ANDREWS SEC 13, BLK A-38, PSL

Schlumberger

SIMULTANEOUS COMPENSATED NEUTRON FORMATION DENSITY

COUNTY ANDREWS, TX
FIELD WILDCAT
LOCATION
WELL GRACE #1
COMPANY BRAZOS PETROLEUM

COMPANY BRAZOS PETROLEUM COMPANY

WELL GRACE #1

FIELD WILDCAT

COUNTY ANDREWS STATE TEXAS

LOCATION 554' FNL & 554' FEL, SEC. 13, BLK. A-38, PSL SURVEY

API SERIAL NO. SEC. TWP. RANGE

Other Services DIL/SFL ML

Permanent Datum	G.L.		Elev. 3418
Log Measured From	K.B.	16.5 Ft. Above Perm. Datum	
Drilling Measured From	K.B.		

Elev.: K.B. 3434.5
D.F. 3433.5
G.L. 3418.0

Date	2-13-84	
Run No.	ONE	
Depth-Driller	11395	
Depth-Logger	11400	
Btm. Log Interval	11397	
Top Log Interval	SURFACE	
Casing-Driller	8 5/8 @ 4500	
Casing-Logger	4491	
Bit Size	7 7/8	
Type Fluid in Hole	F. GEL/MONOPAL	
Dens. | Visc.	8.9	43
pH | Fluid Loss	10.5	7 ml
Source of Sample	PIT	
Rm @ Meas. Temp.	.876 @ 56 F	
Rmf @ Meas. Temp.	.657 @ 56 F	
Rmc @ Meas. Temp.	@ F	
Source: Rmf | Rmc	M	
Rm @ BHT	.327 @ 162 F	
Circulation Stopped	0200	
Logger on Bottom	0800	
Max. Rec. Temp.	162 F	
Equip. | Location	8279	HOBBS
Recorded By	SPIELMAN	
Witnessed By	PAYTON	

REPRODUCED BY
Petroleum Information
MIDLAND, TEXAS 79701

REFERENCE Y 7087G

29 COMPLETION RECORD

MADE FROM BEST COPY AVAILABLE

SPUD DATE

COMP DATE

DST RECORD

API NO. 42-003-33854

CASING RECORD

PERFORATING RECORD

ACID FRAC SHOT

I P

GOR GR

T P C P

REMARKS

REPRODUCTION FOR RESALE IN WHOLE OR PART PROHIBITED

The well name, location and borehole reference data were furnished by the customer

RUN NO.	
Service Order No.	408649
Fluid Level	4201
Salinity, PPM CL	5300
Speed FPM	

EQUIPMENT DATA

Dens. Panel	227
Dens. Cart	814
Dens. Skid	895
Dens. Sonde	071
Dens. Source	5532
Dens. Calibrator	
Neut. Panel	227
Neut. Cart	8279
Neut. Source	2184
Neut. Calibrator	3421
GR Cart	30
Memorizer Panel	
Tape Recorder (TTR)	
Depth Encoder (DRE)	
Pressure Wheel (CPW)	
Centralizers / Bow Spring / Standoffs / or None — Type	BOWSPRING
No.	
S. O. — Inches	

Type Log	Depth

REMARKS:

CALIBRATION DATA

GR	BKG. CPS	SEE CAL FILM
	Source CPS	
	Sens. - Cal	
	T.C. - Cal	
CNL	Short Spacing - Before Log	
	Long Spacing - Before Log	
	Short Spacing - After Log	
	Long Spacing - After Log	
FDC	Pi — Before Log	
	Pi — Before Log	
	Pi — After Log	
	Pi — After Log	

LOGGING DATA

DEPTH		CNP			FDC						GR		
Top	Bottom	Porosity Scale	Matrix	Auto Corr. or Hole Size Setting	Porosity Scale	Grain Density	Liquid Density	Hole Fluid	Sens. Loss	f ø	Zero Div.	API / 100 Div.	
		30 -10	LIME	AUTO	30 -10	2.71	1.1	F.W.	165 API			100	

[illegible] interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our General Terms and Conditions as set out in our current Price Schedule.

CALIPER DIAM. IN INCHES

6 16

GAMMA RAY API UNITS

0 100

100 200

DEPTH

CORRECTION GRAMS/CC

Use this scale when correction curve is presented in Track 2 OR Use this scale when correction curve is presented in Track 3

0 +.25 -.25 0 +.25

BULK DENSITY GRAMS/CC

2.0 2.5 3.0

1.0 1.5 2.0

CNL POROSITY—%

30 20 10 0 -10

FILE

7

GR (GAPI)
100.00 200.00
CALI(IN)
6.0000 16.000
GR (GAPI)
0.0 100.00

DRHO(G/C3)
-0.100 0.4000
NPHI( )
0.3000 -0.100
RHOB(G/C3)
2.0000 3.0000

SENSOR MEASURE POINT TO TENSION REFERENCE POINT

SCNL	25.0	FEET	GR	33.5	FEET
FCNL	25.0	FEET	NCNL	25.0	FEET
SS1	3.0	FEET	SS2	3.0	FEET
LS	3.5	FEET	LITH	3.5	FEET
LL	3.5	FEET	LU	3.5	FEET
TENS	.0	FEET	CALI	3.6	FEET
NRAT	25.0	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
TD	11395.0	F	BS	7.87500	IN
PSNR	2.34700		SHT	80.0000	DEGF
MATR	LIME		HC	CALI	
MDEN	2.71000	G/C3	FD	1.10000	G/C3
BHS	OPEN		BARI	DISA	
[illegible]	[illegible]	F			

7

GR (GAPI)		DRHO(G/C3)		TENS(LB)	
100.00	200.00	-0.100	0.4000	-5000.	5000.0
CALI(IN)		NPHI( )			
6.0000	16.000	0.3000			-0.100
GR (GAPI)		DPHI( )			
0.0	100.00	0.3000			-0.100

SENSOR MEASURE POINT TO TENSION REFERENCE POINT

SCNL	25.0	FEET	GR	33.5	FEET
FCNL	25.0	FEET	NCNL	25.0	FEET
SS1	3.0	FEET	SS2	3.0	FEET
LS	3.5	FEET	LITH	3.5	FEET
LL	3.5	FEET	LU	3.5	FEET
TENS	.0	FEET	CALI	3.6	FEET
NRAT	25.0	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
TD	11395.0	F	BS	7.87500	IN
PSNR	2.34700		SHT	80.0000	DEGF
MATR	LIME		HC	CALI	
MDEN	2.71000	G/C3	FD	1.10000	G/C3
BHS	OPEN		BARI	DISA	
PP	RECO		DO	0.0	F

TAPE NOT MADE

GR (GAPI)		DRHO(G/C3)		TENS(LB)	
100.00	200.00	-0.100	0.4000	-5000.	5000.0
CALI(IN)		NPHI( )			
6.0000	16.000	0.3000			-0.100
GR (GAPI)		DPHI( )			
0.0	100.00	0.3000			-0.100

FILE
5

REPEAT SECTION

FILE

```
                              5

            GR  (GAPI)                        DRHO(G/C3)                   TENS(LB  )
100.00                    200.00      -0.100                 0.4000  -5000.                 5000.0
          CALI(IN  )                                         NPHI(   )
6.0000                    16.000      0.3000                                               -0.100
            GR  (GAPI)                                       DPHI(   )
0.0                       100.00      0.3000                                               -0.100

               SENSOR MEASURE POINT TO TENSION REFERENCE POINT

          SCNL 25.0   FEET                          GR    33.5   FEET
          FCNL 25.0   FEET                          MCNL  25.0   FEET
          SS1   3.0   FEET                          SS2    3.0   FEET
          LS    3.5   FEET                          LITH   3.5   FEET
          LL    3.5   FEET                          LU     3.5   FEET
          TENS   .0   FEET                          CALI   3.6   FEET
          NRAT 25.0   FEET

                                  PARAMETERS

          NAME   VALUE     UNIT                     NAME  VALUE      UNIT

          TD    11395.0    F                        BS    7.87500    IN
          PSNR 2.34700                              SHT   80.0000    DEGF
          MATR LIME                                 HC    CALI
          MDEN 2.71000     G/C3                     FD    1.10000    G/C3
          BHS  OPEN                                 BARI  DISA
          DO   0.0         F

                  BEFORE SURVEY CALIBRATION SUMMARY

   PERFORMED:      84/02/13
   PROGRAM FILE: LEP18  (VERSION    24.2    83/03/29)

 SGTK                  DETECTOR CALIBRATION SUMMARY

                MEASURED
              BKGD    JIG          CALIBRATED           UNITS
      GR       28     191              165              GAPI

 LDTC                  DETECTOR CALIBRATION SUMMARY

          LDT TOOL SERIAL NUMBER :    8279
              M E A S U R E D
            BKGD   AL+FE    AL   UNITS
      LL    17.7    96.3   92.3   CPS
      LU    69.7   137.1  146.5   CPS
      LS    52.6   155.0  165.5   CPS
    LITH     5.4    34.7   50.0   CPS
     SS1    16.0   181.0  193.0   CPS
     SS2    11.0   245.1  261.0   CPS

 CNTH                  DETECTOR CALIBRATION SUMMARY

                 TANK                              JIG
            INPUT   CALIBRATED              MEASURED   CALIBRATED
    NRAT    2.34700  2.158                   2.369      2.178

 LDTC                  CALIPER CALIBRATION SUMMARY

              MEASURED                          CALIBRATED
            SMALL    LARGE                     SMALL      LARGE        UNITS
    CALI     9.4     13.5                       8.0       12.0          IN
                      FILE

                    AFTER SURVEY TOOL CHECK SUMMARY

    PERFORMED:     84/02/13
    PROGRAM FILE: LEP18  (VERSION    24.2    83/03/29)

  LDTC                          TOOL  CHECK

           LDT TOOL SERIAL NUMBER :    8279

               BACKGROUND MEASURED
               BEFORE         AFTER         UNITS
      LL       17.78          17.84          CPS
      LU       69.75          70.18          CPS
      LS       52.68          52.96          CPS
    LITH        5.421          5.25          CPS
     SS1       16.06          15.97          CPS
     SS2       11.06          11.03          CPS

  CNTH                          TOOL  CHECK

                          JIG
                  BEFORE        AFTER
    NRAT          2.178         2.140

    POROSITY CHANGE  (LIME): -0.005
                          FILE

                              9
```

```
                         CHANGED PARAMETERS
  NAME  VALUE      UNIT   DEPTH ( F )      NAME  VALUE      UNIT    DEPTH ( F )
  BHS   CASE              4464.0
                   SHOP SUMMARY

    PERFORMED:      84/01/27
    PROGRAM FILE: CCS18  (VERSION     24.8    83/03/29)

  CNTH                 DETECTOR CALIBRATION SUMMARY

                    TANK                            JIG
           MEASURED  CALIBRATED         MEASURED   CALIBRATED

    NRAT    2.347       2.158              2.314       2.128

                         (CNC:87   , CNB:2531)

  LDTC                 DETECTOR CALIBRATION SUMMARY

               LDT TOOL SERIAL NUMBER :    B279
                  MASTER  CALIBRATED
                  BKGD   AL+FE    AL   UNITS
          LL      17.8    86.4   92.4   CPS
          LU      69.1   137.2  146.5   CPS
          LS      52.4   156.1  165.6   CPS
        LITH       5.2    34.8   50.1   CPS
         SS1      15.8   181.1  193.0   CPS
         SS2      10.9   245.2  261.2   CPS

  [illegible]          CALIPER CALIBRATION SUMMARY

                 MEASURED                         CALIBRATED
              SMALL    LARGE                  SMALL      LARGE          UNITS
        CALI   0.0      0.0                    0.0        0.0            IN
```

COMPANY [illegible] COMPANY

SCHL. FR 11397
SCHL. TD 11400
DRLR. TD 11395
Elev.
KB 3434.
DF 3433.
GL 3418.0

FIELD [illegible]

COUNTY [illegible] STATE TEXAS

umberger

BOREHOLE COMPENSATED SONIC LOG

COUNTY ANDREWS
FIELD WILDCAT
LOCATION
WELL RALPH #10-19
COMPANY MOBIL OIL CORP.

COMPANY MOBIL OIL CORPORATION

WELL RALPH #10-19

FIELD WILDCAT

COUNTY ANDREWS **STATE** TEXAS

LOCATION
660' FNL & 990' FEL
SEC. 19, BLK. A-37
PSL SURVEY

API SERIAL NO | SEC | TWP | RANGE

Other Services
DIL
FDC

Permanent Datum: GL Elev.: 3349
Log Measured From: KB 11 Ft Above Perm Datum
Drilling Measured From: KB

Elev: KB 3360
DF 3359
GL 3349

Date	1-14-78			
Run No.	ONE			
Depth—Driller	8683			
Depth—Logger (Schl.)	8680			
Btm. Log Interval	8677			
Top Log Interval	SURF.			
Casing—Driller	8 5/8 @4400	@	@	@
Casing—Logger	4395			
Bit Size	7 7/8			
Type Fluid in Hole	FRESH WATER GEL			
Dens. | Visc.	8.8 | 49	|	|	|
pH | Fluid Loss	9.2 | 8 ml	| ml	| ml	| ml
Source of Sample	FLOWLINE			
Rm @ Meas. Temp.	.75 @65 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	.59 @65 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	1.129@65 °F	@ °F	@ °F	@ °F
Source: Rmf | Rmc	M | C	|	|	|
Rm @ BHT	.46 @ 110°F	@ °F	@ °F	@ °F
TIME Circulation Stopped	0800			
TIME Logger on Bottom	1630			
Max. Rec. Temp.	110 °F	°F	°F	°F
Equip. | Location	7626 | MID-OH	|	|	|
Recorded By	SEVOUGIAN			
Witnessed By Mr	THOMPSON			

Reproduced By
Electrical Log Services
Midland, Texas 79701

REFERENCE W 6072W

10 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

API NO. 42-003-31589

CASING RECORD

PERFORATING RECORD

ACID FRAC SHOT

I P

GOR **GR**

T P **C P**

REMARKS:

Ⓟ REPRODUCTION FOR RESALE PROHIBITED

Run No.	ONE			
Service Order No	2443D			
Fluid Level	130'			

EQUIPMENT DATA

Sonic Panel No.	42			
Sonic Cart No.	752			
Sonic Sonde No.	1469			
Mem. Panel No.	88			
G.R. Cart. No.	1605			
G.R. Panel No	56			
Caliper No	364			
TTR No	796			
Centralizers: No.	1			
Type	CME-Z			
Standoffs: No.	1			
Type	1 1/2"			
Time Const.-Sec.				
Speed - F.P.M.	50			

SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

LOGGING DATA

Porosity Selectors				Depth	
Δtm	Δtf	Cp	Ø Scale	From	To

REMARKS

FILM SPLICE ON 2" AT 4000'.

CALIBRATION DATA

	BKG CPS	64
GR	Source CPS	523
	Tc Sec	

Velocity (ft/sec) = 1,000,000 / Interval Transit Time (microseconds per foot)

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CALIPER DIAM IN INCHES

6 16

GAMMA RAY API UNITS

0 100

100 200

DEPTH

INTERVAL TRANSIT TIME MICROSECONDS PER FOOT T 3 R. 2 R. 2

100 70 40

160 130 100

INTEGRATED TRAVEL TIME

6
6

GAMMA RAY API UNITS
0 100
100 200

CALIPER DIAM IN INCHES
6 16

DEPTH

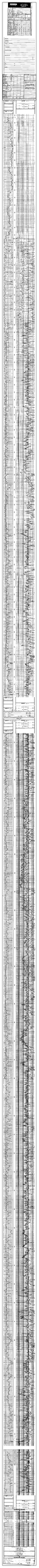
INTEGRATED TRAVEL TIME

INTERVAL TRANSIT TIME MICROSECONDS PER FOOT T 3 R, 2 R,
100 70 40
160 130 100

COMPANY MOBIL OIL CORPORATION
WELL RALPH #10-19
FIELD WILDCAT
COUNTY ANDREWS STATE TEXAS

SCHL FR 8677
SCHL TD 8680
DRLR TD 8683
Elev. KB 3360
DF 3359
GL 3349

1-25-78



Welex

RADIOACTIVITY LOG

COMPANY OPCO Oil & Gas Company
WELL Humble - Sims # 1
FIELD Undesignated
County Andrews State Texas

COMPANY OPCO OIL & GAS COMPANY

WELL HUMBLE - SIMS # 1

FIELD UNDESIGNATED

COUNTY ANDREWS STATE TEXAS

Location 467' FWL & 1787' FNL Sec. 16, Blk. A - 29, PSL Survey.

Sec. _____ Twp _____ Rge _____

Other Services:

Permanent Datum Ground Level Elev. 3515'
Log Measured from K. B. - 10 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Elev.: K.B. 3525'
D.F. 3524'
G.L. 3515'

Date	10/29/68		
Run No	- One -		
Type Log	G/R - N/G		
Depth—Driller	4450		
Depth—Welex	4451		
Bottom Logged Interval	4450		
Top Logged Interval	Surface		
Type Fluid in Hole	Water		
Salinity, PPM Cl			
Density			
Level			
Max rec temp., deg. F			
Operating Rig Time			
Recorded By	J.S. Cauble		
Witnessed by	Mr. Butler & Mr. Looney		

RUN	BORE-HOLE RECORD			CASING RECORD			
No.	Bit	From	To	Size	Wgt.	From	To
-1-	7-7/8"	0	4475'	4-1/2"		0	4450'

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

PERFORATING RECORD

ACID, FRAC SHOT

I P

GOR GR

T P C P

REMARKS,

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
Run No.	- One -	Run No.	- One -
Tool Model No.	83	Log Type	Neutron - Gamma
Diameter	1-5/8"	Tool Model No.	83
Detector Model No.	Type III	Diameter	1-5/8"
Type	Bismuth	Detector Model No.	Type II
Length	27"	Type	Bismuth
Distance to N. Source	96"	Length	12"
		Source Model No.	5 CU
GENERAL		Serial No.	N 27
Hoist Truck No.	8443	Spacing	15,6"
Instrument Truck No.	8443	Type	PuBe
Tool Serial No.	15352	Strength	8.8 x 10^6 Neutrons/Second

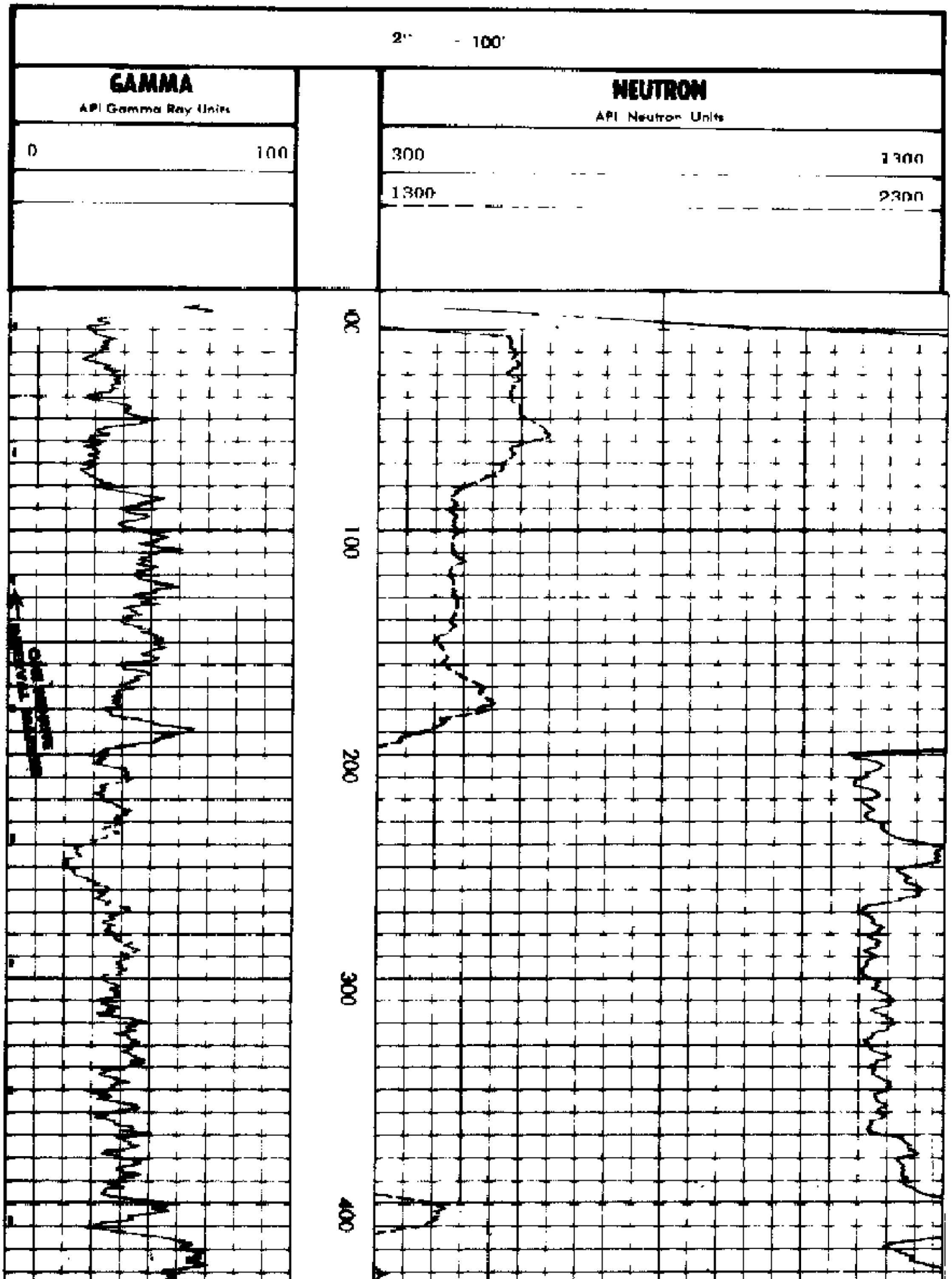
LOGGING DATA

Run No.	GENERAL Depths From	To	Speed Ft/Min	GAMMA RAY T C Sec.	Sens Settings	Zero Div. L or R	API G R Units per Log Div.	NEUTRON T C Sec.	Sens Settings	Zero Div. L or R	API N Units per Log Div.
-1-	0	4450'	*	2	100	0	10	2	1000	3/L	50

Reference Literature.

Service Ticket No Remarks: * Recorded spots on left indicate logging speed.

