

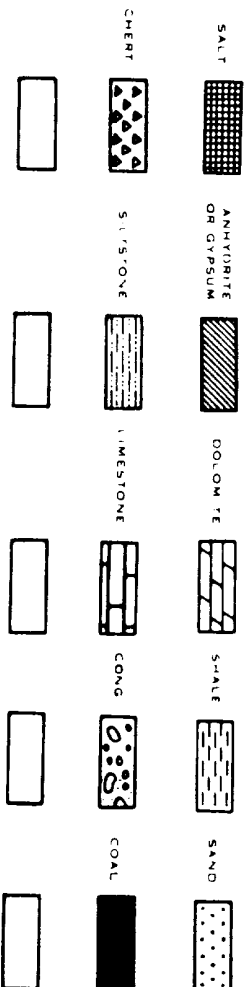
MCMNEESE

Logging Service Inc.



COMPANY HALLOWOOD PETROLEUM
 WELL BASS NO. 4
 FIELD HAT MESA DELAWARE
 COUNTY LEA STATE NEW MEXICO
 LOCATION 1700' FNL. & 1815' FEL SEC 30 ELEVATION 3599KB
 T20S R33E
 DEPTH LOGGED 6000' TO 8300'
 DATE LOGGED 5/24/98 TO 6/2/98 UNIT NO 15R
 CREW CHIEF B. KIMES
 DRLG. FLUID FRESH WTR. MUD 6000' - 8300'

LITHOLOGY



ABBREVIATIONS

NB = NEW BIT
 CO = CIRCULATED OUT
 DST = DRILL STEM TEST
 LAT = LOGGED AFTER TRIP
 TG = TRIP GAS
 NR = NO RETURNS
 DS = DIRECTIONAL SURVEY
 DC = DEPTH CORRECTION
 W = WEIGHT
 V = VISCOSITY API SECONDS
 F = FILTRATE API CCS
 P = PH
 C = CAKE THICKNESS 32nds
 S = SALINITY, ppm Cl

HYDROCARBON ANALYSIS

CHROMATOGRAPH

Units/Div.

METHANE - C1 20
 ETHANE - C2 20
 PROPANE - C3 20
 BUTANE - C4 20
 PENTANE - C5 20

FORM.

LEACH
 T F G
 FLUOR

CUTTING GAS
 MUD GAS 20
 CUTTINGS
 MUD

Units/Div.

FORMATION DESCRIPTION, REMARKS, ETC.

HOT WIRE

% VIS.
 PORO.
 G F T

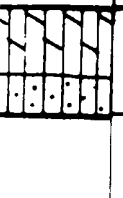
DRILLING RATE

MIN/FT ☒

FT/HR ☐

78 90 28

LITHO DEPTH



START MUD UP

TO TRUE DEPTH
BY RIG PERSONNEL

DOL CRM 14 OF 1
WH VFXLN DNS

SS CLR LTGY VF
FG SUBRND
POOR SRTD PT
FRIAB

SS LTGY CLR VF
FG SUBRND
UNCONSOL.

NOTE SAMPLE
QUAL POOR ALL
LCM

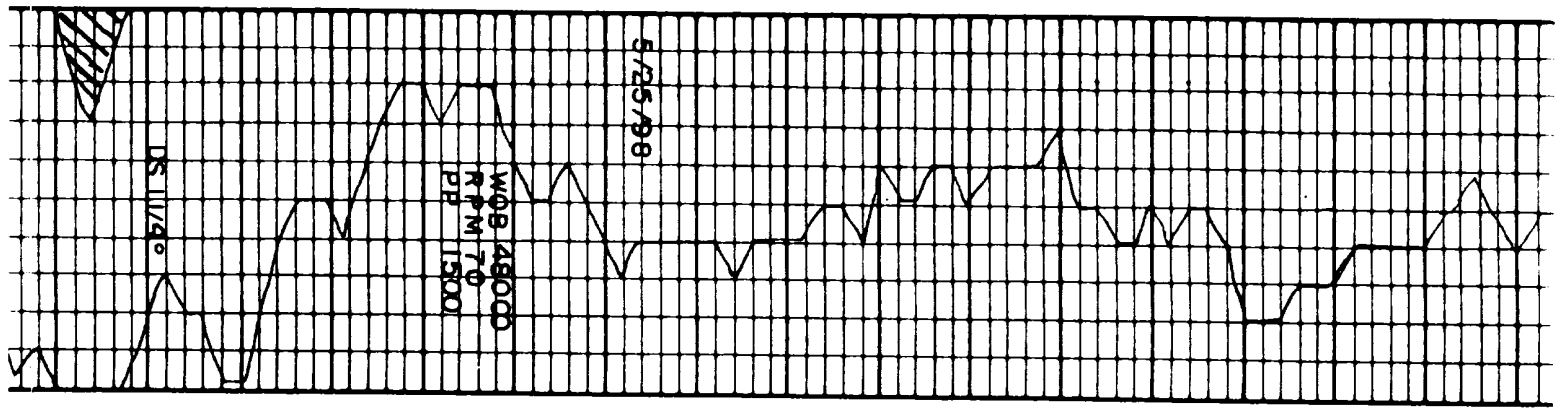
DOL TN CRM LT
GY VFXLN DNS
PTS MOTI

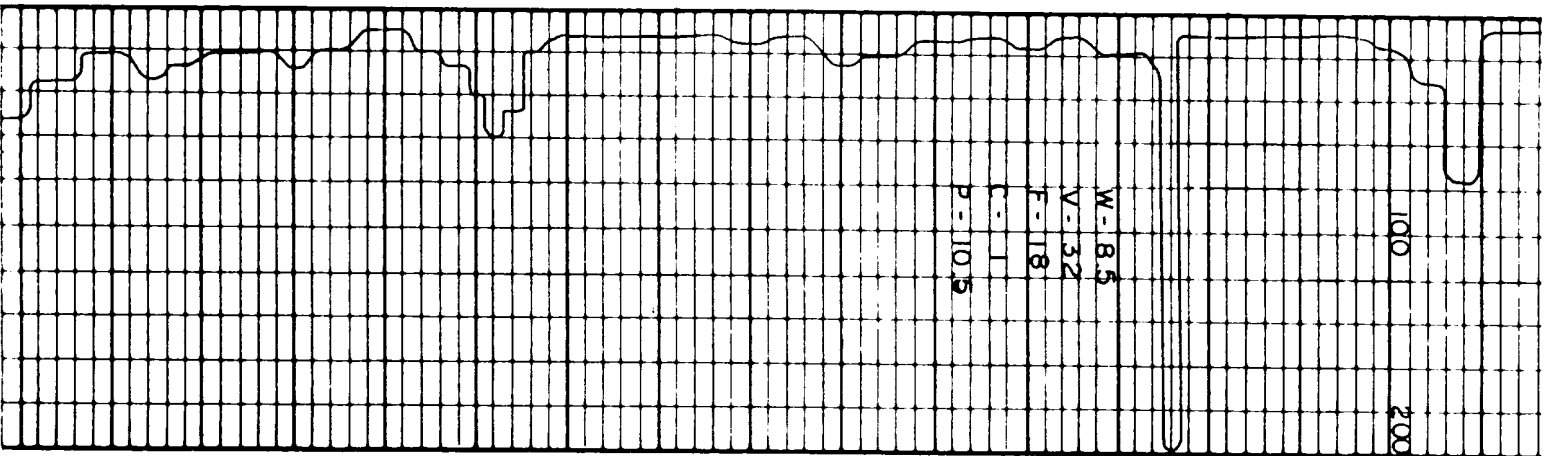
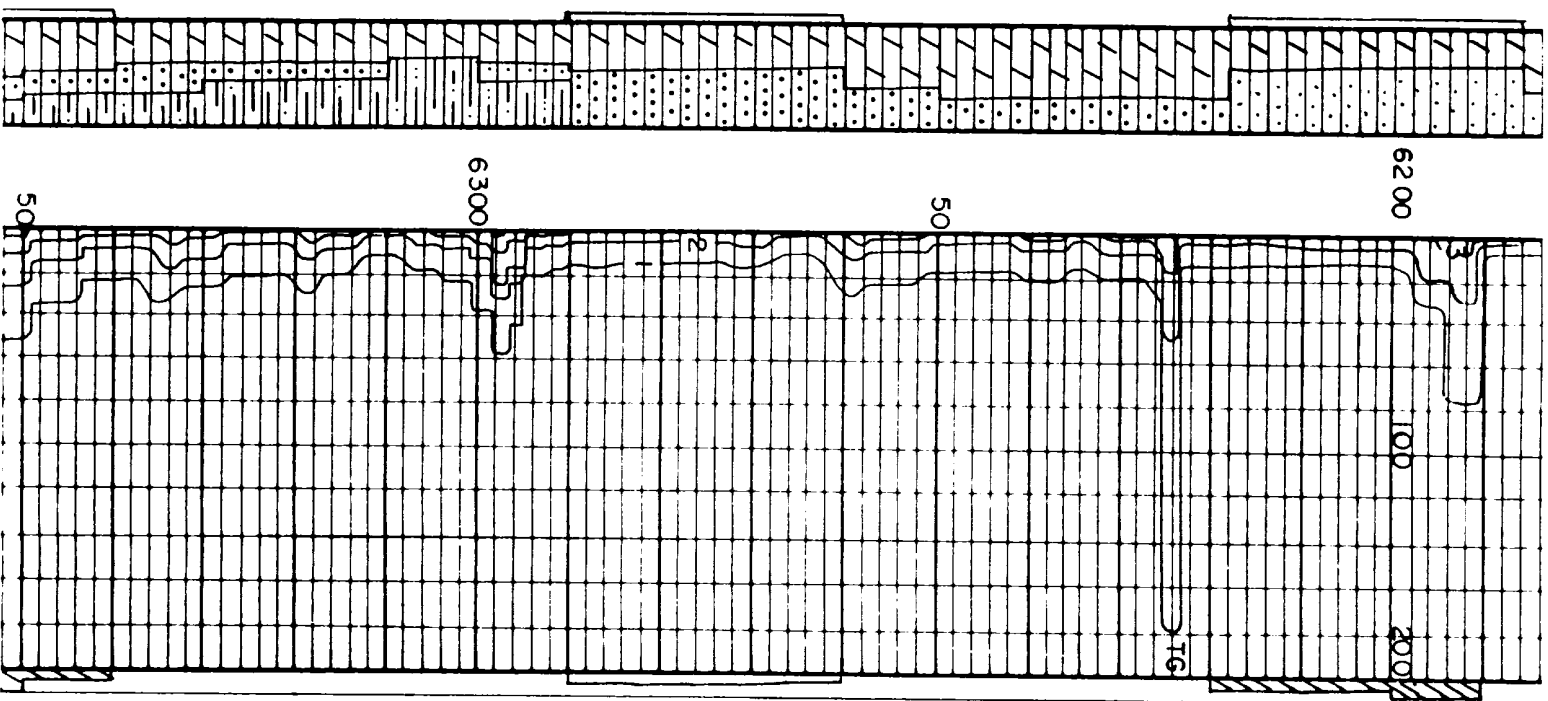
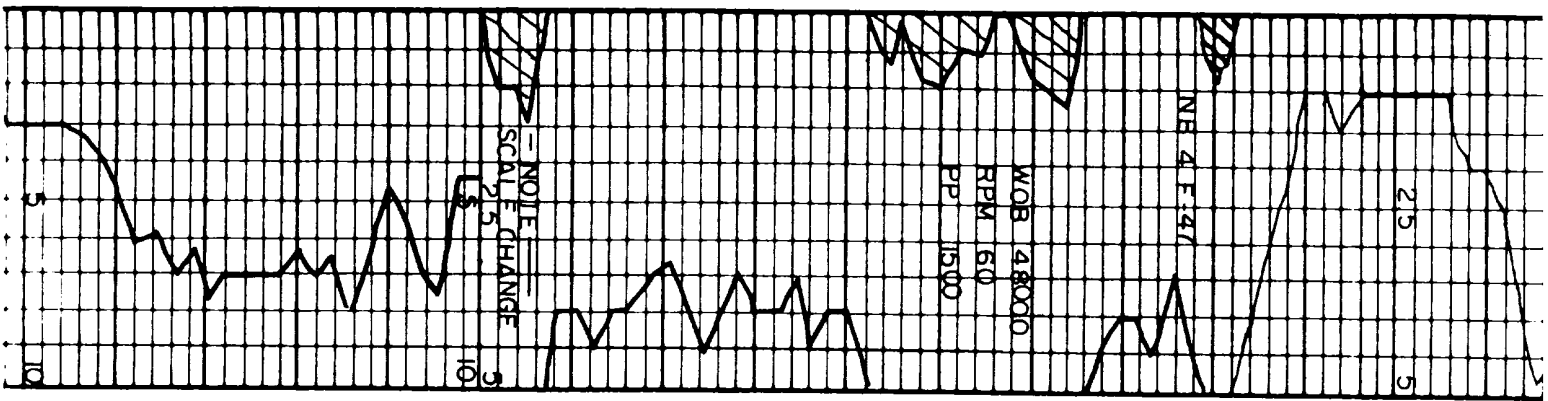
NO	LCM
SAMPLE	ALL
LCM	ALL

