New Drill Surface Casing Check

Date	12/7/2020			
Operator	Verdad Resources LLC			
Well/Pad Name	462872 Peggy #2501 Pad		(25-9N-60W)	4893' GR
API or DOC #	402475448	402475417		
	402475438	402475446		
	402475447	402475441		
	402475434			
Base of Fox Hills - SB5	NA			
Base of Fox Hills - Offset Log	470	123-08462	4886 GR	477'
Upper Pierre Aq	970-1650'			
Deepest Water Well Within One Mile	72'		Number of Wells	3
Deepest Water Well Within Two Miles	395'		Number of Wells	23
Deepest Water Well Within Three Miles			Number of Wells	
Operator Proposed Surface Casing Depth	1500'			
Minimum Surface Casing Depth	477'		+ 50' =	527'
Change Permit Surface Casing Depth from	1500'		to	1800'
Sussex Production Within One Mile	NA			
Shannon Production Within One Mile	NA			

Oil and Gas Wells within Map Selection

API County	API Sequen	Location ID	Status	Well	Operator`	Qtr Qtr	Section	Township	Range	Meridian	Lat	Long	Formation Information Sidetrack	Formation	Top	Bottom	TD	Formation S
123	41038	432177	PR	SHULL *5-2	VERDAD RE	SWSE	25	9N	60W	6	40.71469	-104.036	0	NBRR	6451	11037	11037	PR
123	8462	406429	DA	STATE-HUS	BENNETT P	NWNE	36	9N	60W	6	40.71227	-104.038						
123	8606	406495	DA	RAINBOW-	TOLTEK DR	SWNW	31	9N	59W	6	40.70868	-104.028						
123	34045	424459	AL	SHULL *1-2	CARRIZO O	SESE	25	9N	60W	6	40.72799	-104.035						
123	34050	424472	AL	Shull *31-1	CARRIZO N	NWNW	31	9N	59W	6	40.71331	-104.029						
123	36996	432177	PR	Shull *1-25	VERDAD RE	SESE	25	9N	60W	6	40.71469	-104.035	1	NBRR	6532	9965	10572	PR
123	37237	432694	PR	Shull *2-35	VERDAD RE	NENE	35	9N	60W	6	40.71314	-104.054	0	NBRR	6390	10653	10653	PR
123	37239	432694	PR	Shull *1-35	VERDAD RE	NENE	35	9N	60W	6	40.71318	-104.054	0	NBRR	6423	10722	10722	PR
123	37243	432177	PR	Shull *4-25	VERDAD RE	SWSE	25	9N	60W	6	40.71469	-104.035	1	NBRR	6352	10841	10842	PR
123	37244	432177	PR	Shull *3-25	VERDAD RE	SWSE	25	9N	60W	6	40.71469	-104.035	0	NBRR	6556	10565	10565	PR
123	37245	432177	PR	Shull *2-25	VERDAD RE	SESE	25	9N	60W	6	40.71469	-104.035	0	NBRR	6563	10580	10580	PR
123	37769	433774	AL	KEEGAN *L	NOBLE ENE	Lot 4	30	9N	59W	6	40.7155	-104.029						
123	40028	432694	SI	Shull *3-35	VERDAD RE	NENE	35	9N	60W	6	40.71322	-104.054	0	NBRR	6393	10688	10688	SI
123	40494	432177	PR	SHULL *6-2	VERDAD RE	SWSE	25	9N	60W	6	40.71469	-104.036	0	NBRR	6329	10676	10676	PR
123	40495	432177	PR	SHULL *7-2	VERDAD RE	SWSE	25	9N	60W	6	40.71469	-104.036	0	NBRR	6305	10652	10796	PR
123	40496	432177	PR	SHULL *8-2	VERDAD RE	SWSE	25	9N	60W	6	40.71469	-104.036	0	NBRR	6421	10640	10807	PR
123	41231	441036	AL	PTASNIK *1	CARRIZO N	LOT 4	30	9N	59W	6	40.71505	-104.026						
123	41232	441036	AL	PTASNIK *9	CARRIZO N	LOT 4	30	9N	59W	6	40.71505	-104.026						
123	41233	441036	AL	PTASNIK *1	CARRIZO N	LOT 4	30	9N	59W	6	40.71504	-104.026						
123	41234	441036	AL	PTASNIK *1	CARRIZO N	LOT 4	30	9N	59W	6	40.71505	-104.026						
123	41235	441036	AL	PTASNIK *8	CARRIZO N	LOT 4	30	9N	59W	6	40.71505	-104.026						
123	41236	441036	AL	PTASNIK *1	CARRIZO N	LOT 4	30	9N	59W	6	40.71504	-104.026						
123	41237	441036	AL	PTASNIK *1	CARRIZO N	LOT 4	30	9N	59W	6	40.71504	-104.026						
123	41238	441036	AL	PTASNIK *1	CARRIZO N	LOT 4	30	9N	59W	6	40.71505	-104.026						
123	41239	441041	PR	PTASNIK *2	VERDAD RE	LOT 4	30	9N	59W	6	40.71519	-104.029	0	NBRR	6335	10832	10832	PR
123	41240	441041	AL	PTASNIK *7	CARRIZO N	Lot 4	30	9N	59W	6	40.71519	-104.029						
123	41241	441041	AL	PTASNIK *6	CARRIZO N	Lot 4	30	9N	59W	6	40.71519	-104.029						
123	41242	441041	PR	PTASNIK *3	VERDAD RE	Lot 4	30	9N	59W	6	40.71519	-104.029	0	NBRR	6447	11019	11019	PR
123	41243	441041	PR	PTASNIK *4	VERDAD RE	Lot 4	30	9N	59W	6	40.71519	-104.029	0	NBRR	6342	10931	10931	PR
123	41244	441041	PR	PTASNIK *1	VERDAD RE	LOT 4	30	9N	59W	6	40.71519	-104.029	0	NBRR	6349	10939	10939	PR
123	41245	441041	AL	PTASNIK *5	CARRIZO N	Lot 4	30	9N	59W	6	40.71519	-104.029						
123	43663	447902	PR	Shull Fed *	MALLARD I	NENW	31	9N	59W	6	40.71147	-104.023	0	CODL	6933	13567	13597	CM
													0	FTHYS	6733	6894	13597	CM
													0	CD-FH	6733	13567	13597	PR
123	43664	447902	PR	Shull Fed *	MALLARD I	NENW	31	9N	59W	6	40.71151	-104.023	0	NBRR	6662	13511	13554	PR
123	43665	447902	XX	Shull Fed *	MALLARD I	NENW	31	9N	59W	6	40.71103	-104.022						
123	43666	447902	XX	Shull Fed *	MALLARD I	NENW	31	9N	59W	6	40.71112	-104.022						
123	43667	447902	XX	Shull Fed *	MALLARD I	NENW	31	9N	59W	6	40.71107	-104.022						
123	43668	447902	XX	Shull Fed *	MALLARD I	NENW	31	9N	59W	6	40.71138	-104.023						
123	43669	447902	XX	Shull Fed *	MALLARD I	NENW	31	9N	59W	6	40.71098	-104.022						
123	43674	447913	AL	Shull Fed *	MALLARD I	SENW	31	9N	59W	6	40.70913	-104.023						
123	43678	447902	XX	Shull Fed *	MALLARD I	NENW	31	9N	59W	6	40.71142	-104.023						
123	49828	462872	AL	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.7147	-104.041						
123	49829	462872	XX	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.71478	-104.04						
123	49830	462872	XX	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.71478	-104.041						
123	49831	462872	AL	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.7147	-104.04						
123	49832	462872	AL	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.7147	-104.04						
123	49833	462872	AL	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.7147	-104.041						
123	49834	462872	XX	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.71478	-104.04						
123	49835	462872	AL	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.71477	-104.041						
123	49836	462872	AL	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.7147	-104.04						
123	49837	462872	AL	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.7147	-104.041						
123	49838	462872	XX	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.71478	-104.041						
123	49839	462872	PR	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.71477	-104.041		N-COM				PR
123	49840	462872	PR	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.71477	-104.041		N-COM				PR
123	49841	462872	XX	PEGGY *25	VERDAD RE	SESW	25	9N	60	6	40.71477	-104.041						
123	49842	462872	XX	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.71478	-104.04						
123	49843	462872	XX	PEGGY *25	VERDAD RE	SESW	25	9N	60W	6	40.71478	-104.04						

Status

72 ft 1 mi

Water Wells within Map Selection 3 wells

Receipt	Permit	Water Well	Quarter	Section	Township	Range	Depth	Top Perf	Bottom Perf	Aquifer
9059457	5911-	SHULL, D J	NWNW	31	9.0 N	59.0 W				ALL UNNAMED AQUIFERS
0013318B	151884--	STATE BOARD OF LA	NWNW	36	9.0 N	60.0 W	72	8	23	ALL UNNAMED AQUIFERS
0013318A	151884-	STATE BOARD OF LA	NWNW	36	9.0 N	60.0 W	34			ALL UNNAMED AQUIFERS

395 ft 2 mi

Water Wells within Map Selection 23 wells

Receipt	Permit	Water Wel	Quarter	Section	Township	Range	Depth	Top Perf	Bottom Pe	Aquifer
9066355	123001-	US FOREST	NENW	1	8.0 N	60.0 W	200			ALL UNNAMED AQUIFERS
9063049	24349-	US FOREST	SENE	2	8.0 N	60.0 W	395			ALL UNNAMED AQUIFERS
9063979	37157-	ENDERSON	SWSW	19	9.0 N	59.0 W				ALL UNNAMED AQUIFERS
9059457	5911-	SHULL, D J	NWNW	31	9.0 N	59.0 W				ALL UNNAMED AQUIFERS
9058797	1737-R	BENNER, W	NENE	23	9.0 N	60.0 W	76			ALL UNNAMED AQUIFERS
3602611A	268348-	ENDERSON	NWNW	24	9.0 N	60.0 W				ALL UNNAMED AQUIFERS
3602611B	268348--A	HAWKINS,	NWNW	24	9.0 N	60.0 W	350	170	350	ALL UNNAMED AQUIFERS
0409127B	200307-	HAWKINS,	SWNE	26	9.0 N	60.0 W	130	70	130	ALL UNNAMED AQUIFERS
0108845E		POWER RE	SESW	27	9.0 N	60.0 W				LARAMIE FOX HILLS
2935		WYOMING	NESE	34	9.0 N	60.0 W				ALL UNNAMED AQUIFERS
0108845D		POWER RE	NESE	34	9.0 N	60.0 W				LARAMIE FOX HILLS
0108845C		POWER RE	SENE	34	9.0 N	60.0 W				LARAMIE FOX HILLS
3626257	276779-	WELD COU	SENE	34	9.0 N	60.0 W	360	300	340	ALL UNNAMED AQUIFERS
97628		KEOTA TOV	SENE	34	9.0 N	60.0 W				ALL UNNAMED AQUIFERS
212715	118621--A	KEOTA TOV	SENW	34	9.0 N	60.0 W				ALL UNNAMED AQUIFERS
474009	223685--A	SPRAGUE,	SENW	34	9.0 N	60.0 W	250	180	200	ALL UNNAMED AQUIFERS
45568	118621-	WELD COU	SENW	34	9.0 N	60.0 W				ALL UNNAMED AQUIFERS
3661394	292560-	BOYDSTON	NESW	35	9.0 N	60.0 W	152	98	152	ALL UNNAMED AQUIFERS
2936		WYOMING	NWSW	35	9.0 N	60.0 W				ALL UNNAMED AQUIFERS
0108845A		POWER RE	SESE	35	9.0 N	60.0 W				LARAMIE FOX HILLS
0108845B		POWER RE	SWNW	35	9.0 N	60.0 W				LARAMIE FOX HILLS
0013318A	151884-	STATE BOA	NWNW	36	9.0 N	60.0 W	34			ALL UNNAMED AQUIFERS
0013318B	151884--A	STATE BOA	NWNW	36	9.0 N	60.0 W	72	8	23	ALL UNNAMED AQUIFERS

Schlumberger

INDUCTION-ELECTRICAL LOG

COMPANY BENNETT PETROLEUM CORPORATION

123-08462

WELL NO. 1 HUSKY-STATE

FIELD WILDCAT

COUNTY WELD STATE COLORADO

LOCATION: 600' FNL - 2040' FEL 7

Sec. 36 Twp. 9N Rge. 60W

Other Services: FDC-GR

Elev.: K.B. 4897 D.F. - G.L. 4886

COUNTY WELD

FIELD or LOCATION WILDCAT

WELL NO. 1 HUSKY-STATE

COMPANY BENNETT PETRO.

