

COAL LITHOLOGY LOG

LOG 104

BOREHOLE DATA

PERMANENTUM GROUND LEVEL
ELEVATION OF F.O. BRB
MAGNANIMITY GROUND LEVEL DRENEL
DEPTH REACHED 113 110.9
CASING SIZE 1 10.2 2 10.2
BIT SIZES 3 3.2 TO 7.0 4 4 TO 7.0
CASING SIZES 1 4 TO 10.2 2 4 TO 10.2

FLUID DATA

WATER 0.05
SOLIDS 0.05
GAS 0.05
VISCOSITY GROUND LEVEL
FROM BIT RESS. TEMP. BIT

SONDE TYPE GEMMA RAY
COAL COMBINATION GEMMA RAY
SONDE GEMMA RAY
LOG SUITE GEMMA RAY
GAMMA RAY GEMMA RAY
LS DENSITY GEMMA RAY
CALIPER GEMMA RAY

BOREHOLE TWB-D - 401
CLIENT CRONSWEST RESOURCES LTD.
AREA TELKWA B.C.
COUNTRY CANADA
DATE LOGGED 12/05/94
LOG # 104-1005

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT		LOG TAPED	TAPING		RECORD SPEED	DIRECTOR REPLAY	SPEED	TC SECS	PANEL	CAL COEFF	DEPTHS		SEAM LOG RUN
	SONDE	SOURCE		CALIBRATOR	LOG TAPED							RECORD SPEED	FROM	
GAMMA RAY	115		371	Y	9M/M	R	9M/M	1	1.56	112	0.0	112		
LS DENSITY			3996	Y	9M/M	R	9M/M	7.68		112	0.0	112		
CALIPER		SIDEWALL POSITION		Y	9M/M	R	9M/M	0.3		112	0.0	112		

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

FROM	TO	INTERVAL TOTAL
37 M	25 M	
33 M	10 M	
4 M	15 M	

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
510	DGN	1 : 100	
314	MCS	1 : 100	
221	DIP	1 : 100	
217	VERT	1 : 100	

REMARKS

Diameter and MCS logged from 75 M due to unstable borehole conditions.

START OP 14:20
FINISH OP 20:30

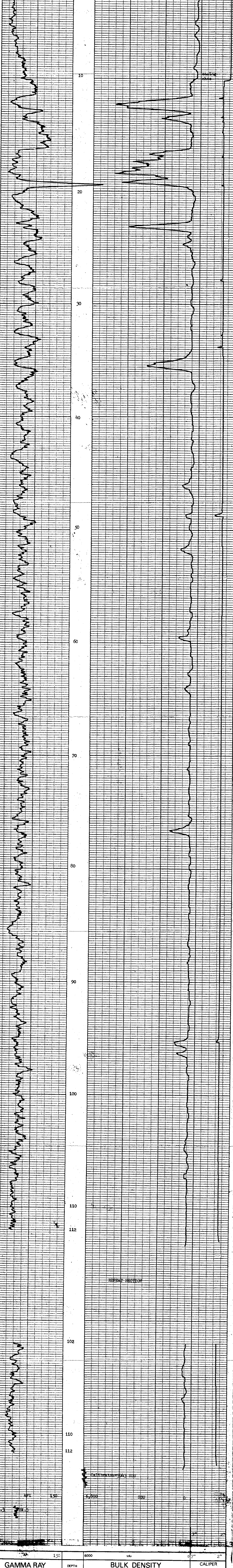
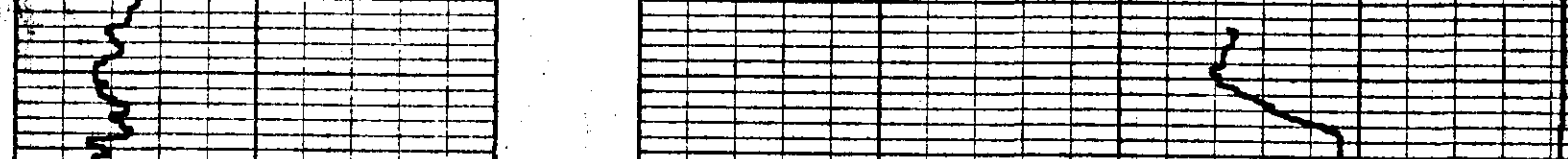
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 371	VALUE @ 5' DIAM	JIG CAL DATE 8/JUN/84	JIG VALUE 594.3	SOU @ 1.31 km ³	2 ms 424 cps
JIG MARK SHOWN AT ABOVE VALUE - X.3		JIG No 3996	SPAN 6000	NORM 7.68	7 ms 722 cps

GAMMA RAY DEPTH BULK DENSITY CALIPER

HOLE SIZE CORRECTION DATA



GAMMA RAY DEPTH BULK DENSITY CALIPER

BOREHOLE TWB-D - 401 **AREA** TELKWA B.C.
CLIENT CRONSWEST RESOURCES LTD. **COUNTRY** CANADA

COAL LITHOLOGY LOG



TK - Telkwa 84(3)B

240



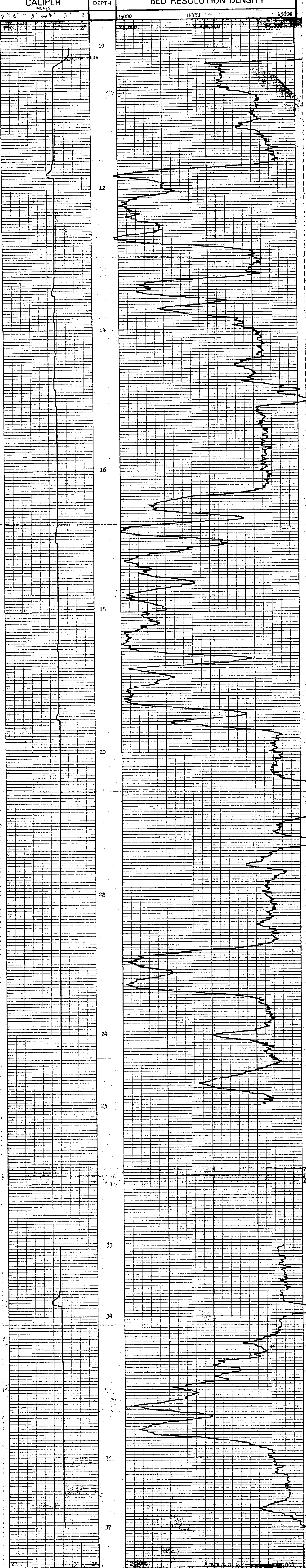
SEAM THICKNESS LOG

BOREHOLE TW84D - 401
 CLIENT CROWSNEST RESOURCES LTD.
 AREA TELKWA B.C.
 COUNTRY CANADA
 DATE LOGGED 8/11/84
 DEPTH SCALE 1:320
 2 OF 5 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA
 COAL COMBINATION SONDE
 LOG TAPPING PANEL
 LOG RECORD SPEED INCHES PER MINUTE
 CALIPER I 20/M R 20/M I 20/M
 BAR DENSTY X 20/M R 20/M I 20/M
 SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS
 FROM 37 M TO 23 M
 TO 33 M TO 10 M
 INTERVAL FROM 4 M TO 1.5 M
 INTERVAL TOTAL 4.19
 REMARKS

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 6 5 4 3 2	25000	SBRDU 15000



BOREHOLE TW84D - 401
 CLIENT CROWSNEST RESOURCES LTD.
 AREA TELKWA B.C.
 COUNTRY CANADA

SEAM THICKNESS LOG

TK-TELKWA 84(3) B 240



BOREHOLE TW84D - 401 (3)
 CLIENT CROWSNEST RESOURCES LTD.

AREA TELIKWA B.C.
 DEPTH SCALE 1 : 20
 COUNTRY CANADA
 DATE LOGGED 12/JUN/94
 3 OF 5 LOGS

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

COAL QUALITY LOG

LOG TAINING SIDEWALL POSITION
 LOG RECORD SPEED 1.5 NORM
 GAMMA RAY 237/3 3 1.50
 S DENSITY 237/3 1 7.68
 SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

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

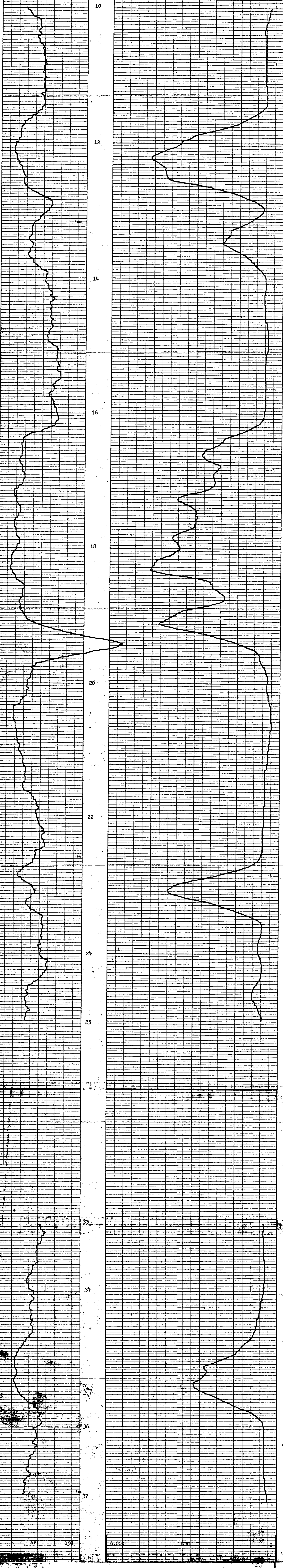
COAL QUALITY	LOG INTERVALS
FROM 37 M	25 M
TO 33 M	10 M
INTERVAL 4 M	4.5 M
TO	
INTERVAL	
TOTAL	1.9
REMARKS	

B P B COAL QUALITY LOG

DEPTH	COAL BULK DENSITY g/cm ³
GAMMA RAY	

HOLE SIZE CORRECTION DATA

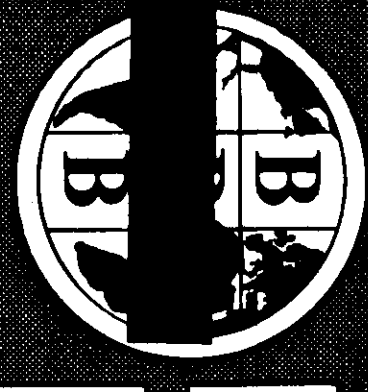
2"	1.25	1.3	1.35	1.4	1.45	1.5	1.55	1.6	1.7	1.8	1.9	2.0	2.2	2.4	3.0
4"															
6"															
8"															



0	API	150	6000	g/cm ³	8000
GAMMA RAY		COAL BULK DENSITY			
DEPTH					



BOREHOLE TW84D - 401
 CLIENT CROWSNEST RESOURCES LTD.
 AREA TELIKWA B.C.
 COUNTRY CANADA
COAL QUALITY LOG



The Telkwa 8403B 240

MULTI-CHANNEL SONIC LOG

BOREHOLE TW40 - 401
CLIENT CROWNSHIRT RESOURCES LTD.

AREA TELKWA B.C.
COUNTRY CANADA
DATE LOGGED 12/JUN/94

DEPTH SCALE 1 : 100
4 OF 5 LOGS

BOREHOLE DATA

PERMANENT DATA	GROUND LEVEL	
ELEVATION OF PD	BR	DRILLER
MEASUREMENTS FROM GROUND LEVEL	GROUND LEVEL	GROUND LEVEL
DEPTH REACHED	113	114.9
CASING SIZE	10.2	10.2
BIT SIZES	1 3.7 TO 7D	2 TO
	3 TO	TO
CASING SIZES	4 4.0 TO 10.2	2 TO

FLUID DATA

NATURE	SILVER GEL-X / H2O
S.G.	0.85
LEVEL	GROUND LEVEL
VISCOSITY	
Rim at mast temp	
BHT	

OPERATION DATA

FIRST READING	75 M
LAST READING	8.5 M
INTERVAL LOGGED	66.5 M
UNIT - TRUCK NO.	24 / 1216
ENGINEER	MACGREGOR / BRZ
WITNESS	

EQUIPMENT AND RECORDING DATA

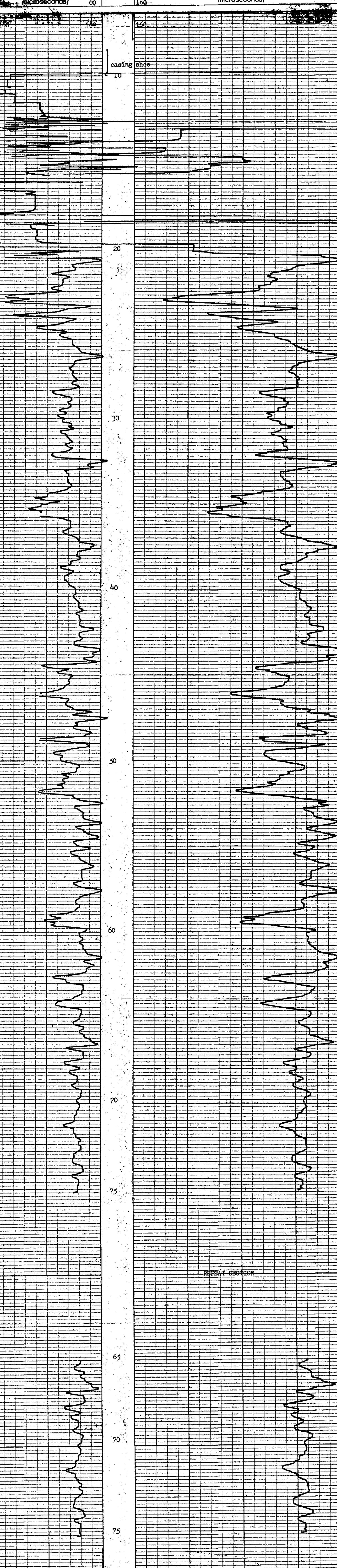
SONDE No. 314	CENTRALISERS SET TO 5" DIAMETER												
TRANSUCER ARRANGEMENT	GENERAL LOGGING	DETAIL LOGGING	DATA RECORDED	DATA DISPLAYED									
RECEIVER PAIR	SPACING R-R	SPACING T-R	SPEED	TC SECS	SPEED	TC SECS	FROM	TO	INTERVAL	FROM	TO	INTERVAL	
CHANNEL 1	R1 - R2	8"	24"	9M/M	.3			75	8.5	66.5	75	8.5	66.5
CHANNEL 2	R2 - R4	16"	32"	9M/M	.3			75	8.5	66.5	75	8.5	66.5
CHANNEL 3	R1 - R4	24"	24"	9M/M	.3			75	8.5	66.5			
CHANNEL 4	R3 - R4	8"	40"	9M/M	.2			75	8.5	66.5			

DETAIL ZONES DISPLAYED (SEE RELEVANT LOG)	INTERVAL TOTAL
FROM	
TO	
INTERVAL	

REMARKS

LOGGED FROM 75 METERS DUE TO UNSTABLE BOREHOLE CONDITIONS.

CHANNEL ONE	DEPTH	CHANNEL TWO
INTERVAL TRANSIT TIME		INTERVAL TRANSIT TIME
microseconds/ 60	160	microseconds/ 60



microseconds/ 60	DEPTH	160	microseconds/ 60
CHANNEL ONE			CHANNEL TWO

BOREHOLE TW40 - 401 AREA TELKWA B.C.
CLIENT CROWNSHIRT RESOURCES LTD. COUNTRY CANADA

MC SONIC LOG



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GAMMA RAY AND POROSITY LOG
 10 A

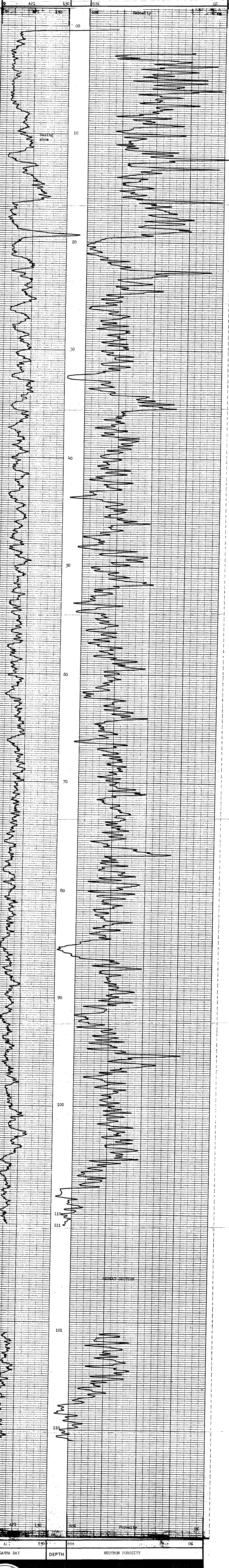
BOREHOLE TW84D - 401 (5)
 CLIENT CROWNEST RESOURCES LTD.

AREA TELKWA B.C.
 COUNTRY CANADA
 DATE LOGGED 12/04/94
 5.0F-5.10SS

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

LOG	TAPING	PANEL	CORE
LOG	LOG	LOG	LOG
LOG	LOG	LOG	LOG
LOG	LOG	LOG	LOG
LOG	LOG	LOG	LOG
LOG	LOG	LOG	LOG

REMARKS



GAMMA RAY	DEPTH	NEUTRON POROSITY
API 150	60%	0%



BOREHOLE TW84D - 401
 CLIENT CROWNEST RESOURCES LTD.
 AREA TELKWA B.C.
 COUNTRY CANADA



DIPMETER ANALYSIS

240

TK-TELKWA

84133B

CLIENT _____
BOREHOLE _____
AREA _____
COUNTRY _____

CROWS NEST RESOURCES
TW84D-401 (6)
TELKWA, B.C.
CANADA

DATE LOGGED.....12 JUN-84
DATE PROCESSED..16-JUL-84



COMMENTS.....

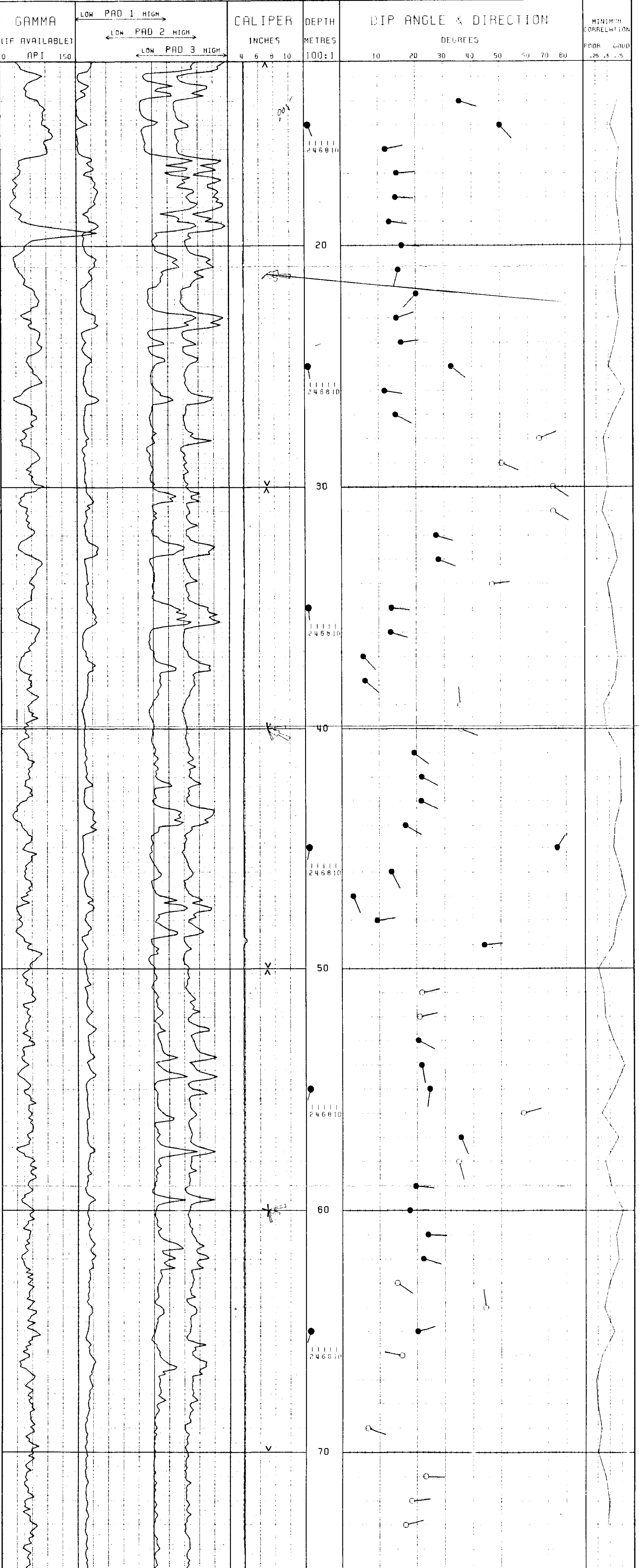
INTERPRETATION PARAMETERS

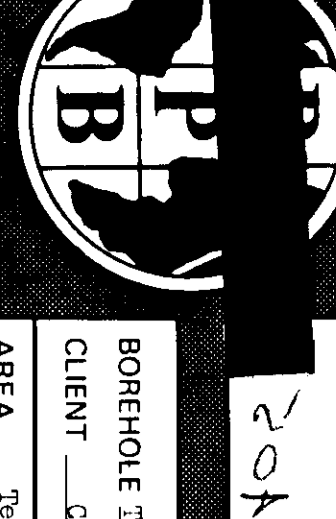
STEP 1.00M. DECLINATION 26.0 EAST
INTERVAL 2.00M. DEPTH RANGE 12.36 - 75.00M.
SEARCH ANGLE 80. DATE PROCESSED 16-JUL-84

AVERAGE BOREHOLE DEVIATION & DIRECTION
ANNOTATED EVERY 10.0M.

LEGEND:
● GOOD (>0.5)
○ FAIR (>0.3)

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





Gamma Ray and
Long Spaced Density
201

BOREHOLE TR64D-402 0

CLIENT Crownstest Resources Ltd.

AREA Telkwa B.C. DEPTH SCALE 1 to 100

COUNTRY Canada

DATE LOGGED 12/02/81 1 of 2 LOGS

BOREHOLE DATA

PHREASANT DIAPHRAGM Ground Level

ELEVATION OF P P n/a DRILLER

MEASUREMENTS FROM Ground Level Ground Level

DEPTH REACHED 1.7 158.67

CASING SHOE 1.7 13.7

BIT SIZES 1" TO 1.315" 2" TO

CASING SIZES 1 7/8" TO 4.125" 2" TO

FLUID DATA

NATURE Subst. Salt / H2O

S.G. 1.023

VISCOSITY Secund. Level

TEMP. n/a

PH I

OPERATION DATA

FIRST READING 1.57

LAST READING Ground Level

INTERVAL LOGGED 1.57

UNIT - TRUCK NO. 26 / 2416

ENGINEER MADOC / BTD

WITNESSES

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT	TAPING	PANEL	CAL	DEPTHS	
SONDE	SOURCE	LOG TAPID	RECORD DIRECT SCALED REFLECT	NORM	FROM TO INTERVAL	
Gamma	115	n/a	771	Y98	9m/m r 2m/m 1	1.65 157 0.0 157
ISD	115	S222	S226	Y98	9m/m r 2m/m 1	2.65 157 0.0 157

ADDITIONAL SONDES RUN

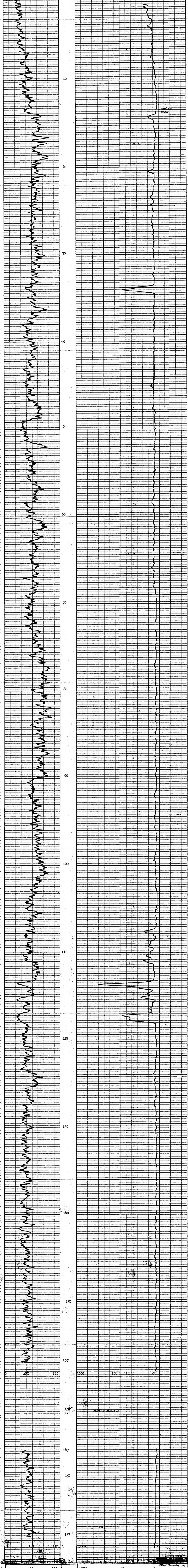
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
S10	DSN	1:100	

REMARKS

No open hole logs available due to unstable borehole conditions.

START OF 10:30

FINISH OF 12:30



GAMMA DEPTH LONG SPACED DENSITY

BOREHOLE TR64D-402

CLIENT Crownstest Resources Ltd.

AREA TELKWA B.C.

COUNTRY CANADA



TR - Talkwa 841318

240



COAL LITHOLOGY LOG

BOREHOLE DATA
 BOREHOLE: TRW4D-03
 CLIENT: Crown Nest Resources Ltd.
 AREA: Talkwa, B.C.
 COUNTRY: Canada
 DATE LOGGED: 13/Jan/04

BOREHOLE DATA
 PERMANENT DATA: Ground Level
 ELEMENTS OF ID: BFB
 DEPTH RECORDED: 137.5m
 CALIBRATED: 127.2m
 BIT SIZES: 3" TO 7", 2" TO 4", 1 1/2" TO 2"

FLUID DATA
 NATURE: Surface
 LEVEL: 0.0m
 VISCOSITY: 3.14
 SHIT: 3.14

OPERATION DATA
 LOG SUITE: GAMMA RAY, U.S. DENSI, CALIPER
 FIRST READING: 1:21:00
 LAST READING: 1:21:00
 DATE/TIME LOGGED: 13/Jan/04
 OPERATOR: J.C. B. B.

EQUIPMENT AND RECORDING DATA

LOG	SOURCE	EQUIPMENT	LOG TAPED	TAPPING SPEED	PANEL DIRECT REPLAY	PANEL SPEED SECS	CAL COEFF NORM	DEPTHS FROM	DEPTHS TO	SEAM LOG RUN	
GAMMA RAY	129	522		371	Y	9m/R	1	1.59	154	00	154
U.S. DENSI				3996	Y	9m/R	.3	7.17	154	00	154
CALIPER				7" .2"	Y	9m/R	.3	-	154	00	154

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

FROM	TO	INTERVAL	INTERVAL TOTAL
87.0m	71.0m	40.0m	15.0m
34.0m	67.0m	35.0m	11.0m
2.0m	4.0m	5.0m	4.0m

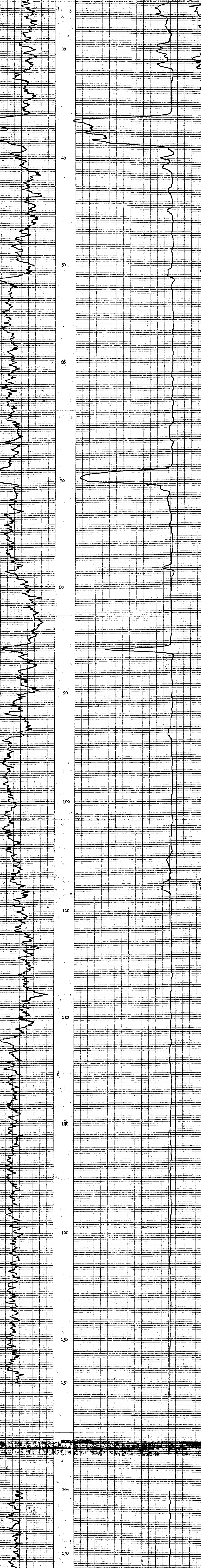
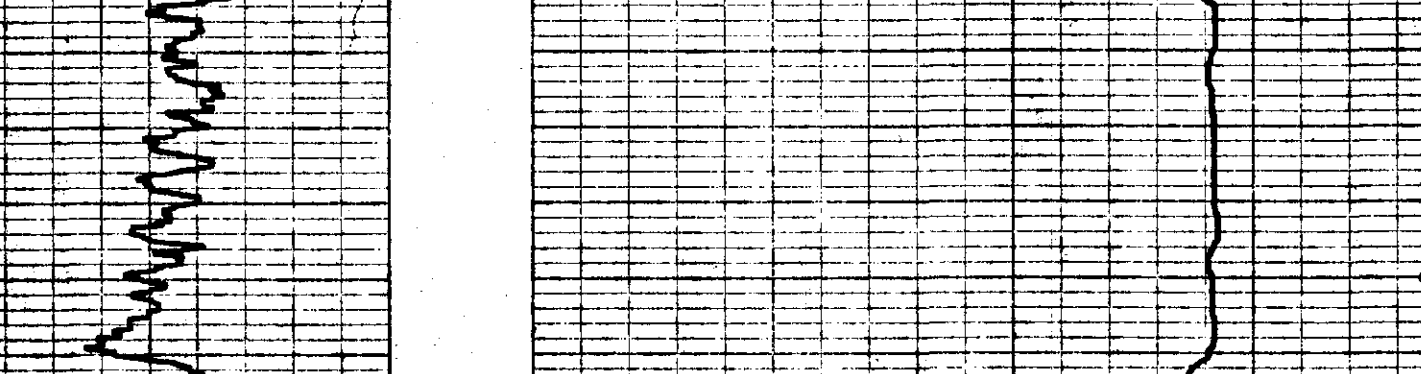
ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS
510	ISN	1:100		
201	Dip	1:100		
217	Vezt.	CDS		

BPB COAL LITHOLOGY LOG

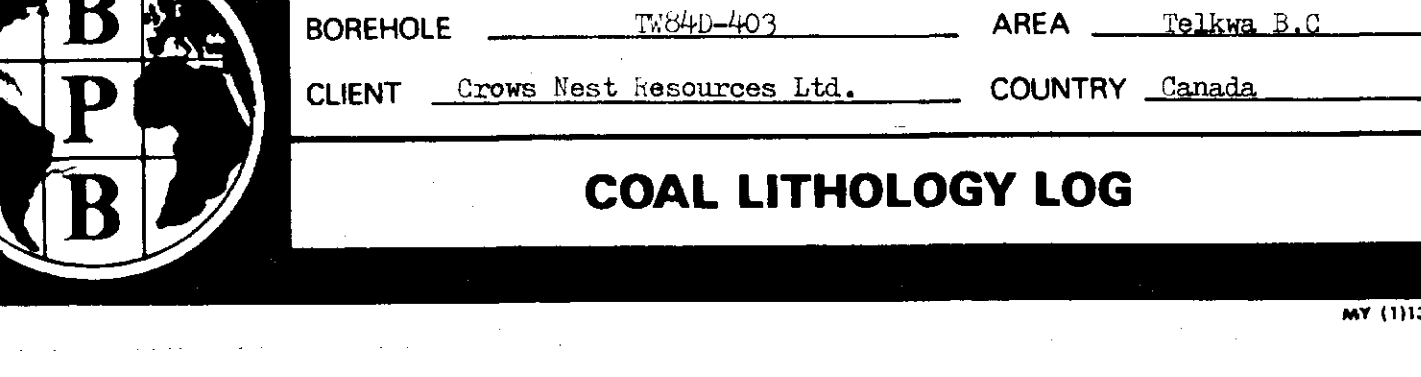
CALIBRATION DATA
 JIG No 371 VALUE: 24 @ 5" DIAM
 JIG MARK SHOWN AT ABOVE VALUE: X, 3
 JIG CAL DATE: 08/11/03
 JIG No 3996 SPAN: 6.000 NORM: 7.17
 SDU @ 1.32 g/cm³
 SDU @ 1.27 g/cm³

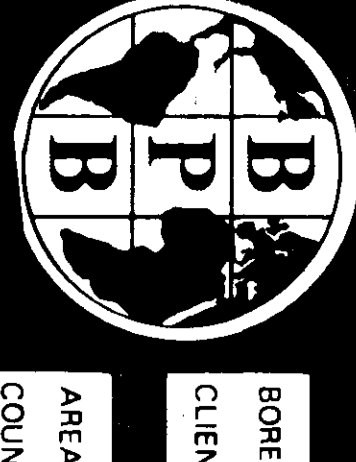
GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
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GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
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COAL LITHOLOGY LOG
 BOREHOLE: TRW4D-03
 CLIENT: Crown Nest Resources Ltd.
 AREA: Talkwa, B.C.
 COUNTRY: Canada





SEAM THICKNESS LOG

BOREHOLE TR84D-403 **2**
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa B.C. DEPTH SCALE 1:20
 COUNTRY Canada
 DATE LOGGED 3/24/84 2 of 4 LOGS

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

LOG TAPING PANEL SIDEWALL POSITION
 LOG NO. 1 SPEED 1 COEFF. 1
 TAPING SPEED 1 INCHES PER MINUTE
 CALIPER Y 2 INCHES R 2 INCHES 1 INCHES
 BR DENSTY Y 2 INCHES R 2 INCHES 3 INCHES 1 INCHES

SONDE TYPE _____
 COAL COMBINATION _____
 SONDE _____

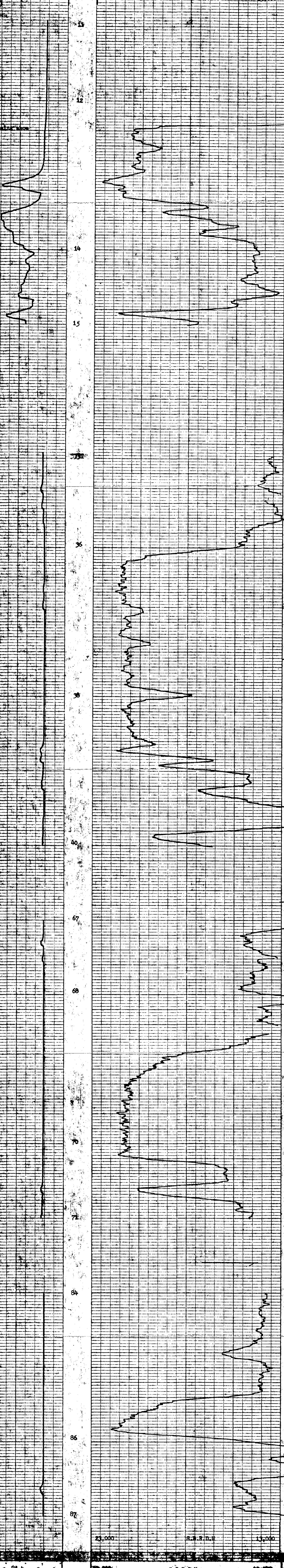
LOG SUITE _____
 CALIPER _____
 BR DENSITY _____

SEAM THICKNESS LOG INTERVALS

FROM	TO	INTERVAL	SEAM THICKNESS
87.0m	71.0m	16.0m	15.0m
84.0m	67.0m	17.0m	11.0m
81.0m	64.0m	17.0m	11.0m
78.0m	61.0m	17.0m	11.0m
75.0m	58.0m	17.0m	11.0m
72.0m	55.0m	17.0m	11.0m
69.0m	52.0m	17.0m	11.0m
66.0m	49.0m	17.0m	11.0m
63.0m	46.0m	17.0m	11.0m
60.0m	43.0m	17.0m	11.0m
57.0m	40.0m	17.0m	11.0m
54.0m	37.0m	17.0m	11.0m
51.0m	34.0m	17.0m	11.0m
48.0m	31.0m	17.0m	11.0m
45.0m	28.0m	17.0m	11.0m
42.0m	25.0m	17.0m	11.0m
39.0m	22.0m	17.0m	11.0m
36.0m	19.0m	17.0m	11.0m
33.0m	16.0m	17.0m	11.0m
30.0m	13.0m	17.0m	11.0m
27.0m	10.0m	17.0m	11.0m
24.0m	7.0m	17.0m	11.0m
21.0m	4.0m	17.0m	11.0m
18.0m	1.0m	17.0m	11.0m
15.0m	0.0m	15.0m	11.0m
TOTAL		116	

B PB SEAM THICKNESS LOG

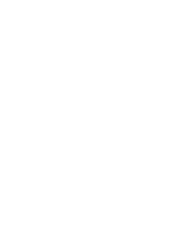
CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 6 5 dia 4 3 2	23,000	S.B.R.D.U 13,000



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 6 5 dia 4 3 2	23,000	S.B.R.D.U 13,000

BOREHOLE TR84D-403 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

SEAM THICKNESS LOG



TK- Talkwa 84(3) A 240



COAL QUALITY LOG

BOREHOLE TW34D-403 (3)
 CLIENT Crows Nest Resources Ltd.
 AREA Talkwa 3.0 DEPTH SCALE 1:10
 COUNTRY Canada
 DATE LOGGED 13/Jan/94 of LOGS

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

LOG TAPPING SIDEWALL POSITION
 LOG RECORDING SPEED 7.5 NORM
 GAMMA RAY 2 24/1 2 1.52
 S DENSITY Y 22/1 R 24/1 1 7.17

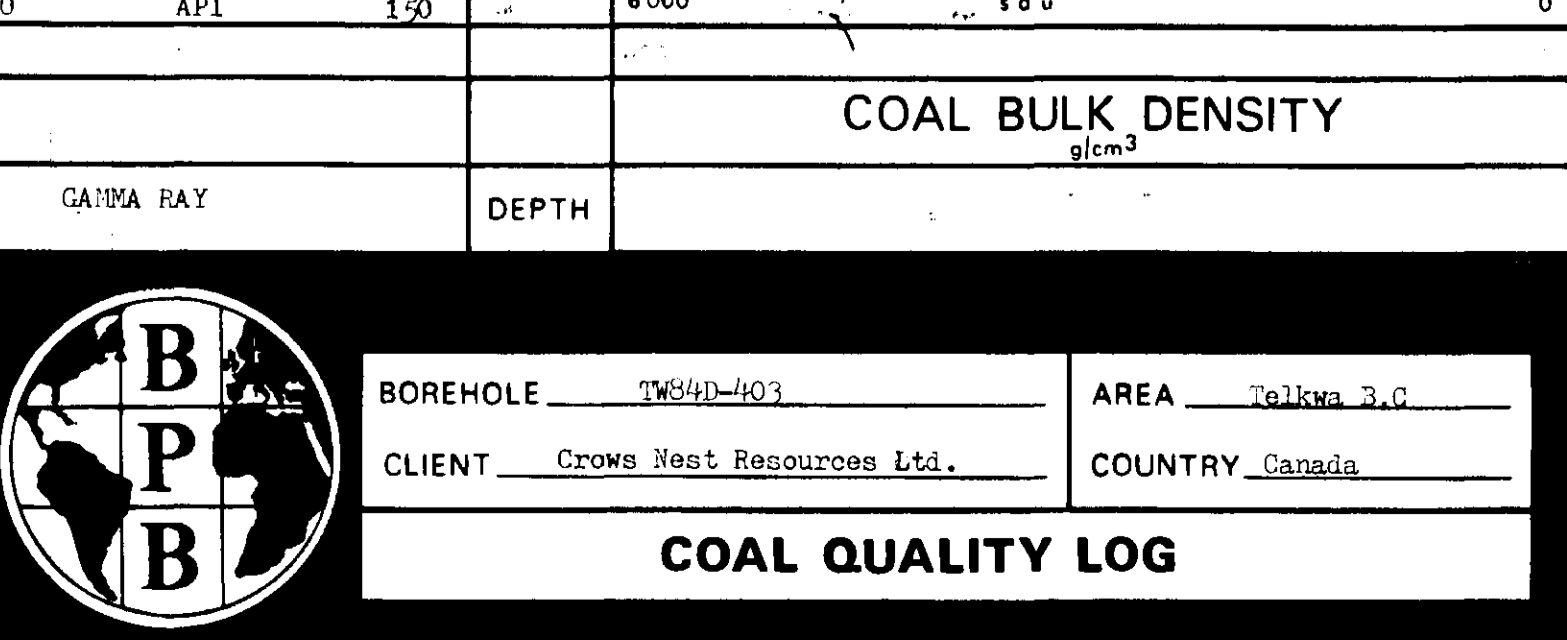
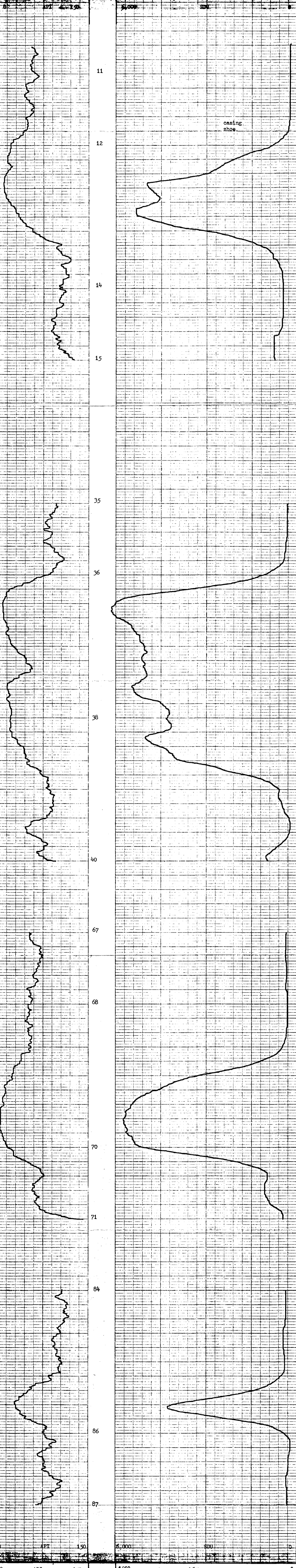
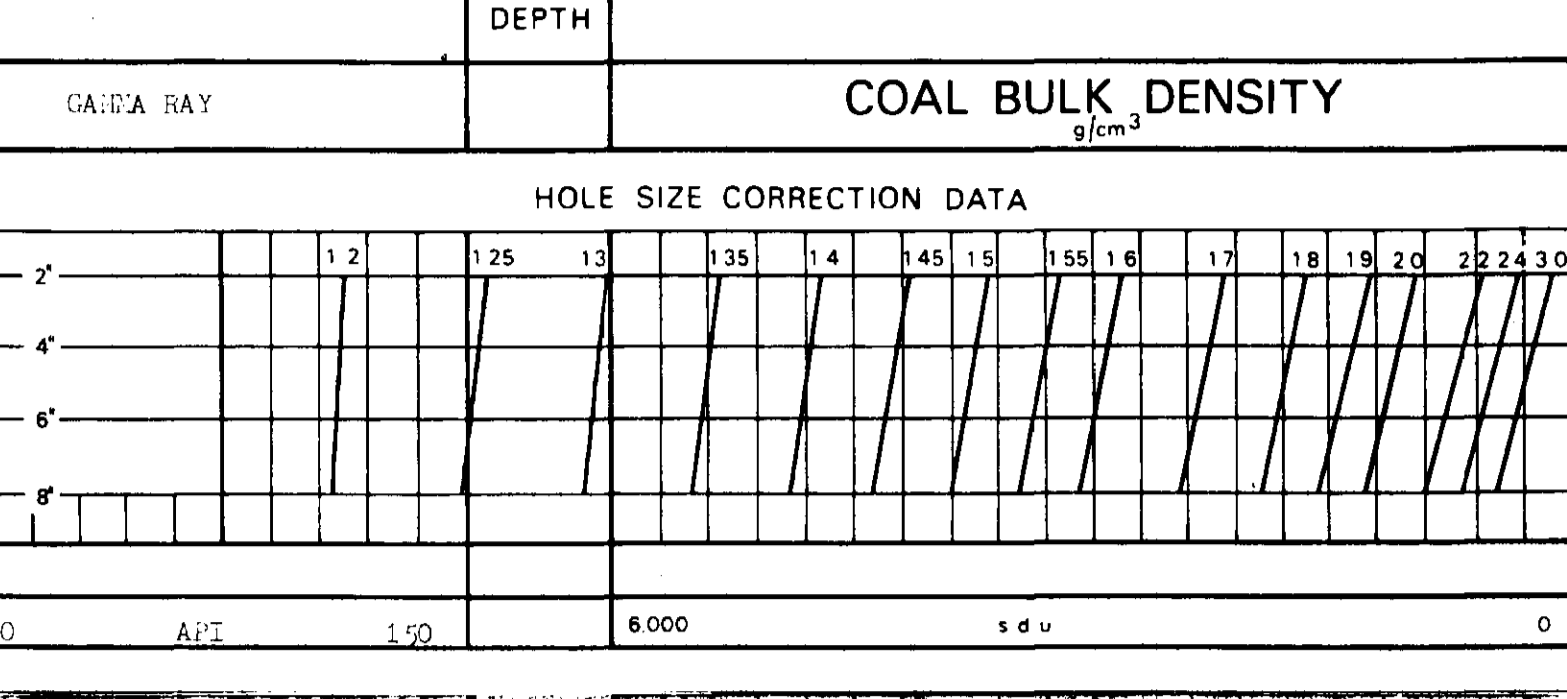
SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

SONDE TYPE:
 COAL COMBINATION SONDE
 COAL QUALITY LOG INTERVALS

LOG SUITE:
 GAMMA RAY
 L S DENSITY

FROM 7.0m TO 21.0m 40.0m 15.0m
 INTERVAL 3.0m 4.0m 5.0m 5.0m
 INTER VAL TOTAL
 REMARKS

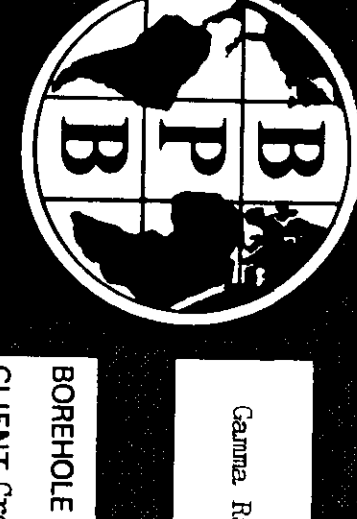
B P B COAL QUALITY LOG



BOREHOLE TW34D-403 AREA Talkwa 3.0
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

COAL QUALITY LOG





Ganma Ray & Porosity Log.

