



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper, Resistance

T-64

COMPANY **Teck** *RE-BELLINGS 77 (2)A.*
BOREHOLE **1-64** *Phillimore*
STATE **S.C.** COUNTRY **Canada**

Permanent Datum _____ Elev. _____ Ft.
Log measured from **Table** Ft. above P.D.
Drilling measured from **Table** Ft. above P.D.

Run No. **1** Depth Scale **1:200**
Date **18 June 1977**
First Reading **61**
Last Reading **w.l.**
Interval Measured **61m**
Casing BPP _____
Casing Driver _____
Depth Reached **61.85m**
Bottom Driver **62m**
Mud Nature **Bentonite**
SG _____ Viscosity _____

Bit Size **H.G.** to **F.D.**
Casing Size **1** to **3**
Rm @ Meas Temp _____ @ _____ °F
Rmf @ Meas Temp _____ @ _____ °F
Rmc @ Meas Temp _____ @ _____ °F
Source Rmf _____ Rmc _____
Rm @ BHT _____ @ _____ °F
Rmf @ BHT _____ @ _____ °F
Rmc @ BHT _____ @ _____ °F
Operating Time **1 hr.**
Tuck No **V21/35**
Recorded By **R. Stetson**
Witness _____

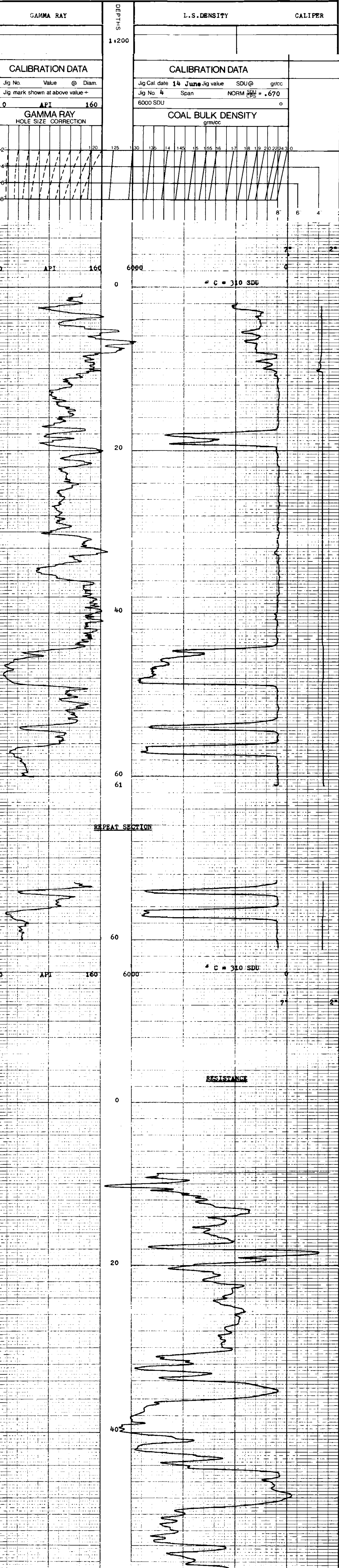
478

told here

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down
Depth - Driller					
Type Fluid in Hole					
Dens	Visc				
ph	Fluid Loss				
Source of Sample		Equipment Data			
Rm @ Meas Temp	@ _____ °F	Run No	Tool Type	Tool Position	Other
Rmf @ Meas Temp	@ _____ °F				
Rmc @ Meas Temp	@ _____ °F				
Source Rmf	Rmc				
Rm @ BHT	@ _____ °F				
Rmf @ BHT	@ _____ °F				
Rmc @ BHT	@ _____ °F				

Logging Data						
Log	Depths	Speed	T.C.	Norm.	Sonde No.	Source Number
	From To	m/min	sec			
Gamma	60 w.l.	9	1	out	110	
L.S.D.	61 w.l.	9	0.3	.670	110	M5852
Cal.	61 0	15	0.3	out	110	
Res.	61 w.l.	12			ES22	





GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper, Resistance

COMPANY **Jack Mc-Bull Moose 77 (A)**
BOREHOLE **T-65 Bull Moose**
STATE **B.C.** COUNTRY **Canada**

Permanent Datum **Ground Level** Elev. **Fi.**
Log measured from **Table** F. above **P.D.**
Drilling measured from **Table** G. above **G.L.**

Run No **1** Depth Scale **1:200**
Date **18 June 1977**
First Reading **69**
Last Reading **K.L.**
Interval Measured **69m**
Casing BPR
Casing Driver
Depth Reached **69.6m**
Bottom Driver **70.5m**
Mud Name **Bentonite**
S.G. Viscosity

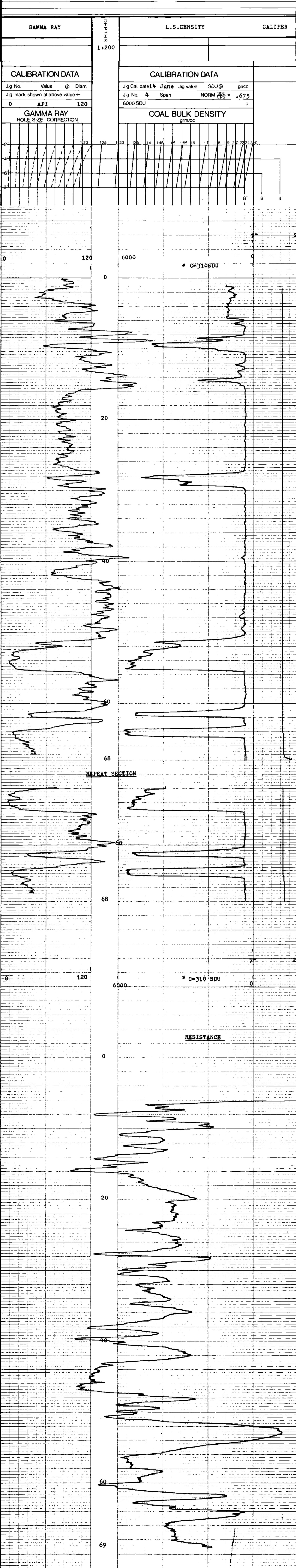
Bit Size 1 **H.Q.** to **T.D.**
2 to to to to to to
3 to to to to to to
Casing Size 1 to to to to to to
2 to to to to to to
Rm @ Meas Temp @ @ @ @ @ @
Rm @ Meas Temp @ @ @ @ @ @
Rmc @ Meas Temp @ @ @ @ @ @
Source: Rmf Rmc
Rm @ BHT @ @ @ @ @ @
Rmc @ BHT @ @ @ @ @ @
BHT
Operating Time **1 hr.**
Truck No **V211/35**
Recorded By **R. B. HOD**
Witnesses

478

REMARKS

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

Log	Depths		Speed		T.C.	Norm.	Sider No.	Source Number
	From	To	m/min	sec				
Gamma	67	w.l.	9	1	out	110		
L.S.D.	68	w.l.	9	0.3	out	110	M5852	
Cal.	68	0	15	0.3	out	110		
Reg.	69	w.l.	12				ES22	





GENERAL LOGS
 Gamma Ray, L.S. Density,
 CALIPER, RESISTANCE

COMPANY **Teck** *RA - Bellrose 77(3)4.*
 BOREHOLE **T-66** *Bullmoose*
 STATE **B.C.** COUNTRY **Canada**

Permanent Datum _____ Elev. _____ Ft.
 Log measured from _____ Table _____ Ft. above P.D.
 Drilling measured from _____ Table _____ Ft. above P.D.

Run No _____ Depth Scale _____
 Date **19 June 1977**
 First Reading **72**
 Last Reading **72**
 General Measured **72m**
 Casing Bore _____
 Casing Driller _____
 Bottom Reached **72.3m**
 Mud Name **Bentolite**
 Mud Viscosity _____

Bit Size 1 **H.O.** to **T.D.** _____
 2 _____
 3 _____
 Casing Size 1 _____
 2 _____
 Run @ Meas Temp _____
 Run @ Meas Temp _____
 Run @ Meas Temp _____
 Run @ Meas Temp _____
 Operating Time **1 hr.**
 Check No. **121/35**
 Recorded By **R. Bishop**
 Witness _____

478

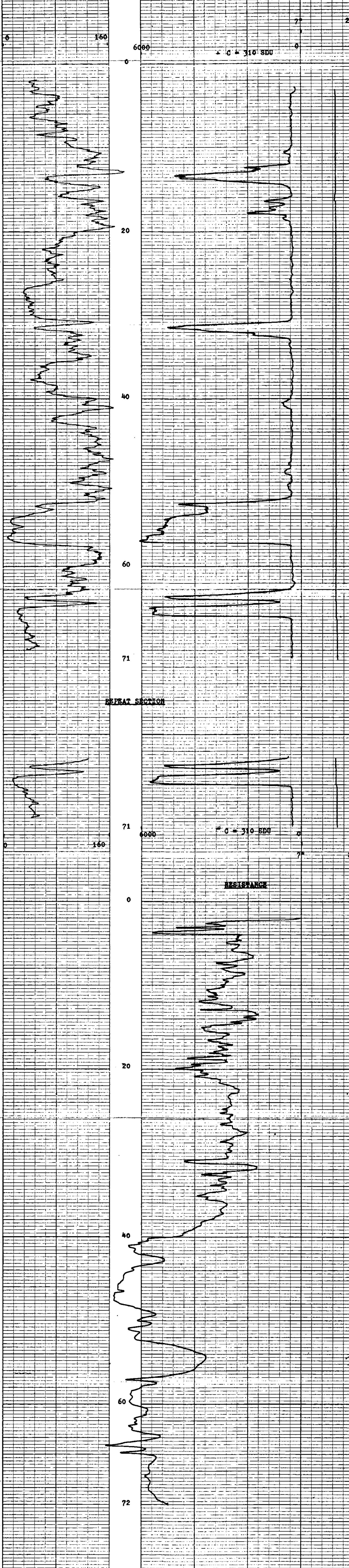
REMARKS		Scale Changes	
Date	Sample No.	Type Log	Depth
Type Fluid in Hole		Scale Up Hole	
		Scale Down	
Dens. Visc. _____			
ph. Fluid Loss _____ ml			
Source of Sample _____		Equipment Data	
Run @ Meas Temp. _____	_____	Run No.	Tool Type
Rmf @ Meas Temp. _____	_____		Tool Position
Rmc @ Meas Temp. _____	_____		Other
Source Rmf _____ Rmc _____			
Rm @ BHT _____	_____		
Rmf @ BHT _____	_____		
Rmc @ BHT _____	_____		

Log	Depths		Speed	T.C.	Norm.	Sonde No.	Source Number
	From	To					
Gamma	70	W.L.	9	1	out	110	
L.S.D.	71	W.L.	9	0.3	.665	110	M5852
Cal.	71	0	15	0.3	out	110	
Res.	72	W.L.	12				RS22

GAMMA RAY	DEPTHS	L.S.DENSITY	CALIPER
	1+200		

CALIBRATION DATA		CALIBRATION DATA	
Jig No.	Value @ Diam.	Jig Cat date	14 June Jig value
Jig mark shown at above value+		Jig No.	4 Span
			NORM SDU = .665
			6000 SDU

GAMMA RAY HOLE SIZE CORRECTION		COAL BULK DENSITY	
API	160	gm/cc	





GENERAL LOGS

Gamma Ray, L.S. Density

COMPANY Teck R. Bulltoss 725A.
 BOREHOLE T-67 Bulltoss
 STATE B.C. COUNTRY Canada

Permanent Datum _____ Elev. _____ Ft.
 Log measured from Top of Casing Ft. above P.D.
 Drilling measured from Top of Casing Ft. above P.D.

Run No. 2 Date 1:200
 Depth Scale _____
 First Reading 113m
 Last Reading 0
 Interval Measured 113m
 Casing B.P.B. _____
 Casing Driver _____
 Depth Reached 114.4m
 Bottom Driller 114.9m
 Mud Name Benlonite

S.G. _____ Viscosity _____
 F. Size 1 _____ to _____
 2 _____ to _____
 3 _____ to _____

Ch. q. Size 1 _____ to _____
 2 _____ to _____
 3 _____ to _____
 @ Meas Temp _____ °F
 @ Meas Temp _____ °F
 @ Meas Temp _____ °F
 @ Meas Temp _____ °F
 @ Meas Temp _____ °F
 @ Meas Temp _____ °F
 @ Meas Temp _____ °F
 @ Meas Temp _____ °F
 @ Meas Temp _____ °F
 @ Meas Temp _____ °F

Operating Time 3/4 hr.
 Truck No V21/35
 Recorded By R. Blinop

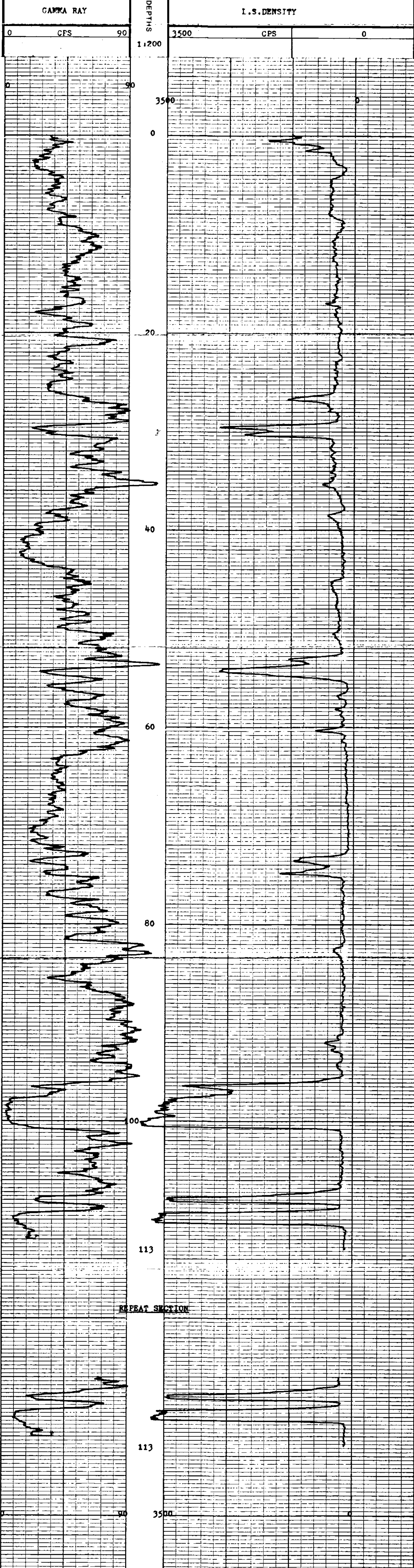
Witness _____
478

fold here

REMARKS

Changes in Mud Type or Additional Samples				Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down		
Type Fluid in Hole							
Dens.	Visc.						
ph.	Fluid Loss	mi					
Source of Sample				Equipment Data			
Rm	@ Meas Temp	@	°F	Run No.	Tool Type	Tool Position	Other
Rmf	@ Meas Temp	@	°F				
Rmc	@ Meas Temp	@	°F				
Source: Rmf Rmc							
Rm	@ BHT	@	°F				
Rmf	@ BHT	@	°F				
Rmc	@ BHT	@	°F				
Logging Data							
Log	Depths	Speed	T.C.	Norm.	Sonde No.	Source	
	From To	m/min	sec			Number	
Gamma	112 0	9	1	out	110		
L.S.D.	113 0	9	0.3	out	110	M5852	

Hole logged through HQ drill rods - rig on site.
 N.B. HQ rods still in hole from 54.8m to 73.1m.





GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper, Resistance

T-68

COMPANY **TECK** **RE-BELLICONS 71314**

BOREHOLE **T-68** **BILLINGS**

STATE **B.C.** COUNTRY **Canada**

Permanent Datum **Top of casing** Elev **110** Ft. above P.D.

Log measured from **Top of casing** Ft. above P.D.

Drilling measured from **Top of casing** Ft. above P.D.

Run No **1** Depth Scale **11200**

Date **19 June 1977**

Last Reading **6.0m**

Label Reading **W.L.**

Interval Measured **8.6m**

Casing Size **86.8m**

Casing Outer **86.8m**

Bottom Reached **86.3m**

Bottom Chiller **Bentonite**

Mud Nature **Bentonite**

SG **H.Q.** Viscosity **to T.D.**

Bit Size **2** to **10**

Casing Size **1** to **10**

Rm @ Meas Temp **2** to **10**

Rmc @ Meas Temp **2** to **10**

Operating Time **1 hr.**

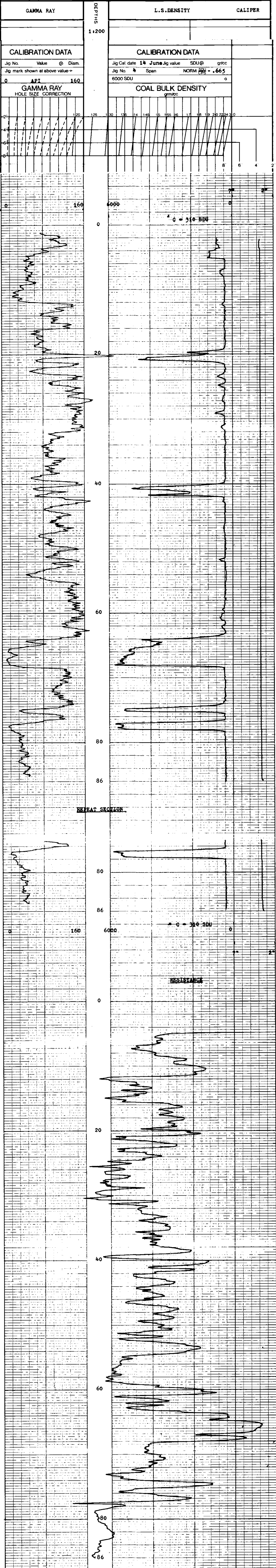
Recorded By **R. Bishop**

478

fold here

Changes in Mud Type or Additional Samples		Scale Changes		
Date	Sample No.	Type Log	Depth	Scale Up Hole
Type Fluid in Hole				
Dens.	Visc			
ph	Fluid Loss			
Source of Sample		Equipment Data		
Rm @ Meas Temp	@ °F	Run No	Tool Type	Tool Position
Rmf @ Meas Temp	@ °F			Other
Rmc @ Meas Temp	@ °F			
Source Rmf	Rmc			
Rm @ BHT	@ °F			
Rmf @ BHT	@ °F			
Rmc @ BHT	@ °F			

Logging Data						
Log	Depths	Speed	T.C	Norm	Sonde No.	Source
	From To	m/min	sec			Number
Gamma	85 w.l.	9	1	out	110	
L.S.D.	86 w.l.	9	0.3	665	110	MS2
Cal.	86 0	15	0.3	out	110	
Res.	86 w.l.	12			2522	





GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper, Resistance

COMPANY Beck CS - Burlington 71834
BOREHOLE T-71 Baltimore
STATE B.U. COUNTRY Canada

Permanent Datum _____ Elev _____ Ft.
Log measured from _____ Top of casing _____ Ft. above P.D.
Drilling measured from _____ 100' of casing _____ Ft. above P.D.

No. Depth Scale 1 1 1200
Running _____ 103
Measured _____ 103
Driller _____ 103
Reached _____ 103
m Order _____ 104
Mud _____ Bentonite
Viscosity _____ HQ to T.D.