Permanent Datum:	G.L.	Elev.: 4886		
Log Measured From	K.B.	11 Ft. Above Perm. Datum		
Drilling Measured From	K.B.			
Date	7-9-75			
Run No.	ONE			
Depth—Driller	7220			
Depth—Logger	7223			
Btm. Log Interval	7222			
Top Log Interval	217			
Casing—Driller	8-5/8 @ 218	@	@	@
Casing—Logger	217			
Bit Size	7-7/8			
Type Fluid in Hole	F.G.M.			
Dens. / Visc.	9.9 / 81			
pH / Fluid Loss	8.0 / 5.2 ml		ml	ml
Source of Sample	PIT			
Rm @ Meas. Temp.	3.76 @ 76 °F	1.63 @ 175 °F	@ °F	@ °F
Rmf @ Meas. Temp.	3.59 @ 76 °F	1.56 @ 175 °F	@ °F	@ °F
Rmc @ Meas. Temp.	- @ - °F	- @ - °F	@ °F	@ °F
Source: Rmf / Rmc	M / -			
Rm @ BHT	1.63 @ 175F	@ °F	@ °F	@ °F
TIME Circulation Stopped	0600			
TIME Logger on Bottom	0800			
Max. Rec. Temp.	175 °F	°F	°F	°F
Equip. / Location	7727 FT.M.			
Recorded By	ADKISSON			
Witnessed By	D. LARSON			

RECEIVED
JUL 31 1975
COLO. OIL & GAS CONS. COMM.

FOLD HERE

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

Run No.	ONE			
Service Order No.	70553			
Fluid Level	FULL			

SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

EQUIPMENT DATA

Panel	M-466			
Mem. Panel	B-258			
TTR	-			
DPI	B-1119			
Cartridge	F-473			
Sonde	M-1273			
Cent. Device	USED			
Stand Off - Inches	3/4"			
G. R. Panel	-			
G. R. Cartridge	-			

REMARKS:

CALIBRATION DATA

INDUCTION	S.B.R.		ONE		
	SONDE ERROR (When measured. At surface, enter "surface" Down hole, enter depth)		SURFACE		
	Corrected For	Hole Size			
		Rm			
Speed - F.P.M.					
GR		BKG. CPS			
		Source CPS			
		Tc Sec			

All 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 willful 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 Clause 7 of our General Terms and Conditions as set out in our current Price Schedule.

SPONTANEOUS-POTENTIAL

$-\frac{|20|}{MV}+$ MILLIVOLTS

DEPTH

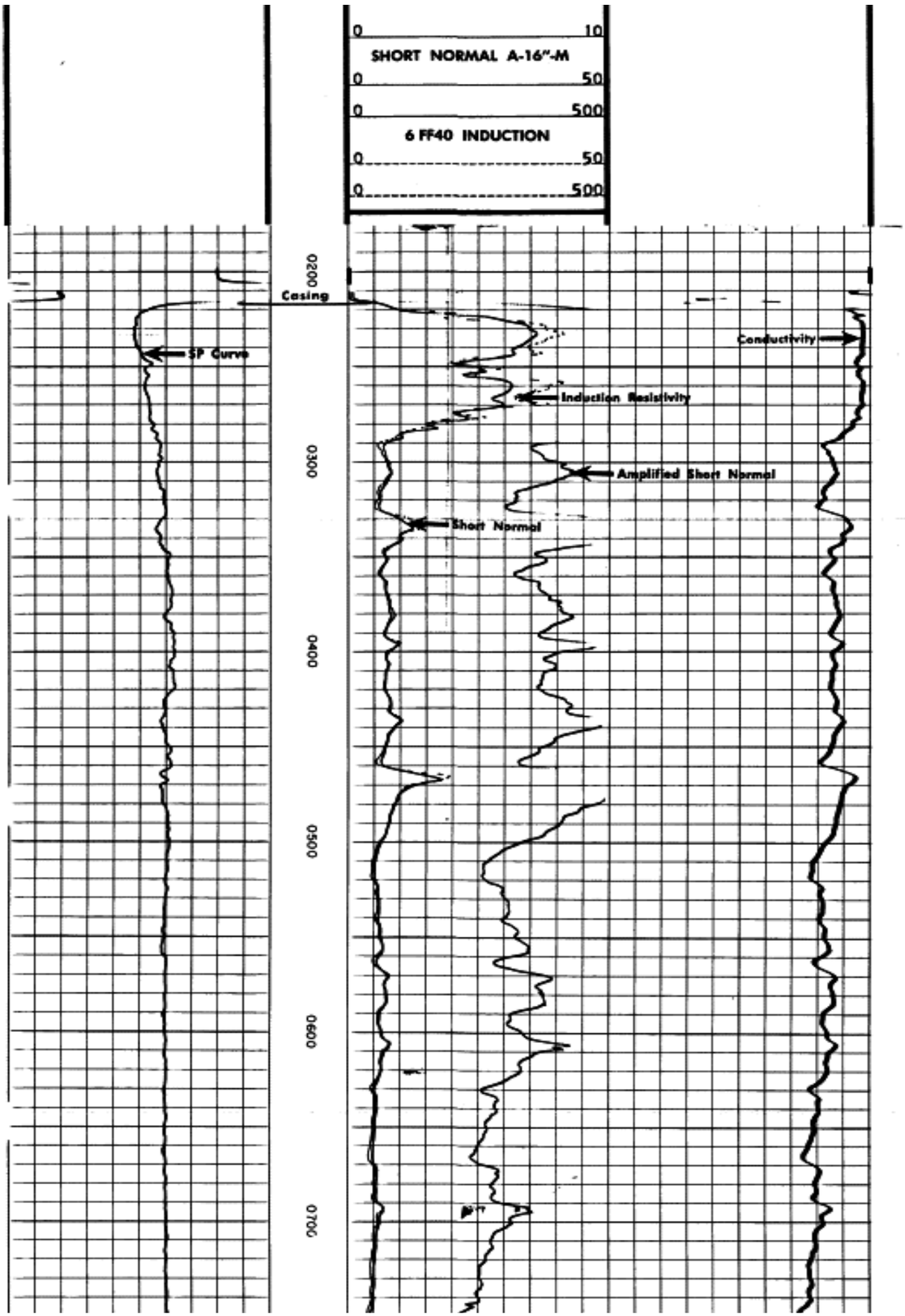
6FF40 INDUCTION **CONDUCTIVITY** MILLIMHOS/M = $\frac{1000}{\text{OHMS. M}^2/\text{M}}$

1000 0

2000 1000

RESISTIVITY OHMS. M²/M

AMP. SHORT NORMAL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SHORT NORMAL A-16"-M
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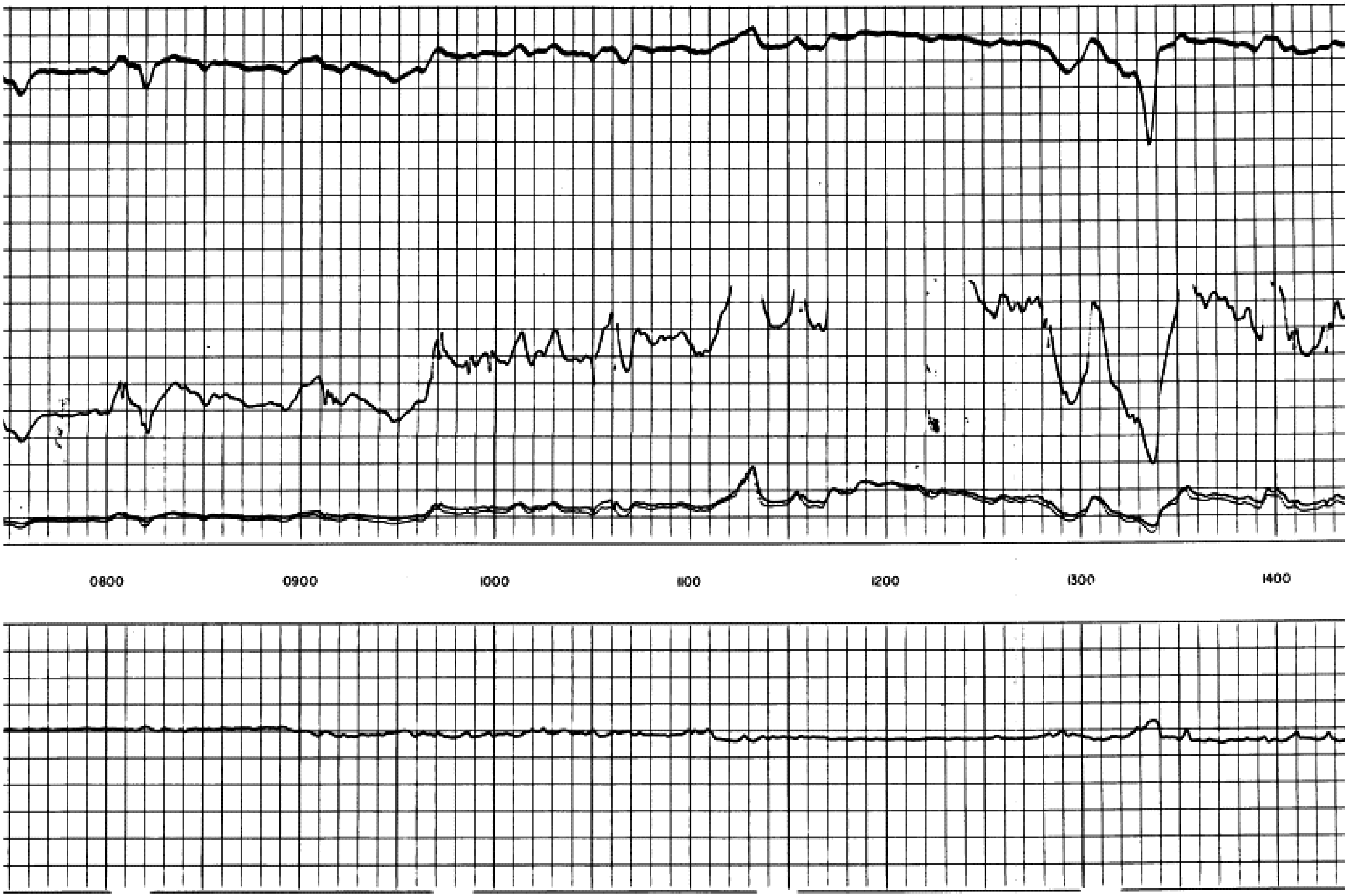
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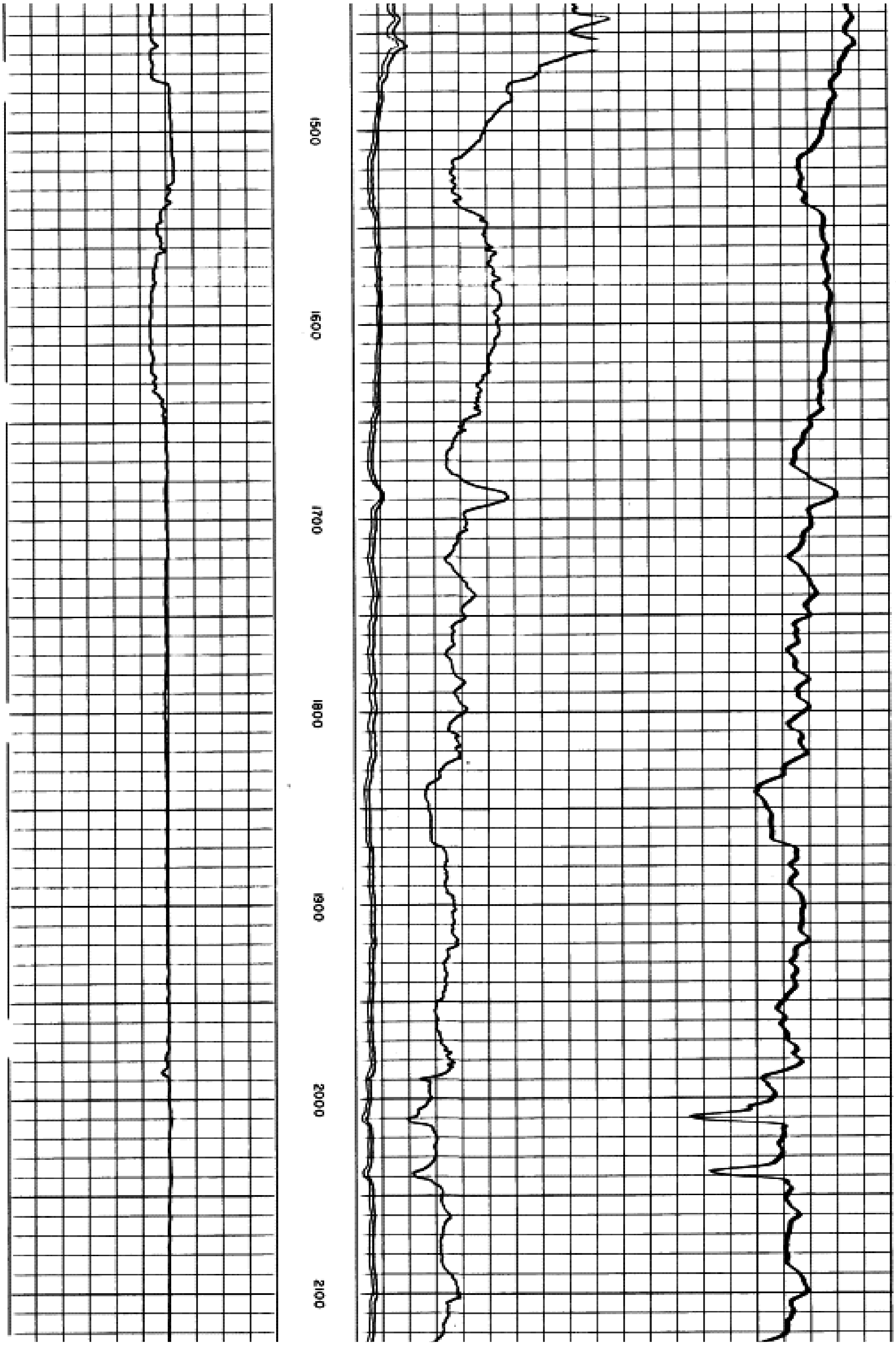