Fold Here


2" - 100'
GAMMA
API Gamma Ray Units
0
100
NEUTRON
API Neutron Units
300
1300
1300
2300
100
200
300
400

500
600
700
800
900
1000

1100
1200
1300
1400
1500
1600
1700

1900

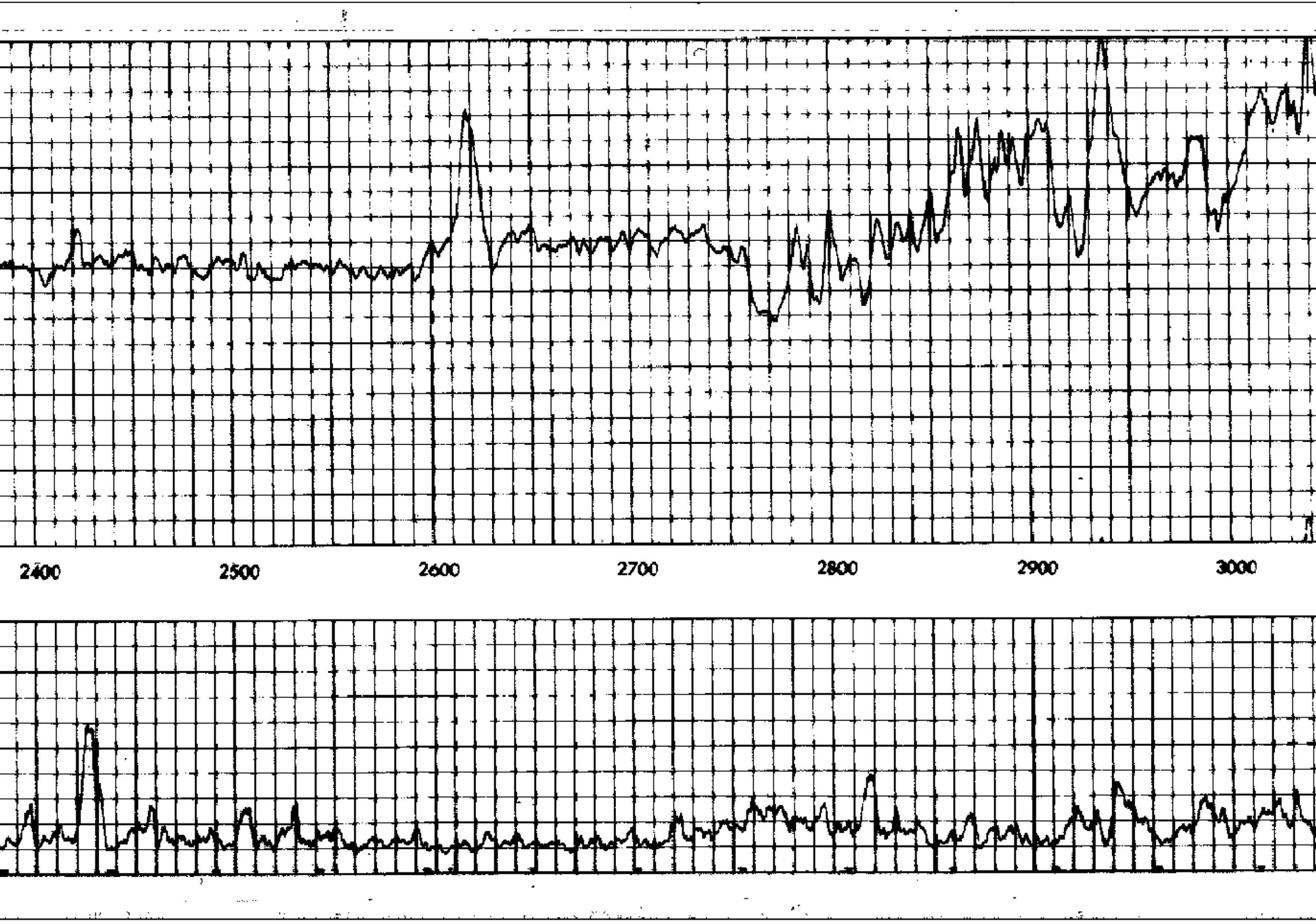
1900

2000

2100

2200

2300


2400
2500
2600
2700
2800
2900
3000

3100
3200
3300
3400
3500
3600

3700

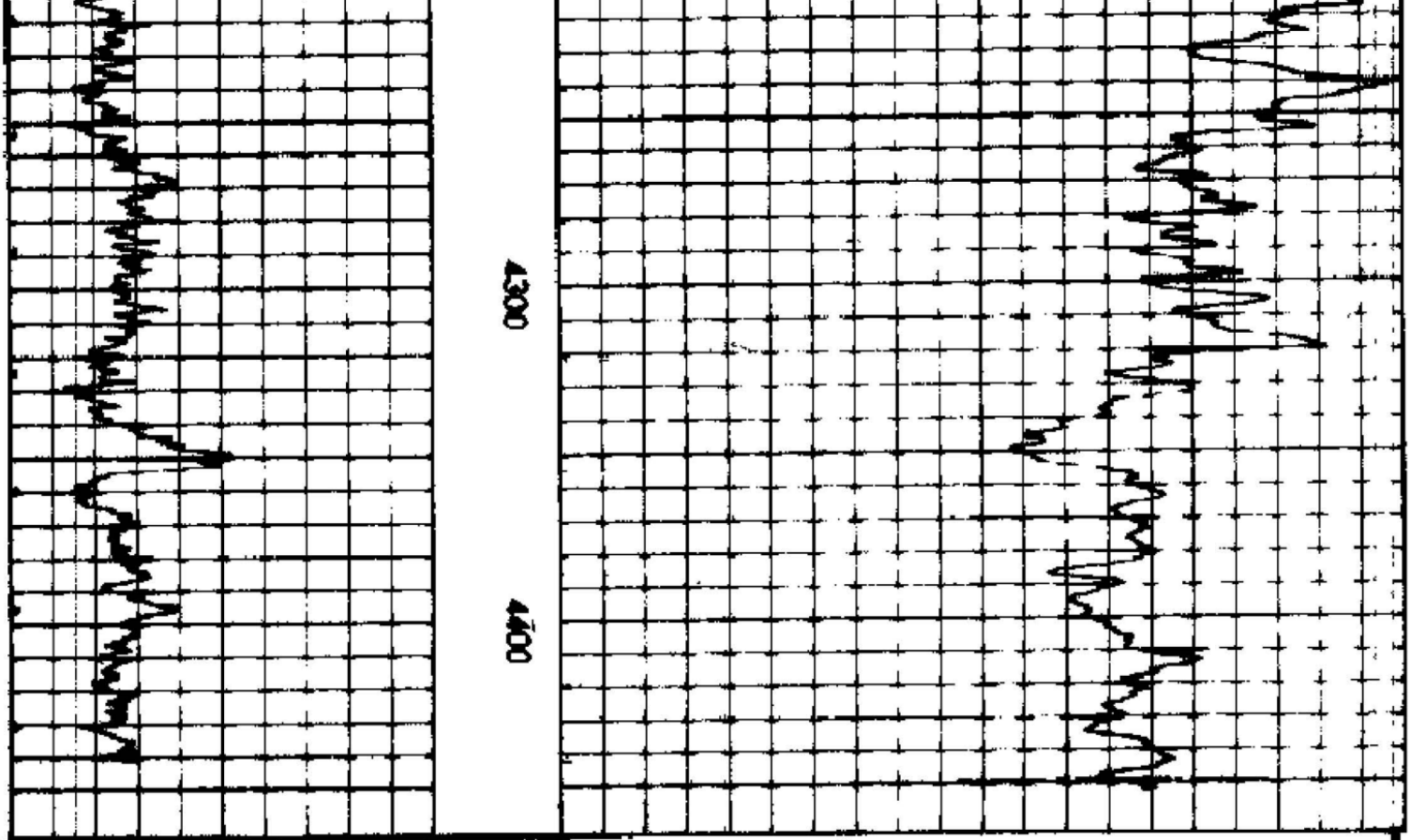
3800

3900

4000

4100

4200



0	100	300	1300
		1300	2300
GAMMA API Gamma Ray Units		**NEUTRON** API Neutron Units	

OPCO Oil & Gas Company
Rumble - Sims # 1
Undesignated Field
Andrews County, Texas

TD LOGGED	4450'
TD DRILLER	4450'
TD WELEX	4451'

5" — 100'

GAMMA API Gamma Ray Units		**NEUTRON** API Neutron Units	
0	100	300	1300

3850

3900

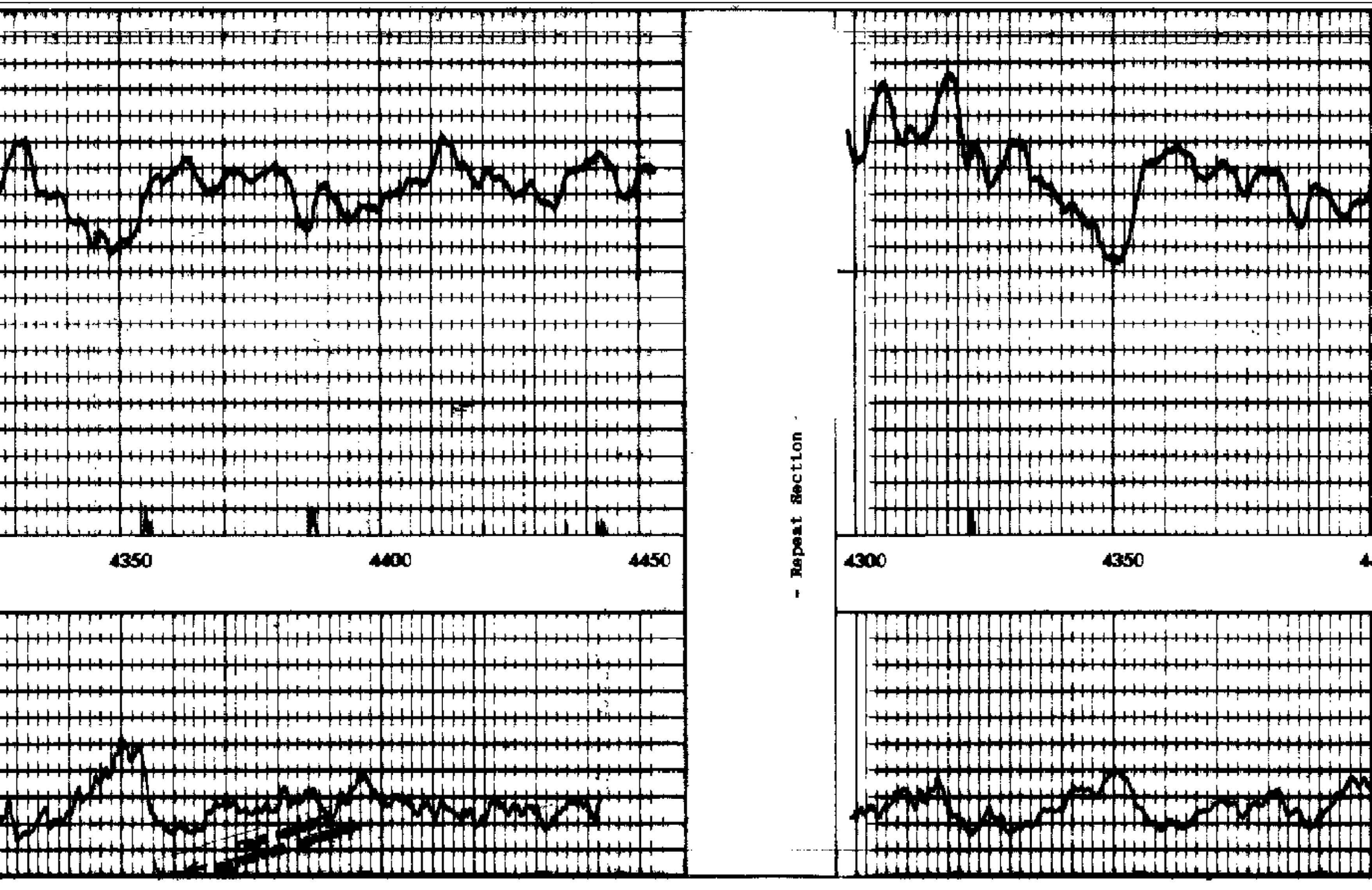
3950

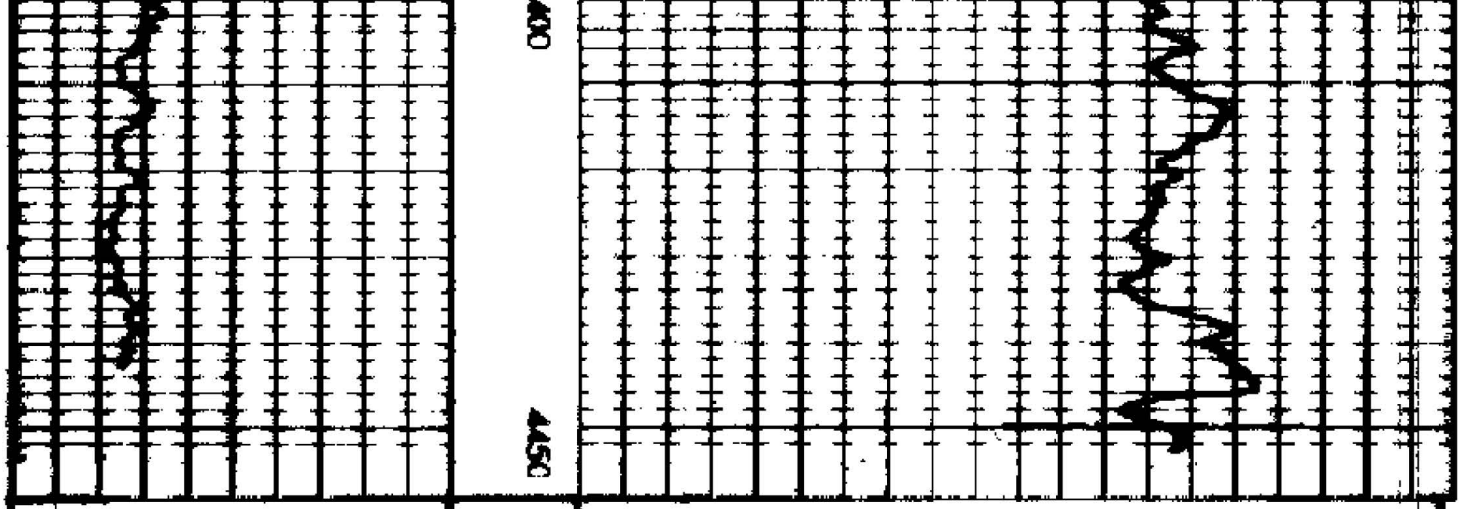
4000

4050

Casing Collars

4100
4150
4200
4250
4300


4350
4400
4450
- Repeat Section -
4300
4350



0	100	300	1300
GAMMA API Gamma Ray Units		**NEUTRON** API Neutron Units	

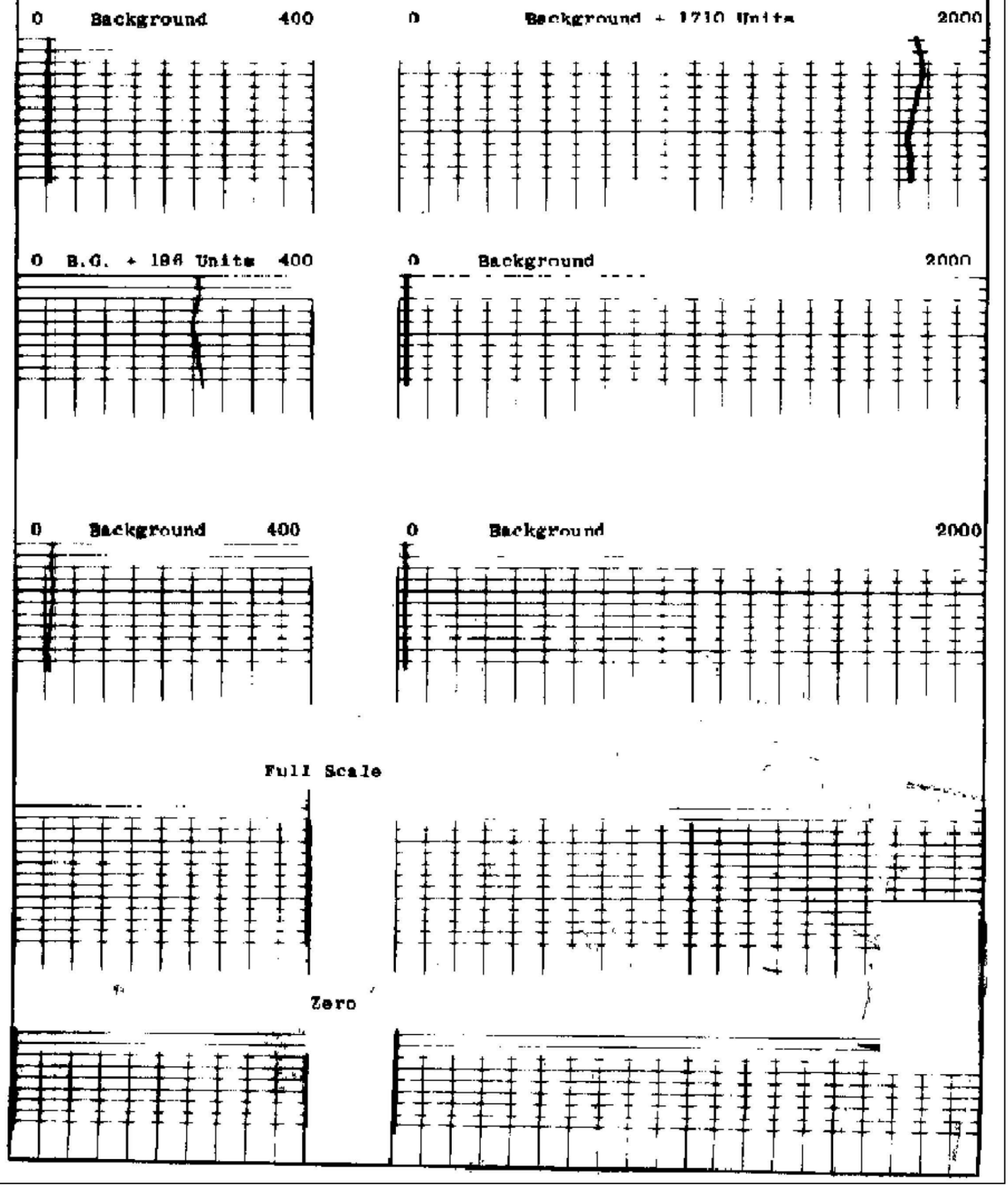
OPCO Oil & Gas Company
Rumble - Sims # 1
Undesignated Field
Andrews County, Texas

TD LOGGED	4450'
TD DRILLER	4450'
TD WELEX	4451'

After Survey Calibrations

0 Background 400		0 Background + 1710 Units 2000	
0 B.G. + 196 Units 400		0 Background 2000	
0 Background 400		0 Background 2000	

Before Survey Calibrations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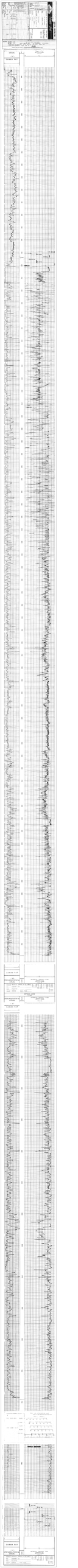
0 Background + 1710 Units 2000
0 B.G. + 186 Units 400
0 Background 2000
0 Background 400
0 Background 2000
Full Scale
Zero



LANE WELLS

RADIOACTIVITY LOG

GAMMA RAY NEUTRON

SCHLUMBERGER

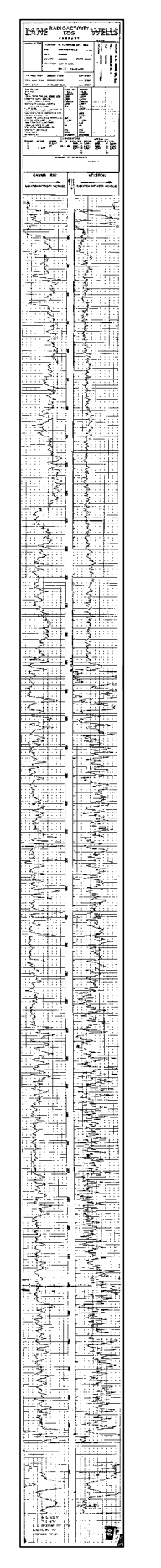
GAMMARON

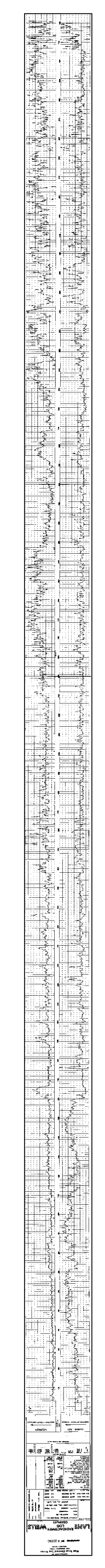
Schlumberger

Radiation Log

Schlumberger

Radiation Log


BAKER
RADIOACTIVITY
LOG
WELLS
SURVEY
GAMMA RAY
NEUTRON



LANE WELLS RADIOACTIVITY LOG COMPANY

FILE NO.