6100

50

50





SS CLR LTGY VEG
SUBANG POOR
SRTD PTS CMTD
PTS FRIAB PTS
PALE GLD FLU
TR CUT DRY
FR DRY CUT IP

DOL BF-TN-CRM-
TNGY VFX DYS
CLN SLTY IP

SS CLR-LTGY-GY
VF FG CON FRI
IP TGT IP DOL
CMT PRED CLN
PRLY SRTD IP
DRTY SB ANG
SB RDD DULL
SPPTY YEL FLU
NO WET CUT
TR DRY CUT

SH GYBN-DKBN-BN
FRM V/SDLTY
MICA CARB UP
SB FISS-BLKY

DOL BF-TN-CRM-GY
VF-FX DNS SL

5/26/98

0511°

WOB 48000

REMT 60

PR 1630

SUC IP CLN
TR P.P.POR
IP TR STN IP
FNT-BRT YEL
FLU SPTY IP
NO WET CUT
FR DRY CUT

SS CLR-LTGY-GY
VF-FG CON SL
FRI TGT IP
SM CLN SM DRT
PRLY SRTD SM
W/FNT SPTY YEL
FLU NO WET CUT
TR FR DRY CUT

SS CLR-LTGY-GY
VF-FG CON FRI
IP TGT IP SM
CLN PRED WL
SRTD SM DRTY
PRLY SRTD SM
W/FNT SPTY YE
FLU NO WET CT
TR-FR DRY CUT