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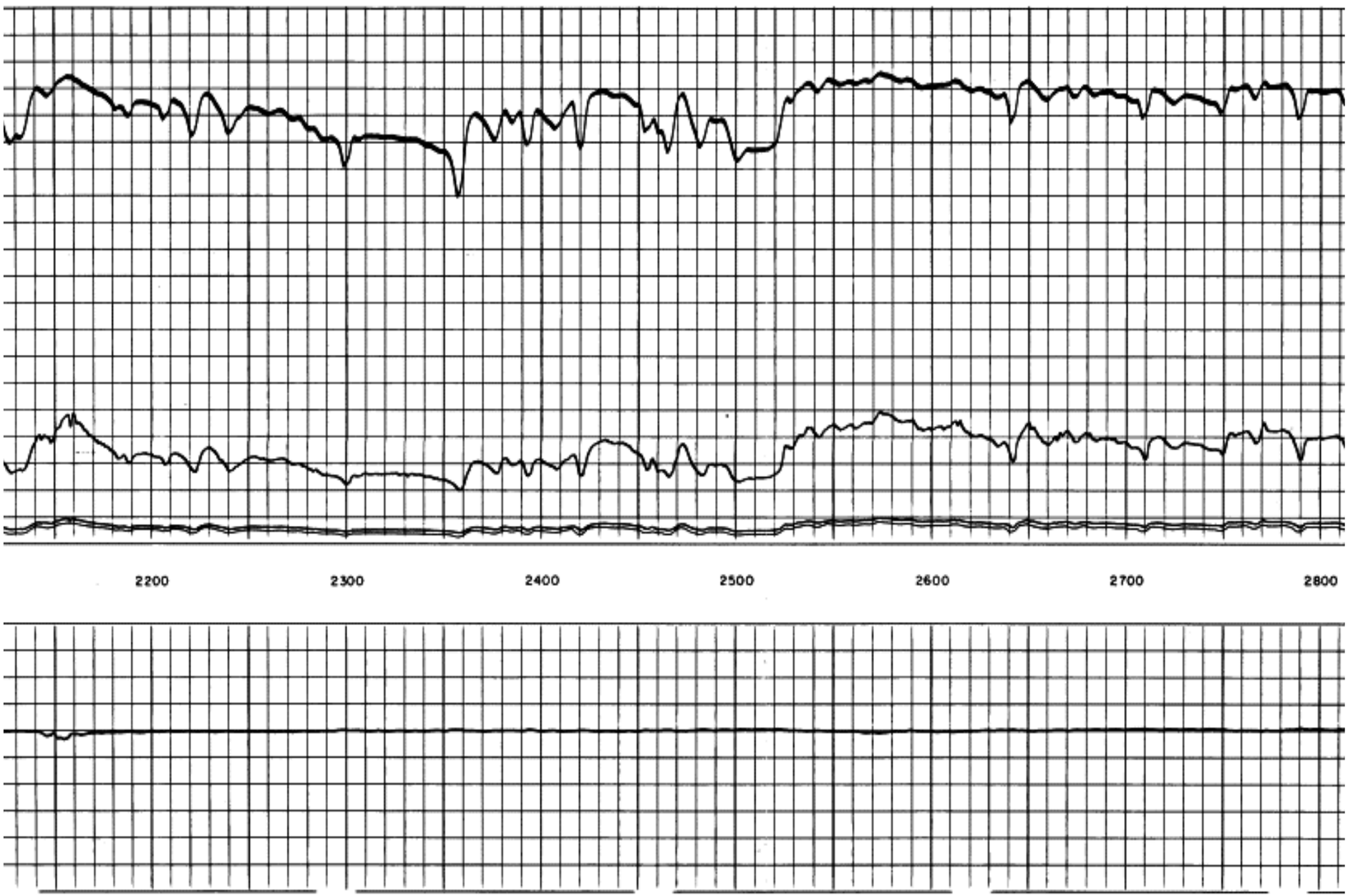
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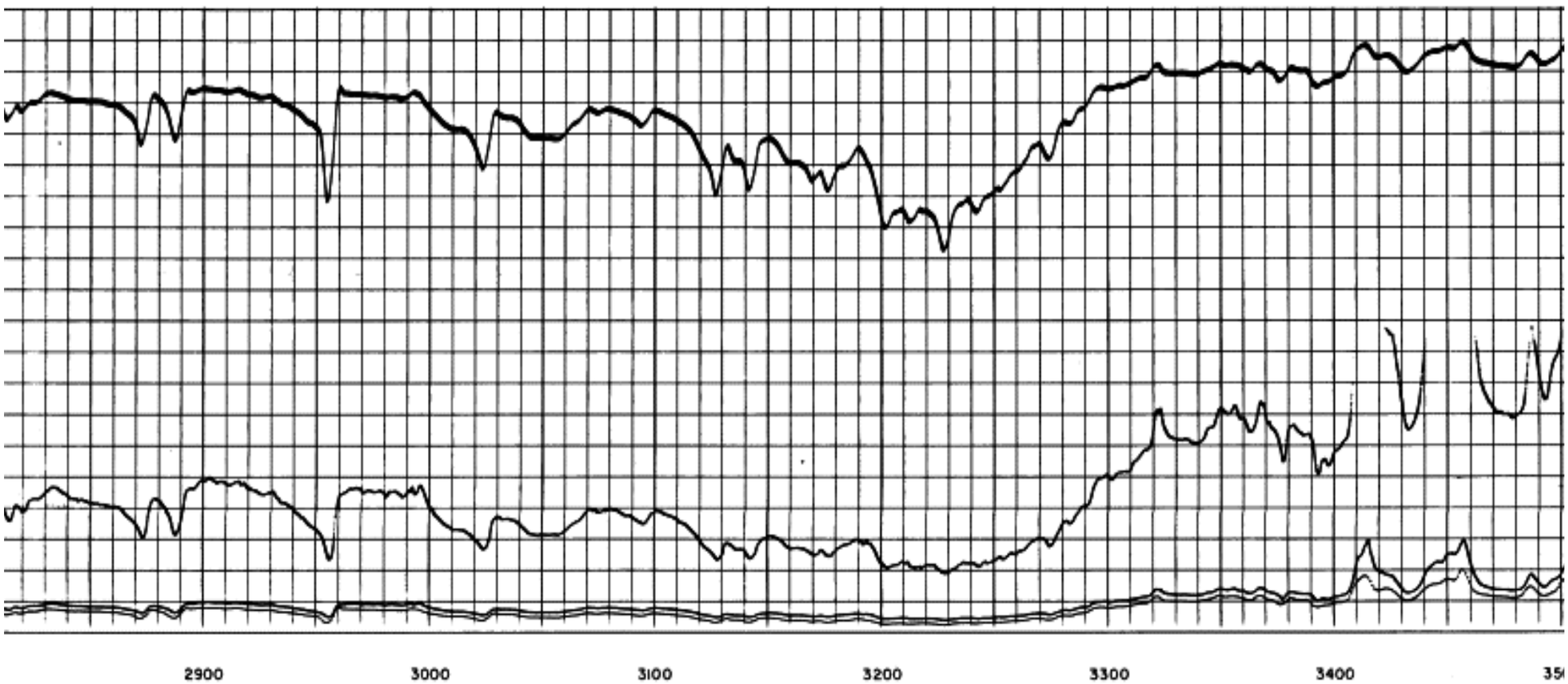
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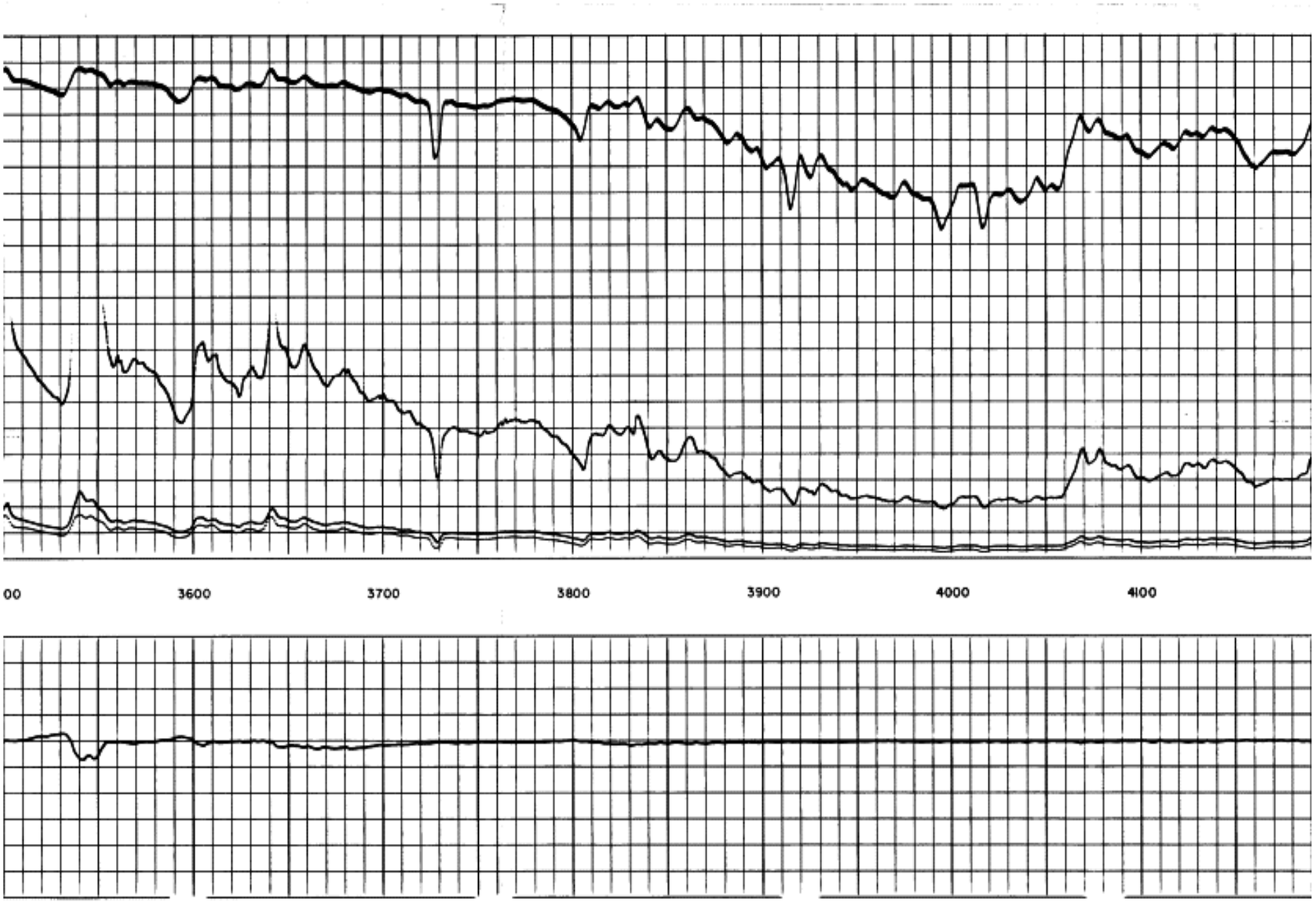
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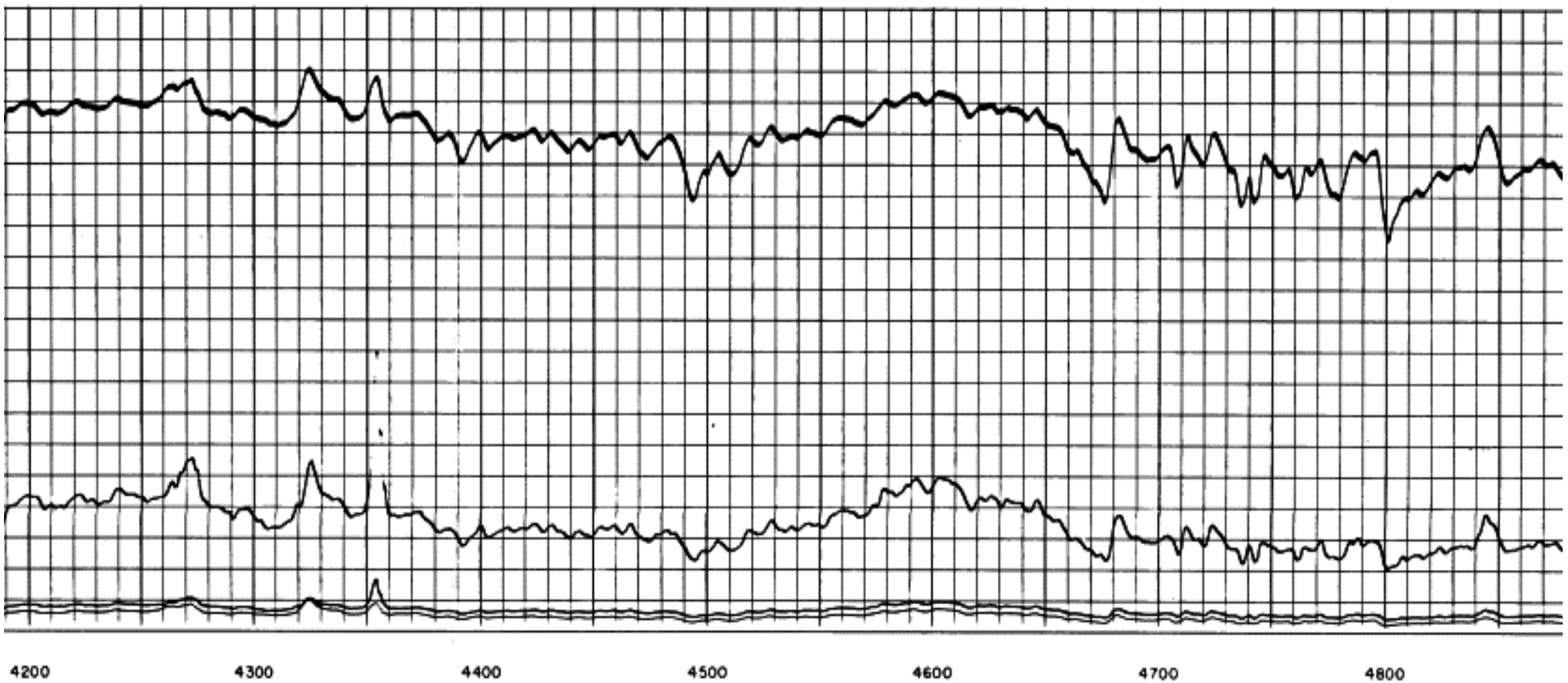