BOREHOLE TW64D-403

CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

DATE LOGGED 13/Jul/94

LOGS

BOREHOLE DATA

OPERATION DATA

EQUIPMENT AND RECORDING DATA

LOG

LOG

LOG

LOG

LOG

LOG

LOG

LOG

LOG

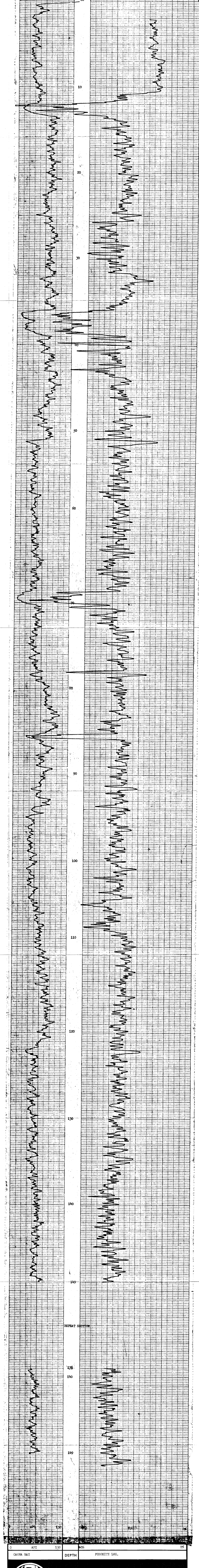
LOG

LOG

LOG

LOG

LOG



GANMA RAY	DEPTH	POROSITY LOG.
0	150	0%

BOREHOLE TW64D-403 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada





DIPMETER ANALYSIS

240

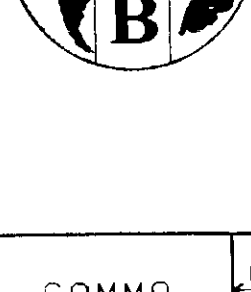
TK- Telkwa

84(3)P

CLIENT _____
BOREHOLE _____
AREA _____
COUNTRY _____

CROWS NEST RESOURCES
TW84D-403 ⑤
TELKWA, B.C.
CANADA

DATE LOGGED.....13-JUN-84
DATE PROCESSED..16-JUL-84



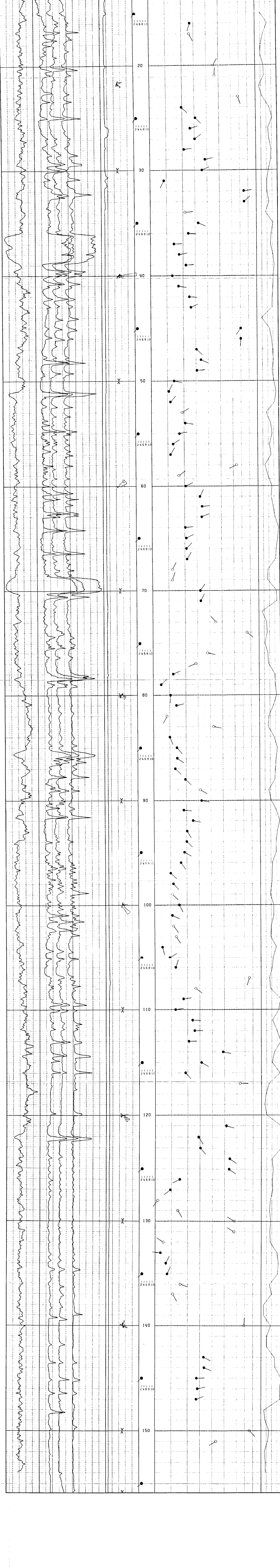
COMMENTS.....

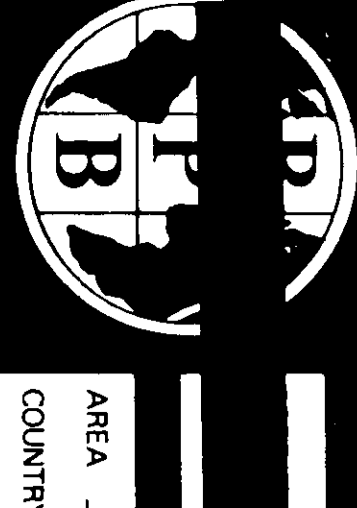
INTERPRETATION PARAMETERS

STEP 1.00M. DECLINATION 26.0 EAST
INTERVAL 2.00M. DEPTH RANGE 13.36 - 155.90M.
SEARCH ANGLE 80. DATE PROCESSED 16-JUL-84

AVERAGE BOREHOLE DEVIATION & DIRECTION
ANNOTATED EVERY 10.0M.
ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES.
.1" RADIUS PER DIP MARKER DISPLAYED

LEGEND:
● GOOD (>0.50)
○ POOR (<0.25)





SONDE TYPE COAL COMBINATION SONDE	LOG SUITE GAMMA RAY L.S DENSITY CALIPER
WELL-LOG ①	AREA Talkwa B.C. COUNTRY Canada
BOREHOLE DATA	DATE LOGGED 14/Jun/94
REMARKS	DEPTH SCALE 1:100 LOG 1 or 4 LOGS
FORMATION Ground Layer	DEPTH REACHED 99.0m CASING STOP 24.3m BIT SIZES 1 1/2" TO 2" TO 2 1/4" TO 2 5/8"
ELEVATION OF D 878	FLUID DATA
FLUID TYPE Slippert Gel-X/Falcker	
SG 0.83 Gms/cc	
LEVEL 0.0m	
VISCOSITY N/A	
PH N/A	
OPERATION DATA	
FIRST READING 03:06	
LAST READING 03:06	
INTERNAL LOGGED 93.0m	
API-TRUCK No V216/024	
ENGINEER MAOCC & BU	
WITNESSES	

EQUIPMENT AND RECORDING DATA										
COAL COMBINATION SONDE										
LOG	EQUIPMENT	TAPING	PANEL	CAL	DEPTHS			SEAM LOG RUN		
SONDE	SOURCE	RECORD SPEED	TC SECS	COEFF	FROM	TO	INTERVAL			
GAMMA RAY	371	Y	9m/m	D	9m/m	1	1.52	93	00	93
L.S DENSITY	3996	Y	9m/m	D	9m/m	.3	6.99	93	00	93
CALIPER	2" .7"	Y	9m/m	D	9m/m	.3	-	93	00	93

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)			
FROM	TO	INTERVAL	TOTAL
40.0m	29.0m	4.0m	8.0m

ADDITIONAL SONDES RUN				REMARKS	
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
510	Dsn	1:100		Start Op. 02:30	
217	Vert.	CDS		Finish Op. 09:15	
201	Dip	1:100			

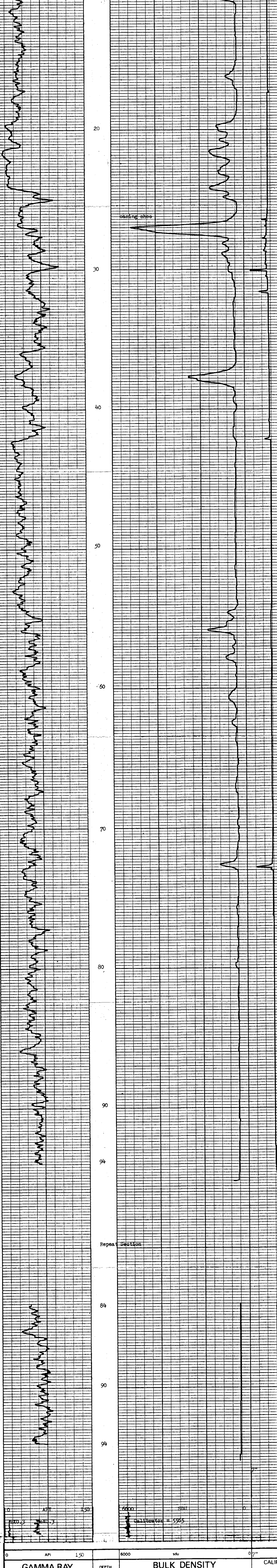
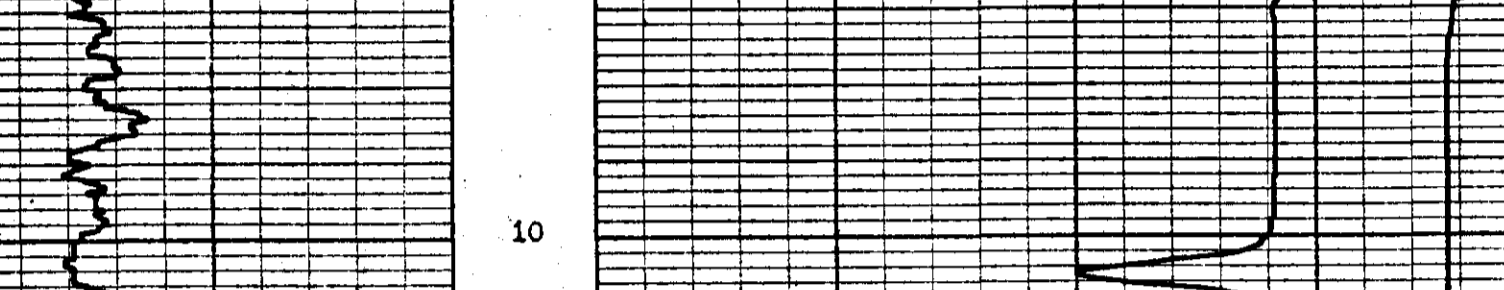
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 371	VALUE 5.4 @ 5" DIAM	JIG CAL DATE 08/Jun/94	JIG VALU 565	SDU @ 1.329cm ³	2" ms 531 cps
JIG MARK SHOWN AT ABOVE VALUE - X.3		JIG No 3996	SPAN 6,000	NORM 6.99	7" ms 934 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 TW840-404	AREA Talkwa B.C.
CLIENT Crows Nest Resources Ltd.	COUNTRY Canada

TK - Telkwa 84(3)A

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BOREHOLE TW84D-404 (2)
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
 COUNTRY Canada
 DATE LOGGED 14/Jun/84 2 of 4 LOGS

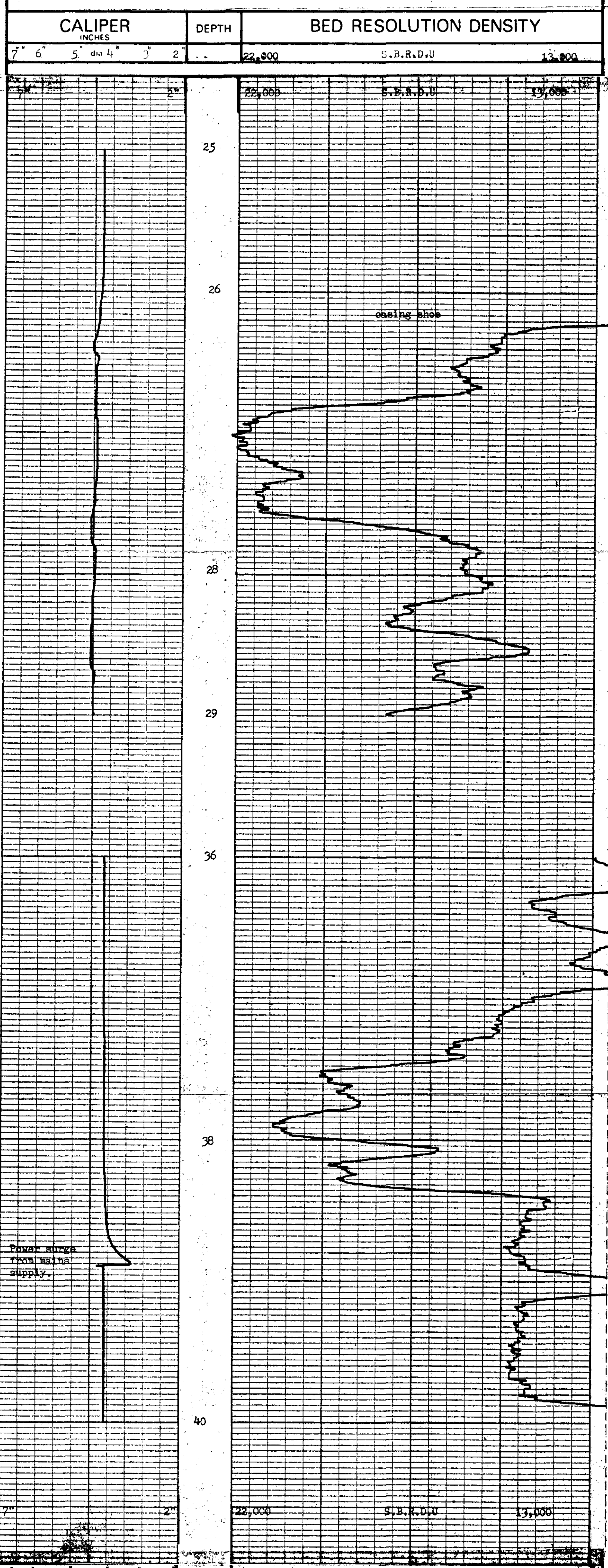
BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA

SEAM THICKNESS LOG
 LOG

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

FROM	40.0m	29.0m
TO	36.0m	25.0m
INTERVAL	4.0m	4.0m
FROM		
TO		
INTERVAL		
TOTAL		4.5

B P B SEAM THICKNESS LOG



CALIPER INCHES DEPTH BED RESOLUTION DENSITY

BOREHOLE TW84D-404 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

SEAM THICKNESS LOG



Tk-Telkwa 8413) A

240



BOREHOLE TW84D-404 (3)
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa, B.C. DEPTH SCALE 1:20
 COUNTRY Canada
 DATE LOGGED 14/Jan/84 3 of 4 LOGS

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

COAL COMBINATION SONDE

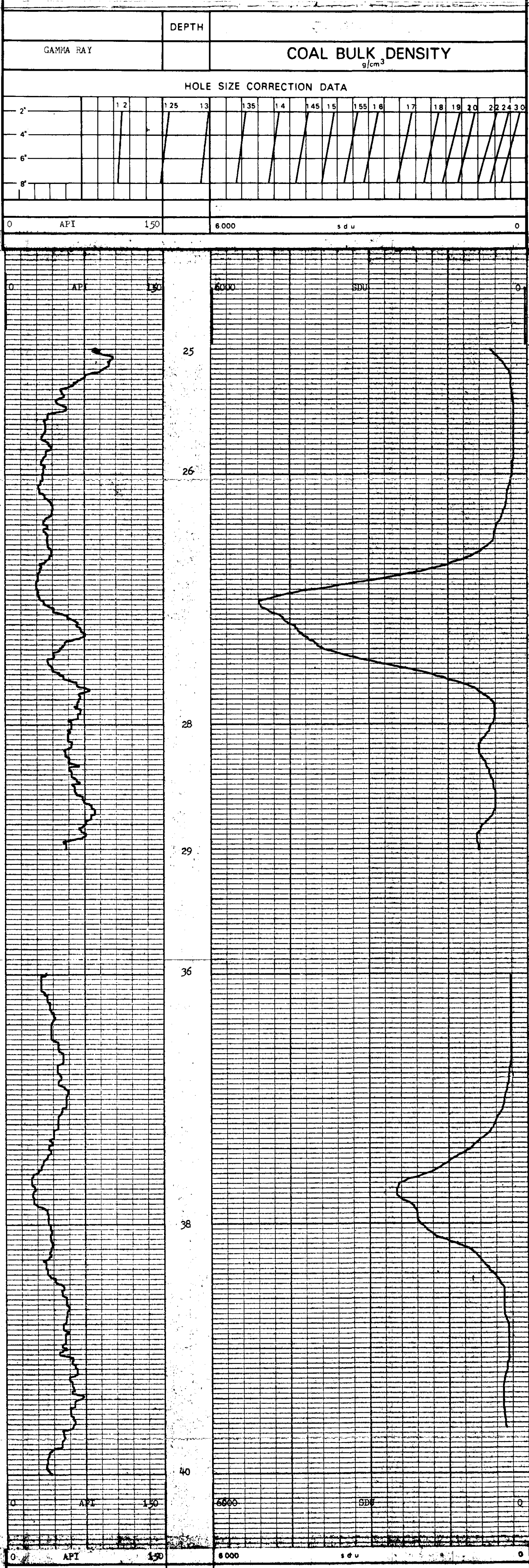
LOG TAPPING SIDEWALL POSITION
 LOG RECORDING SPEED PANEL CAT
 TAPED SPEED RELAY SECS. NORM. COEFF.
 GAMMA RAY Y 2m/m R 2m/m 2 - 1.52
 L.S. DENSITY Y 2m/m R 2m/m 1 6.99 -
 SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

SONDE TYPE
 COAL COMBINATION SONDE

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

COAL QUALITY	LOG INTERVALS
FROM	40.0m 29.0m
TO	36.0m 25.0m
INTERVAL	4.0m 4.0m
FROM	
TO	
INTERVAL	
REMARKS	

BPB COAL QUALITY LOG



BOREHOLE	<u>TW84D-404</u>	AREA	<u>Telkwa B.C.</u>
CLIENT	<u>Crows Nest Resources Ltd.</u>	COUNTRY	<u>Canada</u>
COAL QUALITY LOG			



TK-TELKWA 84(3)A

240



Gamma Ray & Porosity Log.
404

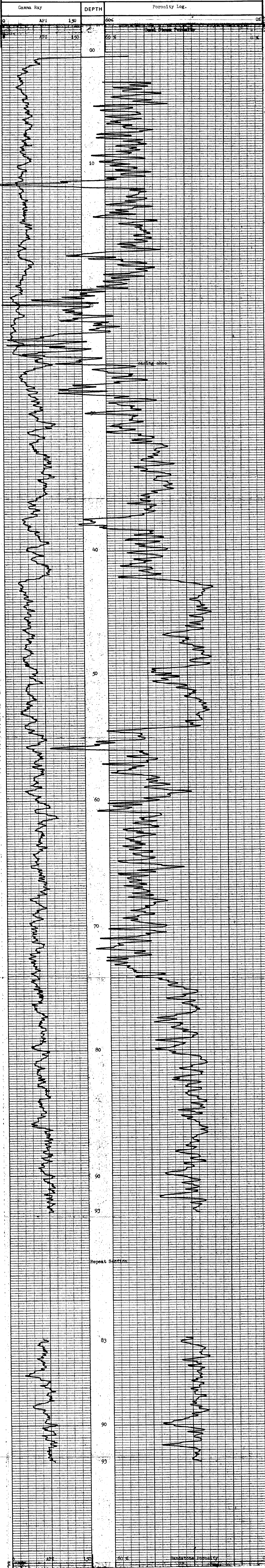
BOREHOLE TW84D-404
CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada
DATE LOGGED 14/Jan/84

BOREHOLE DATA REFERS TO Lithology LOG
OPERATION DATA REFERS TO Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPPING	PANEL	CAT
C/A	X	2m/m	D
ISN	Y	2m/m	D
SCALE	2510	1000	17202



BOREHOLE TW84D-404
CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada



DIPMETER ANALYSIS

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Tk-Telkwa

94(3)R

CLIENT _____
BOREHOLE _____
AREA _____
COUNTRY _____

CROWS NEST RESOURCES
TW84D-404 (5)
TELKWA, B.C.
CANADA

DATE LOGGED.....14-JUN-84
DATE PROCESSED..16-JUL-84



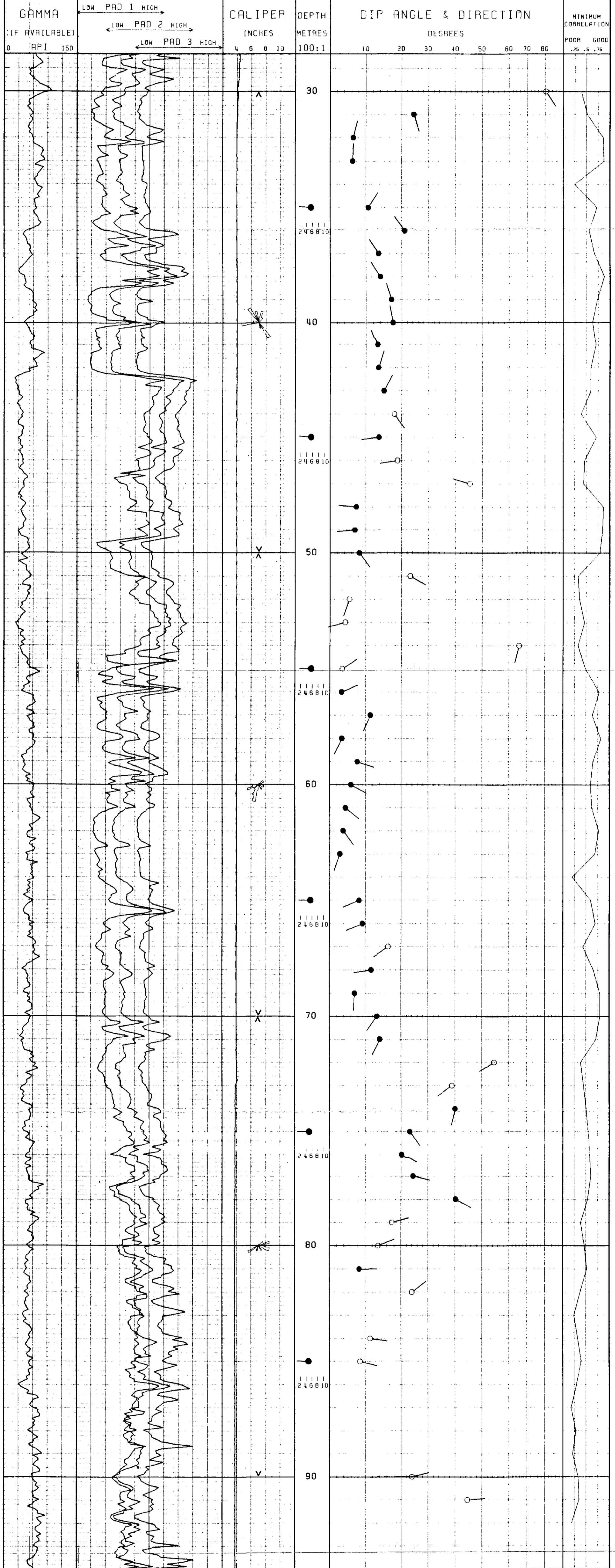
COMMENTS.....

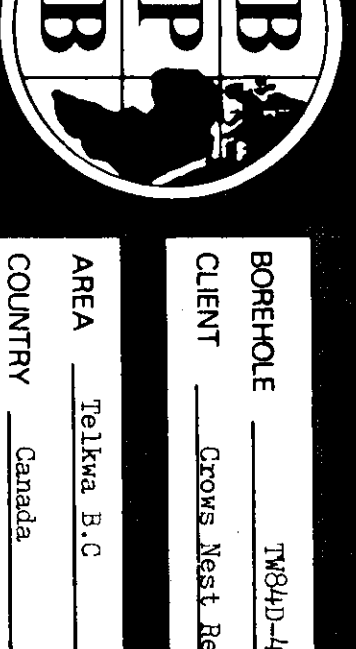
INTERPRETATION PARAMETERS

STEP 1.00M. DECLINATION 26.0 EAST
INTERVAL 2.00M. DEPTH RANGE 28.36 - 94.00M.
SEARCH ANGLE 80. DATE PROCESSED 16-JUL-84

AVERAGE BOREHOLE DEVIATION & DIRECTION ANNOTATED EVERY 10.0M.
ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES. .1" RADIUS PER DIP MARKER DISPLAYED

LEGEND:
● GOOD (>0.50)
○ FAIR (>0.30)





BOREROLE TW94D-405
CLIENT Crown Nest Resources Ltd.
AREA Tolksa B.C.
COUNTRY Canada
DATE LOGGED 15/Jun/99

COAL LITHOLOGY LOG
LOG

SONDE TYPE _____
COAL COMBINATION _____
SONDE _____
LOG SLATE _____
GAMMA RAY _____
SCALE _____
LOG _____

BOREHOLE DATA
 TEMPERATURE (m) _____
 TEMPERATURE (ft) _____
 TEMPERATURE (m) _____
 TEMPERATURE (ft) _____
 TEMPERATURE (m) _____
 TEMPERATURE (ft) _____
 TEMPERATURE (m) _____
 TEMPERATURE (ft) _____

EQUIPMENT AND RECORDING DATA

LOG	SONDE	EQUIPMENT	TAPPING RECORD SPEED	DIRECT REPLAY	PANEL SPEED	TC SECS	CAL COR	DEPTHS	SEAM LOG RUN
GAMMA RAY	115	5822	9m/m	D	9m/m	1	1.55	235 00	235
DENSITY		3996	9m/m	D	9m/m	3	7.64	235 00	235
CALIPER	7" .2"		9m/m	D	9m/m	3	-	235 00	235

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

FROM	TO	175.0m	146.0m	125.0m	99.0m	87.0m	62.0m	INTERVAL
TO	185.0m	153.0m	142.0m	114.0m	94.0m	75.0m	59.0m	TOTAL
INTERVAL	24.0m	23.0m	4.0m	11.0m	4.0m	11.0m	3.0m	80.0m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE	DETAIL LOG SCALE
510	TDR	1:100	
217	Vert. CBS		1:100
201	Dip		1:100

REMARKS
 Start Op. 05:14
 Finish Op. 11:15

BPB COAL LITHOLOGY LOG

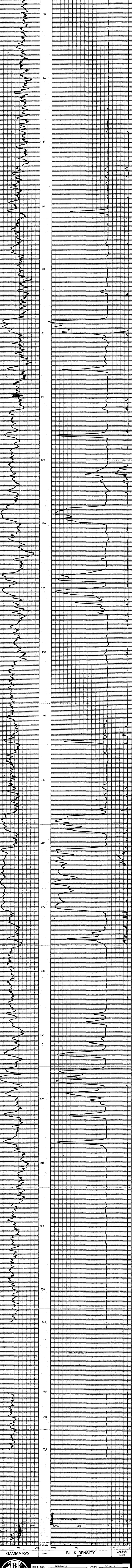
CALIBRATION DATA

JG No 371	VALUER@ 5" DIAM	JG CAL DATE 8/10/94	JG VALUE 5943	SOU @ 1.32 g/cm ³	2" ms 425 cps
JG MARK SHOWN AT ABOVE VALUE - X.3		JG No 3996	SPAN 6,000	NORM 899	7" ms 890 cps

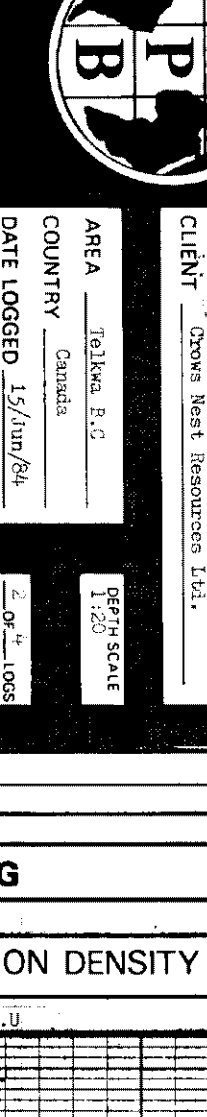
GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
			INCHES

HOLE SIZE CORRECTION DATA

AP	1.5"	1.25"	1.0"	0.75"	0.5"
0	1.50	1.25	1.00	0.75	0.50
6000	1.50	1.25	1.00	0.75	0.50
0	1.50	1.25	1.00	0.75	0.50



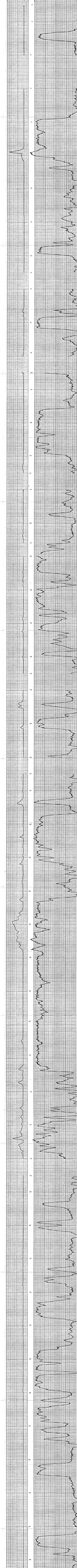
GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES



SEAM THICKNESS LOG
 OPERATIONAL DATA
 DATE LOGGED: 11/11/06
 AREA: 10-10-11
 CLIENT: Crown Refractories Ltd.
 COUNTRY: Canada

THICKNESS LOG
 OPERATIONAL DATA
 DATE LOGGED: 11/11/06
 AREA: 10-10-11
 CLIENT: Crown Refractories Ltd.
 COUNTRY: Canada

SEAM THICKNESS LOG
 OPERATIONAL DATA
 DATE LOGGED: 11/11/06
 AREA: 10-10-11
 CLIENT: Crown Refractories Ltd.
 COUNTRY: Canada



T-7/1/14 841319 240

BPB

BOREHOLE: 240-0000
CLIENT: 240
AREA: T-7/1/14
COUNTY: T-7/1/14
DATE LOGGED: 14/01/2014

BOREHOLE DATA: WITH 10 LITRES USE
OPERATION DATA: WITH 10 LITRES USE

LOG: 1.00
COAL COMBINATION: 100%
COAL QUALITY: 100%
LOG INTERVALS: 100%
GAMMA RAY: 100%
REMARKS:

QUALITY LOG

BOREHOLE DATA: WITH 10 LITRES USE
OPERATION DATA: WITH 10 LITRES USE

EQUIPMENT AND RECORDING DATA

BPB COAL QUALITY LOG

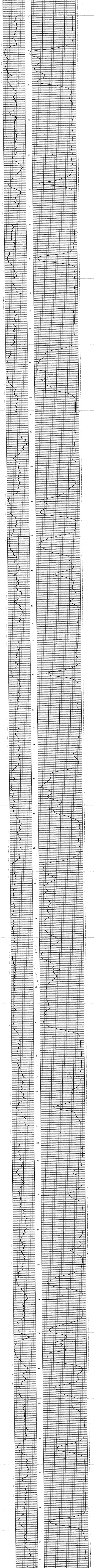
DEPTH: Gamma Ray

COAL BULK DENSITY

HOLE SIZE CORRECTION DATA

COAL QUALITY LOG INTERVALS

GAMMA RAY



BPB

BOREHOLE: 240-0000
CLIENT: 240
AREA: T-7/1/14
COUNTY: T-7/1/14
DATE LOGGED: 14/01/2014

BOREHOLE DATA: WITH 10 LITRES USE
OPERATION DATA: WITH 10 LITRES USE

EQUIPMENT AND RECORDING DATA

LOG: 1.00
COAL COMBINATION: 100%
COAL QUALITY: 100%
LOG INTERVALS: 100%
GAMMA RAY: 100%
REMARKS:

BPB COAL QUALITY LOG

DEPTH: Gamma Ray

COAL BULK DENSITY



Canada Kelly & Sandstone Porosity Log

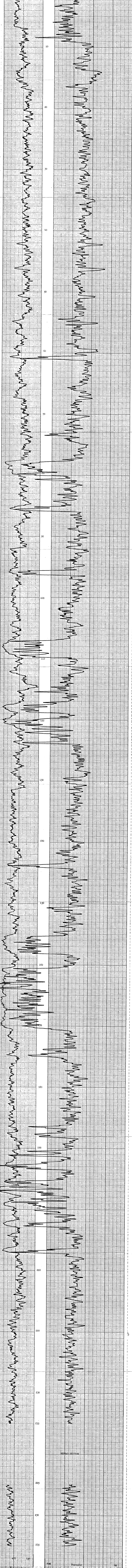
BOREHOLE TKW-605
CLIENT Crowe Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada
DATE LOGGED 5/2/07

BOREHOLE DATA
OPERATION DATA
EQUIPMENT AND RECORDING DATA

LOG TYPE SP
LOG SCALE 100
LOG RANGE 0-100
LOG START 0
LOG END 235

REMARKS





DIPMETER ANALYSIS

240

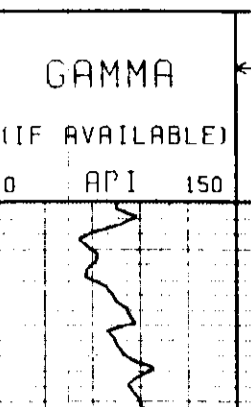
716-TELKWA

91(3) B

CLIENT _____
 BOREHOLE _____
 AREA _____
 COUNTRY _____

CROWS NEST RESOURCES
 TW84D-405 (5)
 TELKWA, B.C.
 CANADA

DATE LOGGED.....15-JUN-84
 DATE PROCESSED..16-JUL-84



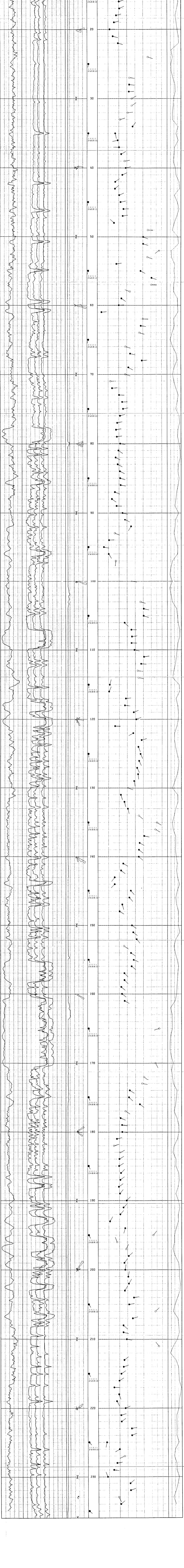
COMMENTS.....

INTERPRETATION PARAMETERS

STEP 1.00M. DECLINATION 26.0 EAST
 INTERVAL 2.00M. DEPTH RANGE 10.36 - 236.00M.
 SEARCH ANGLE 80. DATE PROCESSED 16-JUL-84

AVERAGE BOREHOLE DEVIATION 4.0 DIRECTION
 INDICATED EVERY 10.0M.
 ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES.
 .1" RADIUS PER DIP MARKER DISPLAYED

LEGEND:
 ● GOOD (1.0-5.0)
 ○ FAIR (5.0-30)





COAL LITHOLOGY LOG

AREA: TELKWA B.C. DEPTH SCALE: 1:100
 COUNTRY: Canada DATE LOGGED: 15/Jan/94 LOGS: 1 of 2

BOREHOLE DATA

REMANENTIAL: (Original Level)
 ELEVATION OF P.O.: BRG: CALIBER:
 MASS RAN/STATION: 5.1: C.I.: 1.2m
 DEPTH REACHED: 93.0m C.I.: 1.2m
 CASING SIZE: 16.0m I.O.: 1.0m
 BIT SIZES: 1 3 1/2" TO 3" 2 4" TO 3 1/2" 3 4" TO 3" 4 4" TO 3 1/2" 5 4" TO 3 1/2"

FLUID DATA

NATURE: Sweet, Gal. V. Water
 S.G.: 0.83 GMS/CC.
 LEVEL: 8.0m
 VISCOSITY: V/A
 BIT at mass temp: V/A
 B-T: V/A

OPERATION DATA

FIRST READING: 31.0m
 LAST READING: 00.0m
 INTERVAL LOGGED: 31.0m
 UNIT TRACK NO: V216/02H
 ENGINEER: MCGIBB & SH
 WITNESS:

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			LOG TAPED	TAPING RECORD SPEED	DIRECT OF REPLAY	SPEED	PANEL TC SECS	CAL COEFF	DEPTHS		SEAM LOG RUN		
	SONDE	SOURCE	CALIBRATOR							FROM	TO		INTERVAL	
GAMMA RAY	115	5822			Y	9m/m	D	9m/m	1	-	1.61	81	00	81
L.S. DENSITY			371		Y	9m/m	D	9m/m	.3	7.73	-	81	00	81
CALIPER		SIDEWALL POSITION	7" .2"		Y	9m/m	D	9m/m	.3	-	-	81	00	81

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

FROM	TO	INTERVAL	SEAM LOG RUN
32.0m	27.0m	5.0m	
29.0m	20.0m	9.0m	
		3.0m	10

ADDITIONAL SONDES RUN:

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
510	D5N	1:100	
314	MGS	1:100	
221	Dip	1:100	
217	Vert.	ODS	

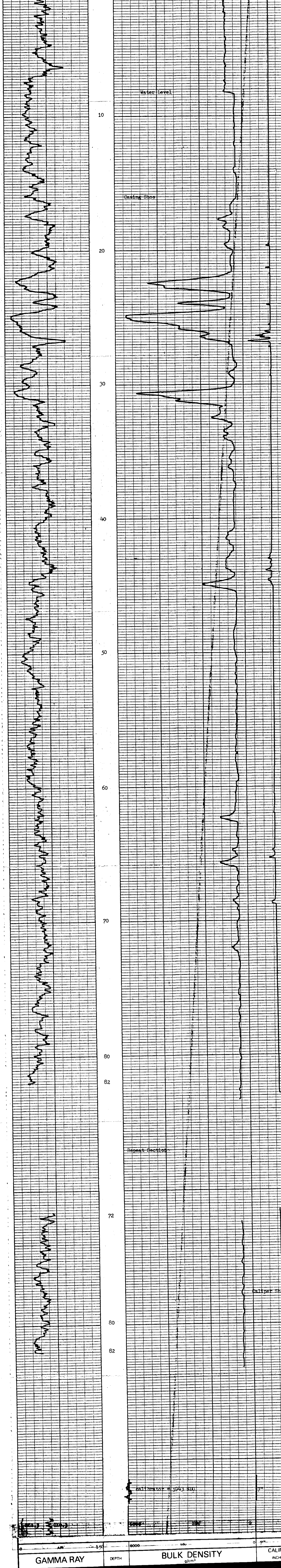
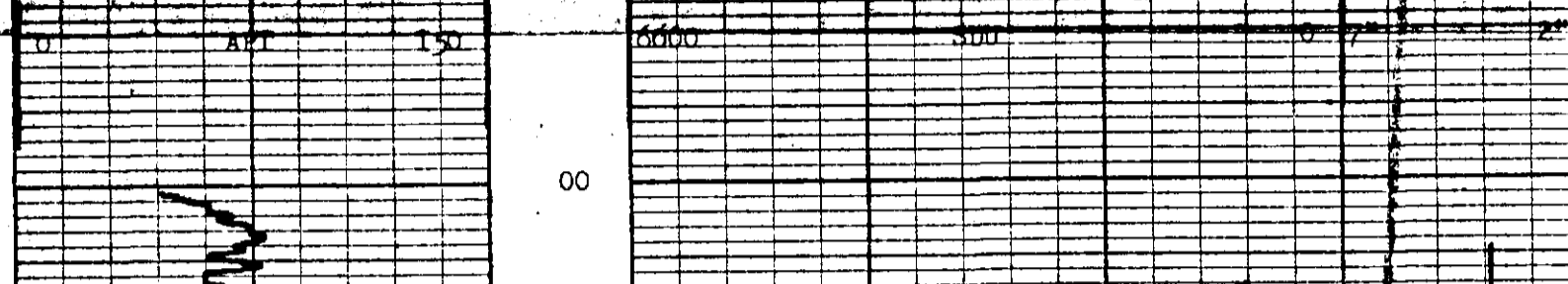
REMARKS: Start Op. 11:58
Finish Op. 16:00

BPB COAL LITHOLOGY LOG

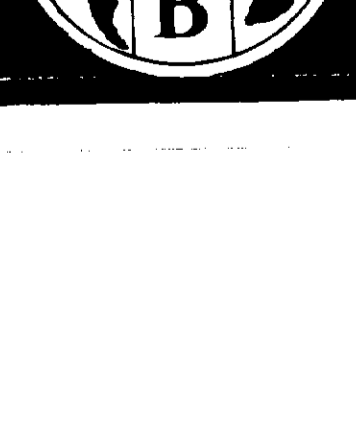
CALIBRATION DATA

JIG No 371	VALUATION @ 5' DIAM	JIG CAL DATED 08/Jan/94	JIG VALUE 3996	SQU @ 1.32g/cm ³	2" md#25	cps
JIG MARK SHOWN AT ABOVE VALUE - X.3		JIG No 3996	SPAN 6,000	NORM 7.73	7" md#90	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: T84D-406 AREA: Telkwa B.C.
 CLIENT: Crows Nest Resources Ltd. COUNTRY: Canada

COAL LITHOLOGY LOG

TK - Telkwa 84(3) A

2110



SEAM THICKNESS LOG

BOREHOLE TW84D-406 (2)
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa B.C.
 COUNTRY Canada
 DATE LOGGED 15/Jun/84 2 of 5 LOGS
 DEPTH SCALE 1:20

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 DIRECT PANEL COFF
 LABEL SPEED HERE LAY SPEED SCS NORM
 CALIPER I 2m/m H 2m/m I -
 BR DENSITY Y 2m/m H 2m/m I 3.7-3.5

SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

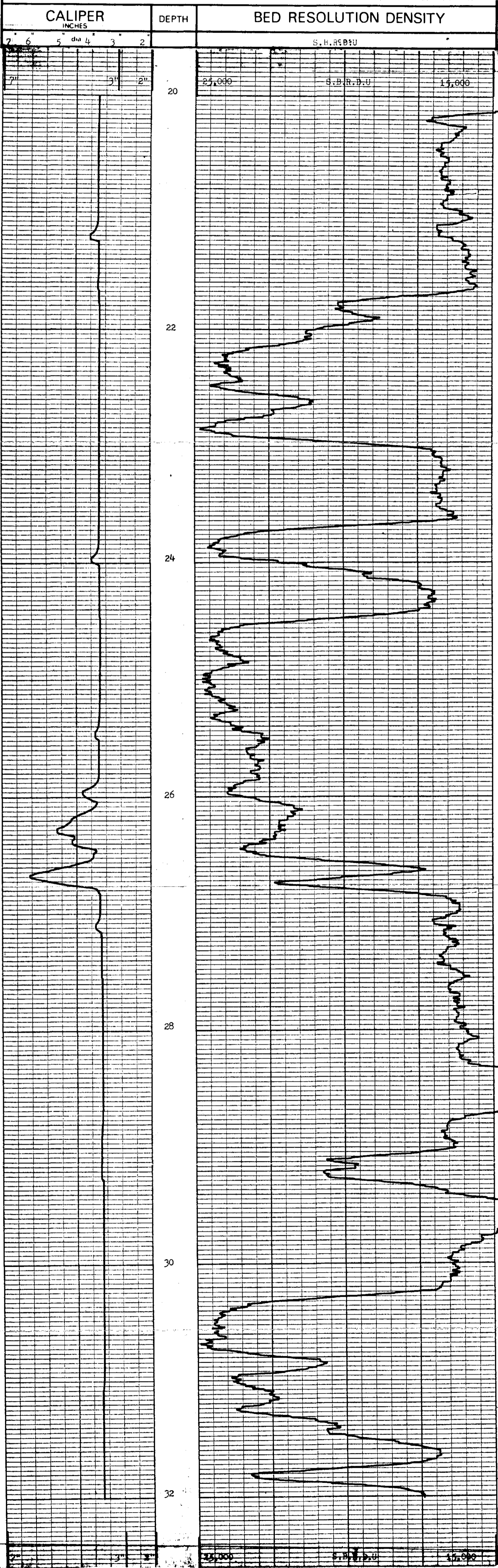
SEAM THICKNESS LOG INTERVALS

SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 CALIPER
 BR. DENSITY

FROM 32.0m 27.0m
 TO 29.0m 20.0m
 INTERNAL 3.0m 7.0m
 FROM
 TO
 INTERNAL
 TOTAL 11.0
 REMARKS

B P B SEAM THICKNESS LOG



CALIPER INCHES DEPTH BED RESOLUTION DENSITY

7 6 5 dia 4 3 2 S.B.R.D.U.