SS LTGY CLR OFF
WH VF FG SUB
ANG MWL SRTD
PTS FRIAB TR
LT STN MBGT
YELL GLD FLU
GD CUT DRY

SS OFFWH CLR
VEG SUBANG
POOR SRTD CAL
CONSOL BGTVEL

6500

50

6400

CUT DRY

SH DKGY GYBRN
FRM SILTY

DOL OFFWH CRM
VF FXLN FINE
SUCROS

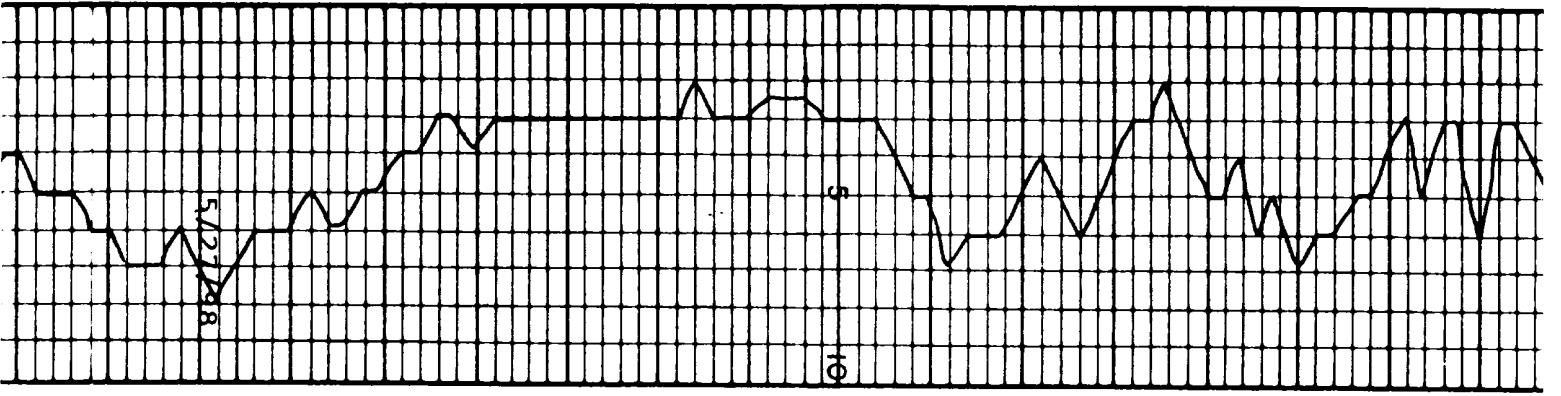
SS LTGY CLR VFG
SUBANG POOR
SRTD CONSOL
PT ARGIL DULL
SPTD YEL FLU
WK CUT DRY

SS LTGYLTN CLR
VFG SUBANG
POOR SRTD PTS
CONSOL PTS
FRIAB TR LT
STN FT ODER
BGT SPTD GLD
FLU GD CUT
DRY

SS LTGY GY VFG
SUBANG POOR
SRTD ARGIL
TR DULL GLD
FLU TR CUT
DRY

SH DKGYBRN FRM
CHNKY SILTY

DOLTN CEM VFXLN



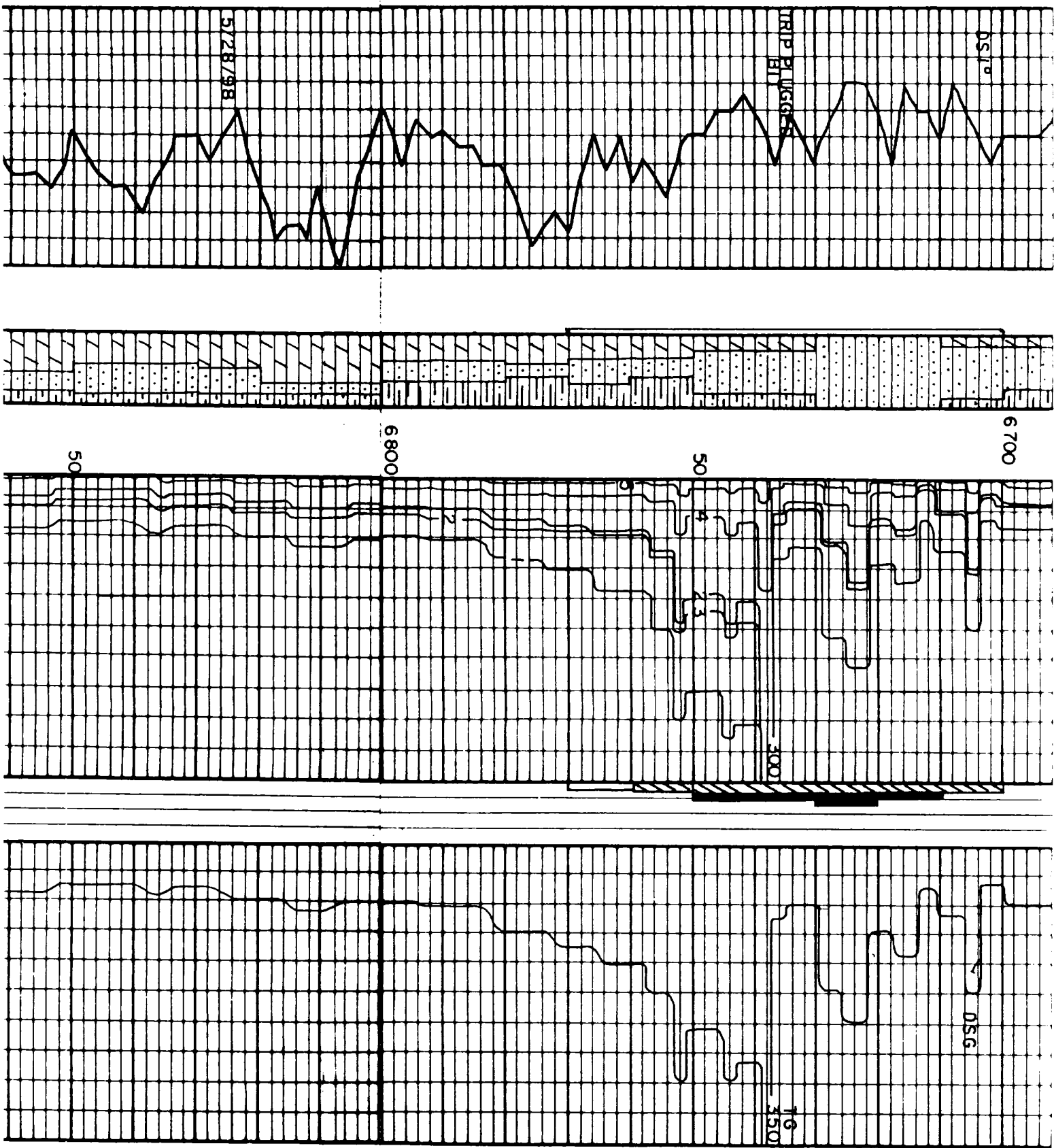
SS GY LTGY OFF
WH VFG WL CON
SOL TR DULL
YEL FLU WK
CUT DRY

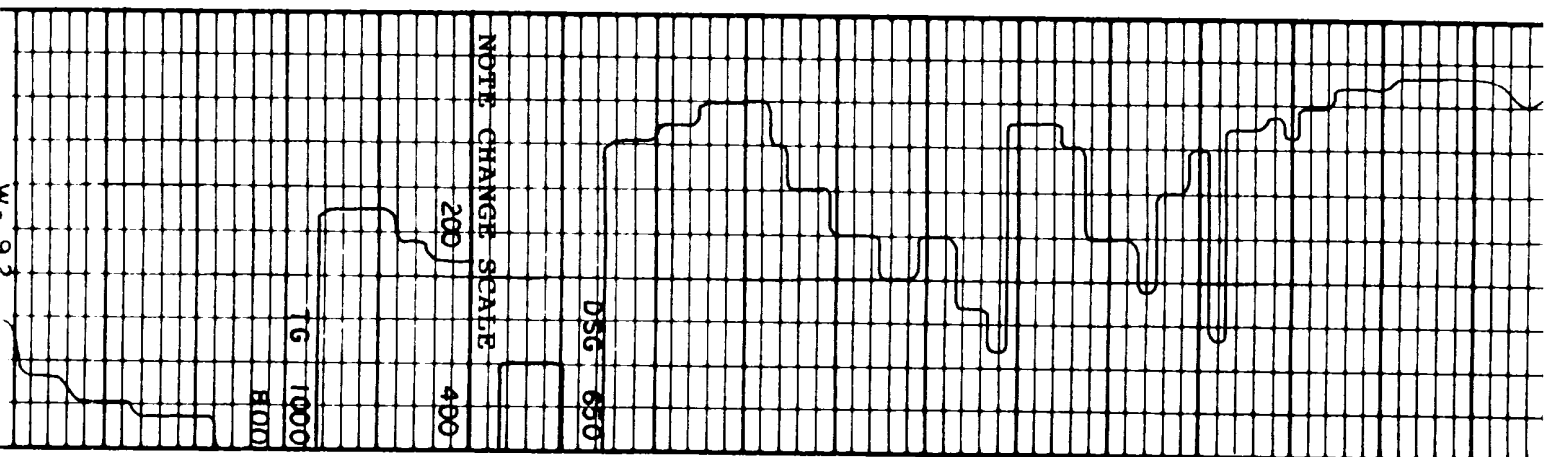
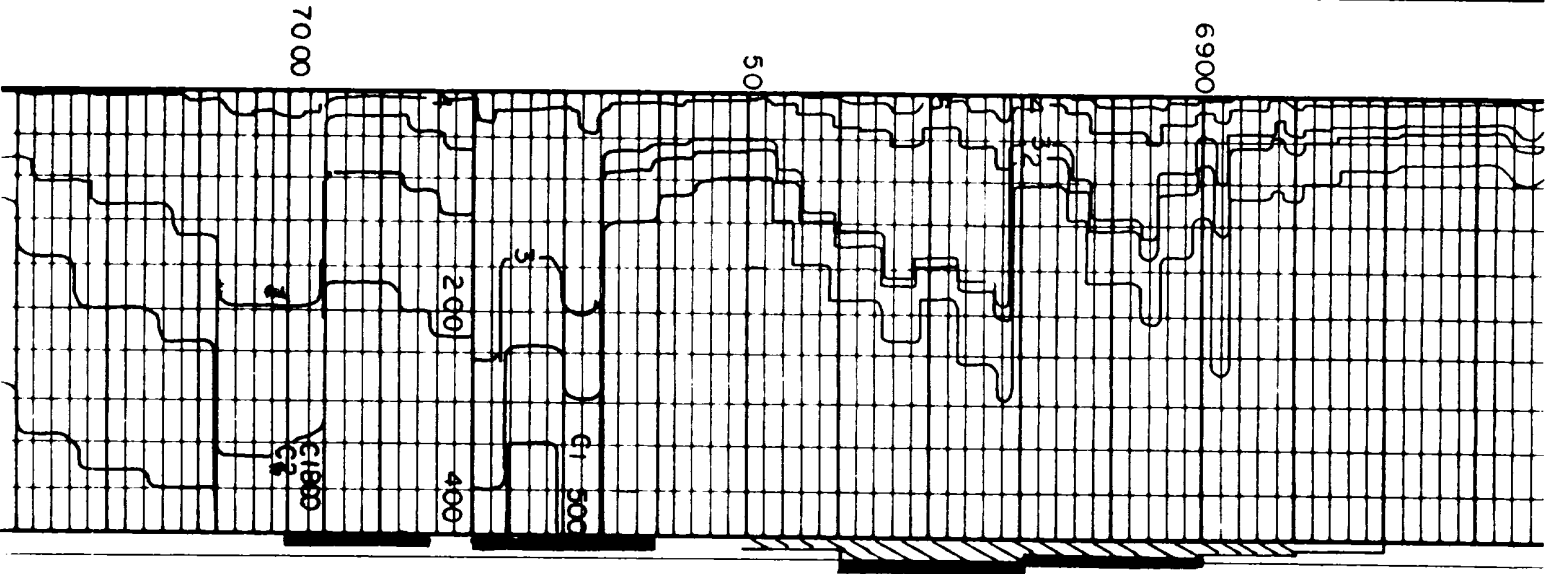
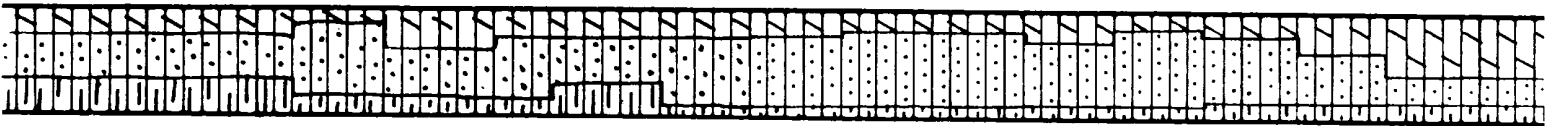
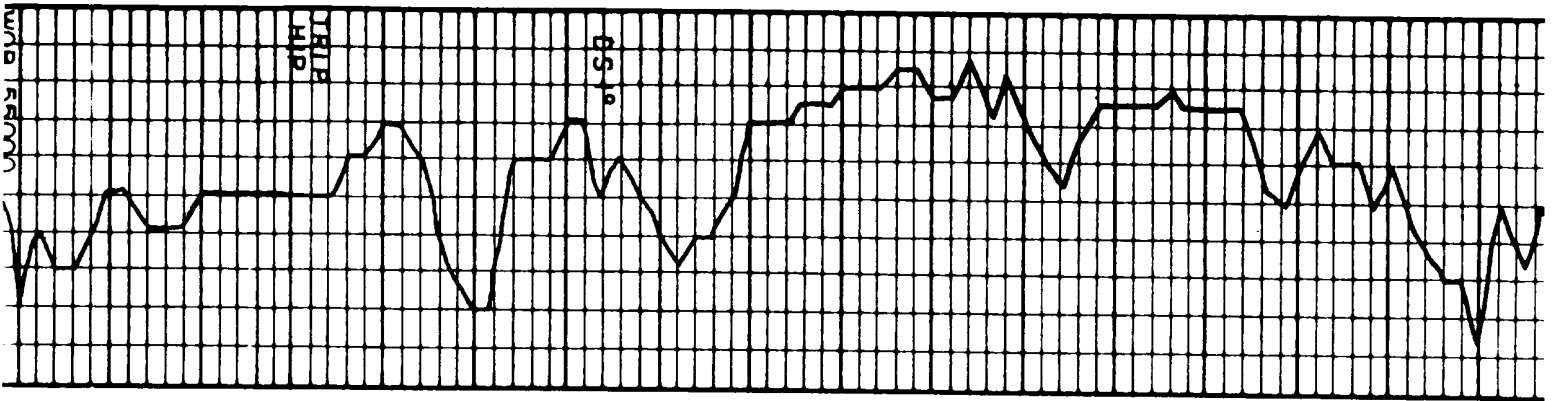
SS LTGYWH-LTGY-
BF VF-FG CON
HD IP FRI IP
SM LSly CON
CLN WL SRTD
IP DRTY PRLY
SRTD IP SB AN
SB RDD-RDD
BRT YEL FLU
NO WET CUT
FR-GD DRY CT