1	to	10	to	10
2	to	10	to	10
3	to	10	to	10
4	to	10	to	10
5	to	10	to	10
6	to	10	to	10
7	to	10	to	10
8	to	10	to	10
9	to	10	to	10
10	to	10	to	10
11	to	10	to	10
12	to	10	to	10
13	to	10	to	10
14	to	10	to	10
15	to	10	to	10
16	to	10	to	10
17	to	10	to	10
18	to	10	to	10
19	to	10	to	10
20	to	10	to	10
21	to	10	to	10
22	to	10	to	10
23	to	10	to	10
24	to	10	to	10
25	to	10	to	10
26	to	10	to	10
27	to	10	to	10
28	to	10	to	10
29	to	10	to	10
30	to	10	to	10

478

Told here

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes	
Date	Sample No	Type Log	Depth
Type Fluid in Hole		Scale Up Hole	Scale Down
Dens	Visc	Equipment Data	
ph	Fluid Loss	Run No	Tool Type
Source of Sample		Tool Position	Other
Rm @ Meas Temp	@ °F		
Rmf @ Meas Temp	@ °F		
Rmc @ Meas Temp	@ °F		
Source: Rmf	Rmc		
Rm @ BHT	@ °F		
Rmf @ BHT	@ °F		
Rmc @ BHT	@ °F		

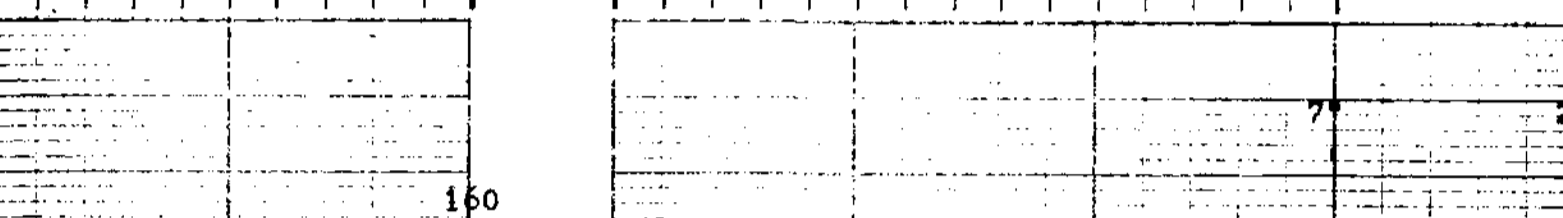
Logging Data						
Log	Depths	Speed	T.C	Norm	Source No	Source
	From To	m/min	sec			Number
Gamma	102 w.1	9	1	out	110	
L.S.D.	103 w.1	9	0.3	.620	110	M5852
Cal.	103 0	15	0.3	out	110	
Res.	103 w.1	12			ES22	

GAMMA RAY L.S. DENSITY CALIPER

DEPTHS 1200

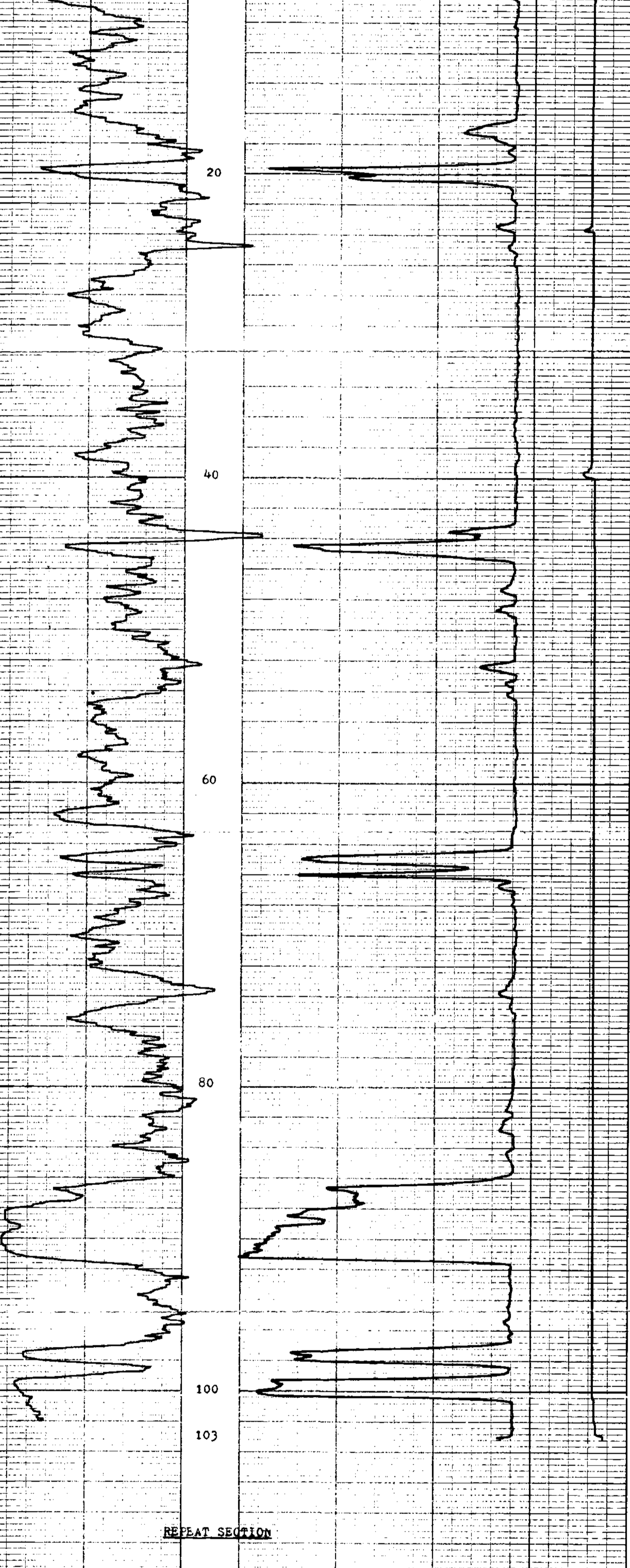
CALIBRATION DATA			CALIBRATION DATA		
Jig No.	Value	@ Diam.	Jig Cal. date	Jig value	SDU@ gr/cc
Jig mark shown at above value+			Jig No.	Span	NORM SDU @ gr/cc = .670
0	API	160	6000	SDU	0

GAMMA RAY HOLE SIZE CORRECTION COAL BULK DENSITY



C = 310 SDU

water level

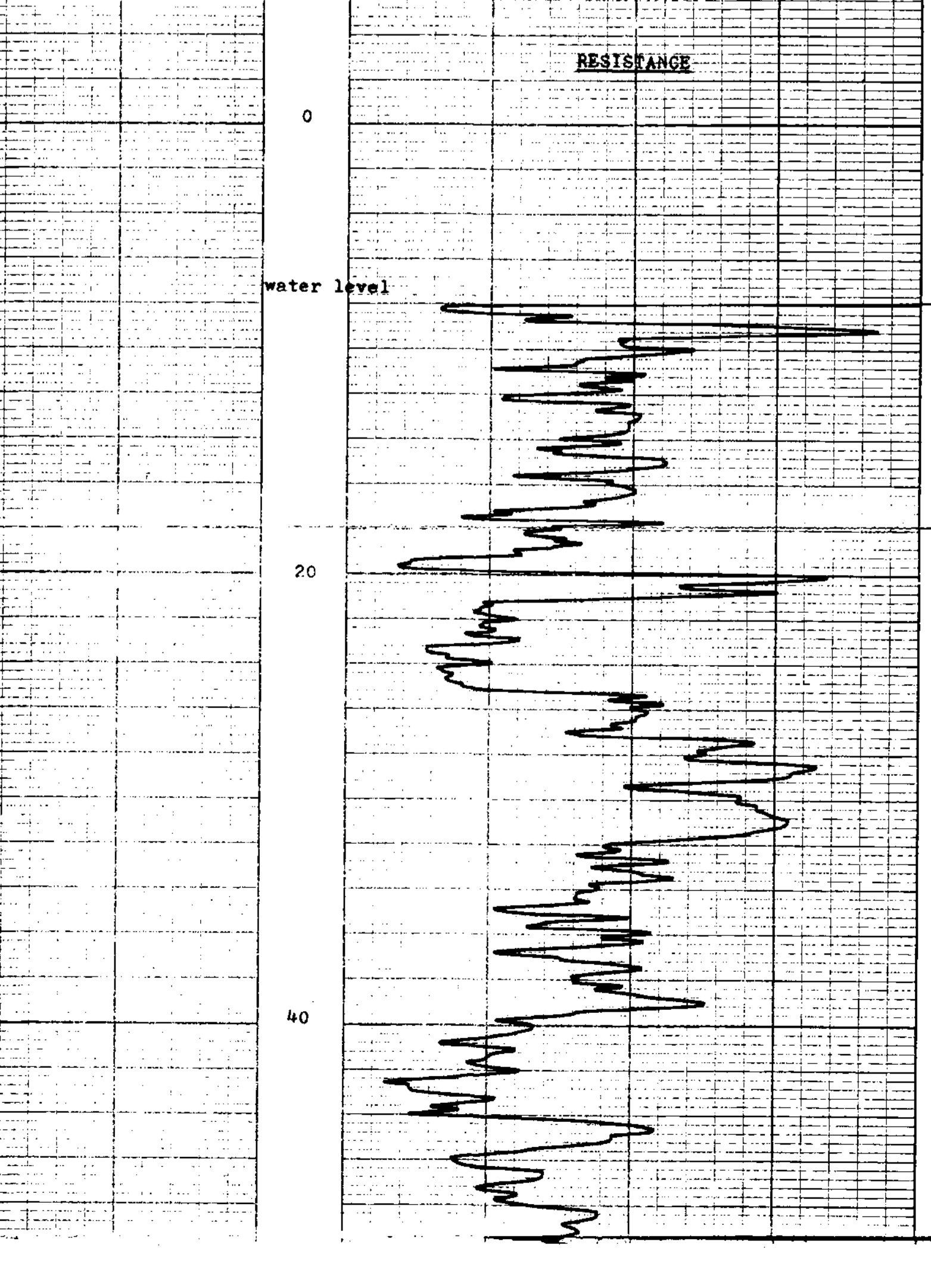


REPEAT SECTION

C = 310 SDU

RESISTANCE

water level





GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper, Resistance

COMPANY Test BE-Bullnose 2 (3)A
BOREHOLE E-2 Bullnose
STATE ... COUNTRY Canada

Permanent Datum _____ Elev. _____ Ft.
Log measured from _____ Ft. above P.D.
Drilling measured from _____ Ft. above P.D.

Run No. 1 1,200
Date 25 June 1977
First Reading _____
Last Reading _____

Interval Measured _____
Casing B.P.S. _____
Casing Depth _____
Casing Headed _____
Bottom Driver _____

Mud Nature W. L. 1.12
SG VISCOSITY _____
Bit Size 1 1/2"

3 _____ to _____ to _____
2 _____ to _____ to _____
1 _____ to _____ to _____

Operating Time 1 hr.
Drill No. VI/35
Log No. K. Bishop

478

fold here

REMARKS

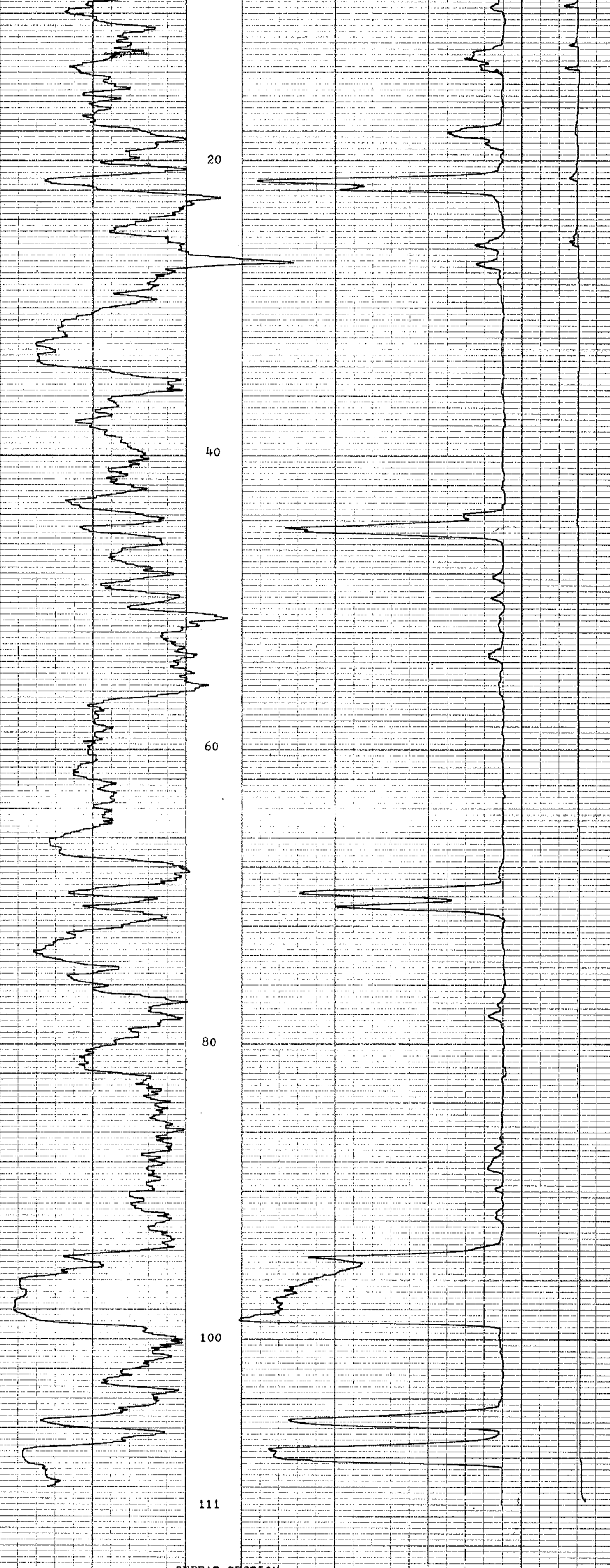
Changes in Mud Type or Additional Samples		Scale Changes	
Date	Sample No.	Type Log	Scale Up Hole
Depth - Driller			Scale Down
Type Fluid in Hole			
Dens.	Visc.		
ph	Fluid Loss	mi	
Source of Sample		Equipment Data	
Rm @ Meas Temp.	@	Run No.	Tool Type
Rmf @ Meas Temp.	@		Tool Position
Rmc @ Meas Temp.	@		Other
Source Rmf Rmc			
Rm @ BHT	@		
Rmf @ BHT	@		
Rmc @ BHT	@		

Logging Data		Norm. Sand No.		Source Number	
Log	Depths	Speed	T.C.		
	From To	ft/min	sec		
Gamma	110 w.l	9	1	out	110
L.S.D.	111 w.l	9	0.3	.670	110 M5852
Cal.	111 0	15	0.3	out	110
Res.	112 w.l	12			ES27

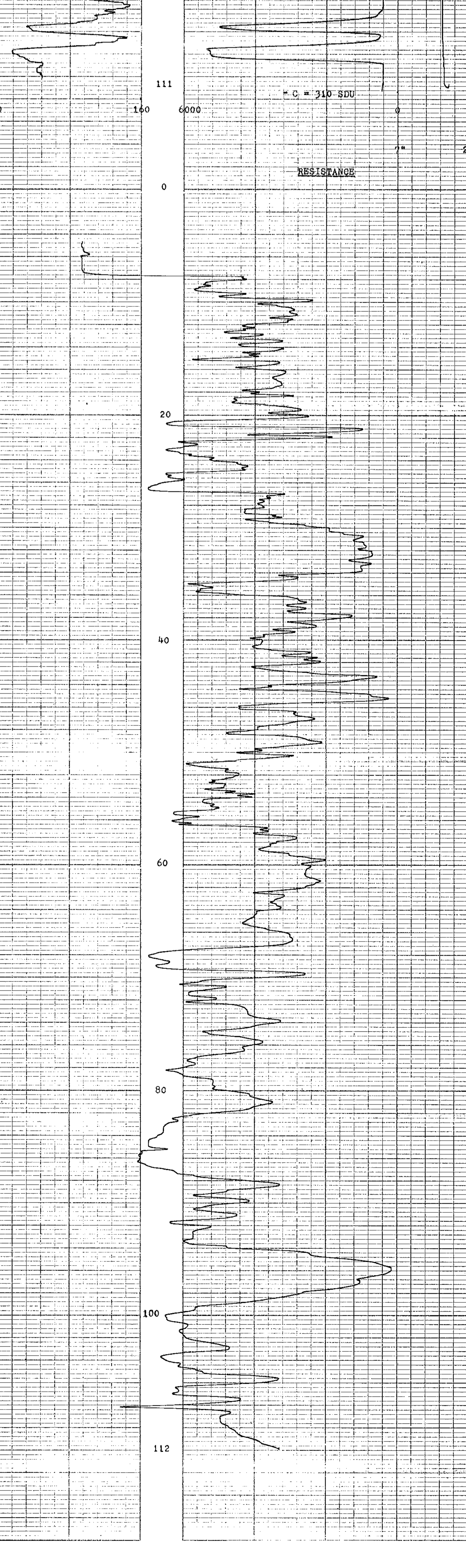
GAMMA RAY	L.S.DENSITY	CALIPER
DEPTHS		
1:200		

CALIBRATION DATA		CALIBRATION DATA	
Jig No.	Value @ Diam.	Jig Cal date	Jig value SDU@ gr/cc
Jig mark shown at above value		14 June	
0	API 160	Jig No.	Span NORM $\frac{SDU}{SDU} = .670$
		6000 SDU	

GAMMA RAY HOLE SIZE CORRECTION		COAL BULK DENSITY grm/cc	
2	120	125	130
4	130	135	14
6	140	145	15
8	150	155	16
	160	165	17
		175	18
		185	19
		195	20
		205	21
		215	22
		225	23
		235	24
		245	25



REPEAT SECTION





GENERAL LOGS
Gamma Ray, I.S. Density,
Caliper

COMPANY 1961
BOREHOLE T-73 Fullerton
STATE B.C. COUNTRY Canada

Permanent Datum _____ Elev _____ Ft.
Log measured from _____ Top of Casing _____ Ft. above P.D.
Drilling measured from _____ Top of Drilling _____ Ft. above P.D.

Run No	1	1200
Date	29 June 1977	
First Reading	138	
Last Reading	138	
Interval Measured	0	
Casing BPS	138.7m	
Casing Driller	A27M	
Depth Reached	Bottom Driller	
Mud Name	Bentonite	
S.G. Viscosity	HQ	to F.D.
Bit Size	2	to 10
	3	to 10
Casing Size	1	to 10
	2	to 10
First @ Meas Temp	⊙	⊙
First @ Meas Temp	⊙	⊙
First @ Meas Temp	⊙	⊙
First @ Meas Temp	⊙	⊙
Operating Time	3/4 hr.	
Track No	V21/35	
Recorded By	R. Bishop	
Witness		

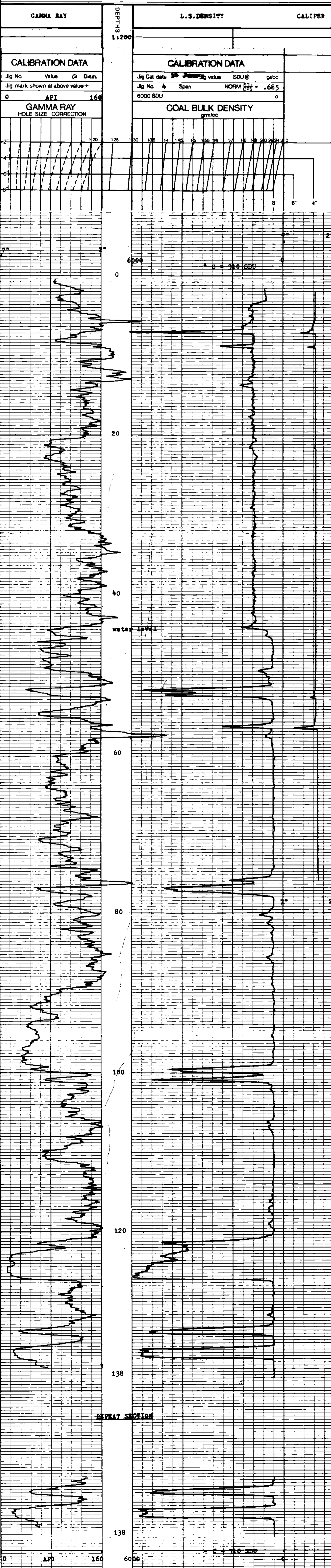
told here

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down
Depth - Driller					
Type Fluid in Hole					
Dens.	Visc.				
ph.	Fluid Loss	mi			
Source of Sample		Equipment Data			
Rm	⊙ Meas Temp	⊙	⊙	⊙	⊙
Rmf	⊙ Meas Temp	⊙	⊙	⊙	⊙
Rmc	⊙ Meas Temp	⊙	⊙	⊙	⊙
Source: Rmf		Rmc			
Rm	⊙ BHT	⊙	⊙	⊙	⊙
Rmf	⊙ BHT	⊙	⊙	⊙	⊙
Rmc	⊙ BHT	⊙	⊙	⊙	⊙

Logging Data						
Log	Depths	Speed	T.C.	Norm.	Scale No.	Source
	From	To	m/min	sec		Number
Gamma	137	0	9	1	out	110
I.S.D.	138	0	9	0.3	.685	110 M5852
Cal.	76	0	15	0.3	out	110

CCS stuck downhole - caliper only run from 76m.



