

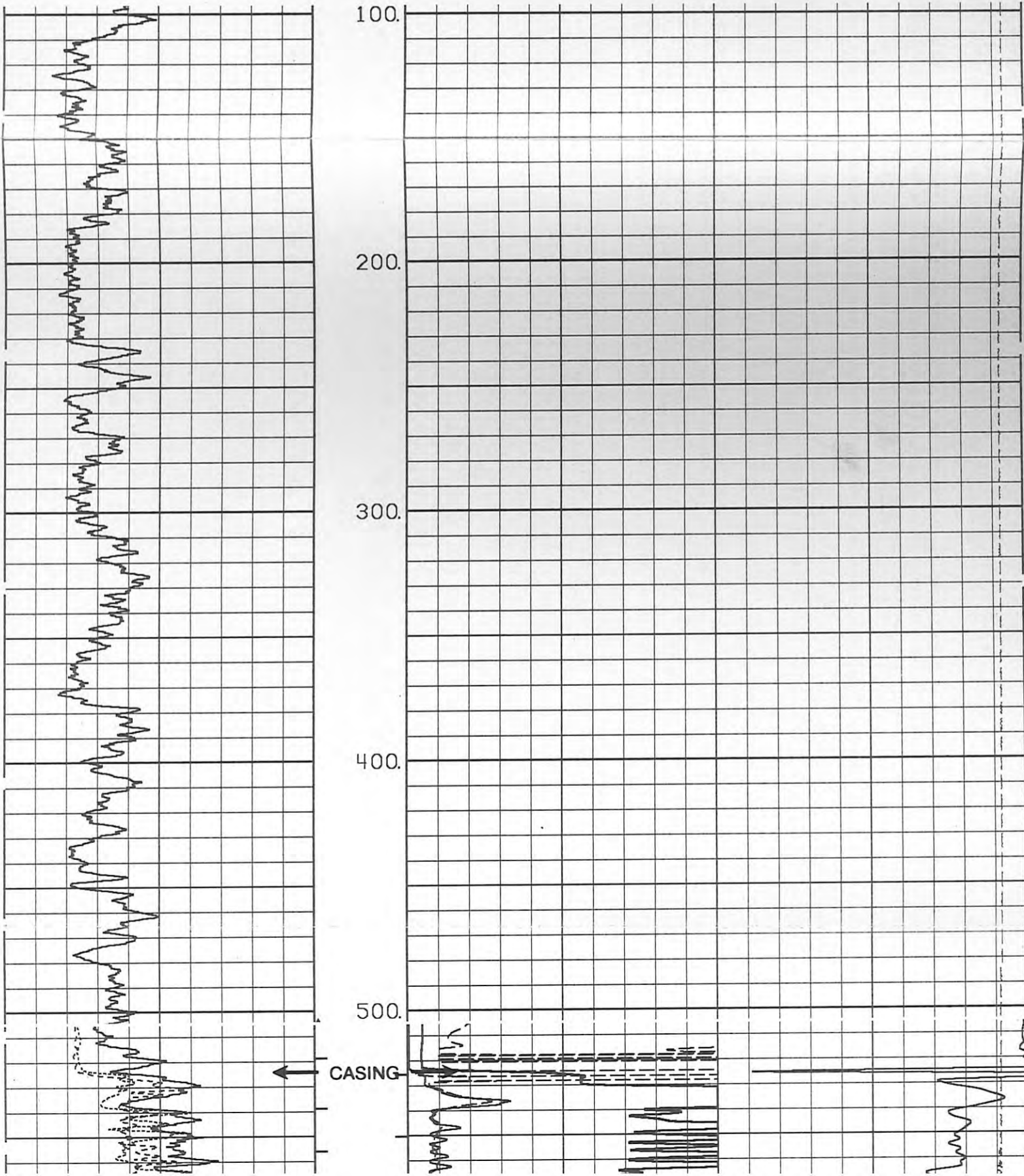


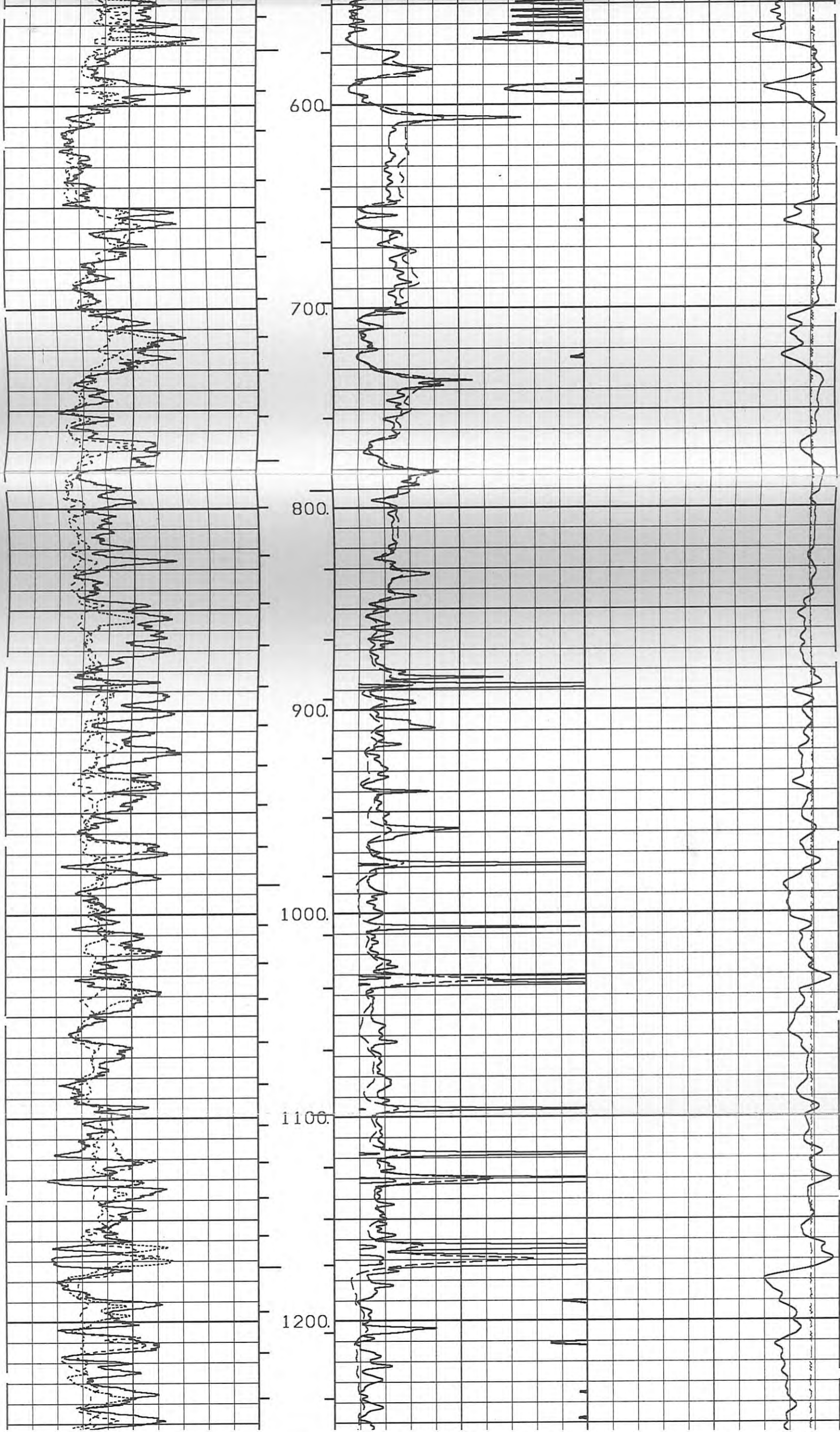
REMARKS: TD NOT LOGGED DUE TO HOLE CONDITIONS. PULLED TIGHT AT 4582' TO 4576',  
AND CLOSED CALIPERS. FISH AT BOTTOM OF WELL.  
ANNULAR HOLE VOLUME BASED ON 5.5" CASING  
THANK YOU FOR USING HALLIBURTON ENERGY SERVICES, VERNAL 801-789-3155  
CREW: J.MELANCON, R.SHAW //RIG// ADCOR NO. 36