Location of Well

COMPANY: MAGNOLIA PETROLEUM COMPANY

WELL: RALPH 11 A-37 # 15

FIELD: FULLERTON

COUNTY: ANDREWS STATE: TEXAS

LOCATION: SECTION 11, BLOCK A-37

COMPANY: MAGNOLIA PETROLEUM COMPANY
WELL: RALPH 11 A-37 # 15
FIELD: FULLERTON
COUNTY: ANDREWS STATE: TEXAS
LOCATION: SECTION 11, BLOCK A-37

LOG MEAS. FROM KELLY DRIVE BUSHING ELEV. 3340

DRLG. MEAS. FROM KELLY DRIVE BUSHING ELEV. 3340

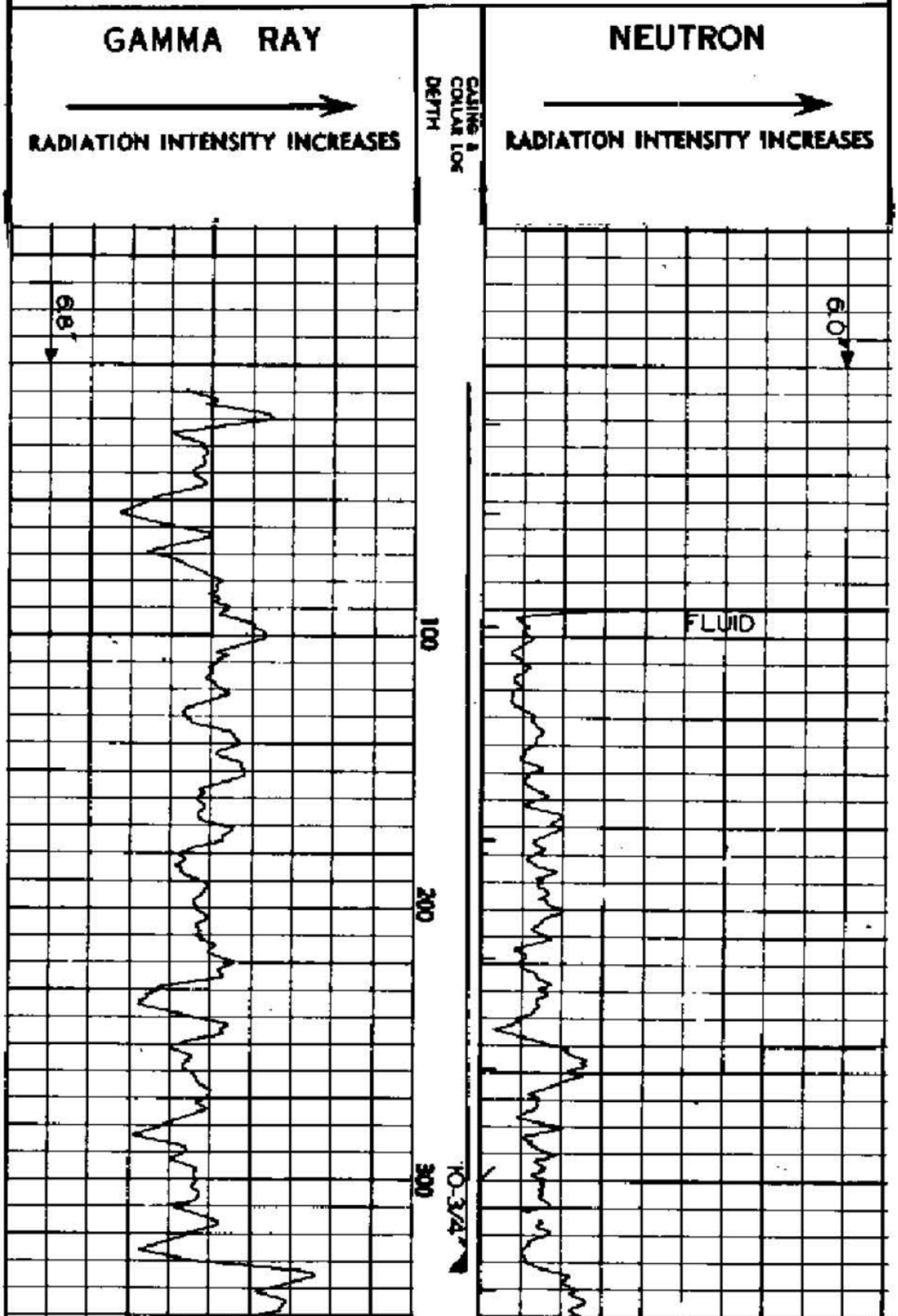
PERM. DATUM 7" HEADEN HEAD ELEV. 3329

TYPE OF LOG	GAMMA RAY	NEUTRON		
RUN NO.	1	1		
DATE	10-24-51	10-24-51		
TOTAL DEPTH (DRILLER) STRAIN	7210	7210		
EFFECTIVE DEPTH (DRILLER)	7210	7210		
TOP OF LOGGED INTERVAL	0	0		
BOTTOM OF LOGGED INTERVAL	7220	7220		
TYPE OF FLUID IN HOLE	MUD	MUD		
FLUID LEVEL	89	89		
MAXIMUM RECORDED TEMP.				
NEUTRON SOURCE STRENGTH & TYPE		600 M		
SOURCE SPACING — IN.		8.25		
LENGTH OF MEASURING DEVICE — IN.	36	9		
O.D. OF INSTRUMENT — IN.	3-5/8	3-5/8		
TIME CONSTANT — SECONDS	1	1		
LOGGING SPEED FT./MIN.	30	35		
STATISTICAL VARIATION — IN.				
SENSITIVITY REFERENCE	224	275		
RECORDED BY	SCHLOTTERBACK			
WITNESSED BY	HOUSTON	HOUSTON		

CASING RECORD

RUN NO.	BIT SIZE	CASING	WT.—LB.	FROM	WELL RECORD TO	INTERVAL FROM	R/A LOG TO
1	15	10-3/4		0	TO 333	0	TO 333
1	9-7/8	7-5/8		0	TO 3910	0	TO 3912
1	6-3/4				TO	3912	TO T.D.
					TO		TO
					TO		TO

REMARKS OR OTHER DATA


GAMMA RAY
RADIATION INTENSITY INCREASES
CASING & COLLAR LOG DEPTH
NEUTRON
RADIATION INTENSITY INCREASES
6.0
FLUID
100
200
300
10-3/4"

400
500
600
700
800

900
1000
1100
1200
1300

1400

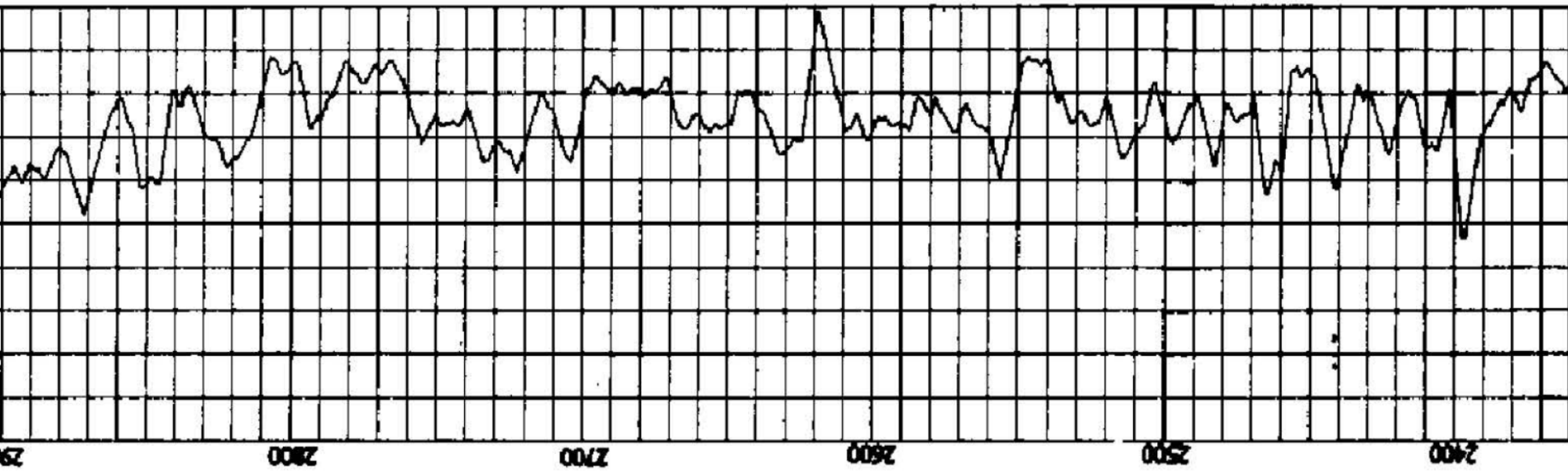
1500

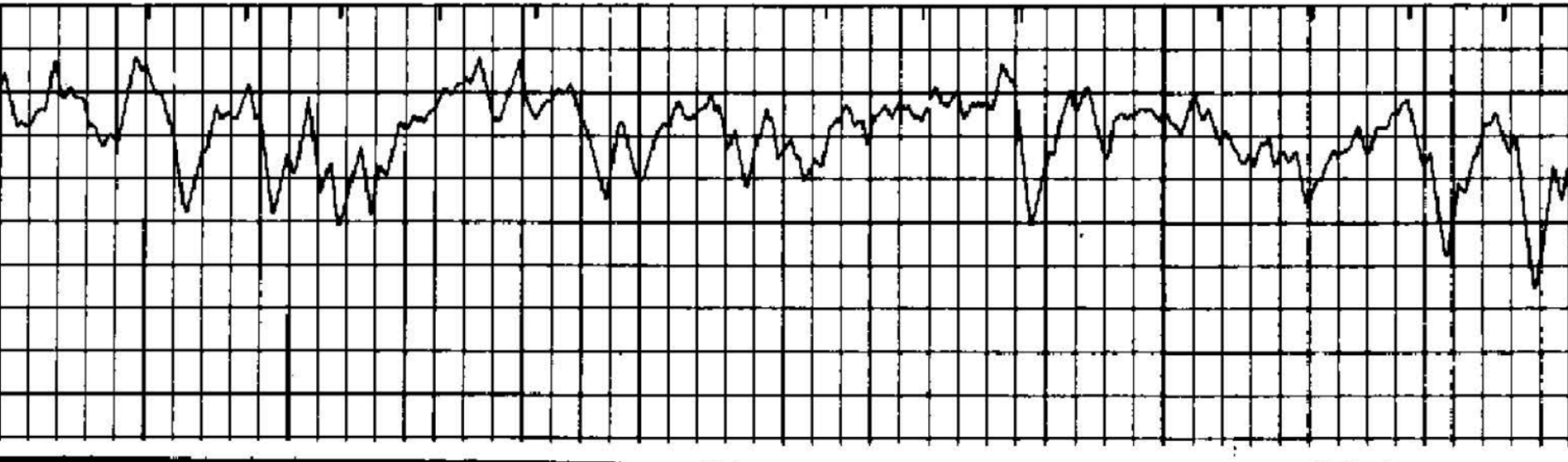
1600

1700

1800

1900
2000
2100
2200
2300


2400
2500
2600
2700
2800



3000
3100
3200
3300
3400

3500
3600
3700
3800
3900
7-5/8"

4000
4100
4200
4300
4400

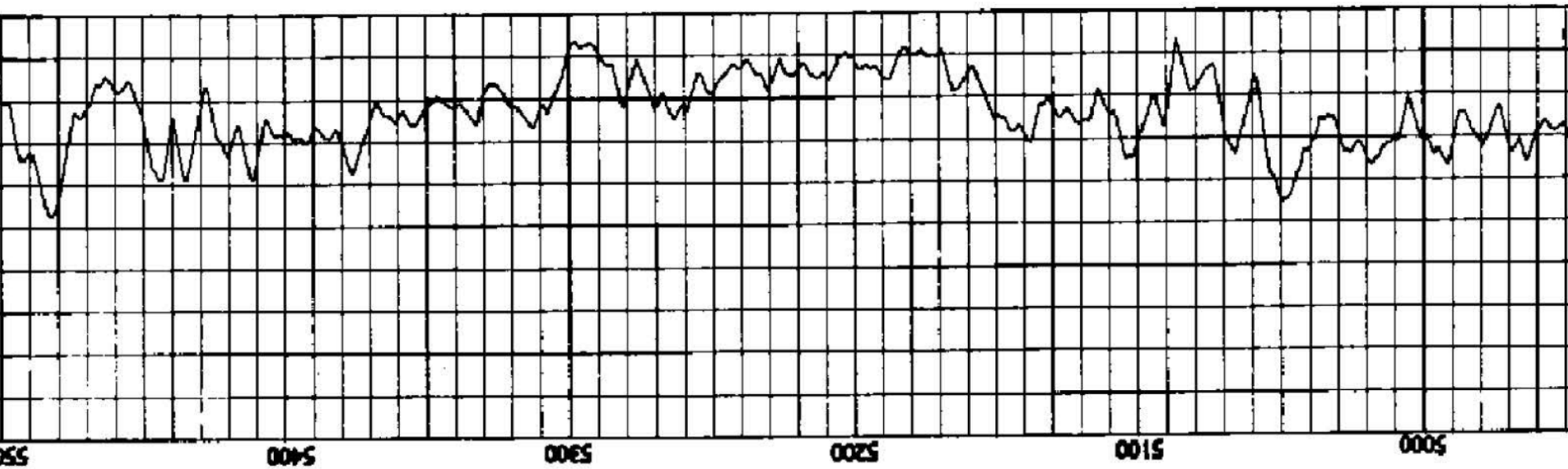
4500

4600

4700

4800

4900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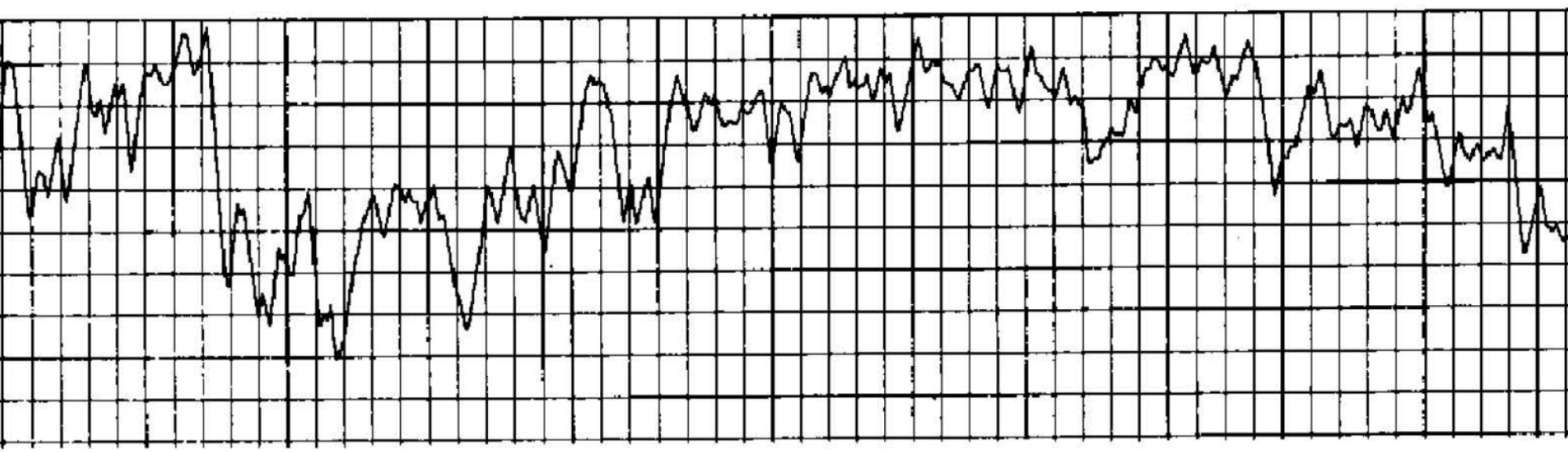
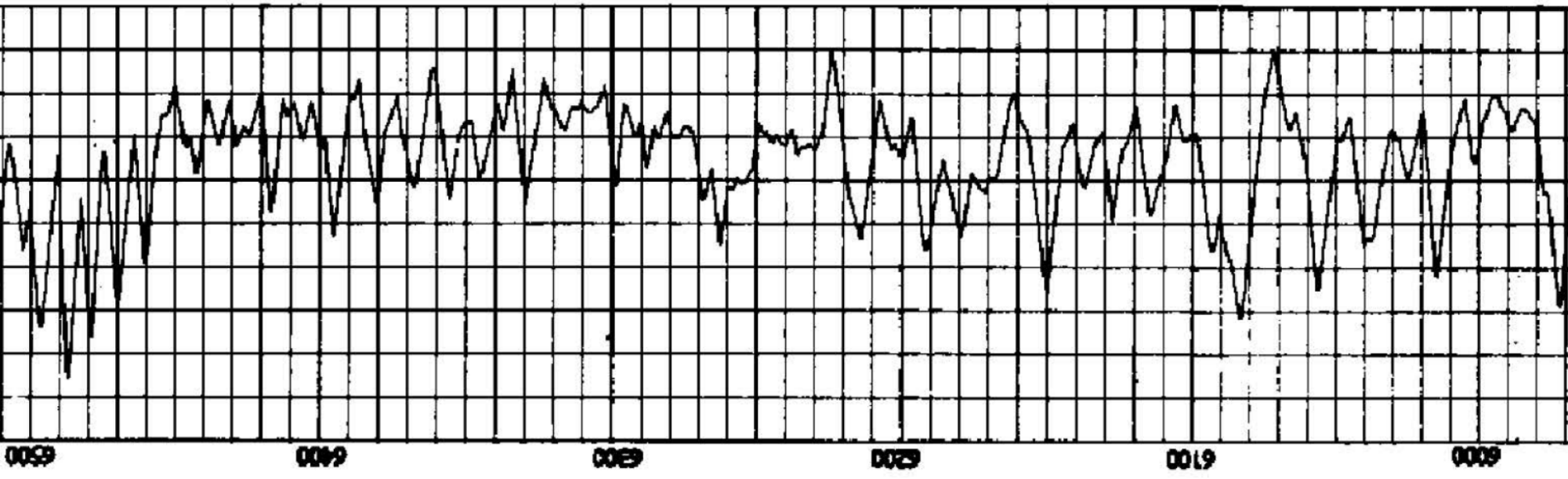
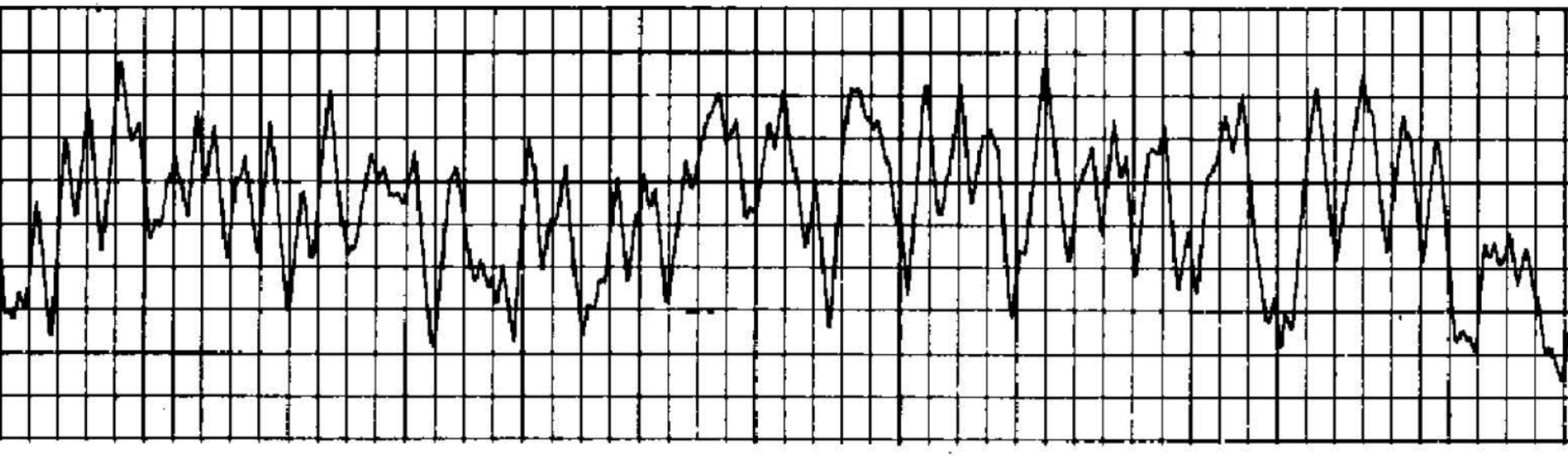
5200
5300
5400

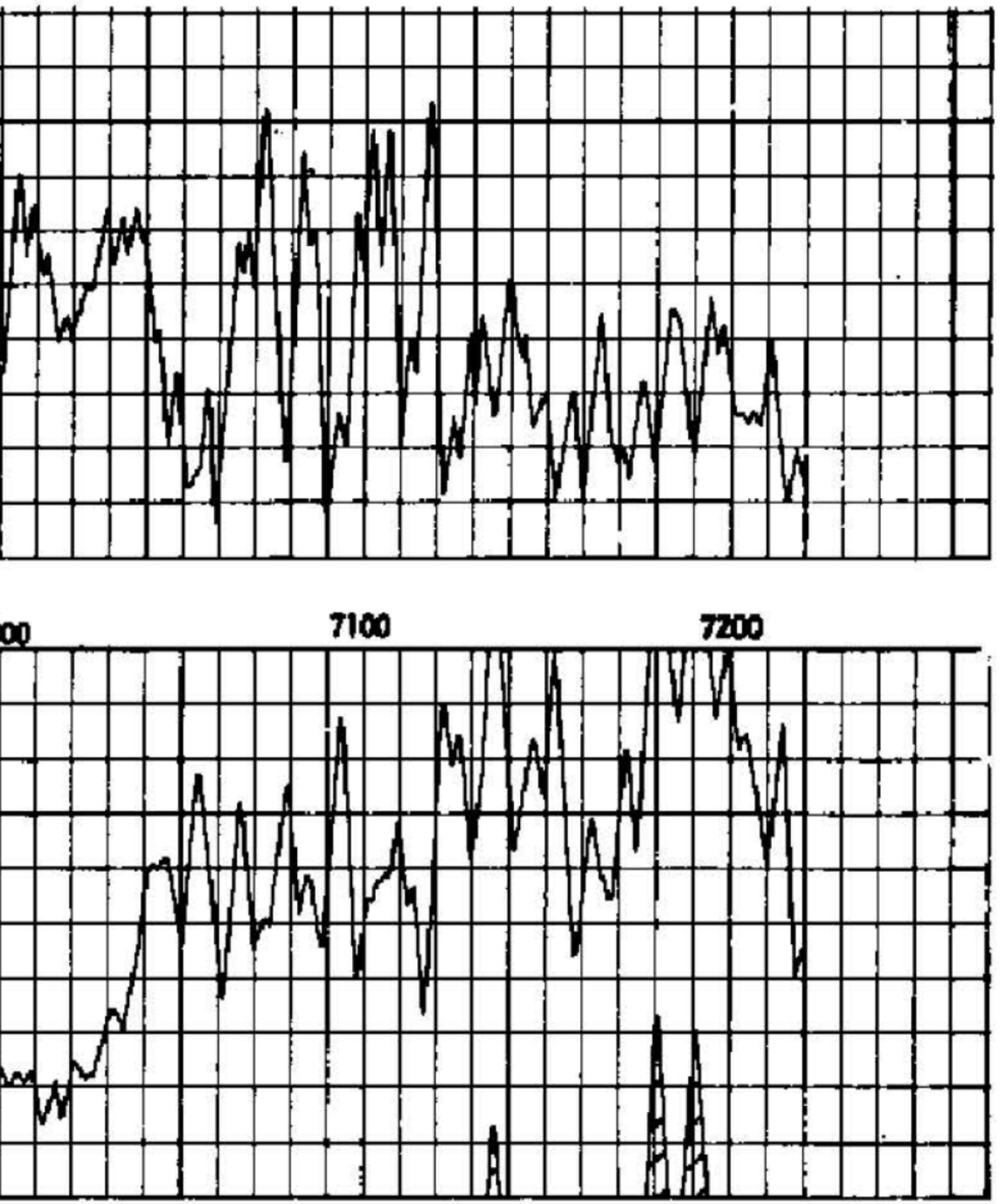


5900
5800
5700
5600


6500
6400
6300
6200
6100
6000



6600
6700
6800
6900
70


00
7100
7200

LANE-WELLS COMPANY

RADIOACTIVITY LOG

Location of Well

3357' D.F.

COMPANY: MAGNOLIA PET. CO.

WELL: RALPH NO. 14 FILE:

FIELD: FULLERTON

COUNTY: ANDREWS STATE: TEXAS

LOCATION: SW/4 OF SW/4 SEC. 11

BLK. A-37 PSL

LOG MEASURED FROM TOP OF ROTARY ELEVATION 3358.5'

DRILLING MEASURED FROM T.O. ROTARY ELEVATION 3358.5'

PERMANENT DATUM 7" BRADEN HEAD ELEVATION 3347.5'

COMPANY: MAGNOLIA PET. CO.