25,000 S.B.R.D.U. 14,000

20 22 24 26 28 30 32

25,000 S.B.R.D.U. 14,000

7 6 5 dia 4 3 2 S.B.R.D.U.

CALIPER INCHES DEPTH BED RESOLUTION DENSITY

BOREHOLE TW84D-406 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

SEAM THICKNESS LOG





COAL QUALITY LOG

BOREHOLE 1W54D-406 3
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa B.C. DEPTH SCALE 1:20
 COUNTRY Canada
 DATE LOGGED 15/Jan/84 3 of 5 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA
 COAL COMBINATION SONDE
 LOG TAPPING PANEL SIDEWALL POSITION
 LOG LABEL RECORDING SPEED T.C. NORM. COAL
 RAY Y 2m/m H 2m/m 2 - 1.01
 S DENSITY Y 2m/m R 2m/m 1 7.73 -

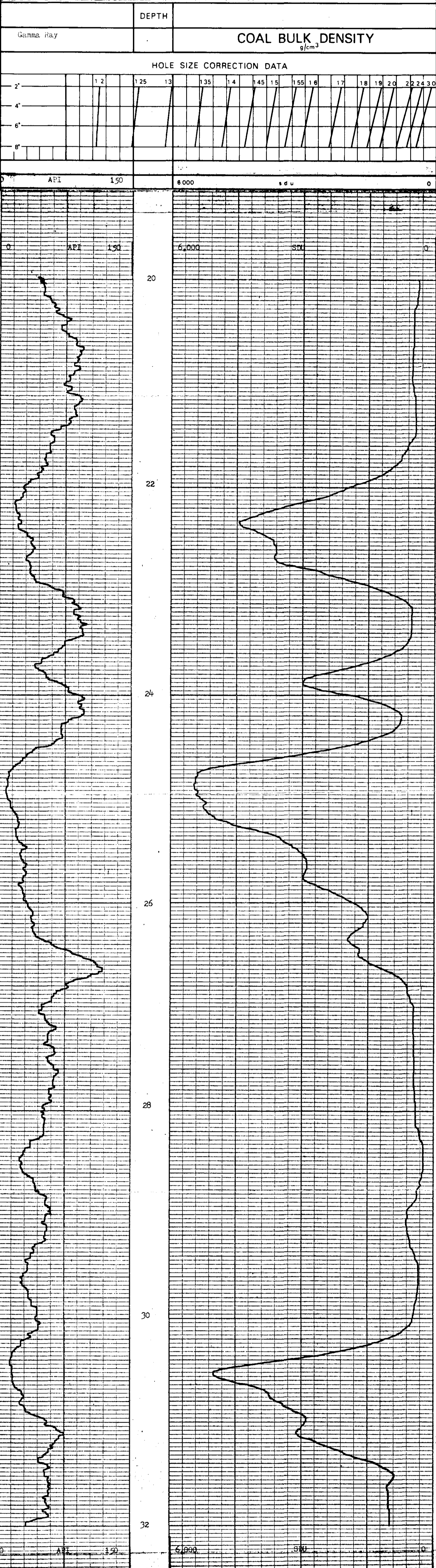
SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

COAL QUALITY LOG INTERVALS
 FROM 32.0m 27.0m
 TO 29.0m 20.0m
 INTERVAL 3.0m 7.0m

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

REMARKS

B P B COAL QUALITY LOG



0	API	150	6000	SDU	0
Gamma Ray	COAL BULK DENSITY (g/cm ³)				
DEPTH					



BOREHOLE 1W54D-406 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd.. COUNTRY Canada

COAL QUALITY LOG



MULTI-CHANNEL SONIC LOG

BOREHOLE TW41-406 (5)
 CLIENT Crowsnest Resources Ltd.
 AREA Telkwa B.C. DEPTH SCALE 1:100
 COUNTRY Canada DATE LOGGED 15/11/91 5 OF 5 LOGS

BOREHOLE DATA
 PERMANENT DATUM Ground Level
 ELEVATION OF P.D. BFB DRILLER G.L.
 MEASUREMENTS FROM G.L.
 DEPTH REACHED 83.0m
 CASING SHOE 16.0m
 CASING SIZE 1 3 1/2" TO 10 2 4 TO 16
 CASING SIZE 3 4" TO 16 2 4 TO 16

FLUID DATA
 NATURE Super Gel-Water
 S.G. 0.83 gms/cc.
 LEVEL 8.0m
 VISCOSITY N/A
 Rate of return N/A
 R.H.T. N/A

OPERATION DATA
 FIRST READING 82.0m
 LAST READING 14.0m
 INTERVAL LOGGED 68.0m
 UNIT - TRUCK No. V216/214
 ENGINEER MADOC & RT.
 WITNESS

EQUIPMENT AND RECORDING DATA

SONDE No. 314 CENTRALISERS SET TO 3" DIAMETER

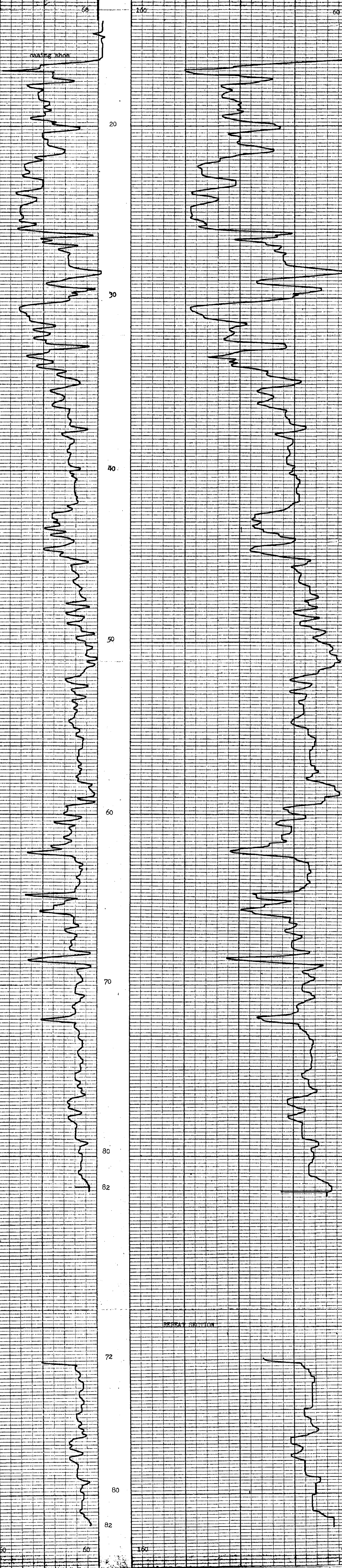
CHANNEL	TRANSDUCER ARRANGEMENT			GENERAL LOGGING		DETAIL LOGGING		DATA RECORDED			DATA DISPLAYED		
	RECEIVER PAIR	SPACING R-R	SPACING T-R	SPEED	TC SECS	SPEED	TC SECS	FROM	TO	INTERVAL	FROM	TO	INTERVAL
CHANNEL 1	R1 - R2	8"	24"	9m/m	.3			82	14	68	82	14	68
CHANNEL 2	R2 - R4	16"	32"	9m/m	.3			82	14	68	82	14	68
CHANNEL 3	R1 - R4	24"	24"	9m/m	.3			82	14	68			
CHANNEL 4	R3 - R4	8"	40"	9m/m	.3			82	14	68			

DETAIL ZONES DISPLAYED (SEE RELEVANT LOG)

FROM		INTERVAL TOTAL
TO		
INTERVAL		

REMARKS

CHANNEL ONE	DEPTH	CHANNEL TWO
INTERVAL TRANSIT TIME		INTERVAL TRANSIT TIME
160 microseconds/		60 microseconds/



160 microseconds/	DEPTH	60 microseconds/
CHANNEL ONE		CHANNEL TWO



BOREHOLE TW41-406 AREA Telkwa B.C.
 CLIENT Crowsnest Resources COUNTRY Canada

MC SONIC LOG



DIPMETER ANALYSIS

240

TK - Telkwa

94(3)A

CLIENT _____
BOREHOLE _____
AREA _____
COUNTRY _____

CROWS NEST RESOURCES
TW84D-406 (6)
TELKWA, B.C.
CANADA

DATE LOGGED.....15-JUN-84
DATE PROCESSED...16-JUL-84



COMMENTS.....

INTERPRETATION PARAMETERS

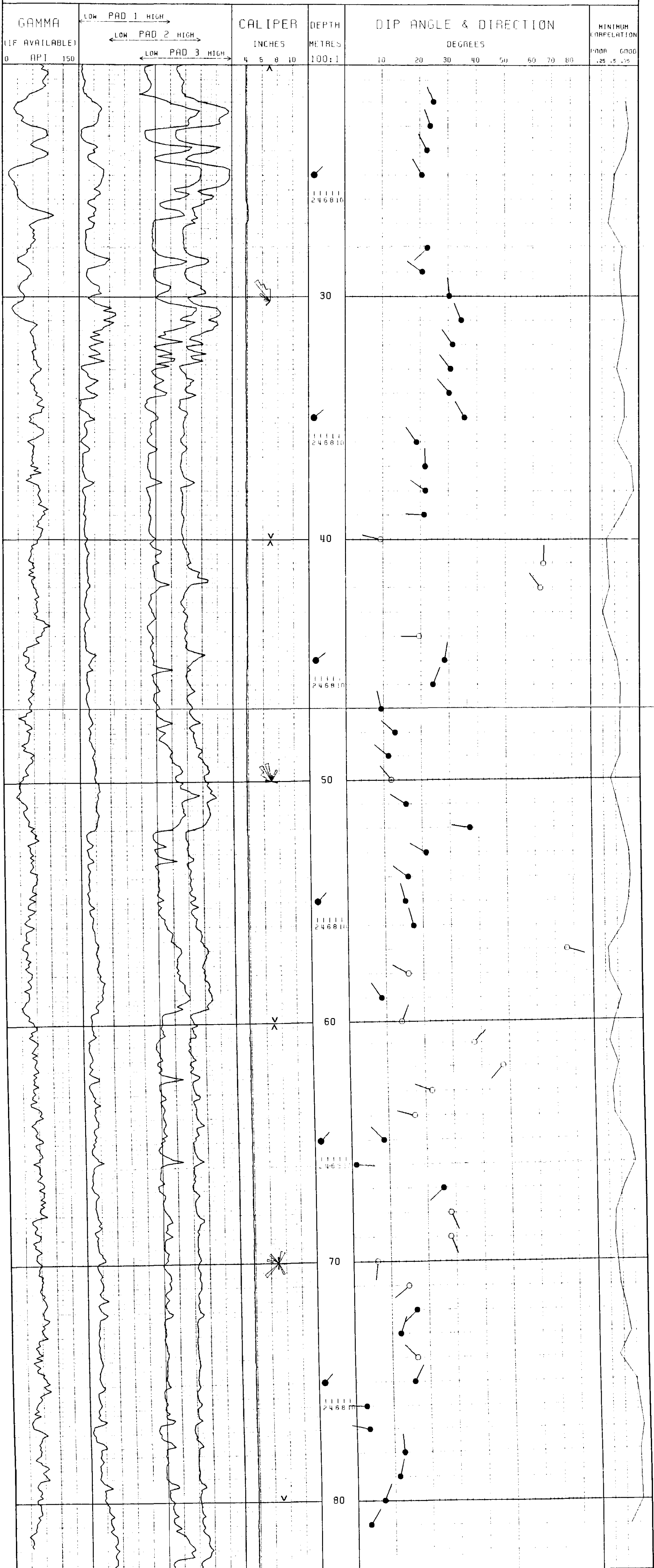
STEP 1.00M. DECLINATION 25.0 EAST
INTERVAL 2.00M. DEPTH RANGE 20.35 - 82.90M.
SEARCH ANGLE 80. DATE PROCESSED 16-JUL-84

AVERAGE BOREHOLE DEVIATION & DIRECTION ANNOTATED EVERY 10.0M.

LEGEND:

● GOOD (>0.50)
○ FAIR (>0.30)

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





SEAM THICKNESS LOG

BOREHOLE TW84D-407 (2)
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa B.C. DEPTH SCALE 1:20
 COUNTRY Canada
 DATE LOGGED 16/Jan/84 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 RECORD	RECT	SPEED	NORM
CALIPER	1	2m/m	1
BR DENSITY	Y	2m/m	.3
			7.85

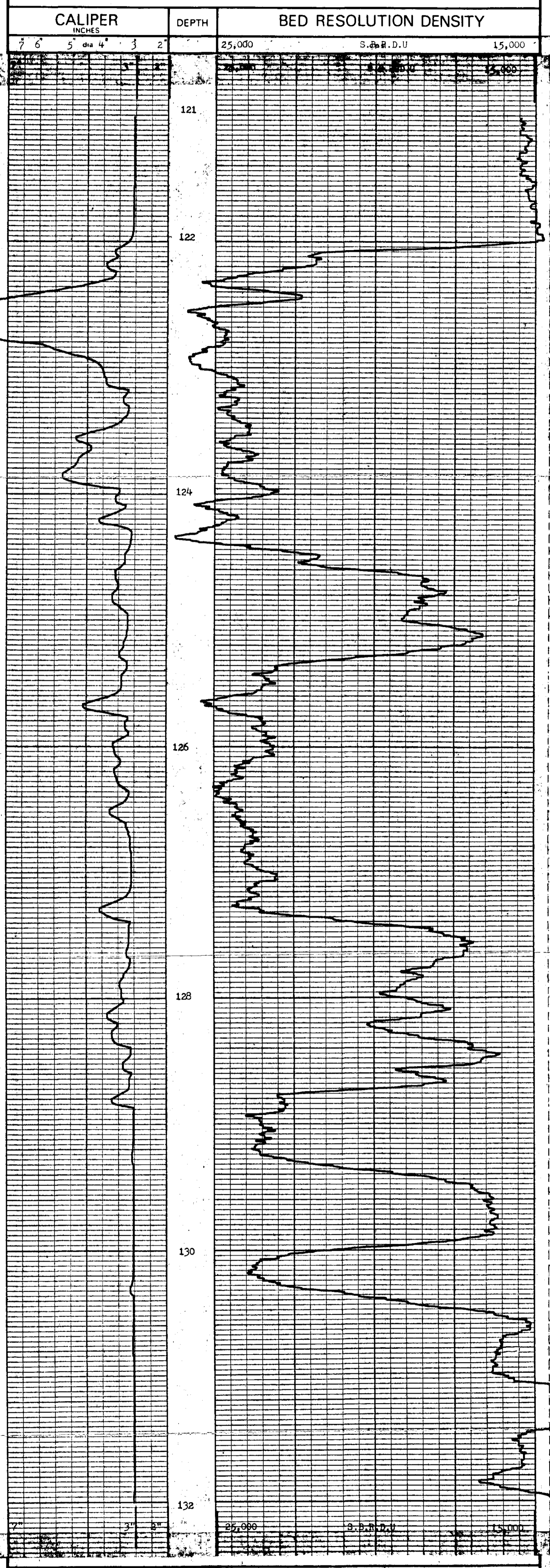
SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

FROM	132.0m
TO	121.0m
INTERVAL	11.0m
FROM	
TO	
INTERVAL	
TOTAL	11

LOG SUITE:
 CALIPER
 BR DENSITY

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 6 5 dia 4 3 2	25,000	S.P.R.D.U
		15,000

BOREHOLE TW84D-407 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

SEAM THICKNESS LOG



Tk - Telkwa 84(3) B 240



BOREHOLE TWB40-407 (3)
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C. DEPTH SCALE 1:20
 COUNTRY Canada
 DATE LOGGED 16/Jun/84 3 of 4 LOGS

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

COAL QUALITY LOG

SONDE TYPE:
 COAL COMBINATION SONDE

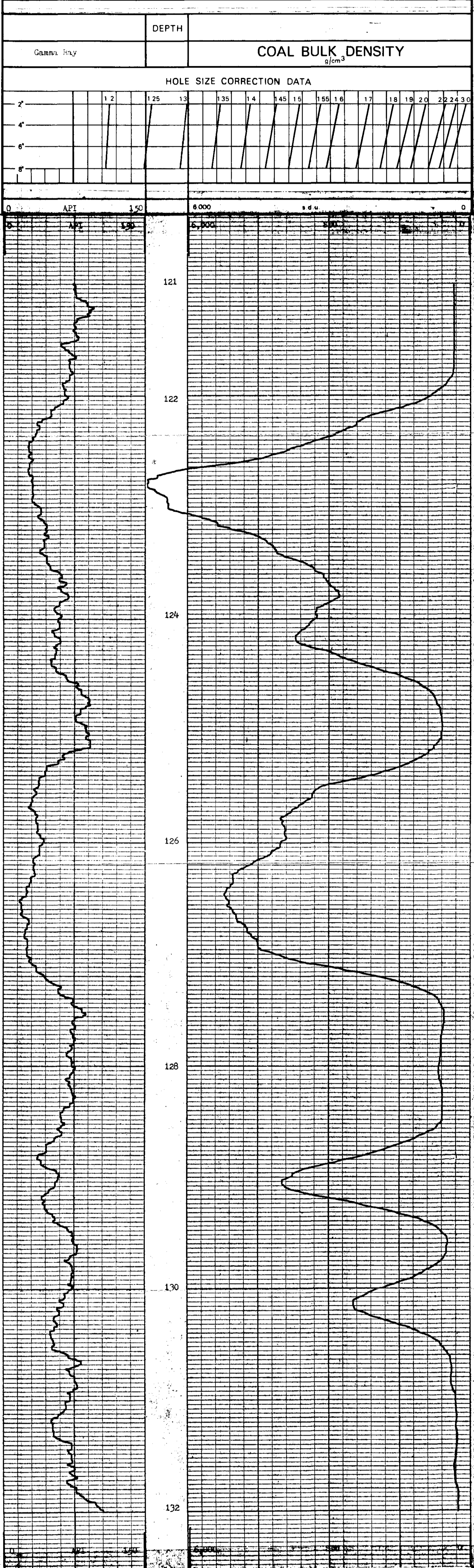
LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

EQUIPMENT AND RECORDING DATA
 COAL COMBINATION SONDE

COAL QUALITY LOG INTERVALS
 FROM 122.0m
 TO 121.0m
 INTERVAL 11.0m

LOG	TAPPING	SIDEWALL POSITION	PANEL	COEF.
L.S. DENSITY	Y	2m/m	R	2
GAMMA RAY	Y	2m/m	R	2
INTERVAL	Y	2m/m	R	1
INTERVAL	Y	2m/m	R	1

B P B COAL QUALITY LOG



COAL BULK DENSITY g/cm³
 DEPTH

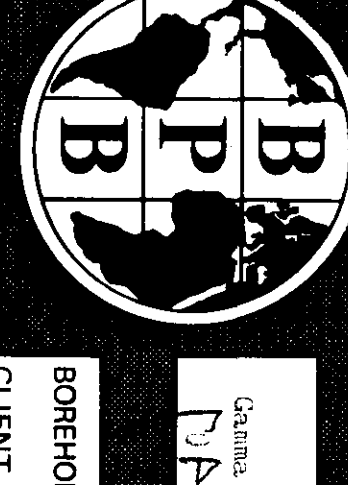


BOREHOLE TWB40-407 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

COAL QUALITY LOG

76-76/114 87(3)A

240



Geona Bay & Sarsfjord Exploration Ltd.
N.A.

BOREHOLE T294-107 (4)
CLIENT Crown Nest Resources Ltd.

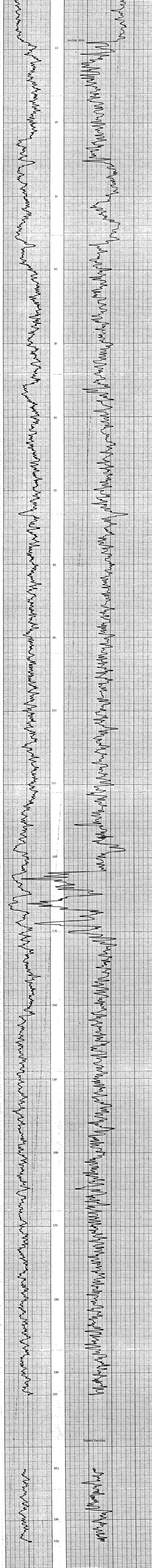
AREA Talskov B.C.
COUNTRY Canada
DATE LOGGED 16/08/98

BOREHOLE DATA REFER TO Lithology
OPERATION DATA REFER TO Lithology

EQUIPMENT AND RECORDING DATA

LOGS
LOGS
LOGS

REMARKS



Geona Bay

DEPTH

BOREHOLE T294-107

CLIENT Crown Nest Resources Ltd.

AREA Talskov B.C.

COUNTRY Canada



MVA144433



DIPMETER ANALYSIS

240

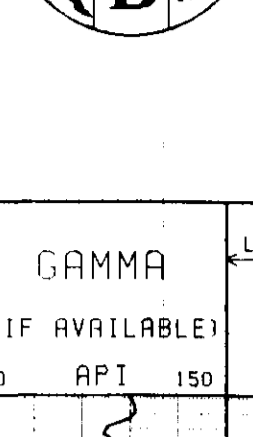
TK-Talkwa

CLIENT _____
BOREHOLE _____
AREA _____
COUNTRY _____

CROWS NEST RESOURCES
TW84D-407 (S)
TELKWA, B.C.
CANADA

84(3)A

DATE LOGGED...16-JUN-84
DATE PROCESSED..16-JUL-84



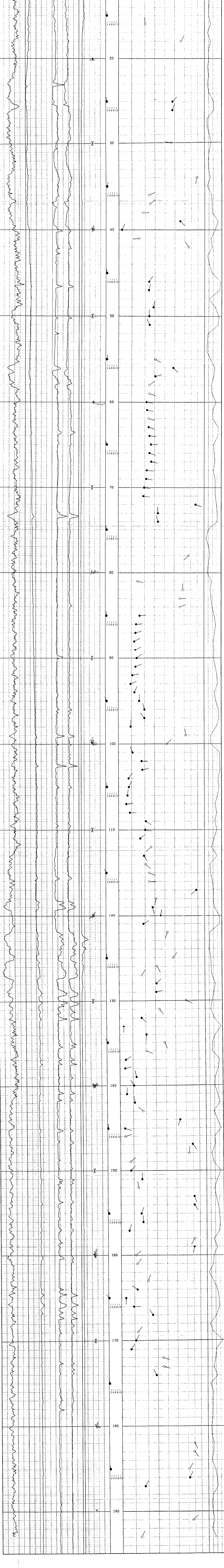
COMMENTS.....

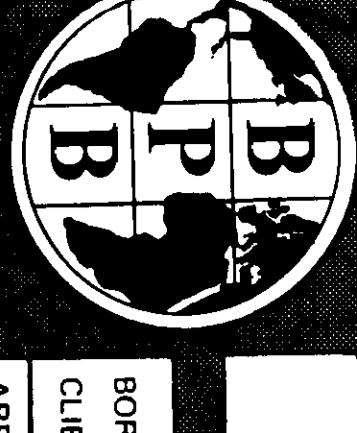
INTERPRETATION PARAMETERS

STEP 1.00M. DECLINATION 26.0 EAST
INTERVAL 2.00M. DEPTH RANGE 10.36 - 194.90M.
SEARCH ANGLE 80. DATE PROCESSED 16-JUL-84

AVERAGE BOREHOLE DEVIATION & DIRECTION
RADIATED EVERY 10 CM.
ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES.
* RADIUS PER DIP NUMBER DISPLAYED

LEGEND:
● GOOD (>0.50)
○ FAIR (>0.30)





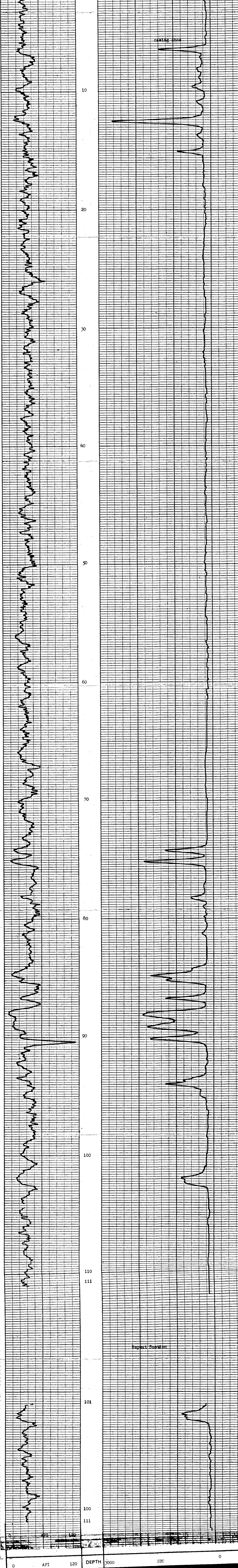
Gamma Ray and Long Spaced Density

BOREHOLE TELKWA-408
 CLIENT Crombeal Resources Ltd.
 AREA Telkwa B.C.
 COUNTRY Canada
 DATE LOGGED
 BOREHOLE DATA
 PERMANENT DATUM Ground Level
 ELEVATION OF P.D. R/A/
 MEASUREMENTS FROM Ground Level
 DEPTH REACHED 111
 CASING SHOE 6.0
 BIT SIZES 1 3/4, 10-T.D., 2 TO
 CASING SIZES 1 4.0, 10-T.D., 2 TO
 FLUID DATA
 NATURE Super Galy H2O
 SG 0.92 @ 60°C
 LEVEL
 VISCOSITY
 OPERATIONAL DATA
 FIRST READING 111X
 LAST READING Ground Level
 INTERNAL LOGGED 111X
 UNIT - TRUCK NO. 24 / VZIC
 ENGINEER MURPHY
 WITNESS

EQUIPMENT AND RECORDING DATA													
LOG	EQUIPMENT			TAPING		PANEL			CAL COEFF		DEPTHS		
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT REPLAY	SPEED	T.C SECS	NORM	FROM	TO	INTERVAL	
Gamma	115		371	Y	9m/m	R	9m/m	1		1.54	111	GL	111
Log	115	5822	3996	Y	9m/m	R	9m/m	.3	7.78		111	GL	111

ADDITIONAL SONDES RUN				REMARKS	
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS	
510	IGN	1:100			No open hole logs available. Scales changed accordingly..

0	API	120	DEPTH	3000	SDU	0
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0	API	120	DEPTH	3000	SDU	0
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BOREHOLE TELKWA-408
 CLIENT Crombeal Resources
 AREA Telkwa B.C.
 COUNTRY Canada





BOREHOLE: WB4D-108
 CLIENT: Crownest Resources Ltd.

AREA: TELKWA B.C.
 COUNTRY: Canada
 DATE LOGGED: 10/23/94

DEPTH SCALE: 1:100
 2 OF 4 LOGS

BOREHOLE DATA: REFER TO LITHOLOGY LOG

OPERATION DATA: REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

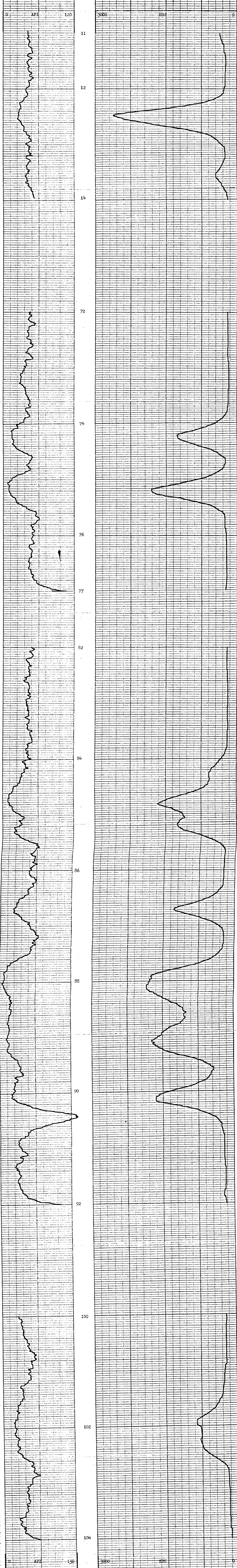
COAL COMBINATION SONDE

LOG TAPPING: 100%
 LOG SPEED: 100 RPM
 LOG PRESSURE: 100 PSI
 LOG TEMPERATURE: 100 °C
 LOG HUMIDITY: 100 %

COAL QUALITY LOG INTERVALS

COAL COMBINATION SONDE	LOG INTERVALS
FROM 104	TO 92
INTERVAL 4	TO 10
FROM 100	TO 92
INTERVAL 4	TO 10
FROM 96	TO 88
INTERVAL 4	TO 10
FROM 92	TO 84
INTERVAL 4	TO 10
FROM 88	TO 80
INTERVAL 4	TO 10
FROM 84	TO 76
INTERVAL 4	TO 10
FROM 80	TO 72
INTERVAL 4	TO 10
FROM 76	TO 68
INTERVAL 4	TO 10
FROM 72	TO 64
INTERVAL 4	TO 10
FROM 68	TO 60
INTERVAL 4	TO 10
FROM 64	TO 56
INTERVAL 4	TO 10
FROM 60	TO 52
INTERVAL 4	TO 10
FROM 56	TO 48
INTERVAL 4	TO 10
FROM 52	TO 44
INTERVAL 4	TO 10
FROM 48	TO 40
INTERVAL 4	TO 10
FROM 44	TO 36
INTERVAL 4	TO 10
FROM 40	TO 32
INTERVAL 4	TO 10
FROM 36	TO 28
INTERVAL 4	TO 10
FROM 32	TO 24
INTERVAL 4	TO 10
FROM 28	TO 20
INTERVAL 4	TO 10
FROM 24	TO 16
INTERVAL 4	TO 10
FROM 20	TO 12
INTERVAL 4	TO 10
FROM 16	TO 8
INTERVAL 4	TO 10
FROM 12	TO 4
INTERVAL 4	TO 10
FROM 8	TO 0
INTERVAL 4	TO 10

BPB COAL QUALITY LOG





SEAM THICKNESS LOG

LOG

BOREHOLE: W24-4003
 CLIENT: Crown West Resources Ltd.
 AREA: Telkwa, B.C.
 COUNTRY: Canada
 DATE LOGGED: 15/Jan/84

DEPTH SCALE: 1:20
 OF LOSSES

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

COAL COMBINATION SONDE: SIDEWALL POSITION

LOG TAPPING PANEL CORRECTION
 LOG RECORD SPEED: 1% NORM
 CALIPER: 1.00 INCHES
 BREAKDOWN: 1.00 INCHES

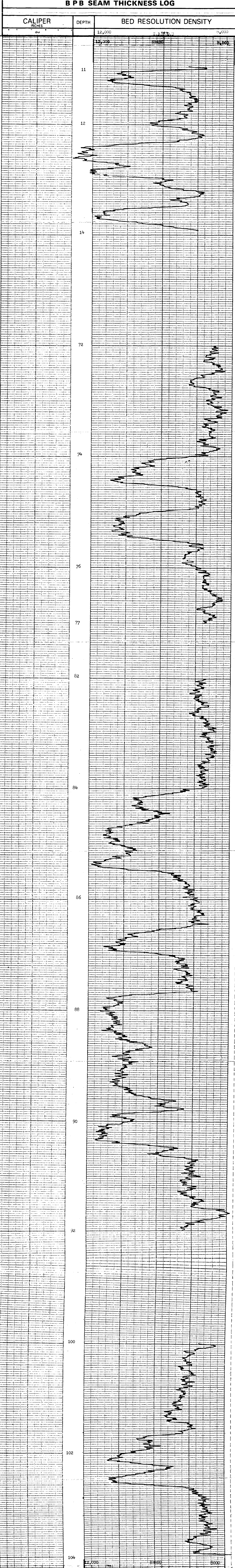
SONDE SONDE AND CALIBRATION: 2014.3 X .25
 REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

FROM	324.0m	325.0m	77.0m	14.0m
TO	307.0m	22.0m	72.0m	11.0m
INTERVAL	4.0m	10.0m	5.0m	3.0m
FROM				
TO				
INTERVAL				
TOTAL				22

LOG SUITE:
 CALIPER
 BR DENSITY

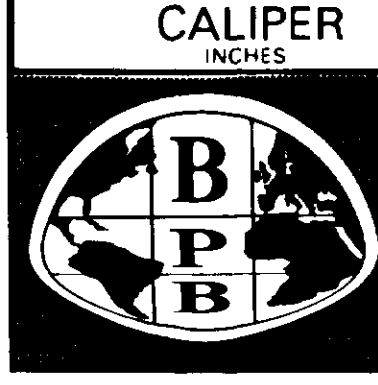
B P B SEAM THICKNESS LOG



CALIPER INCHES **DEPTH** **BED RESOLUTION DENSITY**

BOREHOLE: W24-4003 AREA: Telkwa, B.C.
 CLIENT: Crown West Resources Ltd. COUNTRY: Canada

SEAM THICKNESS LOG





Gamma Neutron/Neutron Log

BOREHOLE TWB4D-408 (4)

CLIENT Crowe Nest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

DATE LOGGED 16/Jan/84

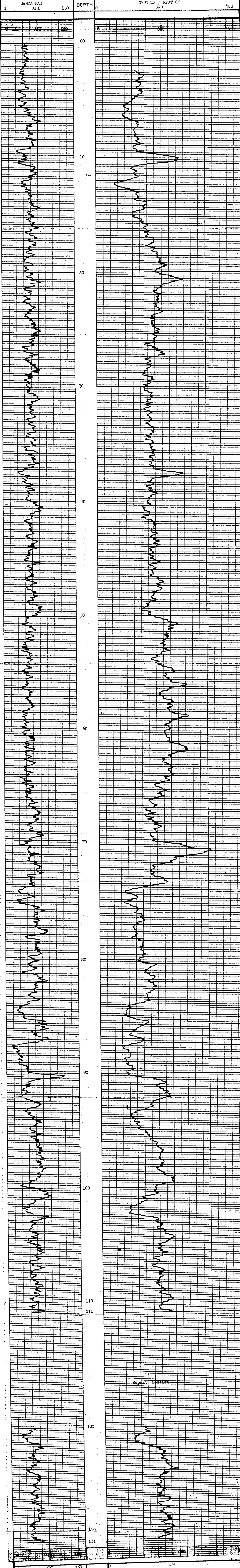
BOREHOLE DATA REFER TO CH / 1SD LOG

OPERATION DATA REFER TO CH / 1SD LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPPING	PANEL	CODE
LOG	RECORDING	SPEED	A.C. NOMI
CR	I	20/A	R 20/A 1
I/A	X	20/A	R 20/A 3
	X	20/A	R 20/A 7-7

REMARKS
No open hole logs - scales adjusted accordingly 23/45 to 62:52



GAMMA RAY	DEPTH	NEUTRON / NEUTRON
API		SNU



BOREHOLE TWB4D-408
CLIENT Crowe Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada



DIPMETER ANALYSIS

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TK - TELKWA

84(3)B

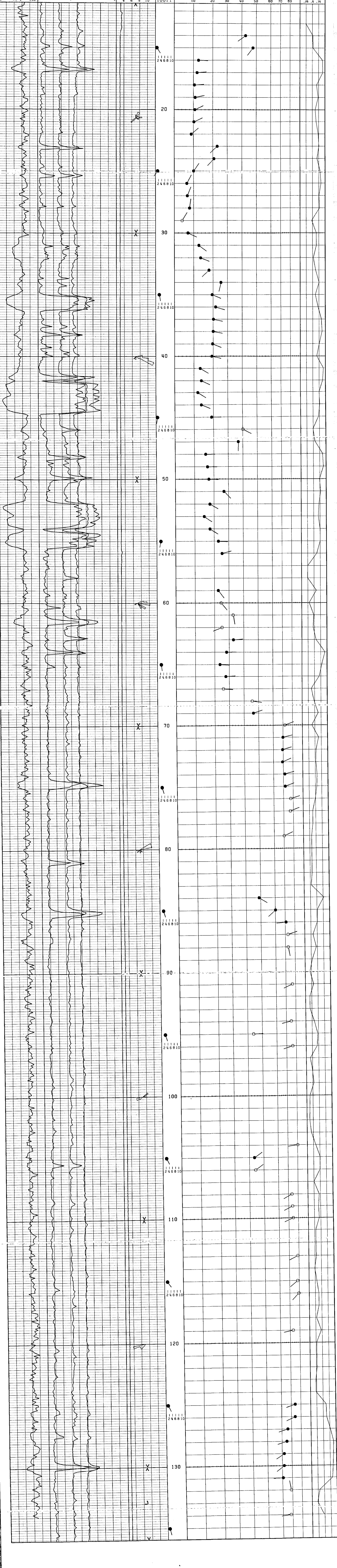
CLIENT _____
 BOREHOLE _____
 AREA _____
 COUNTRY _____

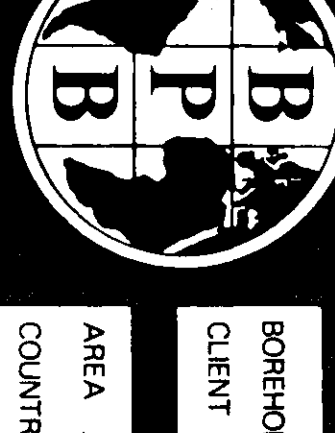
C.N.R.L.
 TW-84D-409 ①
 TELKWA B.C
 CANADA

DATE LOGGED.....17-JUN-84
 DATE PROCESSED..02-AUG-84

COMMENTS..... INTERPRETATION PARAMETERS
 STEP 1.00M. DECLINATION 26.0 EAST
 INTERVAL 2.00M. DEPTH RANGE 11.36 - 135.90M.
 SEARCH ANGLE 80. DATE PROCESSED 02-AUG-84

AVERAGE BOREHOLE DEVIATION & DIRECTION ANNOTATED EVERY 10.0M. LEGEND:
 ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES. .1" RADIUS PER DIP MARKER DISPLAYED. ● GOOD (>0.50) ○ FAIR (>0.30)





COAL		LOG	
ELEMENT OF P.O. Ground Level BOREHOLE DATA BFB DMLER MAXIMUM DEPTH 1.36.0m 1.36.2m DEPTH REACHED 1.36.0m 1.36.2m CASING SIZES 1 7" TO 3" 2 3 7" TO 3" 2 CASING SIZES 1 3 1/2" TO 6 2 TO TO TO TO		PERMANENT DATA ELEMENT OF P.O. Ground Level BOREHOLE DATA BFB DMLER MAXIMUM DEPTH 1.36.0m 1.36.2m DEPTH REACHED 1.36.0m 1.36.2m CASING SIZES 1 7" TO 3" 2 3 7" TO 3" 2 CASING SIZES 1 3 1/2" TO 6 2 TO TO TO TO	
SOLE TYPE COAL COMBINATION SOLE LOG SITE GAMMA RAY L.S. DENSITY CALIPER ENGINEER WITNESS		BOREHOLE TW340-409 CLIENT Crown's Nest Resources Ltd. AREA Telkwa B.C. COUNTRY Canada DATE LOGGED 17/Jan/84 DEPTH SCALE 1:100 OF 4 LOGS	

EQUIPMENT AND RECORDING DATA													
COAL COMBINATION SONDE			EQUIPMENT		TAPING		PANEL		CAL		DEPTHS		SEAM LOG RUN
LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT/REPLAY	SPEED	T.C SECS	NORM	COEFF	FROM	TO	MIRVA
GAMMA RAY	115	5322											
L.S. DENSITY			371	Y	9m/m	D	2m/s	1	-	1.7	133	00	133
CALIPER			3296	Y	9m/m	D	9m/s	.3	7.65	-	133	00	133
			7" .2"	Y	9m/m	D	9m/s	.3	-	-	133	00	133

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)				INTERVAL TOTAL
FROM	57.0m	46.0m	38.0m	
TO	50.0m	40.0m	33.0m	
INTERVAL	7.0m	6.0m	5.0m	18.0m

ADDITIONAL SONDES RUN			REMARKS	
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS
510	DSN	1:100		Start Op. 12:45
212	Vert.	1:100		Finish Op. 18:30
201	Dip	1:100		

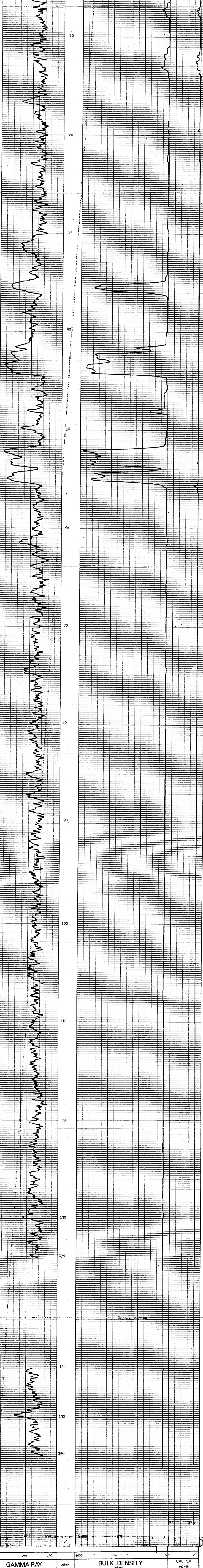
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 371	VALUE 49.4 @ 5" DIAM	JIG CAL DATE 11/Jan/84	JIG VALUE 5543	SOU @ 1.32g/cm ³	2" int 425 cps
JIG MARK SHOWN AT ABOVE VALUE	N/A	JIG No 3996	SPAN 6,000	NORM 3996	7" int 890 cps

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



0	API 150	6000	g/cm ³	0.7"	2"
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GAMMA RAY	DEPTH	BULK DENSITY g/cm ³	CALIPER INCHES
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BOREHOLE	TW340-409	AREA	Telkwa B.C.
CLIENT	Crown's Nest Resources Ltd.	COUNTRY	Canada

COAL LITHOLOGY LOG

TK - Telkwa 84(3) A

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BOREHOLE TWB4D-409 (3)
 CLIENT Cross Nest Resources Ltd.