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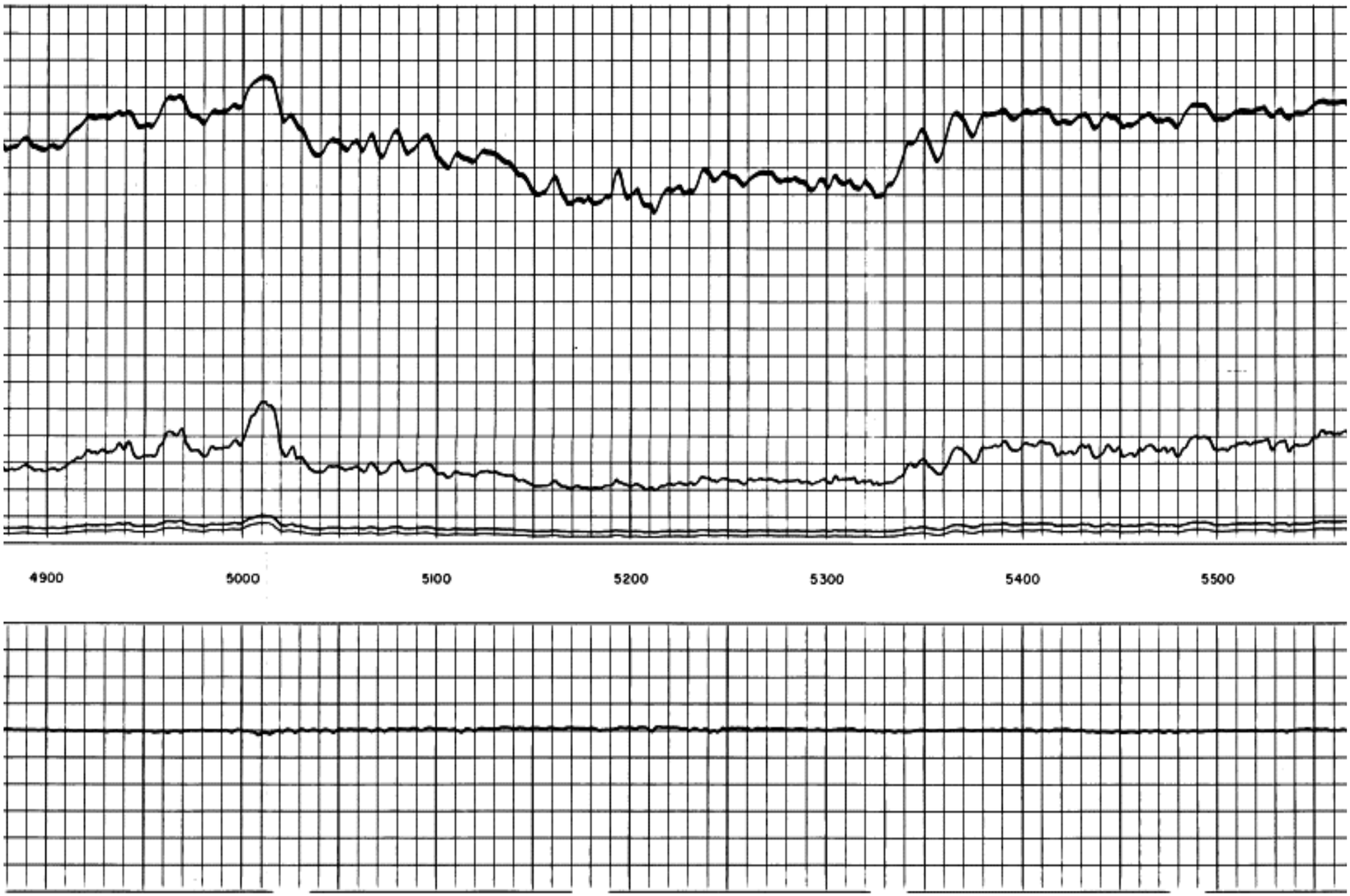
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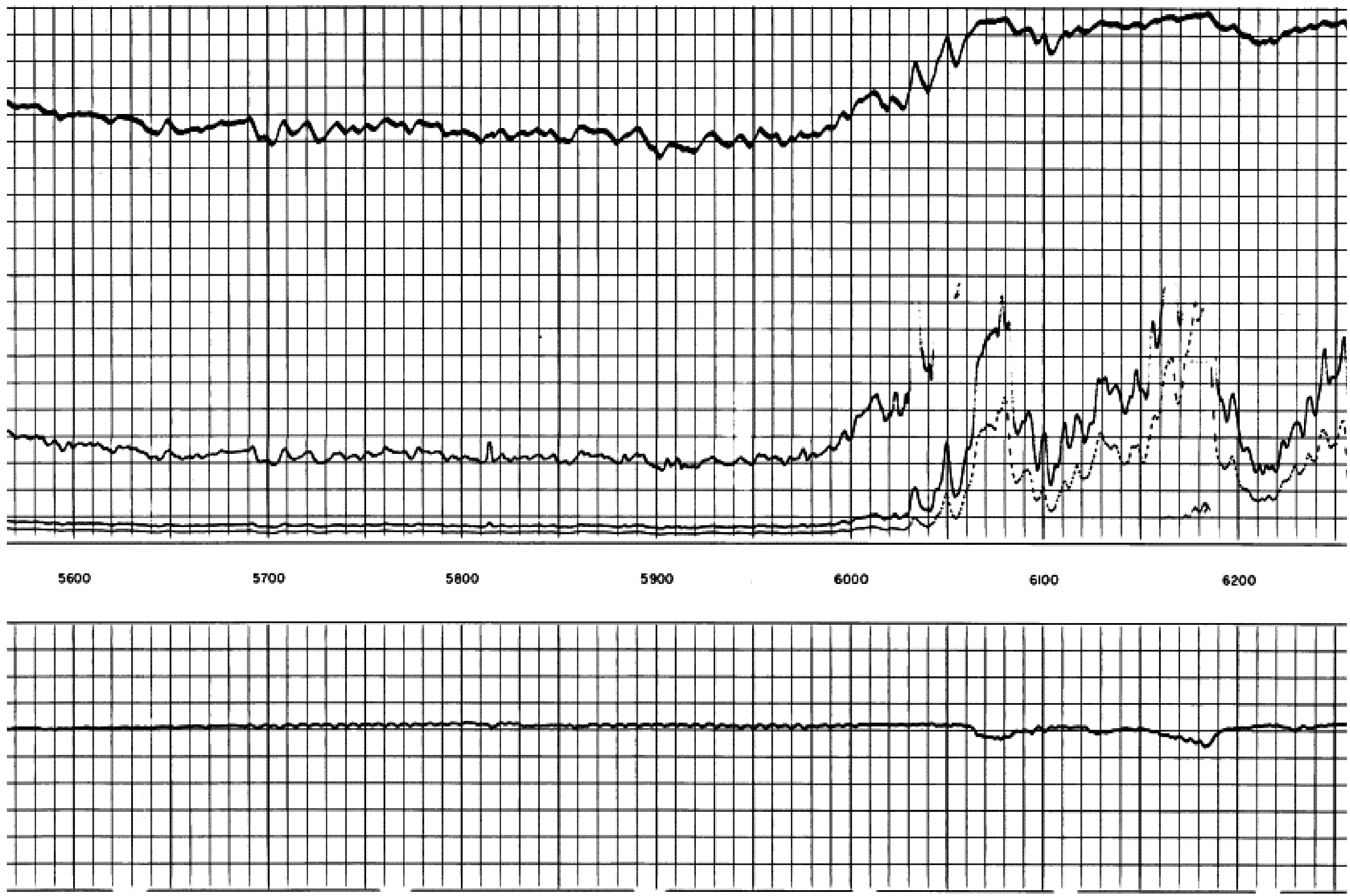
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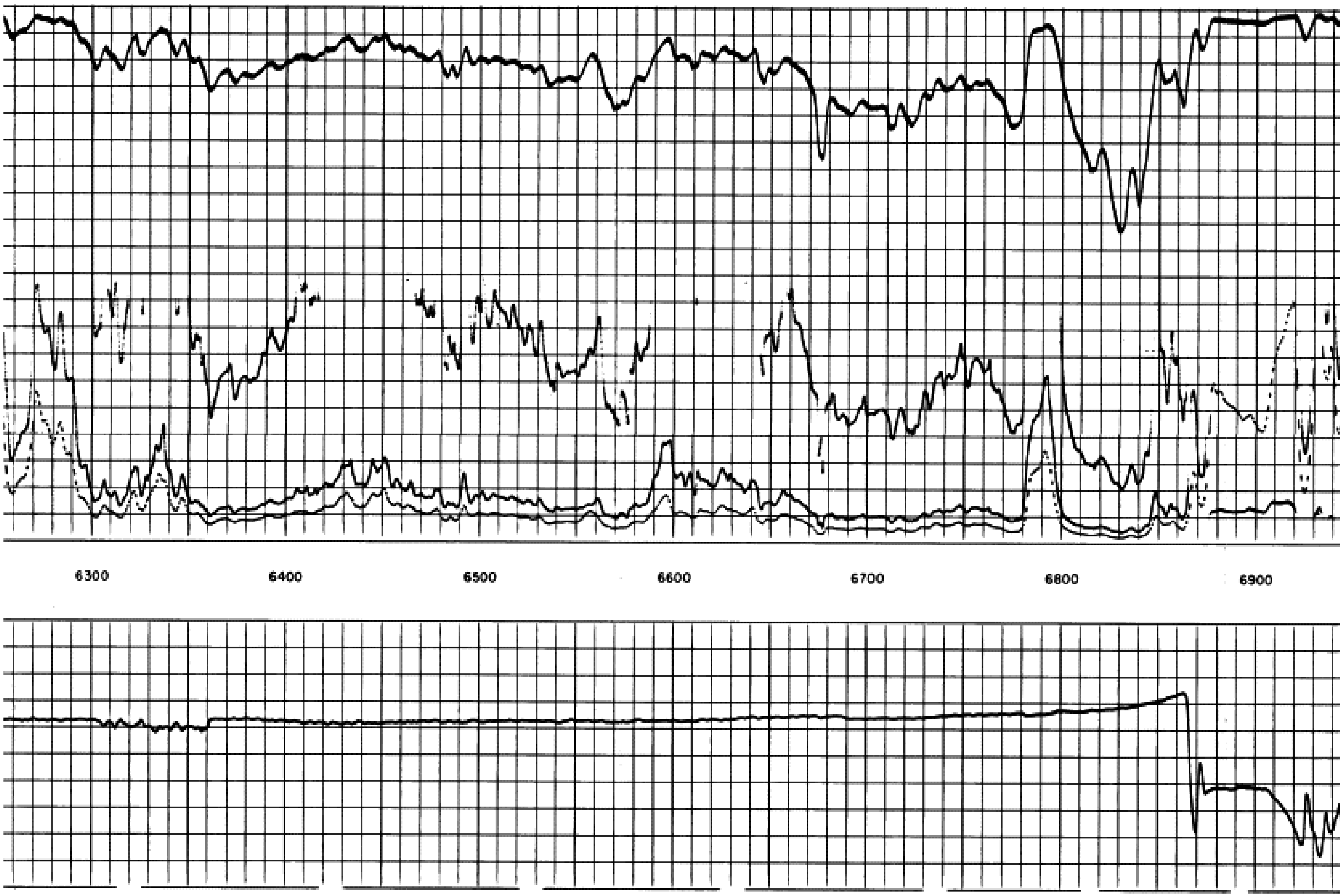
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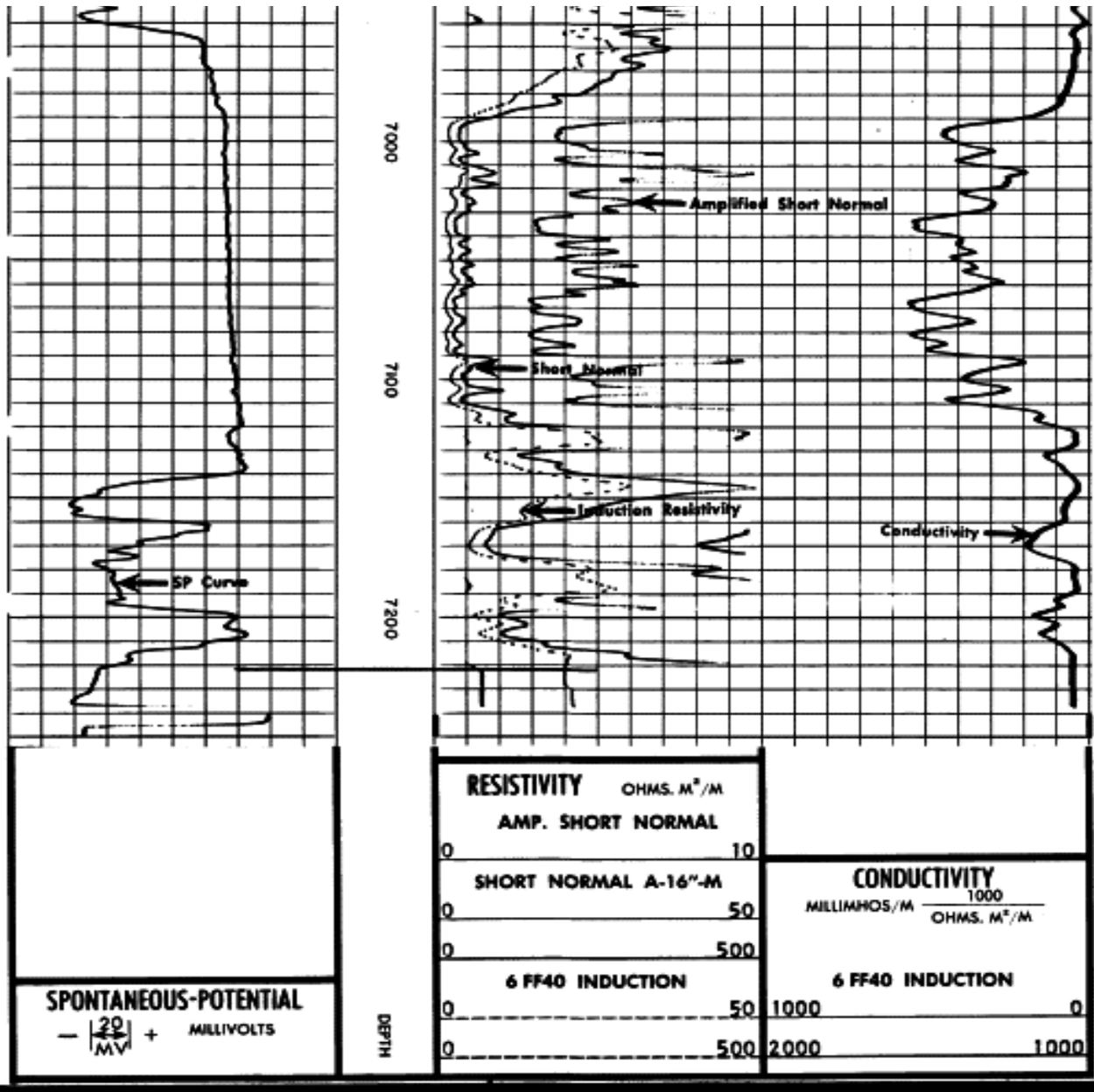