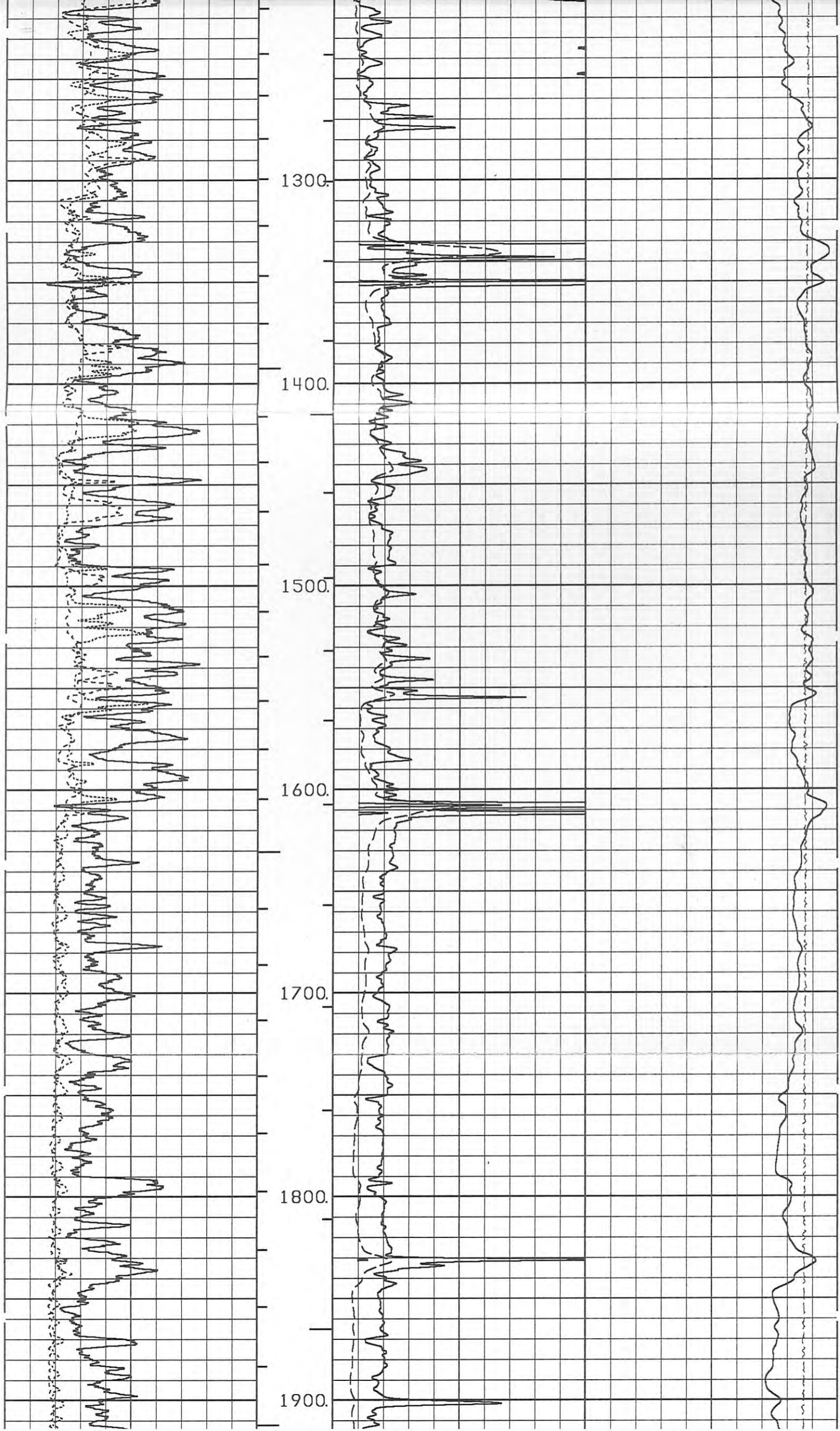
HALLIBURTON LOGGING SERVICES, INC. DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK  
PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HLS PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA,  
INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HLS IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT,  
FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

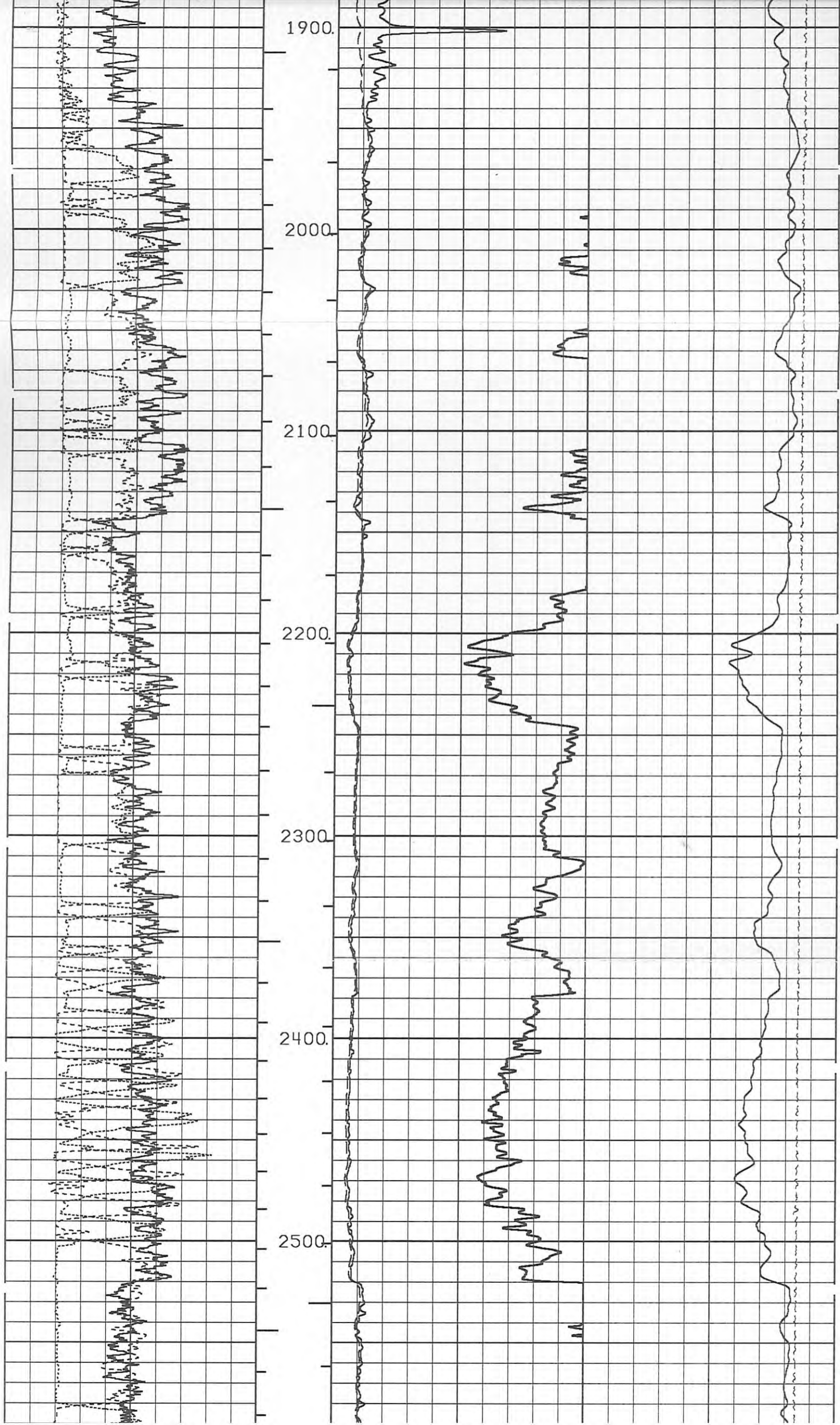
MATN PASS: 2" = 100'