AREA Telkwa B.C.
 DEPTH 30.0m
 COUNTRY Canada
 DATE LOGGED 17/Jan/84
 2 OF 4 LOSS

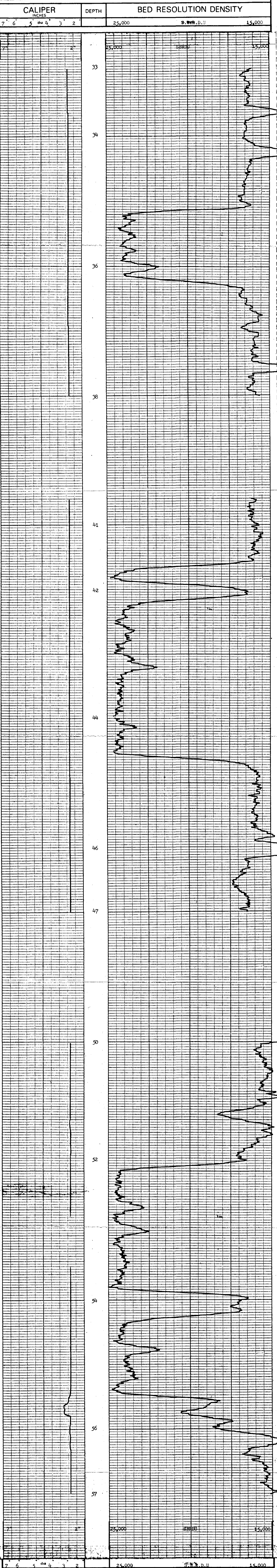
SEAM THICKNESS LOG

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 1055 1055 1055 1055 1055 1055 1055 1055 1055 1055
 CALIPER 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
 BRUSHING 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
 SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS
 FROM 57.0m 46.0m 33.0m
 TO 50.0m 40.0m 33.0m
 INTERVAL 7.0m 6.0m 5.0m
 TOTAL 1.8
 LOG SUITE
 CALIPER
 B.R. DENSITY

B P B SEAM THICKNESS LOG

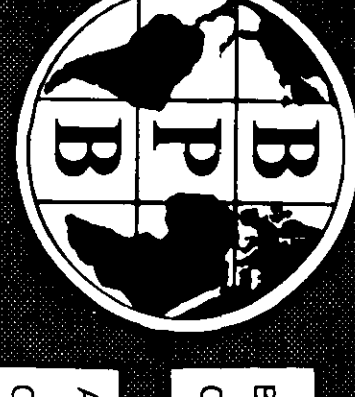


CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7	57	25,000
6	56	25,000
5	55	25,000
4	54	25,000
3	53	25,000
2	52	25,000



BOREHOLE TWB4D-409
 CLIENT Cross Nest Resources Ltd.
 AREA Telkwa B.C.
 COUNTRY Canada

SEAM THICKNESS LOG



BOREHOLE TW84D-409
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
 COUNTRY Canada

DATE LOGGED 17/Jan/84

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

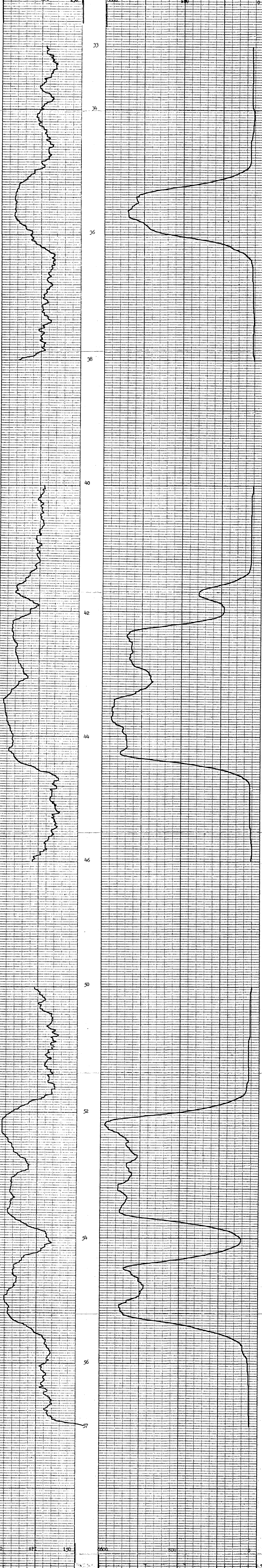
FROM	57.0m	46.0m	38.0m
TO	50.0m	49.0m	33.0m
INCH	7.0m	6.0m	5.0m
INTERVAL			
TOTAL			

BPB COAL QUALITY LOG

DEPTH	COAL BULK DENSITY
-------	-------------------

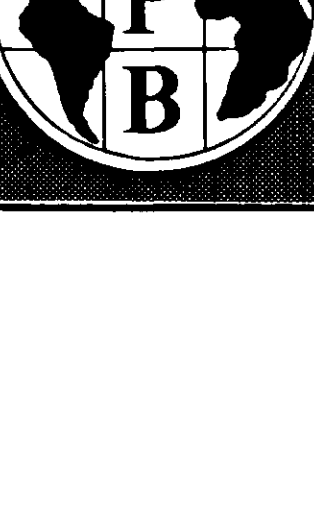
HOLE SIZE CORRECTION DATA	
2"	1.25
4"	1.3
6"	1.35
8"	1.4
	1.45
	1.5
	1.55
	1.6
	1.7
	1.8
	1.9
	2.0
	2.2
	2.4
	3.0

0	API	150	6000	SDU	0
---	-----	-----	------	-----	---



0	API	150	6000	SDU	0
---	-----	-----	------	-----	---

DEPTH	COAL BULK DENSITY
-------	-------------------



BOREHOLE TW84D-409
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
 COUNTRY Canada

COAL QUALITY LOG



Gamma Ray & Porosity Log

BOREHOLE TW84D-409

CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

DATE LOGGED 12/Jan/84

BOREHOLE DATA refer to Lithology LOG

OPERATION DATA refer to Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG TAPPING PANEL DATE

LOG NO. TW84D-409

LOG DATE 12/Jan/84

LOG TIME 11:00

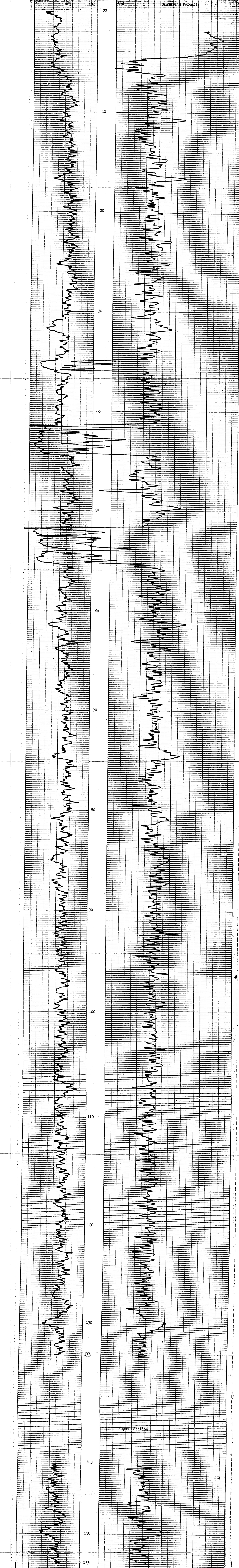
LOG LOGS

LOG LOGS

LOG LOGS

LOG LOGS

LOG LOGS



0	API	150	60%	0%
0	Gamma Ray	DEPTH	Sandstone Porosity Log.	



BOREHOLE TW84D-409
CLIENT Crows Nest Resources Ltd.
AREA Telkwa B.C.
COUNTRY Canada

BPB DIPMETER ANALYSIS
INTERPRETATION NOTES

409

6

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1. All plots are correct to the resolution of the plotter used, ie. one hundredth of an inch. Vertical resolution may vary by up to one percent but each plot is correct within itself, the plotted data being dynamically merged with its gridded background. Plots exceeding eight metres in length will be split into multiples thereof, however there is no data loss associated with this subdivision.
2. Rose diagrams are plotted between every major division and are delimited by two bold arrows. For certain replay scales it may be desirable to plot these less frequently; this option is available on request.
3. The borehole tilt and azimuth displayed on the plot are the average values over the whole major division.
4. The replay scale for pads 1, 2 & 3 are designed to give the maximum visual effect over the plotted interval. Replaying shorter sections of the curve will enhance this display.
5. The grid over which the computed dip information is displayed is locally linear. That is to say it is linear between 0 & 10, degrees, 10 & 20, 20 & 30 etc.
6. The correlation value will vary depending upon the interval size selected. Generally speaking the larger the correlation interval, the lower the value becomes. For this reason a direct comparison of this value for differing correlation intervals is meaningless, quality control being exercised with an appreciation of this effect.
7. For customised control of computed dipmeter analysis the following parameters must be specified:
correlation step and interval(s)
magnetic declination (ie. the difference between true and magnetic North)
search angle(s)
depth range(s)
replay scale(s)
the frequency for rose diagrams
(quality control is exercised in accordance with the correlation interval used, alternatively all correlations may be displayed on request)

The following information is a listing of ALL the output from BPB's dipmeter analysis. The data is subdivided into three consecutive sets of data readings, being read from left to right. Below is a full description of each data item:

DEPTH the depth corresponding to the centre of the correlation interval
CALIPER the average borehole caliper recorded over the correlation interval
HOLE DRIFT the average borehole deviation from vertical over the correlation interval
HOLE AZIMUTH the average borehole azimuth over the correlation interval in degrees East of true North
DIP ANGLE the computed formation dip in degrees, from the horizontal plane
DIP AZIMUTH the formation azimuth in degrees East from true North
CORRELATION a measure of the reliability of the computed result. This parameter is also used in the visual display to determine the quality of result

Further recorrelations over any step & interval size are available on any scale over any section of the log. Alternative methods of presentation, or analysis may be made available on request.

TW-84D-409

Magnetic declination 26.00 degrees East of North
Correlation step 1.00 metres , interval 2.00 metres Search angle 80. degrees

02-AUG-84
PAGE 1

DEPTH metres	CAL. ins.	BOREHOLE TILT	FORMATION AZI	MIN. COR.	DEPTH metres	CAL. ins.	BOREHOLE TILT	FORMATION AZI	MIN. COR.	DEPTH metres	CAL. ins.	BOREHOLE TILT	FORMATION AZI	MIN. COR.						
13.00	3.3	2.0	160.	44.9	129.	0.25	14.00	3.1	1.9	154.	43.0	233.	0.52	15.00	3.0	1.8	150.	48.7	217.	0.52
16.00	3.0	1.7	149.	12.6	92.	0.91	17.00	3.0	1.5	148.	11.9	85.	0.91	18.00	3.0	1.4	146.	10.5	86.	0.67
19.00	3.0	1.3	146.	10.9	77.	0.73	20.00	3.0	1.1	146.	10.8	64.	0.61	21.00	3.0	1.0	148.	10.2	65.	0.65
22.00	3.0	0.9	151.	8.9	49.	0.73	23.00	3.0	0.8	154.	23.4	228.	0.76	24.00	3.0	0.8	157.	20.9	223.	0.68
25.00	3.0	0.7	166.	10.0	34.	0.80	26.00	3.0	0.6	179.	6.5	28.	0.84	27.00	3.0	0.7	190.	6.8	22.	0.76
28.00	3.0	0.8	203.	7.9	7.	0.78	29.00	3.0	1.0	214.	4.1	31.	0.47	30.00	3.0	1.2	217.	7.1	115.	0.65
31.00	2.9	1.4	216.	12.7	127.	0.65	32.00	2.9	1.7	213.	13.5	111.	0.53	33.00	3.0	1.9	208.	17.8	225.	0.62
34.00	3.0	2.1	203.	26.1	192.	0.75	35.00	3.0	2.2	199.	19.5	114.	0.60	36.00	2.9	2.3	195.	21.9	107.	0.71
37.00	2.9	2.4	190.	20.2	102.	0.84	38.00	2.9	2.4	185.	20.0	101.	0.87	39.00	2.9	2.4	180.	19.6	112.	0.76
40.00	2.9	2.4	176.	19.3	104.	0.66	41.00	3.0	2.3	170.	13.3	121.	0.92	42.00	2.9	2.3	164.	13.8	117.	0.89
43.00	2.9	2.1	158.	12.0	123.	0.74	44.00	2.9	1.9	152.	13.8	112.	0.76	45.00	2.9	1.7	149.	19.0	90.	0.72
46.00	2.9	1.5	148.	40.2	117.	0.50	47.00	2.9	1.3	148.	37.7	181.	0.56	48.00	2.9	1.1	153.	15.8	89.	0.86
49.00	2.9	0.9	162.	16.7	91.	0.90	50.00	2.9	0.8	175.	17.3	92.	0.74	51.00	2.9	0.9	189.	27.7	137.	0.78
52.00	2.9	1.1	202.	17.8	121.	0.71	53.00	2.9	1.3	211.	14.8	124.	0.68	54.00	2.9	1.6	212.	17.8	123.	0.75
55.00	2.9	1.9	210.	23.2	93.	0.75	56.00	3.0	2.1	206.	26.0	75.	0.61	57.00	3.0	2.2	202.	59.0	33.	0.25
58.00	2.9	2.3	200.	69.7	234.	0.24	59.00	2.9	2.4	197.	22.9	142.	0.59	60.00	2.9	2.5	194.	25.0	141.	0.30
61.00	2.9	2.6	191.	33.1	170.	0.48	62.00	2.9	2.6	188.	25.7	248.	0.45	63.00	2.9	2.6	185.	33.2	85.	0.57
64.00	2.9	2.7	183.	29.1	88.	0.92	65.00	2.9	2.7	181.	24.0	94.	0.79	66.00	2.9	2.7	179.	28.5	86.	0.69
67.00	2.9	2.7	178.	26.6	94.	0.37	68.00	2.9	2.6	177.	46.4	98.	0.48	69.00	2.9	2.5	178.	47.2	70.	0.64
70.00	2.9	2.5	176.	72.0	69.	0.38	71.00	2.9	2.5	173.	69.9	76.	0.64	72.00	2.9	2.6	172.	69.3	73.	0.54
73.00	2.9	2.6	171.	69.1	66.	0.52	74.00	2.9	2.6	170.	71.5	73.	0.57	75.00	2.9	2.5	169.	71.8	69.	0.55
76.00	2.9	2.5	168.	77.2	73.	0.49	77.00	2.9	2.5	167.	76.8	69.	0.38	79.00	2.9	2.4	165.	70.1	65.	0.33
83.00	2.9	2.4	163.	51.1	346.	0.28	84.00	2.9	2.4	163.	50.0	122.	0.77	85.00	2.9	2.4	163.	60.1	227.	0.51
86.00	2.9	2.4	163.	70.9	266.	0.50	87.00	2.9	2.4	164.	72.7	72.	0.33	88.00	3.0	2.4	164.	72.8	170.	0.45
89.00	3.0	2.4	164.	80.7	300.	0.30	90.00	3.0	2.4	164.	80.5	301.	0.18	91.00	2.9	2.4	164.	76.6	245.	0.33
92.00	2.9	2.4	163.	41.2	114.	0.18	94.00	2.9	2.4	163.	75.1	256.	0.34	95.00	2.9	2.4	163.	44.4	87.	0.47
96.00	2.9	2.4	162.	76.1	252.	0.44	97.00	2.9	2.4	161.	40.3	35.	0.17	98.00	2.9	2.4	162.	61.6	58.	0.24
99.00	2.9	2.5	162.	67.8	54.	0.29	100.00	2.9	2.5	163.	66.2	89.	0.13	101.00	2.9	2.5	163.	63.4	73.	0.12
102.00	2.9	2.5	162.	77.7	14.	0.11	103.00	2.9	2.4	161.	74.6	48.	0.17	104.00	2.9	2.4	159.	80.1	262.	0.33
105.00	2.9	2.4	156.	44.0	54.	0.51	106.00	2.9	2.3	155.	44.8	53.	0.49	107.00	2.9	2.3	153.	58.8	59.	0.25
108.00	2.9	2.3	153.	73.6	240.	0.45	109.00	2.9	2.3	153.	74.1	242.	0.42	110.00	2.9	2.3	153.	74.6	244.	0.44
111.00	2.9	2.3	152.	81.1	258.	0.29	113.00	2.9	2.2	150.	78.9	243.	0.31	114.00	2.9	2.2	149.	79.1	240.	0.24
115.00	2.9	2.2	148.	78.3	229.	0.31	116.00	2.9	2.1	147.	79.4	223.	0.39	118.00	2.9	2.0	145.	77.1	249.	0.29
119.00	2.9	2.0	145.	73.1	258.	0.47	120.00	2.9	1.9	144.	75.4	78.	0.27	123.00	2.9	1.8	145.	46.3	224.	0.23
124.00	2.9	1.7	146.	73.2	65.	0.22	125.00	2.9	1.7	146.	74.1	250.	0.62	126.00	2.9	1.6	147.	73.9	244.	0.63
127.00	2.9	1.6	147.	66.1	253.	0.77	128.00	2.9	1.5	148.	64.9	253.	0.89	129.00	2.9	1.5	149.	62.1	235.	0.88
130.00	2.9	1.4	151.	61.9	232.	0.86	131.00	2.9	1.3	153.	60.6	269.	0.83	132.00	2.9	1.3	156.	68.7	349.	0.32
133.00	2.9	1.2	160.	74.1	335.	0.23	134.00	2.9	1.2	165.	68.0	261.	0.47							



DIPMETER ANALYSIS

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Tk-Telkwa

34(3) B

CLIENT _____
BOREHOLE _____
AREA _____
COUNTRY _____

C.N.R.L.
TW-84D-410 ①
TELKWA B.C
CANADA

DATE LOGGED.....17-JUN-84
DATE PROCESSED..02-AUG-84



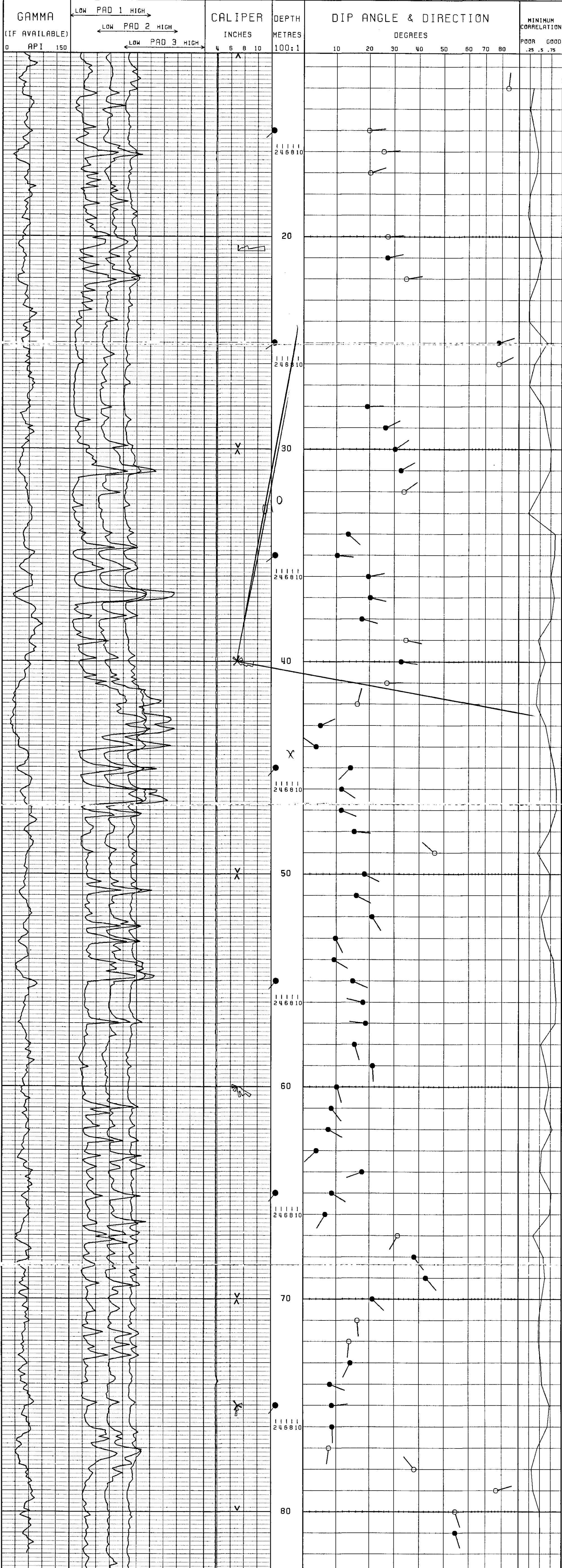
COMMENTS.....

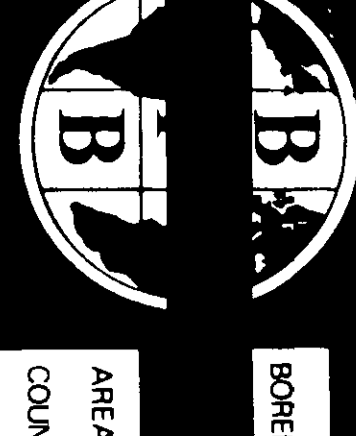
INTERPRETATION PARAMETERS

STEP 1.00M. DECLINATION 26.0 EAST
INTERVAL 2.00M. DEPTH RANGE 11.36 - 83.00M.
SEARCH ANGLE 80. DATE PROCESSED 02-AUG-84

AVERAGE BOREHOLE DEVIATION & DIRECTION
ANNOTATED EVERY 10.0M.
ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES,
.1" RADIUS PER DIP MARKER DISPLAYED

LEGEND:
● GOOD (>0.50)
○ FAIR (>0.30)





BOREHOLE TW40-410 **2**
 Crows Nest Resources Ltd.

AREA Telkwa B.C. **DEPTH SCALE** 1:100
COUNTRY Canada **DATE LOGGED** 12/Jun/84 **1 OF 4 LOGS**

COAL
LITHOLOGY LOG

BOREHOLE DATA
 REMARKS: _____
 ELEVATION OF P.D. _____
 M.A.S. PERMISSIBLE G.L. _____
 DEPTH READER 83
 CASING SIZE 6.1 TO 6.1
 CASING SIZES 1 2.4 TO 1.4, 2 4 TO 4, 3 4.0 TO 6.1, 4 TO TO

FLUID DATA
 NATURE SUPERCEIX - H2O
 SIG 0.05 g/cm³
 LEVE _____
 VISCOSITY _____
 Run at mass memo

OPERATION DATA
 FIRST READING 82.0
 LAST READING 82.0
 INTERVAL LOGGED 82
 UNIT/INCH NO. 21/7215
 ENGINEER MICO/2971
 WITNESS _____

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL		CAL COEFF	DEPTHS		SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPE	RECORD SPEED	DIRECTOR REPLAY	SPEED	FC SECS		FROM	TO	
GAMMA RAY	115	5322								82	82	
DENSITY	115		371	Y	9m/m	R	9m/m	1	1.98	82	G.L.	82
CALIPER	115		3996	Y	9m/m	R	9m/m	3	7.67	82	G.L.	82
				Y	9m/m	R	9m/m	3		82	G.L.	82

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

FROM	TO	INTERVAL	SEAM LOG RUN
56	48		
52	33		
04	15		19

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
510	DSN	1:100	
201	DIP	1:100	
217	VERT	CDS	

REMARKS
 Start Op: 23:45
 Finish Op: 02:00

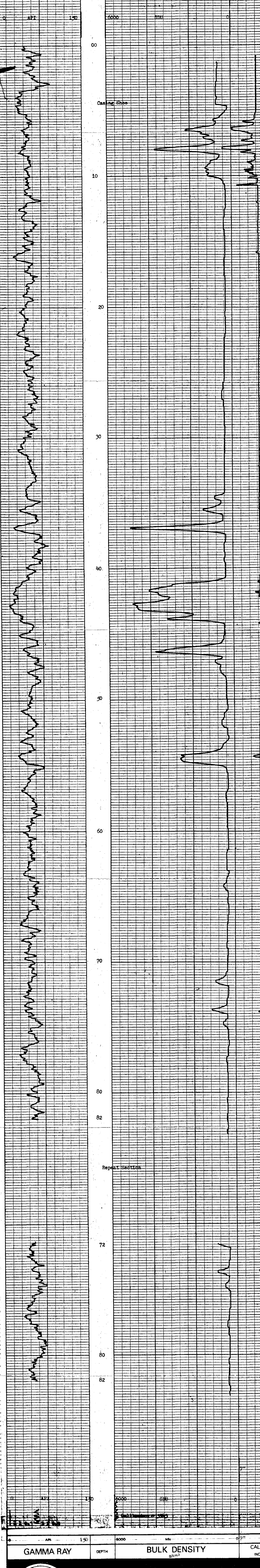
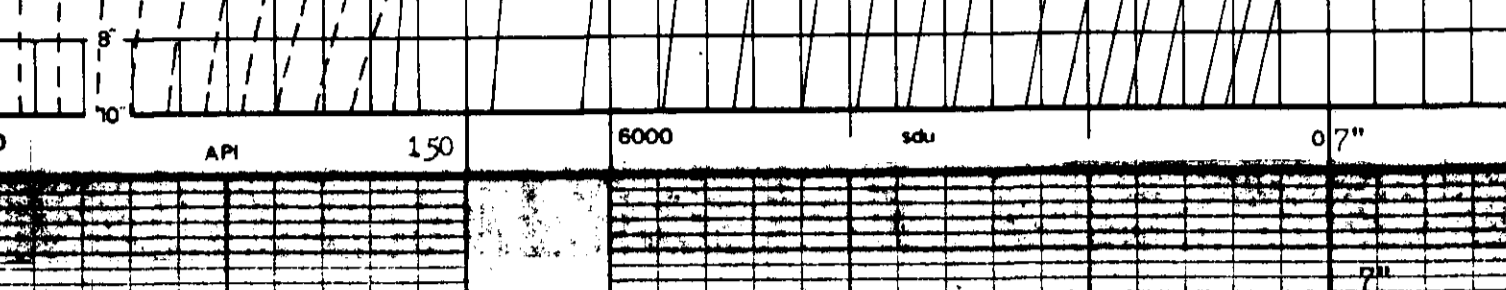
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

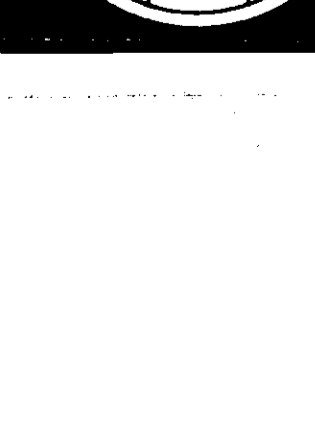
JIG No 371	VALU@94@ 5" DIAM	JIG CAL DATE 6/6/84	JIG VALUE 5943	SDU @ 0.32 g/cm ³	2 ms 425 cps
JIG MARK SHOWN AT ABOVE VALUE = X.3		JIG No 3996	SPAN 6000	NORM 890	7 ms 890 cps

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 TW40-410 **AREA** Telkwa B.C.
CLIENT Crows Nest Resources Ltd. **COUNTRY** Canada

COAL LITHOLOGY LOG



BOREHOLE TM84D-410 **3**
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C. DEPTH SCALE 1:20
 COUNTRY Canada
 DATE LOGGED 12/14/84 2. or 4. LOGS

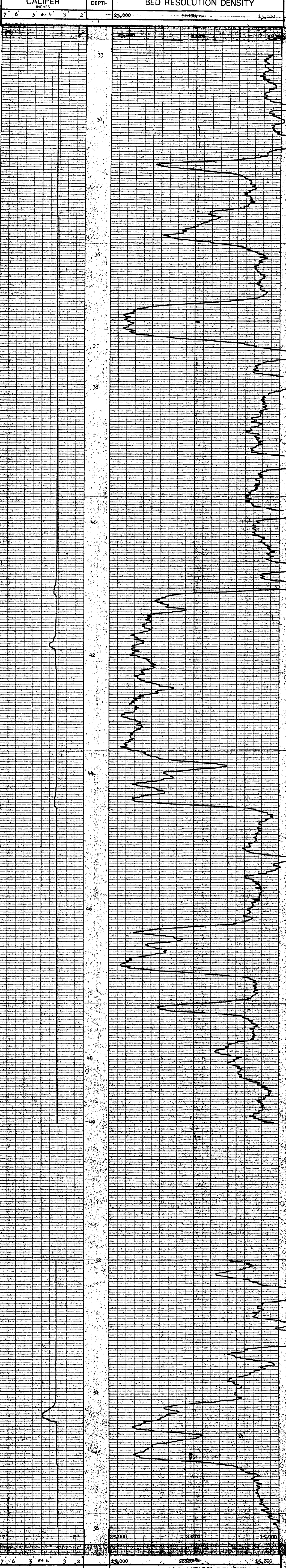
SEAM THICKNESS LOG
 BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA

LOG
 COAL COMBINATION SONDE
 LOG TANKING SIDE WALL POSITION
 LOG RECORDED SPEED NORM
 TAPPED SPEED REEL A V 200/31 R 200/31 I 200/31
 CALIPER Y 220/31 R 220/31 I 220/31
 BR DENSTY Y 220/31 R 220/31 I 220/31

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

SEAM THICKNESS	LOG INTERVALS
FROM 56	48
TO 52	33
INTERVAL 04	15
FROM	
TO	
INTERVAL	
REMARKS	

B PB SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 6 5 dia 4 3 2	25,000	SRPDA 15,000



BOREHOLE TM84D-410 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

SEAM THICKNESS LOG

TK - Telkwa 84131A

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BOREHOLE TW84D-410
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa, B.C.
 COUNTRY Canada

DATE LOGGED 12/Jan/84

COAL QUALITY LOG

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

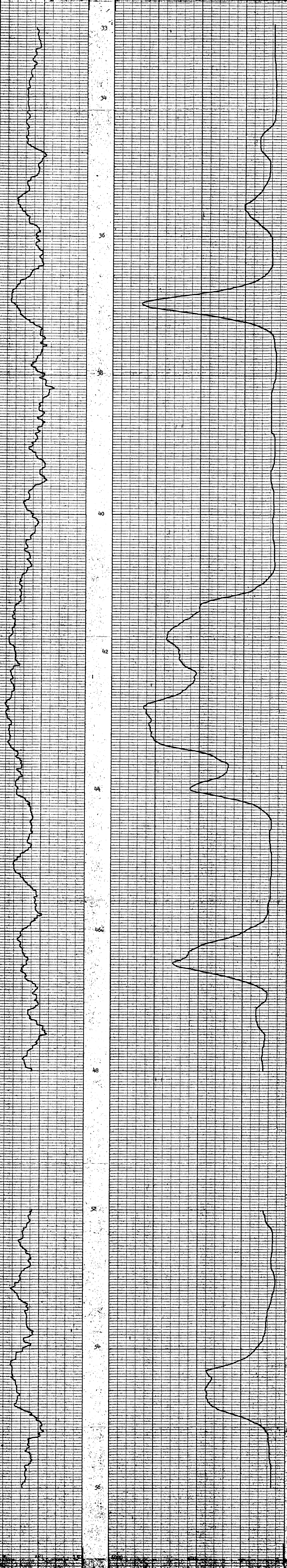
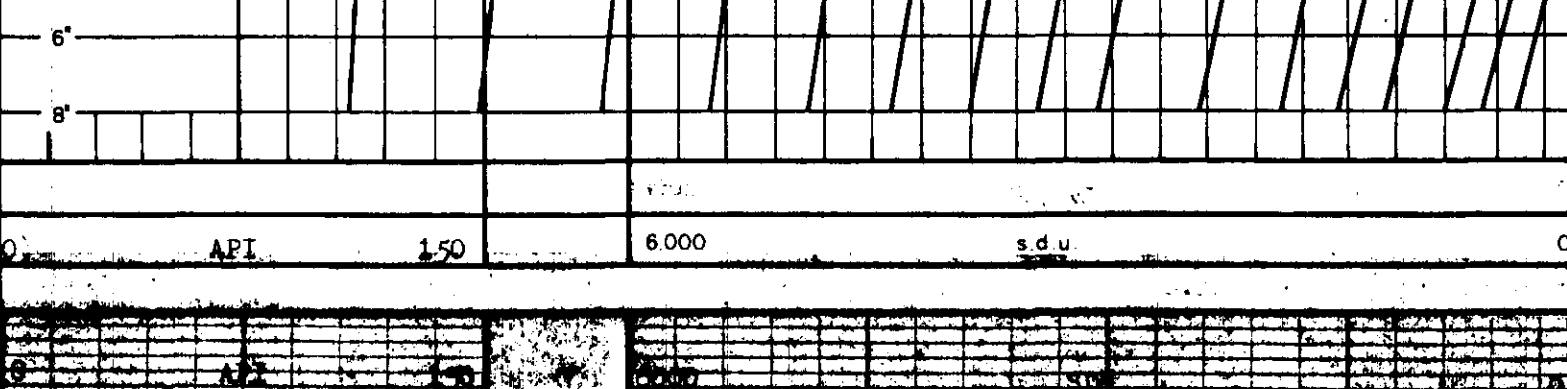
COAL COMBINATION SONDE
 TAPPING PANEL SIDEWALL POSITION
 LOG 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
 LOG SPEED (RPM) 1000
 LOG SPEED (FT/HR) 200
 LOG SPEED (IN/HR) 1.5
 LOG SPEED (M/HR) 1.5

COAL QUALITY LOG INTERVALS
 FROM 56 TO 52 INTERVAL 48
 FROM 52 TO 48 INTERVAL 33
 FROM 48 TO 44 INTERVAL 15
 FROM 44 TO 40 INTERVAL 19
 FROM 40 TO 36 INTERVAL 19
 FROM 36 TO 32 INTERVAL 19
 FROM 32 TO 28 INTERVAL 19
 FROM 28 TO 24 INTERVAL 19
 FROM 24 TO 20 INTERVAL 19
 FROM 20 TO 16 INTERVAL 19
 FROM 16 TO 12 INTERVAL 19
 FROM 12 TO 8 INTERVAL 19
 FROM 8 TO 4 INTERVAL 19
 FROM 4 TO 0 INTERVAL 19

B P B COAL QUALITY LOG

GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm ³
-----------	-------	--

HOLE SIZE CORRECTION DATA



GAMMA RAY	DEPTH	COAL BULK DENSITY g/cm ³
-----------	-------	--



BOREHOLE TW84D-410
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
 COUNTRY Canada

COAL QUALITY LOG

AM 81023



Tk-Telkwa

84130A

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Gamma Ray and Sandstone Porosity Log

BOREHOLE TW84D-410
CLIENT Crowns Nest Resources Ltd.

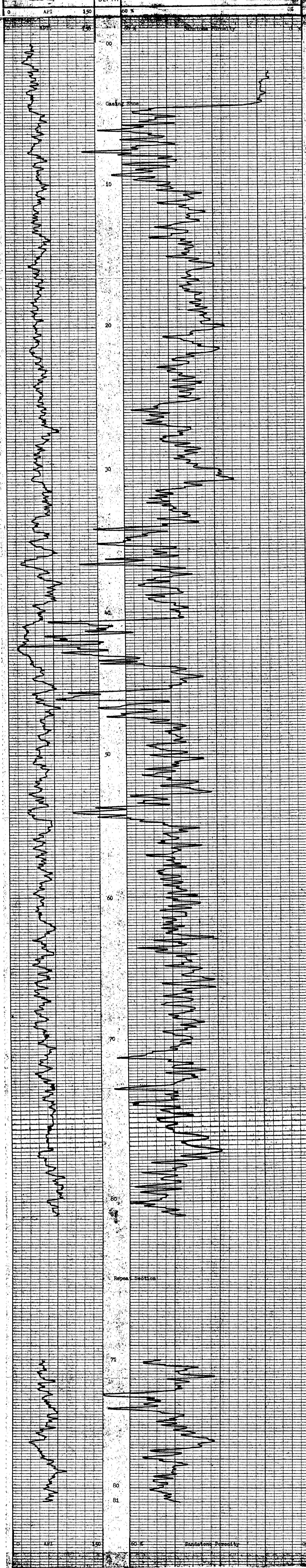
AREA Telkwa B.C.
COUNTRY Canada
DATE LOGGED 17/Jan/94

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

EQUIPMENT AND RECORDING DATA

LOG TRANS PANEL COEFF
GAMMA Y 9m/m R 9m/m 1.1.7
ISN Y 9m/m R 9m/m 3.10.960

REMARKS



0	API	150	60 %	0 %
Gamma Ray	DEPTH		Sand Stone Porosity	



BOREHOLE TW84D-410
CLIENT Crowns Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada

410

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BPB DIPMETER ANALYSIS INTERPRETATION NOTES

- 1. All plots are correct to the resolution of the plotter used, ie. one hundredth of an inch. Vertical resolution may vary by up to one percent but each plot is correct within itself, the plotted data being dynamically merged with its gridded background... 2. Rose diagrams are plotted between every major division and are delimited by two bold arrows. For certain replay scales it may be desirable to plot these less frequently; this option is available on request. 3. The borehole tilt and azimuth displayed on the plot are the average values over the whole major division. 4. The replay scale for pads 1, 2 & 3 are designed to give the maximum visual effect over the plotted interval. Replaying shorter sections of the curve will enhance this display. 5. The grid over which the computed dip information is displayed is locally linear. That is to say it is linear between 0 & 10, degrees, 10 & 20, 20 & 30 etc. 6. The correlation value will vary depending upon the interval size selected. Generally speaking the larger the correlation interval, the lower the value becomes. For this reason a direct comparison of this value for differing correlation intervals is meaningless, quality control being exercised with an appreciation of this effect. 7. For customised control of computed dipmeter analysis the following parameters must be specified: correlation step and interval(s) magnetic declination(ie. the difference between true and magnetic North) search angle(s) depth range(s) replay scale(s) the frequency for rose diagrams (quality control is exercised in accordance with the correlation interval used, alternatively all correlations may be displayed on request)

The following information is a listing of ALL the output from BPB's dipmeter analysis. The data is subdivided into three consecutive sets of data readings, being read from left to right. Below is a full description of each data item:

Table with 2 columns: Parameter Name and Description. Parameters include DEPTH, CALIPER, HOLE DRIFT, HOLE AZIMUTH, DIP ANGLE, DIP AZIMUTH, and CORRELATION.

Further recorrelations over any step & interval size are available on any scale over any section of the log. Alternative methods of presentation, or analysis may be made available on request.

Table with 3 main sections of data. Each section has columns: DEPTH (metres), CAL. (ins.), BOREHOLE TILT, FORMATION AZI, MIN. COR., and another set of columns for DEPTH, CAL., BOREHOLE TILT, FORMATION AZI, MIN. COR. Includes magnetic declination and correlation step information.