DOL BF-TN-LTBN-
BN VFX DNS
CLN IP ARG
IP

SH GYBN-DKGYBN
FRM SLTY MICA
CARB IP SB
FISS

DOL BF-TN-CRM VF
DNS CLN SL
SUC IP





SS BF-LTGY-GY VF
FG CON FRI SM
LSLY CON IP
PRD CLN WL
SRTD IP SM
DRTY IP BRT
YEL FLU SPTY
IP NO WET CT
TR-FR DRY CT

SS BF-LTGY-GY VF
FG CON FRI SM
LSLY CON IP
PRD CLN WL
SRTD SM DRTY
IP SB ANG-RDD
BRT SPTY YEL
FLU NO WET CT
FR-GD DRY CT

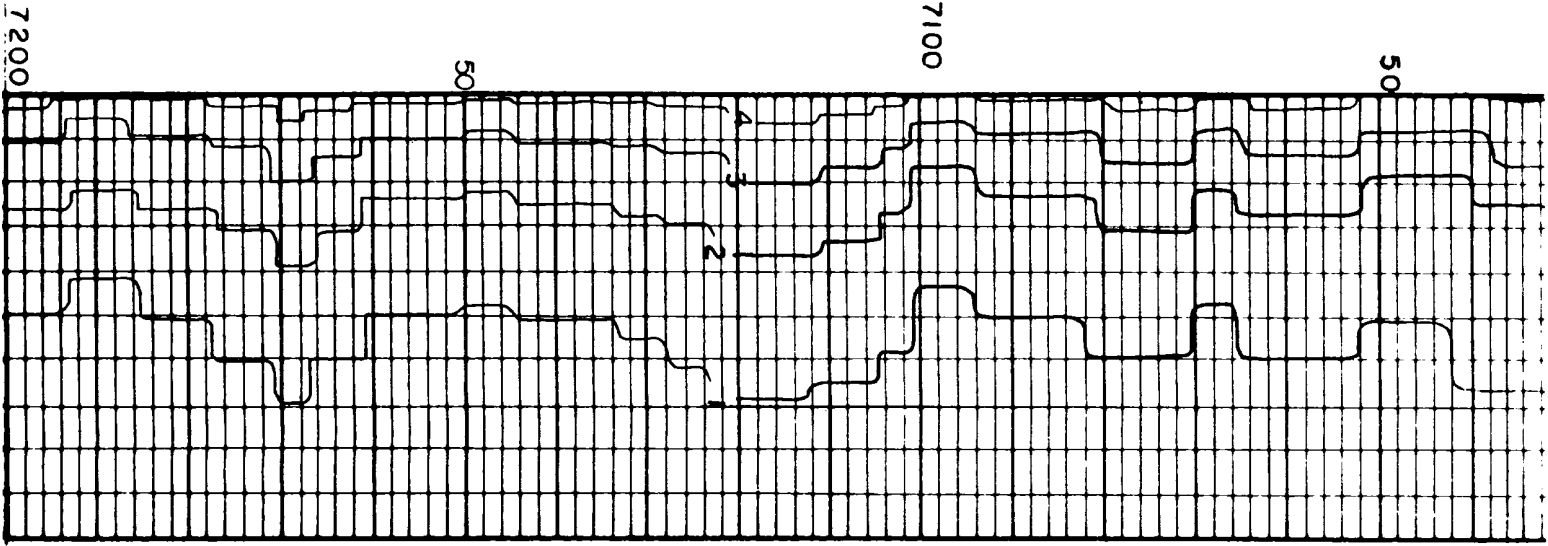
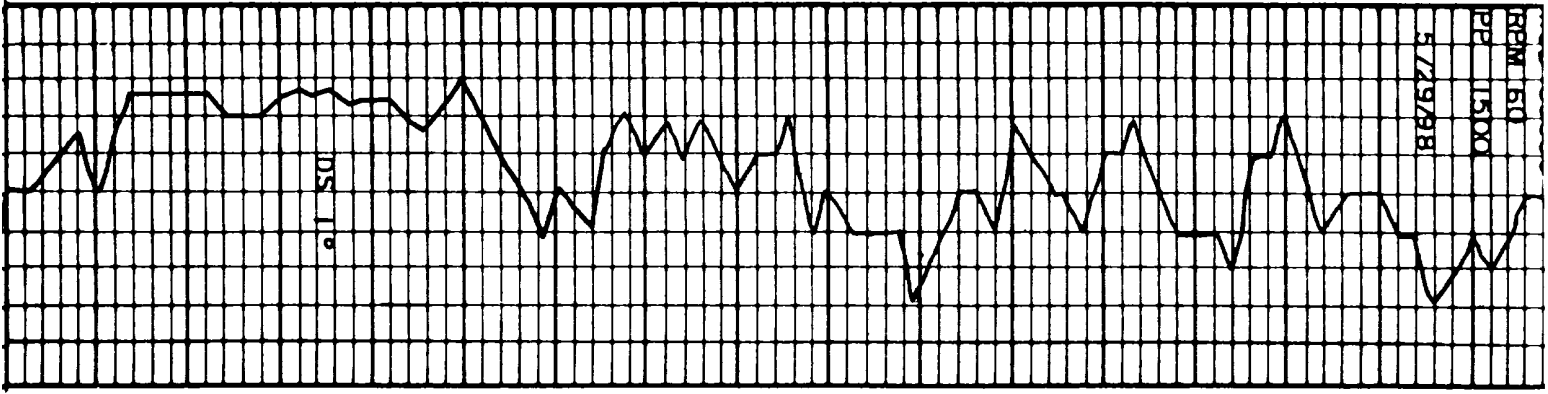
SS OFFWH LTGY FG
VEG LAMNTD CON
SUBRND POOR
SRTD PALE BLU
YELL FLU GD CUT
DRY

DOL CRN TN VFXLN
DNS PTS MOT
LIMY IP

RRM 50
PF 15000

5/29/88

DS 1p



V - 3.4
F - 1.8
C - 3
P - 9.0

SH GY DKGYBRM
CHNKY SDY

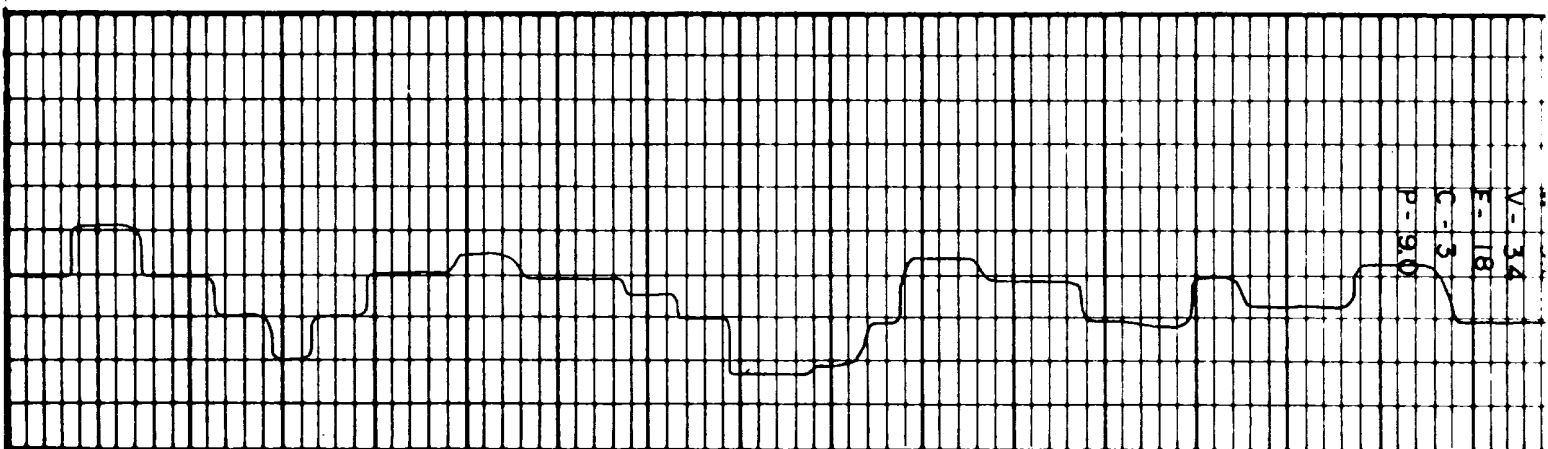
SS GY LTGY VFG
ARGIL IP

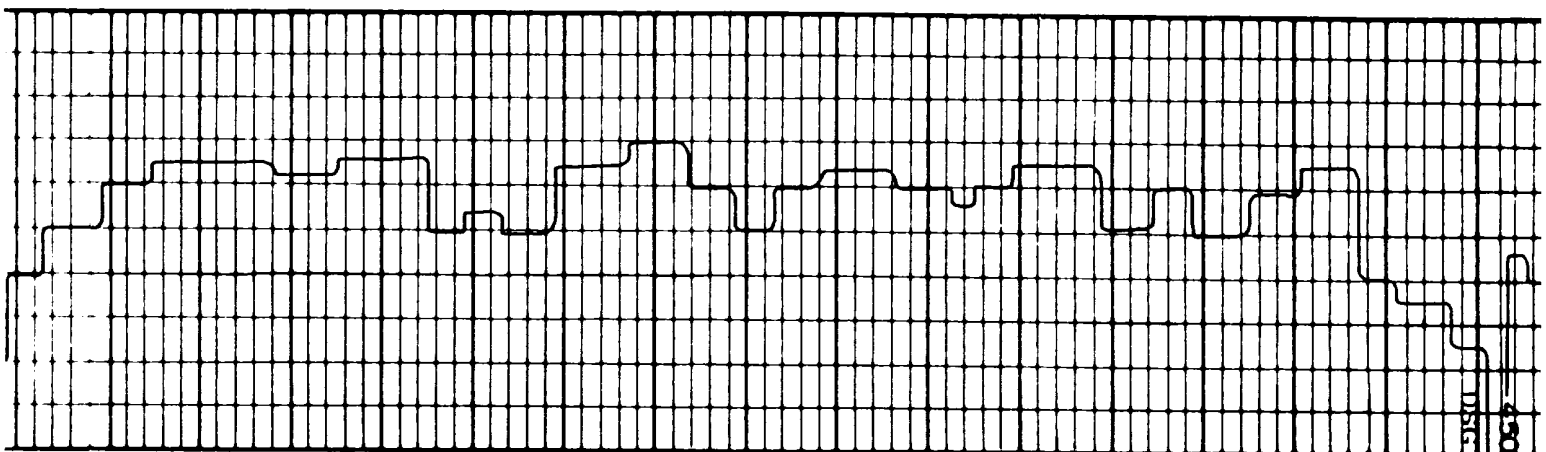
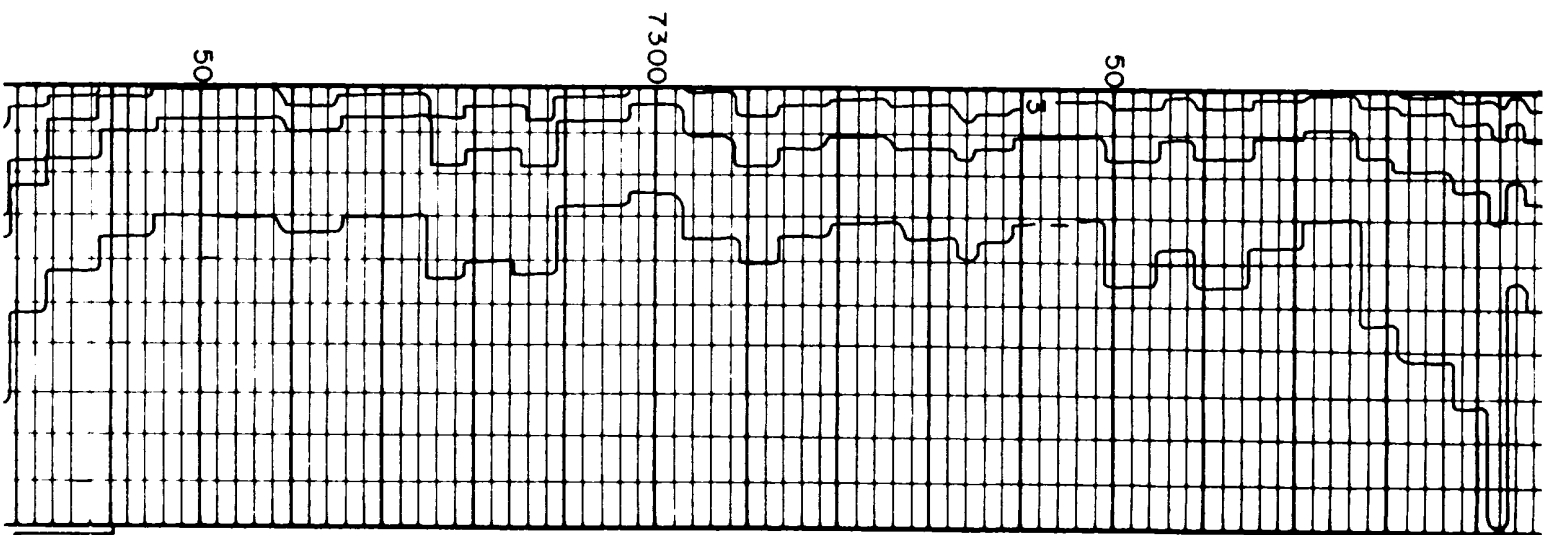
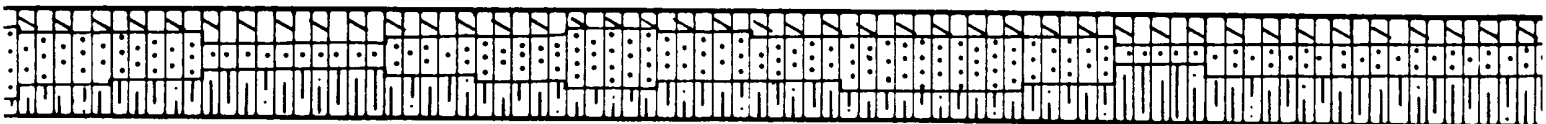
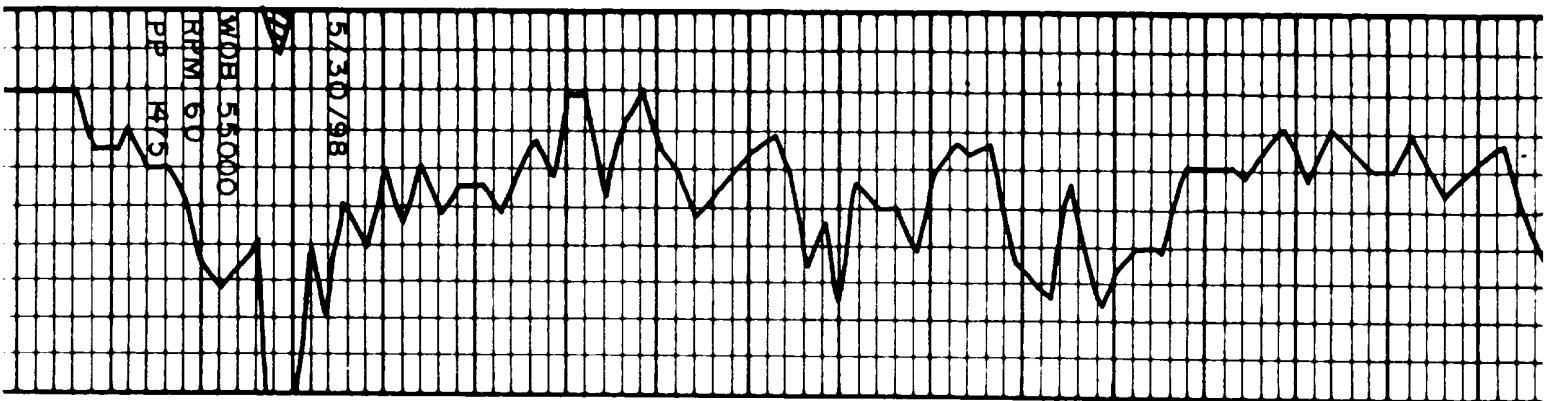
SH DKGYBRN DKGY
SLTY GRADE TO
SLTSTN