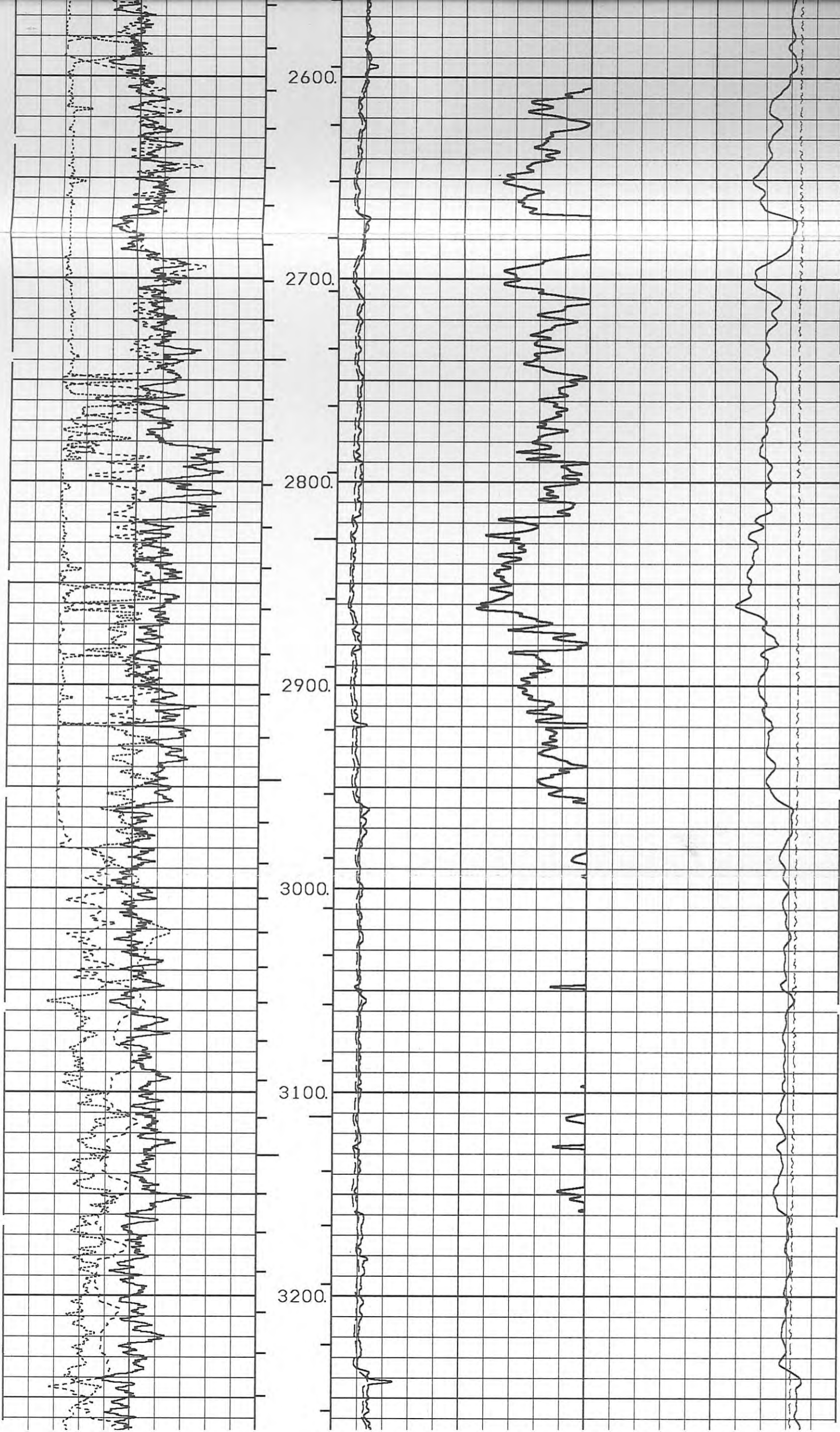
GAMMA			AHV	SH GUARD RES		DEEP COND			
0	GAMMA API	150	<AHV<	0	OHMM	100	500	MMHO	0
CALIP 1-3			BHV	AMP GUARD		TENSION			
6	INCHES	16	>BHV>	0	OHMM	10	10000	POUNDS	0
CALIP 2-4				DEEP RES					
6	INCHES	16		0	OHMM	100			