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

COMPANY **TEAL** *P. Sullivan 71834*

BOREHOLE **T-74** **WILMORE**

STATE **B.C.** COUNTRY **CANADA**

Permanent Datum Elev. **FT.**

Log measured from **TOP OF CASING** Ft. above **P.D.**

Drilling measured from **TOP OF CASING** Ft. above **P.D.**

Run No. **1** Depth Scale **1 11200**

Date **12 JULY 1977**

First Reading **88m**

Last Reading **0**

Interval Measured **88m**

Casing BPP

Casing Driller

Depth Reached **82.2m**

Bottom Driller **88.4m**

Mud Nature **Benstonite**

S.G. Viscosity

Bit Size 1 **NO** to **T.D.**

Bit Size 2 **NO** to **10**

Bit Size 3 **NO** to **10**

Casing Size 1 **NO** to **10**

Casing Size 2 **NO** to **10**

Rm @ Meas Temp. **0** to **10**

Rm @ Meas Temp. **0** to **10**

Rmc @ Meas Temp. **0** to **10**

REMARKS

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

Logging Data						
Log	Depths From	To	Speed $\frac{ft}{min}$	T.C. $\frac{sec}{ft}$	Norm. SDU	Source Number
Gamma	87	0	9	1	out	110
L.S.D.	88	0	9	0.3	660	110 2552
Cal.	88	0	15	0.3	out	110

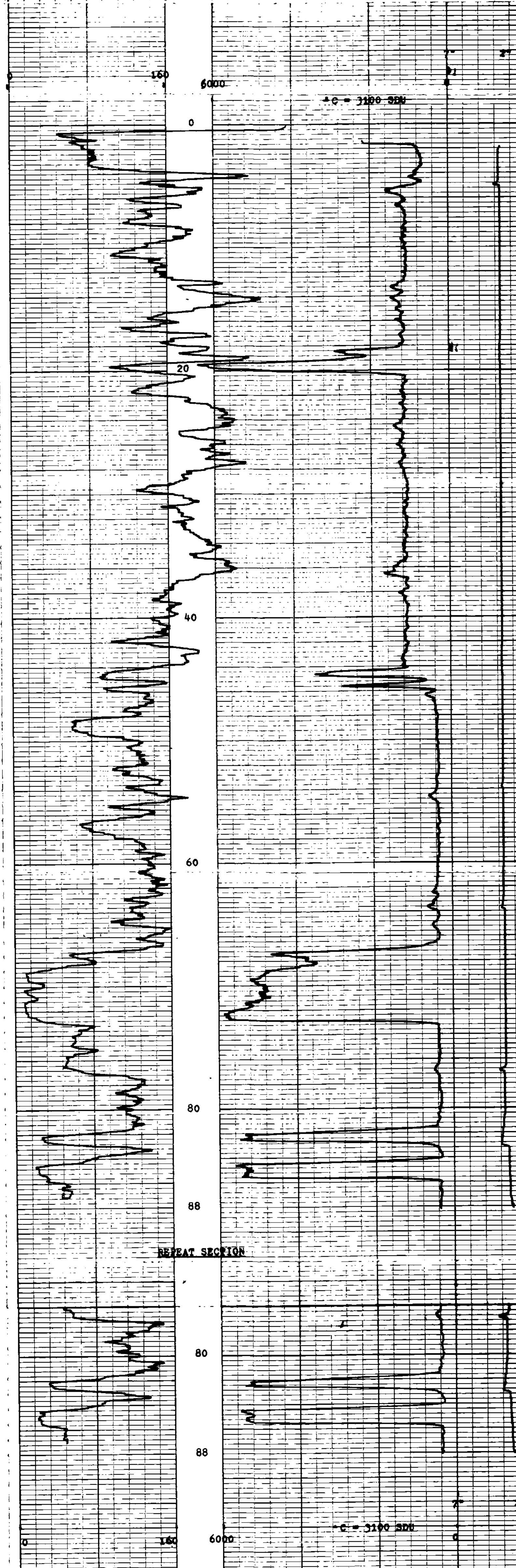
GAMMA RAY DEPTHS L.S.DENSITY CALIPER

CALIBRATION DATA			
Jig No.	Value	@	Diam.
Jig mark shown at above value +			
0	API		160

CALIBRATION DATA			
Jig Cal. date	14 June	Jig value	SDU @ gr/cc
Jig No.	Span	NORM	SDU @ gr/cc = .660
6000 SDU			

GAMMA RAY HOLE SIZE CORRECTION			
2	120	125	130
4	135	14	145
6	15	155	16
8	17	18	19
	20	22	24
	30		

COAL BULK DENSITY gr/cc			
2	120	125	130
4	135	14	145
6	15	155	16
8	17	18	19
	20	22	24
	30		



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

1-75

COMPANY Teck RE-SULLMOORE 22334
 WELL NO. 15 Billmose
 DATE 1977 COUNTRY Canada
 Permanent Datum _____ Elev. _____ Ft.
 Measured from _____ Top of Casting _____ Ft. above P.D.
 Logging measured from _____ Top of Casting _____ Ft. above P.D.

1:200
 1:27m
 1:27m
 1:29m

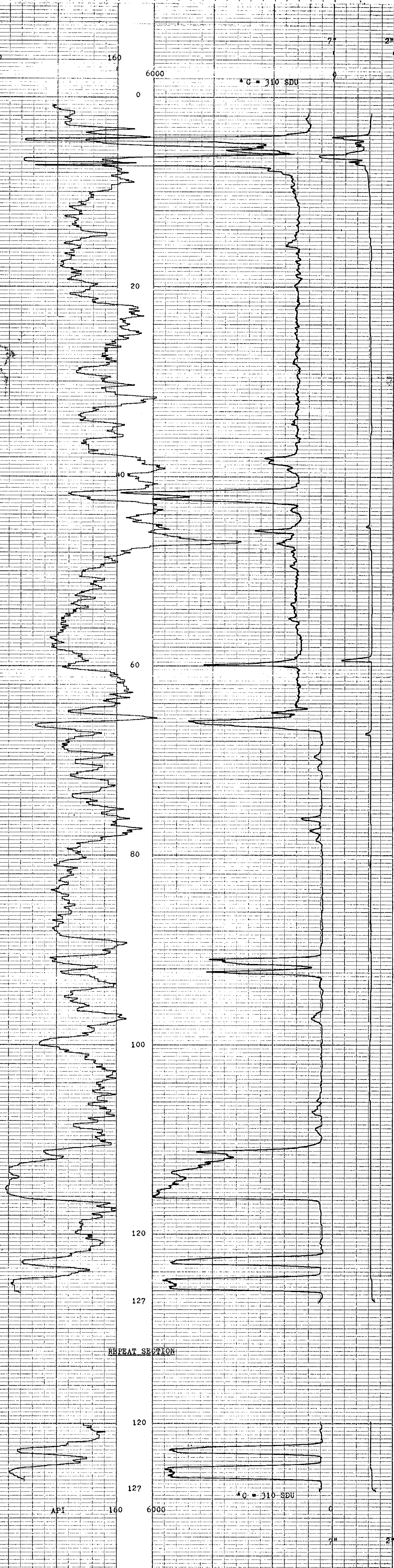
Section
 1/2 to T.D. 10 10
 10 10
 10 10
 10 10
 10 10
 10 10
 10 10
 1 hr.
 21/35
 H. Bishop

fold here

REMARKS				Scale Changes			
Changes in Mud Type or Additional Samples				Type Log	Depth	Scale Up Hole	Scale Down
Date	Sample No.						
Depth - Driller							
Type Fluid in Hole							
Dens. ph.	Visc.						
Fluid Loss	ml						
Source of Sample				Equipment Data			
Rm @ Meas Temp.	@	°F	@	°F	Run No.	Tool Type	Tool Position
Rmf @ Meas Temp.	@	°F	@	°F			Other
Rmc @ Meas Temp.	@	°F	@	°F			
Source: Rmf		Rmc					
Rm @ BHT	@	°F	@	°F			
Rmf @ BHT	@	°F	@	°F			
Rmc @ BHT	@	°F	@	°F			

Log	Depths		Logging Data		Norm.	Sonde No.	Source Number
	From	To	Speed n/min	T.C. sec			
Gamma	126	0	9	1	out	110	
L.S.D.	127	0	9	0.3	.665	110	M5852
Cal.	127	0	15	0.3	out	110	

GAMMA RAY			L.S. DENSITY			CALIPER		
DEPTHS			1:200					
CALIBRATION DATA			CALIBRATION DATA					
Jig No.	Value	@ Diam.	Jig Cal date	Jig value	SDU@	gr/cc		
Jig mark shown at above value+			Jig No.	Span	NORM SDU	0.665		
0	API	160	6000	SDU		0		
GAMMA RAY HOLE SIZE CORRECTION			COAL BULK DENSITY gr/cc					



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

1-76

COMPANY TECK BEAUMONT 22 (3) A
BOREHOLE T-76 BEAUMONT
STATE 22 COUNTRY Canada

Permanent Datum _____ Elev _____ Ft.
Log measured from _____ Top of Casing _____ Ft. above P.D.
Drilling measured from _____ Top of Casing _____ Ft. above P.D.

Run No. 1 Depth Scale 1:200
Date _____
First Reading _____
Interval Measured _____
Casing BPE _____
Casing Driller _____
Depth Reached _____
Bottom Driller _____
Mud Nature _____
S.G. _____ Viscosity _____

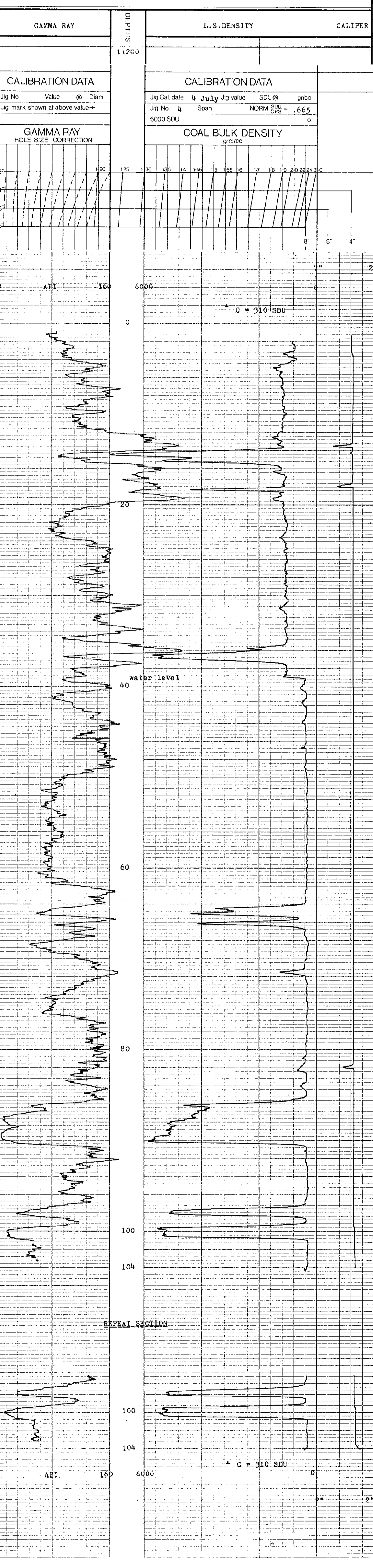
Bl. Size	1	10	10
2	10	10	10
3	10	10	10
Casing Size	1	10	10
2	10	10	10
Rm @ Meas Temp	@	@	@
Rmf @ Meas Temp	@	@	@
Rmc @ Meas Temp	@	@	@
Source: Rmf			
Rm @ BHT	@	@	@
Rmf @ BHT	@	@	@
Rmc @ BHT	@	@	@

fold here

REMARKS

Changes in Mud Type or Additional Samples		Type Log	Depth	Scale Changes	
Date	Sample No.			Scale Up Hole	Scale Down
Depth - Driller					
Type Fluid in Hole					
Dens	Visc				
ph.	Fluid Loss				
Source of Sample		Equipment Data			
Rm @ Meas Temp	@	Run No.	Tool Type	Tool Position	Other
Rmf @ Meas Temp	@				
Rmc @ Meas Temp	@				
Source: Rmf					
Rm @ BHT	@				
Rmf @ BHT	@				
Rmc @ BHT	@				

Logging Data						
Log	Depths	Speed	T.C.	Norm.	Source No.	Source
	From	To	m/mir	sec		Number
Gamma	103	0	9	1	out	110
L.S.D.	104	0	9	0.3	out	110 M5852
Cal.	104	0	15	0.3	out	110



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

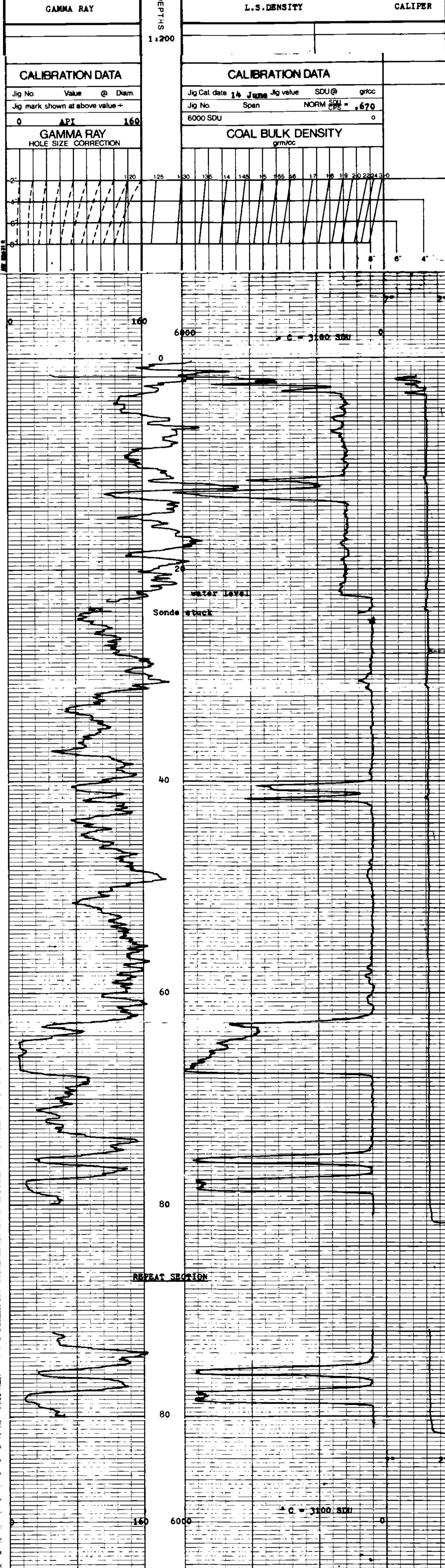
COMPANY Task NR-BULLMOOSE 22(S)
 BOREHOLE T-28 Bullmoose
 STATE B.C. COUNTRY Canada
 Permanent Datum _____ Elev _____ Ft.
 Log measured from Top of casing Ft. above P.D.
 Drilling measured from Top of casing Ft. above P.D.
 Run No. 1 Depth Scale 1:200
 Date 9 July 1977
 First Reading 81m
 Last Reading 0
 Interval Measured 81m
 Casing GBS _____
 Casing Driller _____
 Depth Reached 82.1m
 Bottom Driller B2.3m
 Mud Nature Bentonite
 SG _____ Viscosity _____
 Bit Size 1 NO to T.D. to _____
 2 _____ to _____
 3 _____ to _____
 Casing Size 1 _____ to _____
 2 _____ to _____
 Rm @ Meas Temp _____ @ _____ °F
 Rmf @ Meas Temp _____ @ _____ °F
 Rmc @ Meas Temp _____ @ _____ °F
 Rm @ BHT _____ @ _____ °F
 Rmf @ BHT _____ @ _____ °F
 Rmc @ BHT _____ @ _____ °F
 Operating Time 1 1/2 hrs.
 Truck No. Y21/35
 Recorded By R. Blahod
 Witness _____

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes				
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down	
Depth - Driller						
Type Fluid in Hole						
Dens.	Visc					
ph.	Fluid Loss					
Source of Sample		Equipment Data				
Rm @ Meas Temp.	② °F	② °F	Run No.	Tool Type	Tool Position	Other
Rmf @ Meas Temp.	② °F	② °F				
Rmc @ Meas Temp.	② °F	② °F				
Source: Rmf	Rmc					
Rm @ BHT	② °F	② °F				
Rmf @ BHT	② °F	② °F				
Rmc @ BHT	② °F	② °F				

Logging Data						
Log	Depths	Speed	T.C.	Norm	Sonde No.	Source
	From	To	min	sec		Number
Gamma	80	0	9	1	out	110
L.S.D.	81	0	9	0.3	.670	110 M5852
Cal.	81	0	15	0.3	out	110

Sonde stuck downhole - full suite not obtained on this run.



478



GENERAL LOGS
Gamma Ray, I.S. Density,
Caliper

T-79

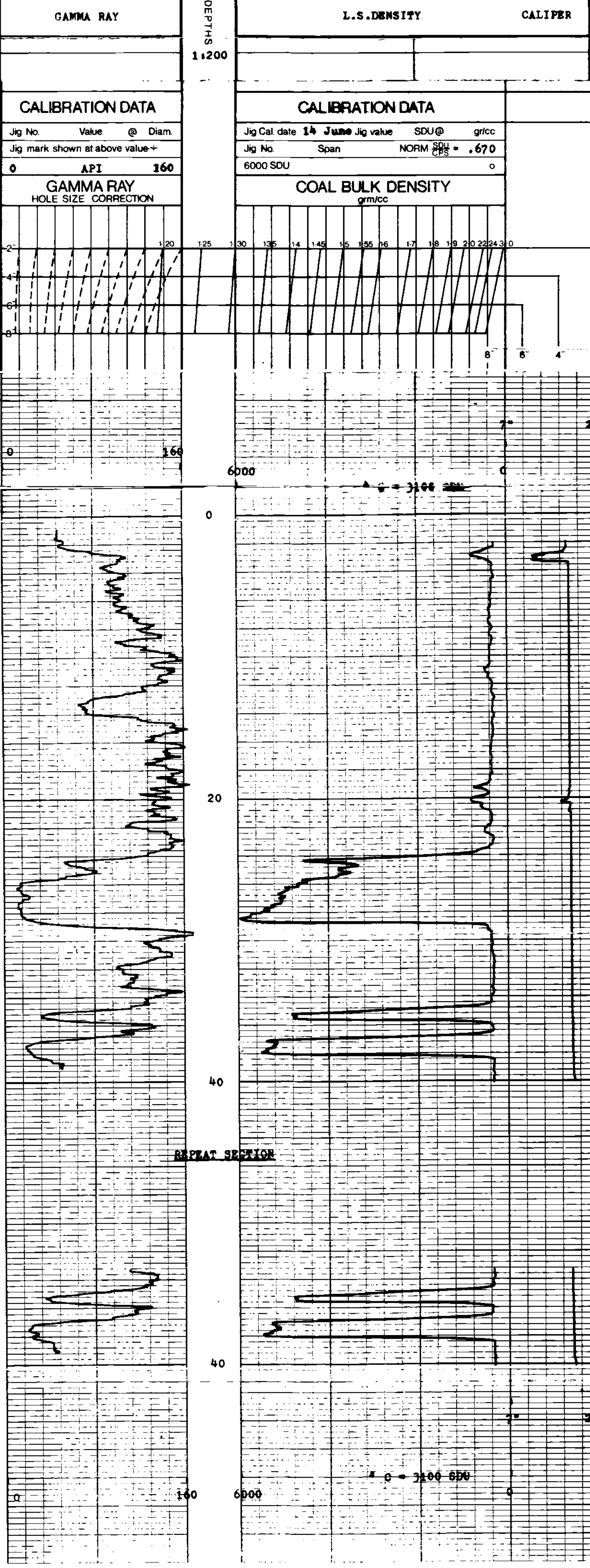
COMPANY Teck RE-BULLMOOSE 220219
BOREHOLE T-79 BULLMOOSE
STATE B.C. COUNTRY Canada

Permanent Datum _____ Elev _____ Ft.
Log measured from Top of casing Ft. above P.D.
Drilling measured from Top of casing Ft. above P.D.

