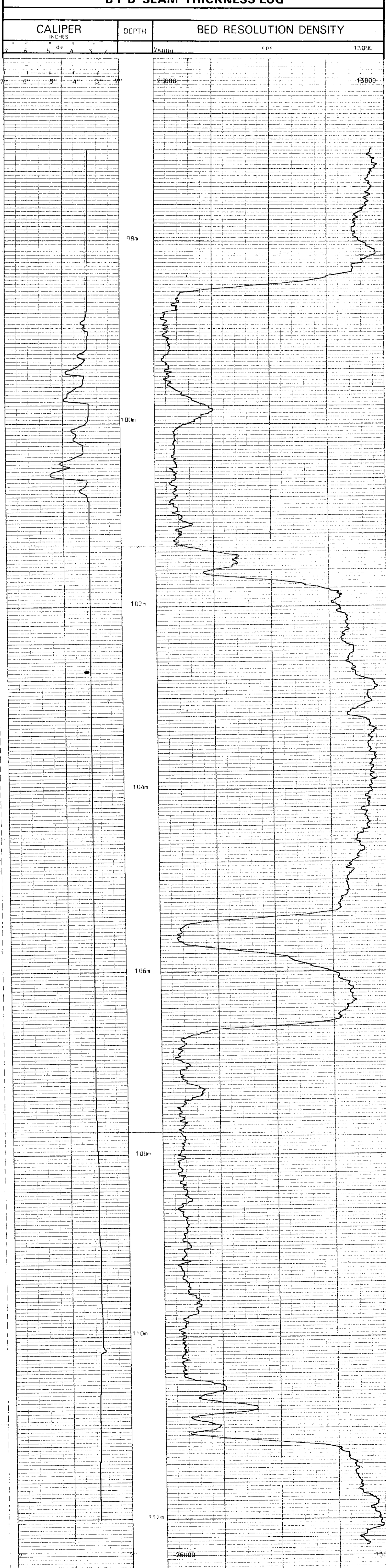
BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE _____
 LOG TAPPING PANEL _____
 LOG RECORDING SPEED TIC NORMAL
 CALIPER V 3m/h 3m/h 1 -
 BR DENSITY 3m/h 3m/h 1/4 .85 -

SEAM THICKNESS LOG INTERVALS
 FROM 11.2m
 TO 11.7m
 INTERVAL 0.5m
 FROM _____
 TO _____
 INTERVAL TOTAL _____
 REMARKS _____

489

B P B SEAM THICKNESS LOG



CALIPER INCHES: 2 3 4 5 6 7
 DEPTH: 9.8m 10.0m 10.2m 10.4m 10.6m 10.8m 11.0m 11.2m
 BED RESOLUTION DENSITY cps: 25000 13000



BOREHOLE BR-31 AREA Autaliver
 CLIENT Teck Corp COUNTRY Canada

SEAM THICKNESS LOG



BOREHOLE _____
 CLIENT _____
 AREA _____
 COUNTRY _____
 DATE LOGGED _____

DEPTH SCALE
 _____ OF _____ 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
 LOG TAPPING SIDEWALL POSITION
 LOG LABEL RECORD SPEED SECS NORM
 GAMMA RAY SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

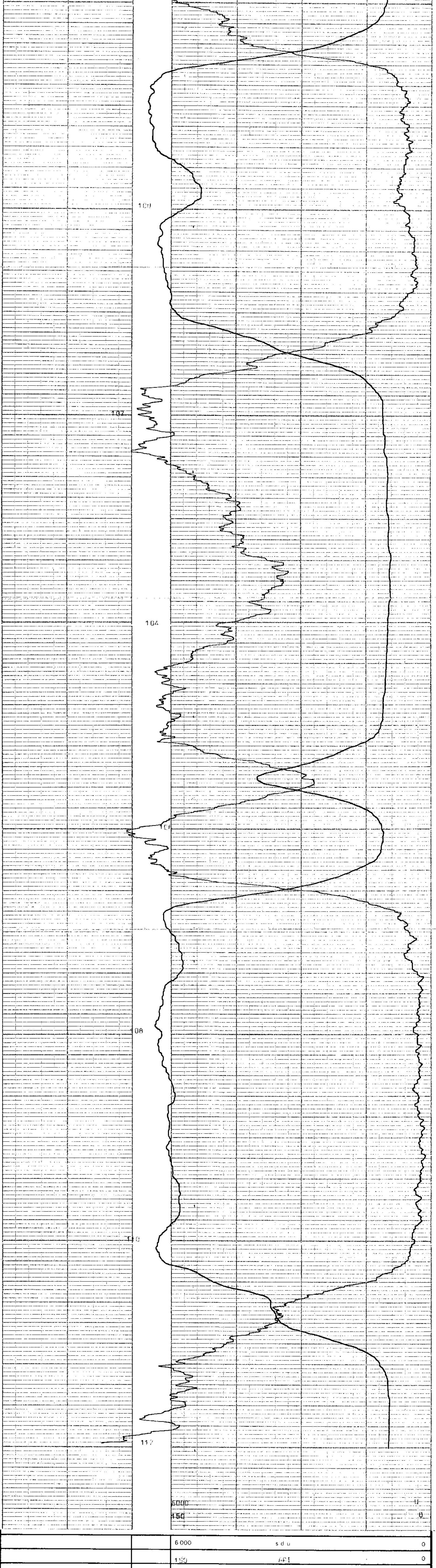
B PB COAL QUALITY LOG

DEPTH	GAMMA RAY	COAL BULK DENSITY
		g/cm ³

HOLE SIZE CORRECTION DATA

DEPTH	1.2	1.25	1.3	1.35	1.4	1.45	1.5	1.55	1.6	1.7	1.8	1.9	2.0	2.2	2.4	3.0
2"																
4"																
6"																
8"																

150	0
6000	0



6000	0
150	0

DEPTH	GAMMA RAY	COAL BULK DENSITY
-------	-----------	-------------------

BOREHOLE Br-31 AREA Burnt River
 CLIENT Tech Corp COUNTRY Canada

COAL QUALITY LOG





NO. 10-M-107-63N

BOREHOLE 32-31
CLIENT Tech Corp.