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SEAM THICKNESS LOG

BOREHOLE: TWB42-11 (2)
 CLIENT: Crow's Nest Resources Ltd.
 AREA: Talkwa S.C.
 COUNTRY: Canada
 DATE LOGGED: 15/Jan/94

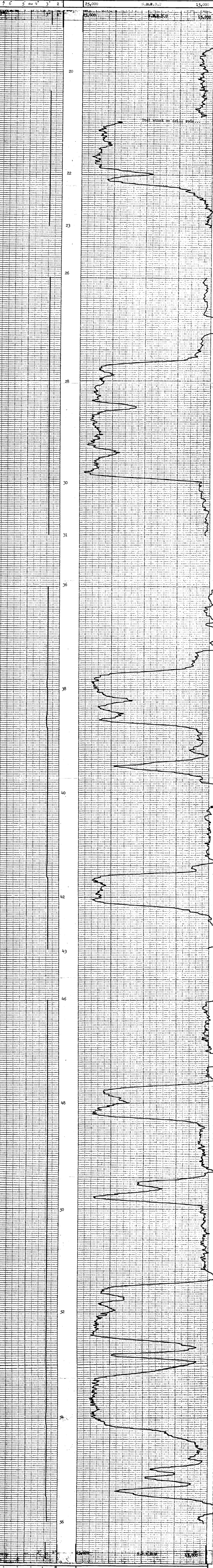
DEPTH SCALE: 1:20
 LOG SCALE: 2" = 4' LOGS

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

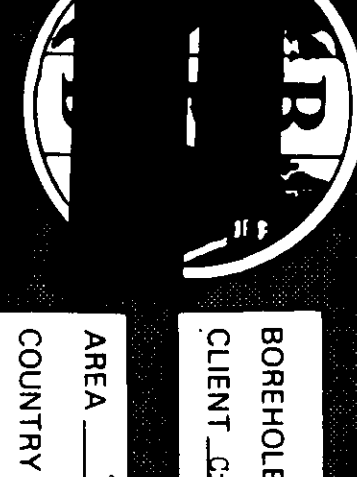
COAL COMBINATION SONDE: SIDEWALL POSITION
 LOG: TAPPING PANEL: CEF
 LOG NO: 1000
 LOG SPEED: 3.5 INCH/MIN
 CALIPER: X 25/16" R 25/16" 1" -
 BRACKET: Y 1/16" R 25/16" 3/16" -
 SOURCE: SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

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

B P B SEAM THICKNESS LOG



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BOREHOLE TW94D-411 (3)
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa B.C.
 COUNTRY Canada
 DATE LOGGED 18/2/94
 DEPTH SCALE 1:20
 3 of 4 LOGS

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

COAL COMBINATION SOND
 LOG TAPPING SIDEWALL POSITION
 LOG TYPE TAPPING SIDEWALL POSITION
 LOG NUMBER 2800
 LOG SPEED 1000 RPM
 LOG PRESSURE 100 PSI
 LOG TEMPERATURE 100 F
 LOG SOURCE SOND AND CALIBRATION
 REFER TO LITHOLOGY LOG

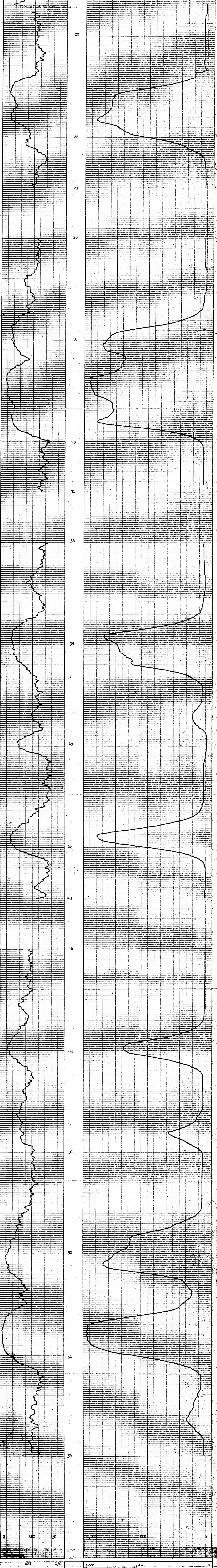
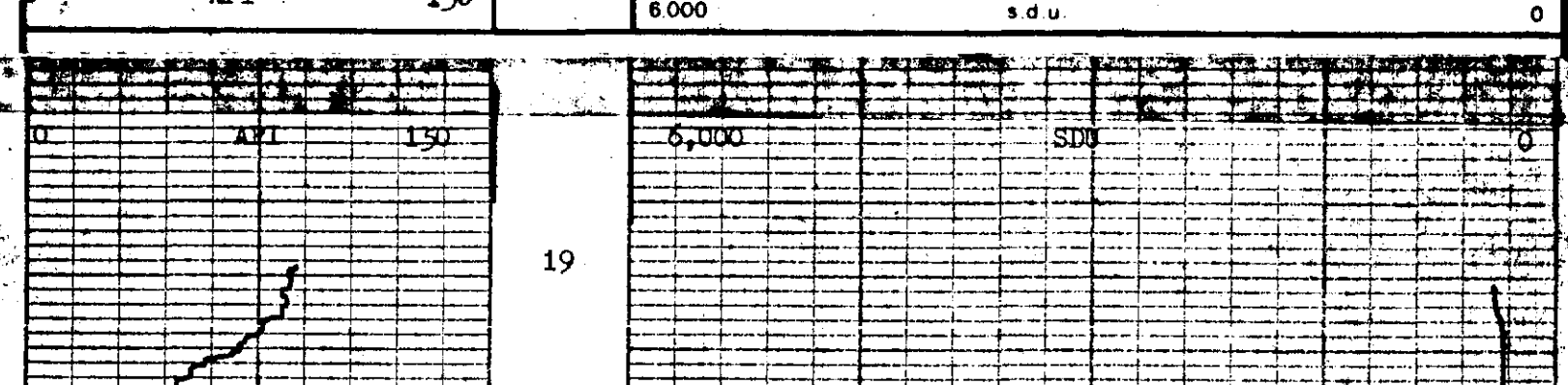
SOND TYPE:
 COAL COMBINATION SOND

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

B P B COAL QUALITY LOG

DEPTH	COAL BULK DENSITY g/cm ³
Gamma Ray	

HOLE SIZE CORRECTION DATA



DEPTH	COAL BULK DENSITY g/cm ³
Gamma Ray	



BOREHOLE TW94D-411
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa B.C.
 COUNTRY Canada

COAL QUALITY LOG



Gamma Ray & Sandstone Porosity Log.

BOREHOLE TW84D-411 (4)

CLIENT Crows Nest Resources Ltd.

AREA Talkwa B.C. DEPTH SCALE 1:100
 COUNTRY Canada
 DATE LOGGED 18/Jan/84 4 OF 4 LOGS

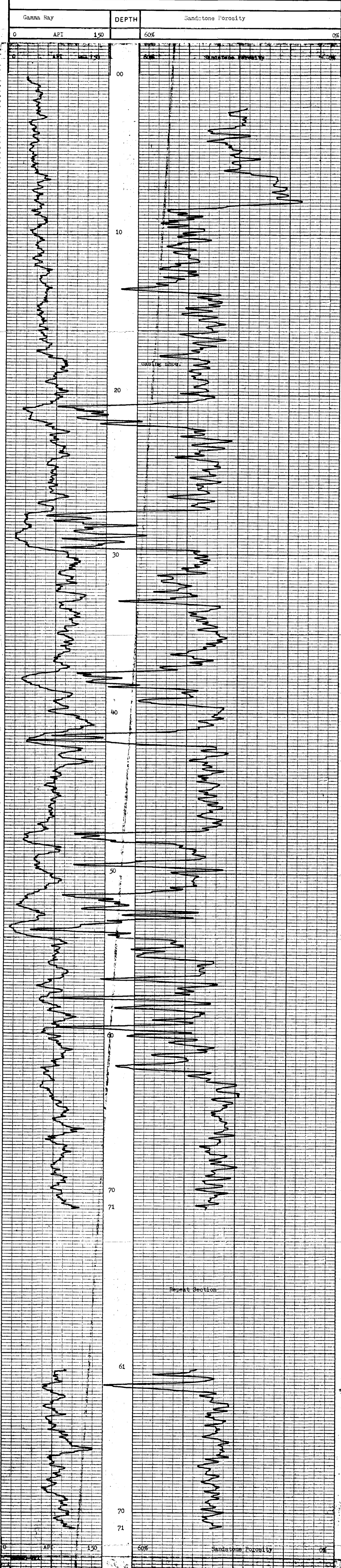
BOREHOLE DATA REFER TO Lithology LOG

OPERATION DATA REFER TO Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	DATE
G/R	Y	D	9m/1
DSN	Y	D	9m/1
			3.1.0
			1.0

REMARKS



Gamma Ray	DEPTH	Sandstone Porosity
0	API	150
60%		0%

	BOREHOLE <u>TW84D-411</u>	AREA <u>Talkwa B.C.</u>
	CLIENT <u>Crows Nest Resources Ltd.</u>	COUNTRY <u>Canada</u>



COAL LITHOLOGY LOG		BOREHOLE DATA	
COAL COMBINATION SONDE	SONDE TYPE SONDE	AREA Telkwa B.C.	DEPTH SCALE 1:100
LOG SUITE GAMMA RAY L.S. DENSITY CALIPER	FLUID DATA NATURE: Super Gas-X/Mater SG: 1.0 g/cm ³ cc. LEVEL: 3.4m VISCOSITY: N/A TEMP AT MEAS TEMP: N/A	COUNTRY Canada	DATE LOGGED 18/Jan/84
BOREHOLE TWS4D-112	CLIENT Crows Nest Resources Ltd.	DATE LOGGED 18/Jan/84	LOSS 1 of 4

EQUIPMENT AND RECORDING DATA													
COAL COMBINATION SONDE													
LOG	EQUIPMENT			TAPING			PANEL		CAL COEFF		DEPTHS		SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT or REPLAY	SPEED	T.C SECS	NORM	FROM	TO	INTERVAL	
GAMMA RAY	115	5822			9m/m	D	9m/m	1	-	1.53	49	00	49
L.S. DENSITY			371	Y	9m/m	D	9m/m	3	7.77	-	49	00	49
CALIPER		SIDEWALL POSITION	3996	Y	9m/m	D	9m/m	3	-	-	49	00	49

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)			
FROM	24.0m	13.0m	
TO	20.0m	6.0m	
INTERVAL	4.0m	7.0m	11

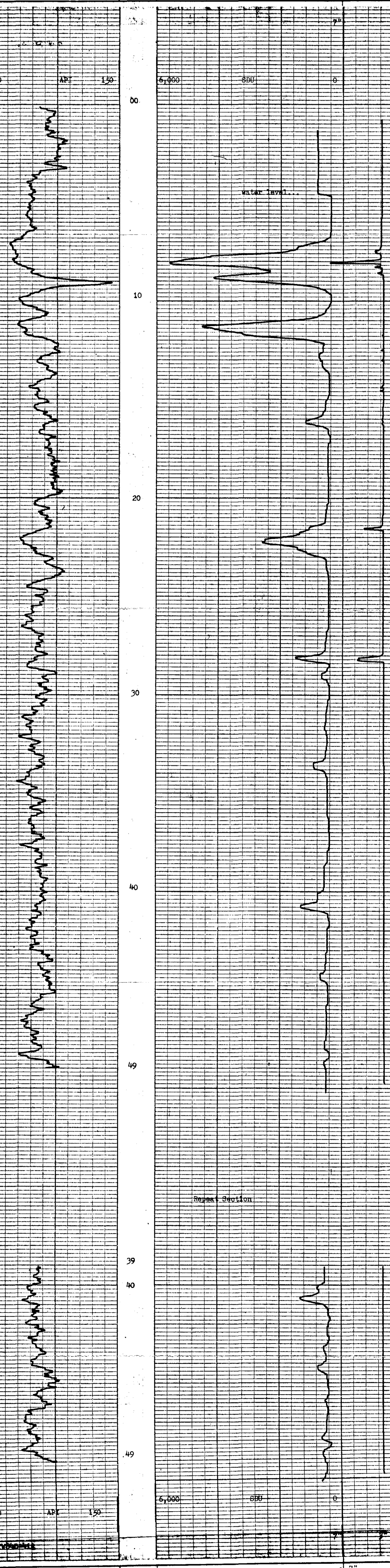
ADDITIONAL SONDES RUN				REMARKS	
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
519	DSN	1:100		REFER TO ADDITIONAL HEADINGS	
221	Dip	1:100			
217	Vert.	CDS			

BPB COAL LITHOLOGY LOG
CALIBRATION DATA

JIG No 371	VALUE 49.6 @ 5" DIAM	JIG CAL DATE 08/Jun/84	JIG VALUE 594.3	SDU @ 1.32 g/cm ³	2" ins 423 cps
JIG MARK SHOWN AT ABOVE VALUE - X0.3		JIG No 3996	SPAN 6.000	NORM SDU = 7.77	2" ins 882 cps

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

HOLE SIZE CORRECTION DATA																					
2	4	6	8	10	12	125	13	135	14	145	15	155	16	17	18	19	20	21	23	25	30



GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
		g/cm ³	INCHES

BOREHOLE TWS4D-112	AREA Telkwa B.C.
CLIENT Crows Nest Resources Ltd.	COUNTRY Canada

COAL LITHOLOGY LOG



TK - Telkwa 84(3) B

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SEAM THICKNESS LOG

BOREHOLE TW84D-412 (2)
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa B.C.
 COUNTRY Canada
 DATE LOGGED 18/Jun/84
 DEPTH SCALE 1:20
 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 TAPPING RECORD REPAIR SPEEDS INCHES
 LOG SPEED 2m/m R 2m/m 1
 CALIPER Y 2m/m R 2m/m 3 Y 3.5
 BR DENSITY Y 2m/m R 2m/m 3 Y 3.5

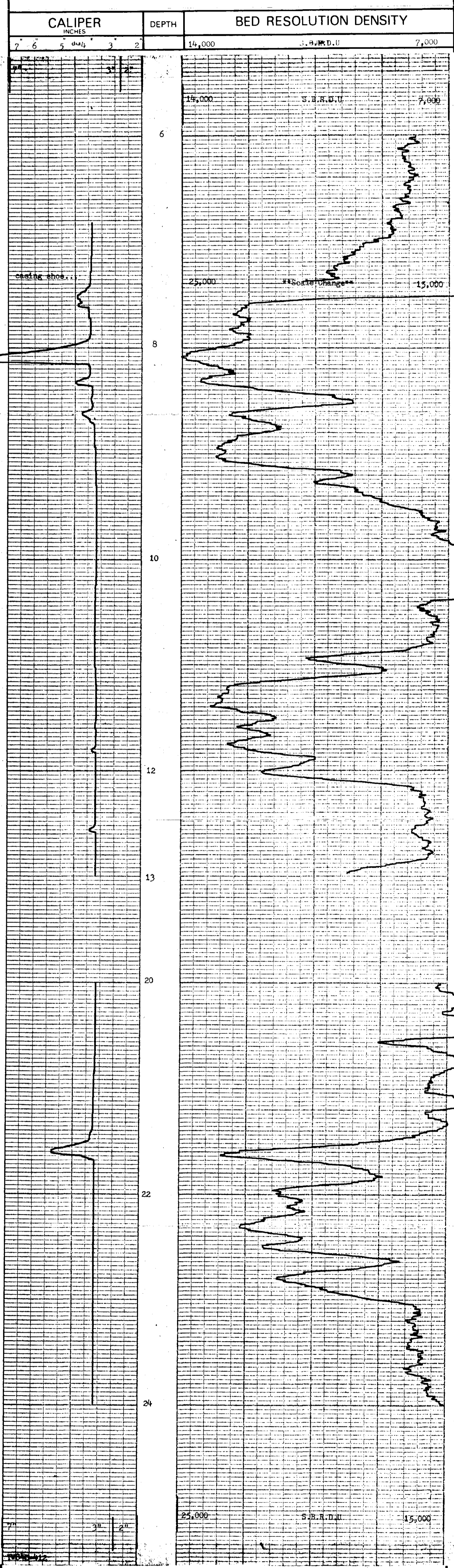
SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

FROM	24.0m	13.0m
TO	20.0m	6.0m
INTERVAL	4.0m	7.0m
FROM		
TO		
INTERVAL		
TOTAL		11

LOG SUITE
 CALIPER
 BR DENSITY

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7 6 5 4 3 2	25.000	S.B.R.D.U 15,000

BOREHOLE TW84D-412
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa B.C.
 COUNTRY Canada

SEAM THICKNESS LOG



Tk - Telkwa 841319

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COAL QUALITY LOG

SONDE TYPE:
COAL COMBINATION SONDE

LOG SUITE:
GAMMA RAY
L.S. DENSITY

BOREHOLE Tw84D-412
CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada
DATE LOGGED 18 Jun/81

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

COAL COMBINATION SONDE
LOG

LOG TAPPING PANEL COAL
LOG RECORD REVERSE SPEED SECS. NORM
GAMMA RAY Y 2m/m R 2m/m 2 - 1.59
S DENSITY I 2m/m H 2m/m 1 7.77 -

COAL QUALITY LOG INTERVALS
FROM 24.0m 13.0m
TO 20.0m 6.0m
INTERVAL 4.0m 7.0m

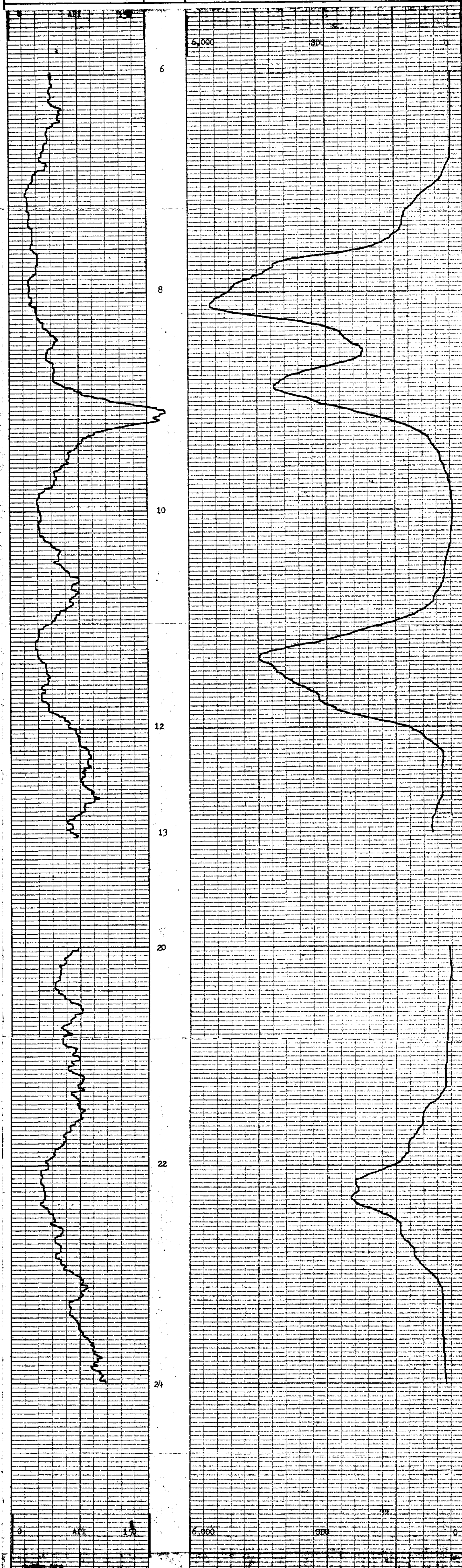
REMARKS

B P B COAL QUALITY LOG

DEPTH	COAL BULK DENSITY g/cm^3
Gamma Ray	

HOLE SIZE CORRECTION DATA

DEPTH	API	SDU
2'	12	13
4'	125	135
6'	13	14
8'	145	15
	155	16
	165	17
	175	18
	185	19
	195	20
	205	22
	215	24
	225	30



DEPTH	COAL BULK DENSITY g/cm^3
Gamma Ray	

BOREHOLE Tw84D-412 AREA Telkwa B.C.
CLIENT Crows Nest Resources Ltd. COUNTRY Canada

COAL QUALITY LOG



MT 8802 R

#3

Tk - Telkwa 84(3)H 240



Gamma Ray & Sandstone Porosity Log.

BOREHOLE TWSAD-412
 CLIENT Crows Nest Resources Ltd.

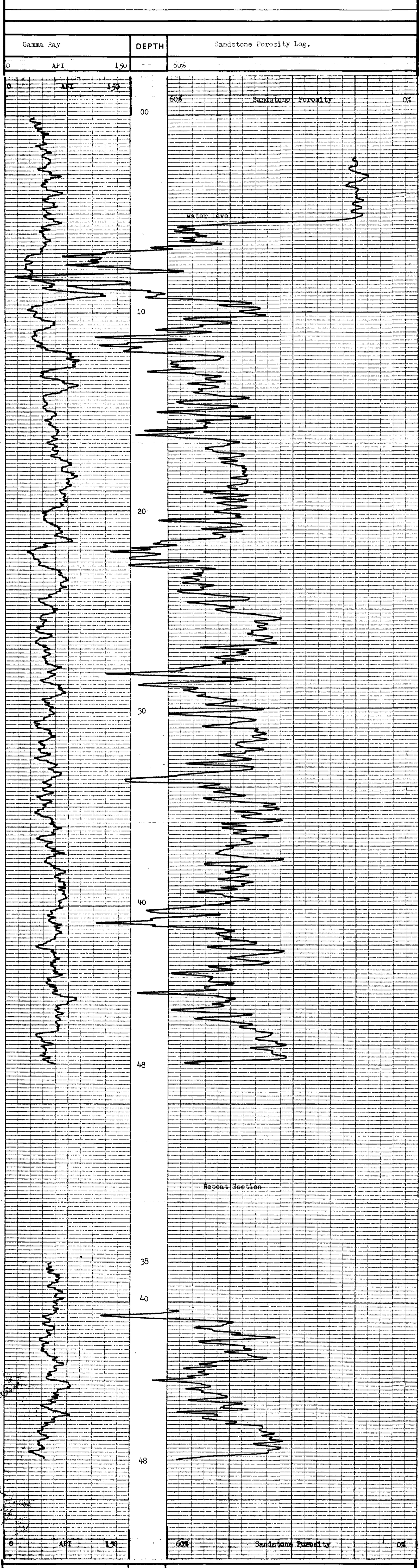
AREA Telkwa, B.C.
 COUNTRY Canada
 DATE LOGGED 18 Jun/84

DEPTH SCALE
 1:100
 4 OF 4 LOGS

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

LOG	TAPPING	RECORDING	PANEL	DATE
LOG TAPED	LOG SPEED	LOG REFRAY	LOG CORR	
Y/A	Y/m	D	Y	1.7
Y	Y/m	D	Y	1.0
	Y/m	D	Y	202

REMARKS



Gamma Ray	DEPTH	Sandstone Porosity Log.
0	API 150	60%

Gamma Ray	DEPTH	Sandstone Porosity Log.
0	API 150	60%

	BOREHOLE TWSAD-412	AREA Telkwa, B.C.
	CLIENT Crows Nest Resources Ltd.	COUNTRY Canada



DIPMETER ANALYSIS

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TK-Telkwa

CLIENT _____
BOREHOLE _____
AREA _____
COUNTRY _____

C.N.R.L.
TW-84D-412 (5)
TELKWA B.C
CANADA

84(3)A

DATE LOGGED.....18-JUL-84
DATE PROCESSED..02-AUG-84



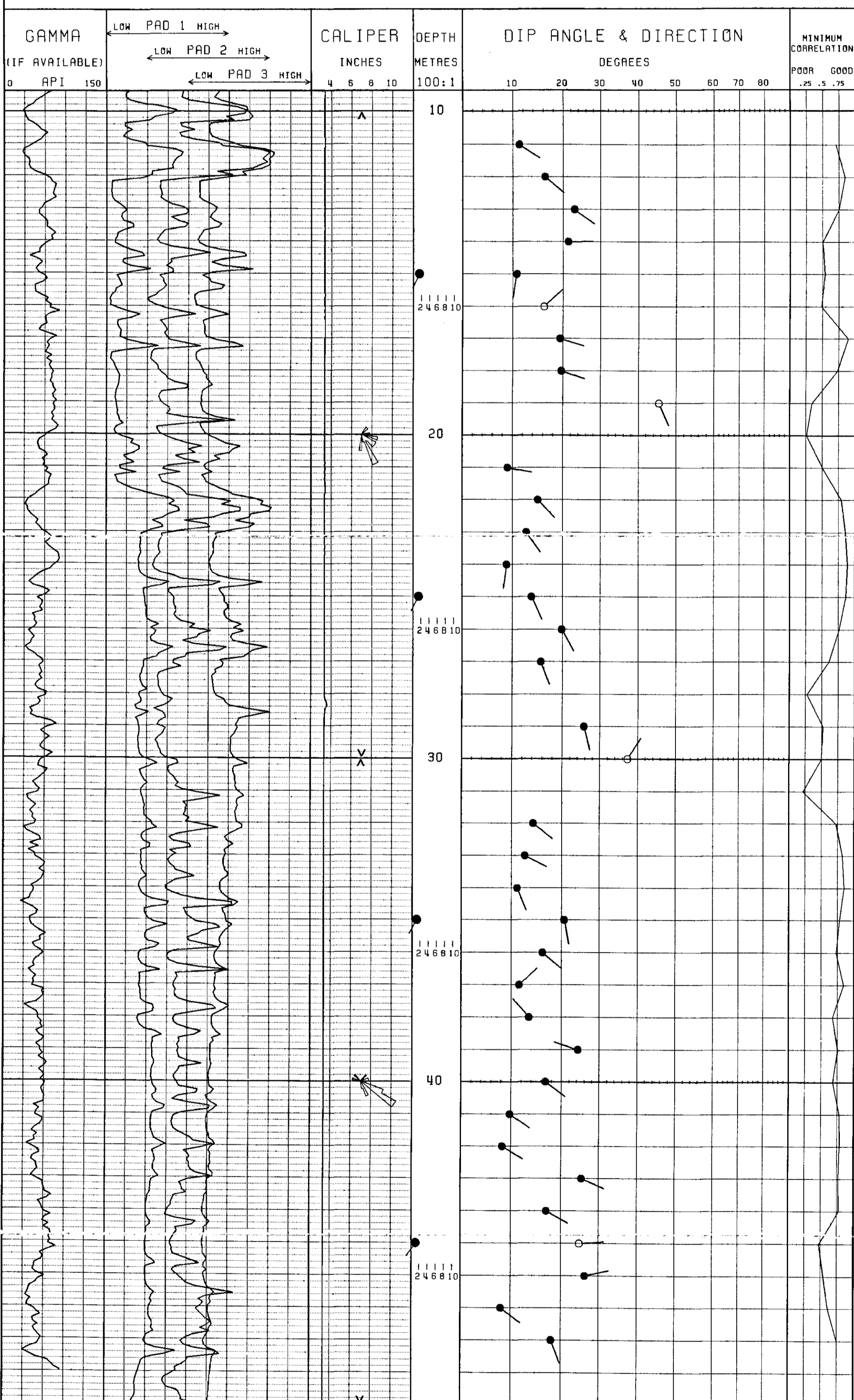
COMMENTS.....

INTERPRETATION PARAMETERS

STEP 1.00M.
INTERVAL 2.00M.
SEARCH ANGLE 80.
DECLINATION 26.0 EAST
DEPTH RANGE 9.36 - 50.00M.
DATE PROCESSED 02-AUG-84

AVERAGE BOREHOLE DEVIATION & DIRECTION ANNOTATED EVERY 10.0M.
ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES.
.1" RADIUS PER DIP MARKER DISPLAYED

LEGEND:
● GOOD (>0.50)
○ FAIR (>0.30)



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BPB DIPMETER ANALYSIS
INTERPRETATION NOTES

1. All plots are correct to the resolution of the plotter used, ie. one hundredth of an inch. Vertical resolution may vary by up to one percent but each plot is correct within itself, the plotted data being dynamically merged with its gridded background. Plots exceeding eight metres in length will be split into multiples thereof, however there is no data loss associated with this subdivision.
2. Rose diagrams are plotted between every major division and are delimited by two bold arrows. For certain replay scales it may be desirable to plot these less frequently; this option is available on request.
3. The borehole tilt and azimuth displayed on the plot are the average values over the whole major division.
4. The replay scale for pads 1, 2 & 3 are designed to give the maximum visual effect over the plotted interval. Replaying shorter sections of the curve will enhance this display.
5. The grid over which the computed dip information is displayed is locally linear. That is to say it is linear between 0 & 10, degrees, 10 & 20, 20 & 30 etc.
6. The correlation value will vary depending upon the interval size selected. Generally speaking the larger the correlation interval, the lower the value becomes. For this reason a direct comparison of this value for differing correlation intervals is meaningless, quality control being exercised with an appreciation of this effect.
7. For customised control of computed dipmeter analysis the following parameters must be specified:
 correlation step and interval(s)
 magnetic declination (ie. the difference between true and magnetic North)
 search angle(s)
 depth range(s)
 replay scale(s)
 the frequency for rose diagrams
 (quality control is exercised in accordance with the correlation interval used, alternatively all correlations may be displayed on request)

The following information is a listing of ALL the output from BPB's dipmeter analysis. The data is subdivided into three consecutive sets of data readings, being read from left to right. Below is a full description of each data item:

DEPTH	the depth corresponding to the centre of the correlation interval
CALIPER	the average borehole caliper recorded over the correlation interval
HOLE DRIFT	the average borehole deviation from vertical over the correlation interval
HOLE AZIMUTH	the average borehole azimuth over the correlation interval in degrees East of true North
DIP ANGLE	the computed formation dip in degrees, from the horizontal plane
DIP AZIMUTH	the formation azimuth in degrees East from true North
CORRELATION	a measure of the reliability of the computed result. This parameter is also used in the visual display to determine the quality of result

Further recorrelations over any step & interval size are available on any scale over any section of the log. Alternative methods of presentation, or analysis may be made available on request.

TW-84D-412		Magnetic declination 26.00 degrees East of North										02-AUG-84		
*****		Correlation step 1.00 metres , interval 2.00 metres										PAGE 1		
		Search angle 80. degrees												
DEPTH	CAL.	BOREHOLE	FORMATION	MIN.	DEPTH	CAL.	BOREHOLE	FORMATION	MIN.	DEPTH	CAL.	BOREHOLE	FORMATION	MIN.
metres	ins.	TILT	AZI	DIP	AZI	COR.	metres	ins.	TILT	AZI	DIP	AZI	COR.	metres
11.00	3.3	1.6	215.	11.3	124.	0.70	12.00	3.3	1.6	213.	16.4	130.	0.84	13.00
14.00	3.3	1.5	212.	21.5	89.	0.51	15.00	3.3	1.5	210.	10.8	190.	0.54	16.00
17.00	3.3	1.5	209.	19.5	108.	0.89	18.00	3.3	1.5	209.	19.7	108.	0.73	19.00
20.00	3.3	1.5	206.	47.9	147.	0.26	21.00	3.3	1.5	205.	9.0	100.	0.51	22.00
23.00	3.3	1.6	206.	12.7	145.	0.86	24.00	3.3	1.5	206.	8.8	187.	0.89	25.00
26.00	3.3	1.5	206.	19.8	151.	0.77	27.00	3.3	1.5	207.	15.6	159.	0.61	28.00
29.00	3.3	1.5	205.	26.4	166.	0.52	30.00	3.3	1.4	206.	38.2	32.	0.50	31.00
32.00	3.3	1.3	206.	14.3	129.	0.72	33.00	3.3	1.3	208.	12.6	117.	0.83	34.00
35.00	3.3	1.3	207.	20.8	170.	0.78	36.00	3.3	1.3	209.	16.1	130.	0.73	37.00
38.00	3.3	1.3	207.	13.5	319.	0.68	39.00	3.3	1.2	208.	24.9	280.	0.75	40.00
41.00	3.3	1.2	210.	9.8	125.	0.78	42.00	3.3	1.2	209.	8.3	122.	0.79	43.00
44.00	3.3	1.2	211.	17.1	120.	0.78	45.00	3.3	1.2	212.	25.5	86.	0.48	46.00
47.00	3.3	1.1	213.	8.1	127.	0.61	48.00	3.3	1.1	215.	18.0	159.	0.75	

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BOREHOLE TWB412-1/3
 CLIENT Crows Nest Resources Ltd.

AREA Talkwa B.C.
 COUNTRY Canada
 DATE LOGGED 19/Jun/84

DEPTH SCALE 1:100
 LOGS 1 OF 4

COAL LITHOLOGY LOG

BOREHOLE DATA

PERMANENTATION Ground Level
 ELEVATION OF P.D. 898
 DRILLER G.L.
 MEASUREMENT FROM G.L. 100.0m
 DEPTH REACHED 105.7m
 CASING SHOE 15.3m
 CASING TO 18.3m
 BIT SIZES 1 3.0" TO 2 TO
 2 3.0" TO 4 TO
 3 3.5" TO 1 3/4" TO 2 TO

FLUID DATA

LIQUOR 1.0 gm/cc
 VISCOSITY N/A
 PH N/A

SONDE TYPE
 COAL COMBINATION
 SONDE

LOG SUITE
 GAMMA RAY
 L.S. DENSITY
 CALIPER

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			LOG TAPED	RECORD SPEED	DIRECT REPLAY	TAPING SPEED	PANEL TC SECS	CAL COEFF	DEPTHS			SEAM LOG RUN
	SONDE	SOURCE	CALIBRATOR							FROM	TO	INTERVAL	
GAMMA RAY	115	521							1.55	99	00	99	
L.S. DENSITY			371	Y	9m/m	R	9m/m	1	-	99	00	99	
CALIPER			3996	Y	9m/m	R	9m/m	.3	7.76	-	99	00	99
				Y	9m/m	R	9m/m	.3	-	-	99	00	99

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

FROM	TO	INTERVAL TOTAL
25.0m	14.0m	11
14.0m	11.0m	

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
510	ISN	1:100	

REMARKS
 Start Op. 10:30
 Finish Op. 14:30

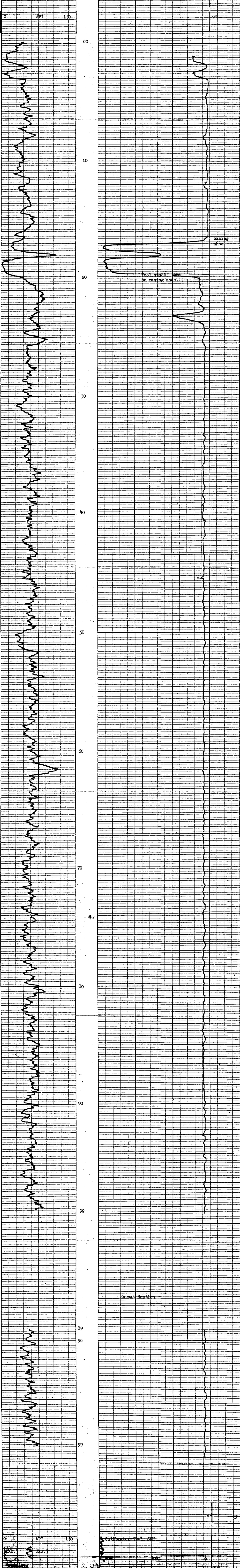
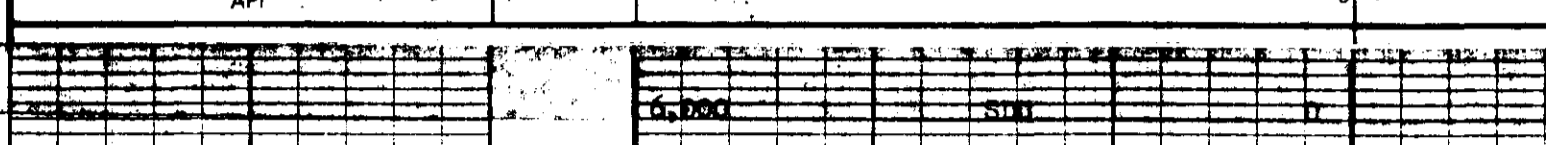
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 371	VALUE 4920 5" DIAM	JIG CAL DATE 08/Jun/84	VALUE 5943	SDU @ 1.32 g/cm ³	2" ms 423 cps
JIG MARK SHOWN AT ABOVE VALUE - X0.3		JIG No 3996	SPAN 6,000	NORM 7.76	7" ms 882 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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Tk - Telkwa 84(3)A

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SEAM THICKNESS LOG

BOREHOLE TW84D-413 (2)
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa B.C. DEPTH SCALE 1:20
 COUNTRY Canada DATE LOGGED 19/June/84 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	SIDEWALL POSITION	PANEL	COEFF
LOGS	RECORDING	DEPTH	15	NORM
CALIPER	Y	2m/m	R	2m/m
BR DENSITY	Y	2m/m	R	2m/m
				0.3
				7.85

SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

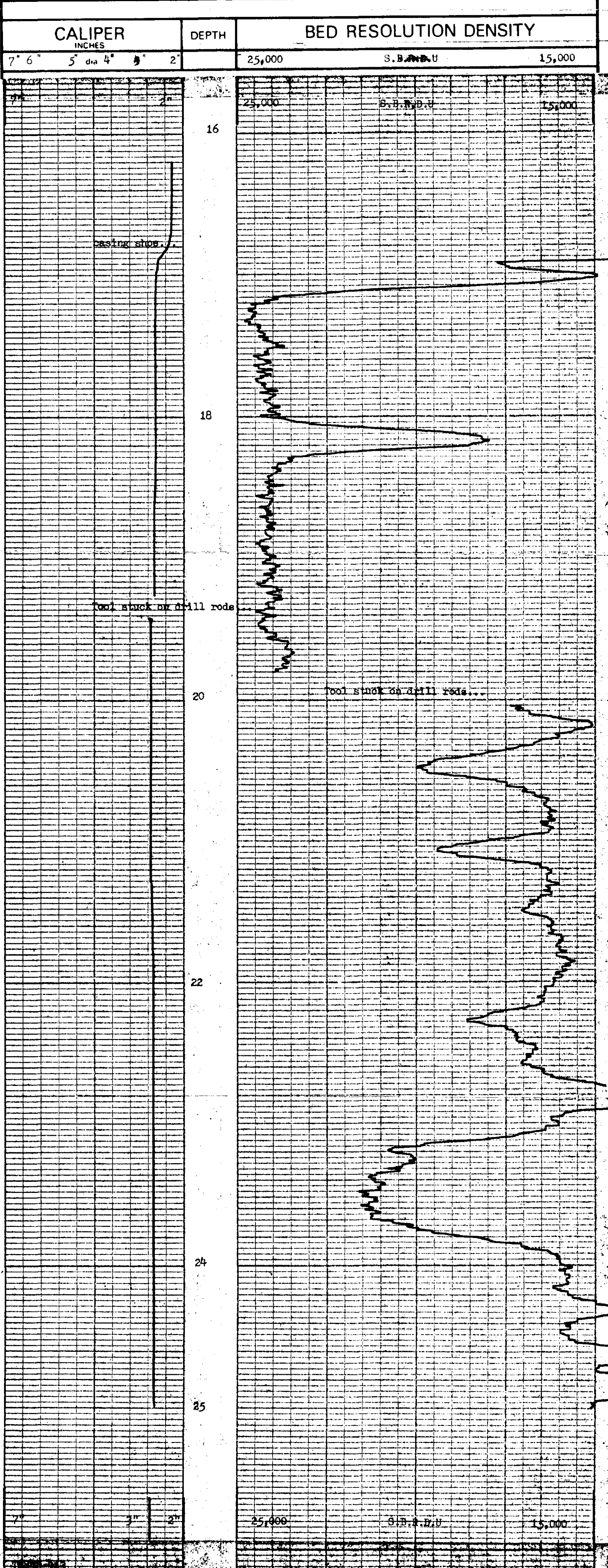
SEAM THICKNESS LOG INTERVALS

FROM	25.0m
TO	14.0m
INTERVAL	11.0m
FROM	
TO	
INTERVAL	
REMARKS	

COAL COMBINATION SONDE

LOG SUITE:
 CALIPER
 BR DENSITY

B P B SEAM THICKNESS LOG



BOREHOLE TW84D-413
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa B.C.
 COUNTRY Canada

SEAM THICKNESS LOG

TK - Telkwa 84(3)A

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BOREHOLE Tw84D-413
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
 COUNTRY Canada
 DATE LOGGED 19/Jun/84

DEPTH SCALE
1:20

3 or 4 LOSS

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG TABBING LOG RECORD SPEED PANEL COAL COEFF

LOG TABBING LOG RECORD SPEED PANEL COAL COEFF
 TABBING LOG RECORD SPEED PANEL COAL COEFF
 LOG TABBING LOG RECORD SPEED PANEL COAL COEFF
 LOG TABBING LOG RECORD SPEED PANEL COAL COEFF

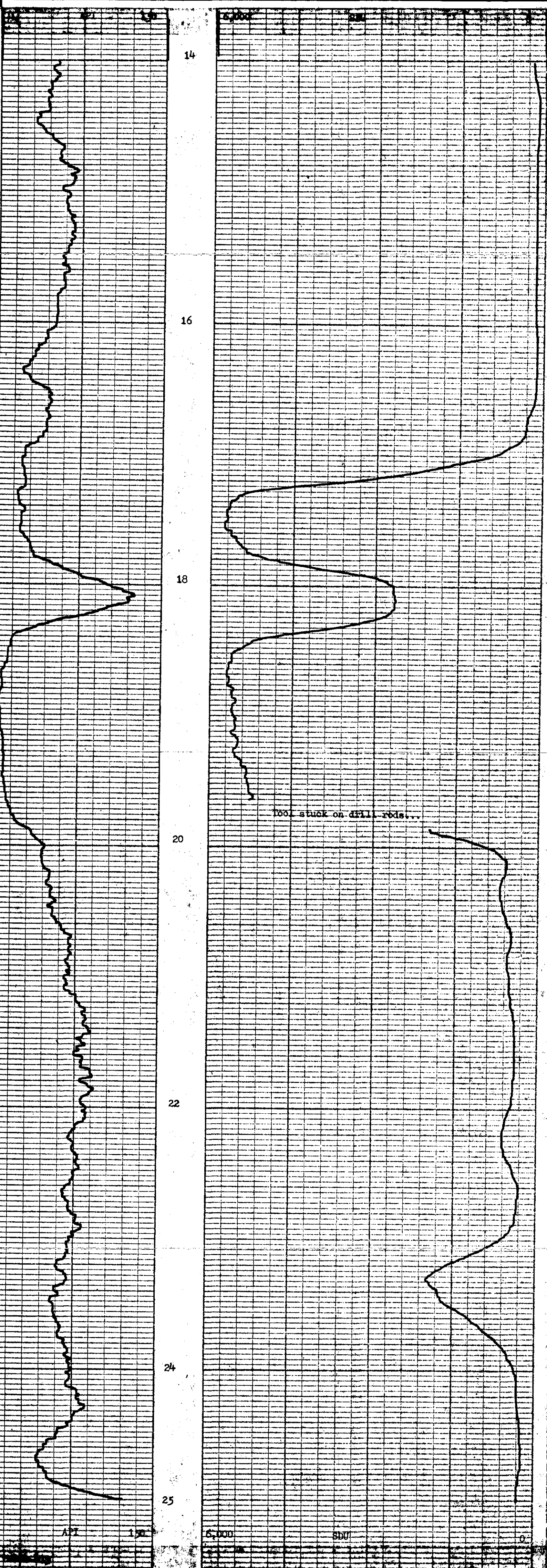
SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

FROM	25.0m	COAL QUALITY	LOG INTERVALS
TO	14.0m		
INTERVAL	11.0m		
FROM			
TO			
INTERVAL			
REMARKS			

BPB COAL QUALITY LOG

DEPTH		GAMMA RAY	COAL BULK DENSITY
Gamma Ray			g/cm^3
HOLE SIZE CORRECTION DATA			
2"	1.2	1.25	1.3
4"			
6"			
8"			
API	150	6.000	S.D.U.