Run No. 1 Depth-1200
Date 19 July 1977
First Reading 40m
Last Reading 0
Interval measured 40m
Casing BPA _____
Casing Driller _____
Depth Reached 40.9m
Bottom Driller 41.1m
Mud Name Bentonite
S.G. _____ Viscosity _____
Bit Size 1 HQ to T.D.
2 _____ to _____ to _____
3 _____ to _____ to _____
Casing Size 1 _____ to _____ to _____
2 _____ to _____ to _____
Rm @ Meas Temp. _____ @ _____ °F
Rmf @ Meas Temp. _____ @ _____ °F
Rmc @ Meas Temp. _____ @ _____ °F
BHT _____
Operating Time 1 1/2 hrs.
Truck No. V21/35
Recorded By R. Bishop
Witness _____

Told here

REMARKS				Scale Changes			
Changes in Mud Type or Additional Samples				Type Log	Depth	Scale Up Hole	Scale Down
Date	Sample No						
Depth - Driller							
Type Fluid in Hole							
Dens	Visc						
ph	Fluid Loss		ml				
Source of Sample				Equipment Data			
Rm	@ Meas Temp	@	°F	Run No	Tool Type	Tool Position	Other
Rmf	@ Meas Temp	@	°F				
Rmc	@ Meas Temp	@	°F				
Source: Rmf Rmc							
Rm	@ BHT	@	°F				
Rmf	@ BHT	@	°F				
Rmc	@ BHT	@	°F				
Logging Data							
Log	Depths	Speed	T.C.	Norm	Sonde No	Source	
	From To	min sec				Number	
Gamma	39 0	9 1	out	110			
L.S.D.	40 0	9 0.3	.670	110		M5852	
Cal.	40 0	15 0.3	out	110			



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

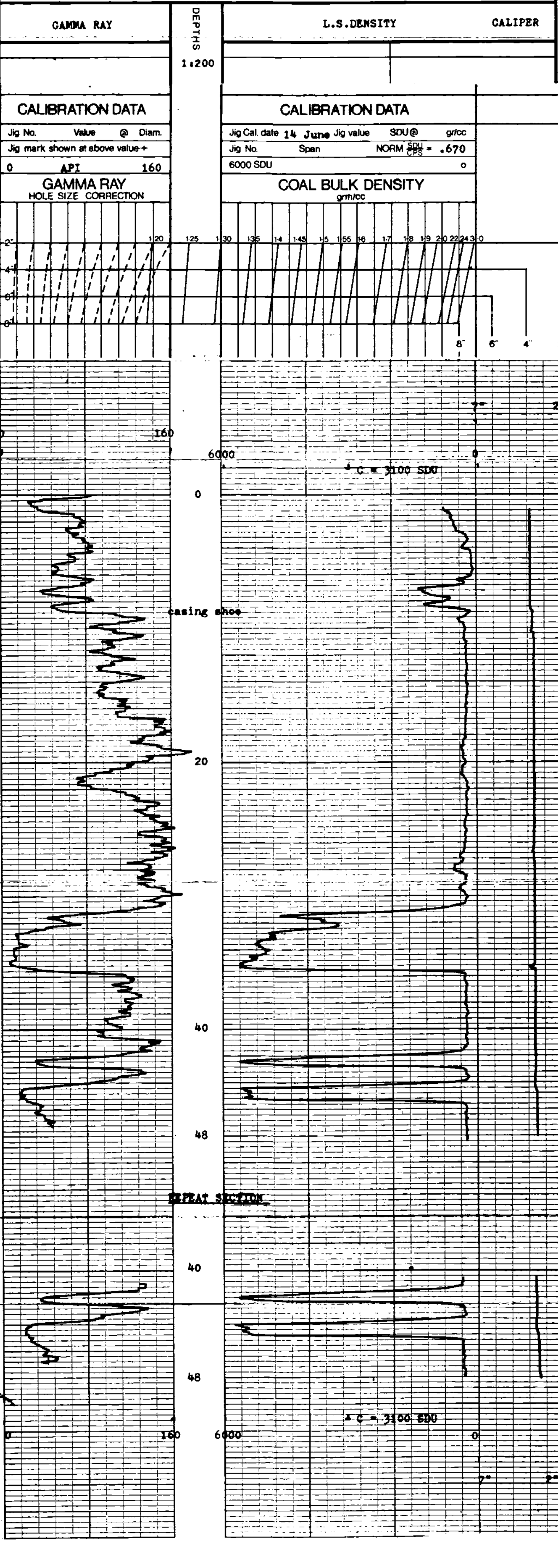
COMPANY Task RR-Bullmoose 77 (3)A
BOREHOLE T-80 Bullmoose
STATE B.C. COUNTRY Canada

Permanent Datum _____ Elev. _____ Ft.
Log measured from Top of Casing Ft. above P.D.
Drilling measured from Top of Casing Ft. above P.D.

Run No	1	11200
Date	16 July 1977	
First Reading	48m	
Last Reading	0	
Interval Measured	48m	
Casing BFB		
Casing Driller	49.1m	
Depth Reached	48.8m	
Bottom Driller	Pentonite	
Mud Nature		
S.G. Viscosity		
Bit Size 1	HQ	to T.D.
	to	to
	to	to
	to	to
Casing Size 1	to	to
	to	to
Casing Size 2	to	to
	to	to
Rm @ Meas Temp.	@	@
Rmf @ Meas Temp.	@	@
Rmc @ Meas Temp.	@	@
Source: Rmf		
Rmc		
Rm @ BHT	@	@
Rmf @ BHT	@	@
Rmc @ BHT	@	@
BHT		
Operating Time	1 hr.	
Truck No.	V21/35	
Recorded By	R. Bishop	
Witness		

fold here

REMARKS				Scale Changes			
Changes in Mud Type or Additional Samples				Type Log	Depth	Scale Up Hole	Scale Down
Date	Sample No.						
Depth - Driller							
Type Fluid in Hole							
Dens.	Visc.						
ph.	Fluid Loss		ml				
Source of Sample				Equipment Data			
Rm @ Meas Temp.	@	°F	@	°F	Run No.	Tool Type	Tool Position
Rmf @ Meas Temp.	@	°F	@	°F			Other
Rmc @ Meas Temp.	@	°F	@	°F			
Source: Rmf							
Rmc							
Rm @ BHT	@	°F	@	°F			
Rmf @ BHT	@	°F	@	°F			
Rmc @ BHT	@	°F	@	°F			
				Logging Data			
				Log	Depths	Speed	T.C.
					From	To	min sec
				Gamma	47	0	9
				L.S.D.	48	0	9
				Cal.	48	0	15
							Norm.
							Sonde No.
							Number



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

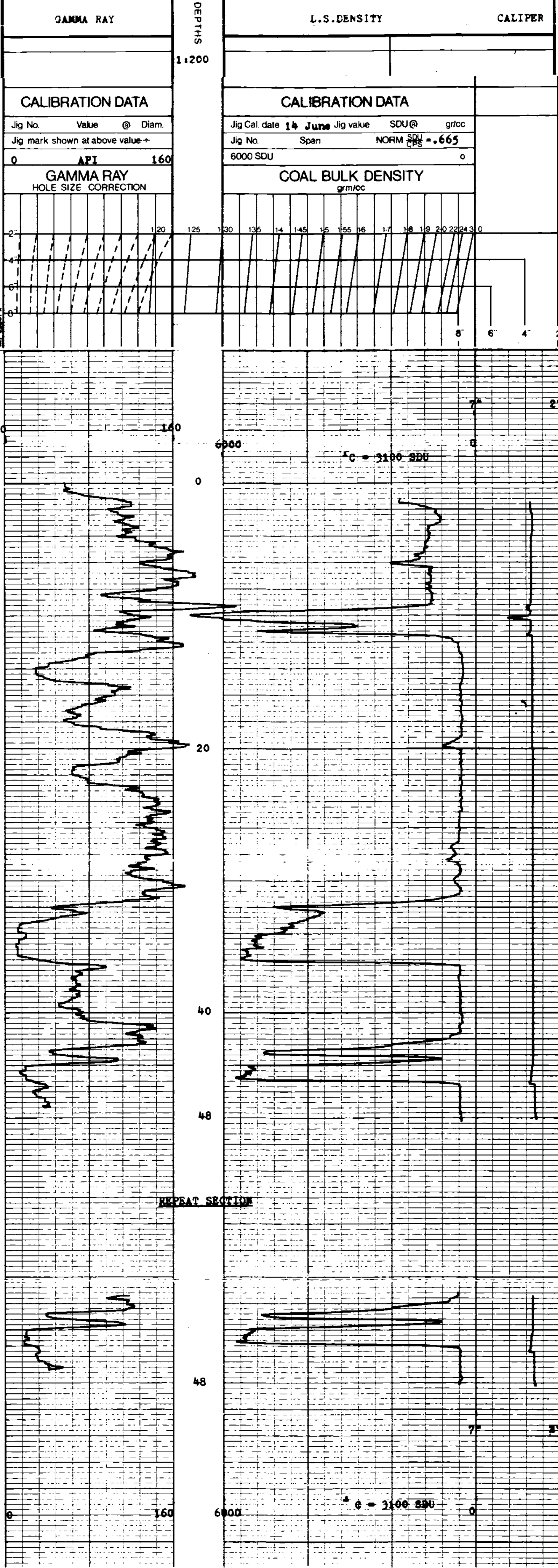
COMPANY **Teck** *2- Bullmoose 77(3)A*
BOREHOLE **T-81** **Bullmoose**
STATE **B.C.** COUNTRY **Canada**

Permanent Datum _____ Elev _____ Ft.
Log measured from **Top of casing** Ft. above P.D.
Drilling measured from **Top of casing** Ft. above P.D.

Run No	1	11200
Date	14 July 1977	
First Reading	0	48m
Last Reading		
Interval Measured		48m
Casing BPP		
Casing Driller		48.7m
Depth Reached		48.8m
Bottom Driller		
Mud Nature		Bentonite
S.G. Viscosity		
BH Size 1	HQ to T.D.	to
2	to	to
3	to	to
Casing Size 1	to	to
2	to	to
Rm @ Meas Temp	@	@
Rmf @ Meas Temp	@	@
Rmc @ Meas Temp	@	@
Source: Rmf		Rmc
Rm @ BHT	@	@
Rmf @ BHT	@	@
Rmc @ BHT	@	@
BHT		
Operating Time		1 hr.
Truck No		V21/35
Recorded By		R. Blahod
Witness		

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes			
Date	Sample No	Type Log	Depth	Scale Up Hole	Scale Down
Depth - Driller					
Type Fluid in Hole					
Dens	Visc				
ph	Fluid Loss				
Source of Sample		Equipment Data			
Rm @ Meas Temp	@	Run No	Tool Type	Tool Position	Other
Rmf @ Meas Temp	@				
Rmc @ Meas Temp	@				
Source: Rmf	Rmc				
Rm @ BHT	@				
Rmf @ BHT	@				
Rmc @ BHT	@				
Logging Data					
Log	Depths	Speed	T.C.	Norm.	Sonde No.
	From To	m/min	sec		Number
Gamma	47 0	9	1	out	110
L.S.D.	48 0	9	0.3	.665	110 M5852
Cal.	48 0	15	0.3	out	110



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

T-82

PC-BULLT00557

COMPANY Teck BOREHOLE 1-82 BULLMOOSE
STATE B.C. COUNTRY Canada

Permanent Datum _____ Elevation _____ Ft.
Log measured from Top of Casing Ft. above P.D. _____
Drilling measured from Top of Casing Ft. above P.D. _____

Run No. 1 Depth Scale 1:200

Date 21 July 1977

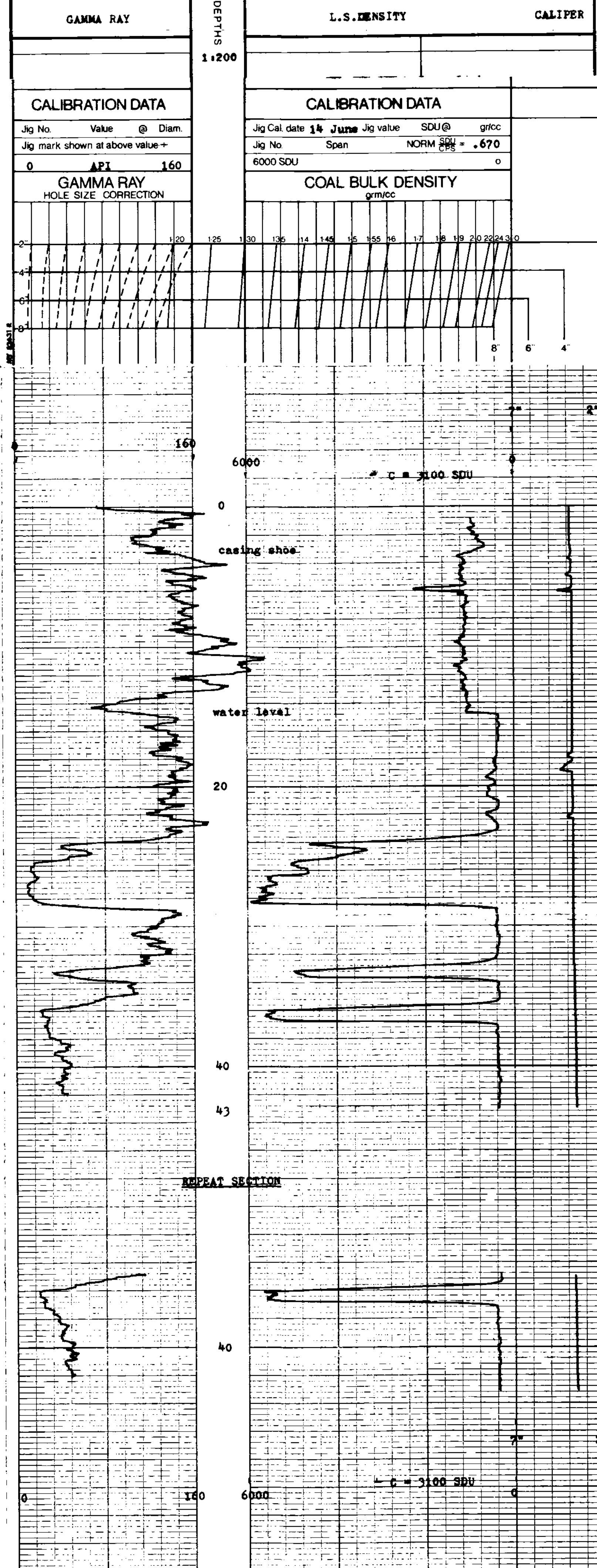
First Reading 4.3m
Last Reading 0
Interval Measured 4.3m
Casing BFB _____
Casing Driller _____
Depth Reached 4.3.8m
Bottom Driller 44.2m
Mud Nature Bentonite

SG _____ Viscosity _____
Bit Size 1 HQ to T.D. _____
2 _____
3 _____
Casing Size 1 _____
2 _____

Rm @ Meas Temp _____
Rmf @ Meas Temp _____
Rmc @ Meas Temp _____
Rm @ Meas Temp _____
Rmf @ Meas Temp _____
Rmc @ Meas Temp _____
BHT _____
Operating Time 3 1/4 hr.
Tuck No. V21/35
Recorded By R. Bishop
Witness _____

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes	
Date	Sample No.	Type Log	Depth
Depth - Driller		Scale Up Hole	Scale Down
Type Fluid in Hole			
Dens	Visc		
ph	Fluid Loss	ml	
Source of Sample		Equipment Data	
Rm @ Meas Temp	@ °F	Run No	Tool Type
Rmf @ Meas Temp	@ °F	Tool Position	Other
Rmc @ Meas Temp	@ °F		
Source: Rmf	Rmc		
Rm @ BHT	@ °F		
Rmf @ BHT	@ °F		
Rmc @ BHT	@ °F		
Logging Data			
Log	Depths	Speed	T.C.
	From To	ft/min	sec
Gamma	42 0	9	1
L.S.D.	43 0	9	0.3
Cal.	43 0	15	0.3
			Norm
			Sonde No
			Source Number



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

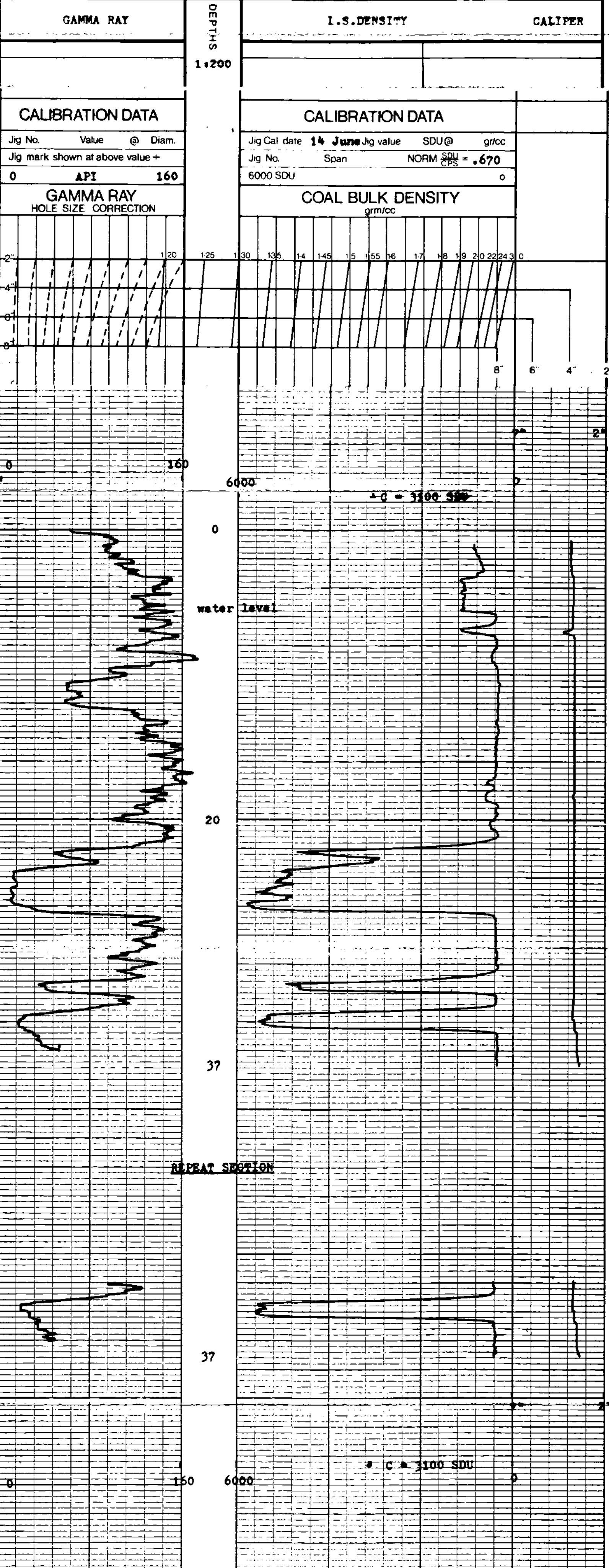
COMPANY Teck 22 - Bullmoose 22 (S)
BOREHOLE T-83 Bullmoose
STATE B.C. COUNTRY Canada

Permanent Datum _____ Elev _____ Ft.
Log measured from Top of Casing Ft. above P.D.
Drilling measured from Top of Casing Ft. above P.D.