WELL: RALPH NO. 14 FILE:

FIELD: FULLERTON

COUNTY: ANDREWS STATE: TEXAS

LOCATION:

RUN NUMBER	1	1		
TYPE OF LOG	GAMMA RAY	NEUTRON		
DATE	3-15-49	3-15-49		
COMPANY DEPTH H. L.	7232'	7232'		
MAXIMUM DEPTH REACHED	7233'	7233'		
WELL FLUID	OIL	OIL		
FLUID LEVEL	FULL	FULL		
MAXIMUM TEMPERATURE				
O.D. OF INSTRUMENT—INCHES	3 5/8	3 5/8		
SENSITIVITY REFERENCE	274	275		
RECORDED BY	KELLY	KELLY		
WITNESSED BY	SAMPLES	SAMPLES		

CASING RECORD

RUN NO.	SIZE—IN.	WT.—LB.	INTERVAL
1	15 3/8		SURFACE TO 326'
1	9 5/8		SURFACE TO 3949'
1	7		SURFACE TO 6802'
			TO
			TO

OPEN HOLE RECORD

BIT SIZE—IN.	INTERVAL
6 1/2	6802' TO T.D.
	TO
	TO
	TO
	TO

REMARKS OR OTHER DATA

Reproduced By

West Texas Electrical Log Service

1305 Commerce Street

Dallas 1, Texas

REFERENCE Nº W 4287 -A

SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS

Electrical Log

COMPANY HUMBLE OIL & REFINING CO.

WELL H.O. SIMMS #6

FIELD NELSON-WICHITA

LOCATION PSL SURVEY

Location of Well
660' FS&EL
Sec.25, Blk.A-35
PSL Survey

ES, GRL (ML)

Andrews
Nelson-Wichita
H.O. Simms #6
Humble Oil & Refining Co.

COUNTY
FIELD or LOCATION
WELL
COMPANY

COUNTY ANDREWS

STATE TEXAS

Elevation: D.F.
K.B.
or G.L. 3356

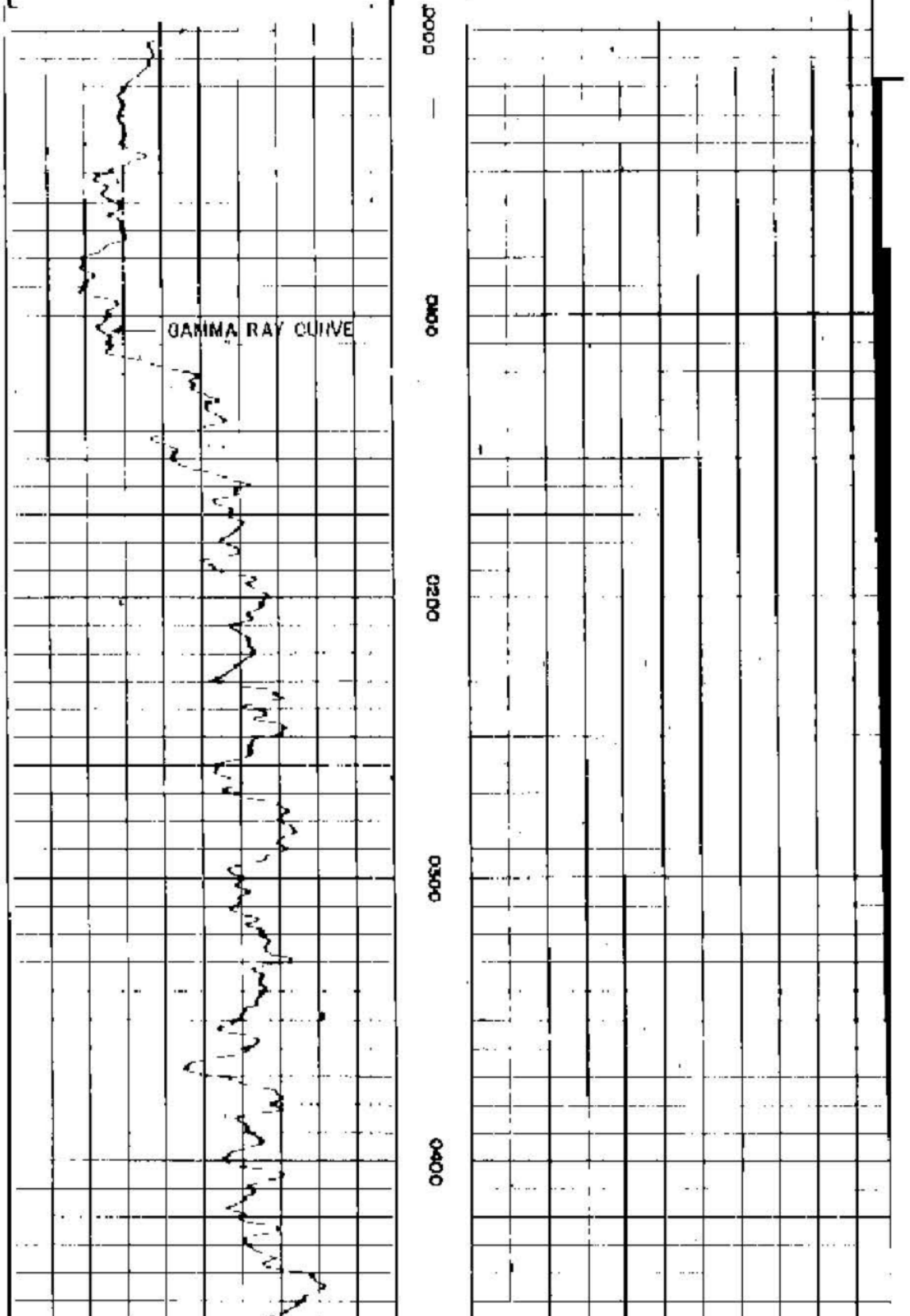
FILING No.

RUN No.	1					
Date	1-3-54					
First Reading	7348					
Last Reading	4160					
Feet Measured	3188					
Csg. Schlum.	4160					
Csg. Driller	4160					
Depth Reached	7351					
Bottom Driller	7345					
Depth Datum	KDB. 11.35' above GL					
Mud Mat.	Gel, Queb., Caustic Soda, Soda Ash					
" Density	8.9					
" Viscosity	48					
" Reslst.	.57@ 52F	@ °F	@ °F	@ °F	@ °F	
" Res. BHT	.21@ 139F	@ °F	@ °F	@ °F	@ °F	
" pH	@ °F	@ °F	@ °F	@ °F	@ °F	
" Wtr. Loss	24 CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	
Max. Temp. °F	139					
Bit Size	6 3/4"					
Spcgt.--AM	10"					
AO	32" LS					
AO	19'					
Opr. Rig time	2 Hrs.					
Truck No.	1130-Ker.					
Recorded By	Manogd					
Witness By	Mr. Lyon					

REMARKS

THIS IS NOT A COMPLETE REPRODUCTION OF THE ORIGINAL THREE-TRACK SCHLUMBERGER LOG.

SPONTANEOUS POTENTIAL millivolts	DEPTHS	RESISTIVITY -ohms. m²/m
20 +		0 16" Normal 75
		0 750
Radioactivity Increases →		0 32" LS 60
0		