DOL BF-TN-LTBN
VFX DNS SL
ARG SLTY IP

SS LTGY-GY-GYBN
VF-FG CON SL
FRI TGT IP
SM WL SRTD
PRD DRTY
SB RDD

SH DKGYBN FRM V/
SLTY BCMG SLT
STN IP BLKY



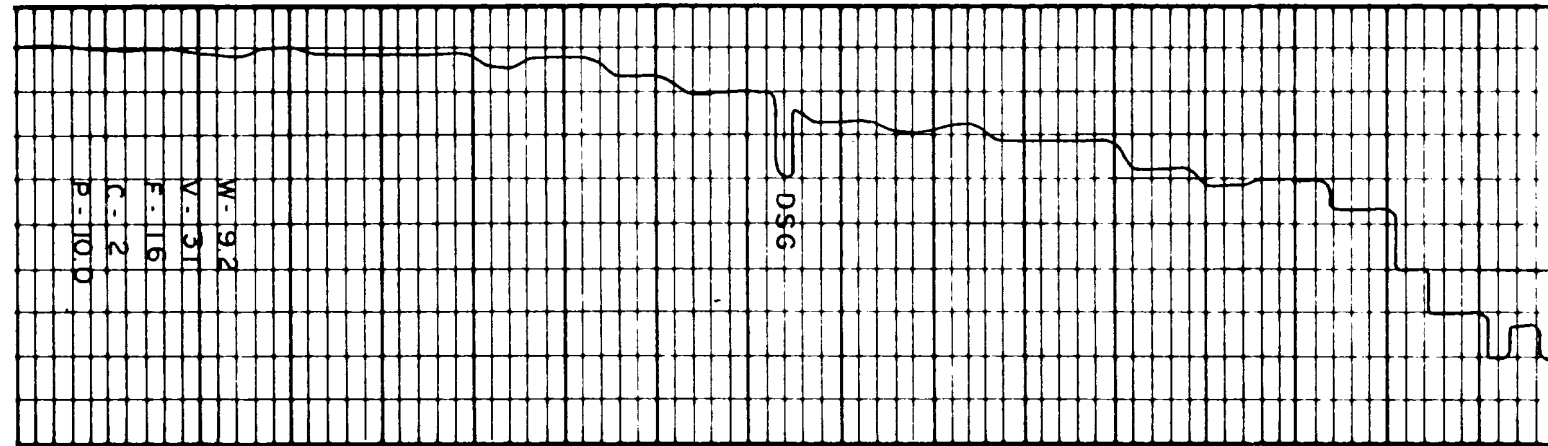
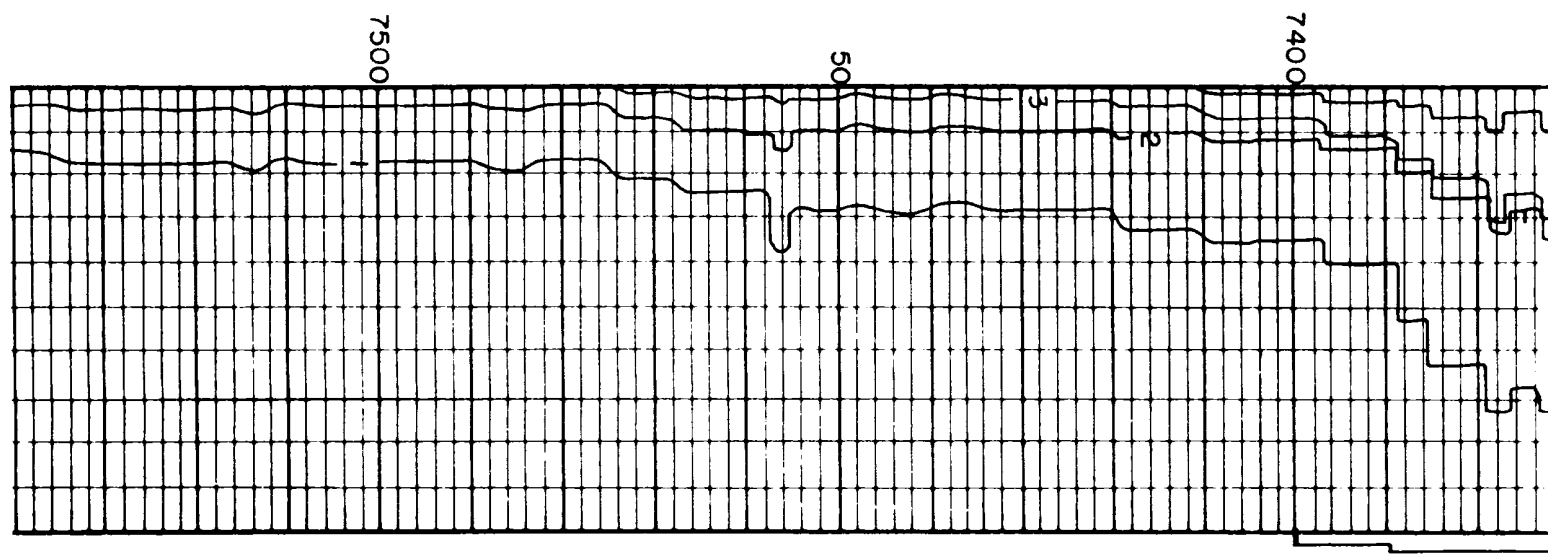
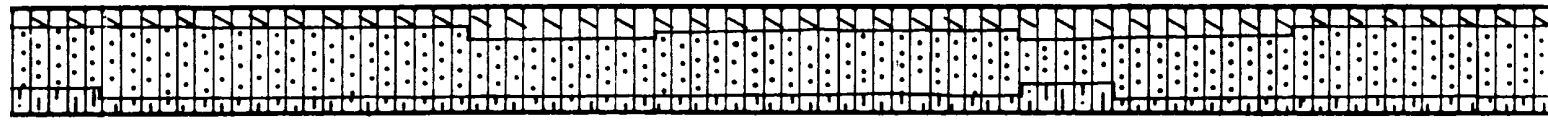
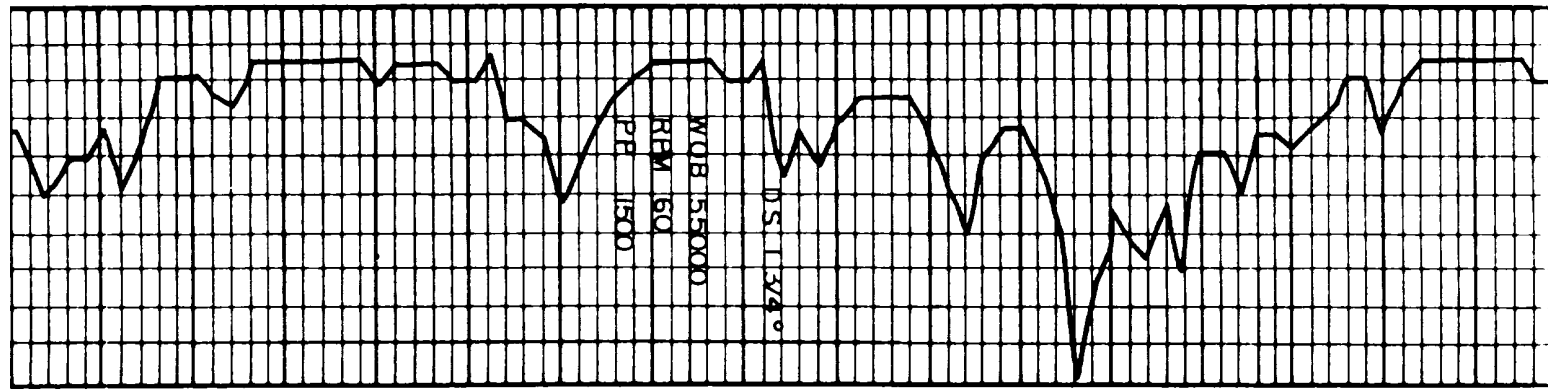