Run No	Depth Scale	1	1,200
Date		22 July 1977	
First Reading		37m	
Last Reading		0	
Interval Measured		37m	
Casing BPS			
Casing Driller		38m	
Depth Reached		38.1m	
Bottom Driller		Bentonite	
Mud Nature			
S.G. Viscosity			
Bit Size	1	HQ to T.D.	to
	2	to	to
	3	to	to
Casing Size	1	to	to
	2	to	to
Rm @ Meas Temp.		@	@
Rmf @ Meas Temp.		@	@
Rmc @ Meas Temp.		@	@
BHT			
Operating Time		1 hr.	
Truck No		V21/35	
Recorded By		R. Bishop	
Witness			

fold here

REMARKS				Scale Changes			
Changes in Mud Type or Additional Samples				Type Log	Depth	Scale Up Hole	Scale Down
Date	Sample No.						
Depth - Driller							
Type Fluid in Hole							
Dens.	Visc.						
ph.	Fluid Loss		ml				
Source of Sample				Equipment Data			
Rm	@ Meas Temp.	@	°F	Run No.	Tool Type	Tool Position	Other
Rmf	@ Meas Temp.	@	°F				
Rmc	@ Meas Temp.	@	°F				
Source: Rmf Rmc							
Rm	@ BHT	@	°F				
Rmf	@ BHT	@	°F				
Rmc	@ BHT	@	°F				
Logging Data							
Log	Depths	Speed	T.C.	Norm.	Sonde No.	Source	
	From To	R/min	sec			Number	
Gamma	36 0	9	1	out	110		
L.S.D.	37 0	9	0.3	.670	110	M5852	
Cal.	37 0	15	0.3	out	110		



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

T-84

COMPANY **Task** **ME - BULLMOOSE 2223A**
 BOREHOLE **T-84** **Bullmoose**
 STATE **B.C.** COUNTRY **Canada**
 Permanent Datum _____ Elev _____ Ft.
 Log measured from **Top of Casing** Ft. above P.D.
 Drilling measured from **Top of Casing** Ft. above P.D.
 Run No. **1** Depth Scale **1200**
 Date **26 July 1977**
 First Reading **98m**
 Last Reading **0**
 Interval Measured **98m**
 Casing BPP _____
 Casing Driller _____
 Depth Reached **99.3m**
 Bottom Driller _____
 Mud Nature **Bentonite**
 S.G. Viscosity _____
 Bit Size **1** HQ to T.D. _____
 Casing Size **2** _____
 Casing Size **3** _____
 Rm @ Meas Temp. _____
 Rmf @ Meas Temp. _____
 Rmc @ Meas Temp. _____
 BHT _____
 Operating Time **3 1/4 hr.**
 Truck No. **V21/35**
 Recorded By **R. Blin**
 Witness _____

fold here

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes			
Date	Sample No	Type Log	Depth	Scale Up Hole	Scale Down
Depth - Driller					
Type Fluid in Hole					
Dens	Visc				
ph	Fluid Loss	ml			
Source of Sample		Equipment Data			
Rm @ Meas Temp.		Run No	Tool Type	Tool Position	Other
Rmf @ Meas Temp.					
Rmc @ Meas Temp.					
Source: Rmf Rmc					
Rm @ BHT					
Rmf @ BHT					
Rmc @ BHT					

Logging Data					
Log	Depths	Speed	T.C.	Norm	Sonde No
	From To	ft/min	sec		Number
Gamma	97 0	9	1	out	110
L.S.D.	98 0	9	0.3	out	110 M5852
Cal.	98 0	15	0.3	out	110

GAMMA RAY	DEPTHS	L.S. DENSITY	CALIPER
	1200		

CALIBRATION DATA

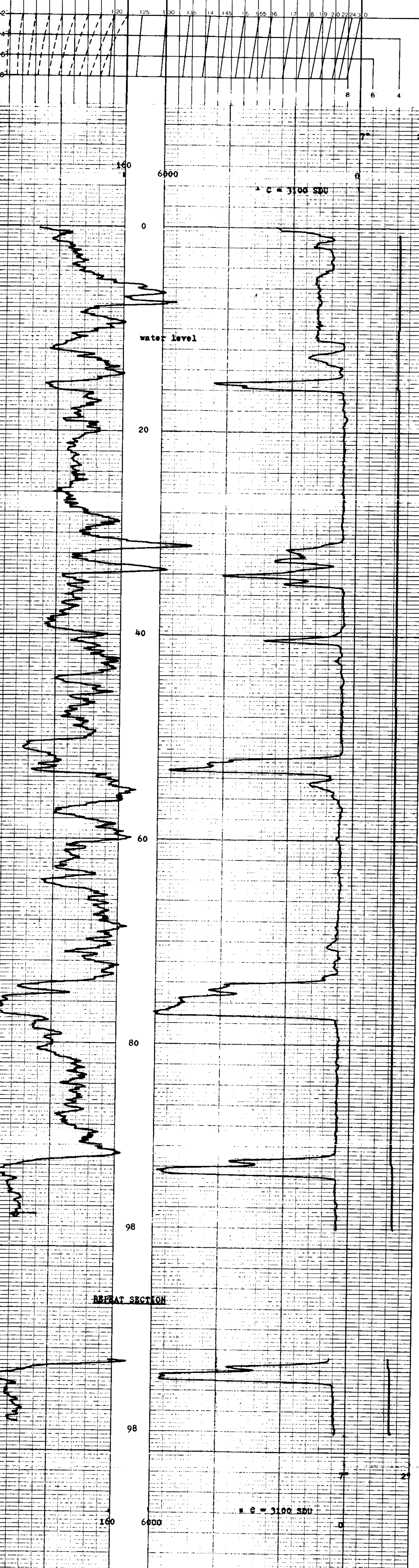
Jig No.	Value	@ Diam.
Jig mark shown at above value +		
0	API	160

GAMMA RAY
HOLE SIZE CORRECTION

CALIBRATION DATA

Jig Cal date	14 June	Jig value	SDU @	gr/cc
Jig No	Span	NORM	SDU	PS = .700
6000 SDU				o

COAL BULK DENSITY
grm/cc



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

T-125

COMPANY Tack 12 - Bullmoose 22 (B)
BOREHOLE T-85 Bullmoose
STATE B.C. COUNTRY Canada

Permanent Datum _____ Elev. _____ Ft.
Log measured from TOP of CASING Ft. above P.D.
Drilling measured from TOP of CASING Ft. above P.D.

Run No	1	1:200
Date	8 July 1977	
First Reading	46m	
Last Reading	0	
Interval Measured	46m	
Casing BFB		
Casing Driver		
Depth Reached	46.5M	
Bottom Driller		
Mud Nature	Bentonite	
SG Viscosity		
Bit Size 1	HQ to T.D.	
2	to	to
3	to	to
Casing Size 1	to	to
2	to	to
Rm @ Meas Temp	@	@
Rmf @ Meas Temp	@	@
Rmc @ Meas Temp	@	@
BHT		
Operating Time	3/4 hr.	
Truck No	V21/35	
Recorded By	R. Blinob	
Witness		

478

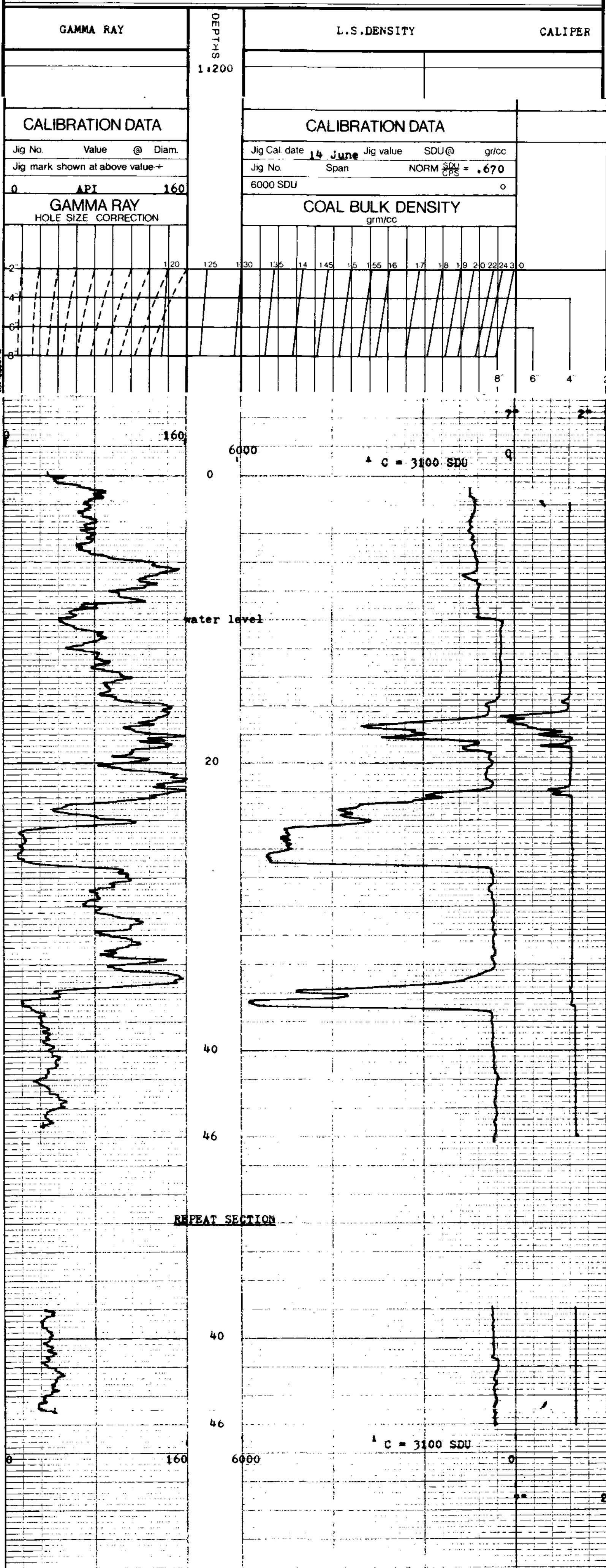
TOTO HERE

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down
Type Fluid in Hole					
Dens.	Visc				
ph.	Fluid Loss				
Source of Sample		Equipment Data			
Rm @ Meas Temp.	@	Run No	Tool Type	Tool Position	Other
Rmf @ Meas Temp.	@				
Rmc @ Meas Temp.	@				
Source Rmf	Rmc				
Rm @ BHT	@				
Rmf @ BHT	@				
Rmc @ BHT	@				

Logging Data						
Log	Depths	Speed	T.C.	Norm.	Sonde No.	Source
	From To	m/min	sec			Number
Gamma	45 0	9	1	out	110	
L.S.D.	46 0	9	0.3	.670	110	M5852
Cal.	46 0	15	0.3	out	110	

Hole logged from 46m at geologist's request





GENERAL LOGS
Canada Bay, L.S. Density

Job No. T-36 Ballmoores 725M
 Date 17 Aug. 1977 10:1m
 B.C. Canada
 Top of casing 1.75 m below P.D.
 Datum P.D.
 Logging measured from Top of Casing Ft. above P.D.

Date	Sample No.	Depth - Driller	Type Fluid in Hole	Dens.	Visc.	Fluid Loss	mi

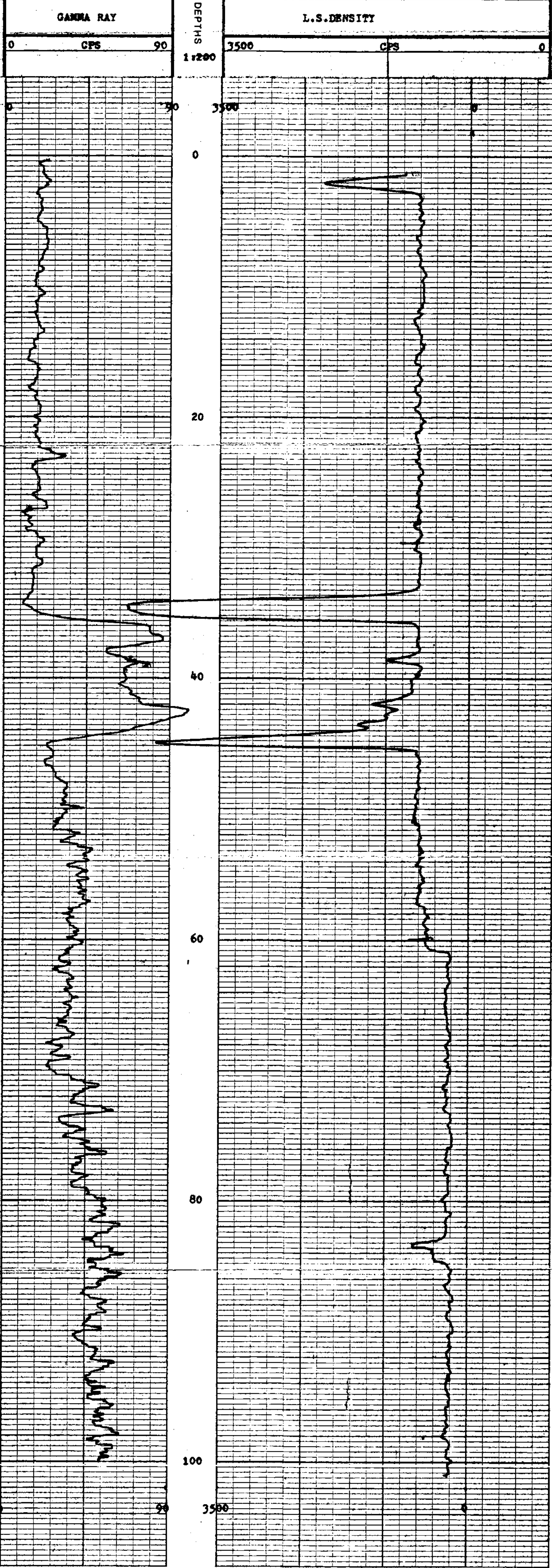
REMARKS

Changes in Mud Type or Additional Samples		Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down
Depth - Driller					
Type Fluid in Hole					
Dens.	Visc.				
ph.	Fluid Loss				
Source of Sample		Equipment Data			
Rm @ Meas Temp.	@ °F	Run No.	Tool Type	Tool Position	Other
Rmf @ Meas Temp.	@ °F				
Rmc @ Meas Temp.	@ °F				
Source: Rmf					
Rm @ BHT	@ °F				
Rmf @ BHT	@ °F				
Rmc @ BHT	@ °F				
Logging Data					
Log	Depths	Speed	T.C.	Norm.	Source Number
	From To	M/min sec			
	Gamma 100	0	9	2	out 119
	L.S.D. 101	0	9	1	out 119

N.B. Depths are measured from 1.75m below top of casing

Logs replayed from tape made by BP Coal logging engineer

Hole logged through drill rods



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

COMPANY Teck Bullmoose 71(3)A.
BOREHOLE T-87 Bullmoose
STATE B.C. COUNTRY Canada

Permanent Datum _____ Elev _____ Ft.
Log measured from _____ Top of Casing _____ Ft. above P.D.
Drilling measured from _____ Top of Casing _____ Ft. above P.D.

Run No.	1	1,200	
Date	24 July 1977		
First Reading	30m		
Last Reading	0		
Interval Measured	30m		
Casing BPP			
Casing Driller			
Depth Reached	31.2m		
Bottom Driller			
Mud Nature	30.5m Bentonite		
SG	Viscosity		
Bit Size	1	HQ to T.D.	to
	2	to	to
	3	to	to
Casing Size	1	to	to
	2	to	to
Rm @ Meas Temp	@	@	@
Rmf @ Meas Temp	@	@	@
Rmc @ Meas Temp	@	@	@
BHT			
Operating Time		1 hr.	
Truck No.		V21/35	
Recorded By		R. Bishop	
Witness			

fold here

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down
Depth - Driller					
Type Fluid in Hole					
Dens.	Visc.				
ph.	Fluid Loss				
Source of Sample		Equipment Data			
Rm @ Meas Temp.	@ °F	Run No.	Tool Type	Tool Position	Other
Rmf @ Meas Temp.	@ °F				
Rmc @ Meas Temp.	@ °F				
Source: Rmf	Rmc				
Rm @ BHT	@ °F				
Rmf @ BHT	@ °F				
Rmc @ BHT	@ °F				
Logging Data					
Log	Depths	Speed	T.C.	Norm.	Sonde No.
	From To	r/min	sec		Source Number
Gamma	29 0	9	1	out	110
L.S.D.	30 0	9	0.3	.685	110 M5852
Cal.	30 0	15	0.3	out	110

GAMMA RAY	DEPTHS	L.S. DENSITY	CALIPER
	1,200		

CALIBRATION DATA

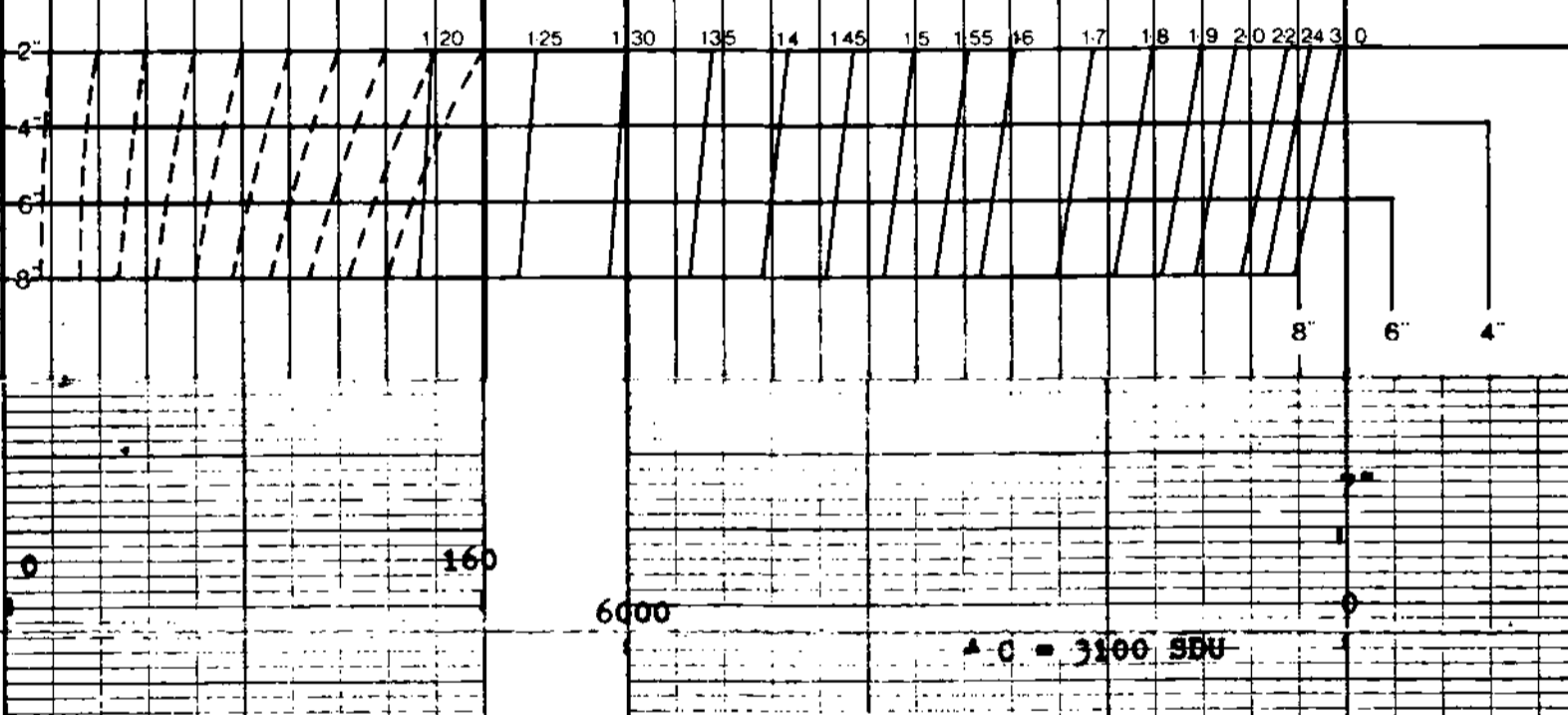
Jig No.	Value	@	Diam.
Jig mark shown at above value +			
0	API		160