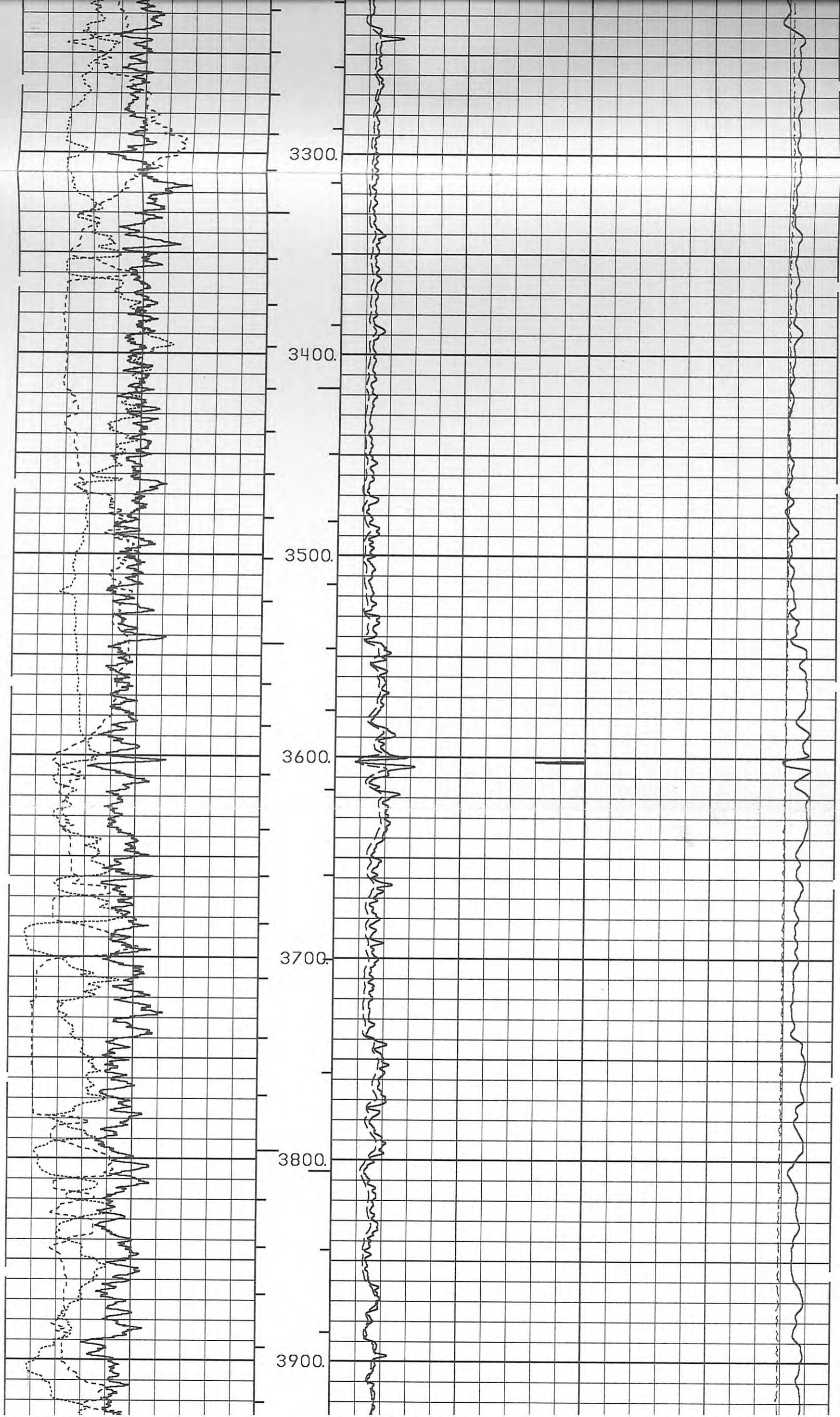


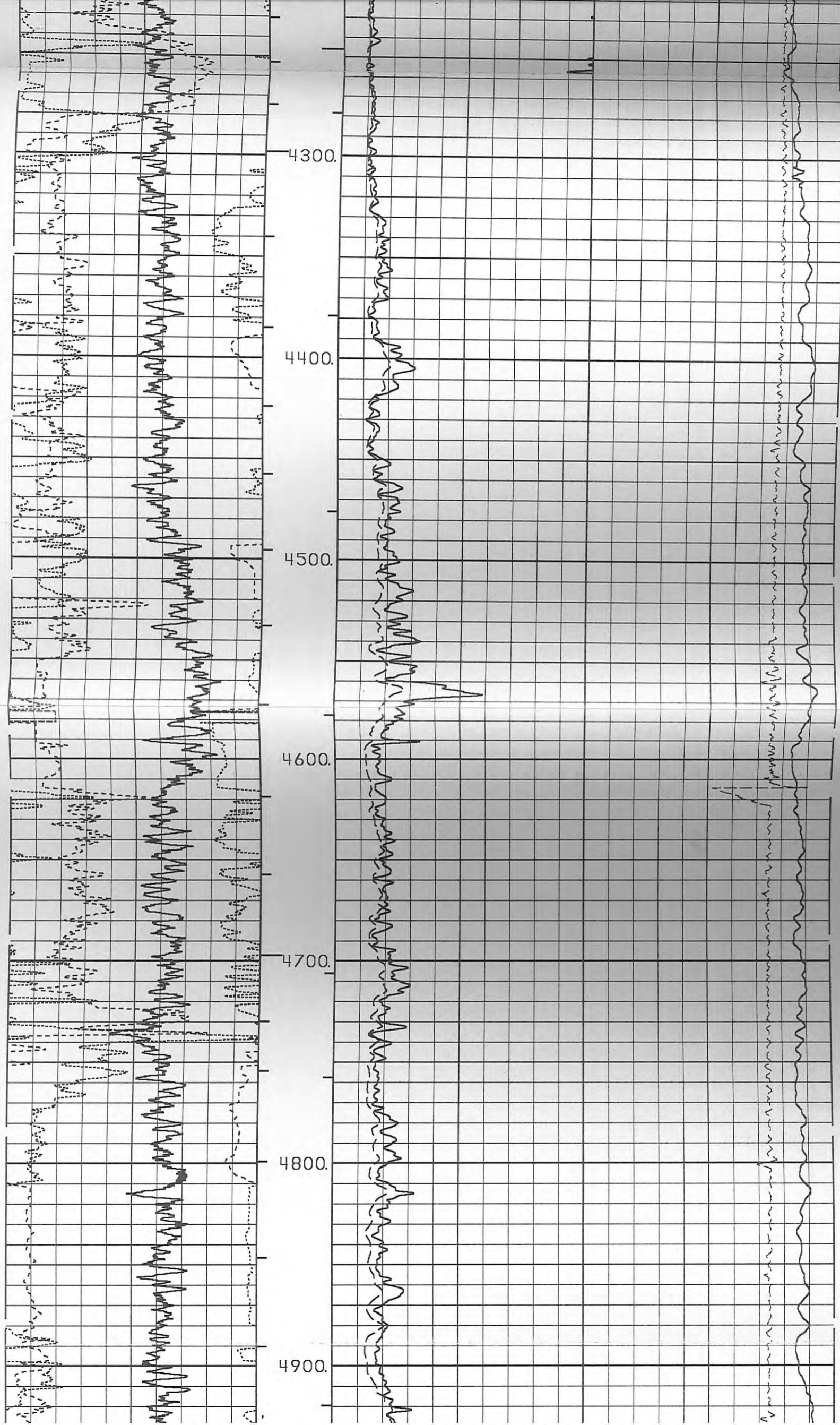


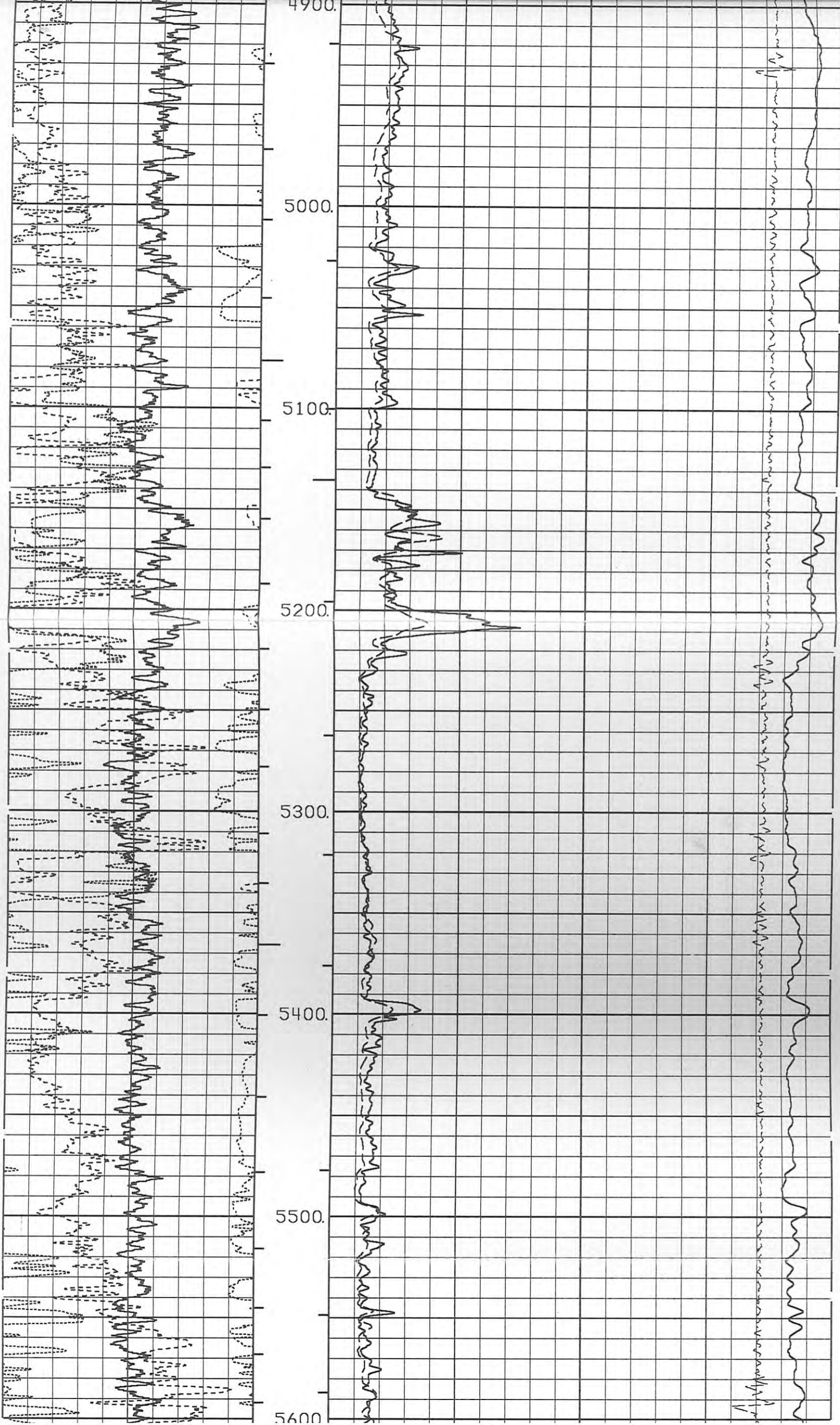


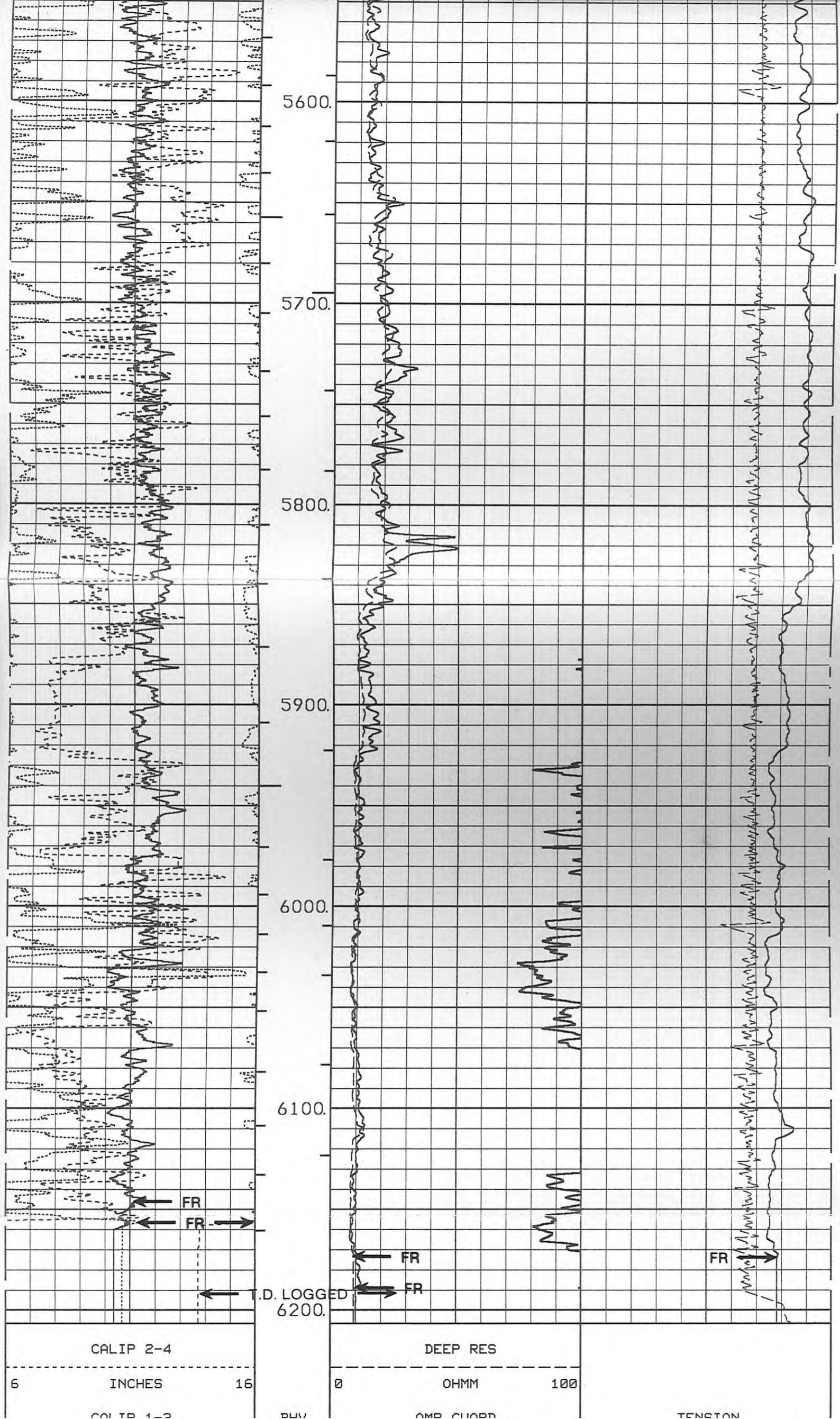












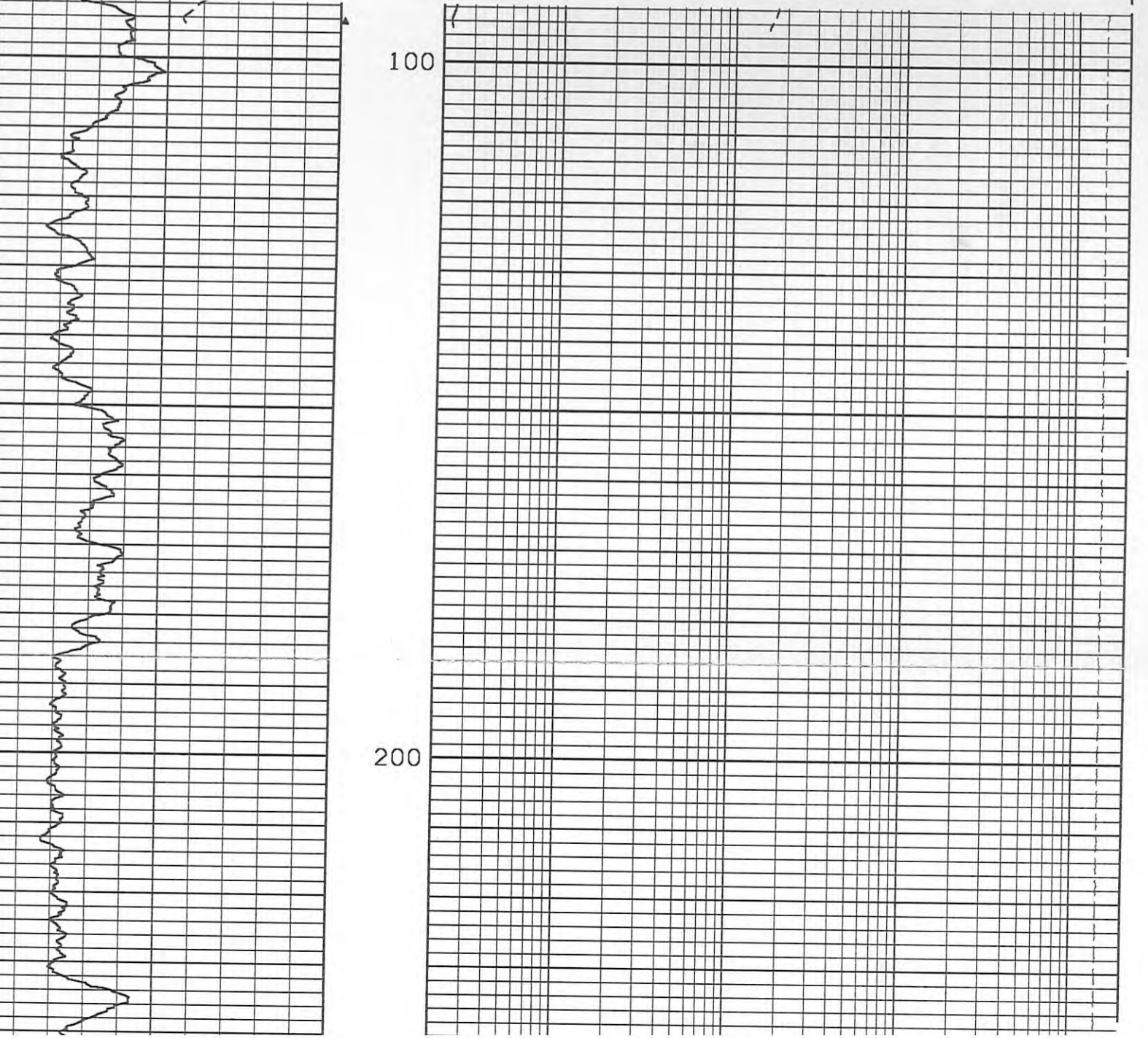
CALIP 2-4			DEEP RES					
6	INCHES	16		0	OHMM	100		
CALIP 1-3			BHV	AMP GUARD			TENSION	
6	INCHES	16	>BHV>	0	OHMM	10	10000	POUNDS 0
GAMMA			AHV	SH GUARD RES			DEEP COND	
0	GAMMA API	150	<AHV<	0	OHMM	100	500	MMHO 0