DOL BF-TN-GYBN
VFX DNS SL
ARG IP

SS LTGY-GY-GYBN
VF-FG CON FRI
SM CLN WL SRTD
SM DRTY PRLY
SRTD GLAUC IP
SB ANG-SB RDD

SH LTBN-GYBN-BN
FRM SLTY MICA
CARB IP SM
RCMG SLTSTN

DOL BF-CRM-LTBN
VFX DNS SL
ARG



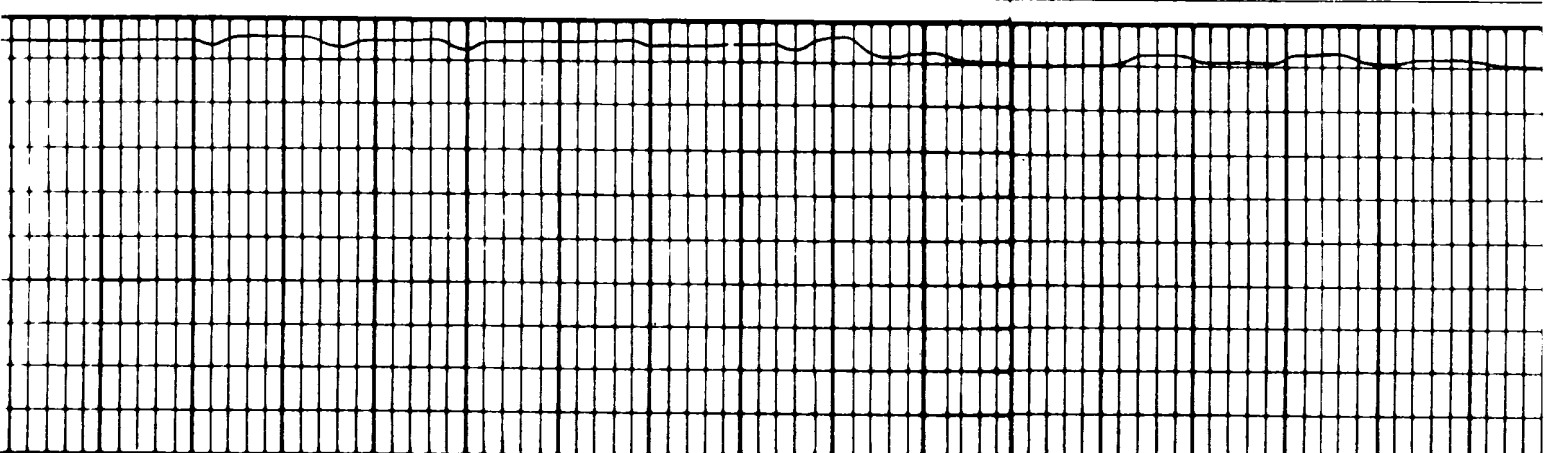
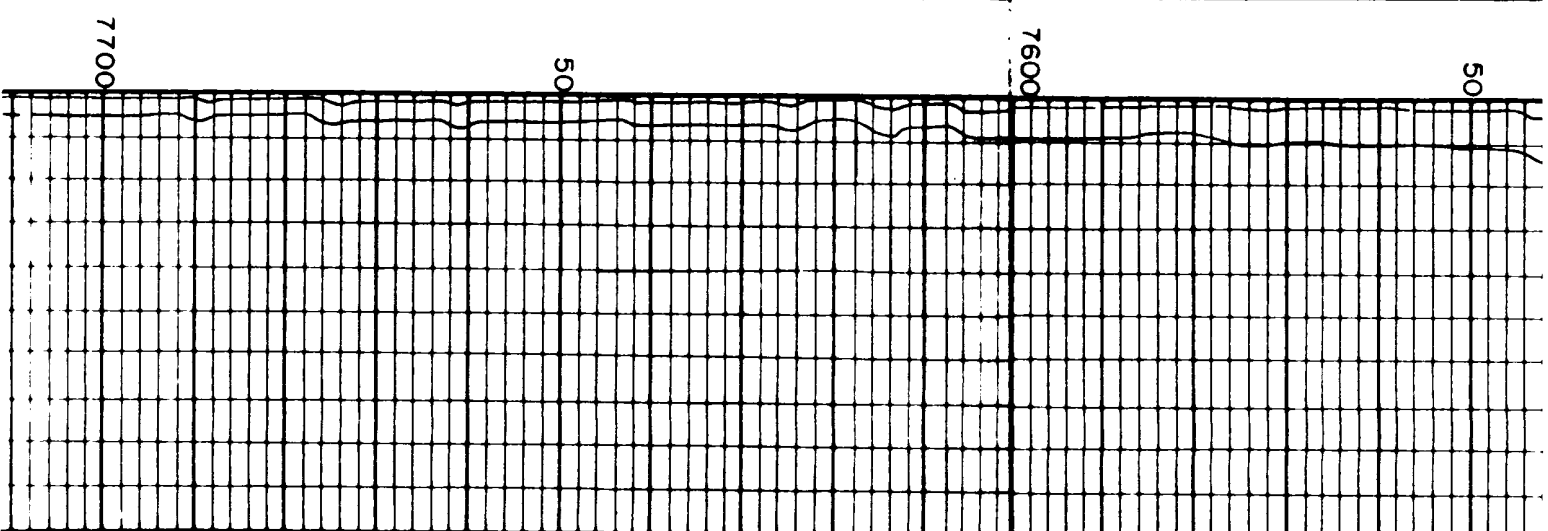
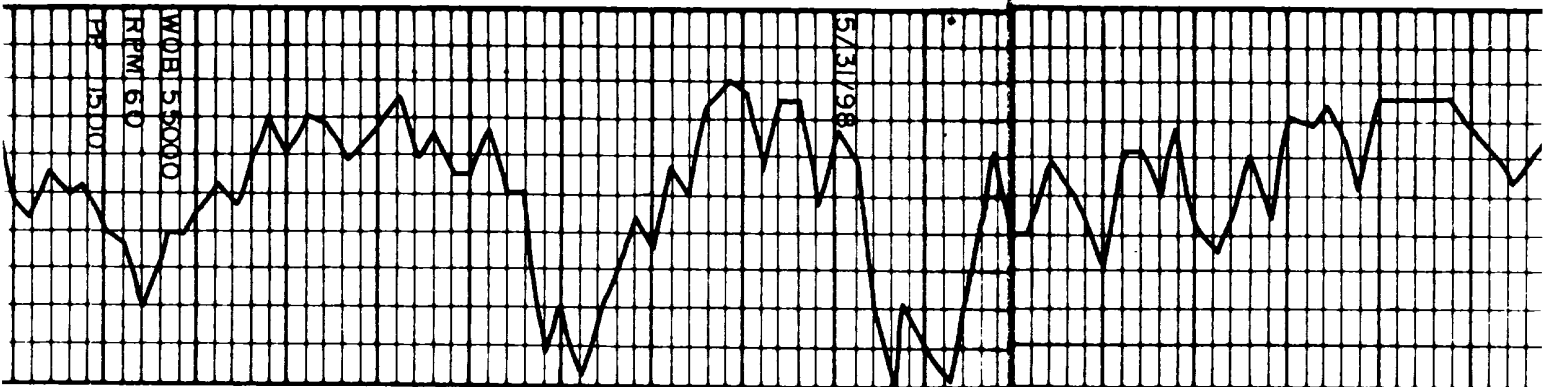
SS LTGY-GY-GYBN
VF-FG CON FRI
SM LSly CON
CLN WL SRTD IP
SL DRTY IP W/
FNT-BRT SPTY
YEL FLU NO VET
CUT TR DRY CUT