GAMMA RAY HOLE SIZE CORRECTION

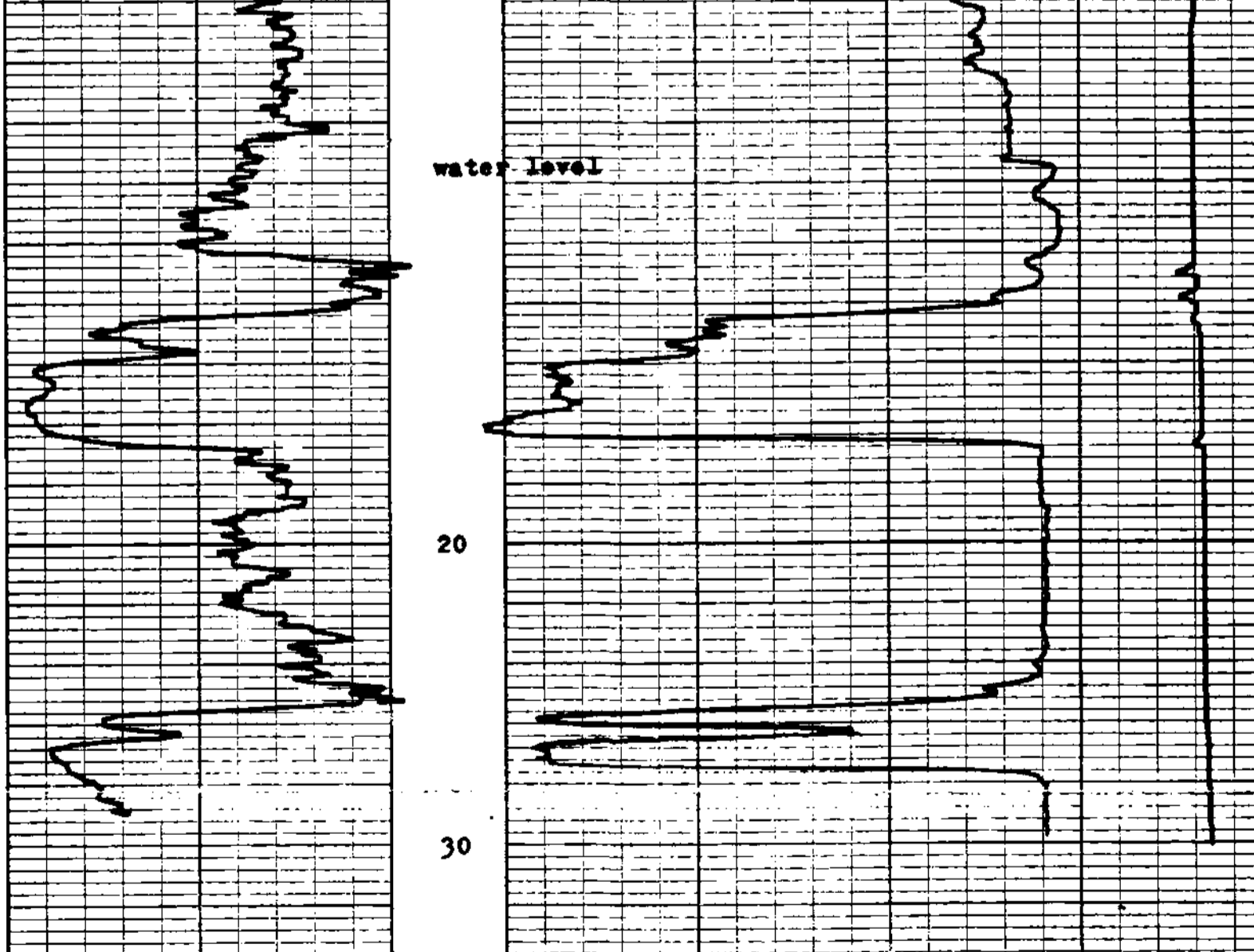
CALIBRATION DATA

Jig Cal. date	14 June	Jig value	SDU@	gr/cc
Jig No.	Span	NORM	SDU	CPS = .685
6000 SDU				o

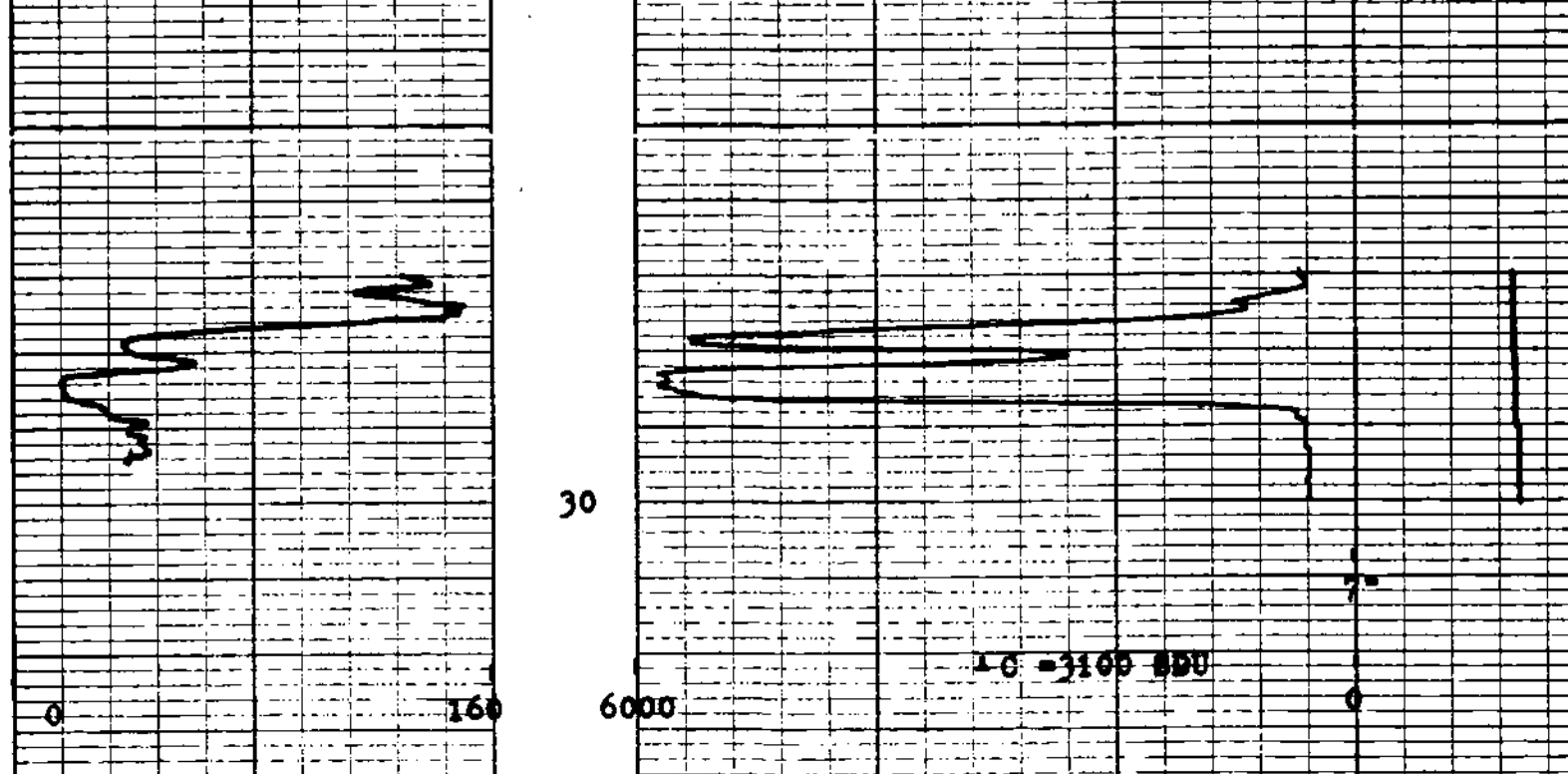
COAL BULK DENSITY gm/cc



water level



REPEAT SECTION



478

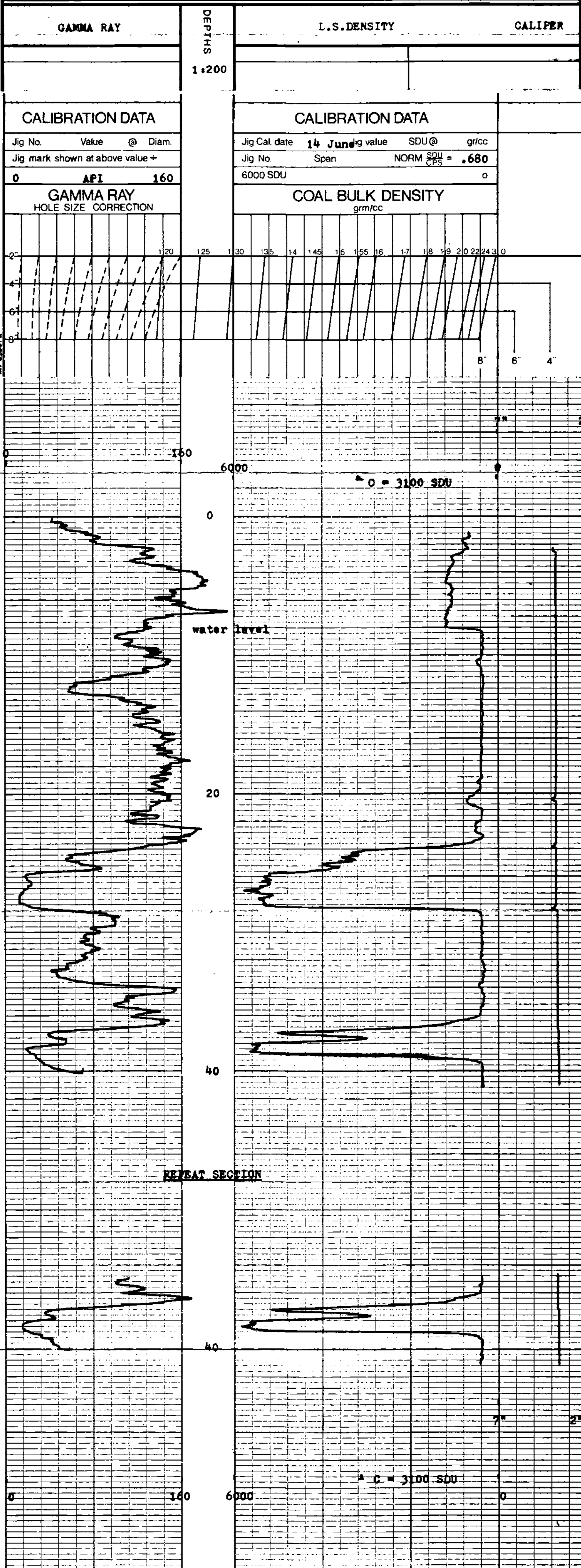


GENERAL LOGS
 Gamma Ray, L.S. Density,
 Caliper

COMPANY Teck CC-BULLMOOSE 72 (3)A.
 BOREHOLE T-88 Bullmoose
 STATE B.C. COUNTRY Canada
 Permanent Datum _____ Elev. _____ Ft.
 Log measured from Top of Casing Ft. above P.D.
 Drilling measured from Top of Casing Ft. above P.D.
 Run No. 1 Depth Scale 1:120
 Date 25 July 1977
 First Reading 41m
 Last Reading 0
 Interval Measured 41m
 Casing B.P.B. 41m
 Casing Driller _____
 Depth Reached 42.3m
 Bottom Driller _____
 Mud Nature Bentonite
 S.G. Viscosity _____
 Bit Size 1 HQ to T.D. _____
 2 _____
 3 _____
 Casing Size 1 _____
 2 _____
 Rm @ Meas Temp _____
 Rmf @ Meas Temp _____
 Rmc @ Meas Temp _____
 BHT _____
 Operating Time 1 hr.
 Truck No. V21/35
 Recorded By R. Bishop
 Witness _____

fold here

REMARKS				Scale Changes			
Changes in Mud Type or Additional Samples				Type Log	Depth	Scale Up Hole	Scale Down
Date	Sample No						
Depth - Driller							
Type Fluid in Hole							
Dens.	Visc.						
ph.	Fluid Loss		ml				
Source of Sample				Equipment Data			
Rm @ Meas Temp.	@	°F	@	°F	Run No.	Tool Type	Tool Position
Rmf @ Meas Temp.	@	°F	@	°F			Other
Rmc @ Meas Temp.	@	°F	@	°F			
Source: Rmf Rmc							
Rm @ BHT	@	°F	@	°F			
Rmf @ BHT	@	°F	@	°F			
Rmc @ BHT	@	°F	@	°F			
Logging Data							
Log	Depths	Speed	T.C.	Norm.	Sonde No.	Source	
	From To	m/min	sec			Number	
Gamma	40 0	9	1	out	110		
L.S.D.	41 0	9	0.3	.680	110	M5852	
Cal.	41 0	15	0.3	out	110		



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

T-89

COMPANY Beck PE-BULLMOOSE-22(3)H.
 BOREHOLE T-89 Bullmoose
 STATE B.C. COUNTRY Canada
 Permanent Datum _____ Elev. _____ Ft. _____
 Log measured from Top of Casing Ft. above P.D. _____
 Drilling measured from Top of Casing Ft. above P.D. _____
 No. 1 Depth Scale 1:200
 First Reading 6 Aug. 1977
 Last Reading 114m
 Interval Measured 0
 Casing BPH 114m
 Casing Driller _____
 Depth Reached 115.3m
 Bottom Driller 112.8m
 Mud Nature Bentonite
 S.G. Viscosity _____

Bit Size	1	2	3	4	5	6	7	8	9	10
HQ to T.D.										

REMARKS

Changes in Mud Type or Additional Samples

Date	Sample No.	Type Log	Depth	Scale Changes	Scale Up Hole	Scale Down

Depth - Driller _____
 Type Fluid in Hole _____

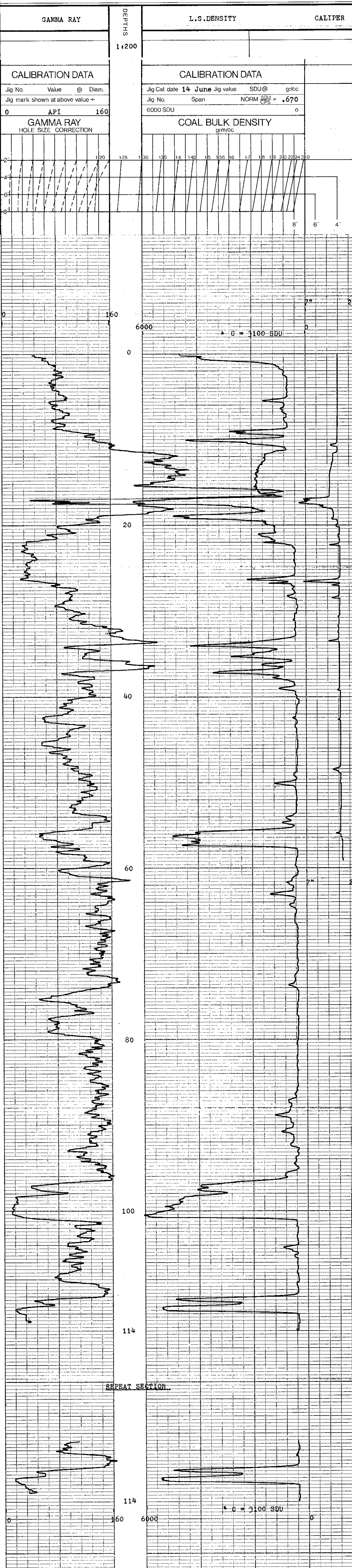
Dens.	Visc.	ph.	Fluid Loss	ml

Source of Sample _____

Run No.	Tool Type	Tool Position	Other

Log	Depths	Speed	T.C.	Norm.	Sonde No.	Source
	From	To	m/min	sec		Number
Gamma	113	0	9	1	out	110
L.S.D.	114	0	9	0.3	.670	110 M5852
Cal.	59	0	15	0.3	out	110

General logs run in open hole but sonde stood up at 59m on Caliper run. Caliper only run from 59m.



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

COMPANY Teck BOREHOLE T-90 BILLMOUSE
STATE B.C. COUNTRY Canada
Permanent Datum _____ Elev _____ Ft.
Log measured from _____ Top of casing _____ Ft. above P.D.
Drilling measured from _____ Top of casing _____ Ft. above P.D.
Run No _____ Depth Scale 1 1:200
Date 7 Aug. 1977
First Reading 34m
Last Reading 0
Interval Measured 34m
Casing BPG _____
Casing Driller _____
Depth Reached 35.2m
Bottom Driller 35.1m
Mud Nature Bentonite
SG _____ Viscosity _____
Bit Size 1 _____ to _____ T.D. _____
2 _____ to _____
3 _____ to _____
Casing Size 1 _____ to _____
2 _____ to _____
Rm @ Meas Temp. _____ @ _____ °F
Rmf @ Meas Temp. _____ @ _____ °F
Rmc @ Meas Temp. _____ @ _____ °F
Rm @ Meas Temp. _____ @ _____ °F
Rmf @ Meas Temp. _____ @ _____ °F
Rmc @ Meas Temp. _____ @ _____ °F
BHT _____
Operating Time 3/4 hr.
Tuck No Y21/35
Recorded By R. Bishop
Witnesses _____

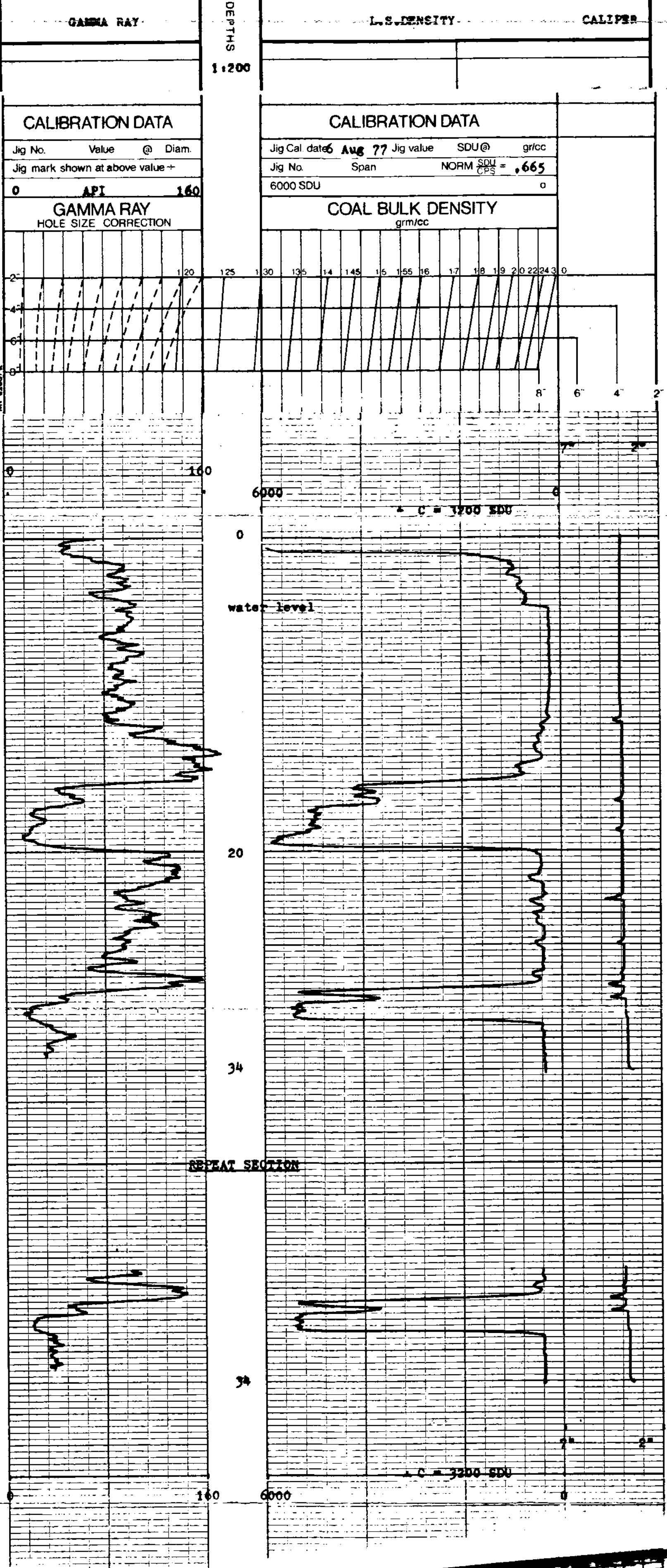
fold here

REMARKS

Changes in Mud Type or Additional Samples				Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down		
Depth - Driller							
Type Fluid in Hole							
Dens.	Visc.						
ph.	Fluid Loss	ml					
Source of Sample				Equipment Data			
Rm @ Meas Temp.	@	°F	@	°F	Run No.	Tool Type	Tool Position
Rmf @ Meas Temp.	@	°F	@	°F			Other
Rmc @ Meas Temp.	@	°F	@	°F			
Source: Rmf Rmc							
Rm @ BHT	@	°F	@	°F			
Rmf @ BHT	@	°F	@	°F			
Rmc @ BHT	@	°F	@	°F			

Logging Data							
Log	Depths	Speed	T.C.	Norm	Sonde No.	Source	
	From	To	m/min	sec		Number	
Gamma	33	0	9	1	out	110	
L.S.D.	34	0	9	0.3	.665	110	M5852
Cal.	34	0	15	0.3	out	110	