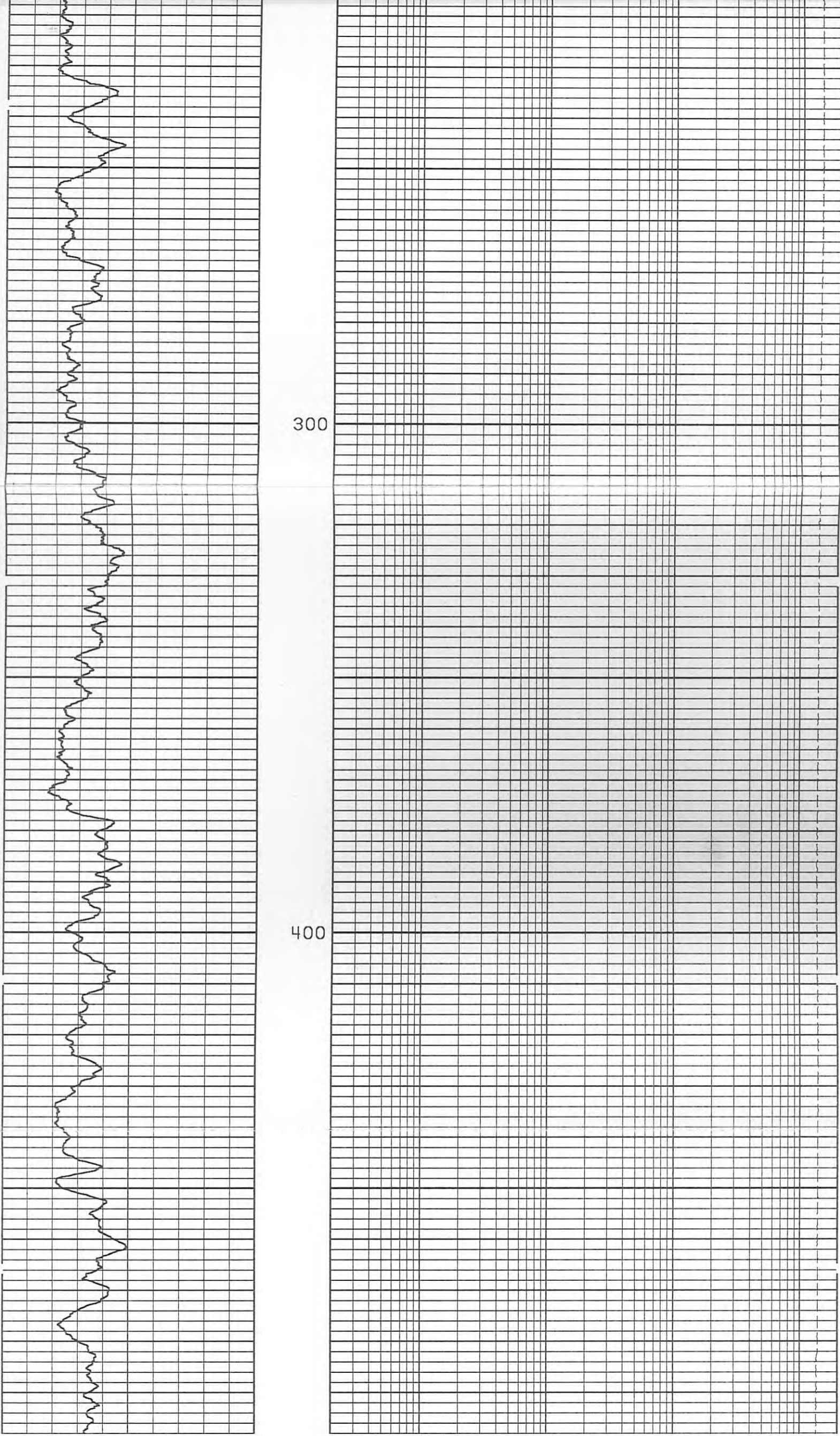
UPLOG
# 2
Depth: 6206.00
Service:2111.0001
Unit:52546

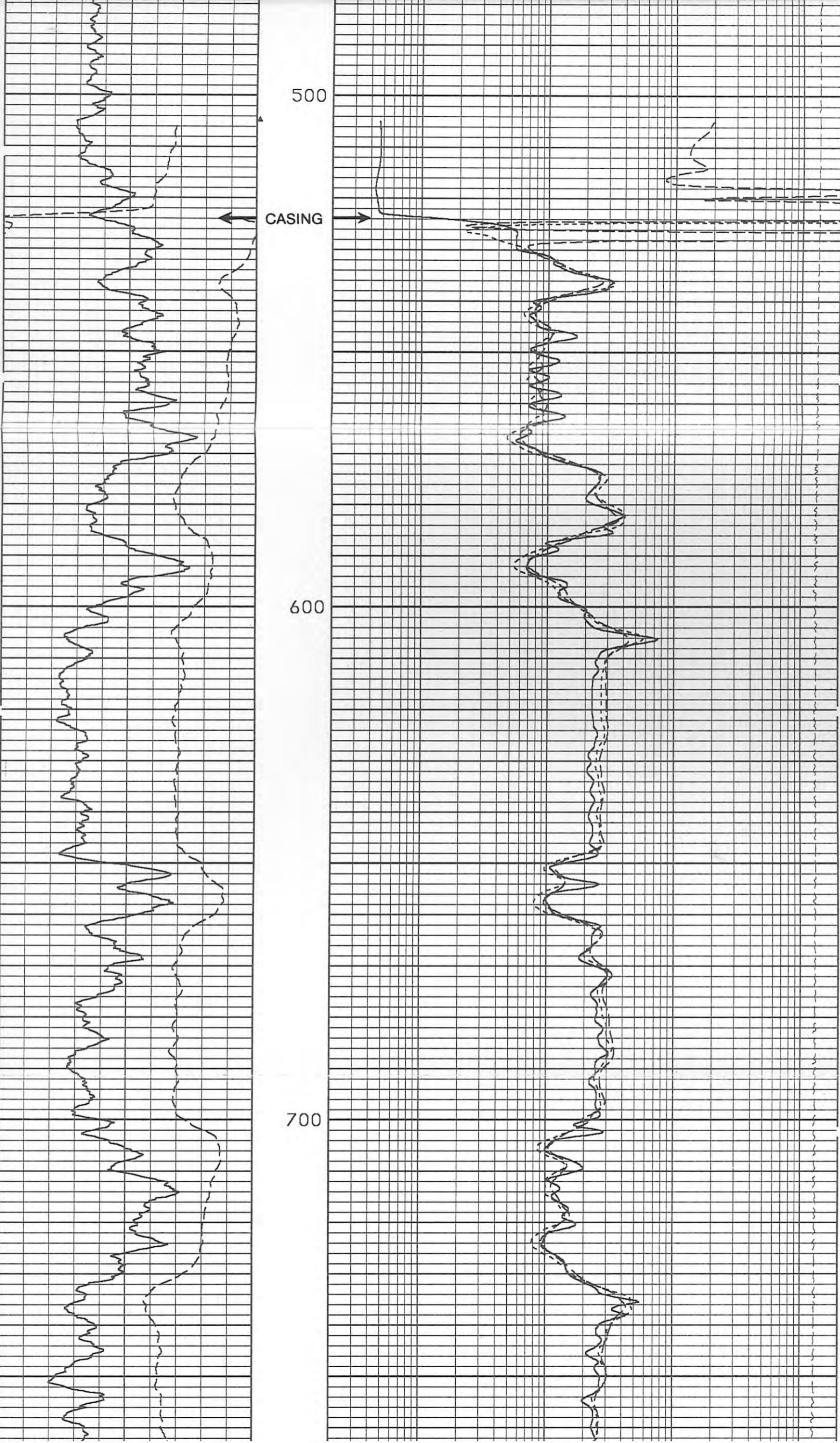
Replay
Log Date: 27-OCT-1993
Time: 06:21:11
Vers:2.32