SH GYBN-DKGYBN
FRM SLTY MICA
SM BCMG SLTSTN

DOL BF-CRM VFx
DNS CLN

SS LTGY-GY-LTGYBN
VF-FG CON FRI
HD IP SM CLN
WL SRTD SM SL
DRTY SB RDD-
RDD

W-9.2
V-31
E-116
C-2
P-10.0

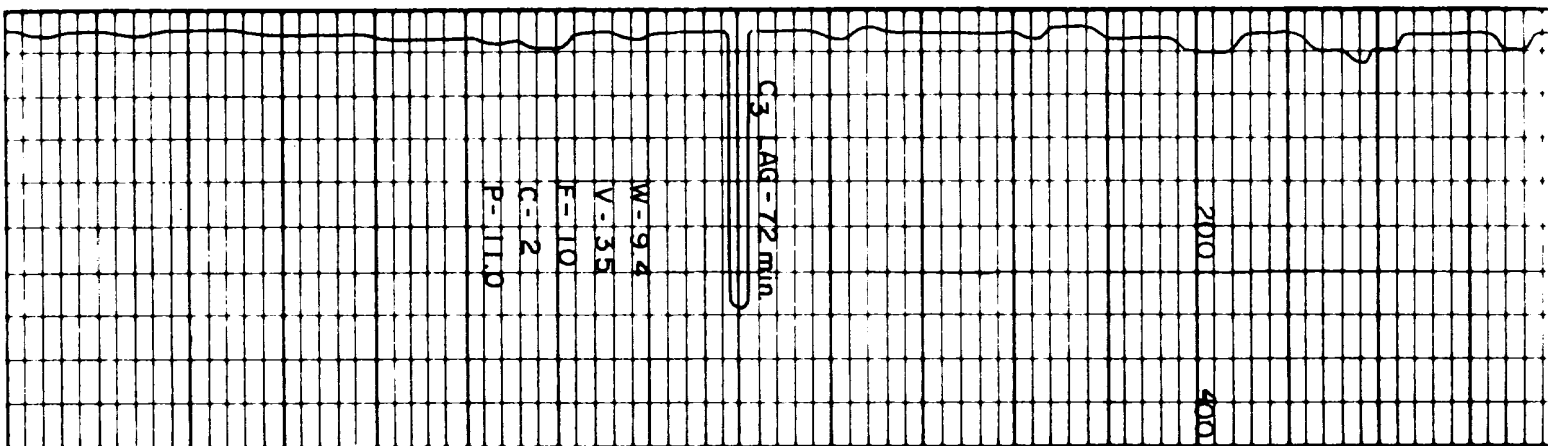
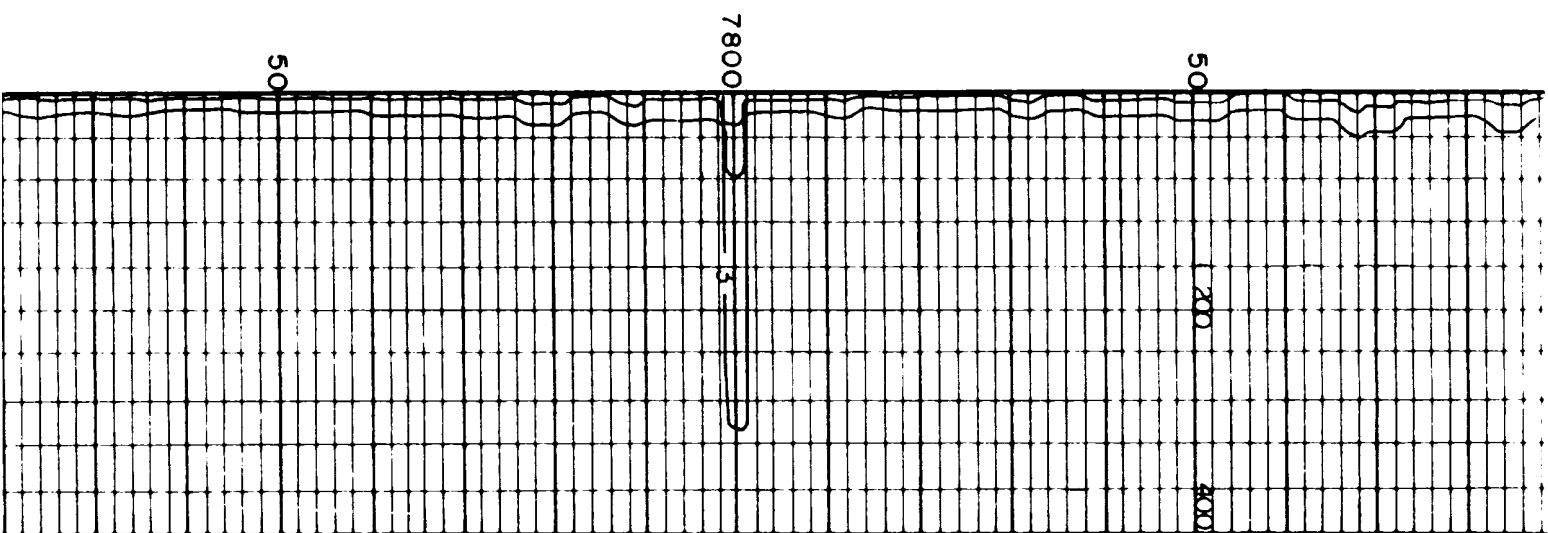
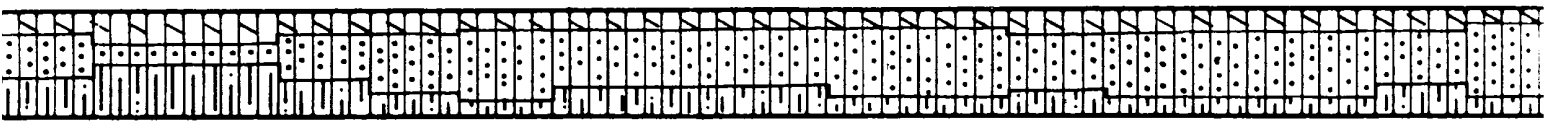
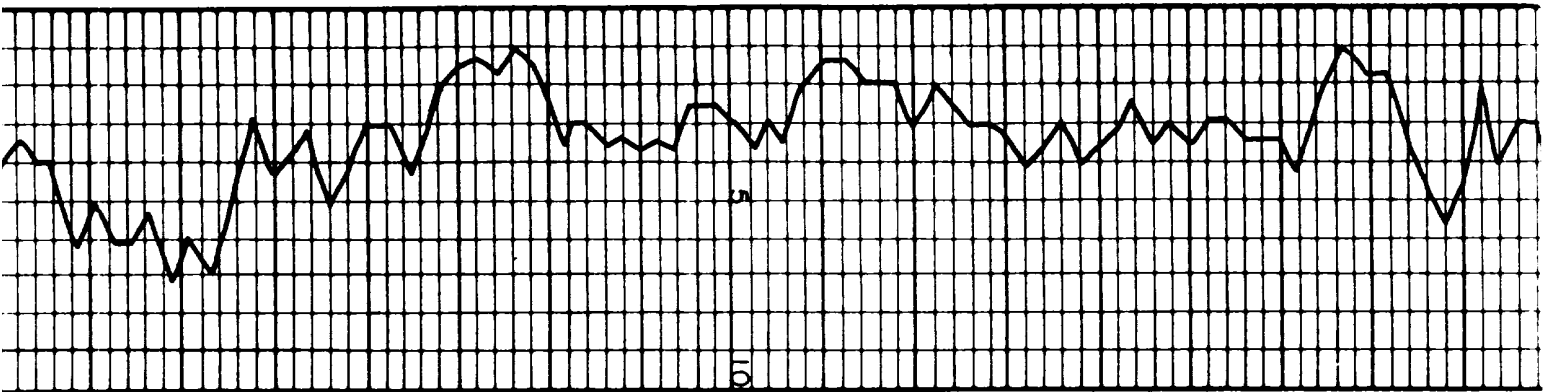


SS LTGYWH-LTGY-GY
VF-FG CON FRI
WL SRTD CLN IP
SL DRTY SLTY
IP SB RDD-RDD

DOL BF-CRM VFX DN
CLN

SH LTBN-GYBN-DKBN
FRM SLTY MICA
SM BCMG SLTSTN
SB BLKY-BLKY

SS LTGYWH-LTGY-GY
VF-FG CON FRI
SM TGT HD IP
SM LSLY CON IP
PRD CLN WL
SRTD SM DRTY
SLTY SB RDD



DOL BF-CRM VFX
DNS CLN

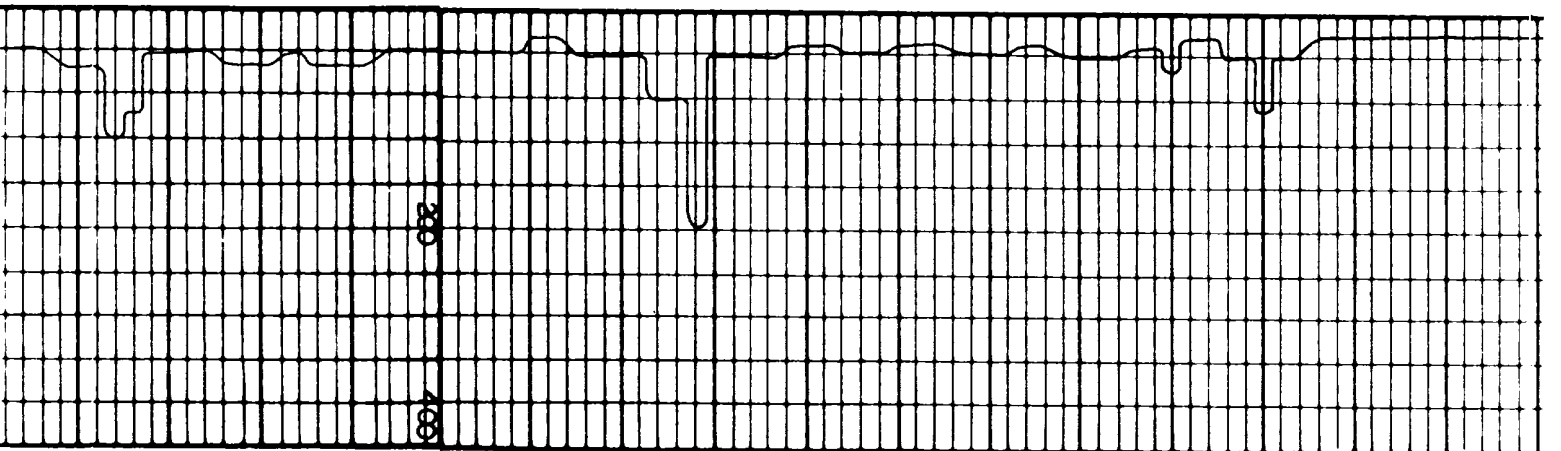
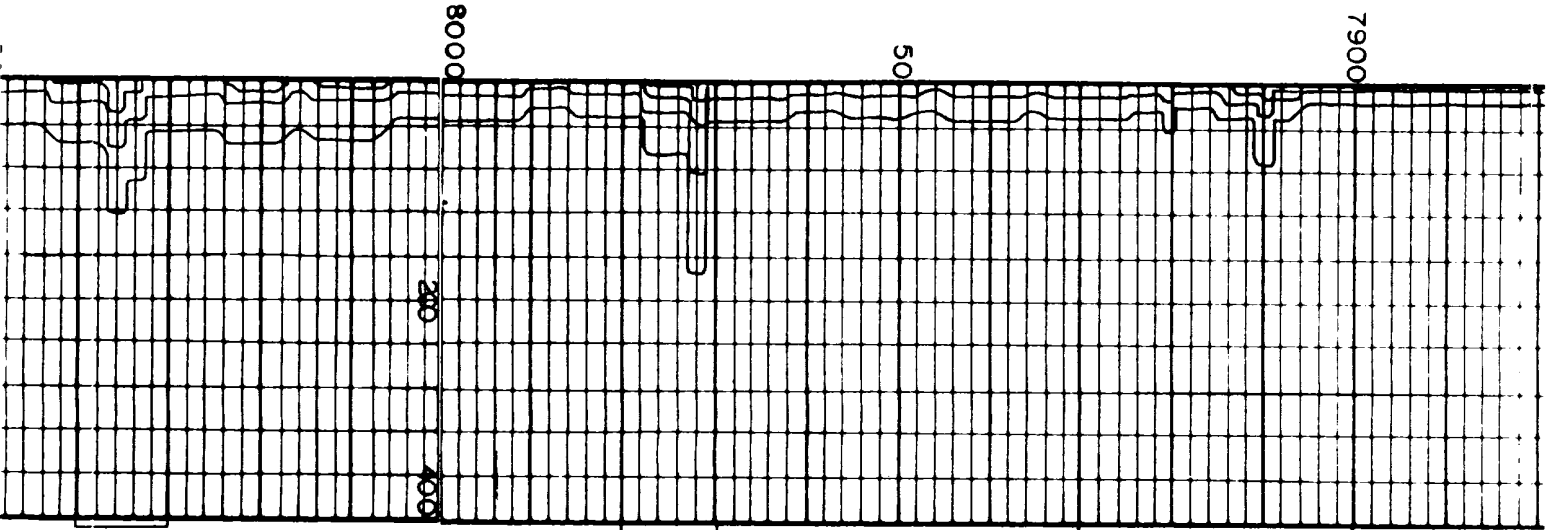
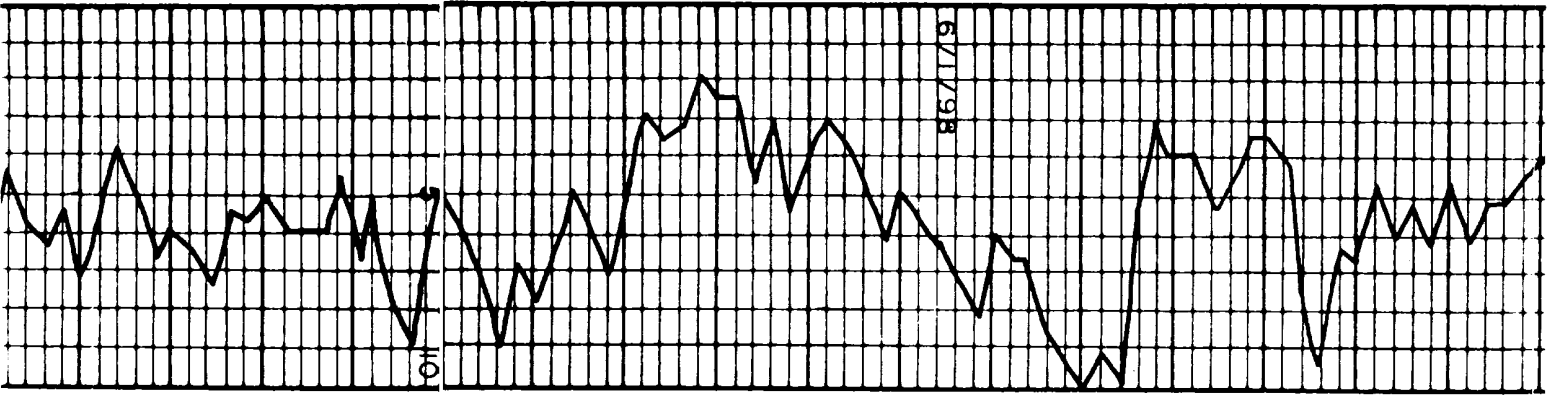
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LSLY CON IP SM
TGT IP CLN SM
DRTY SLY SB
RDD-RDD