Hole logged with rig on site



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

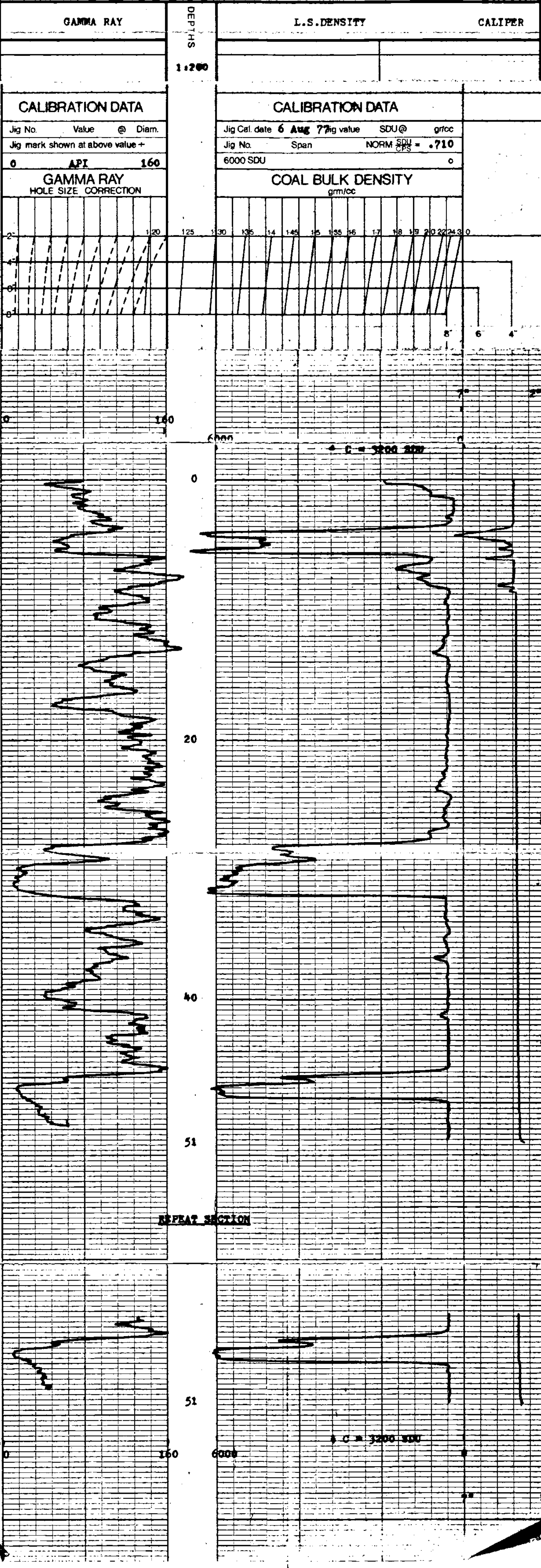
COMPANY Task Re-Bullheads 22(3)A
 BOREHOLE T-91 Bullmoose
 STATE B.C. COUNTRY Canada
 Permanent Datum _____ Elev _____ Ft.
 Log measured from Top of Casing Ft. above P.D.
 Drilling measured from Top of Casing Ft. above P.D.
 Run No. 1 Depth Scale 1200
 Date 9 Aug. 1977
 First Reading 51m
 Last Reading 0
 Interval Measured 51m
 Casing BPP _____
 Casing Driller _____
 Depth Reached 52.0m
 Bottom Driller 51.8m
 Mud Nature Bentonite
 SG Viscosity _____
 Bit Size 1 HQ to T.D. _____
 Casing Size 1 _____
 Casing Size 2 _____
 Rm @ Meas Temp _____
 Rmf @ Meas Temp _____
 Rmc @ Meas Temp _____
 Rm @ Meas Temp _____
 Rmf @ Meas Temp _____
 Rmc @ Meas Temp _____
 BHT _____
 Operating Time 3/4 hr.
 Truck No. V21/35
 Recorded By R. Bishop
 Witness _____

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes	
Date	Sample No.	Type Log	Depth
Depth - Driller		Scale Up Hole	
Type Fluid in Hole		Scale Down	
Dens.	Visc.		
ph.	Fluid Loss		
Source of Sample		Equipment Data	
Rm @ Meas Temp.	@ °F	Run No.	Tool Type
Rmf @ Meas Temp.	@ °F		Tool Position
Rmc @ Meas Temp.	@ °F		Other
Source: Rm1	Rmc		
Rm @ BHT	@ °F		
Rmf @ BHT	@ °F		
Rmc @ BHT	@ °F		

Logging Data						
Log	Depths From	Depths To	Speed R/min	T.C. sec	Norm	Source No. Number
Gamma	50	0	9	1	out	110
L.S.D.	51	0	9	0.3	210	110
Cal.	51	0	15	0.3	out	110

Hole logged with rig on site



478



GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

7-92

COMPANY **Teek** *Re - Evaluation 2121A*
BOREHOLE **T-92** **SHILORE**
STATE **B.C.** COUNTRY **Canada**

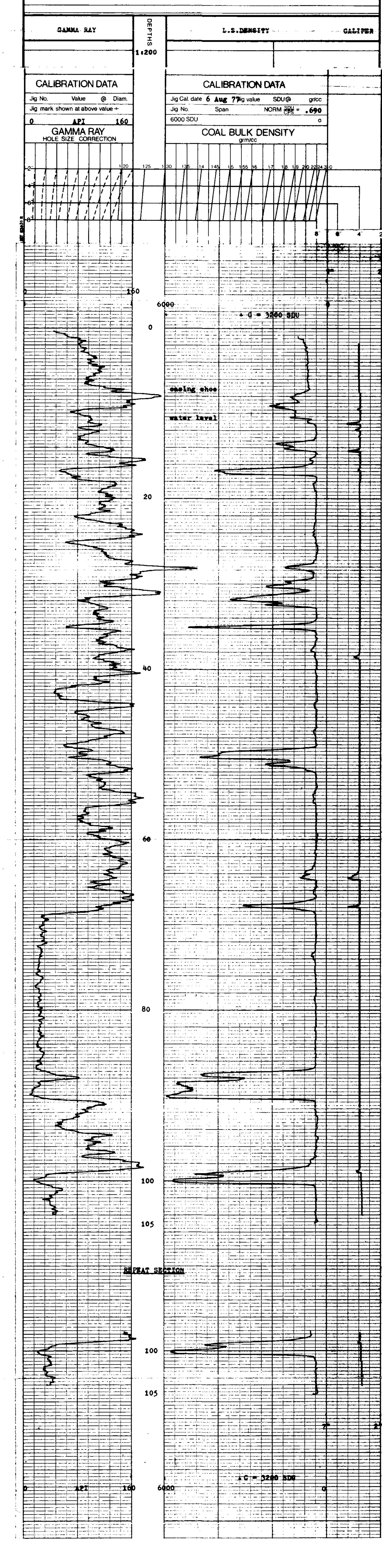
Permanent Datum **Top of Casing** Elev. **11200** Ft.
Log measured from **Top of Casing** Ft. above P.D.
Drilling measured from **Top of Casing** Ft. above P.D.

Run No. **1** Depth Scale **11200**
Date **14 Aug 1977**
First Read. **105**
Last Read. **0**
Interval Measured **105**
Casing Bore **105.13**
Casing Outer **105.13**
Depth Reached **105.2m**
Bottom Drive **3entonalye**
Mud Name **3entonalye**
S.G. **1.0303**
B. Size **1** **HQ** to **S.D.**

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

Logging Data					
Log	From	To	Speed	T.C.	Norm.
			m/min	sec	
Gamma	104	0	9	1	ent 110
L.S.D.	105	0	9	0.3	ent 110 M352
Cal.	104	0	13	0.3	ent 110

Hole logged with rig on site



478



GENERAL LOGS
Gamma Ray, L.S. Density,

173

COMPANY Trak Ballinosee 2131
BOREHOLE T-93 Ballinosee
STATE B.C. COUNTRY Canada

Permanent Datum _____ Elev _____ Ft.
Log measured from Top of Casing Ft. above P.D.
Drilling measured from Top of Casing Ft. above P.D.

Run No. 1 1200
Date 30 July 1977
First Reading 58m
Last Reading 0
Interval Measured 58m
Casing GPR _____
Casing Driller _____
Depth Reached 59.1m
Bottom Driller 59.7m
Mud Nature Bentonite
SG _____ Viscosity _____
Bit Size 1 HQ to T.D.
Casing Size 1 10 10 10
Casing Size 2 10 10 10
Rm @ Meas Temp _____ @ _____ °F
Rmf @ Meas Temp _____ @ _____ °F
Rmc @ Meas Temp _____ @ _____ °F
Rm @ BHT _____ @ _____ °F
Rmf @ BHT _____ @ _____ °F
Rmc @ BHT _____ @ _____ °F
Operating Time 1 hr.
Track No. V21/35
Recorded By R. Bishop
Witness _____

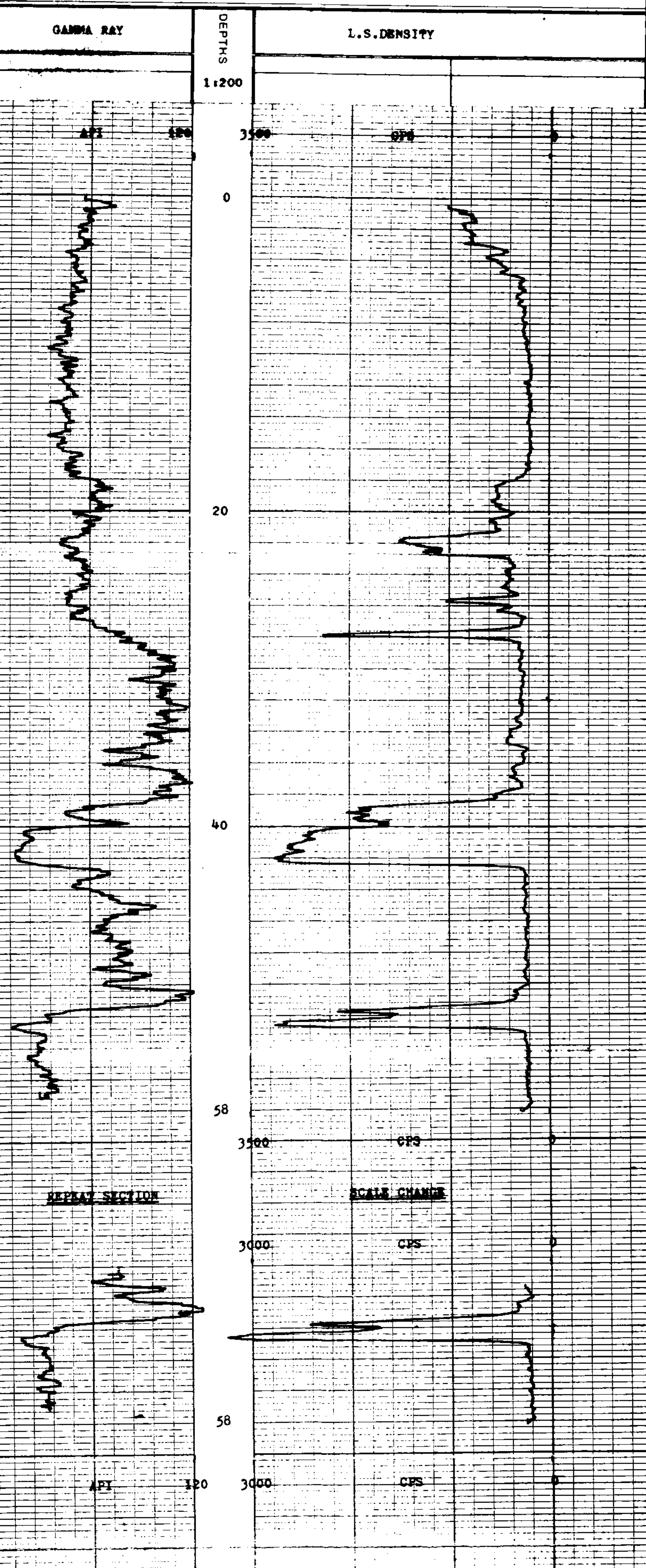
478

fold here

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes		
Date	Sample No.	Type Log	Depth	Scale Up Hole
				Scale Down
Type Fluid in Hole				
Dens.	Visc			
ph.	Fluid Loss	ml		
Source of Sample		Equipment Data		
Rm @ Meas Temp.	@ _____ °F	Run No.	Tool Type	Tool Position
Rmf @ Meas Temp.	@ _____ °F			Other
Rmc @ Meas Temp.	@ _____ °F			
Source: Rmf Rmc				
Rm @ BHT	@ _____ °F			
Rmf @ BHT	@ _____ °F			
Rmc @ BHT	@ _____ °F			
Logging Data				
Log	Depths	Speed	T C	Norm.
	From To			Sonde No.
Gamma	57 0	9	1	out 110
L.S.D.	58 0	9	0.3	out 110 M5852

Hole logged through drill rods





GENERAL LOGS
Gamma Ray, L.S. Density,
Caliper

T-95

COMPANY **Teek** *RE - GULLMAGE 2784*
BOREHOLE **T-95** **Bullmoose**
STATE **B.C.** COUNTRY **Canada**

Permanent Datum _____ Elev _____ Ft.
Log measured from **Top of casing** Ft. above P.D.
Drilling measured from **TOP OF CASING** Ft. above P.D.

Run No. **2** Depth Scale **1:200**
Date **14 June 1977**
First Reading **107m**
Last Reading **0**
Interval Measured **107m**
Casing BFB _____
Casing Driver _____
Depth Reached **105.5m**
Bottom Driller **105.7m**
Mud Nature **Bentonite**
SG _____ Viscosity _____
BIT Size **1** HQ to T.D. _____
Casing Size **1** _____
Run @ Meas Temp **2** _____
Run @ Meas Temp _____
Run @ Meas Temp _____
Run @ Meas Temp _____
BHT _____
Orienting Time **1 hr.**
Truck No. **V21/35**
Recorded By **R. Bishop**
Witness _____

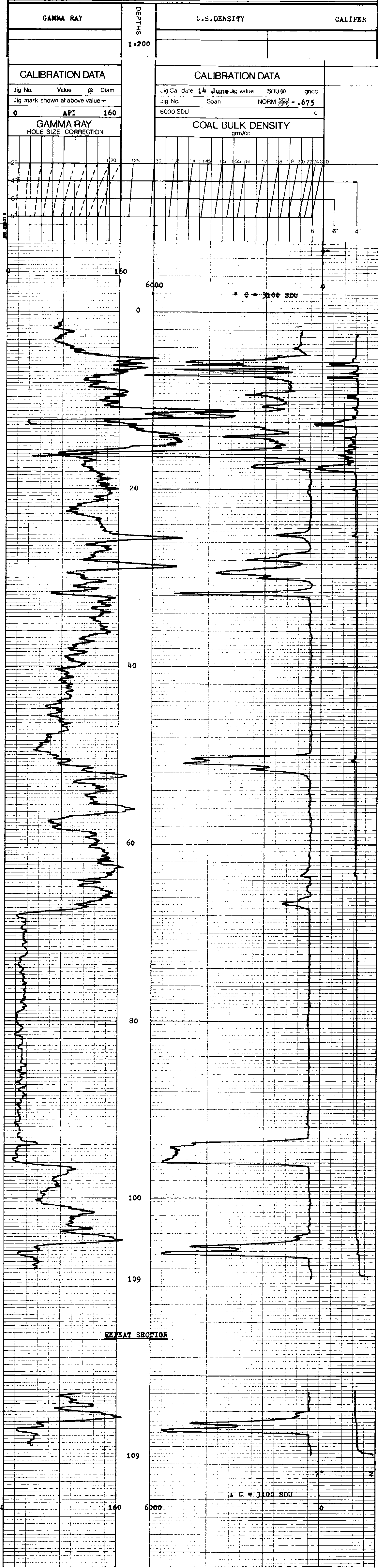
told here

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down
Depth - Driller					
Type Fluid in Hole					
Dens	Visc				
ph	Fluid Loss	mi			
Source of Sample		Equipment Data			
Rm @ Meas Temp	@ °F	Run No.	Tool Type	Tool Position	Other
Rmf @ Meas Temp	@ °F				
Rmc @ Meas Temp	@ °F				
Source: Rmf	Rmc				
Rm @ BHT	@ °F				
Rmf @ BHT	@ °F				
Rmc @ BHT	@ °F				

Log	Depths		Speed r/min	T.C. sec	Norm.	Sonde No.	Source Number
	From	To					
Gamma	108	0	9	1		out 110	
L.S.D.	109	0	9	0.3		out 110	M5852
Cal.	109	0	15	0.3		out 110	

Logs run in open hole



CALIBRATION DATA
Jig No. Value @ Diam.
Jig mark shown at above value +
0 **API** **160**

CALIBRATION DATA
Jig Cal date **14 June** Jig value SDU@ gr/cc
Jig No. Span NORM SDU@ CPS = **.675**
6000 SDU 0

COAL BULK DENSITY
gm/cc

REPEAT SECTION

478



GENERAL LOGS
Caliper, L.S. Density

COMPANY Teck RE-BULLMOUSE 773A1

BOREHOLE R-96 Bullmoose

STATE B.C. COUNTRY Canada

Permanent Datum Elev _____ Ft.

Log measured from Top of Caside Ft. above P.D.

Drilling measured from Top of Caside Ft. above P.D.

Run No. 1 Depth Scale 1:200

Date 19 Aug. 1977

Time Reading 11m

Time Reading 0

Time Reading 11m

Casing Driller 11.5m

Earth Reached 11.3m

Formation Driller Bentonite

And Nature Bentonite

Viscosity HQ to T.D.

Run 1 10 10 10

Run 2 10 10 10

Run 3 10 10 10

Run 4 10 10 10

Run 5 10 10 10

Run 6 10 10 10

Run 7 10 10 10

Run 8 10 10 10

Run 9 10 10 10

1 hr.
V21/35
R. Bishop

478

fold here

REMARKS

Changes in Mud Type or Additional Samples		Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down
Depth - Driller					
Type Fluid in Hole					
Dens.	Visc.				
ph.	Fluid Loss	mi			
Source of Sample		Equipment Data			
Rm @ Meas Temp.	@	°F	Run No.	Tool Type	Tool Position
Rmf @ Meas Temp.	@	°F			Other
Rmc @ Meas Temp.	@	°F			
Source: Rmf Rmc					
Rm @ BHT	@	°F			
Rmf @ BHT	@	°F			
Rmc @ BHT	@	°F			
Logging Data					
Log	Depths	Speed	T.C.	Norm.	Sonde No.
	From To	ft/min	sec		Number
L.S.D.	111 0	9	0.3	.675	110
Cal.	111 0	9	0.3	out	110

Hole logged with rig on site.