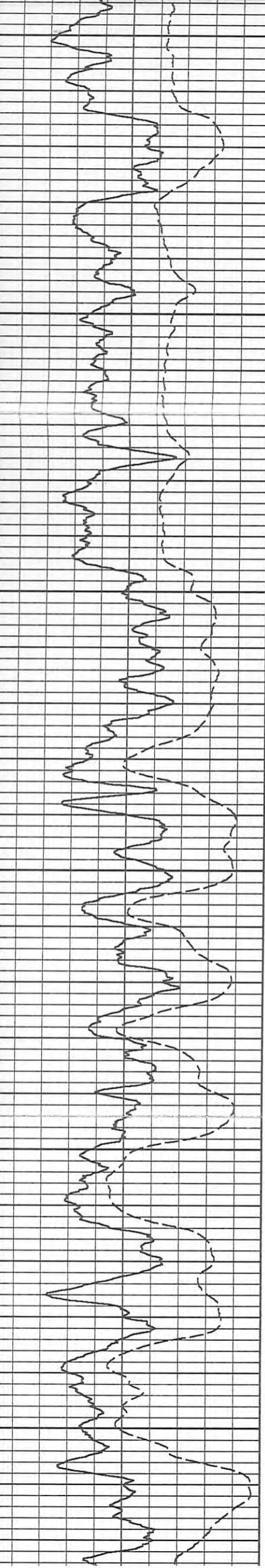
MAIN PASS: 5" = 100'

GAMMA			DEEP RES					
0	GAMMA API	150	.2		OHMM		2000	
SP			MED RES					
0	MV	100	.2		OHMM		2000	
			SHORT GUARD					
			.2		OHMM		2000	
						TENSION		
						10000	POUNDS	0