API	150	6.000	S.D.U.
Gamma Ray			COAL BULK DENSITY
DEPTH			GAMMA RAY

BOREHOLE Tw84D-413 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

COAL QUALITY LOG



MT 8002 R



Gamma Ray & Sandstone Porosity Log

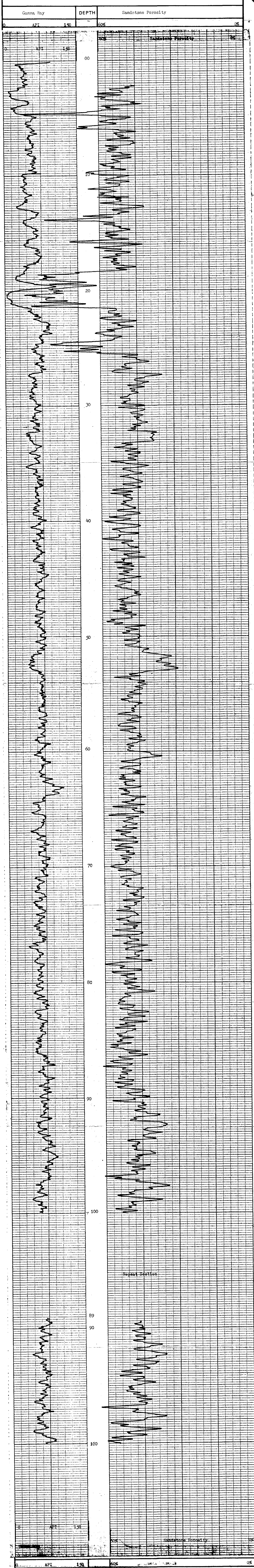
BOREHOLE TW84D-413
CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada
DATE LOGGED 12/14/84

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

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	CORE
LOG	RECORDING	RECORDING	RECORDING
DATE	TIME	DEPTH	DEPTH
12/14/84	12:00	0	0
12/14/84	12:00	150	150

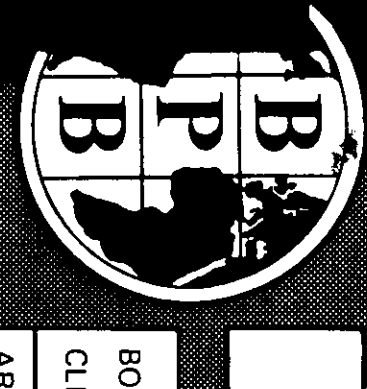


Gamma Ray	DEPTH	Sandstone Porosity
0	150	0%
0	150	0%



BOREHOLE TW84D-413
CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada



Gamma Ray & Long Spaced Density

BOREHOLE TW4D-414

CLIENT Crown Nest Resources Ltd.

AREA Telkwa B.C. DEPTH SCALE 1:100

COUNTRY Canada

DATE LOGGED 19/Jan/84 1 of 4 LOGS

PERMANENT DATA

ELEVATION OF F.O. Ground Level

LOGS/MARKING FROM B.P.B. DRILLER G.J.

DEPTH REACHED 99.0m 103.0m

CASING SHOE Rods in hole Rods in hole

BIT SIZES 1 3.0" TO TD 2 TO

3 TO 13.4 2 TO

CASING SIZES 1 3.5" TO 13.4 2 TO

FLUID DATA

NATURE Super Oil-3/Water

SG 1.0 Gms/Oil

LEVEL 0.0m

VISCOSITY N/A

Rim at meas temp N/A

B.H.T. N/A

OPERATION DATA

LAST READING 99.0m

LAST READING 00.0m

INTERVAL LOGGED 99.0m

UNIT-TRUCK No. 1216/1294

ENGINEER MACCO/DEL/BW

WITNESS

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING			PANEL		CAL COEFF	DEPTHS			
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT REPLAY	SPEED	T.C. SECS		NORM	FROM	TO	INTERVAL
G/R	115	5822	371	Y	9m/m	D	9m/m	1	-	1.2	100	00	100
LSD			3996	Y	9m/m	D	9m/m	3	7.76	-	100	00	100

ADDITIONAL SONDES RUN

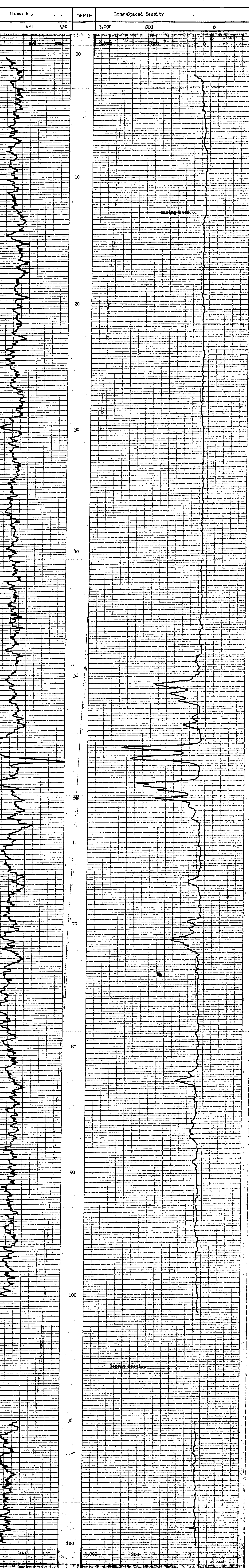
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
510	N/N	1:100	

REMARKS

Logged through drill rods. Scales have been adjusted accordingly.

Start Op 18:30

Finish Op 20:30



Gamma Ray DEPTH Long Spaced Density

0 API 120 3.000 SDU 0

BOREHOLE TW4D-414 AREA Telkwa B.C.

CLIENT Crown Nest Resources Ltd. COUNTRY Canada



Tk- Telkwa 84(3) B 240



BOREHOLE WB4D-414 (2)
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C. DEPTH SCALE 1:20
 COUNTRY Canada
 DATE LOGGED 19/Jan/84 2 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

LOG SUITE:
 CALIPER
 BR DENSITY

LOG	TAPPING	RECORD DIRECT	SPEED	PANEL	TAPE
Y	2m/m	Y	15	NORM	COEFF
Y	2m/m	R	2m/m	37.95	-

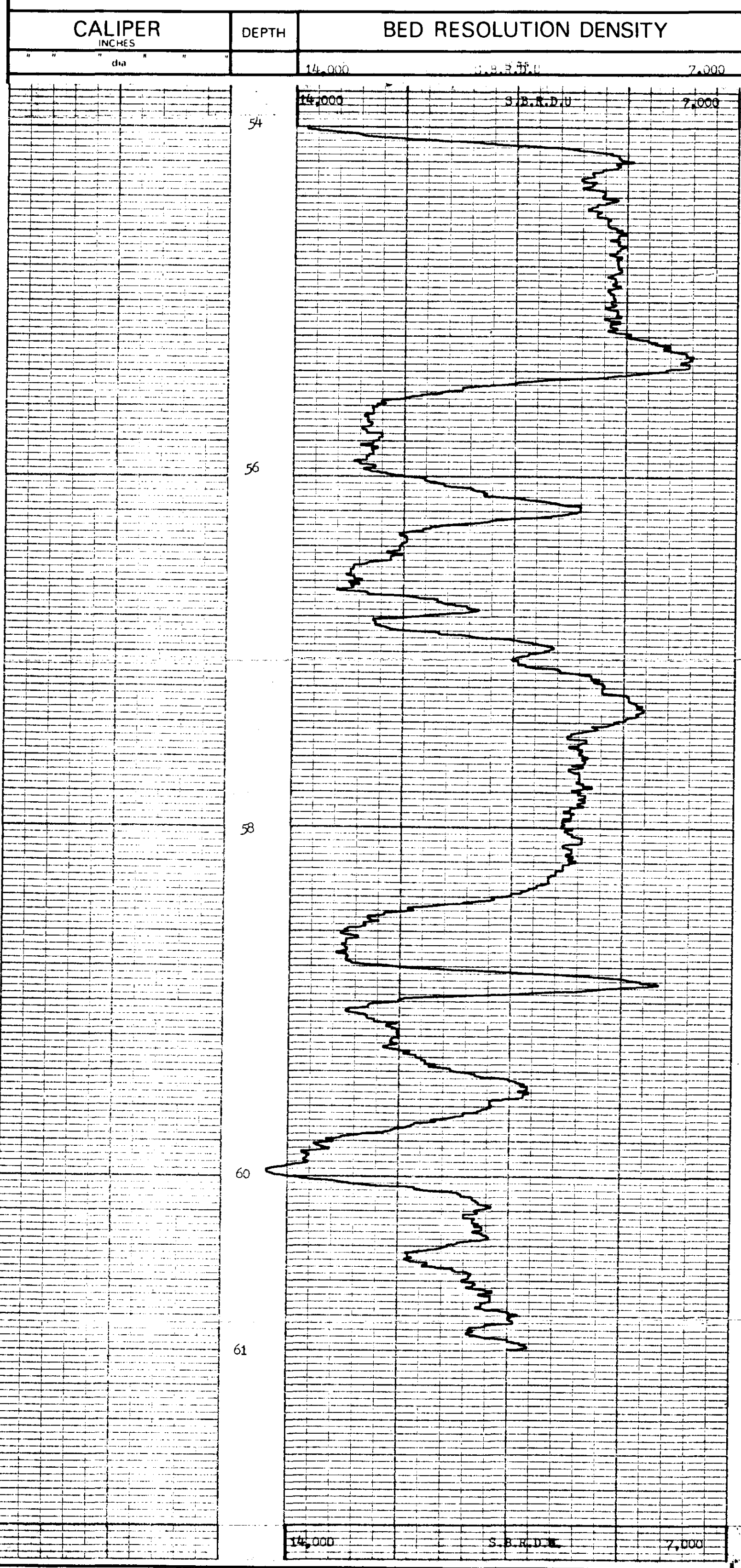
COAL COMBINATION SONDE
 SIDE WALL POSITION
 SOURCE SONDE AND CALIBRATION
 REFER TO LITHOLOGY LOG

SEAM THICKNESS LOG INTERVALS

FROM	TO	INTERVAL	INTERVAL TOTAL
1.0m	57.0m	7.0m	7

LOGGED THROUGH [] rods, scales adjusted accordingly.

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
" " " "		14,000 S.B.R.D.U 7,000

BOREHOLE WB4D-414 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

SEAM THICKNESS LOG





BOREHOLE TR94D-414 **(3)**
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C. DEPTH SCALE 1:20
 COUNTRY Canada DATE LOGGED 19/Jan/84 3 OF 4 LOGS

COAL QUALITY LOG

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

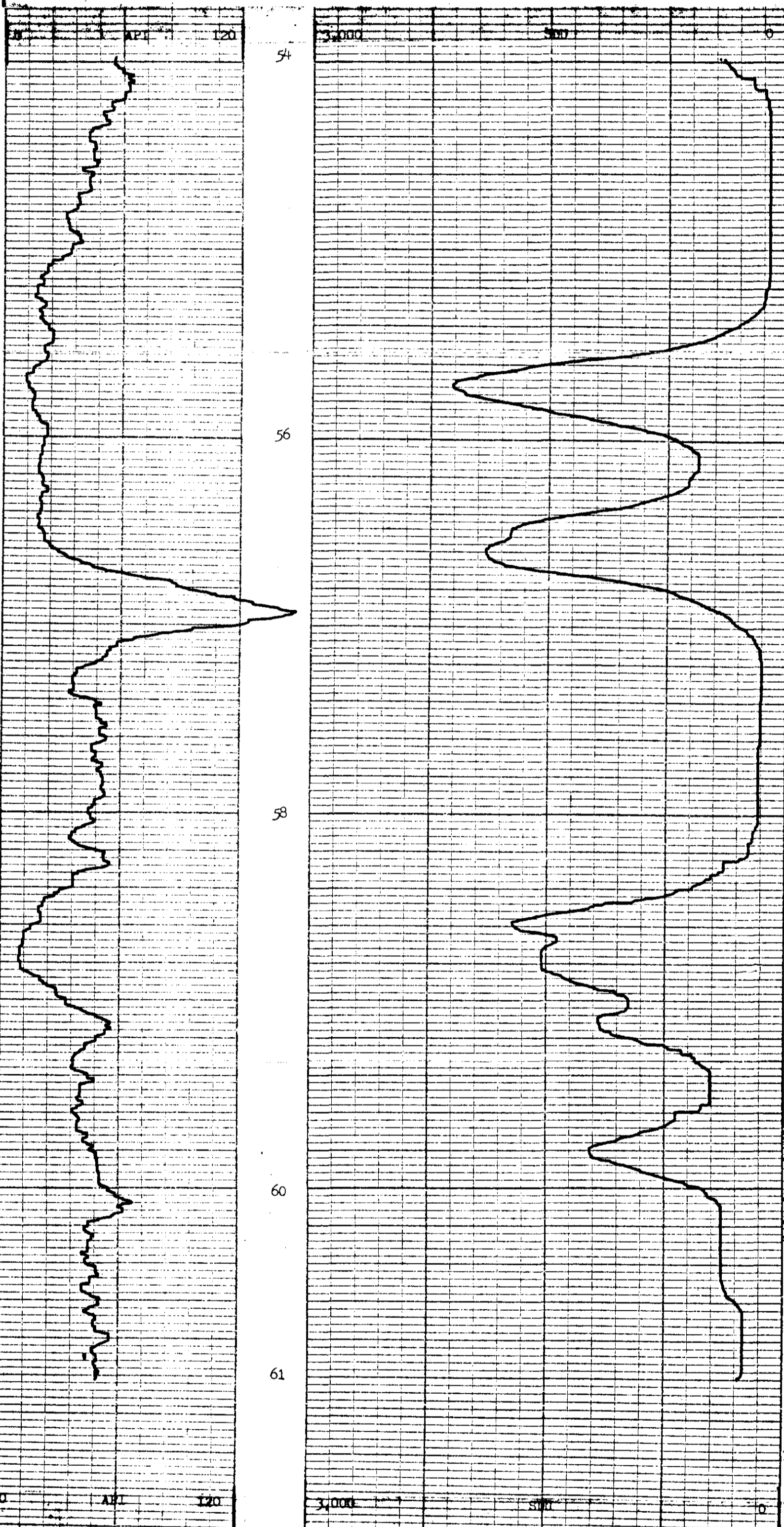
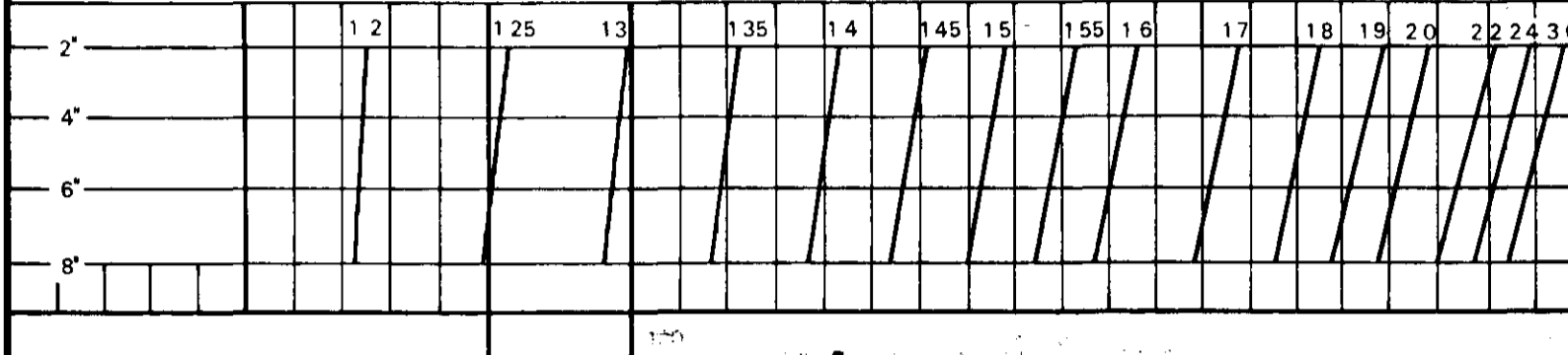
BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA
 COAL COMBINATION SONDE

LOG TAPPING _____ SIDEWALL POSITION _____
 LOG RECORDING SPEED _____ PANEL _____
 TAPED SPEED REPLAY _____ CM/M _____ SECS _____ NORM _____
 GAMMA RAY Y _____ R _____ 2h/m _____ 1.59
 L.S. DENSITY Y _____ R _____ 2h/m _____ 1 _____ 7.76
 SOURCE SONDE AND CALIBRATION _____
 REFER TO LITHOLOGY LOG

B P B COAL QUALITY LOG

0	API	120	DEPTH	3,000	0
			COAL BULK DENSITY g/cm ³		

HOLE SIZE CORRECTION DATA



0	API	150	DEPTH	3,000	0
			COAL BULK DENSITY g/cm ³		
			Long Spaced Density		



BOREHOLE TR94D-414 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

COAL QUALITY LOG



Gamma Ray & Neutron/Neutron

BOREHOLE TW84D-414
CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada
DATE LOGGED 19/Jun/84

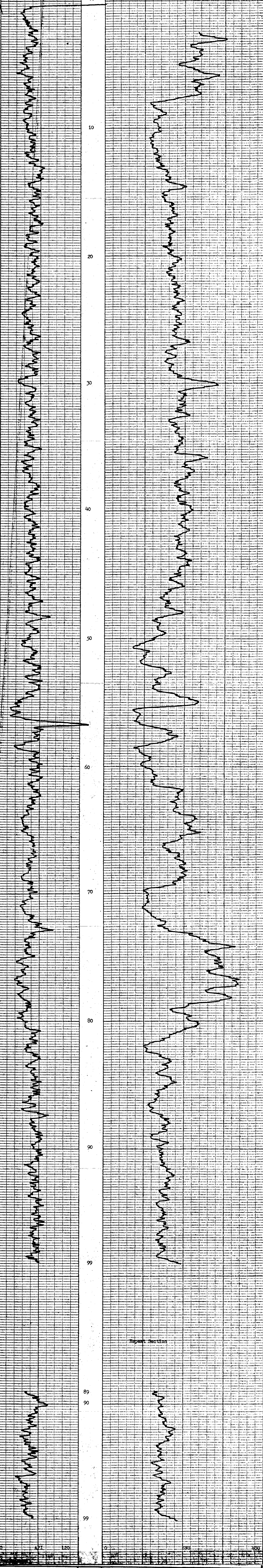
BOREHOLE DATA REFER TO GR & LSD LOG

OPERATION DATA REFER TO GR & LSD LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	CODE
GR	Y	9m/m D	2m/m I
N/N	Y	9m/m D	2m/m I
REMARKS			
Logged through drill rods - scales adjusted accordingly.			

Gamma Ray	DEPTH	Neutron/Neutron
API 120	0	SNU 400



API 120	DEPTH	SNU 400
---------	-------	---------



BOREHOLE TW84D-414
CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada

Tk - Talkwa

84(3) B

210



LOG SUITE
GAMMA RAY
L.S. DENSITY
CALIPER

SONDE TYPE
COAL
COMBINATION
SONDE

COAL
LITHOLOGY
LOG

BOREHOLE DATA

BOREHOLE: TW84D-415

CLIENT: Crows Nest Resources Ltd.

AREA: Talkwa B.C.

COUNTRY: Canada

DATE LOGGED: 19/2 Jun/94

DEPTH SCALE: 1:100

LOGS: 1 OF 4

BOREHOLE DATA

FORMATION DATA: GEOTHERMAL 1st level

ELEVATION OF P.D.: G.P.B.

MAGNETANTHROPIK: G.L.

DEPTH REACHED: 70.0m

CASING SHAPE: 16.4m

BIT SIZES: 1 3.0" TO 1.0" 2 TO TO

CASING SIZES: 3 3.5" TO 16.4" 2 TO TO

FLUID DATA

NATURE: Sliper Gel-X/Meter

SG: 1.0 Gms/cc.

LEVEL: 0.0m

VISCOSITY: N/A

BHT: N/A

OPERATION DATA

FIRST READING: 62.0m

LAST READING: 68.0m

INTERNAL LOGS: 63.0m

UNIT-TRUCK No: V216/214

ENGINEER: RM/BJL

WITNESS:

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT			TAPING		PANEL		CAL COEFF	DEPTHS		SEAM LOG RUN	
	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT/REPLAY	SPEED		T.C SECS	FROM		TO
GAMMA RAY	115	5822			9m/m	D	9m/m	1	1.62	68	00	68
L.S. DENSITY			371	Y	9m/m	D	9m/m	.3	7.73	68	00	68
CALIPER			3996	Y	9m/m	D	9m/m	.3	-	68	00	68

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

FROM	TO	INTERVAL	INTERVAL TOTAL
17.0m	3.0m	14.0m	14

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
510	DSN	1:100	
231	Dip	1:100	
234	Vert.	CDS	

REMARKS

Start Op 20:15
Finish Op 00:00

BPB COAL LITHOLOGY LOG

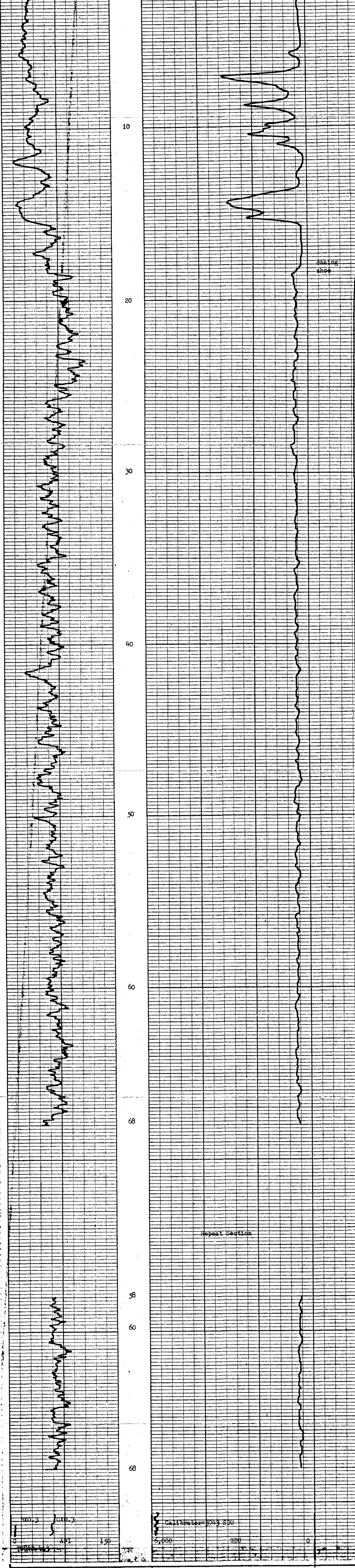
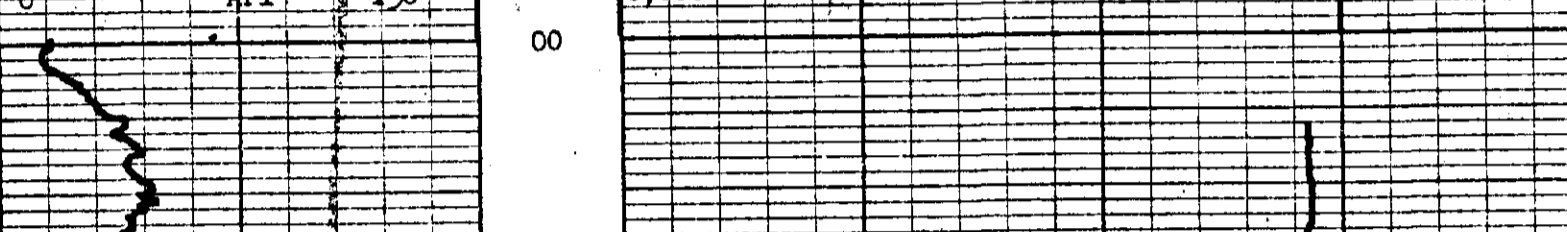
CALIBRATION DATA

JIG No 371 VALUE 49@ 5" DIAM JIG CAL DATE 08/Jun/88 VALUE 5943 SDU@ 1.39/cm³ 2" ins 423 cps

JIG MARK SHOWN AT ABOVE VALUE -X0.3 JIG No 3996 SPAN 6,000 NORM SDU = 7.73 2" ins 882 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: TW84D-415 AREA: Talkwa B.C.

CLIENT: Crows Nest Resources Ltd. COUNTRY: Canada

COAL LITHOLOGY LOG

Tk - Telkwa 84328

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BOREHOLE TW84D-415
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa, B.C.
 COUNTRY Canada
 DATE LOGGED 19/Jun/84

DEPTH SCALE
 1:20

SEAM THICKNESS LOG

LOG

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

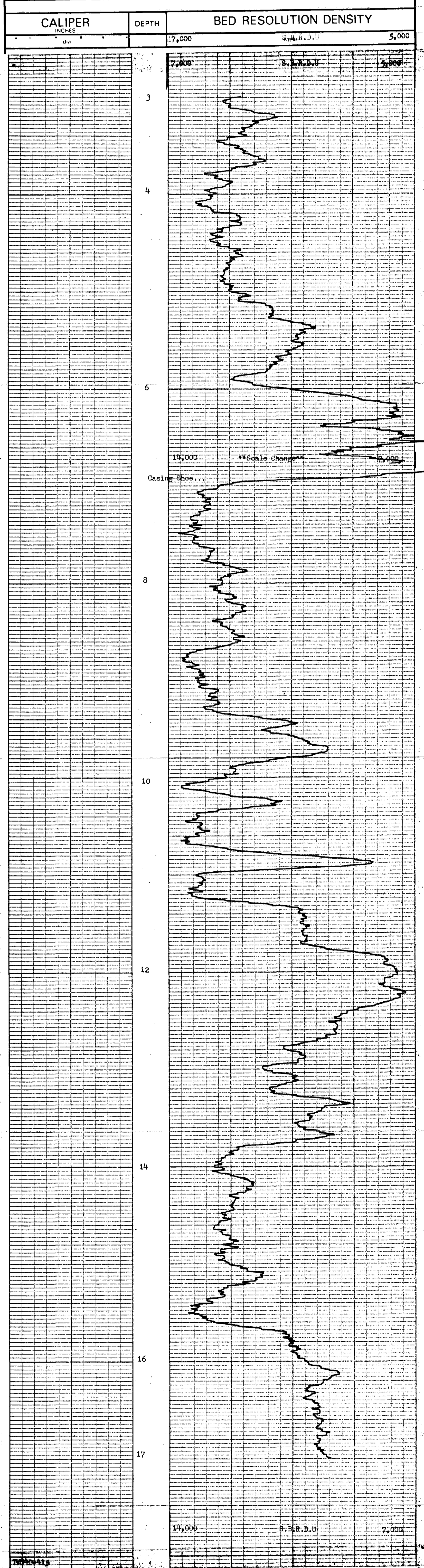
BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE
 LOG

LOG TAPPING SPEED REFLECTOR SPEED SCS INCH/M
 CALIPER X 2m/m R 2m/m 1 -
 BR DENSITY Y 2m/m R 2m/m .312.851 -

SEAM THICKNESS LOG INTERVALS
 FROM 17.3m
 TO 5.0m
 INTERVAL 14.0m
 FROM
 TO
 INTERVAL TOTAL
 REMARKS
 Scales adjusted to compensate for drill
 mol. effect.

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
	14,000	3pB.R.D.U
		7,000



BOREHOLE TW84D-415
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa, B.C.
 COUNTRY Canada

SEAM THICKNESS LOG



BOREHOLE TW84D-415
 CLIENT Crows Nest Resources Ltd.

AREA Teikwa, B.C.
 COUNTRY Canada
 DATE LOGGED 19/Jan/84

DEPTH SCALE 1:20
 1 of 4 LOGS

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

COAL COMBINATION SONDE
 LOG TAPPING SIDEWALL POSITION
 LOG RECORDING SPEED SCS NORM
 GAMMA 1 2m/m 2 1.62
 S DENSITY 1 2m/m 1 7.73

SONDE TYPE:
 COAL COMBINATION SONDE

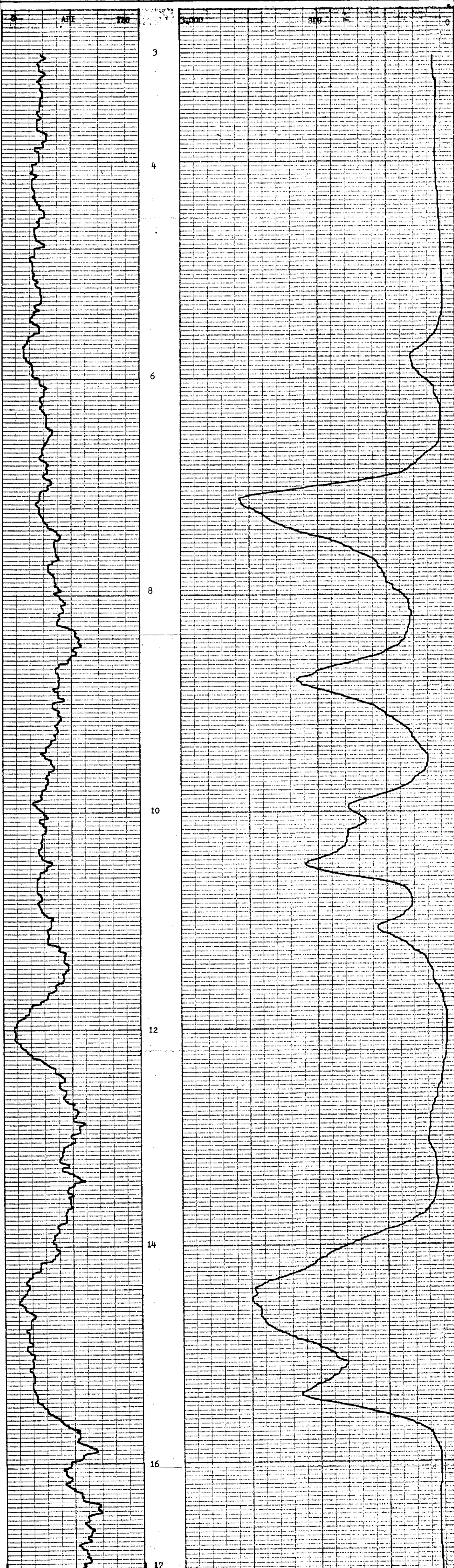
LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

COAL QUALITY LOG INTERVALS

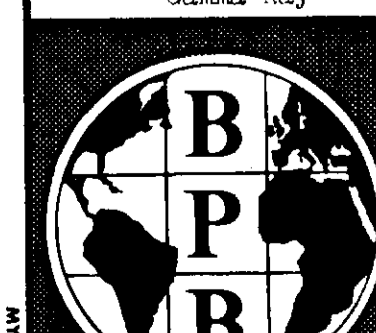
FROM	TO	INTERVAL	INTERVAL TOTAL
17.0m	14.0m	3.0m	14.0m

B P B COAL QUALITY LOG

Gamma Ray	Long Spaced Density
API 120	SSU 0
DEPTH 3,000	
COAL BULK DENSITY g/cm ³	
HOLE SIZE CORRECTION DATA	
2'	1.2
4'	1.25
6'	1.3
8'	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



Gamma Ray	Long Spaced Density
API 120	SSU 0
DEPTH 3,000	
COAL BULK DENSITY g/cm ³	



BOREHOLE TW84D-415
 CLIENT Crows Nest Resources Ltd.
 AREA Teikwa B.C.
 COUNTRY Canada

COAL QUALITY LOG



Gamma Ray & Sandstone Porosity Log.

BOREHOLE TWB4D-415

CLIENT Crows Nest Resources Ltd.

AREA Telkwa, B.C.

COUNTRY Canada

DATE LOGGED 19 Jun 84

DEPTH SCALE 1:100

BOREHOLE DATA REFER TO Ia thology LOG

OPERATION DATA REFER TO Ia thology LOG

EQUIPMENT AND RECORDING DATA

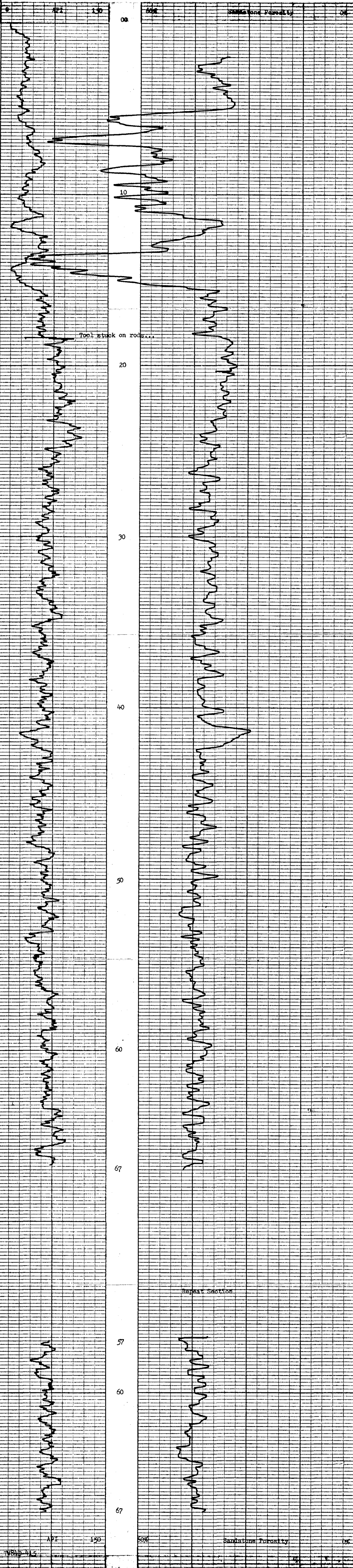
LOG TAPING LOG RECORD DIRECT SPEED T.C. INCH PANEL CORRECTION

G/R Y 2m/m D 9m/m 1 - 1.62

DSN Y 2m/m D 9m/m .3 .97

REMARKS

Gamma Ray	DEPTH	Sandstone Porosity
0 API 150		60% 0%



Gamma Ray	DEPTH	Sandstone Porosity
0 API 150		60% 0%

BOREHOLE TWB4D-415 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada





DIPMETER ANALYSIS

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TK - Telkwa 84(3) B

CLIENT _____
BOREHOLE _____
AREA _____
COUNTRY _____

C.N.R.L.
TW-84D-415 (5)
TELKWA B.C
CANADA

DATE LOGGED.....19-JUN-84
DATE PROCESSED..02-AUG-84



COMMENTS.....

INTERPRETATION PARAMETERS

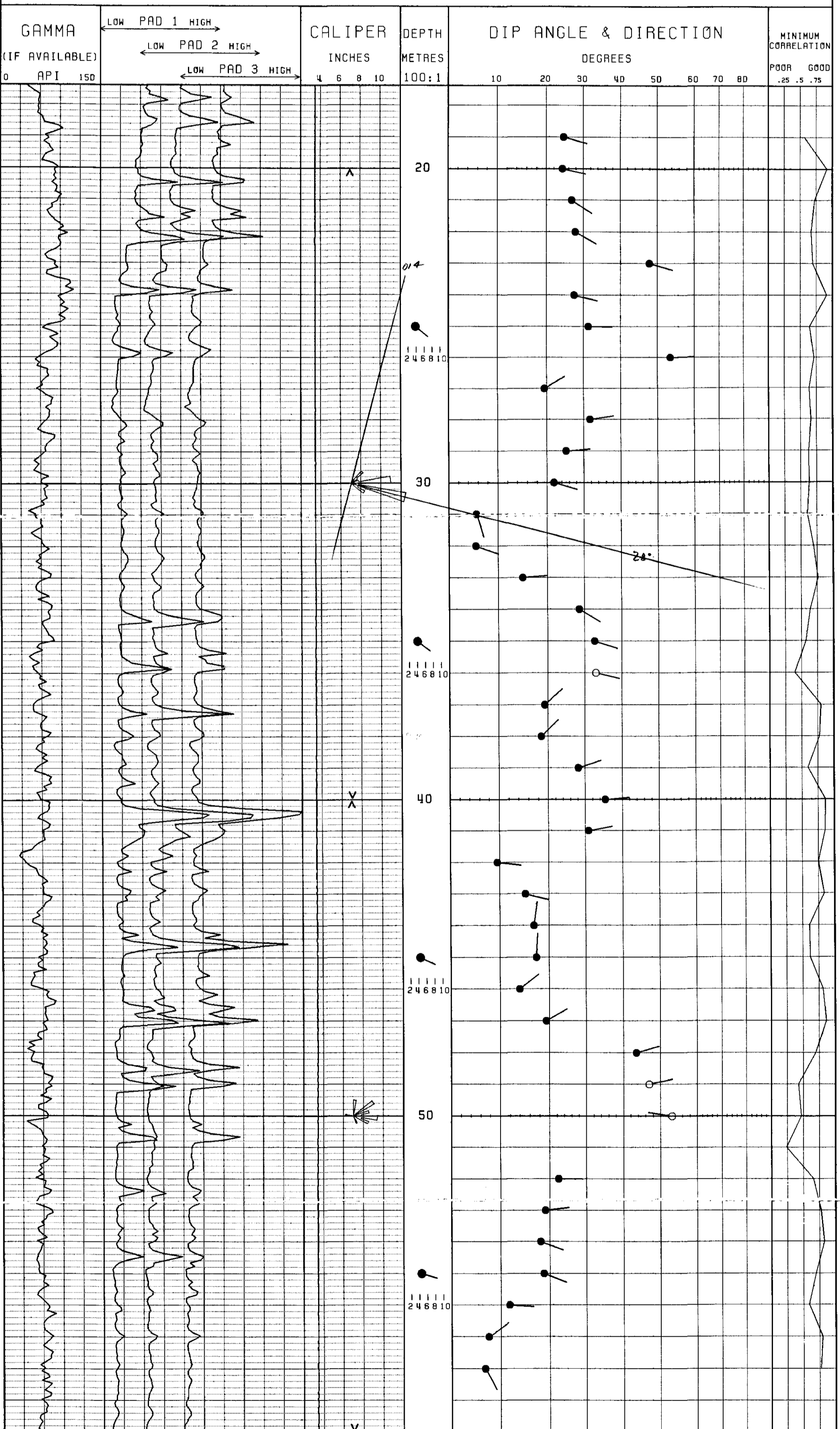
STEP 1.00M.
INTERVAL 2.00M.
SEARCH ANGLE 80.
DECLINATION 26.0 EAST
DEPTH RANGE 17.36 - 60.00M.
DATE PROCESSED 02-AUG-84

AVERAGE BOREHOLE DEVIATION & DIRECTION
ANNOTATED EVERY 10.0M.

LEGEND:

● GOOD (>0.50)
○ FAIR (>0.30)

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



BPB DIPMETER ANALYSIS
INTERPRETATION NOTES

⑥ 415 240

1. All plots are correct to the resolution of the plotter used, ie. one hundredth of an inch. Vertical resolution may vary by up to one percent but each plot is correct within itself, the plotted data being dynamically merged with its gridded background. Plots exceeding eight metres in length will be split into multiples thereof, however there is no data loss associated with this subdivision.
2. Rose diagrams are plotted between every major division and are delimited by two bold arrows. For certain replay scales it may be desirable to plot these less frequently; this option is available on request.
3. The borehole tilt and azimuth displayed on the plot are the average values over the whole major division.
4. The replay scale for pads 1, 2 & 3 are designed to give the maximum visual effect over the plotted interval. Replaying shorter sections of the curve will enhance this display.
5. The grid over which the computed dip information is displayed is locally linear. That is to say it is linear between 0 & 10, degrees, 10 & 20, 20 & 30 etc.
6. The correlation value will vary depending upon the interval size selected. Generally speaking the larger the correlation interval, the lower the value becomes. For this reason a direct comparison of this value for differing correlation intervals is meaningless, quality control being exercised with an appreciation of this effect.
7. For customised control of computed dipmeter analysis the following parameters must be specified:
 - correlation step and interval(s)
 - magnetic declination (ie. the difference between true and magnetic North)
 - search angle(s)
 - depth range(s)
 - replay scale(s)
 - the frequency for rose diagrams
 - (quality control is exercised in accordance with the correlation interval used, alternatively all correlations may be displayed on request)

The following information is a listing of ALL the output from BPB's dipmeter analysis. The data is subdivided into three consecutive sets of data readings, being read from left to right. Below is a full description of each data item:

DEPTH	the depth corresponding to the centre of the correlation interval
CALIPER	the average borehole caliper recorded over the correlation interval
HOLE DRIFT	the average borehole deviation from vertical over the correlation interval
HOLE AZIMUTH	the average borehole azimuth over the correlation interval in degrees East of true North
DIP ANGLE	the computed formation dip in degrees, from the horizontal plane
DIP AZIMUTH	the formation azimuth in degrees East from true North
CORRELATION	a measure of the reliability of the computed result. This parameter is also used in the visual display to determine the quality of result

Further recorrelations over any step & interval size are available on any scale over any section of the log. Alternative methods of presentation, or analysis may be made available on request.

TW-84D-415 *****																Magnetic declination 26.00 degrees East of North Correlation step 1.00 metres, interval 2.00 metres Search angle 80. degrees				02-AUG-84 PAGE 1																																																																																																																																																																																																																																																																			
DEPTH metres	CAL. ins.	BOREHOLE TILT	FORMATION AZI	MIN. COR.	DEPTH metres	CAL. ins.	BOREHOLE TILT	FORMATION AZI	MIN. COR.	DEPTH metres	CAL. ins.	BOREHOLE TILT	FORMATION AZI	MIN. COR.	DEPTH metres	CAL. ins.	BOREHOLE TILT	FORMATION AZI	MIN. COR.																																																																																																																																																																																																																																																																				
19.00	3.4	2.7	131.	25.3	106.	0.57	20.00	3.4	2.7	132.	24.8	103.	0.92	21.00	3.4	2.8	133.	27.6	123.	0.73	22.00	3.4	2.9	134.	28.8	120.	0.67	23.00	3.4	3.0	134.	48.8	106.	0.69	24.00	3.4	3.0	135.	28.3	103.	0.91	25.00	3.4	3.2	135.	31.5	91.	0.65	26.00	3.4	3.3	134.	53.9	88.	0.71	27.00	3.4	3.5	133.	19.5	59.	0.63	28.00	3.4	3.7	131.	31.8	82.	0.67	29.00	3.4	3.7	130.	25.8	86.	0.62	30.00	3.4	3.7	130.	22.1	106.	0.63	31.00	3.4	3.8	130.	5.6	163.	0.60	32.00	3.4	3.8	129.	5.5	109.	0.69	33.00	3.4	3.9	128.	15.0	85.	0.77	34.00	3.4	3.9	128.	29.6	120.	0.64	35.00	3.4	3.9	128.	33.0	108.	0.57	36.00	3.4	3.9	127.	33.4	103.	0.39	37.00	3.4	3.9	127.	19.3	48.	0.80	38.00	3.4	4.0	127.	18.6	45.	0.77	39.00	3.4	4.0	127.	29.1	71.	0.60	40.00	3.4	4.0	127.	36.1	85.	0.86	41.00	3.4	4.0	126.	30.9	79.	0.86	42.00	3.4	4.1	125.	9.5	97.	0.75	43.00	3.4	4.1	124.	15.2	104.	0.84	44.00	3.4	4.1	124.	16.9	8.	0.60	45.00	3.4	4.2	123.	17.4	3.	0.61	46.00	3.4	4.2	122.	14.0	52.	0.82	47.00	3.4	4.3	121.	19.4	59.	0.86	48.00	3.4	4.3	120.	43.9	73.	0.70	49.00	3.4	4.4	118.	47.8	77.	0.42	50.00	3.4	4.4	117.	53.6	279.	0.47	51.00	3.4	4.4	115.	37.9	204.	0.24	52.00	3.4	4.5	113.	22.6	90.	0.65	53.00	3.4	4.4	112.	19.1	83.	0.78	54.00	3.4	4.5	111.	18.1	110.	0.82	55.00	3.4	4.6	110.	18.8	111.	0.69	56.00	3.4	4.6	109.	11.8	94.	0.59	57.00	3.4	4.6	108.	7.6	55.	0.79	58.00	3.4	4.5	106.	6.8	152.	0.77

TK-Tellus 8/13/19 2110



BOREHOLE TWB-116
 CLIENT Crows Nest Resources Ltd.