GAMMA RAY CURVE
0000
0100
0200
0300
0400

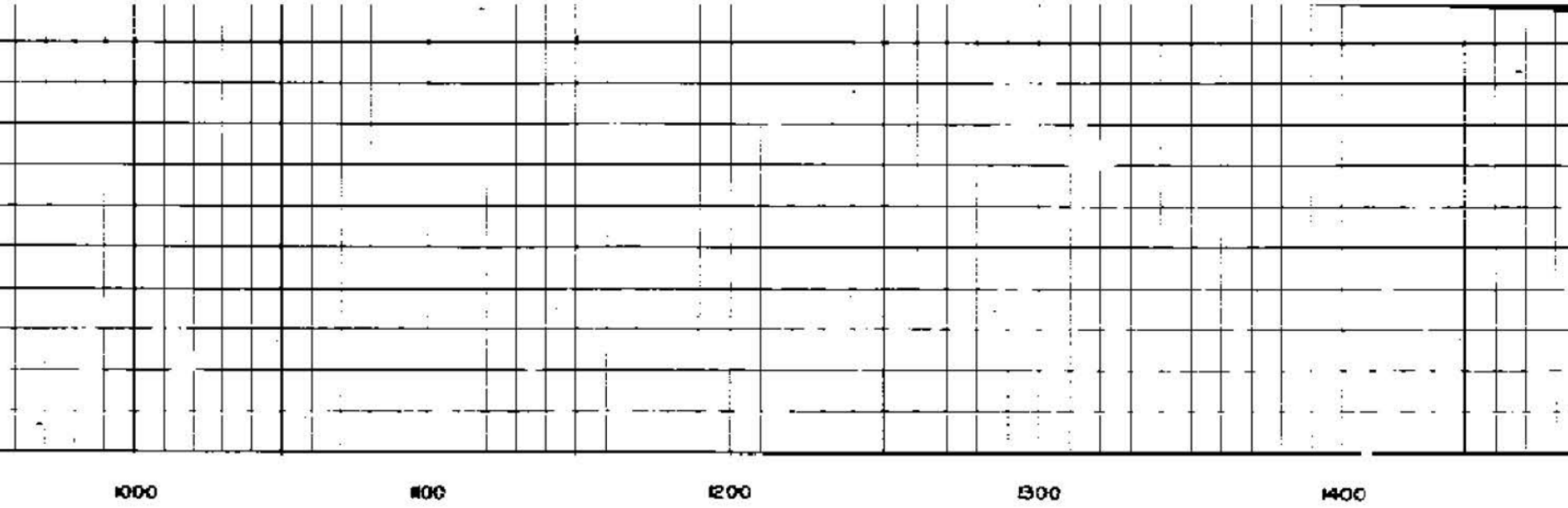
0500

0600

0700

0800

0900


1000
1100
1200
1300
1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

2500
2600
2700
2800
2900

3400
3200
3000
2800

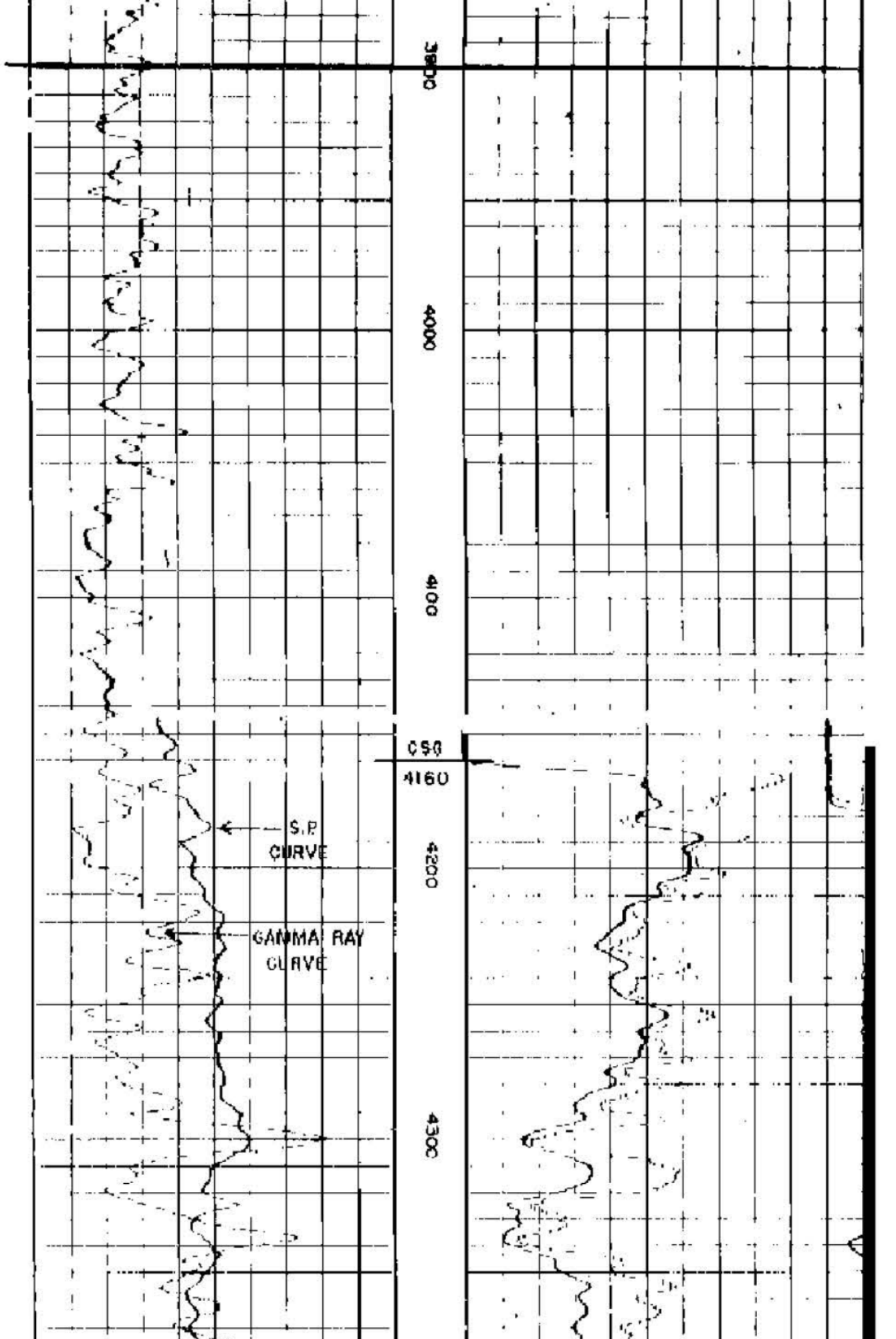
3400

3500

3600

3700

3800


3800
4000
4100
CSG
4160
4200
4300
S.P.
CURVE
GAMMA RAY
CURVE

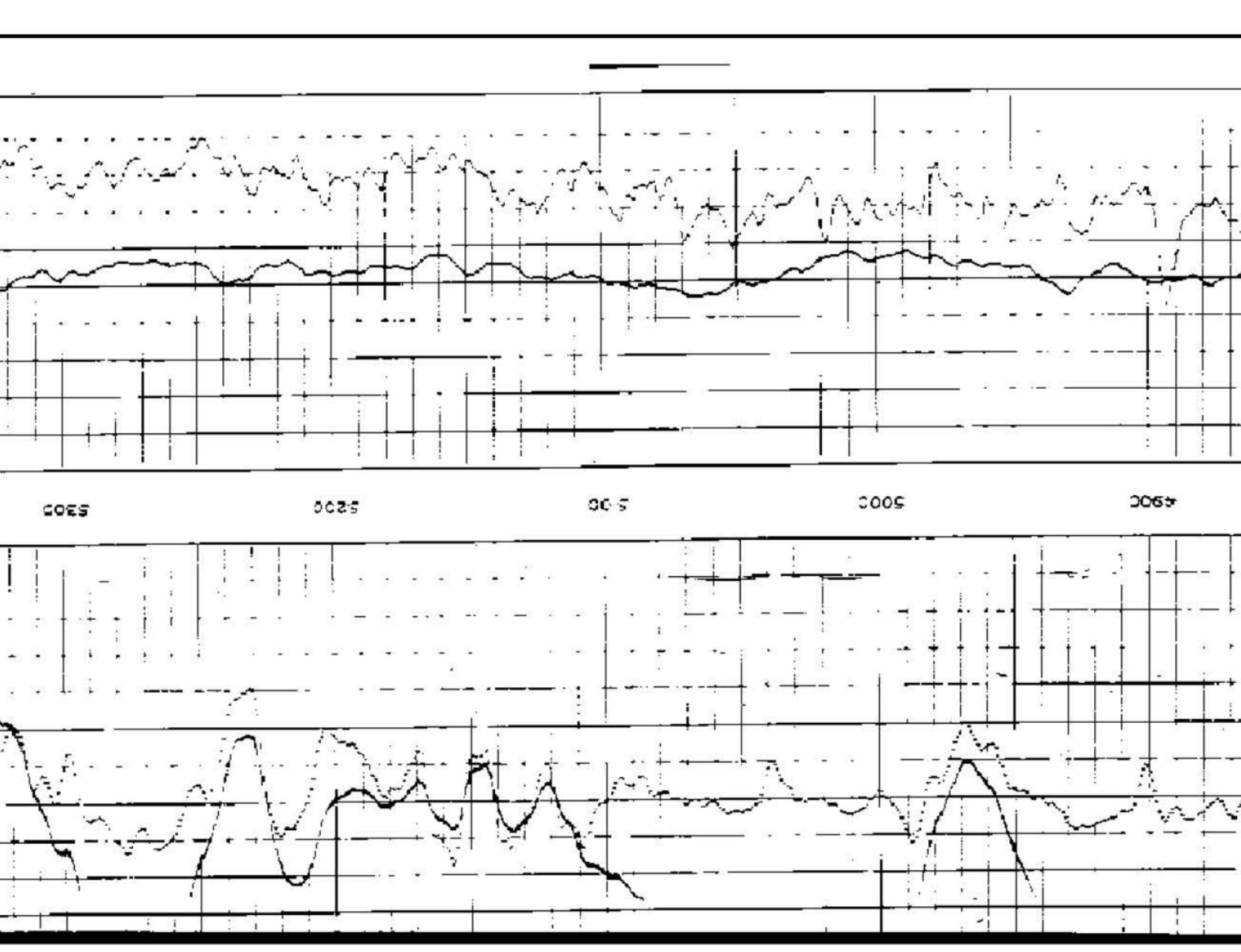
4400

4500

4600

4700

4800


5300
5200
5100
5000
4900

5400
5500
5600
5700
5800

5900

6000

6100

6200

6300

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6500

6600

6700

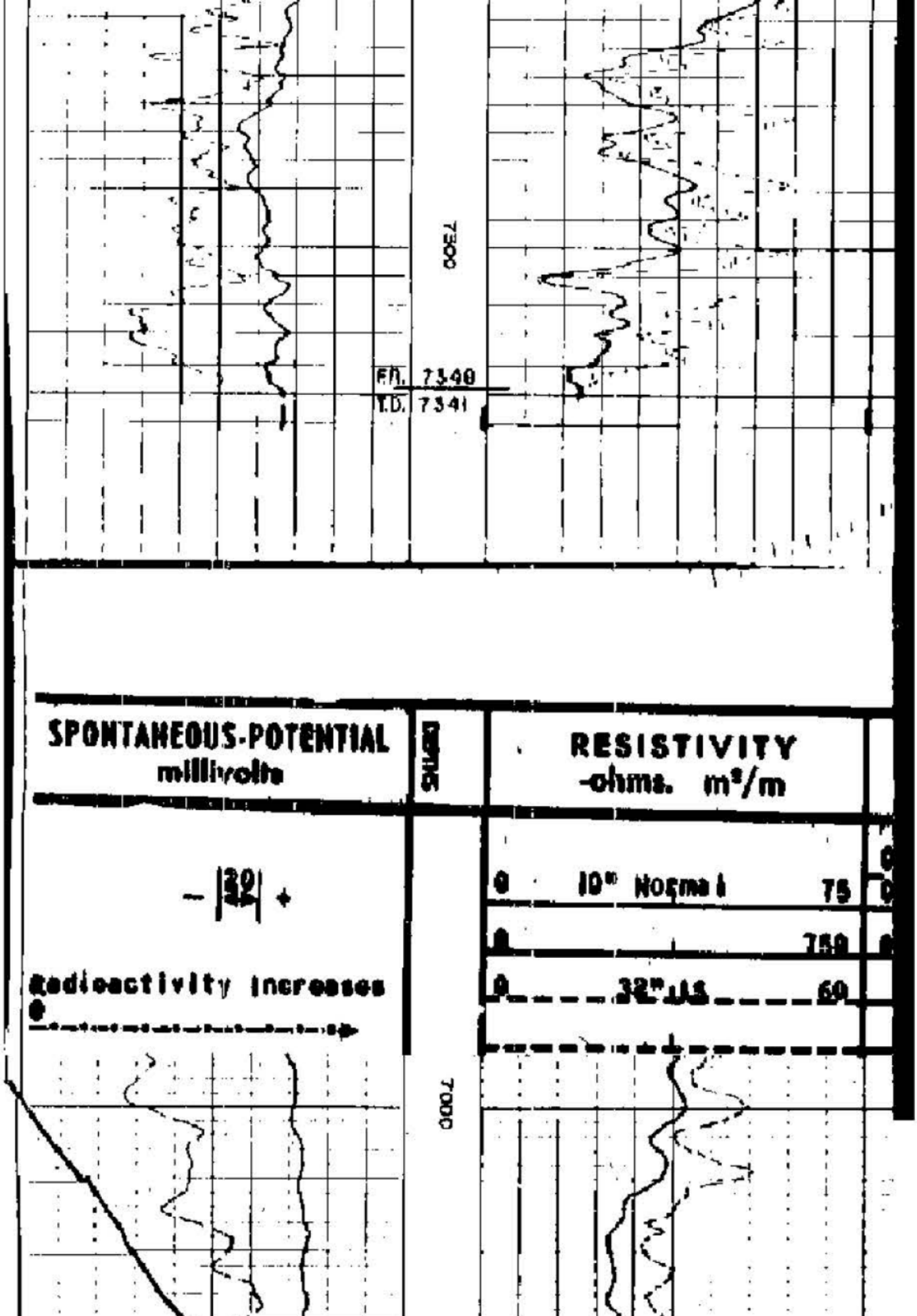
6800

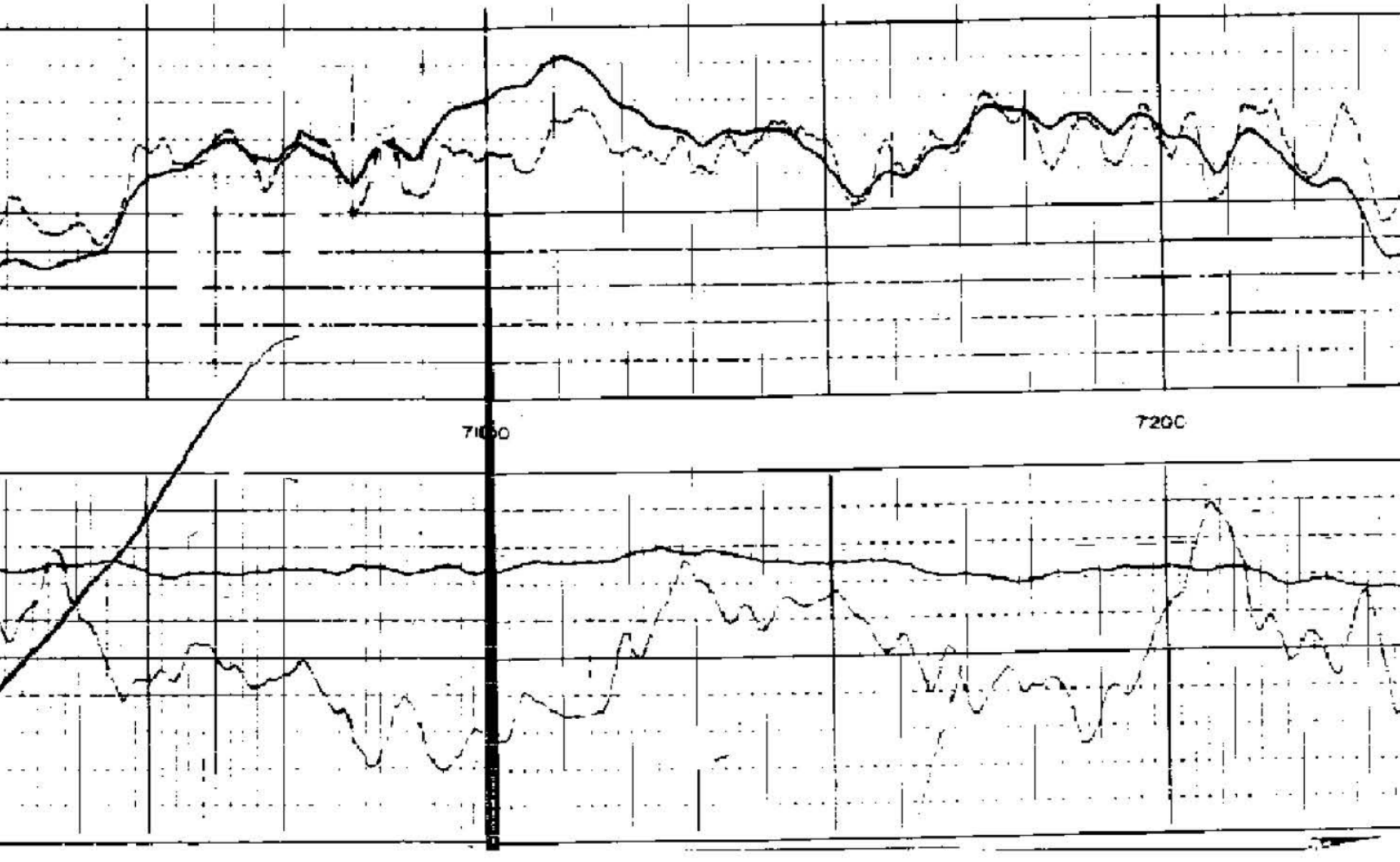
6900

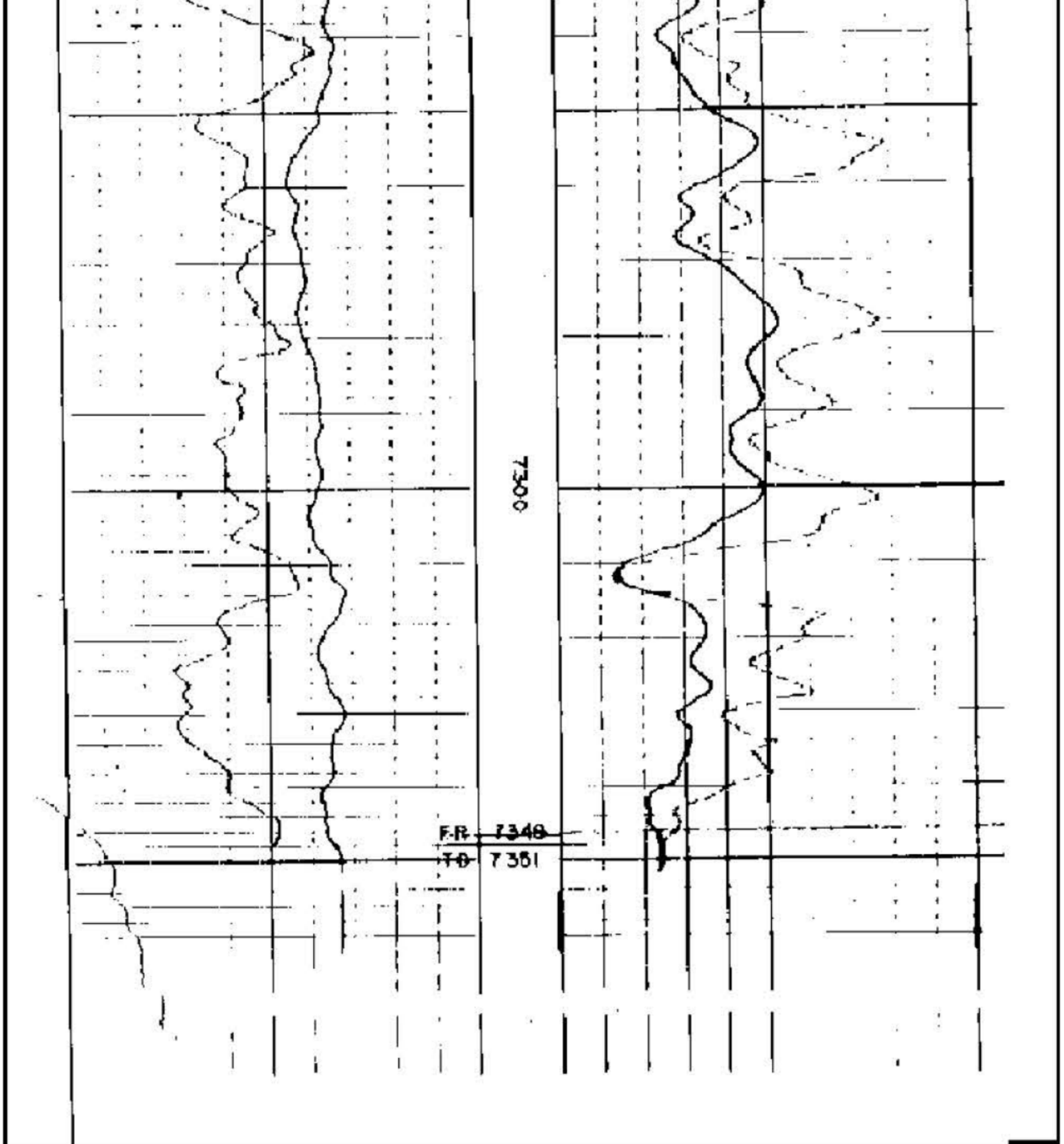
7000

7100

7200


7300
F.P. 7340
T.D. 7341
SPONTANEOUS-POTENTIAL
millivolts
-80 +
Radioactivity increases
SCALES
RESISTIVITY
-ohms. m²/m
0 10" Normal 75
0 750
0 32"-16" 60
7000


7200


7300
F-R 7348
TD 7361

Great Lakes
Petroleum Services, Inc.

NUCLEAR RADIATION LOG

COMPANY GREAT WESTERN DRILLING COMPANY

WELL NO. 1-C SCRATCH ROYALTY CO.

FIELD WILDCAT

COUNTY ANDREWS STATE TEXAS

LOCATION 660' FNL 660' FWL OF SEC. 22, BLK. A-29, PSL SURVEY

SEC. 22 TWP. ___ RGE. ___

OTHER SERVICES

PERMANENT DATUM GROUND LEVEL ELEV 3465

LOG MEASURED FROM Kelly Bu ~~ft above perm. datum~~ DATUM

DRILLING MEASURED FROM GROUND L. EL.

ELEV. K.B. ___

D.F. ___

G.L. 3465

DATE	11-13-60		
RUN NO.	ONE		
TYPE LOG	GR-N MICRO		
DEPTH-DRILLER	4503		
DEPTH-LOGGER	4504		
BOTTOM LOGGED INTERVAL	4502		
TOP LOGGED INTERVAL	100		
TYPE FLUID IN HOLE	WTR		
SALINITY PPM CL			
DENSITY LBS/GAL			
LEVEL			
MAX. REC. TEMP. DEG. F			
OPR. RIG TIME	2 1/2 HRS.		
RECORDED BY	DIXON		
WITNESSED BY	BASWELL		

RUN NO.	BORE HOLE RECORD BIT	FROM	TO	CASING RECORD SIZE	WGT.	FROM	TO
1	7 7/8		4339	5 1/2	14	SURF	4339
2	4 3/4	4339	4503				

Recorded By

West Texas Electrical Log Service

Dallas 2, Texas

REFERENCE A 132M

ELSI

7

COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

PERFORATING RECORD

ACID. FRAC SHOT

I P

GOR GR

T P C P

REMARKS:

FOLD HERE THIS HEADING AND LOG CONFORMS TO API RECOMMENDED STANDARD PRACTICE RP 33

EQUIPMENT DATA

GAMMA RAY

RUN NO.	ONE		
TOOL MODEL NO.	A		
DIAMETER	3 5/8		
DETECT. MODEL NO.	100 G		
TYPE	SCINT		
LENGTH	4. 0		
DIST. TO N. SOURCE	7. 5		

GENERAL

HOIST TRUCK NO.	8		
INST. TRUCK NO.	12		
TOOL SERIAL NO.	11		

NEUTRON

RUN NO.	ONE		
LOG TYPE	NEUT/GAMMA		
TOOL MODEL NO.	A		
DIAM.	3 5/8		
DETECT. MODEL NO.	200		
TYPE	SCINT		
LENGTH	4.0"		
SOURCE MODEL NO.	11A-203		
SERIAL NO.	3		
SPACING	18"		
TYPE	RBS.		
STRENGTH	7790,000 N/SEC		

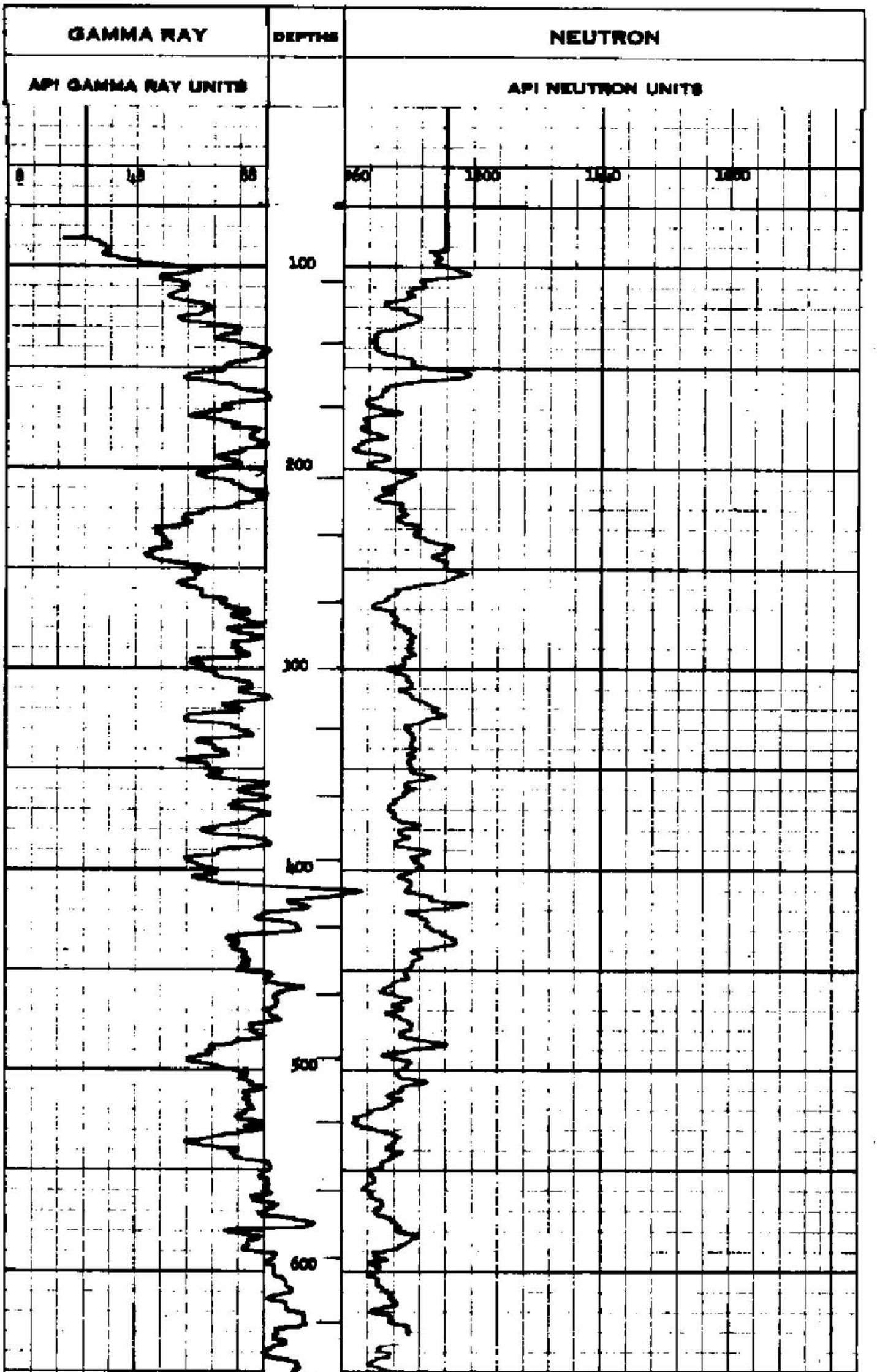
LOGGING DATA

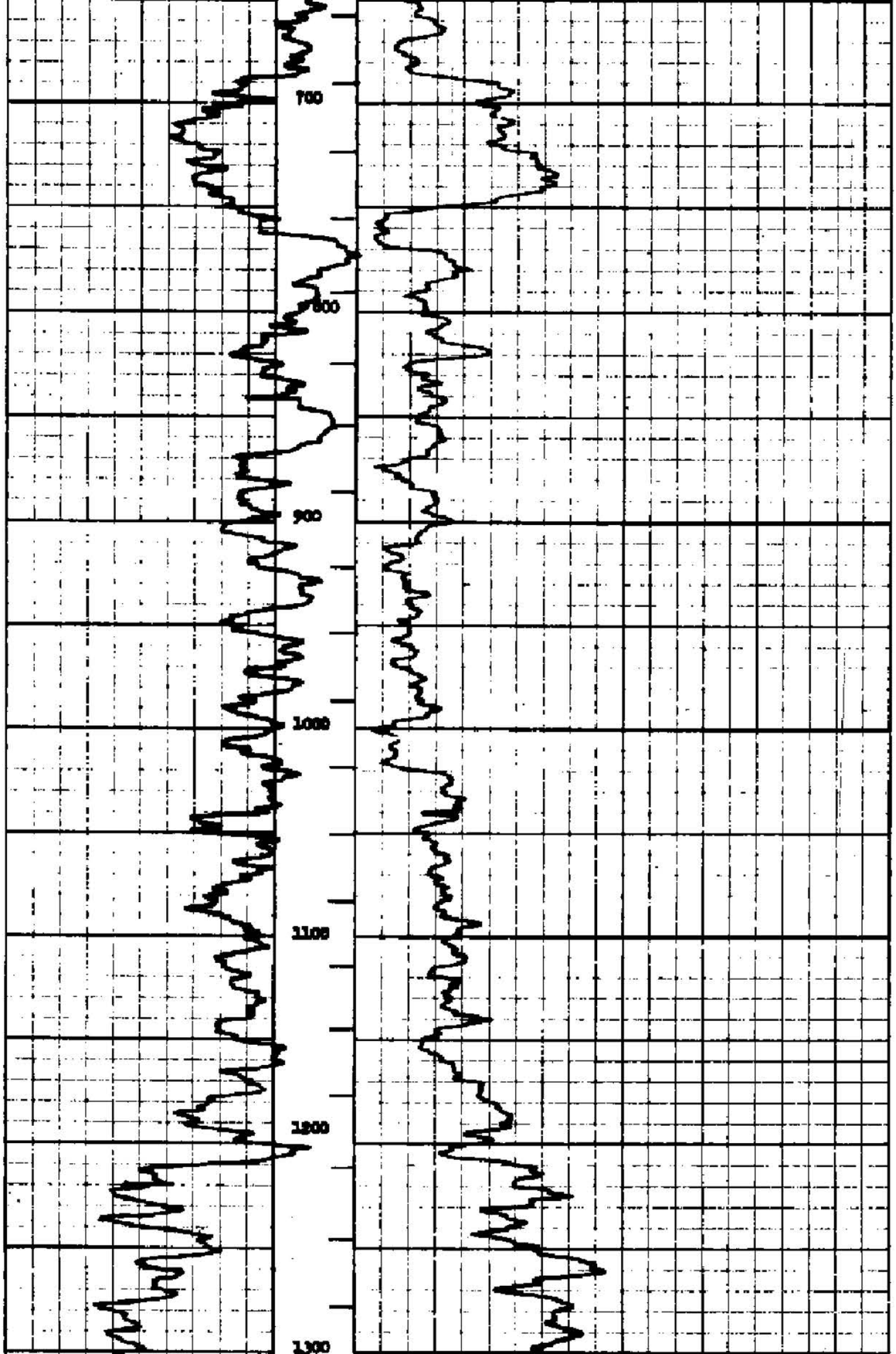
RUN NO.	GENERAL DEPTH FROM	GENERAL DEPTH TO	GENERAL SPEED FT/MIN.	GAMMA RAY T.C. SEC.	GAMMA RAY SENS. SETTINGS	GAMMA RAY ZERO Div. L or R	GAMMA RAY API G.R. Units PER LOG DIV.	NEUTRON T.C. SEC	NEUTRON SENS. SETTINGS	NEUTRON ZERO Div. L or R	NEUTRON API N UNITS PER LOG DIV.
1	4502	4300	25	2	60		8	2	60		48
1	3400	3000	25	2	60		8	2	60		48
1	4502	100	60	2	60		8	2	60		48

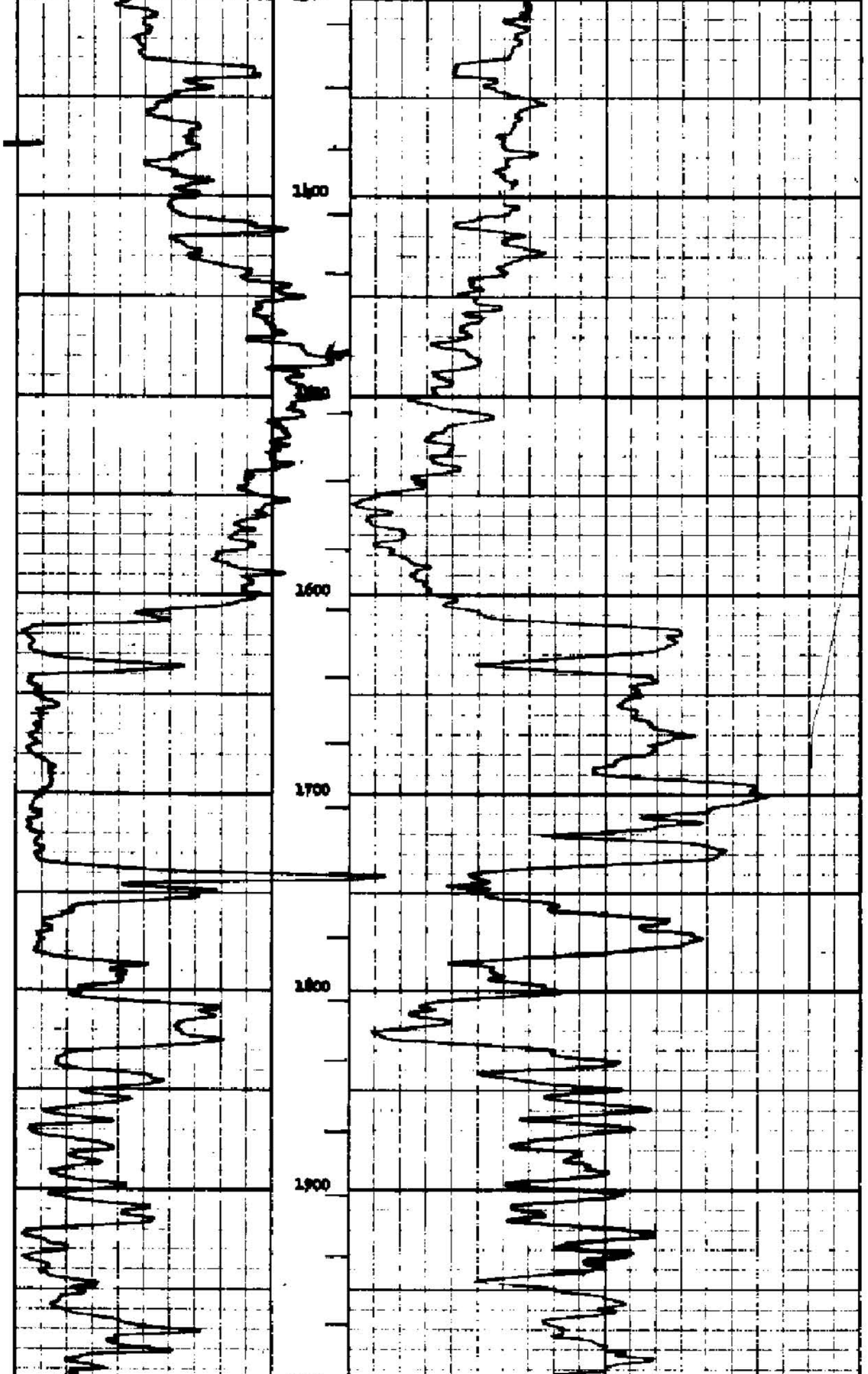
REFERENCE LITERATURE:

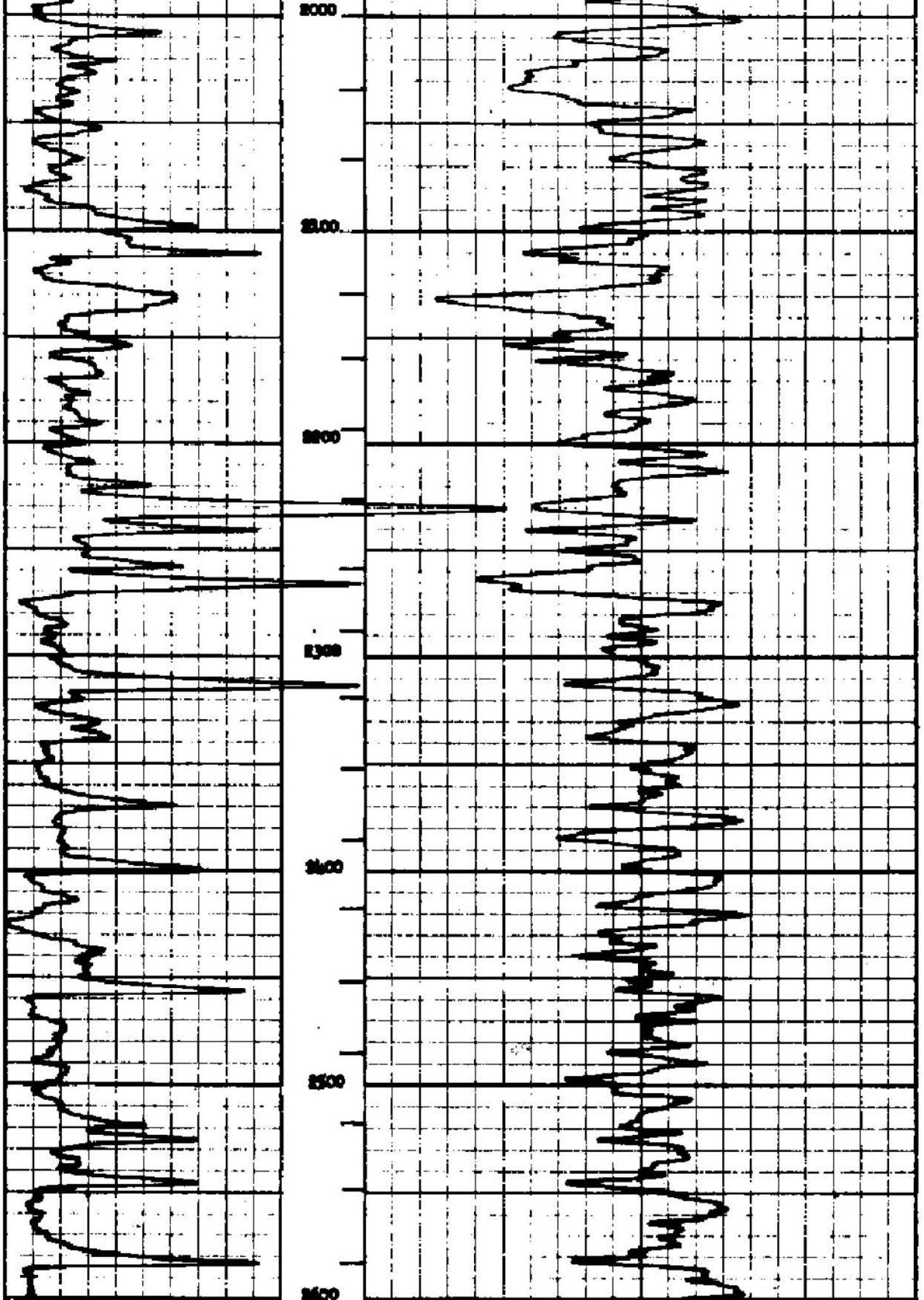
REMARKS

FOLD HERE


GAMMA RAY
DEPTHS
NEUTRON
API GAMMA RAY UNITS
API NEUTRON UNITS
0
40
80
960
1000
1040
1080
100
200
300
400
500
600


700
800
900
1000
1100
1200
1300


1500
1600
1700
1800
1900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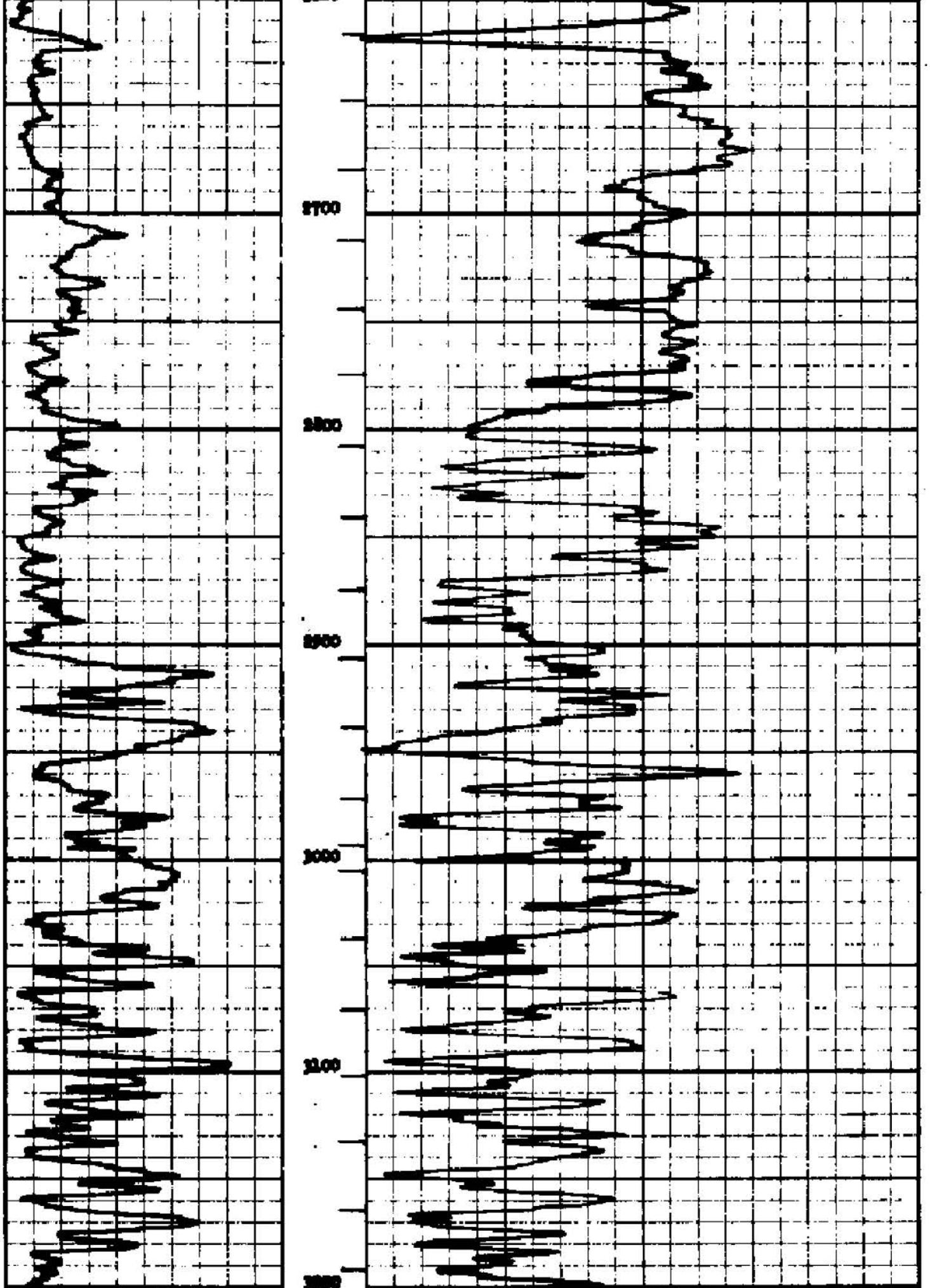
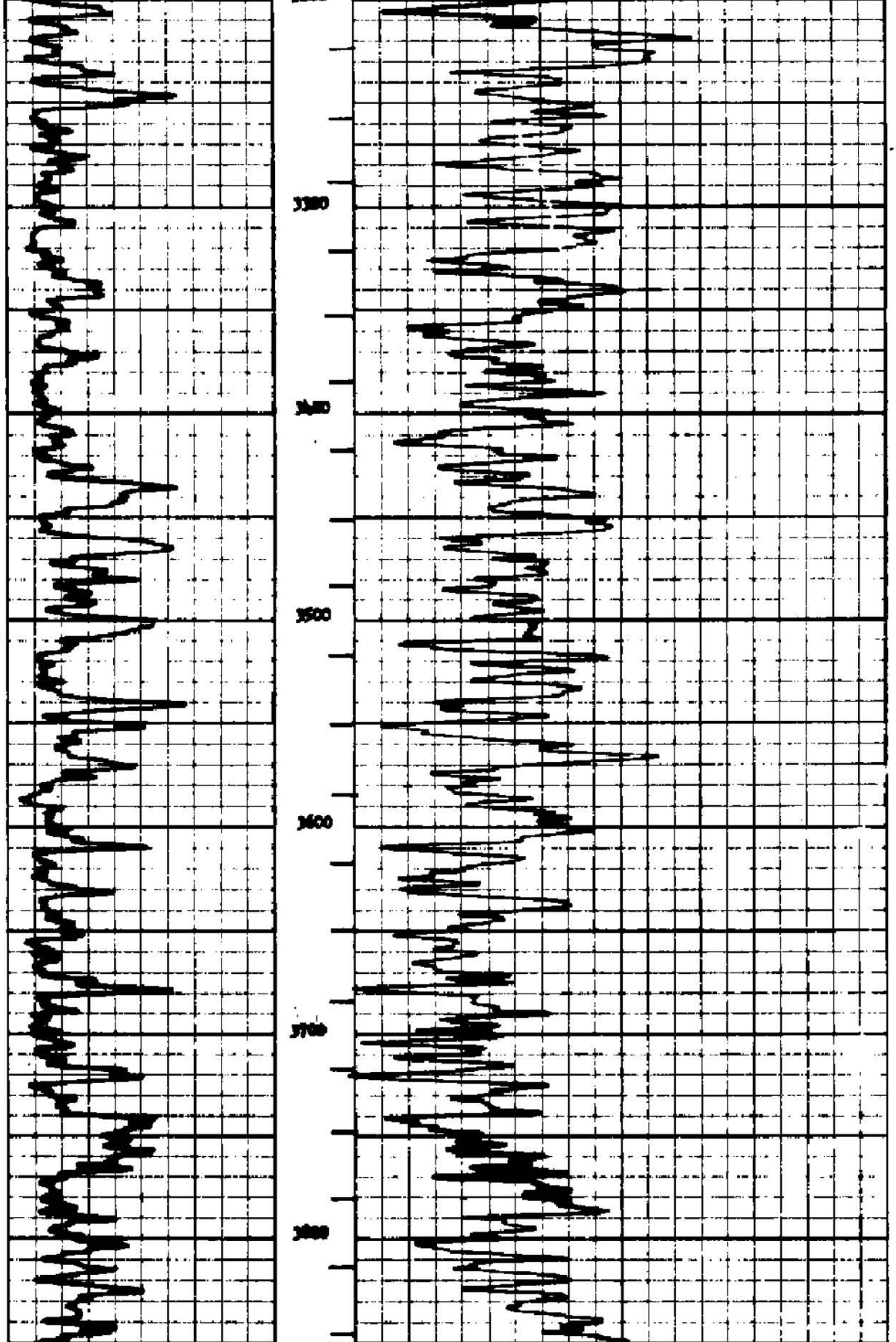
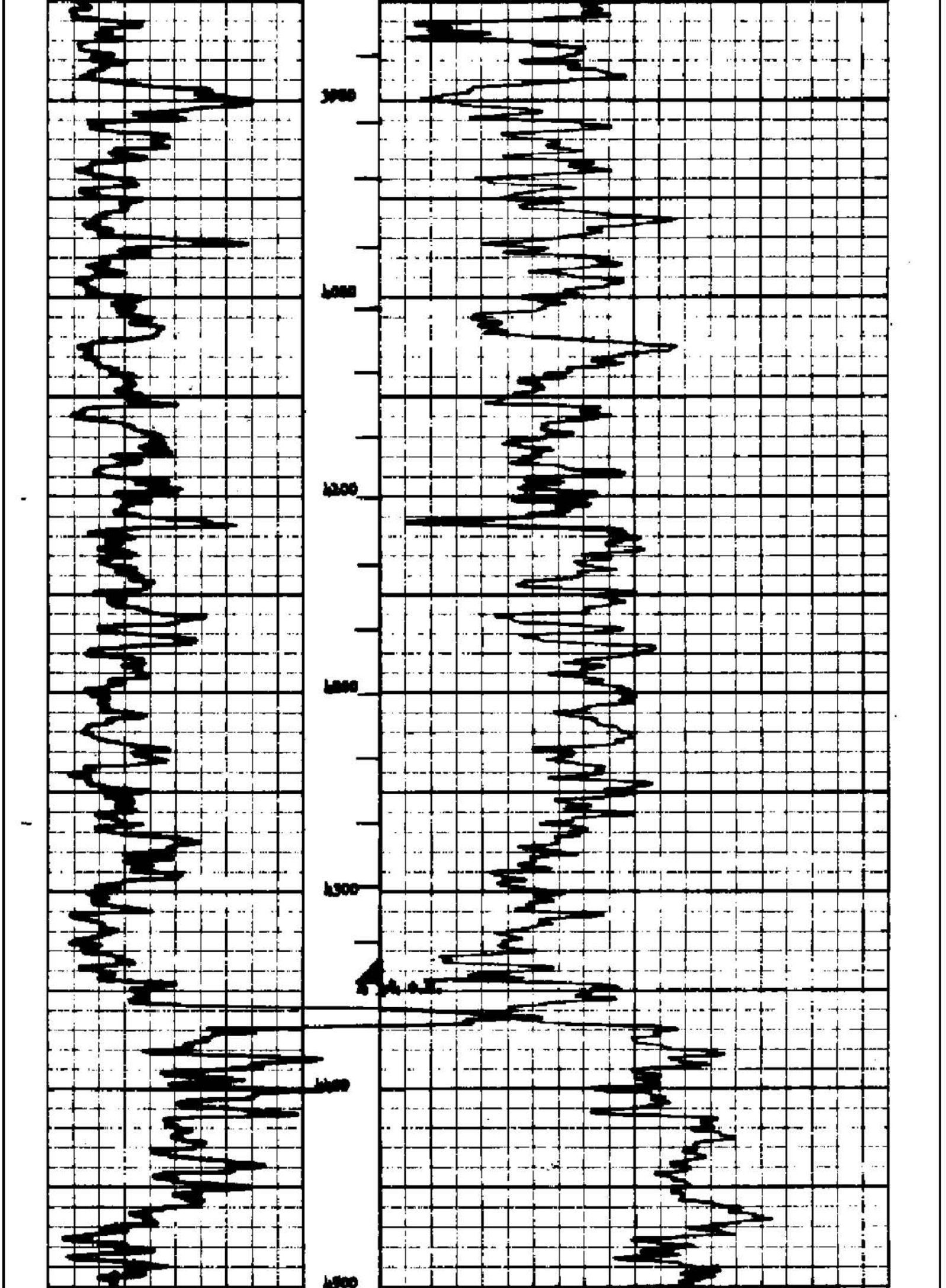
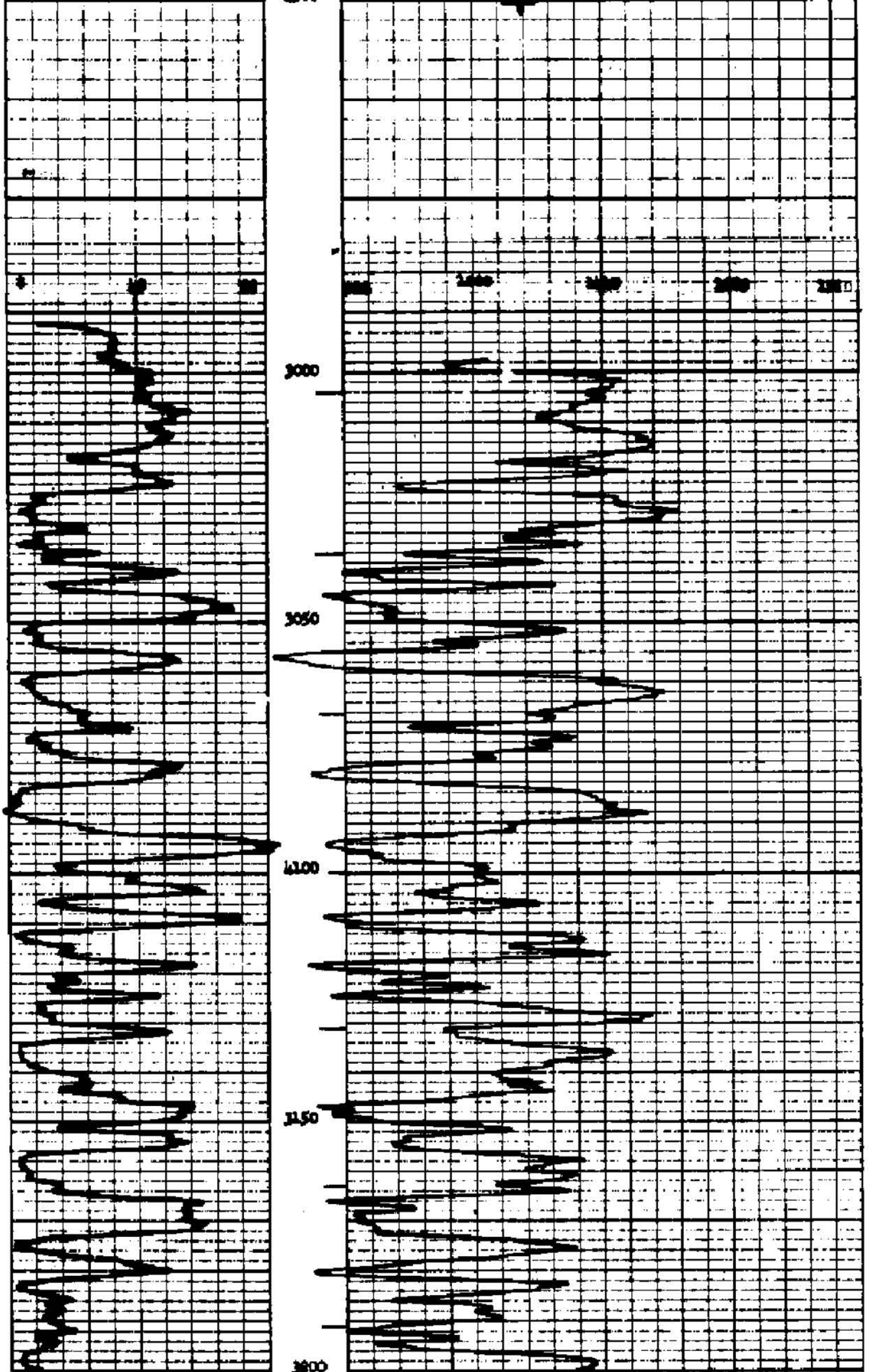
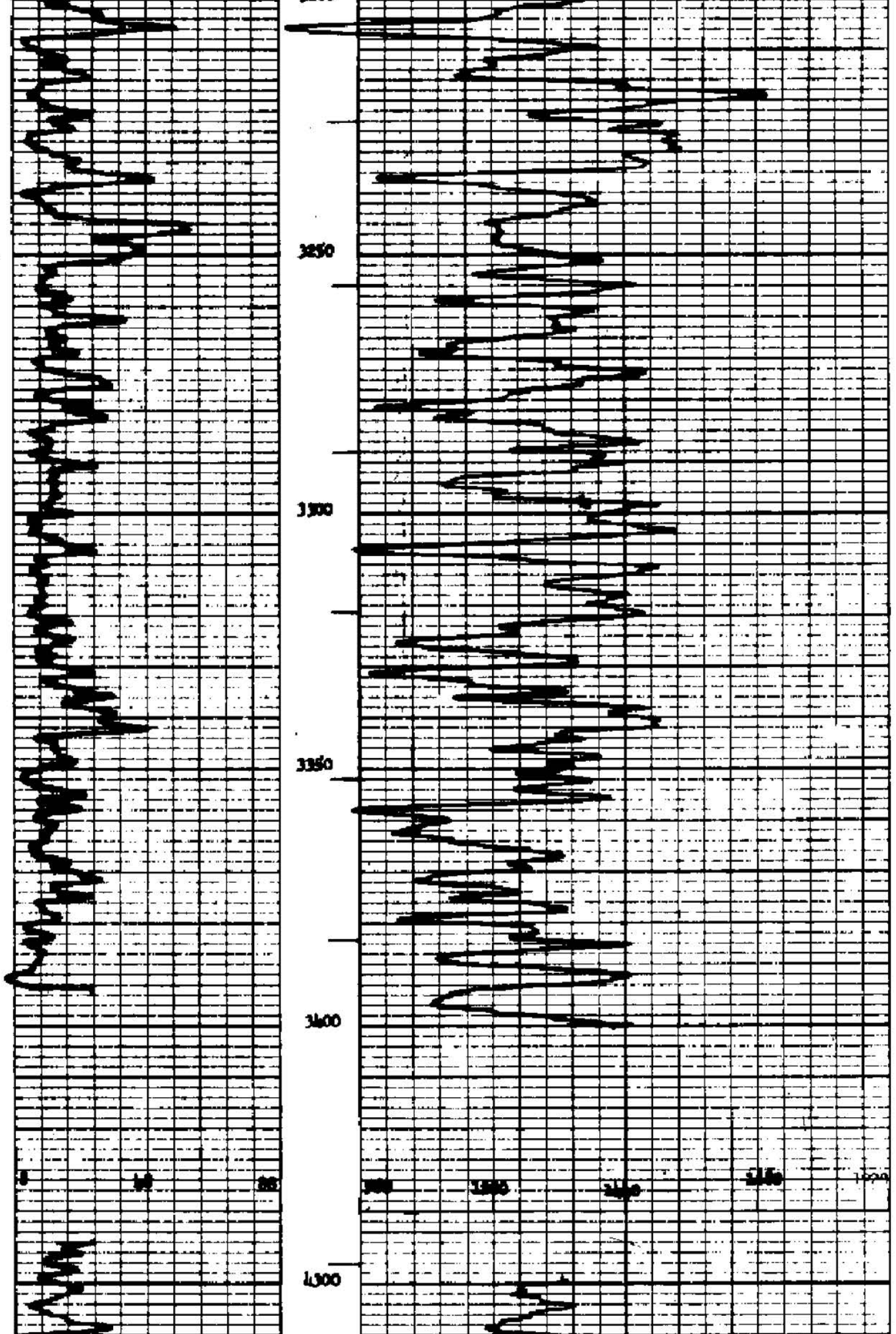
8600

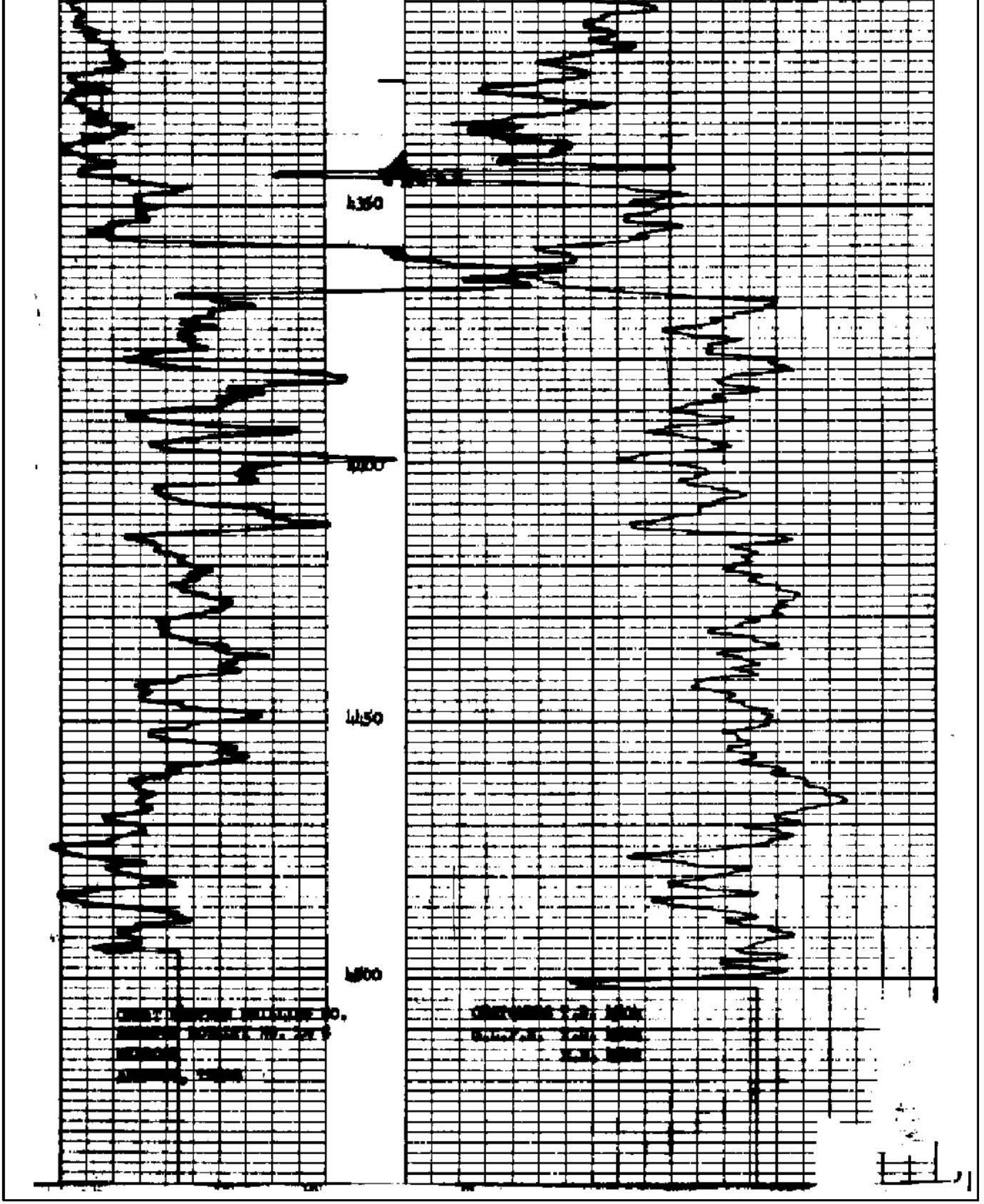

2700
2800
2900
3000
3100


3300
3400
3500
3600
3700
3800




3000
3050
4100
3150


3250
3300
3350
3400
4300


4350
4400
4450
4500

1190

Great Lakes Petroleum Services,

NUCLEAR RADIATION LOG

COMPANY GREAT WESTERN DRILLING CO.