This QUICK LOOK presentation was produced using the LOGARITHMIC OVERLAY METHOD

This Logarithmic Overlay method of presentation simplifies detection of hydrocarbons. It is based upon a comparison of values derived from resistivity and porosity measuring devices.

Every formation is characterized by a Formation Resistivity Factor (F) which relates the resistivity of the formation, when 100% water saturated, to the resistivity of the saturating water. This F is also related to the formation porosity. These relationships are given under Computation Equations. When certain Porosity Logs are run, automatic panel computations permit the film recording of an F curve. To facilitate the quantitative use of overlay comparisons, films of both the F curve and the resistivity curves are recorded on logarithmic scales.

This presentation is made by overlaying the films, shifted to account for water resistivity, and tracing the curve from one film onto the other. With the F and resistivity curves properly positioned, the presence of hydrocarbons is readily apparent. In hydrocarbon-bearing zones, the F curve, indicating the values appropriate for 100% water saturation, reads a lower value than the resistivity curves.

When curves of both deep and shallow investigation resistivity devices are traced, and are properly positioned to account for the resistivities of waters in their respective zones of investigation, the logarithmic overlay presentation also indicates the amount of oil displaced by invasion.

On the Logarithmic Overlay presentation, appropriate scales permit

COMPUTATION EQUATIONS

Apparent Porosity Computations:

Density: $\phi_D = \dfrac{\rho_{ma} - \rho_b}{\rho_{ma} - \rho_f}$

Sonic: $\phi_s = \dfrac{\Delta t - \Delta t_{ma}}{\Delta t_f - \Delta t_{ma}} \cdot \dfrac{1}{C_p}$

Neutron: $\phi_N =$ As recorded on Sidewall Neutron Porosity Log.

Formation Factor Computations:

$F = \dfrac{a}{\phi^m} \qquad F = \dfrac{R_o}{R_w}$

Water Saturation Computations:

$S_w = \sqrt{\dfrac{F R_w}{\quad}} = \sqrt{\dfrac{R_o}{\quad}}$

direct reading for values of porosity and water saturation.

$\sqrt{R_t}$ $\sqrt{R_t}$

Logs Used In Presentation	Type	Run No.	Date	Type	Run No.	Date	Type	Run No.	Date	Type	Run No.	Date
	IES	ONE	7-9	FDC	ONE	7-9						

COMPUTATION PARAMETERS

Depth Interval		Resistivity			FDC		BHC			SNP	
From	To	R_w	R_{mf}	R_z	ρ_{ma}	ρ_f	Δt_{ma}	Δt_f	C_p	Matrix	Hole Fluid
6850	7000	.3	3.59	-	2.65	1.00					
7100	7200	.12	3.59	-	2.65	1.00					

a = .62 m = 2.15

Remarks

Mud Measurements: R_m = 3.76 @ 76 °F | R_{mf} = 3.59 @ 76 °F | BHT = 175 °F

DETAIL LOG

5" = 100'