AREA TELKWA
 COUNTRY CANADA
 DATE LOGGED 21/06/19

DEPTH SCALE 100:1
 LOGS 1 of 4

COAL LITHOLOGY LOG

BOREHOLE DATA
 ELEVATION OF P.D. 928
 MASS MINIMUM STRAIN 0.2
 DEPTH REACHED 93.0m
 CASING SHOE 36.3m

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

FLUID DATA
 NATURE SUPER-CO2 / MISC
 LEVEL 2.0m
 VISCOSITY N/A
 RH-1 N/A

EQUIPMENT AND RECORDING DATA												
COAL COMBINATION SONDE			TAPING			PANEL		CAL CDEFF		DEPTHS		SEAM LOG RUN
LOG	SONDE	SOURCE	CALIBRATOR	LOG TAPED	RECORD SPEED	DIRECT/REPLAY	SPEED	TC SECS	NORM	FROM	TO	INTERVAL
GAMMA RAY	115B	5822	371	Y	9m/m	D	9m/m	1	1.62	81	00	81
L.S. DENSITY			3996	Y	9m/m	D	9m/m	+3	7.71	81	00	81
CALIPER	SIDEWALL POSITION		2" .7"	Y	9m/m	D	9m/m	.3	-	81	00	81

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)				INTERVAL TOTAL
FROM	63.0	53.0	36.0	
TO	59.0	44.0	33.0	
INTERVAL	4.0	9.0	3.0	17.0m

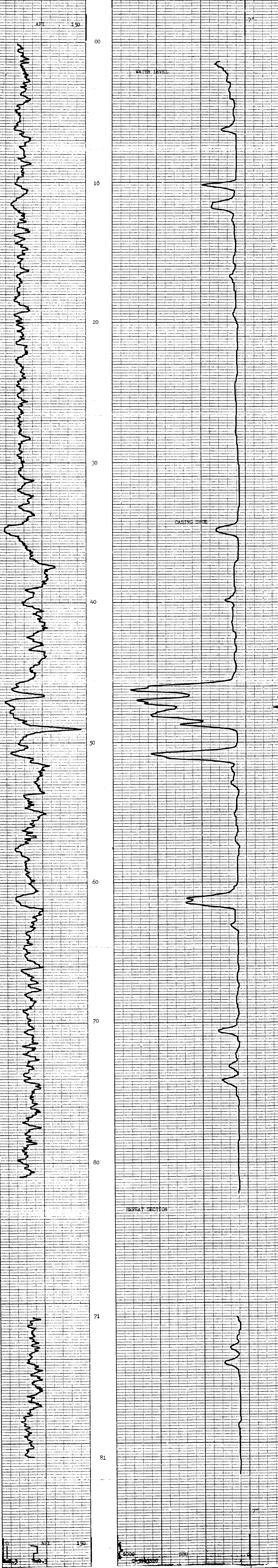
ADDITIONAL SONDES RUN				REMARKS	
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG	REFER TO ADDITIONAL HEADINGS	
510	DGI	100:1			Start Op: 0130
224	Vert	CDS			Finish Op: 0530
231	Dip	100:1			

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

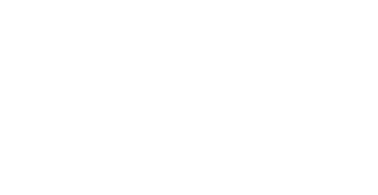
JIG No 311	VALUE 1496 @ 5" DIAM	JIG CAL DATE 08/Jan/13	JIG VALUE 543	SDU @ 1.38km ³	7 ms	822 cps
JIG MARK SHOWN AT ABOVE VALUE - x0.3		JIG No 3996	SPAN 6000	NORM SDU CPS = 7.71	2 ms	432 cps

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 TWB-116 AREA Telkwa
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada



COAL LITHOLOGY LOG



GAMMA RAY AND POROSITY LOG

BOREHOLE TRWD-416 (Z)

CLIENT Crows Nest Resources Ltd.

AREA Telkwa

COUNTRY Canada

DATE LOGGED 22/June/84

DEPTH SCALE 100.1

LOG 2 OF 4 LOGS

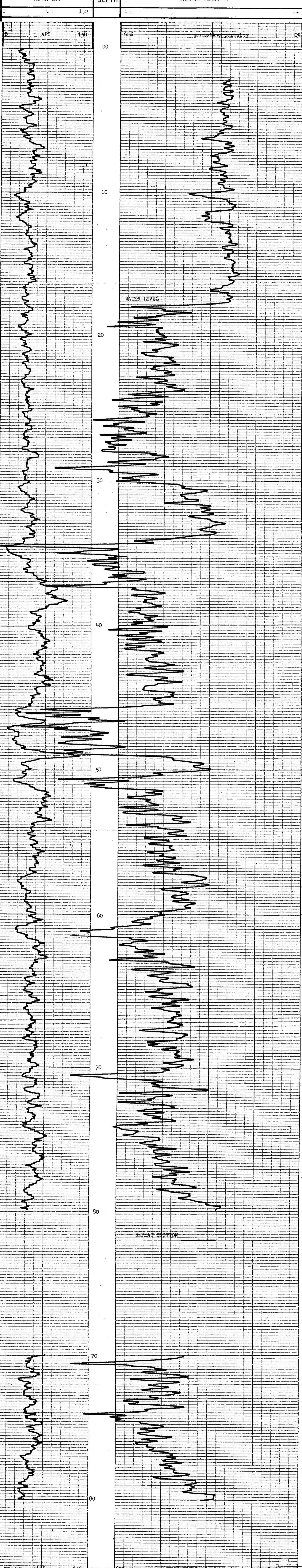
BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

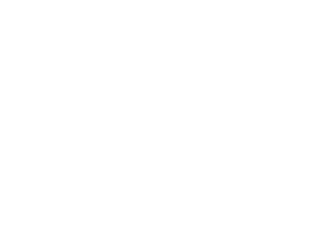
LOG	TRACING	PANEL	CAL
LOG	TRACING	PANEL	CAL
AREA	Y	9m/m	D
SCALE	1	116.031.03	
NO.	217		
DATE	7/22		

REMARKS



GAMMA RAY	DEPTH	NEUTRON POROSITY
0	0	60%
150	80	0%

BOREHOLE TRWD-416 AREA Telkwa
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada





SEAM THICKNESS LOG

SONDE TYPE
COAL COMBINATION
SONDE

LOG SUITE
CALIPER
B.R. DENSITY

BOREHOLE TW341D-416
CLIENT Crows Nest Resources Ltd.

AREA Telkwa
COUNTRY Canada

DATE LOGGED 21/10/94

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

COAL COMBINATION SONDE

LOG SUITE
CALIPER
B.R. DENSITY

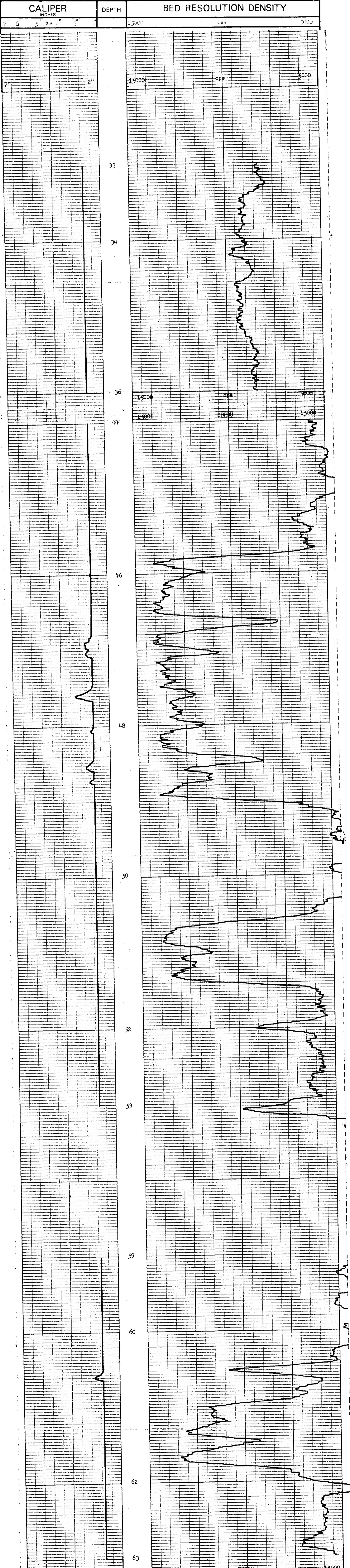
SEAM THICKNESS LOG INTERVALS

FROM 53.0 TO 55.0 SEAM THICKNESS 36.3

FROM 59.0 TO 44.0 SEAM THICKNESS 33.0

FROM 4.0 TO 9.0 SEAM THICKNESS 3.0

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
7	33	15000
6	34	15000
5	36	15000
4	44	15000
3	46	25000
2	48	25000
1	50	25000
0	52	25000
0	53	25000
0	55	25000
0	56	25000
0	58	25000
0	60	25000
0	62	25000
0	63	25000

SEAM THICKNESS LOG

BOREHOLE TW341D-416 AREA Telkwa
CLIENT Crows Nest Resources Ltd. COUNTRY Canada





BOREHOLE TW84D-416 (4)
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa DEPTH SCALE 20:1
 COUNTRY Canada

DATE LOGGED 21/June/84 1 of 4 LOGS

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

EQUIPMENT AND RECORDING DATA
 COAL COMBINATION SONDE

COAL QUALITY LOG

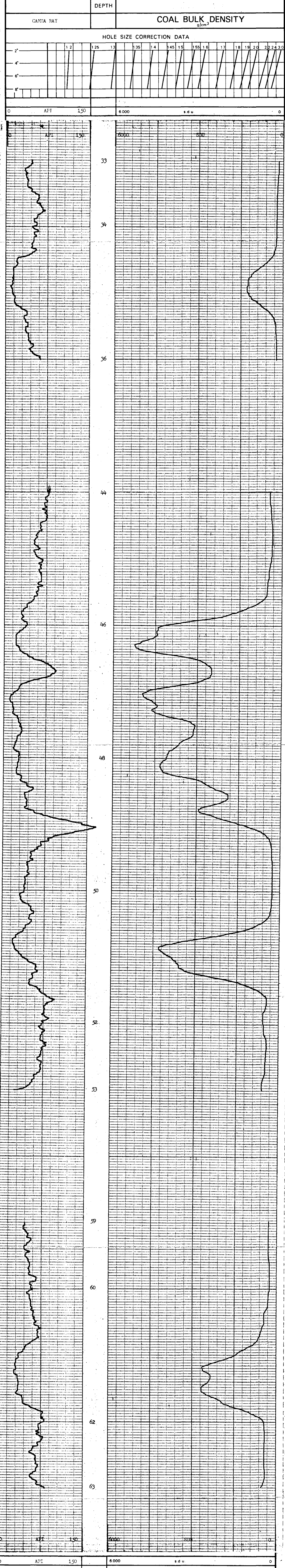
LOG TAPPING SPEEDS PANEL COEFF
 TAPING SPEEDS PANEL COEFF
 GAMMA Y 96/3 R 96/3 A 1.62 1.62
 S DENSITY Y 96/3 R 96/3 0.3 7.71 7.71
 SOURCE SONDE AND CALIBRATION

SONDE TYPE:
 COAL COMBINATION SONDE

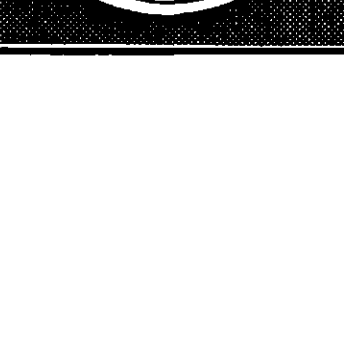
LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

FROM	63.0	53.0	36.0
TO	59.0	49.0	33.0
INTERVAL	4.0	9.0	3.0
FROM			
TO			
INTERVAL			
REMARKS			

BPB COAL QUALITY LOG



0	API	150	6000	SDU	0
GAMMA RAY			COAL BULK DENSITY g/cm^3		
DEPTH					



BOREHOLE TW84D-416 AREA Telkwa
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

COAL QUALITY LOG



DIPMETER ANALYSIS

240

Tk - Telkwa

CLIENT _____
 BOREHOLE _____
 AREA _____
 COUNTRY _____

C.N.R.L.
 TW-84D-416 (5)
 TELKWA B.C
 CANADA

84(3)A

DATE LOGGED.....21-JUN-84
 DATE PROCESSED..02-AUG-84



COMMENTS.....

INTERPRETATION PARAMETERS

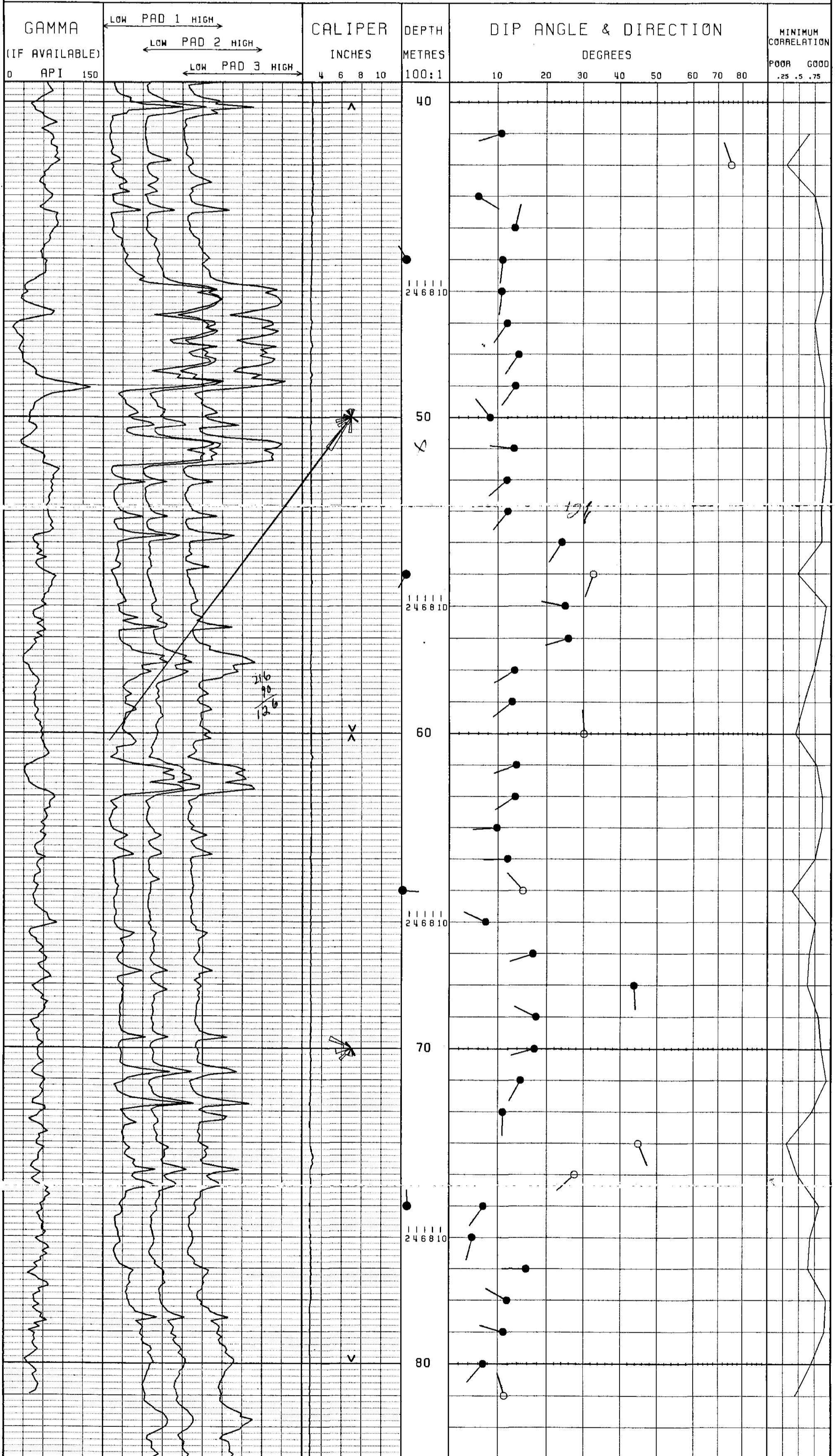
STEP 1.00M. DECLINATION 26.0 EAST
 INTERVAL 2.00M. DEPTH RANGE 39.36 - 83.00M.
 SEARCH ANGLE 80. DATE PROCESSED 02-AUG-84

AVERAGE BOREHOLE DEVIATION & DIRECTION
 ANNOTATED EVERY 10.0M.

LEGEND:

- GOOD (>0.50)
- FAIR (>0.30)

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



416 (b) 240

BPB DIPMETER ANALYSIS
INTERPRETATION NOTES

1. All plots are correct to the resolution of the plotter used, ie. one hundredth of an inch. Vertical resolution may vary by up to one percent but each plot is correct within itself, the plotted data being dynamically merged with its gridded background. Plots exceeding eight metres in length will be split into multiples thereof, however there is no data loss associated with this subdivision.
2. Rose diagrams are plotted between every major division and are delimited by two bold arrows. For certain replay scales it may be desirable to plot these less frequently; this option is available on request.
3. The borehole tilt and azimuth displayed on the plot are the average values over the whole major division.
4. The replay scale for pads 1, 2 & 3 are designed to give the maximum visual effect over the plotted interval. Replaying shorter sections of the curve will enhance this display.
5. The grid over which the computed dip information is displayed is locally linear. That is to say it is linear between 0 & 10, degrees, 10 & 20, 20 & 30 etc.
6. The correlation value will vary depending upon the interval size selected. Generally speaking the larger the correlation interval, the lower the value becomes. For this reason a direct comparison of this value for differing correlation intervals is meaningless, quality control being exercised with an appreciation of this effect.
7. For customised control of computed dipmeter analysis the following parameters must be specified:
 correlation step and interval(s)
 magnetic declination(ie. the difference between true and magnetic North)
 search angle(s)
 depth range(s)
 replay scale(s)
 the frequency for rose diagrams
 (quality control is exercised in accordance with the correlation interval used, alternatively all correlations may be displayed on request)

The following information is a listing of ALL the output from BPB's dipmeter analysis. The data is subdivided into three consecutive sets of data readings, being read from left to right. Below is a full description of each data item:

DEPTH	the depth corresponding to the centre of the correlation interval
CALIPER	the average borehole caliper recorded over the correlation interval
HOLE DRIFT	the average borehole deviation from vertical over the correlation interval
HOLE AZIMUTH	the average borehole azimuth over the correlation interval in degrees East of true North
DIP ANGLE	the computed formation dip in degrees, from the horizontal plane
DIP AZIMUTH	the formation azimuth in degrees East from true North
CORRELATION	a measure of the reliability of the computed result. This parameter is also used in the visual display to determine the quality of result

Further recorrelations over any step & interval size are available on any scale over any section of the log. Alternative methods of presentation, or analysis may be made available on request.

TW-84D-416															Magnetic declination 26.00 degrees East of North					02-AUG-84			
*****															Correlation step 1.00 metres ,interval 2.00 metres					Search angle 80. degrees		PAGE 1	
DEPTH	CAL.	BOREHOLE	FORMATION	MIN.	DEPTH	CAL.	BOREHOLE	FORMATION	MIN.	DEPTH	CAL.	BOREHOLE	FORMATION	MIN.									
metres	ins.	TILT	AZI	DIP	AZI	COR.	metres	ins.	TILT	AZI	DIP	AZI	COR.	metres	ins.	TILT	AZI	DIP	AZI	COR.			
41.00	3.0	2.0	246.	10.8	252.	0.67	42.00	3.0	1.7	225.	75.4	341.	0.31	43.00	3.0	1.5	208.	6.0	122.	0.75			
44.00	3.0	1.2	194.	13.5	14.	0.86	45.00	3.0	0.9	178.	10.9	186.	0.87	46.00	2.9	0.5	154.	10.8	188.	0.87			
47.00	2.9	0.3	100.	11.9	215.	0.75	48.00	2.9	0.4	34.	14.3	214.	0.81	49.00	2.9	0.6	357.	13.7	217.	0.90			
50.00	2.9	1.0	343.	8.4	322.	0.89	51.00	2.9	1.3	329.	13.3	278.	0.93	52.00	2.9	1.7	316.	11.9	229.	0.90			
53.00	2.9	1.9	303.	12.0	217.	0.85	54.00	2.9	2.1	290.	24.6	213.	0.86	55.00	2.9	2.1	277.	33.0	200.	0.48			
56.00	2.9	2.1	264.	25.6	281.	0.93	57.00	2.9	2.0	252.	26.6	254.	0.85	58.00	2.9	1.8	239.	13.4	239.	0.74			
59.00	2.9	1.6	227.	12.9	232.	0.58	60.00	2.9	1.4	217.	30.1	356.	0.44	61.00	2.9	1.2	210.	13.8	250.	0.77			
62.00	2.9	1.0	204.	13.5	236.	0.86	63.00	2.9	0.8	196.	9.8	266.	0.85	64.00	2.9	0.7	188.	12.0	269.	0.75			
65.00	2.9	0.6	180.	15.1	319.	0.39	66.00	2.9	0.5	171.	7.5	295.	0.76	67.00	2.9	0.4	161.	17.2	252.	0.66			
68.00	2.9	0.3	148.	44.1	177.	0.63	69.00	2.9	0.3	134.	17.8	296.	0.81	70.00	2.9	0.3	116.	17.5	255.	0.85			
71.00	2.9	0.3	94.	14.6	208.	0.93	72.00	2.8	0.3	72.	11.0	182.	0.70	73.00	2.9	0.4	56.	45.5	158.	0.31			
74.00	2.9	0.5	48.	28.5	228.	0.48	75.00	2.8	0.6	41.	7.0	215.	0.82	76.00	2.9	0.7	33.	4.8	194.	0.67			
77.00	2.9	0.9	26.	15.8	271.	0.65	78.00	2.9	1.0	18.	11.9	300.	0.92	79.00	2.8	1.1	11.	11.1	286.	0.90			
80.00	2.8	1.3	4.	7.0	221.	0.70	81.00	2.8	1.5	358.	11.3	343.	0.44										

Tk - Telkwa 84133A

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COAL LITHOLOGY LOG	
COAL	LITHOLOGY
LOG	LOG
SONDE TYPE: _____ COAL COMBINATION: _____ SONDE: _____ LOG SUITE: _____ GAMMA RAY _____ U.S. DENSITY _____ CALIPER _____	
CLIENT: _____ AREA: _____ COUNTRY: _____ DATE LOGGED: _____	
BOREHOLE DATA BOREHOLE: _____ CLIENT: _____ AREA: _____ COUNTRY: _____ DATE LOGGED: _____	
PERMANENT DATA ELEVATION OF P.O.: _____ DEPTH REACHED: _____ CASING SIZES: _____ CASING SIZES: _____	
FLUID DATA NATURE: _____ LEVEL: _____ VISCOSITY: _____ PH AT 75°F: _____ PH AT 100°F: _____ BIT: _____	
OPERATION DATA FIRST READING: _____ LAST READING: _____ INTERVAL LOGGED: _____ UNIT - 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 REPLAY	SPEED	C. SECS	NORM	FROM	TO	INTERVAL	
GAMMA RAY	1153	5822											
LS DENSITY			371	Y	9m/m	D	9m/m	1	-	1.56	85	00	85
CALIPER			3996	Y	9m/m	D	9m/m	0.3	-	1.767	85	00	85
			2" x 7"	Y	9m/m	D	9m/m	0.3	-	-	85	00	85

COAL QUALITY/SEAM THICKNESS LOG INTERVALS (Refer to relevant log)		INTERVAL TOTAL
FROM	TO	
47.0	23.0	
33.0	7.0	
INTERVAL		30.0m

ADDITIONAL SONDES RUN				REMARKS	
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
510	DCST	100:1		Start Op: 1330	
331	WCS	100:1		Finish Op: 1630	
224	VERT	CMS			
231	DIP	100:1			

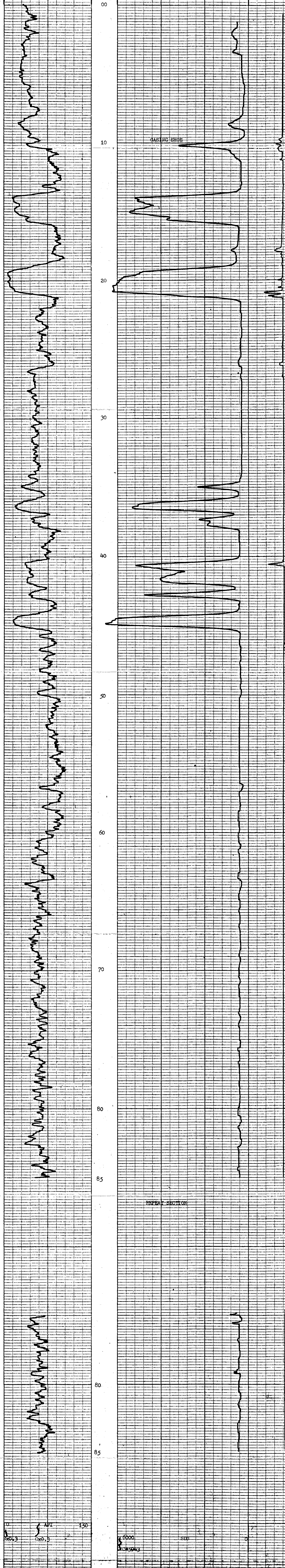
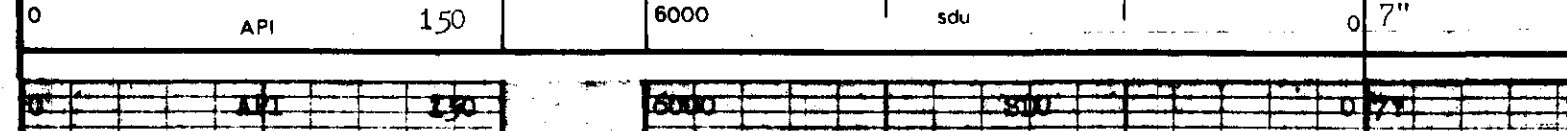
BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 371	VALUE 494 @ 5 DIAM	JIG CAL DATE 8/June/84	JIG VALUE 5943	SDU @ 1.32 cm ³	7 ins 882 cps
JIG MARK SHOWN AT ABOVE VALUE x0.3		JIG No 3996	SPAN 6000	NORM 8000	2 ins 432 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: _____	AREA: _____
CLIENT: _____	COUNTRY: _____



GAMMA RAY AND POROSITY LOG

BOREHOLE TK84-417 (2)

CLIENT Crows Nest Resources Ltd.

AREA Telkwa

COUNTRY Canada

DATE LOGGED 20/11/84

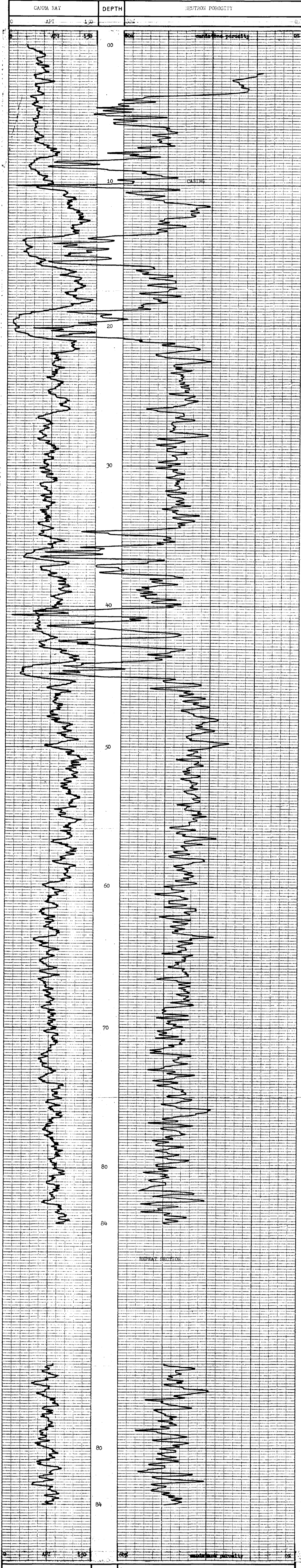
DEPTH SCALE 2 OF 5 LOGS

BOREHOLE DATA REFER TO LITHOLOGY LOG

OPERATION DATA REFER TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	CORRECTION
LOG RECORDING SPEED	T.C. INCH		
TAPER SPEED REF. AVERAGE	SECS	1	1.70
DATE	TIME		
START	STOP		
Y 9M/84	D 21/11	I 1:30	1:30
SPICE 110	START 7202		



GAMMA RAY	DEPTH	NEUTRON POROSITY
0	150	0%
0	150	60%



BOREHOLE TK84-417 AREA Telkwa
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

TK- Telkwa 84(3)A

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MULTI-CHANNEL SONIC LOG

BOREHOLE _____ No. 12-417 3
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa DEPTH SCALE _____
 COUNTRY Canada 100 ft
 DATE LOGGED 20/June/84 1 of 5 LOGS

BOREHOLE DATA
 PERMANENT DATUM Casualty Level
 ELEVATION OF P.D. _____
 MEASUREMENTS FROM B.P.B. DRILLER _____
UL
 DEPTH REACHED 82.7m
UL
 DEPTH TO LOG 10.0m
 DEPTH TO BIT 10.0m
 BIT SIZES 1 3" TO 1 1/2" 2 TO
 3 TO 4 TO
 CASING SIZES 1 3 1/2" x 10m 2 TO

FLUID DATA
 NATURE Slurry Gel K. Water
 SG 1.292 @ 60°C
 VISCOSITY 0.08
 LEVEL _____
 V. at meas. temp 1A
 BIT A

OPERATION DATA
 FIRST READING 0.5, 0.3
 LAST READING 10.0m
 INTERVAL LOGGED 7.5, 0.3
 UNIT - TRUCK No. 1213
 ENGINEER NR
 WITNESSES _____

EQUIPMENT AND RECORDING DATA

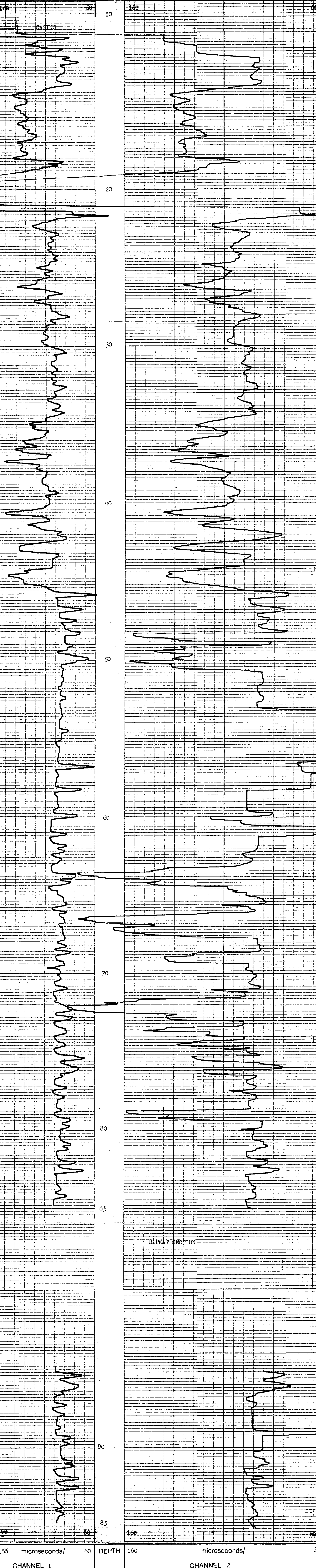
SONDE No. _____ CENTRALISERS SET TO _____ DIAMETER _____

CHANNEL	TRANSDUCER ARRANGEMENT			GENERAL LOGGING		DETAIL LOGGING		DATA RECORDED			DATA DISPLAYED		
	RECEIVER PAIR	SPACING R-R	SPACING T-R	SPEED	TC SECS	SPEED	TC SECS	FROM	TO	INTERVAL	FROM	TO	INTERVAL
CHANNEL 1	R1 - R2	8"	24"	9m/m	0.3			8.5	10	1.5	8.5	10	1.5
CHANNEL 2	R2 - R4	16"	32"	9m/m	0.3			8.5	10	1.5	8.5	10	1.5
CHANNEL 3	R1 - R4	24"	24"	9m/m	0.3			8.5	10	1.5			
CHANNEL 4	R3 - R4	8"	40"	9m/m	0.3			8.5	10	1.5			

DETAIL ZONES DISPLAYED (SEE RELEVANT LOG):
 FROM _____ TO _____ INTERVAL TOTAL _____

REMARKS

CHANNEL 1	DEPTH	CHANNEL 2
INTERVAL TRANSIT TIME		INTERVAL TRANSIT TIME
160 microseconds/	60	160 microseconds/
		60



CHANNEL 1	DEPTH	CHANNEL 2
160 microseconds/	60	160 microseconds/
		60

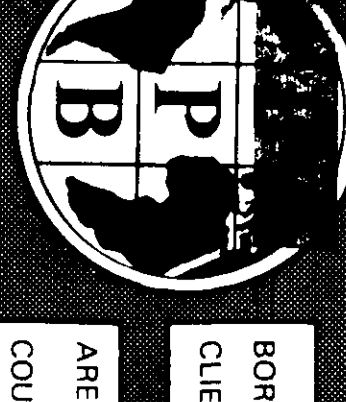
BOREHOLE 12-417 AREA Telkwa
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

MC SONIC LOG



MT 130584

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COAL QUALITY LOG
 714 LOG

LOG SUITE
 GAMMA RAY
 L.S. DENSITY

BOREHOLE 714-1-17 (4)
 CLIENT 3 Sts. level, 400m, 400m, 400m
 AREA Canada DEPTH SCALE 0-11
 COUNTRY Canada or LOGS
 DATE LOGGED 20/10/83

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

COAL COMBINATION SONDE
 LOG TANNING PANEL COAL QUALITY
 GAMMA RAY SPEED SEC. NOM. 1.25
 L.S. DENSITY 1.35
 SOURCE SONDE AND CALIBRATION REFER TO LITHOLOGY LOG

SONDE TYPE: _____
 COAL QUALITY LOG INTERVALS

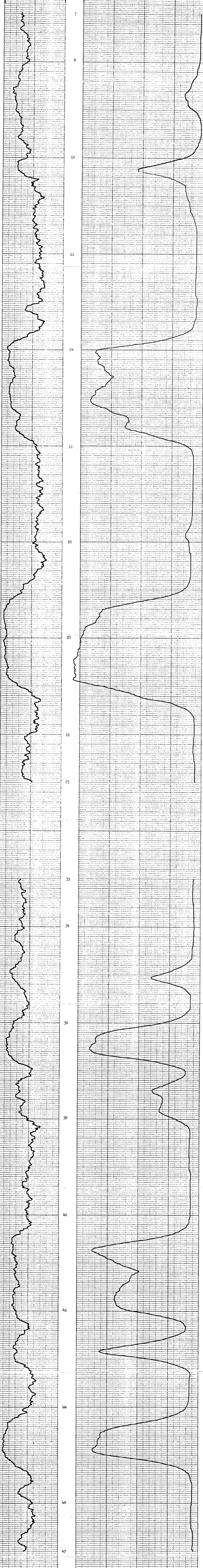
FROM 0.0 TO 1.0
 INTERVAL 1.0
 FROM 1.0 TO 2.0
 INTERVAL 1.0
 FROM 2.0 TO 3.0
 INTERVAL 1.0
 FROM 3.0 TO 4.0
 INTERVAL 1.0
 FROM 4.0 TO 5.0
 INTERVAL 1.0
 FROM 5.0 TO 6.0
 INTERVAL 1.0
 FROM 6.0 TO 7.0
 INTERVAL 1.0
 FROM 7.0 TO 8.0
 INTERVAL 1.0
 FROM 8.0 TO 9.0
 INTERVAL 1.0
 FROM 9.0 TO 10.0
 INTERVAL 1.0
 FROM 10.0 TO 11.0
 INTERVAL 1.0
 FROM 11.0 TO 12.0
 INTERVAL 1.0
 FROM 12.0 TO 13.0
 INTERVAL 1.0
 FROM 13.0 TO 14.0
 INTERVAL 1.0
 FROM 14.0 TO 15.0
 INTERVAL 1.0
 FROM 15.0 TO 16.0
 INTERVAL 1.0
 FROM 16.0 TO 17.0
 INTERVAL 1.0
 FROM 17.0 TO 18.0
 INTERVAL 1.0
 FROM 18.0 TO 19.0
 INTERVAL 1.0
 FROM 19.0 TO 20.0
 INTERVAL 1.0
 FROM 20.0 TO 21.0
 INTERVAL 1.0
 FROM 21.0 TO 22.0
 INTERVAL 1.0
 FROM 22.0 TO 23.0
 INTERVAL 1.0
 FROM 23.0 TO 24.0
 INTERVAL 1.0
 FROM 24.0 TO 25.0
 INTERVAL 1.0
 FROM 25.0 TO 26.0
 INTERVAL 1.0
 FROM 26.0 TO 27.0
 INTERVAL 1.0
 FROM 27.0 TO 28.0
 INTERVAL 1.0
 FROM 28.0 TO 29.0
 INTERVAL 1.0
 FROM 29.0 TO 30.0
 INTERVAL 1.0
 FROM 30.0 TO 31.0
 INTERVAL 1.0
 FROM 31.0 TO 32.0
 INTERVAL 1.0
 FROM 32.0 TO 33.0
 INTERVAL 1.0
 FROM 33.0 TO 34.0
 INTERVAL 1.0
 FROM 34.0 TO 35.0
 INTERVAL 1.0
 FROM 35.0 TO 36.0
 INTERVAL 1.0
 FROM 36.0 TO 37.0
 INTERVAL 1.0
 FROM 37.0 TO 38.0
 INTERVAL 1.0
 FROM 38.0 TO 39.0
 INTERVAL 1.0
 FROM 39.0 TO 40.0
 INTERVAL 1.0
 FROM 40.0 TO 41.0
 INTERVAL 1.0
 FROM 41.0 TO 42.0
 INTERVAL 1.0
 FROM 42.0 TO 43.0
 INTERVAL 1.0
 FROM 43.0 TO 44.0
 INTERVAL 1.0
 FROM 44.0 TO 45.0
 INTERVAL 1.0
 FROM 45.0 TO 46.0
 INTERVAL 1.0
 FROM 46.0 TO 47.0
 INTERVAL 1.0
 FROM 47.0 TO 48.0
 INTERVAL 1.0
 FROM 48.0 TO 49.0
 INTERVAL 1.0
 FROM 49.0 TO 50.0
 INTERVAL 1.0

BPB COAL QUALITY LOG

DEPTH	COAL BULK DENSITY g/cm ³
GAMMA RAY	

HOLE SIZE CORRECTION DATA

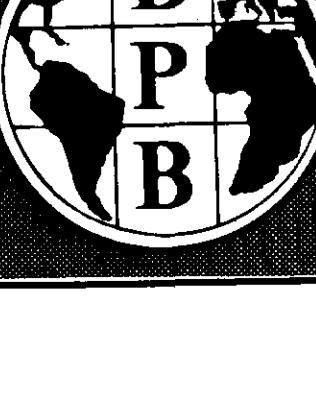
2	12	125	13	135	14	145	15	155	16	17	18	19	20	22	24	30
---	----	-----	----	-----	----	-----	----	-----	----	----	----	----	----	----	----	----



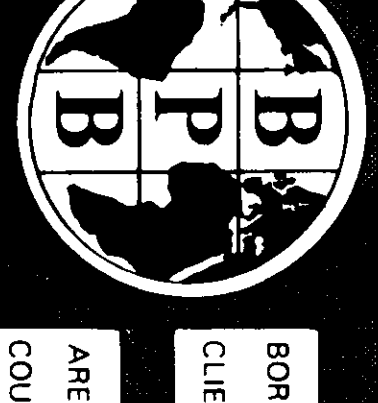
DEPTH	COAL BULK DENSITY g/cm ³
GAMMA RAY	

BOREHOLE 714-1-17 AREA Canada
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

COAL QUALITY LOG



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BOREHOLE T664D-417
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa
 COUNTRY Canada
 DATE LOGGED 20/June/99
 DEPTH SCALE 2011
 LOG OF 5 LOGS

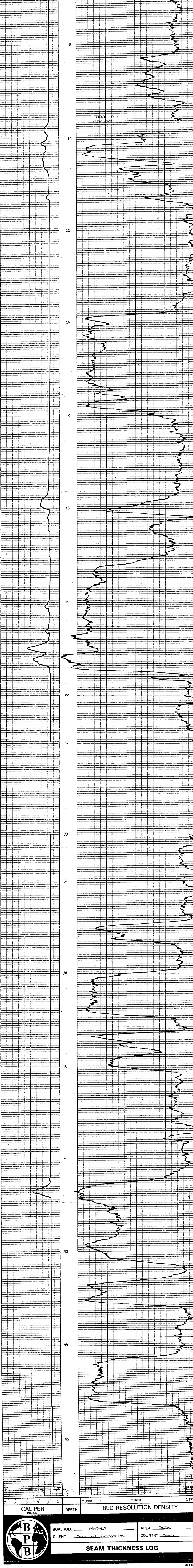
SEAM THICKNESS LOG

LOG

SONDE TYPE
 COAL COMBINATION
 SONDE
 LOG SUITE
 CALIPER
 BR DENSITY

BOREHOLE DATA REFER TO LITHOLOGICAL LOG
 OPERATION DATA REFER TO LITHOLOGICAL LOG
 EQUIPMENT AND RECORDING DATA
 COAL COMBINATION SONDE
 LOG STATION POSITION
 LOG REFERENCE POINT
 CALIPER X 1.27
 BR DENSITY Y 1.27
 R 0.2
 7.5-1.705
 SONDE SONDE AND CALIBRATION
 REFER TO LITHOLOGICAL LOG

B P B SEAM THICKNESS LOG



CALIPER INCHES DEPTH BED RESOLUTION DENSITY

BOREHOLE T664D-417 AREA Telkwa
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada
SEAM THICKNESS LOG





DIPMETER ANALYSIS

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TK - Telkwa

CLIENT _____
BOREHOLE _____
AREA _____
COUNTRY _____

C.N.R.L.
TW-84D-417 (6)
TELKWA B.C
CANADA

84(3)A

DATE LOGGED.....20-JUN-84
DATE PROCESSED..02-AUG-84



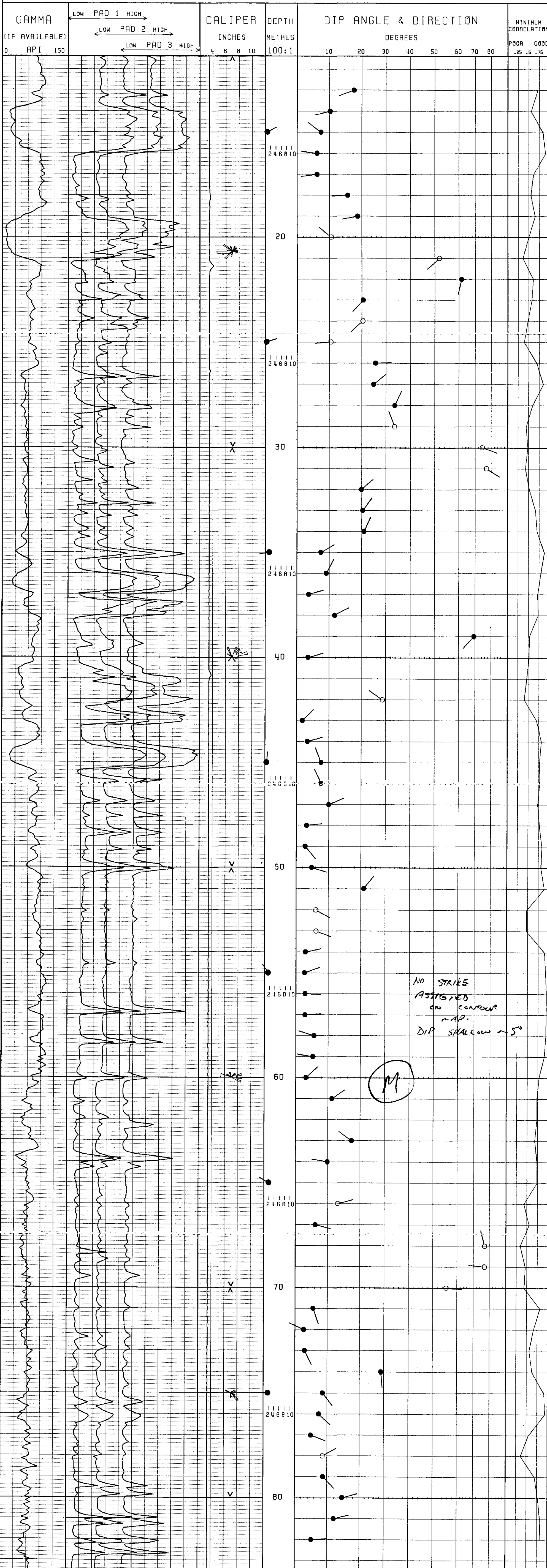
COMMENTS.....