WELL SCRATCH ROYALTY NO. 1-B

FIELD WILDCAT

STANDARD PRACTICE RP 3.3

COUNTY ANDREWS STATE TEXAS

LOCATION 1980 FSL & 660 FEL
BLK. A-29 P.S.L. SURVEY.
SEC 24 TWP ... RGE ...

OTHER SERVICES

PERMANENT DATUM GROUND LEVEL ELEV 3477
LOG MEASURED FROM 9.0ft FT. ABOVE PERM. DATUM
DRILLING MEASURED FROM KELLY DRIVE BUSHING.

ELEV. K.B. 3491
D.F. ...
G.L. 3477

DATE	10-28-60
RUN NO.	ONE
TYPE LOG	GAMMA-RAY NEUTRON
DEPTH-DRILLER	4424
DEPTH-LOGGER	4426
BOTTOM LOGGED INTERVAL	4424
TOP LOGGED INTERVAL	SURF
TYPE FLUID IN HOLE	WATER
SALINITY PPM CL	
DENSITY LBS/GAL	
LEVEL	FULL
MAX. REC. TEMP. DEG. F	230
OPR. RIG TIME	3 HRS.
RECORDED BY	EASTERWOOD
WITNESSED BY	MR. BASWELL

RUN NO.	BORE HOLE RECORD BIT	FROM	TO	CASING RECORD SIZE	WGT.	FROM	TO
1	12 1/4	SURF	39	8 5/8		SURF	39
2	7 7/8	39	4356	5 1/2	14	SURF	4356
3	6 3/4	4356	4426	O. H.			

THIS HEADING AND LOG CONFORMS TO API RECOMMENDED PRACTICE

FOLD HERE

Reproduced By

West Texas Electrical Log Service

Dallas 2, Texas

REFERENCE A 1086

ELSI

7 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

PERFORATING RECORD

ACID. FRAC SHOT

I P

GOR GR

T P C P

REMARKS:

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	A	LOG TYPE	NEUT.- GAMMA
DIAMETER	3 5/8	TOOL MODEL NO.	A
DETECT. MODEL NO.	100 Q	DIAM.	3 5/8
TYPE	SCINT.	DETECT. MODEL NO.	200 N
LENGTH	4"	TYPE	SCINT.
DIST. TO N. SOURCE	8.5'	LENGTH	4"
		SOURCE MODEL NO.	11A-203
		SERIAL NO.	1
		SPACING	15"
		TYPE	PuBe
		STRENGTH	7300,000

GENERAL

HOIST TRUCK NO.	16 W
INDEX. TRUCK NO.	1 C
TOOL SERIAL NO.	

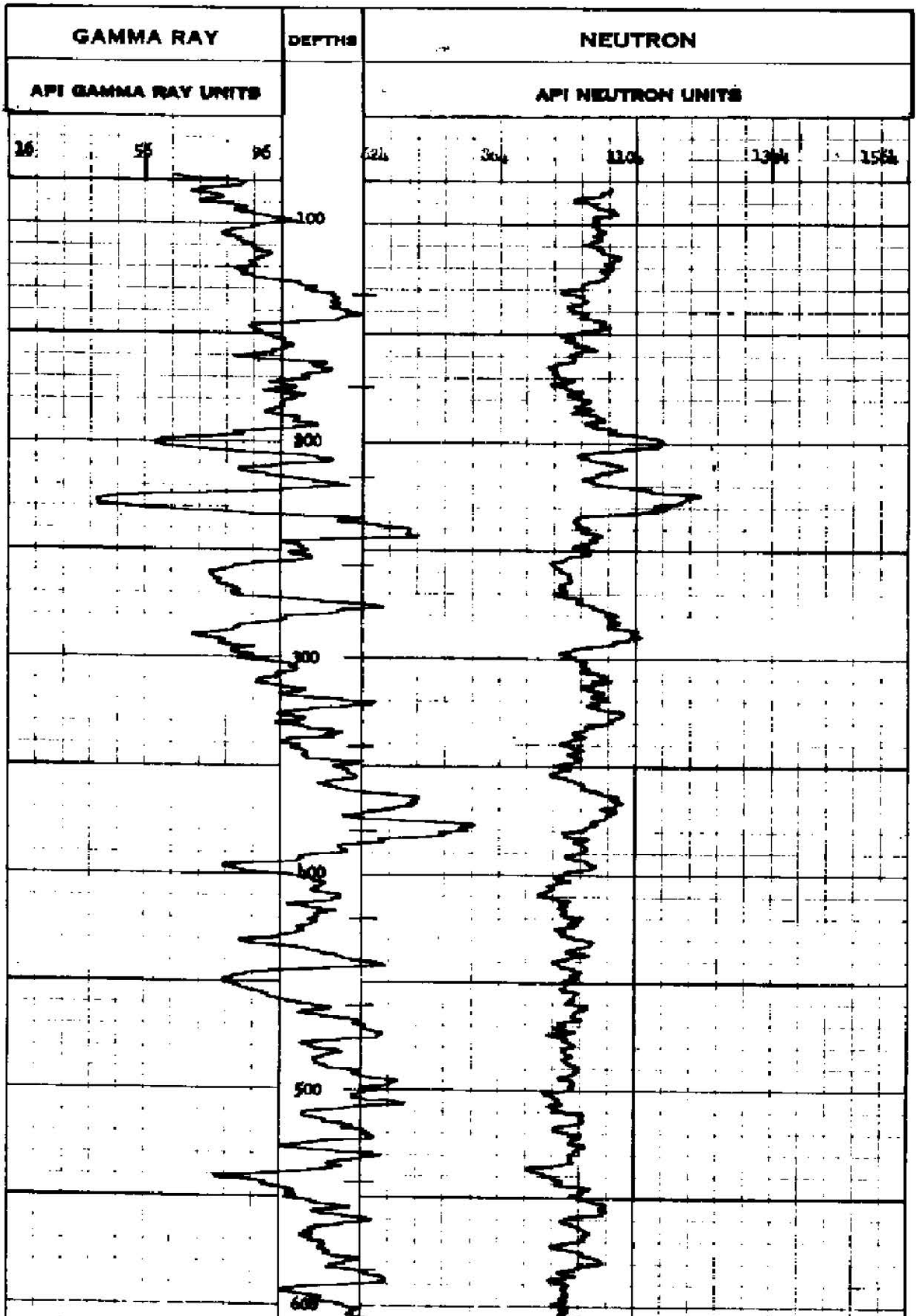
LOGGING DATA

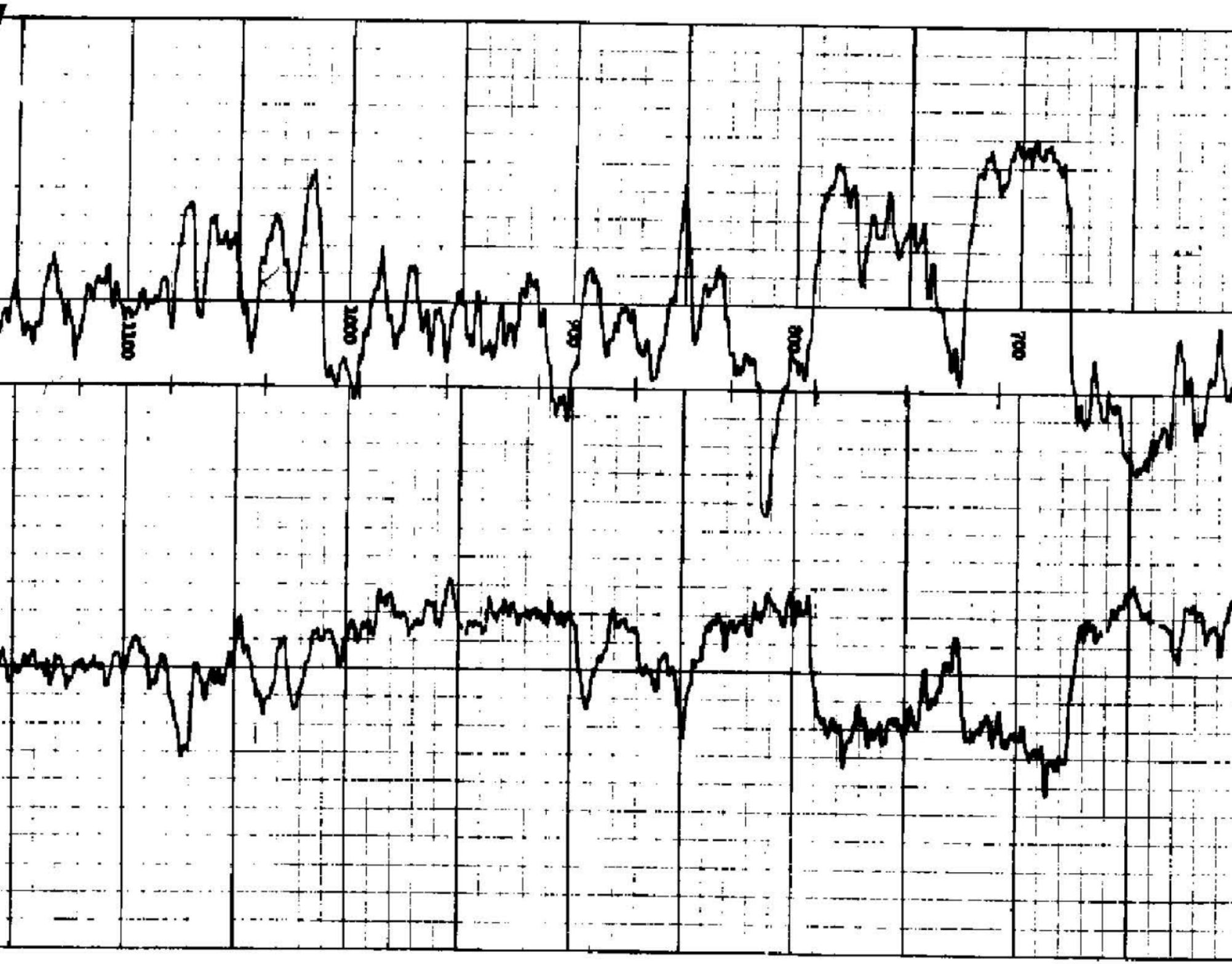
GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTH FROM	DEPTH TO	SPEED FT/MIN.	T.C. SEC.	SENS. SETTINGS	ZERO Div. L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS. SETTINGS	ZERO Div. L or R	API N. UNITS PER LOG DIV.
1	4400	4300	20	4	40	2L	8	4	60	13 L	48
1	3400	3000	20	4	40	2 L	8	4	60	13 L	48
2	4400	100	50	2	40	2 L	8	2	60	13L	48

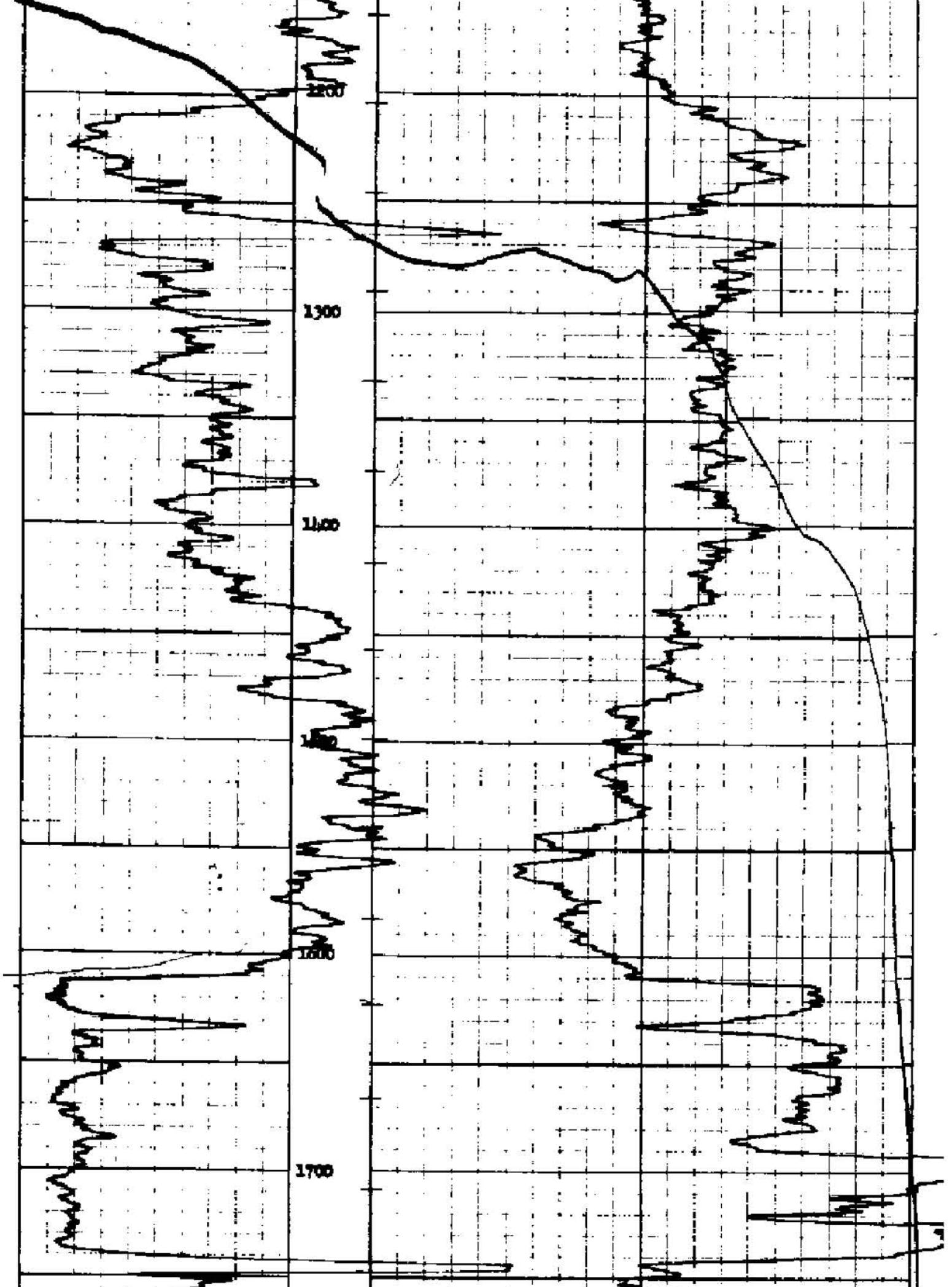
REFERENCE LITERATURE:

REMARKS

FOLD HERE


GAMMA RAY
DEPTHS
NEUTRON
API GAMMA RAY UNITS
API NEUTRON UNITS
16
56
96
42
30
110
138
158
100
200
300
400
500
600


1100
1000
900
800
700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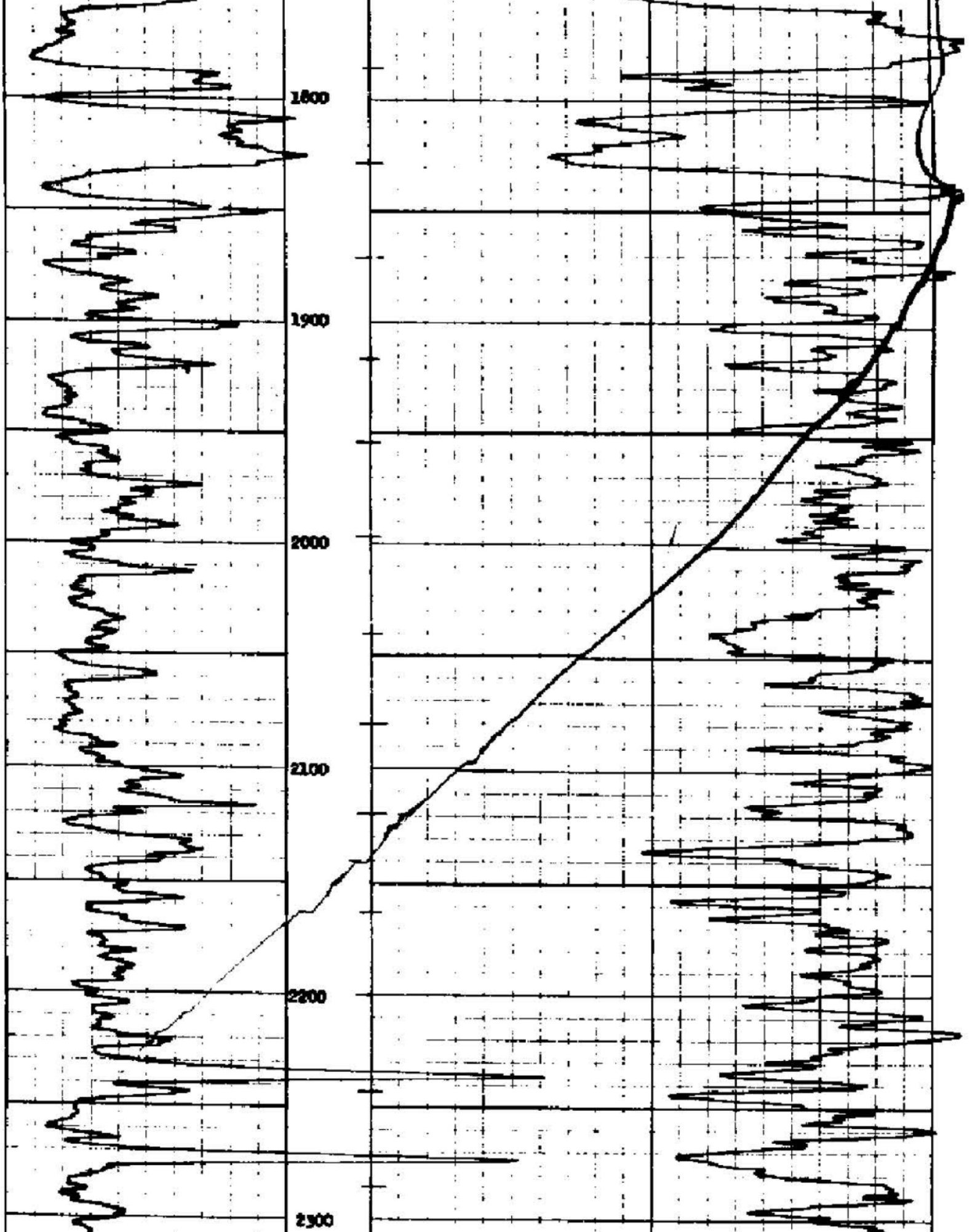
1400
1500
1600
1700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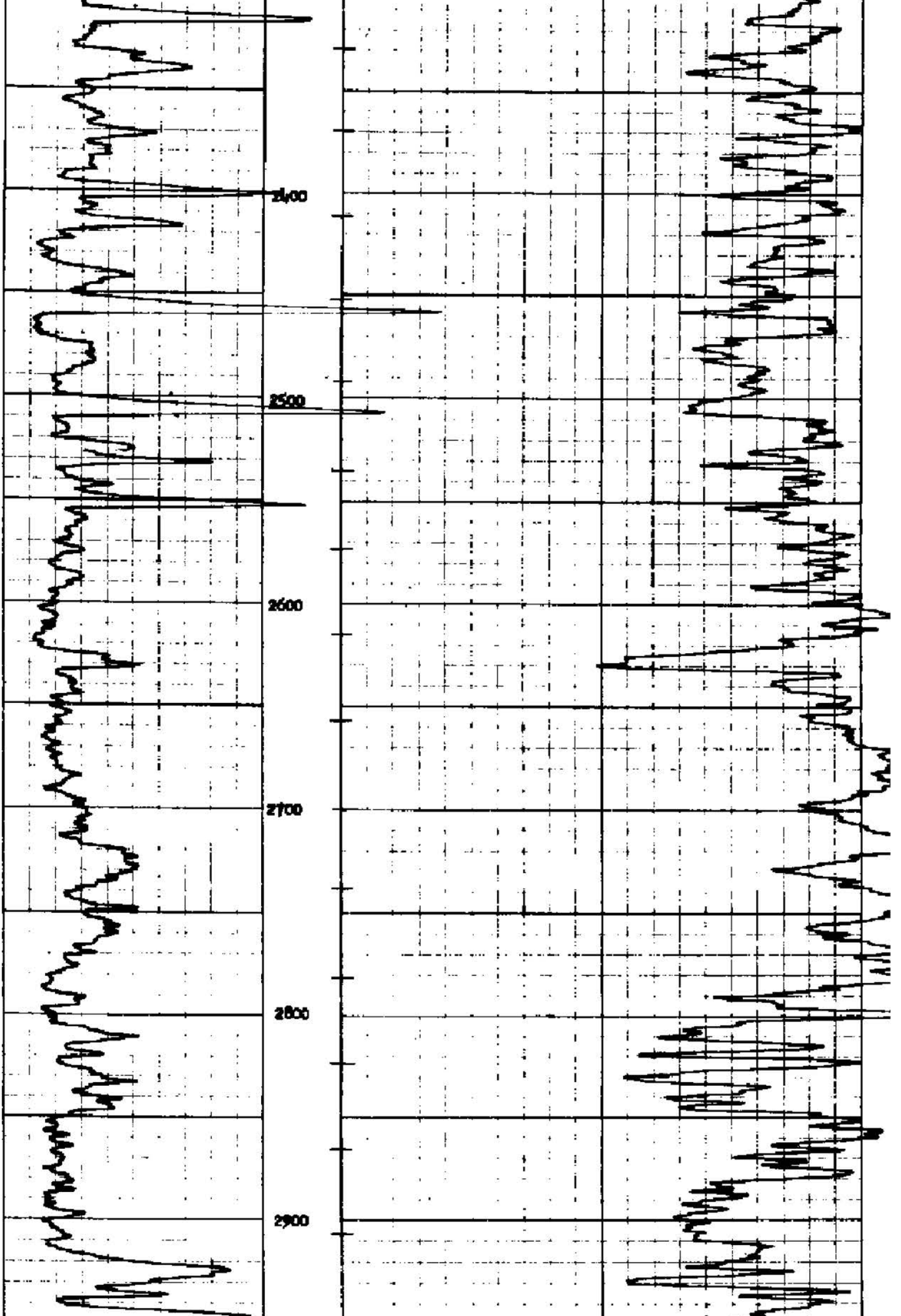
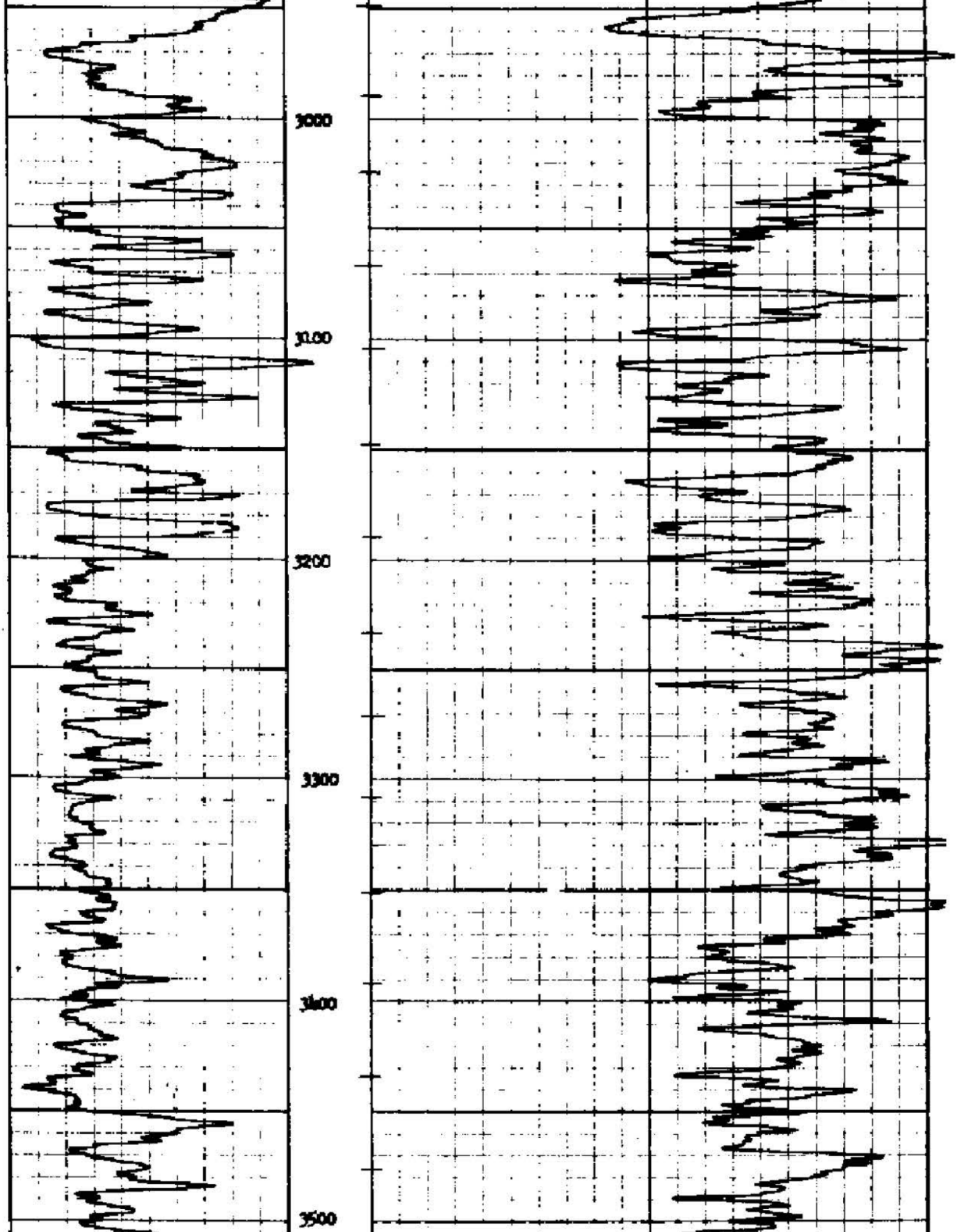
2000
2100
2200
2300