SPONTANEOUS-POTENTIAL

— 20 MV + MILLIVOLTS

DEPTH

RESISTIVITY OHMS. M²/M

AMP. SHORT NORMAL

0 — 10

SHORT NORMAL A-16"-M

0 — 50

0 — 500

6 FF40 INDUCTION

0 — 50

0 — 500

LOGARITHMIC RESISTIVITY

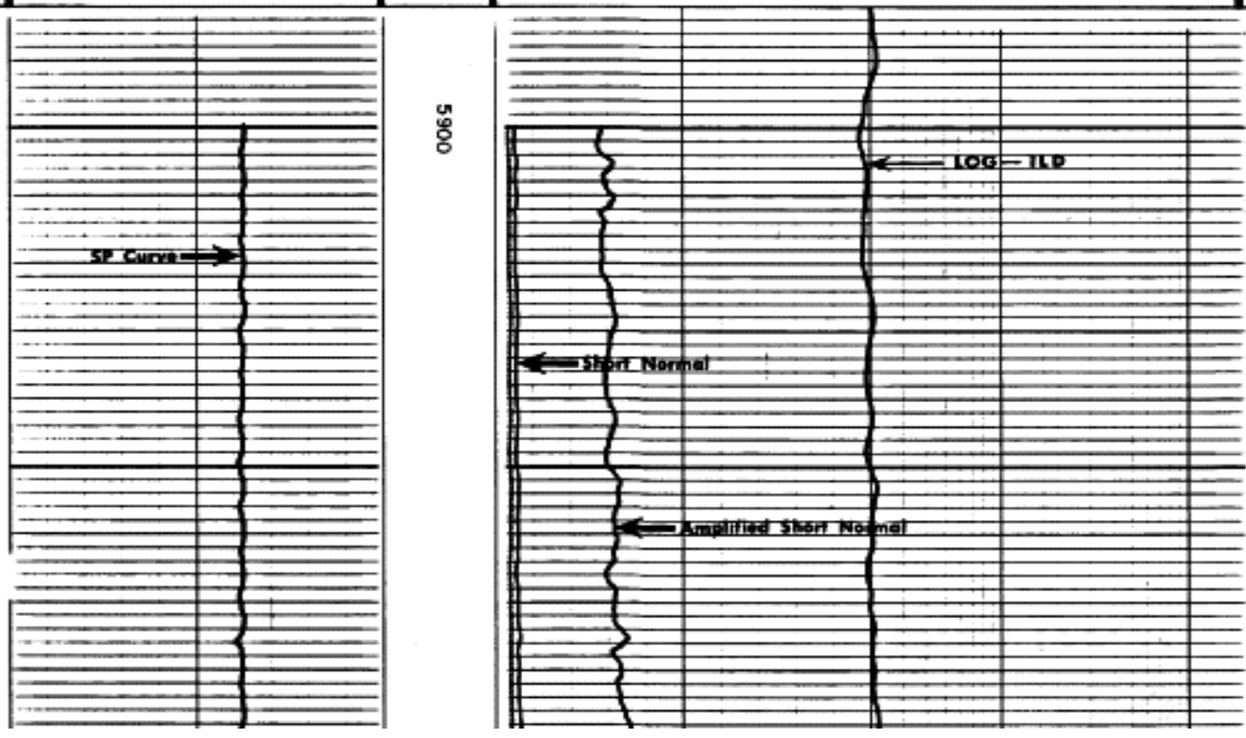
6 FF40 INDUCTION

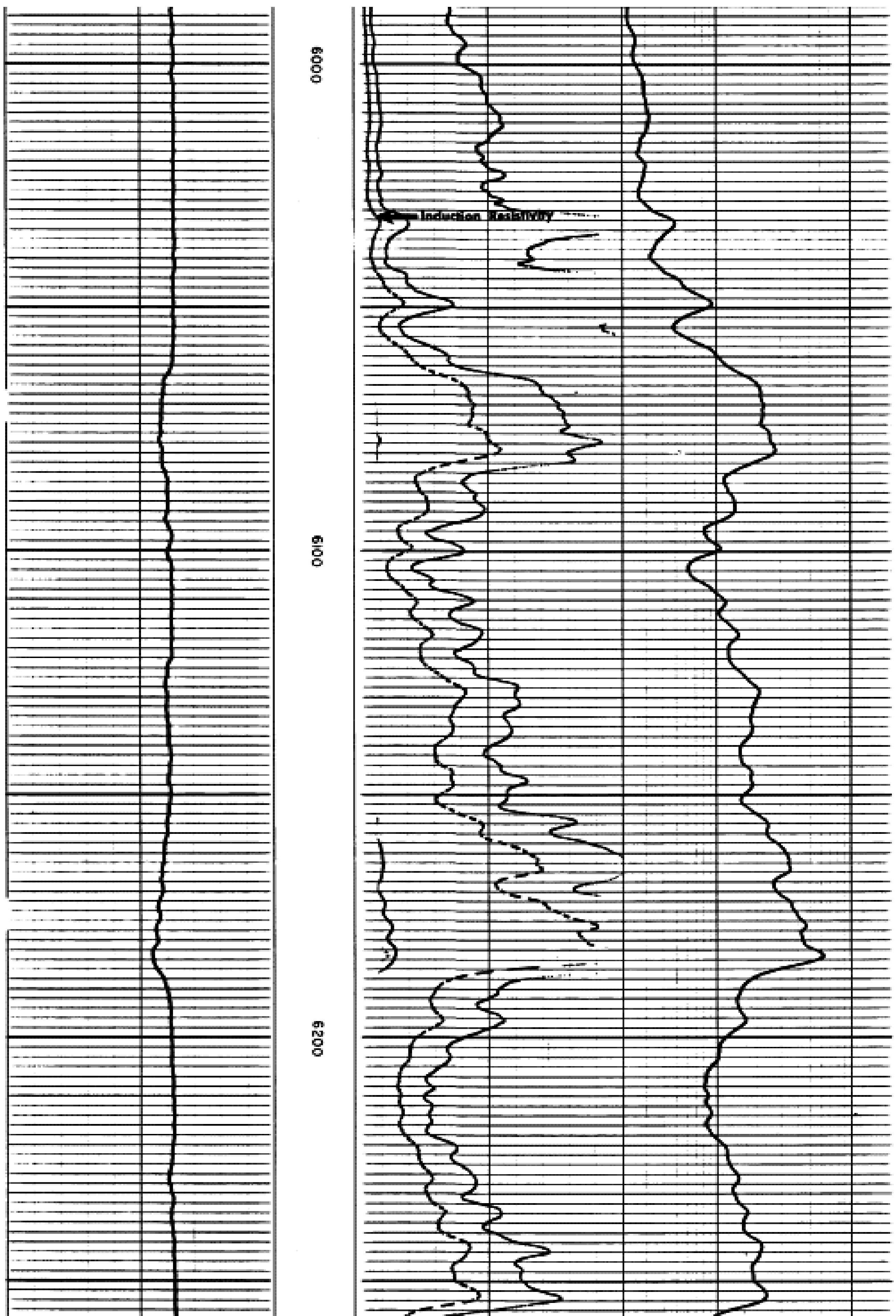
2.0 — 10 — 200

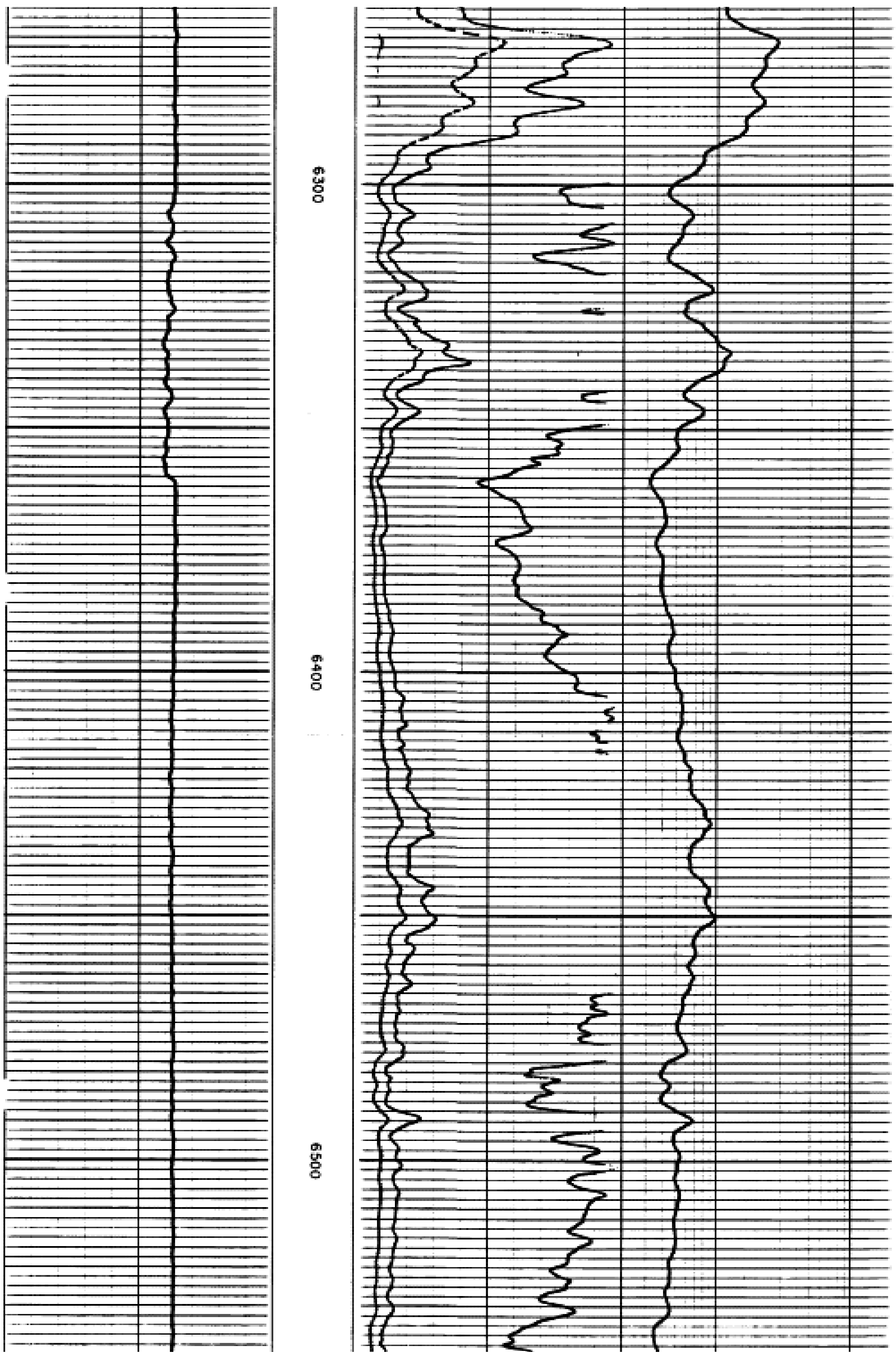
10 20 30 40 50 100

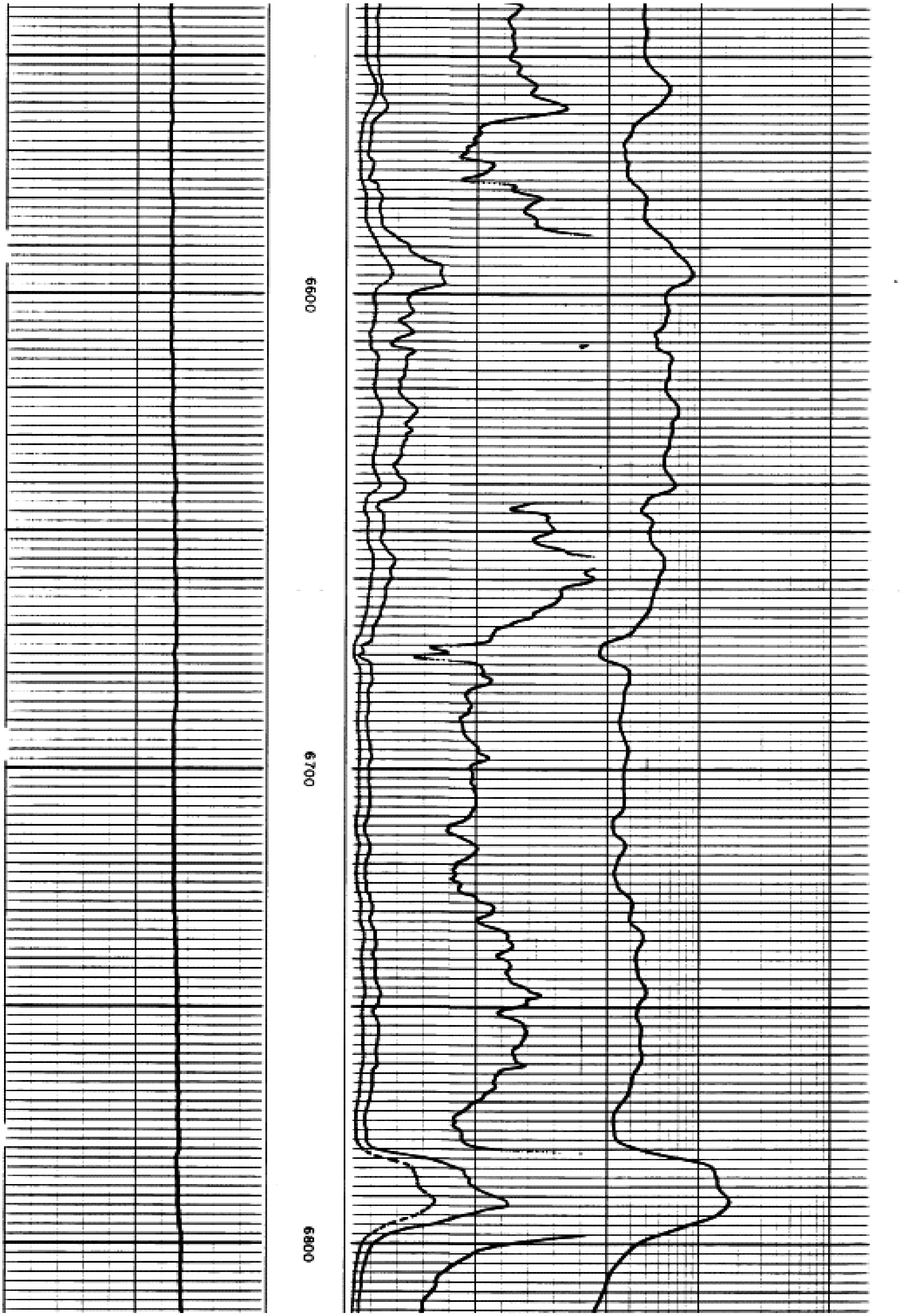
WATER SATURATION

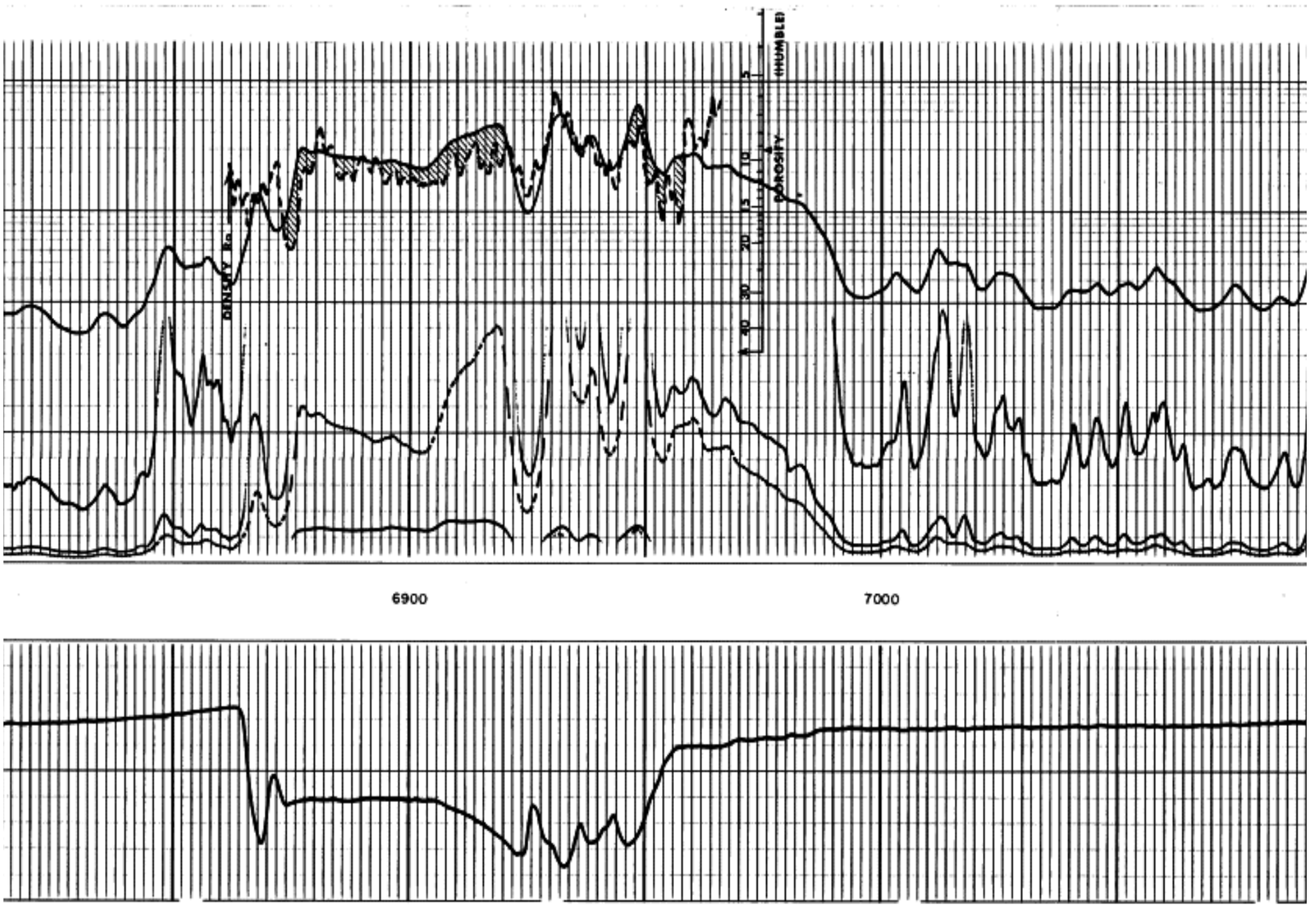