AREA Burnt River
COUNTRY Canada
DATE LOGGED 28/06/20

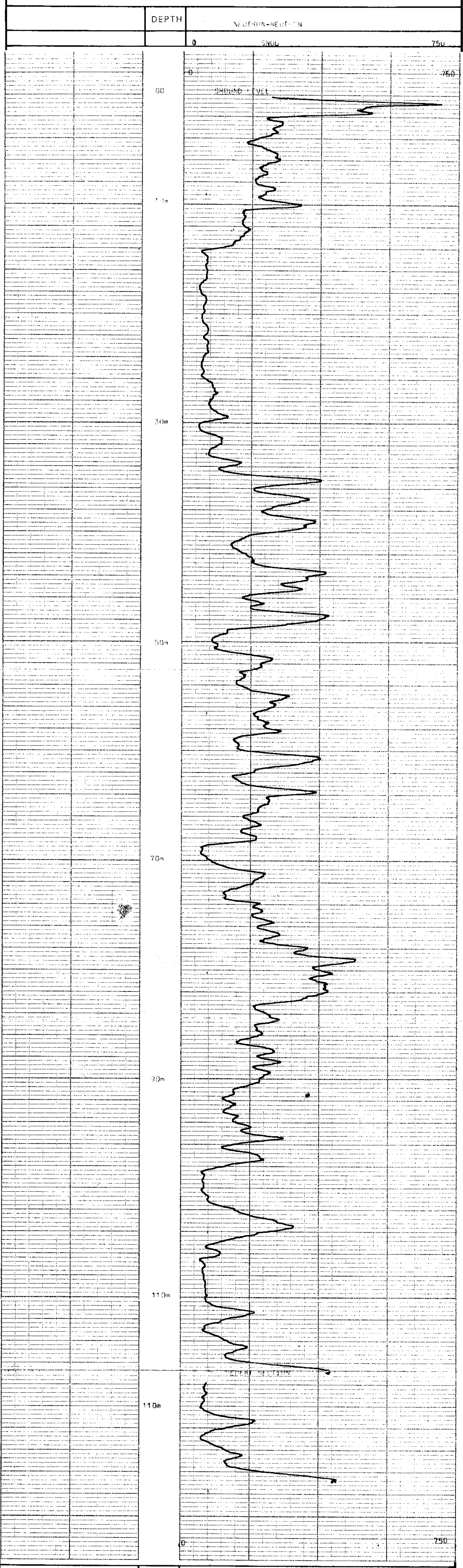
DEPTH SCALE 200.1
4 OF 4 LOGS

BOREHOLE DATA REFER TO 11-M-107-V LOG
OPERATION DATA REFER TO " LOG

EQUIPMENT AND RECORDING DATA
LOG TAPING PANEL GATE COEFF
LOG RECORD DIRECT SPEED T.C. NORM
TAPE SPEED REFLAY SECS .82
N-M 1 1m/m 2 1m/m 2
SONDE 2024

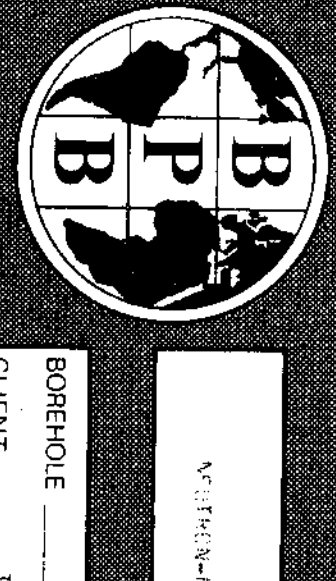
REMARKS
117m
117m
117m
117m

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BOREHOLE 32-31
CLIENT Tech Corp

AREA Burnt River
COUNTRY Canada



APPROXIMATE LOCATION

BOREHOLE BR-37

CLIENT TECH-CON

AREA RUBEN ELVÉN

COUNTRY CHINA

DATE LOGGED 30/07/80

2 OF 4 LOGS

BOREHOLE DATA REFER TO 1144/80

OPERATION DATA REFER TO 1144/80

EQUIPMENT AND RECORDING DATA

LOGS

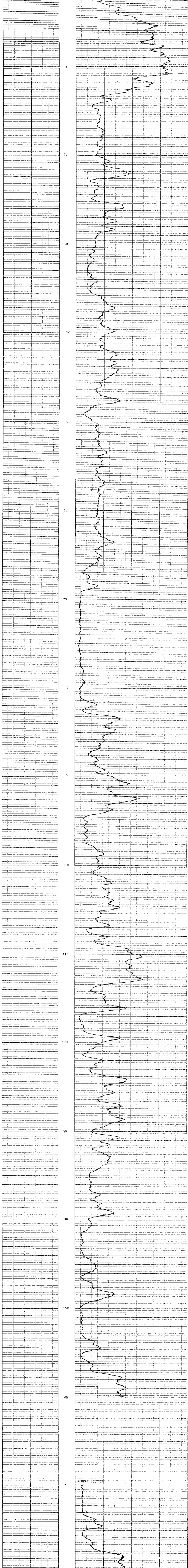
LOG SPEED 1.144/80

PANEL

LOG SPEED 1.144/80

REMARKS

489



BOREHOLE BR-37

CLIENT TECH-CON

AREA RUBEN ELVÉN

COUNTRY CHINA