SH LTGYBN-GYBN
FRM SLY MICA
SM CARB IP SM
V/SLTY/SNDY

W-9.4
V-3.5
F-10
C-2
P-11.0

SS LTGY-BF-GY VF-
FG CON FRI IP
LSLY CON IP
SM TGT DRTY IP
SB RDD-RDD

SH LTGYBN-GYBN-BN
FRM SLY MICA
CARB IP BLKY



DOL BF-TN-GY VFX
DNS CLN

SS LTGYWH-LTGY-GY
VF-FG CON FRI
IP CLN IP SM
DRTY PRLY SRTD
IP SB RDD-RDD
SM W/FNT YELGN
FLU NO WET CUT
TR DRY CUT

SS LTGYWH-LTGY-GY
VF-FG CON FRI
IP CLN WL SRTD
SM DRTY PRLY
SRTD SB RDD-RD
SM W/FNT YELGN
FLU NO WET CUT
TR DRY CUT

SH GYBN-DKGYBN
FRM SL CALC
SLTY MICA V/
CARB IP SB
FISS PYRC

SS LTGY-GY VF-FG
CON FRI CALC
WL SRTD IP SM

DRTY PRLY SRTD

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TR DRY CUT

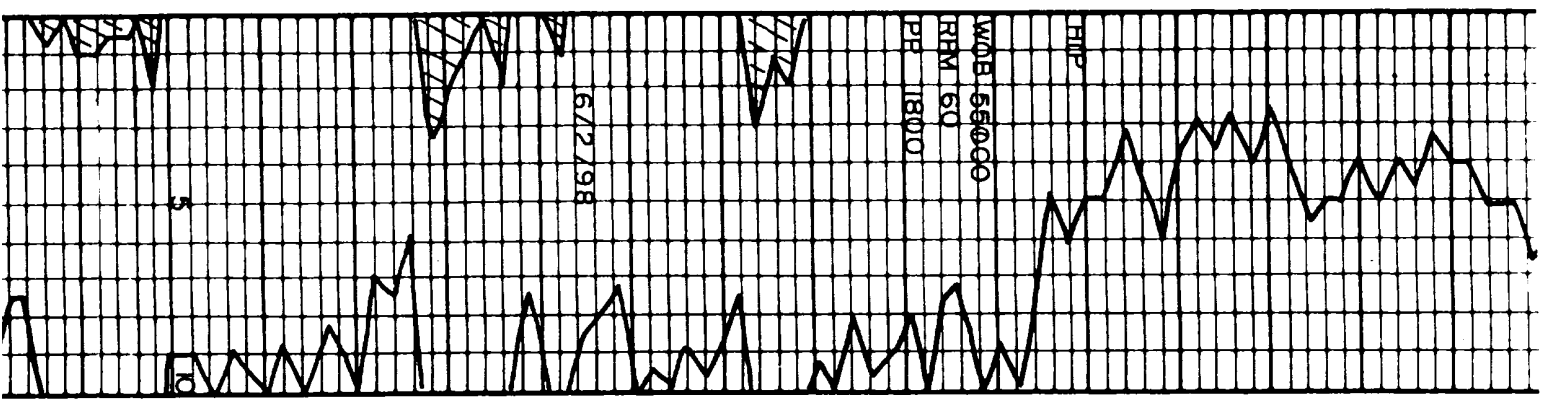
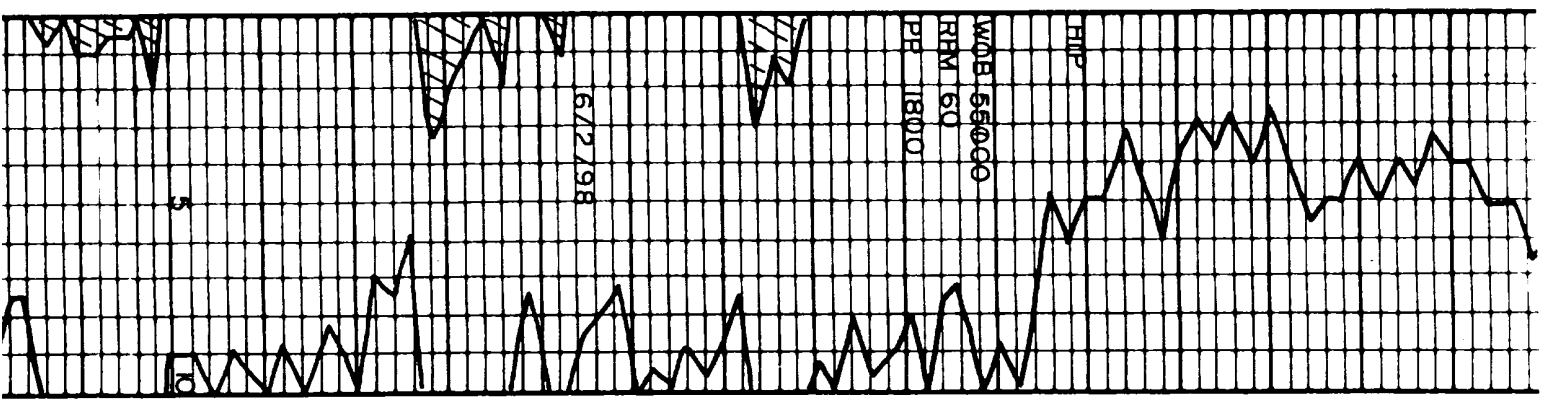
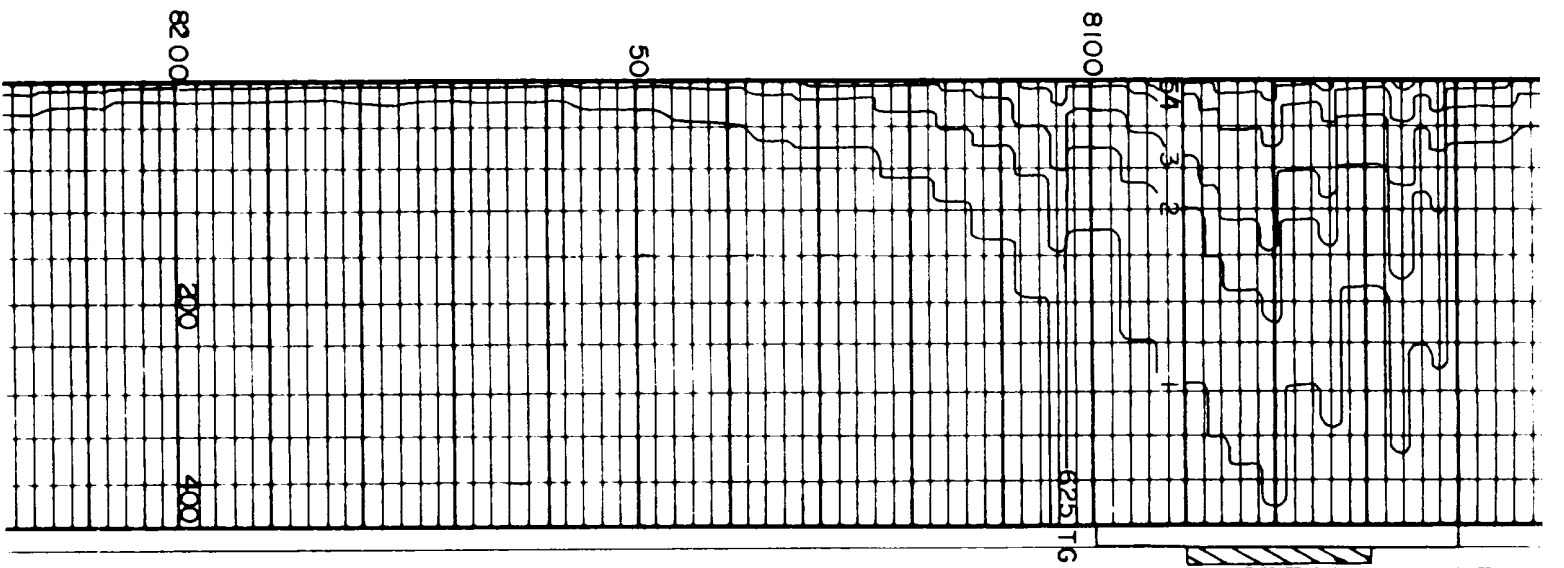
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CON FRI RCMG
V/CALC PRED
WL SRTD DRTY
IP SB RDD-RDD
W/BRT YELGN
FLU SPTY IP
NO WET CUT
TR-FR DRY CUT

SH GYBN-DKGYBN
FRM CALC SLTY
MICA CARB IP
SB FISS

LS BF-TN-BN-GYBN
MOTT IP VFX
DNS SIL ARG

SH GYBN-DKGYBN
FRM CALC SLTY
MICA CARB IP
SB FISS PYRC

LS BF-TN-CRM-GYBN
BN-DKBN VFX
DNS CLN IP
ARG IP PYRC IP



FRM CALC SLTY
MICA CARB SB
BLKY-FISS PYR

LS BF-TN-GYBN-BN-
DKBN VFX DNS
SL SIL IP ARG
TR FOSS IP SM
FNLY PYRC

SH GYBN-DKGYBN
FRM CALC SLTY
MICA CARB PYRC