INDEX R_T ON 100, READ S_W WHERE R_O INTERSECTS SCALE

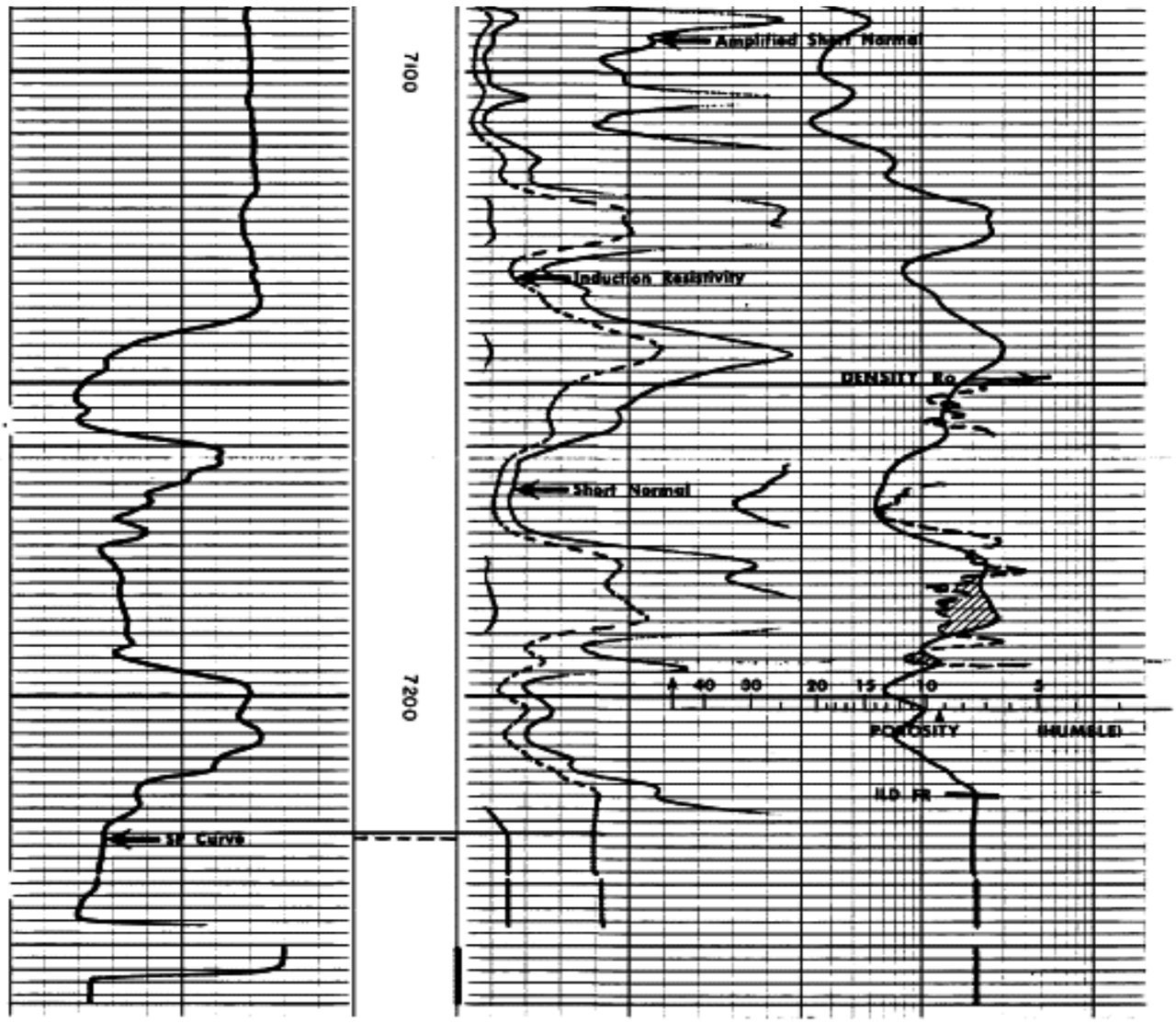


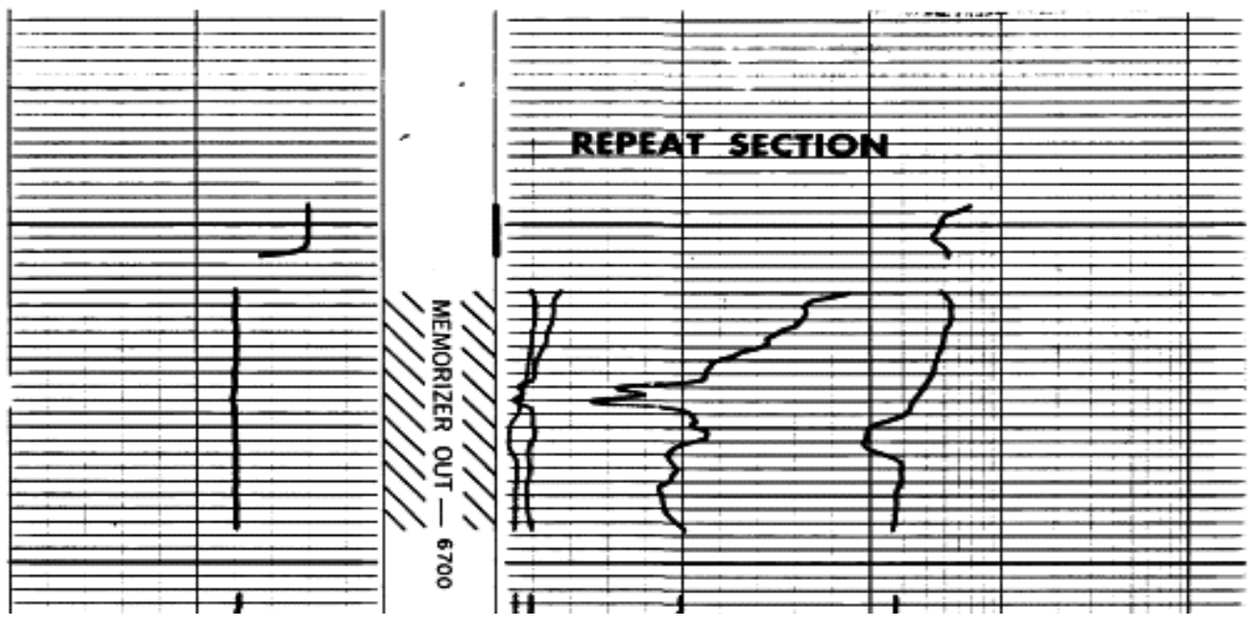

6000
Induction Resistivity
6100
6200

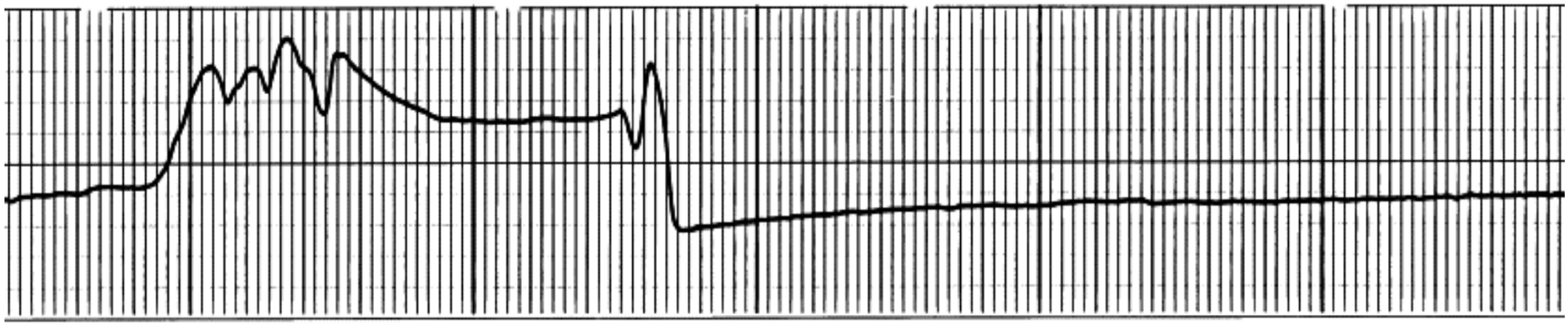

6300
6400
6500


6600
6700
6800


DENSITY lb
(HUMBLE)
POROSITY %
5
10
15
20
30
40
6900
7000

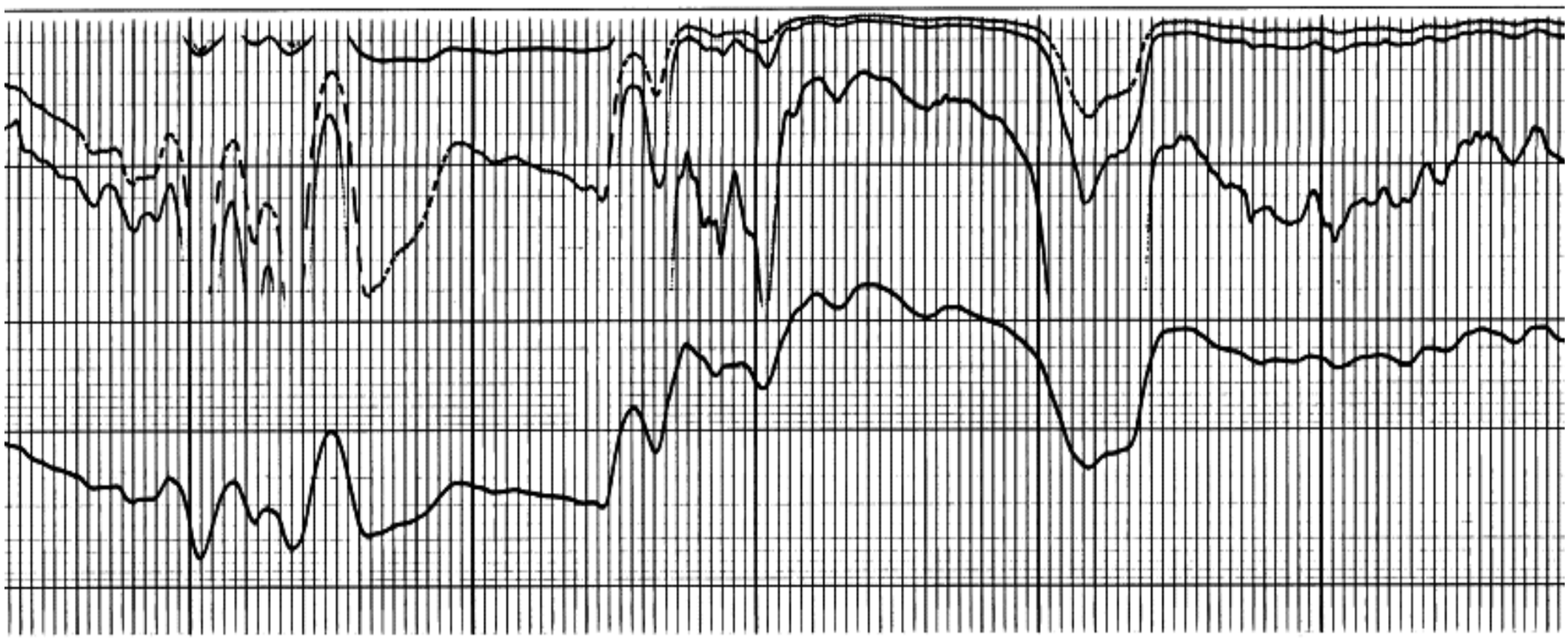

7100
7200
Amplified Short Normal
Induction Resistivity
DENSITY Rb
Short Normal
40
30
20
15
10
5
POROSITY
(HUMBLE)
ILD RR
SP Curve