INTERPRETATION PARAMETERS

STEP 1.00M. DECLINATION 26.0 EAST
INTERVAL 2.00M. DEPTH RANGE 11.36 - 84.00M.
SEARCH ANGLE 80. DATE PROCESSED 02-AUG-84

AVERAGE BOREHOLE DEVIATION & DIRECTION
ANNOTATED EVERY 10.0M.
ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES,
.1" RADIUS PER DIP MARKER DISPLAYED

LEGEND:
● GOOD (>0.50)
○ FAIR (>0.30)





Gamma Ray Long Spaced Density Log
(Through Drill Rods)

BOREHOLE TW84D-418 ①
 CLIENT Cross Next Resources Ltd.
 AREA Tekwa DEPTH SCALE 100:1
 COUNTRY Canada
 DATE LOGGED 21 June/84 1 of 4 LOGS

PERMANENT DATA
 ELEVATION OF P.D. Ground Level
 MESSAGES FROM B & B DRILLER
 DEPTH REACHED 113.0m O.I. 117.9m
 CASING SHOE 6.1m C.I. 6.1m
 BIT SIZES 1 3" TO TD 2 2" TO 10
 CASING SIZES 1 3 1/2" TO 6.1m 2 4" TO 10

FLUID DATA
 NATURE Water-Drill/Sealer
 LEVEL 00
 VISCOSITY NA
 RHO @ 60 deg temp NA
 B.H.I. NA

OPERATION DATA
 FIRST READING 113.0m
 LAST READING 00.0m
 INTERVAL LOGGED 113.0m
 UNIT-TRUCK No V216
 ENGINEER FM
 WITNESS

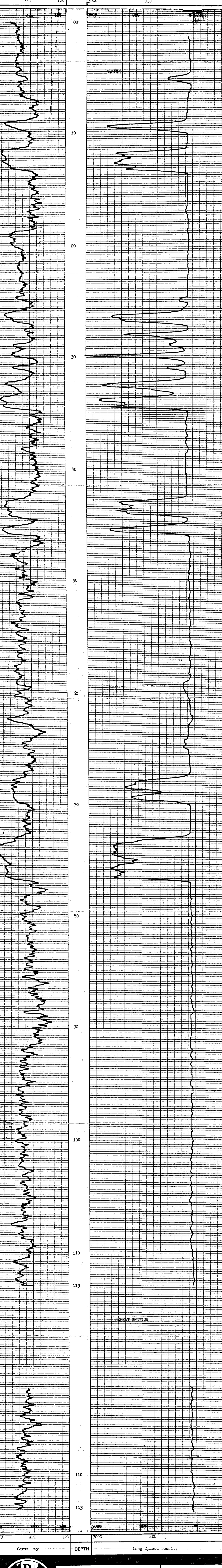
EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT	TAPING	PANEL	CAL	DEPTHS							
					FROM	TO						
Gamma	1153	371	Y	9m/m	D	9m/m	1	1.00	113	00	113	
LSD	115B	3996	Y	9m/m	D	9m/m	0.3	7.71	.771	113	00	113

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
510	DSN	100:1	

REMARKS
 Start Op: 0930
 Finish Op: 1115
 Logged through drill rods, adjusted scales accordingly.



Gamma Ray 0 120 DEPTH 3000 0 Long Spaced Density

BOREHOLE TW84D-418 AREA Tekwa
 CLIENT Cross Next Resources Ltd. COUNTRY Canada





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

BOREHOLE TR87D-418 (2)

CLIENT Crows Nest Resources Ltd.

AREA Telkwa DEPTH SCALE 100' : 1"

COUNTRY CANADA

DATE LOGGED 21 June/88 LOGS 2 OF 4

BOREHOLE DATA REF TO LITHOLOGY LOG

OPERATION DATA REF TO LITHOLOGY LOG

EQUIPMENT AND RECORDING DATA

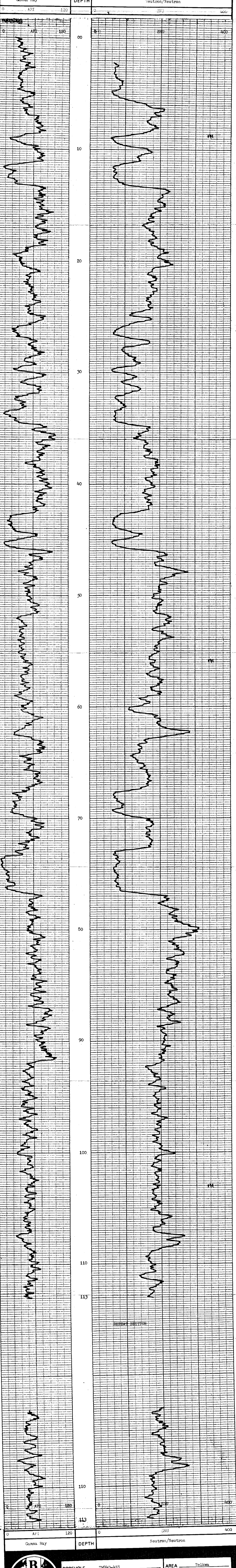
LOG TAPPING PANEL DATE

LOG RECORDING SPEED SEC/NORM 1.7

Sensor: I 3m/8 J 3m/8 I B-36 0.950

SOURCE 510 START 2022

REMARKS Logged through drill rods, scales adjusted accordingly.



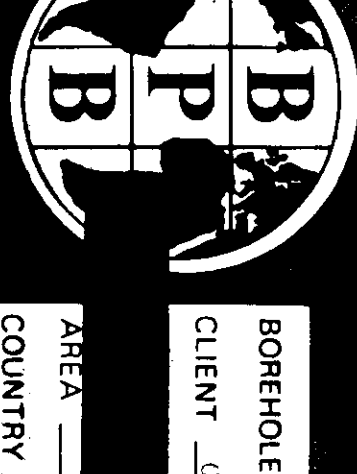
BOREHOLE TR87D-418 AREA Telkwa

CLIENT Crows Nest Resources Ltd. COUNTRY Canada

TK - T/K/kuw

84(3)H

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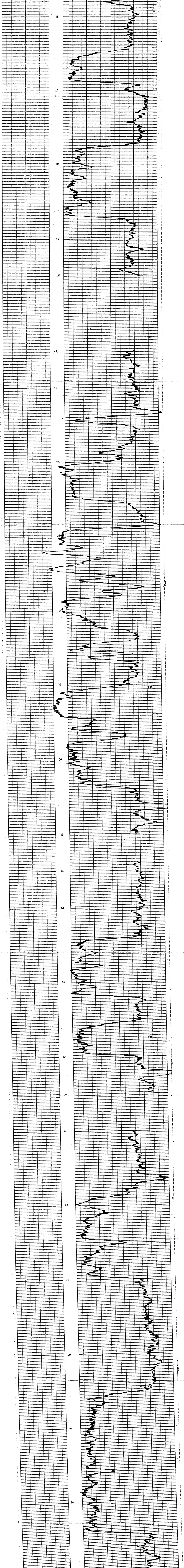
BOREHOLE 7824D-118
 CLIENT Crows Nest Resources Ltd.
 AREA Teikoku
 COUNTRY Canada
 DATE LOGGED 21 June 88
 DEPTH SCALE 20 ft
 30' - LOGS

SEAM THICKNESS LOG
 LOG

SONDE TYPE
 COAL COMBINATION
 SONDE
 SEAM THICKNESS LOG INTERVALS
 FROM 78.0 47.0 36.0 15.0
 TO 66.0 44.0 23.0 7.0
 INTERVAL 12.0 6.0 13.0 8.0
 LOG SUITE
 CALIPER
 BR DENSITY

BOREHOLE DATA REFER TO LITHOLOGY LOG
 OPERATION DATA REFER TO LITHOLOGY LOG
 EQUIPMENT AND RECORDING DATA
 COAL COMBINATION SONDE SERIAL POSITION
 LOG TAMPING PANEL
 CALIPER 1.00 0.50 0.25 0.125
 BR DENSITY 1.35 1.35 1.35 1.35
 SONDE SERIAL POSITION
 REFER TO LITHOLOGY LOG
 SEAM THICKNESS LOG INTERVALS
 FROM 78.0 47.0 36.0 15.0
 TO 66.0 44.0 23.0 7.0
 INTERVAL 12.0 6.0 13.0 8.0
 LOG SUITE
 CALIPER
 BR DENSITY

B P B SEAM THICKNESS LOG

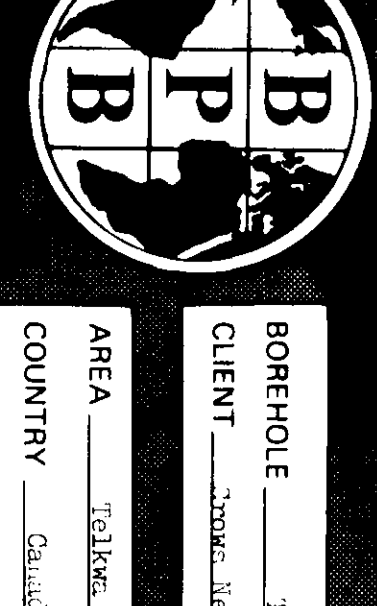


MY 88002 R

Tk-74/ku

874379

210



BOREHOLE 7434-413
CLIENT Nova West Resources Ltd.
AREA Talkeetna
COUNTRY Canada
DATE LOGGED 24/Jan/93
DEPTH SCALE 2011
LOG OF L.S. DENSITY

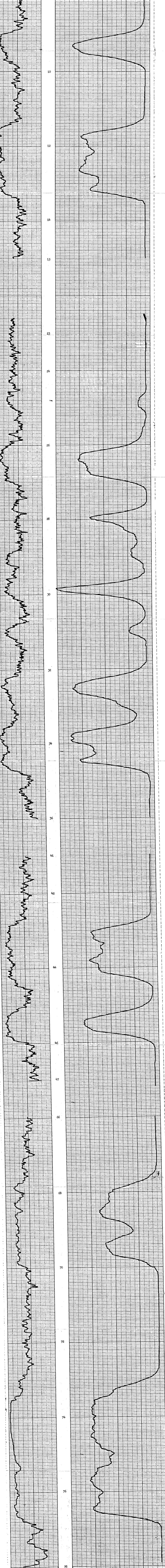
COAL QUALITY LOG
BOREHOLE DATA REFER TO LITHOLOGY LOG
OPERATION DATA REFER TO LITHOLOGY LOG
EQUIPMENT AND RECORDING DATA

LOG
COAL COMBINATION REFER TO LITHOLOGY LOG
LOG INTERVALS

SONDE TYPE: **COAL COMBINATION**
COAL QUALITY LOG INTERVALS
LOG SUITE: **GAMMA RAY**
L.S. DENSITY

LOG INTERVALS
 FROM 55.0 TO 56.0 INTERVAL 1.0
 FROM 6.0 TO 6.0 INTERVAL 0.0
 FROM 13.0 TO 13.0 INTERVAL 0.0
 FROM 23.0 TO 23.0 INTERVAL 0.0
 FROM 29.0 TO 29.0 INTERVAL 0.0
 FROM 31.0 TO 31.0 INTERVAL 0.0
 FROM 32.0 TO 32.0 INTERVAL 0.0
 FROM 34.0 TO 34.0 INTERVAL 0.0
 FROM 41.0 TO 41.0 INTERVAL 0.0
 FROM 42.0 TO 42.0 INTERVAL 0.0
 FROM 44.0 TO 44.0 INTERVAL 0.0
 FROM 46.0 TO 46.0 INTERVAL 0.0
 FROM 47.0 TO 47.0 INTERVAL 0.0
 FROM 66.0 TO 66.0 INTERVAL 0.0
 FROM 68.0 TO 68.0 INTERVAL 0.0
 FROM 70.0 TO 70.0 INTERVAL 0.0
 FROM 72.0 TO 72.0 INTERVAL 0.0
 FROM 74.0 TO 74.0 INTERVAL 0.0
 FROM 76.0 TO 76.0 INTERVAL 0.0
 FROM 78.0 TO 78.0 INTERVAL 0.0

BPB COAL QUALITY LOG



BOREHOLE 7434-413 **AREA** Talkeetna
CLIENT Nova West Resources Ltd. **COUNTRY** Canada
COAL QUALITY LOG



Gamma Ray - Long Spaced Density Log
(Through Drill Rods.)

BOREHOLE TWB4D-419

CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

DATE LOGGED 21/Jan/84

PERMANENT DATA

ELEVATION OF P.D. B.P.B.

MEASUREMENTS FROM G.I.

DEPTH REACHED 81.0m

CASING SHOE 4.0m

BIT SIZES 1 3.0" TO 2 TO

CASING SIZES 1 3.5" TO 4 2 TO

FLUID DATA

NATURE Super Gel-Water

S.G. 0.95 Gms/cc.

LEVEL 0.0m

VISCOSITY 1.1

PH 11.0

OPERATION DATA

FIRST READING 11.0m

LAST READING 81.0m

INTERVAL LOGGED 7210/27

UNIT-TRUCK No. M200

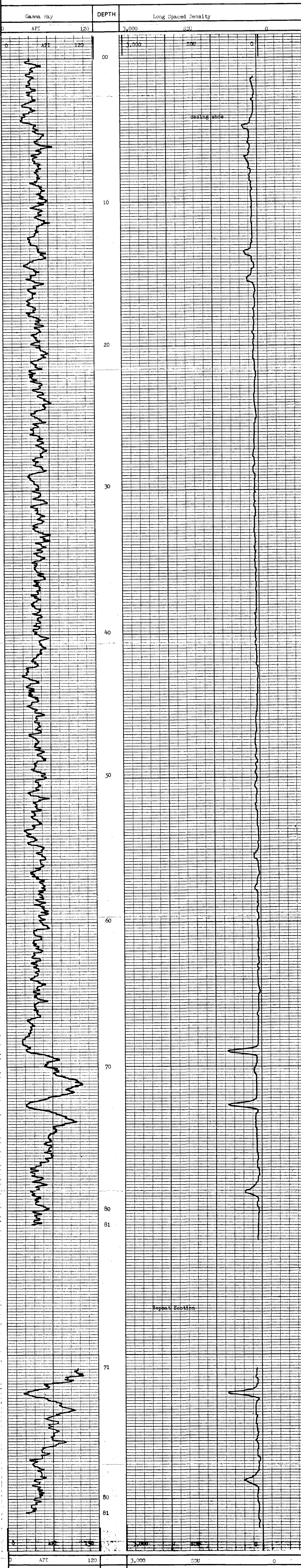
ENGINEER M200

WITNESS

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	115	-	371	Y	9m/m	D	9m/m	1	-	1.62	81	00	81
LSD	115	822	3996	Y	9m/m	D	9m/m	3	2.71	-	81	00	81

ADDITIONAL SONDES RUN				REFER TO ADDITIONAL HEADINGS	REMARKS
SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG		
510	DSH	1:100			Start Op. 22:30 Finish Op 00:00 Logged through drill rods, scales adjusted accordingly.



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



BOREHOLE TWB4D-419
CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada



BOREHOLE TW84D-419 (2)
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C. DEPTH SCALE 1:20
 COUNTRY Canada
 DATE LOGGED 21/Jan/84 2 of 4 LOGS

SEAM THICKNESS LOG

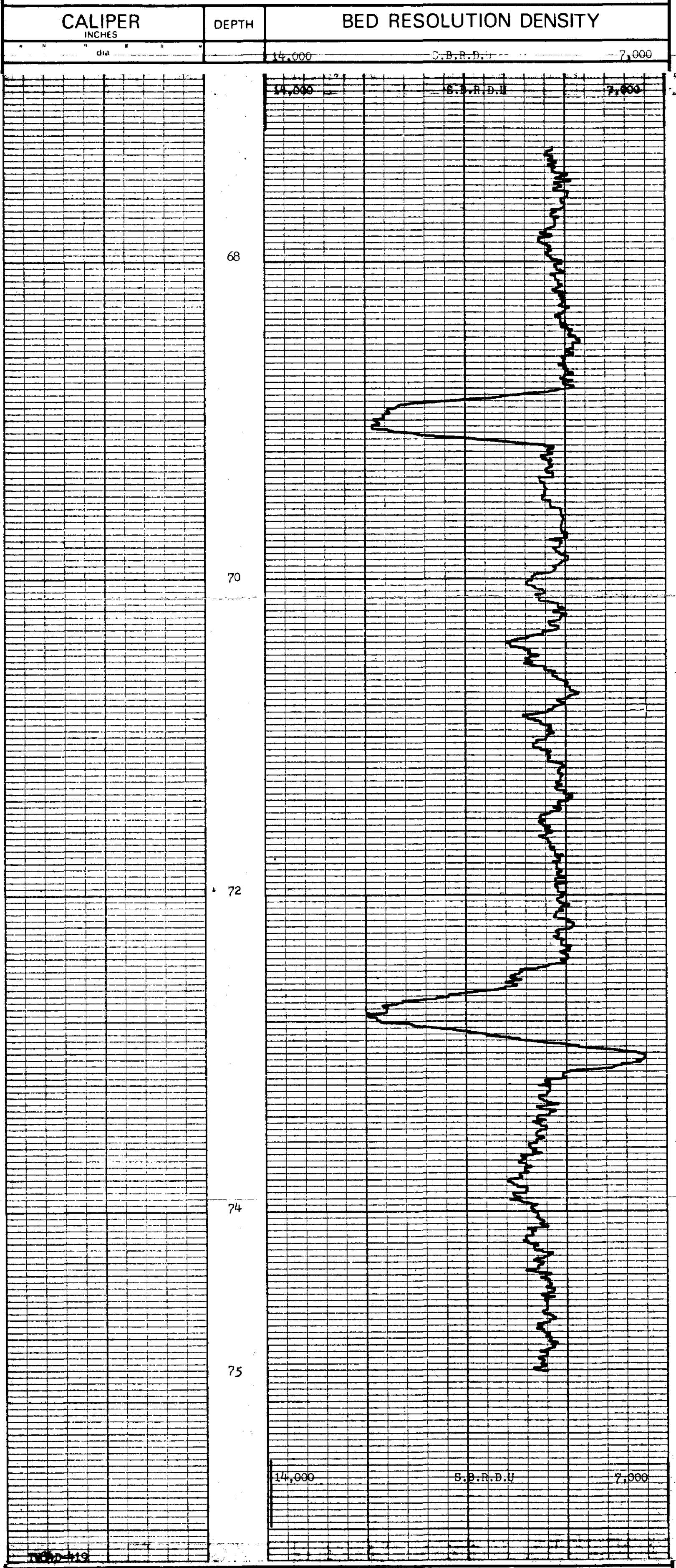
THICKNESS LOG

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	SIDEWALL POSITION
LOG	TAPPING LOG RECORDING TAPED SPEED REPEATY
CALIPER	Y
BR DENSITY	2m/m R 2m/m H 3 7.85
SOURCE SONDE AND CALIBRATION REFER TO LITHOLOGY LOG	
SEAM THICKNESS	LOG INTERVALS
FROM	75.0m
TO	67.0m
INTERVAL	8.0m
FROM	
TO	
INTERVAL	
REMARKS	Logged through drill rods, scales adjusted accordingly.

B P B SEAM THICKNESS LOG



CALIPER INCHES	DEPTH	BED RESOLUTION DENSITY
dia		14,000 S.B.R.D.U 7,000



BOREHOLE TW84D-419 AREA Telkwa B.C.
 CLIENT Crows Nest Resources Ltd. COUNTRY Canada

SEAM THICKNESS LOG



BOREHOLE TW84D-419
 CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
 COUNTRY Canada

DATE LOGGED 21/Jun/84
 3 OF 4 LOGS

COAL QUALITY LOG

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

COAL COMBINATION SONDE

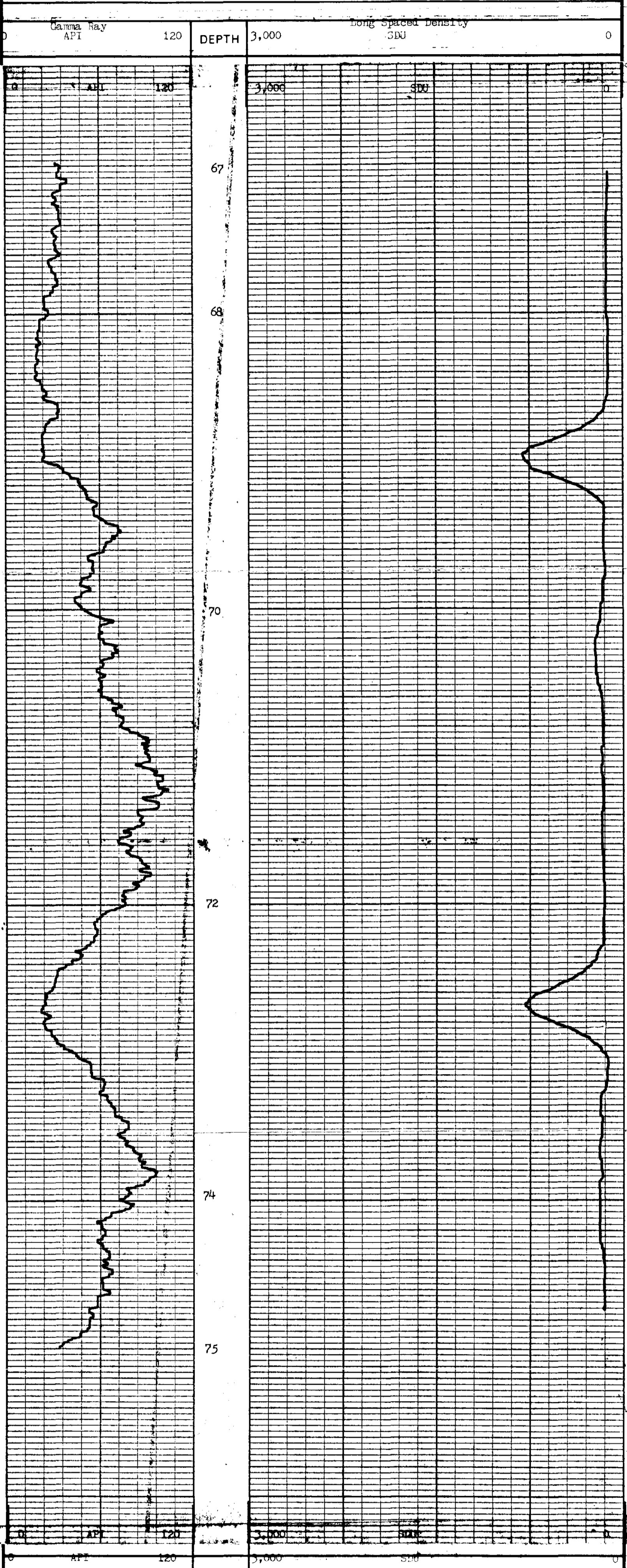
LOG	TAPING	RECORDING	PANEL	COAL	
	TABO	SPEED	T/C	CODE	
	REEL	REEL	SECS	NORM	
GAMMA RAY	Y	2m/m	R	2	1.62
S DENSITY	Y	2m/m	R	1	7.71

SONDE TYPE:
 COAL COMBINATION SONDE

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

FROM 75.0m
 TO 87.0m
 INTERVAL 8.0m
 FROM
 TO
 INTERVAL
 REMARKS
 Logged through drill rods, scales adjusted accordingly.

B P B COAL QUALITY LOG



BOREHOLE TW84D-419
 CLIENT Crows Nest Resources Ltd.
 AREA Telkwa B.C.
 COUNTRY Canada

COAL QUALITY LOG



Gamma Ray: Neutron/Neutron Log
(Through Drill Coll.)

BOREHOLE T8341-12 ④

CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.

COUNTRY Canada

DATE LOGGED 21 Aug/84

DEPTH SCALE 1:100

BOREHOLE DATA REFER TO Lithology LOG

OPERATION DATA REFER TO Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG TAPING PANEL CORE

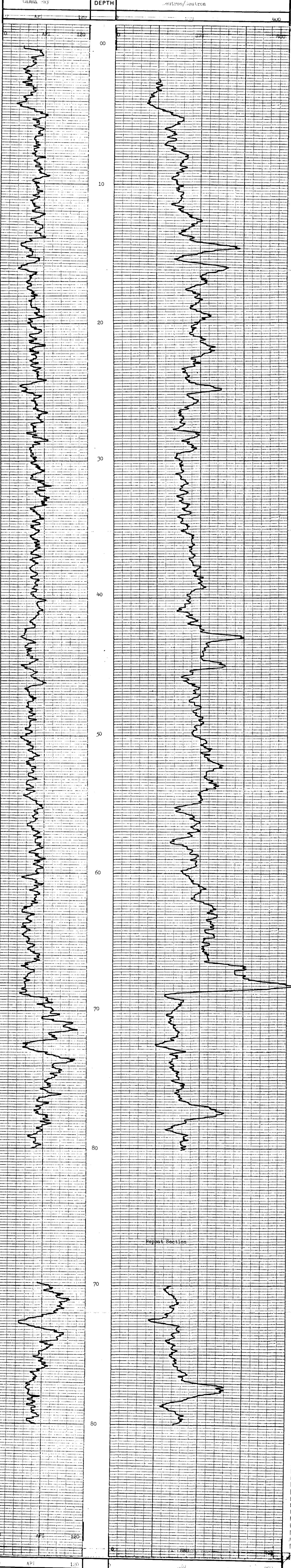
LOG RECORDING SPEED 1 & INCH

TAPED SPEED REPEAT SECS 1

SCALE 1:10

REMARKS

Log run through collar with sealers
attached to avoid cement.



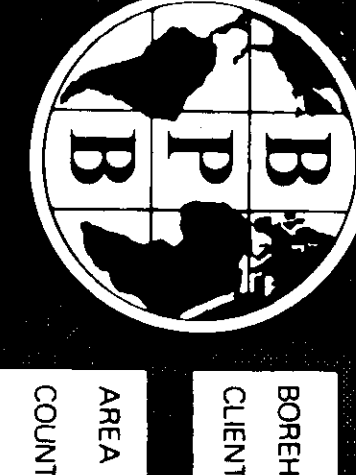
0 API 120 DEPTH 0 LCU 120

Gamma Ray Neutron/Neutron



BOREHOLE T8341-419
CLIENT Crows Nest Resources Ltd.

AREA Telkwa B.C.
COUNTRY Canada



COAL LITHOLOGY LOG

SONDE TYPE _____ **COAL COMBINATION** _____

LOG SUITE _____

GAMMA RAY _____

L.S. DENSITY _____

CALIPER _____

LOG SUITE _____

GAMMA RAY _____

L.S. DENSITY _____

CALIPER _____

WITNESS _____

OPERATION DATA

LOG SUITE _____

GAMMA RAY _____

L.S. DENSITY _____

CALIPER _____

WITNESS _____

BOREHOLE _____

CLIENT _____

AREA _____

COUNTRY _____

DATE LOGGED _____

BOREHOLE DATA

PERMANENT DATE _____

ELEVATION OF P.D. _____

WASSERMANNSSTATION _____

DEPTH REACHED _____

BIT SIZES _____

CASING SIZES _____

FLUID DATA

WATER _____

TEMP. _____

VISCOSITY _____

PH _____

EQUIPMENT AND RECORDING DATA

LOG	EQUIPMENT		TAPING		PANEL		CAL COEFF		DEPTHS		SEAM LOG RUN
	SONDE	SOURCE	RECORD TAPED	DIRECT/REPLAY	SPEED	IC SECS	NORM	FROM	TO	INTERVAL	
GAMMA RAY	115	371	Y	9m/m	D	9m/m	1	-	1.59	112.00	112
L.S. DENSITY		3996	Y	9m/m	D	9m/m	3	-	7.65	112.00	112
CALIPER		2" x 2"	Y	9m/m	D	9m/m	3	-	-	112.00	112

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

FROM	93.0m	82.0m	73.0m	54.0m	INTERVAL TOTAL
TO	84.0m	76.0m	61.0m	50.0m	
INTERVAL	9.0m	8.0m	12.0m	4.0m	33.0m

ADDITIONAL SONDES RUN

SONDE	LOG	GENERAL SCALE LOG	DETAIL SCALE LOG
510	D5H	1:100	
231	Dip	1:100	
224	Vert.	CDS	

REMARKS

Start Op. 01:00

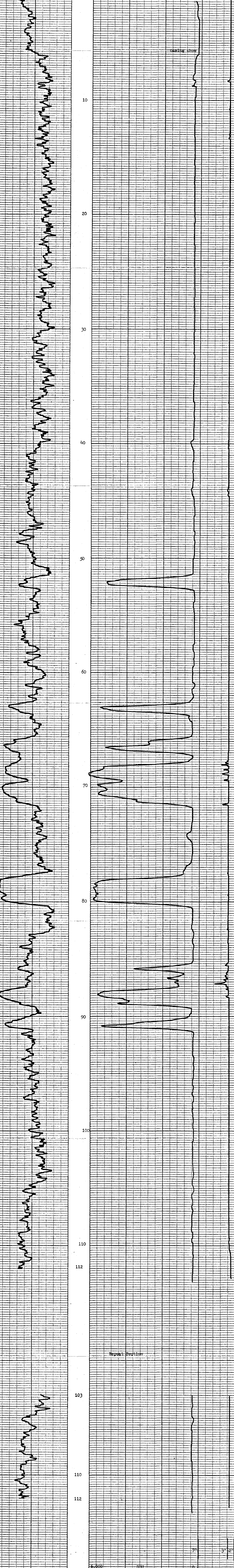
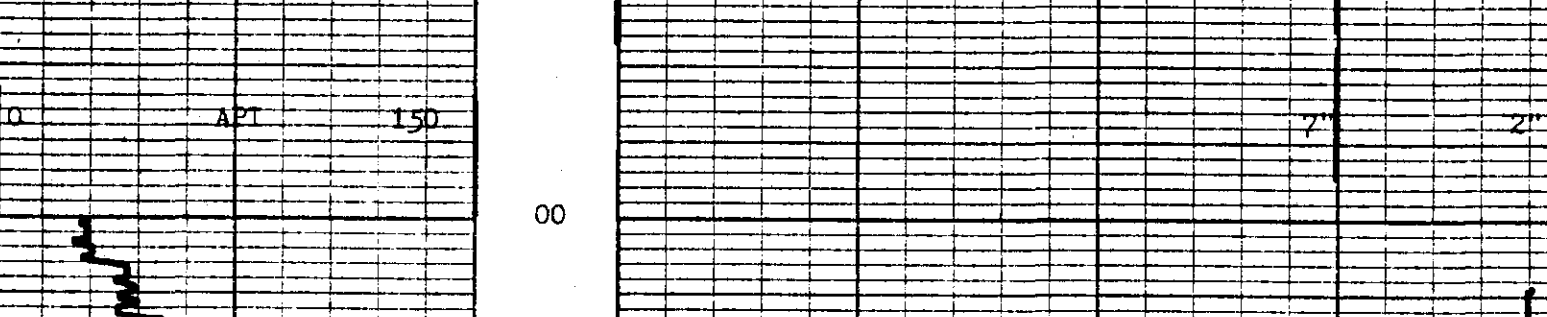
Finish Op. 04:00

BPB COAL LITHOLOGY LOG

CALIBRATION DATA

JIG No 371	VALUE 9943 @ 5" DIAM	JIG CAL DATE 06/30/09	JIG VALUE 5943	SDU @ 1.59 g/cm ³	2" ms 423 cps
JIG MARK SHOWN AT ABOVE VALUE X.3				NORM SDU @ 7.65 g/cm ³	7" ms 882 cps

GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
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GAMMA RAY	DEPTH	BULK DENSITY	CALIPER
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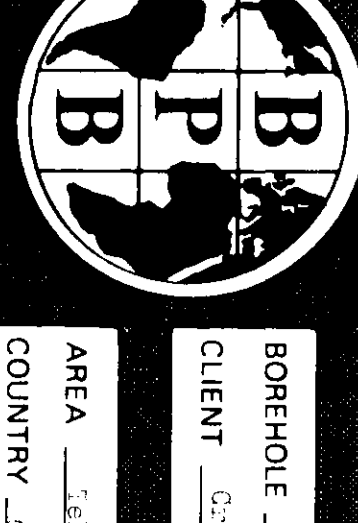
BOREHOLE _____ **AREA** _____

CLIENT _____ **COUNTRY** _____

COAL LITHOLOGY LOG



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SEAM THICKNESS LOG

SEAM THICKNESS LOG

LOG

BOREHOLE: TW4-D-420
 CLIENT: Crow's Nest Resources Ltd.
 AREA: Telkwa, B.C.
 COUNTRY: Canada
 DATE LOGGED: 22/Jan/94

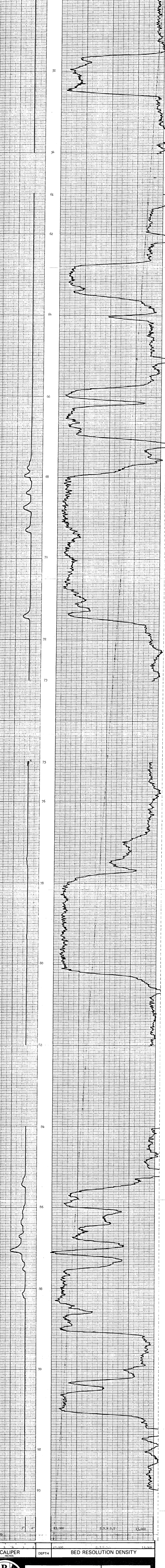
BOREHOLE DATA: REFER TO LITHOLOG LOG
 OPERATION DATA: REFER TO LITHOLOG LOG
 EQUIPMENT AND RECORDING DATA

LOG: ZEPHYRUS
 LOGGING UNIT: SPECTRA
 CALIPER: 1.50
 BARRETT: 1.50
 SQUARED SONGE AND CALIBRATION: 1.50
 REFER TO LITHOLOG LOG

SEAM THICKNESS LOG INTERVALS

COAL COMBINATION:
 SONDE:
 FROM: 93.0m BE: 73.0m SF: 4m
 TO: 84.0m BE: 64.0m SF: 2m
 INTERVAL: 9.0m BE: 11.0m SF: 2m
 FROM: 84.0m BE: 73.0m SF: 4m
 TO: 75.0m BE: 64.0m SF: 2m
 INTERVAL: 9.0m BE: 11.0m SF: 2m
 FROM: 75.0m BE: 64.0m SF: 2m
 TO: 64.0m BE: 55.0m SF: 2m
 INTERVAL: 11.0m BE: 11.0m SF: 2m
 FROM: 64.0m BE: 55.0m SF: 2m
 TO: 55.0m BE: 46.0m SF: 2m
 INTERVAL: 9.0m BE: 11.0m SF: 2m
 FROM: 55.0m BE: 46.0m SF: 2m
 TO: 46.0m BE: 37.0m SF: 2m
 INTERVAL: 9.0m BE: 11.0m SF: 2m
 FROM: 46.0m BE: 37.0m SF: 2m
 TO: 37.0m BE: 28.0m SF: 2m
 INTERVAL: 9.0m BE: 11.0m SF: 2m
 FROM: 37.0m BE: 28.0m SF: 2m
 TO: 28.0m BE: 19.0m SF: 2m
 INTERVAL: 9.0m BE: 11.0m SF: 2m
 FROM: 28.0m BE: 19.0m SF: 2m
 TO: 19.0m BE: 10.0m SF: 2m
 INTERVAL: 9.0m BE: 11.0m SF: 2m
 FROM: 19.0m BE: 10.0m SF: 2m
 TO: 10.0m BE: 1.0m SF: 2m
 INTERVAL: 9.0m BE: 11.0m SF: 2m
 FROM: 10.0m BE: 1.0m SF: 2m
 TO: 1.0m BE: 0.0m SF: 2m
 INTERVAL: 9.0m BE: 11.0m SF: 2m

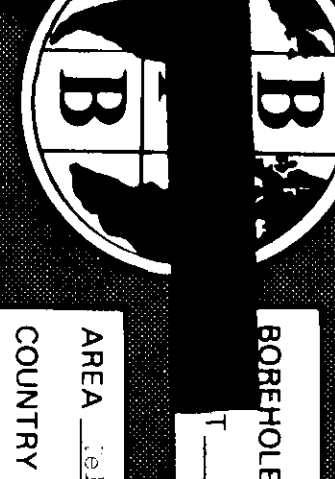
B P B SEAM THICKNESS LOG



SEAM THICKNESS LOG

BOREHOLE: TW4-D-420
 CLIENT: Crow's Nest Resources Ltd.
 AREA: Telkwa, B.C.
 COUNTRY: Canada

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BOREHOLE T-7-1-1-1-1
 AREA Toluca, B.C.
 COUNTRY Canada
 DATE LOGGED 22/11/78
 DEPTH SCALE 1:20
 OF 4,000

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

LOG
 LOG NAME T-7-1-1-1-1
 LOG NUMBER 1
 LOG DATE 22/11/78
 LOG TIME 10:00
 LOG LOCATION Toluca, B.C.
 LOG DEPTH 100.00
 LOG INTERVAL 1.00
 LOG SCALE 1:20
 LOG CORRECTION 0.00

SCONE TYPE:
 COAL COMBINATION
 COAL SONE

LOG SUITE:
 GAMMA RAY
 L.S. DENSITY

B P B COAL QUALITY LOG

DEPTH Gamma Ray

COAL BULK DENSITY $\frac{g}{cm^3}$

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
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DEPTH Gamma Ray

COAL BULK DENSITY $\frac{g}{cm^3}$

COAL QUALITY LOG



BOREHOLE T-7-1-1-1-1
CLIENT Crown Rent Resources Ltd.
AREA Toluca, B.C.
COUNTRY Canada



Gamma Ray & Sandstone Porosity Log

BOREHOLE TELKUR-420
 CLIENT Cross West Resources Ltd.

AREA Telkwa B.C.
 COUNTRY Canada
 DATE LOGGED 22/Jan/84

DEPTH SCALE
 1 OF 4 LOGS

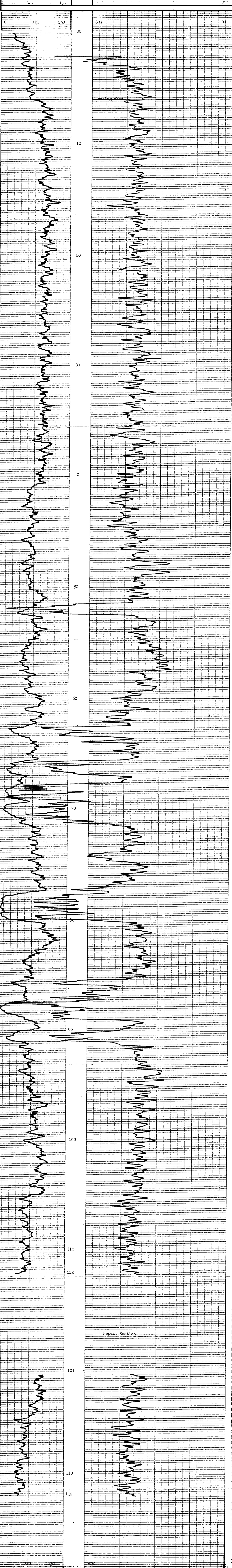
BOREHOLE DATA REFER TO Lithology LOG

OPERATION DATA REFER TO Lithology LOG

EQUIPMENT AND RECORDING DATA

LOG	TAPING	PANEL	DATE
LOG RECORD SPEED	1.5	NON	
TAPING SPEED	REV/2	1	3.52
REV/2	1	1	3.52
REV/2	1	1	3.52

REMARKS



Gamma Ray	DEPTH	Sandstone Porosity
0	0	0%
150	112	60%



BOREHOLE TELKUR-420
 CLIENT Cross West Resources Ltd.
 AREA Telkwa B.C.
 COUNTRY Canada



DIPMETER ANALYSIS

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Tk-Talkus

CLIENT	C.N.R.L.
BOREHOLE	TW-84D-420 (5)
AREA	TELKWA B.C
COUNTRY	CANADA

DATE LOGGED....22-JUN-84
 DATE PROCESSED..02-AUG-84



COMMENTS.....

INTERPRETATION PARAMETERS

STEP 1.00M. DECLINATION 26.0 EAST
 INTERVAL 2.00M. DEPTH RANGE 9.36 - 114.00M.
 SEARCH ANGLE 80. DATE PROCESSED 02-AUG-84

AVERAGE BOREHOLE DEVIATION & DIRECTION ANNOTATED EVERY 10.0M.
 ROSE DIAGRAMS SEGMENTED EVERY TEN DEGREES.
 .1" RADIUS PER DIP MARKER DISPLAYED

LEGEND:
 ● GOOD (>0.50)
 ○ FAIR (>0.30)