2400
2500
2600
2700
2800
2900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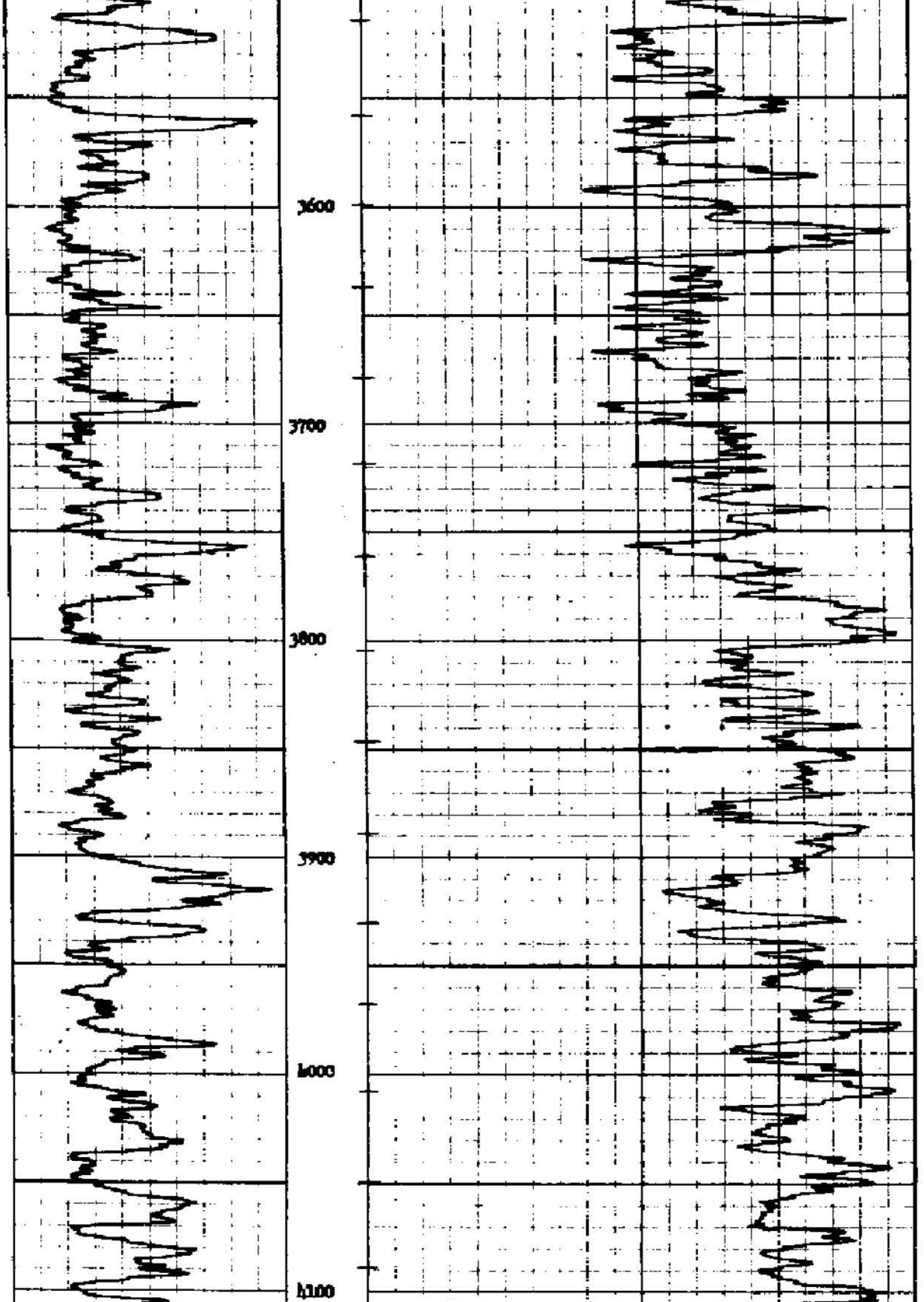
3100
3200
3300
3400
3500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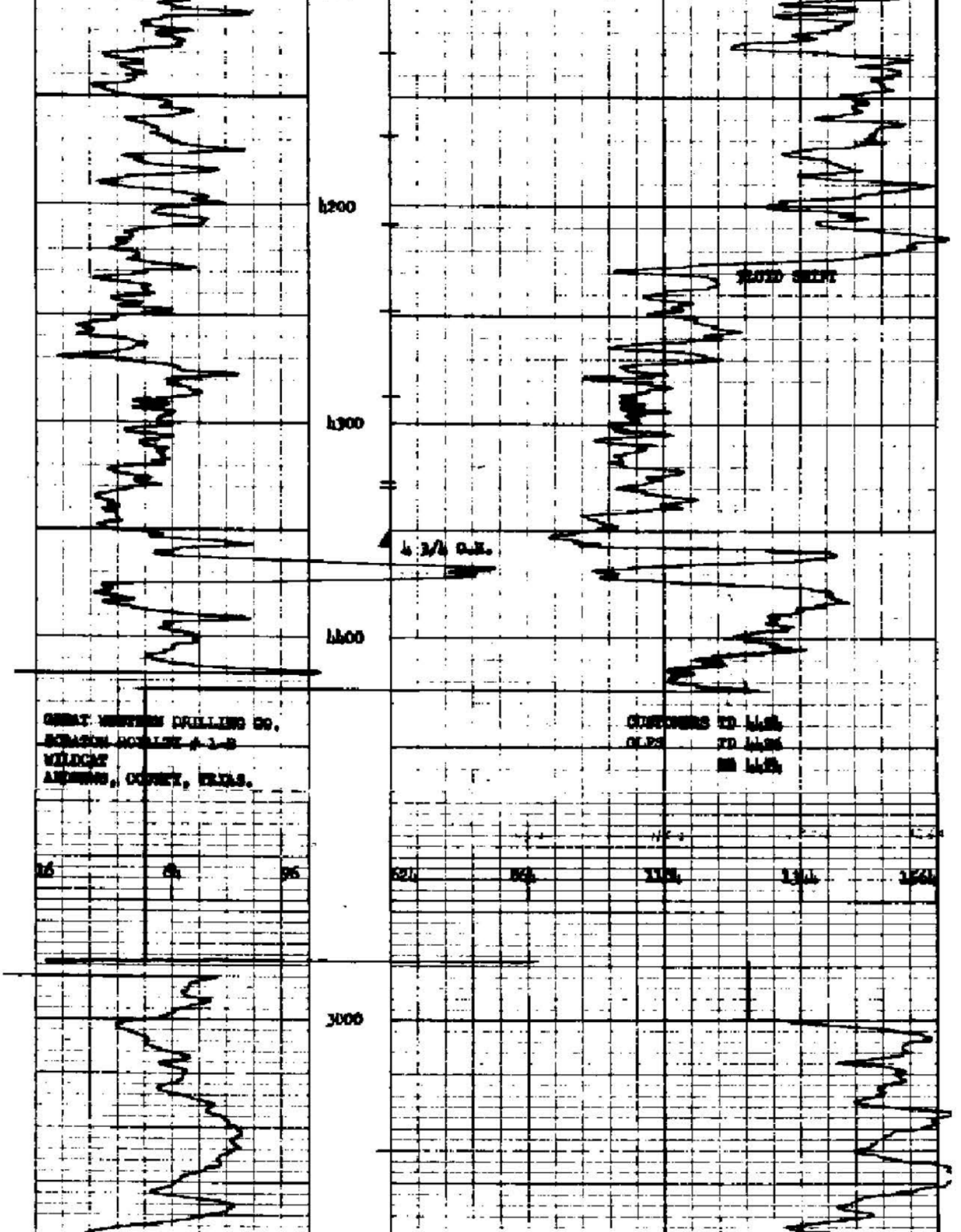
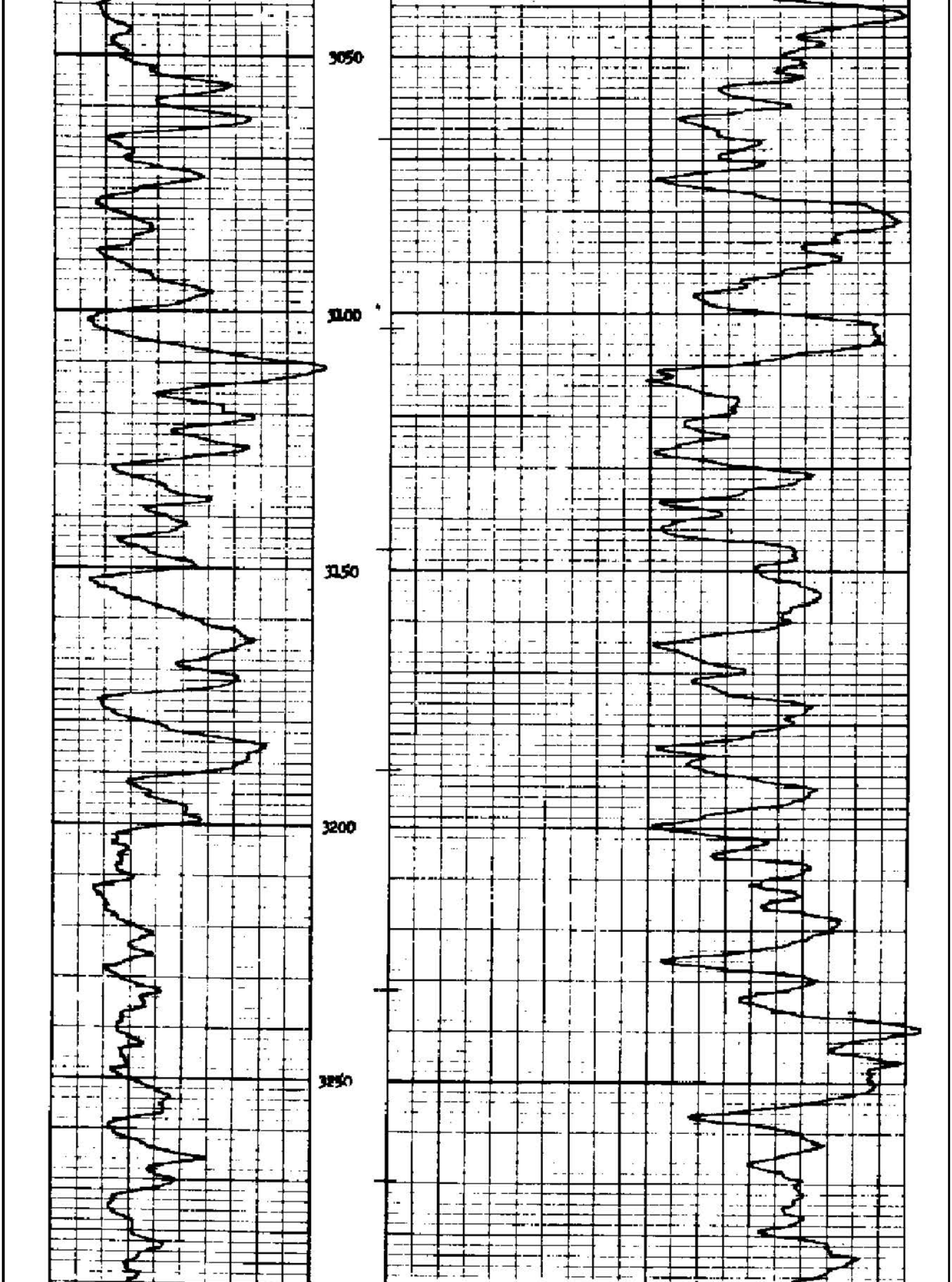
3800
3900
4000
4100


h200
h300
4 3/4 O.H.
h400
3000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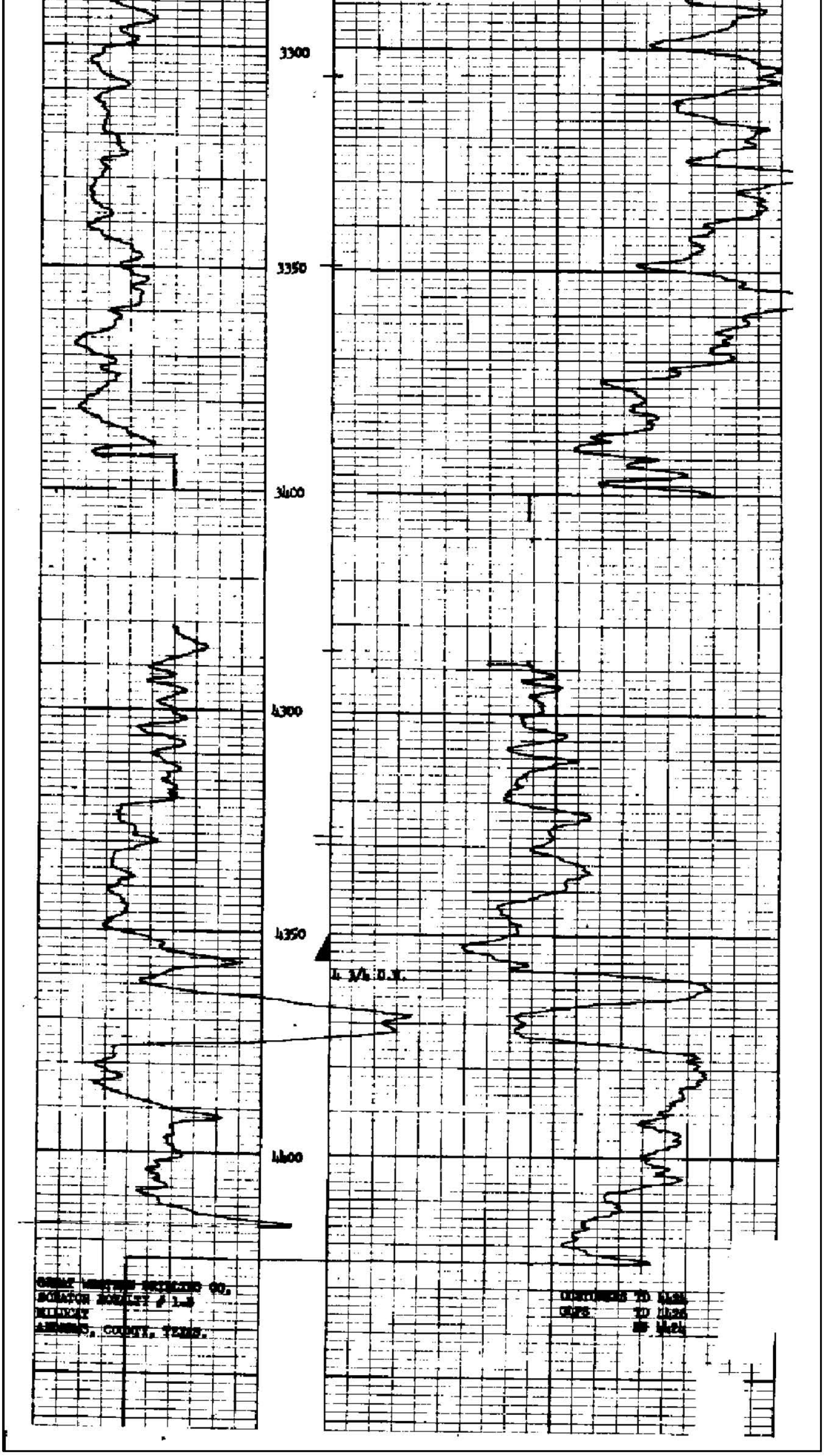
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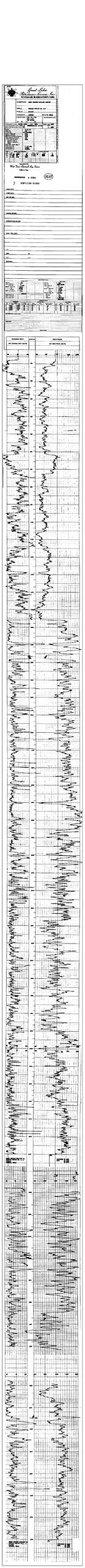
3350
3400
4300
4350
4 1/2 O.H.
4400



SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS

Electrical Log

Andrews

Smith-Clearfork

l-McWhorter #1

Fair-Woodward

COMPANY FAIR-WOODWARD

WELL HALL-McWHORTER #1

FIELD SMITH-CLEARFORK

LOCATION PSL SURVEY

Location of Well
1980' fr N&E/L
Sec. 8, Blk. A-29
PSL Survey

COUNTY
FIELD or
LOCATION
WELL No.
COMPANY

COUNTY ANDREWS

STATE TEXAS

Elevation: D.F.: 3498'
K.B.:
or G.L.:

FILING No.

RUN No.	1				
Date	4-8-51				
First Reading	7503				
Last Reading	4286				
Feet Measured	3217				
Csg. Schlum.	4286				
Csg. Driller	4285				
Depth Reached	7506				
Bottom Driller	7500				
Depth Datum	15"abv.RT - 12'abv.G.L.				
Mud Nat.	Caustic-Soda Ash				
" Density	9.3				
" Viscosity	32				
" Resist.	1.[illegible] 70°F	@ °F	@ °F	@ °F	@ °F
" Res. BHT	1.0@120°F	@ °F	@ °F	@ °F	@ °F
" pH	7 @ °F	@ °F	@ °F	@ °F	@ °F
" Wtr. Loss	6.5 CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.
Max. Temp. °F	120				
Bit Size	8 3/4-7423-6 1/4"				
Spcgs.—AM	10"				
AN	32"LS				
AO	19'				
Opr. Rig Time	6 hrs.				
Truck No.	570-Hobbs				
Recorded By	Scott				
Witnessed By	O'Neill				

REMARKS

Mud sample from flow line.

SPONTANEOUS-POTENTIAL millivolts	DEPTHS	RESISTIVITY -ohms. m²/m
− 10 +		0 10"Normal 125 0
0 Radioactivity Increases		0 1250 0
		0 125

MICROLOG

MUD RESISTIVITY L.O... @120°F (BHT)

BIT SIZE 8¾...″ to 7423...′
9½...″ to 7503...′

▮ GOOD
▯ FAIR
▨ BROKEN

PERMEABILITY

╪ SHALE

D

SPONTANEOUS — POTENTIAL
millivolts

10

RADIOACTIVITY
INCREASES ———→

RESISTIVITY
-ohms m²/m

0 "micronormal" AM=2" 30

0 "microinverse" AO=1.5" 30

FAIR-WOODWARD
HALL-McWHORTER #1