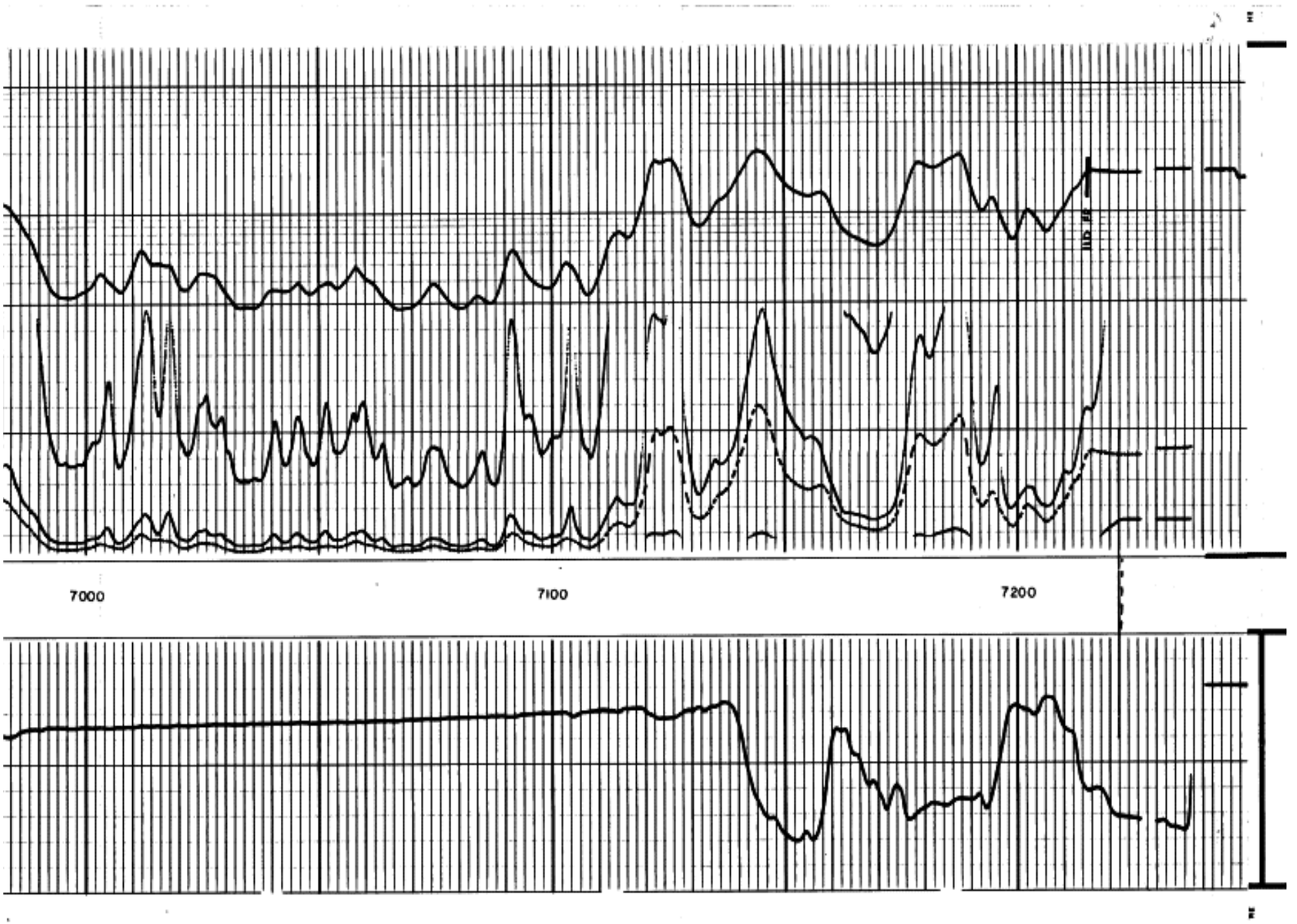

REPEAT SECTION
MEMORIZER OUT — 6700

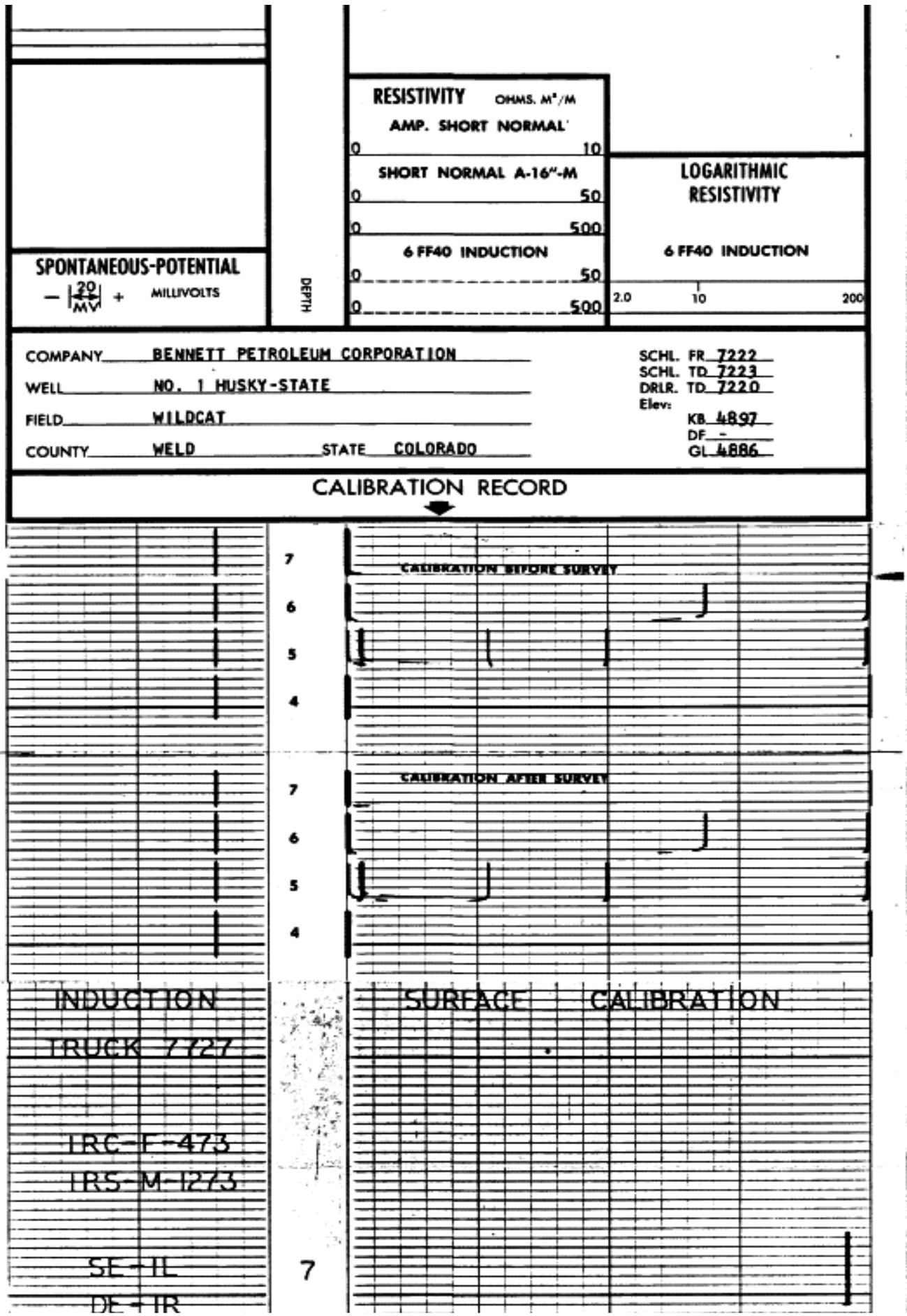


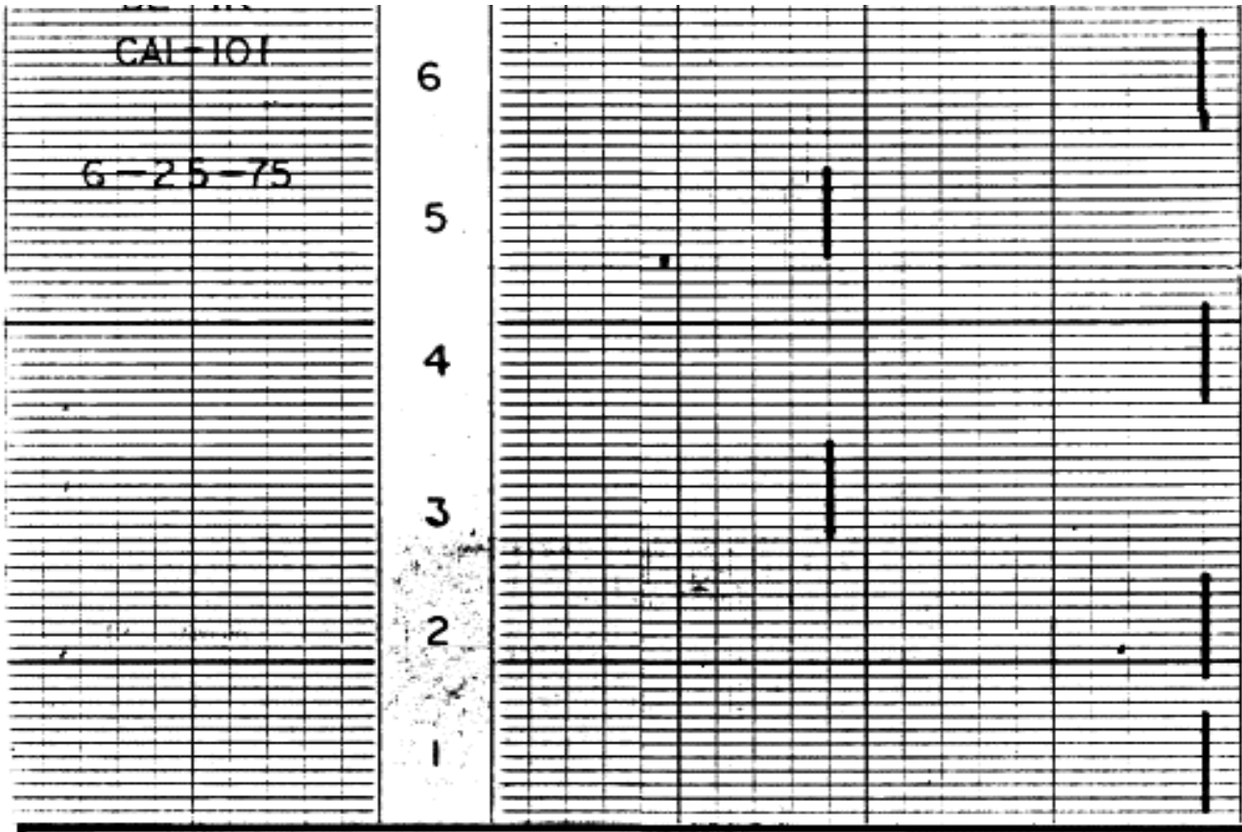
0069

0069




7000
7100
7200


RESISTIVITY OHMS. M²/M
AMP. SHORT NORMAL
0 10
SHORT NORMAL A-16"-M
0 50
0 500
6 FF40 INDUCTION
0 50
0 500
LOGARITHMIC RESISTIVITY
6 FF40 INDUCTION
2.0 10 200
SPONTANEOUS-POTENTIAL
20 MV
MILLIVOLTS
DEPTH
COMPANY BENNETT PETROLEUM CORPORATION
WELL NO. 1 HUSKY-STATE
FIELD WILDCAT
COUNTY WELD STATE COLORADO
SCHL. FR 7222
SCHL. TD 7223
DRLR. TD 7220
Elev:
KB 4897
DF -
GL 4886
CALIBRATION RECORD
CALIBRATION BEFORE SURVEY
7
6
5
4
CALIBRATION AFTER SURVEY
7
6
5
4
INDUCTION
TRUCK 7727
IRC-F-473
IRS-M-1273
SE-IL
DE-IR
SURFACE CALIBRATION
7



INDUCTION-ELECTRICAL SURVEY CALIBRATION CODING

1. MECHANICAL ZERO
2. ELECTRICAL ZERO
3. TEST LOOP - 500 mmho
4. MECHANICAL ZERO
5. INTERNAL CALIBRATION - 1000 mmho
6. SONDE ERROR
7. DIODE ERROR

} DOWN HOLE CALIBRATION

} SURFACE CALIBRATION

CALIBRATION RECORD

COMPANY BENNETT PETROLEUM CORPORATION

WELL NO. 1 HUSKY-STATE

FIELD WILDCAT

COUNTY WELD STATE COLORADO

SCHL. FR 7222
SCHL. TD 7223
DRLR TD 7220
Elev:
KB 4897
DF -
GL 4886

Log Analysis

Schlumberger

COMPANY BENNETT PETROLEUM CORPORATION

WELL NO. 1 HUSKY-STATE

FIELD WILDCAT

COUNTY WELD

STATE COLORADO

DEPTH					RW						% POROSITY	% WATER	REMARKS
6873-76					.3						21	60	
6877-80					.3						11	85	
6884-88					.3						12 MAX	81	
6894-6904					.3						13 MAX	84	

6904-08					.3						12	80	
6908-10					.3						10	90	
6910-14					.3						10 AVG	71	
6914-18					.3						11 AVG	69	
6918-20					.3						11	71	
6945-50					.3						10 AVG	71	
6950-52					.3						12	76	
6952-54					.3						17	70	
7182-84					.12						11	74	
7184-90					.12						9	70	
7193-95					.12						12	80	
					RW FROM F + RO/RW								
					RW FROM SP @ 7150					.09 @ BHT			

DATE	LOCATION	ENGINEER
7-9-75	FORT MORGAN	ADKISSON