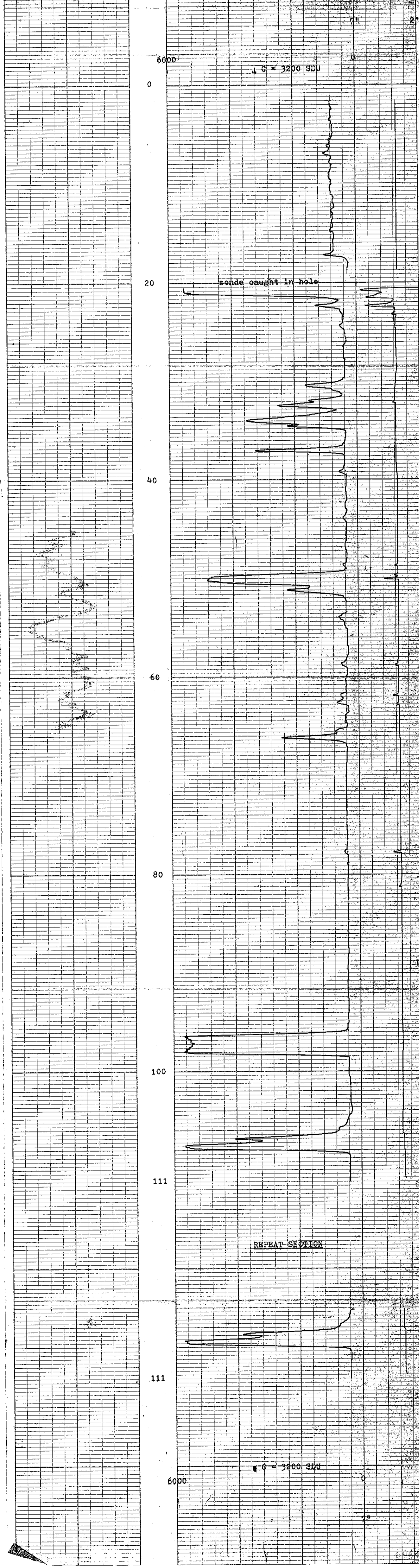
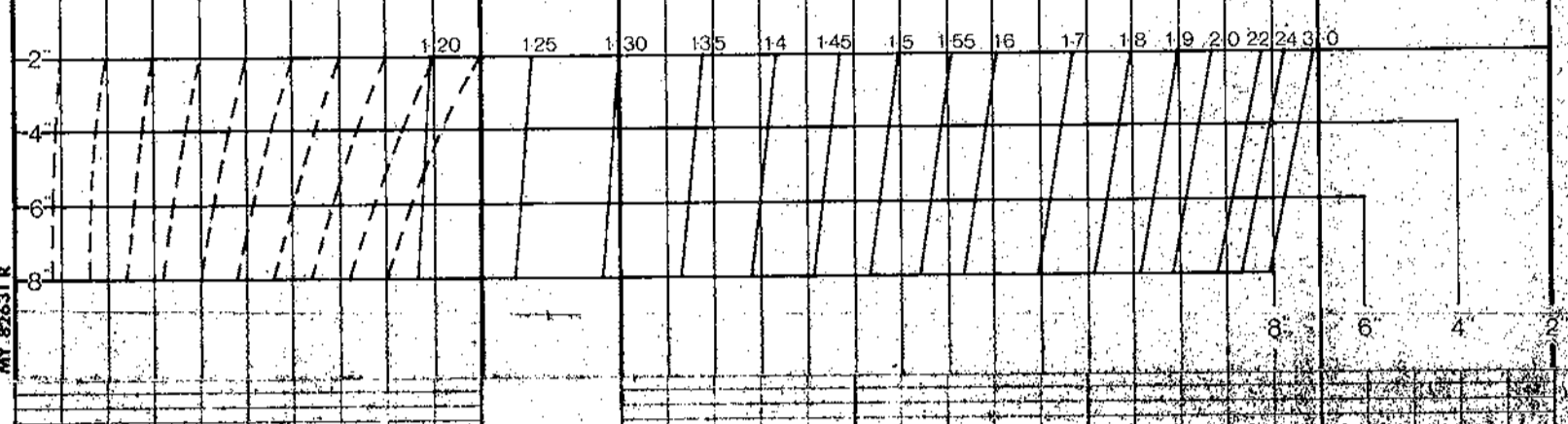
Gamma Ray unavailable - broken PM tube.

DEPTHS 1:200	L.S. DENSITY	CALIPER

CALIBRATION DATA		
Jig No.	Value	@ Diam.
Jig mark shown at above value +		

CALIBRATION DATA			
Jig Cal. date	6 Aug 77	Jig value	SDU @ gr/cc
Jig No.	Span	NORM SDU	CPS = .675
6000 SDU			

COAL BULK DENSITY	
gm/cc	





GENERAL LOGS
Gamma Ray, I.S. Density

COMPANY Geck RR - GULLIVER 7731/4
 BOREHOLE R-97 BILLMORE
 STATE B.C. COUNTRY CANADA

Permanent Datum _____ Elev _____ Ft.
 Log measured from _____ Ft. above P.D.
 Drilling measured from TOP OF CASING _____ Ft. above P.D.

Run No.	1	1:200	
Date	<u>23 AUG. 1977</u>		
First Reading	<u>36m</u>		
Last Reading	<u>0</u>		
Interval Measured			
Casing BPH			
Casing Driller			
Depth Reached	<u>36m</u>		
Bottom Driller	<u>39.6m</u>		
Mud Nature	<u>bartonite</u>		
S.G. Viscosity			
Bit Size	<u>HQ</u>	<u>to F.D.</u>	<u>to</u>
	<u>2</u>	<u>to</u>	<u>to</u>
	<u>3</u>	<u>to</u>	<u>to</u>
Casing Size	<u>1</u>	<u>to</u>	<u>to</u>
	<u>2</u>	<u>to</u>	<u>to</u>
Rm @ Meas Temp.	<u>@</u>	<u>@</u>	<u>@</u>
Rmf @ Meas Temp.	<u>@</u>	<u>@</u>	<u>@</u>
Rmc @ Meas Temp.	<u>@</u>	<u>@</u>	<u>@</u>
BHT			
Operating Time	<u>3/4 hr.</u>		
Truck No.	<u>V21735</u>		
Recorded By	<u>R. Bishop</u>		
Witness			

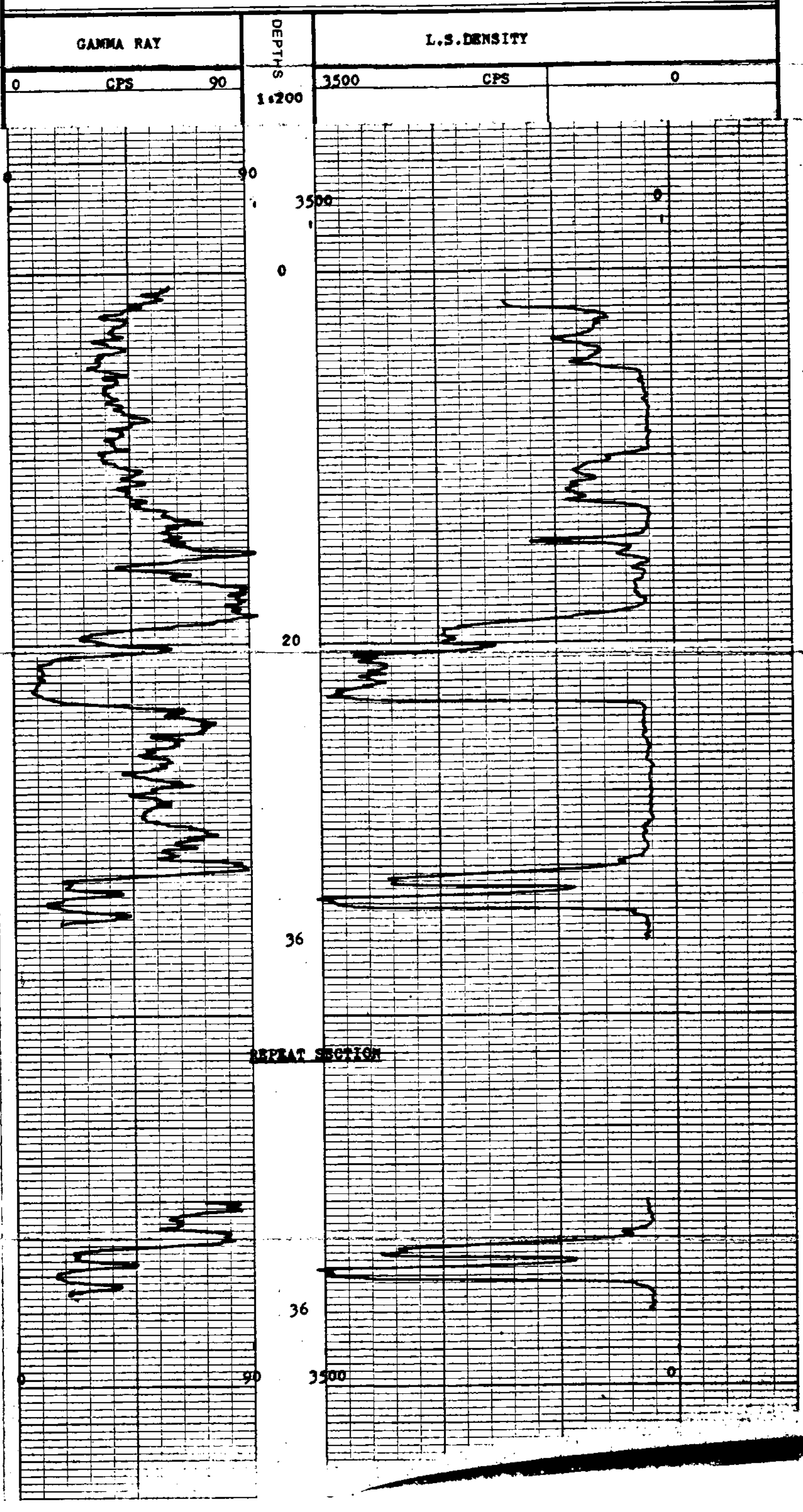
478

fold here

REMARKS

Changes in Mud Type or Additional Samples		Type Log	Depth	Scale Changes		
Date	Sample No.			Scale Up Hole	Scale Down	
Depth - Driller						
Type Fluid in Hole						
Dens.	Visc.					
ph.	Fluid Loss					
Source of Sample		Equipment Data				
Rm @ Meas Temp.	@	%F	@	%F	Run No. Tool Type Tool Position Other	
Rmf @ Meas Temp.	@	%F	@	%F		
Rmc @ Meas Temp.	@	%F	@	%F		
Source: Rmf	Rmc					
Rm @ BHT	@	%F	@	%F		
Rmf @ BHT	@	%F	@	%F		
Rmc @ BHT	@	%F	@	%F		
Logging Data						
Log	Depths	Speed	T.C.	Norm.	Sonde No.	Source
	From To	m/min	sec			Number
<u>Gamma</u>	<u>35 0</u>	<u>9</u>	<u>1</u>	<u>out</u>	<u>110</u>	
<u>L.S.D.</u>	<u>36 0</u>	<u>9</u>	<u>0.3</u>	<u>out</u>	<u>110</u>	<u>M5852</u>

Hole logged through drill rods - rig on site





GENERAL LOGS
Gamma Ray, L.S. Density

COMPANY Rock Re-Bellefleur 21(2)A
BOREHOLE 7-98 BULLMOOSE
STATE B.C. COUNTRY Canada

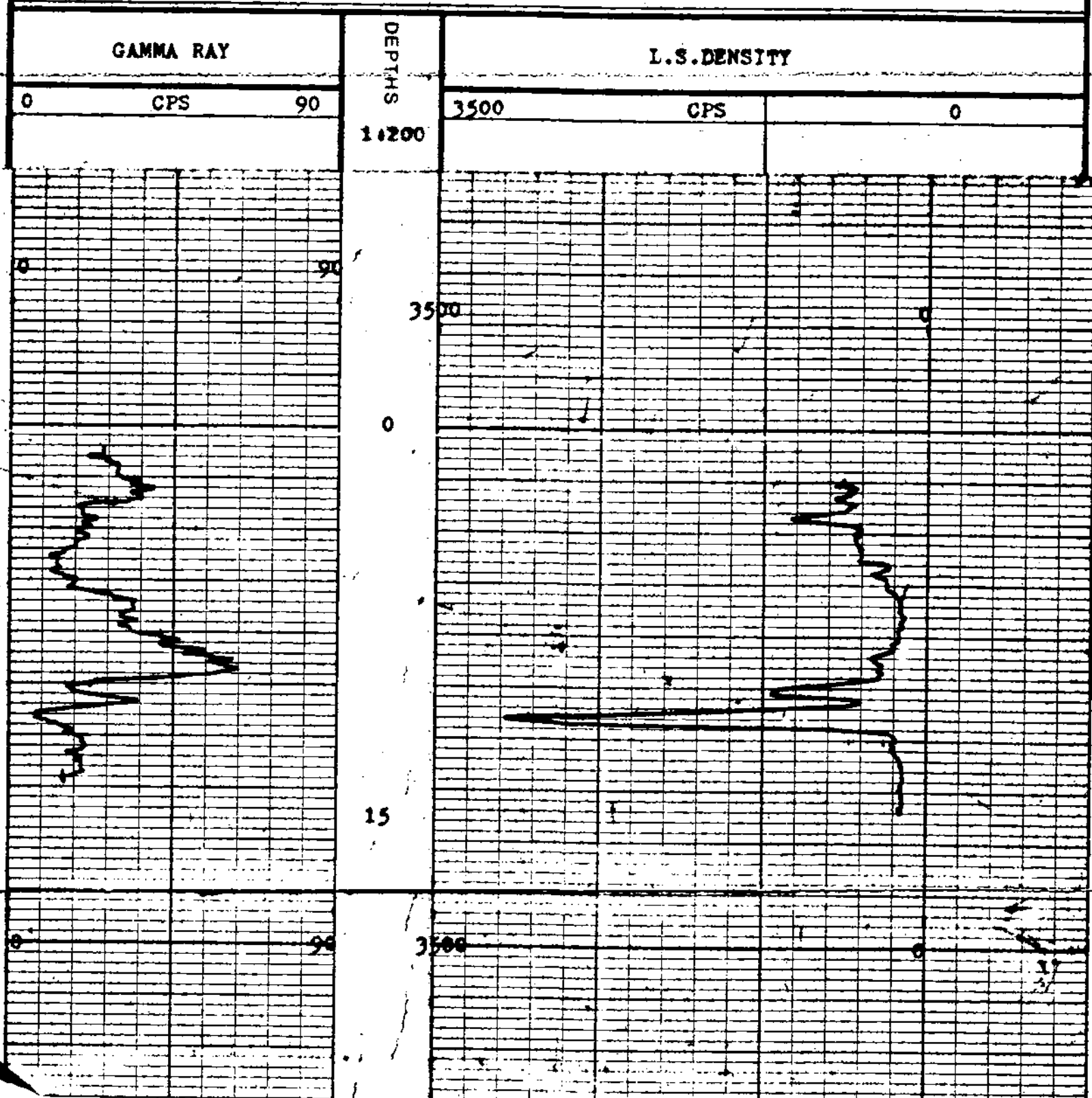
Permanent Datum _____ Elev. _____ Ft.
Log measured from _____ Top of Casing _____ Ft. above P.D.
Drilling measured from _____ Top of Casing _____ Ft. above P.D.

No.	Depth Scale	1	11200		
Reaction		25 Aug. 1977			
Reading		15m			
Value Measured		0			
Logging BPS		15m			
Driller					
Drift Reached		15.5m			
From Driller		15.2m			
Mud Nature		Bentonite			
Viscosity					
Size 1		HQ to F.D.			
Size 2					
Size 3					
Size 1					
Size 2					
Meas Temp					
Meas Temp					
Meas Temp					
Meas Temp					
Logging Time		4 hr.			
Log No.		V21/35			
Recorded By		R. Bishop			

REMARKS

Changes in Mud Type or Additional Samples				Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down		
Depth - Driller							
Type Fluid in Hole							
Dens.	Visc.						
ph.	Fluid Loss	ml					
Source of Sample				Equipment Data			
Rm	@ Meas Temp.	@	°F	Run No.	Tool Type	Tool Position	Other
Rmf	@ Meas Temp.	@	°F				
Rmc	@ Meas Temp.	@	°F				
Source: Rmf Rmc							
Rm	@ BHT	@	°F				
Rmf	@ BHT	@	°F				
Rmc	@ BHT	@	°F				
Logging Data							
Log	Depths	Speed	T.C.	Norm.	Sonde No.	Source	
	From To	m/min	sec			Number	
Gamma	14 0	9	1	out	110		
L.S.D.	15 0	9	0.3	out	110	M5852	

Hole logged through drill rods - rig on site



478



GAMMA RAY SIS DENSITY
CALIPER GENERAL LOG

COMPANY TECK CORPORATION PS - BULLMOOSE TRASH
BOREHOLE T-99 Bullmoose.
STATE British Columbia COUNTRY Canada

Permanent Datum Ground Level Elev. Ft.
Log measured from Top of casing Ft. above P.D.
Drilling measured from Top of casing Ft. above P.D.

Run No. 1 Depth Scale 200.11

Date 12 Sept 77
First Reading 49.60m
Last Reading 0

Interval Measured 40.60m

Casing BPS -

Casing Driller -

Depth Reached 50.22m

Bottom Driller QUIK-3el

Mud Nature -

S.G. Viscosity HQ to TD

Bit Size 1 to 10

Casing Size 1 to 10

Casing Size 2 to 10

Rm @ Meas Temp. @ °F

Rmf @ Meas Temp. @ °F

Rmc @ Meas Temp. @ °F

BHT

Operating Time 1 1/2 hrs

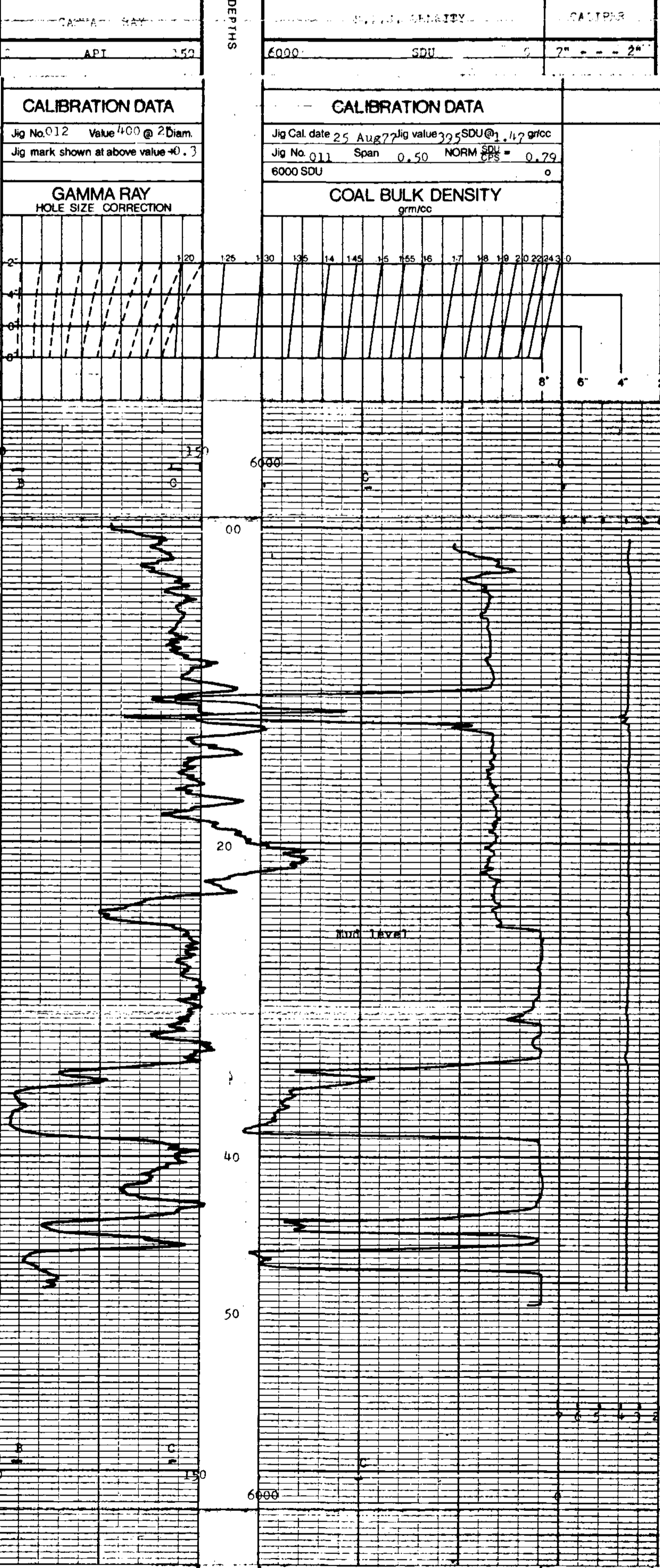
Truck No. V 24/34
Recorded By P.J. Walters
Witness

478

fold here

REMARKS

Changes in Mud Type or Additional Samples				Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down		
Depth - Driller							
Type Fluid in Hole							
Dens.	Visc.						
ph.	Fluid Loss						
Source of Sample				Equipment Data			
Rm	@ Meas Temp.	@	°F	Run No.	Tool Type	Tool Position	Other
Rmf	@ Meas Temp.	@	°F	1	CCS	SIDEWALL	-
Rmc	@ Meas Temp.	@	°F				
Source: Rmf	Rmc						
Rm	@ BHT	@	°F				
Rmf	@ BHT	@	°F				
Rmc	@ BHT	@	°F				
Logging Data							
Log	Depths m	Speed	T.C.	Norm.	Sonde No.	Source	
	From To	m/min	Sec			Number	
Gamma	48.4 0	9	2	1.36	119	-	
SISD	48.2 1.2	9	1/3	0.80	119	M5567	
Caliper	48.2 1	9	1	-	119	-	



0	API	150	DEPTHS	6000	SDU	0	7" - - - - 2"
GAMMA RAY				S.I.S. DENSITY		CALIPER	

COMPANY TECK CORPORATION
BOREHOLE T-99 Bullmoose
FIELD Bullmoose
COUNTRY Canada STATE BC.