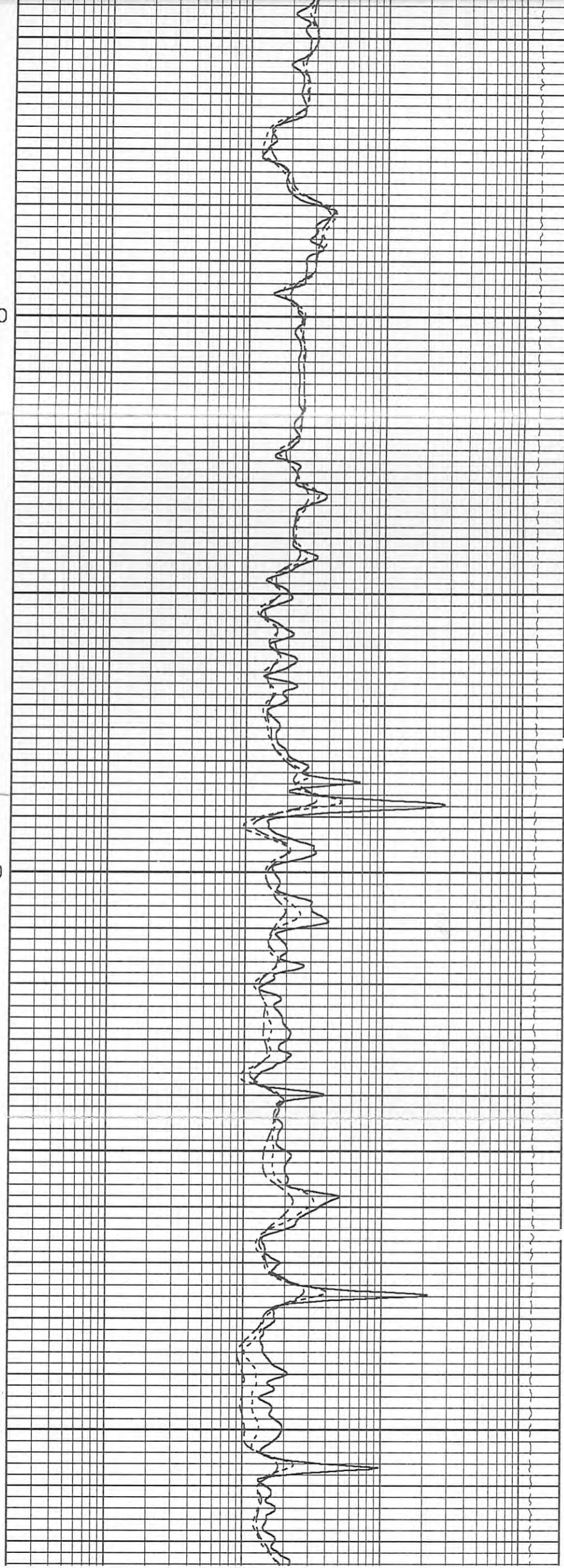


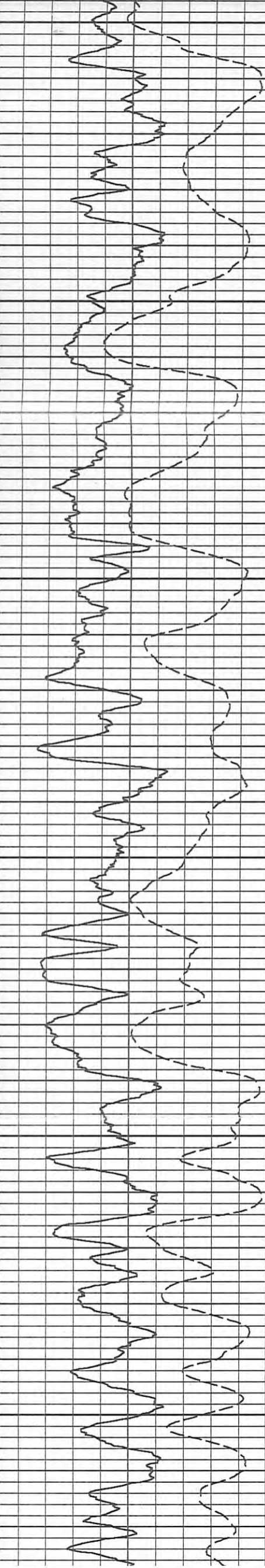
800

Top  
CAMBO

900

1000

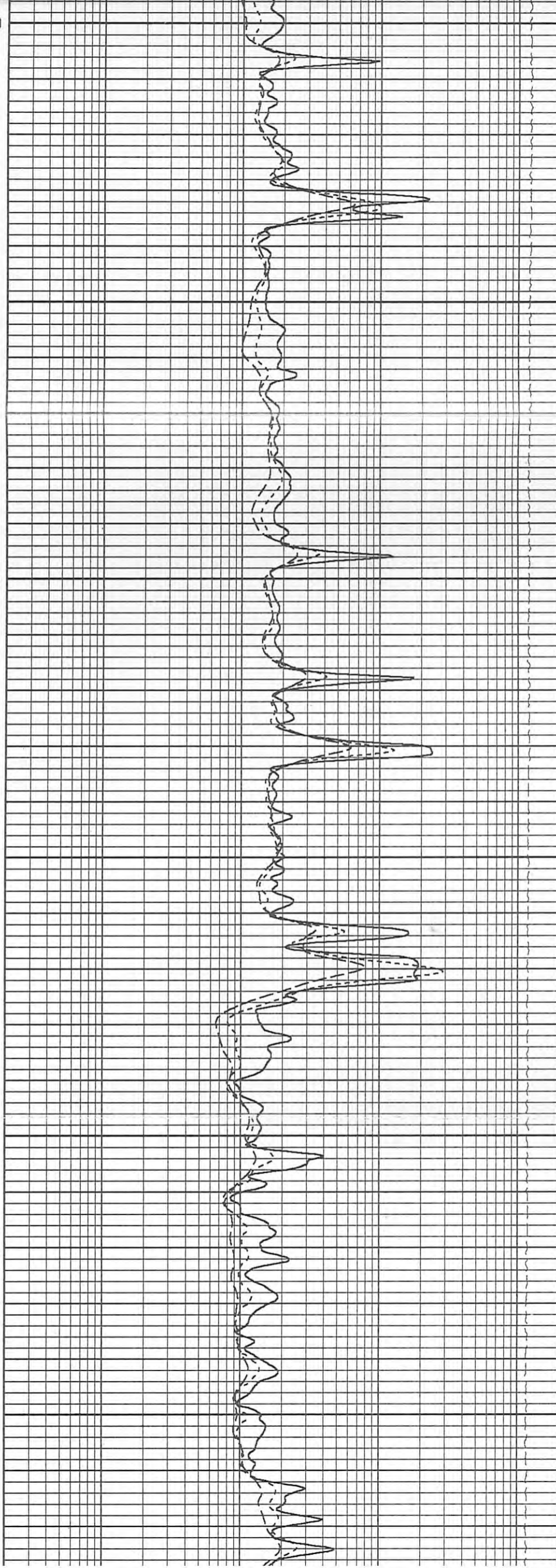


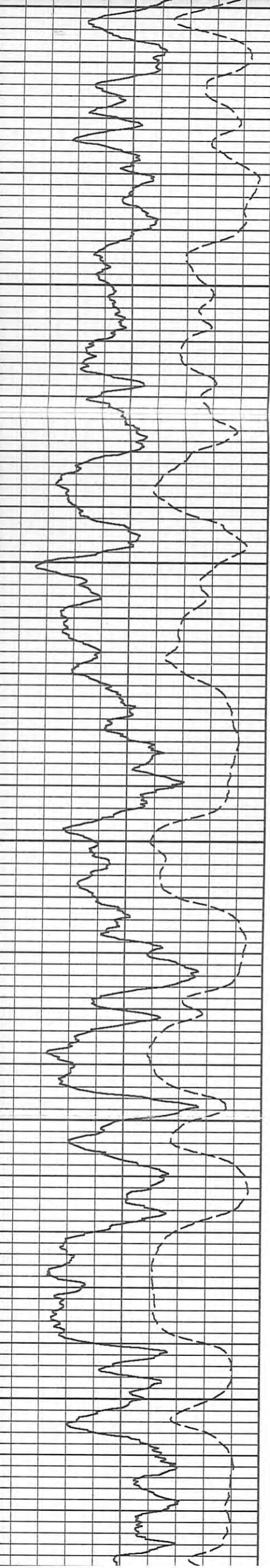


1000

1100

1200



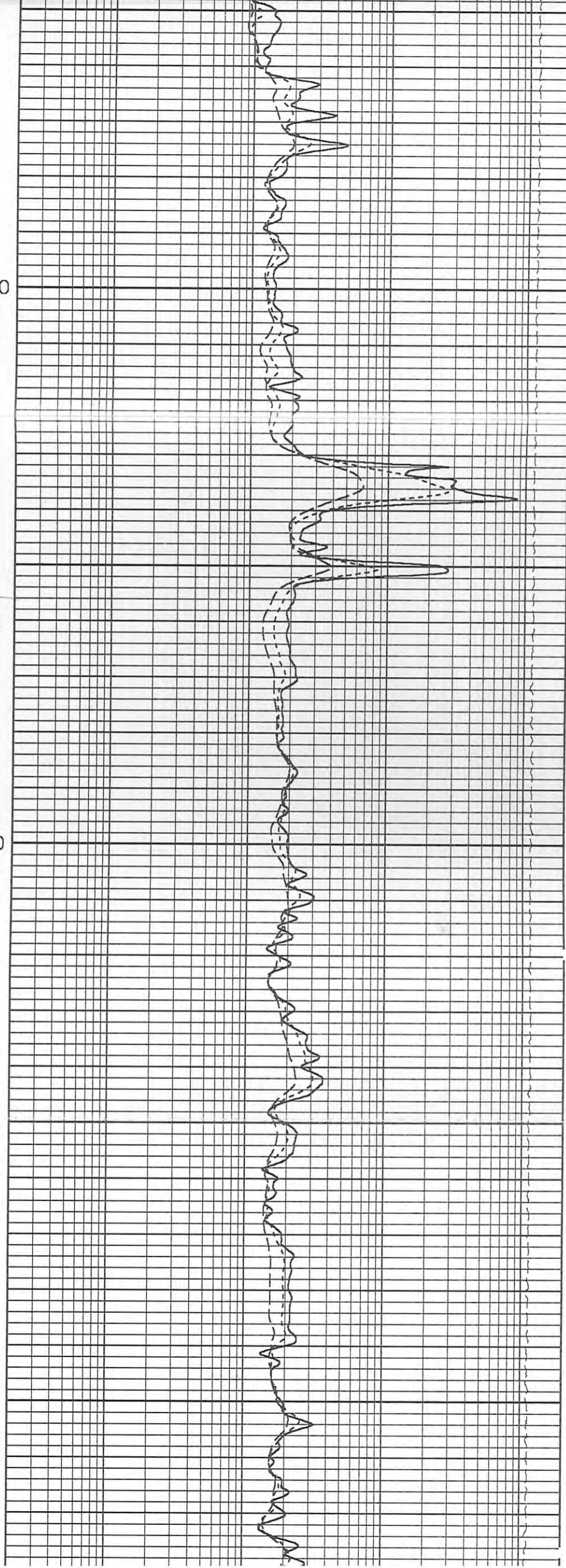


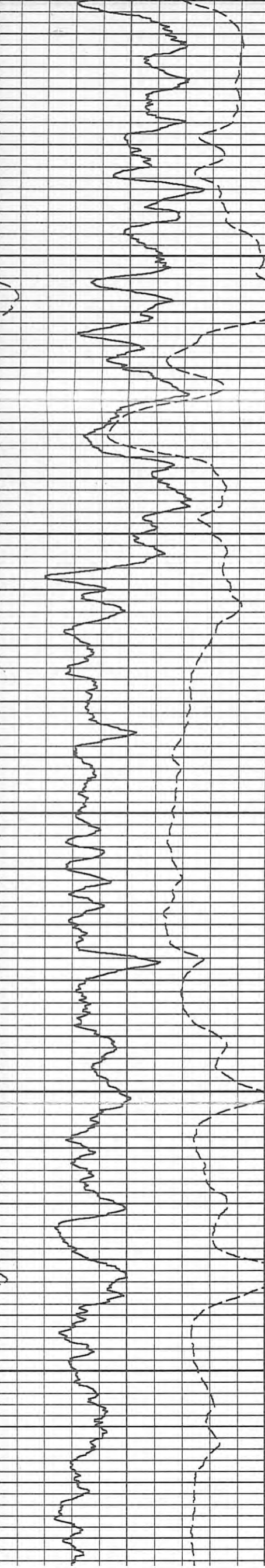
1300

TOP  
Rollins

1400

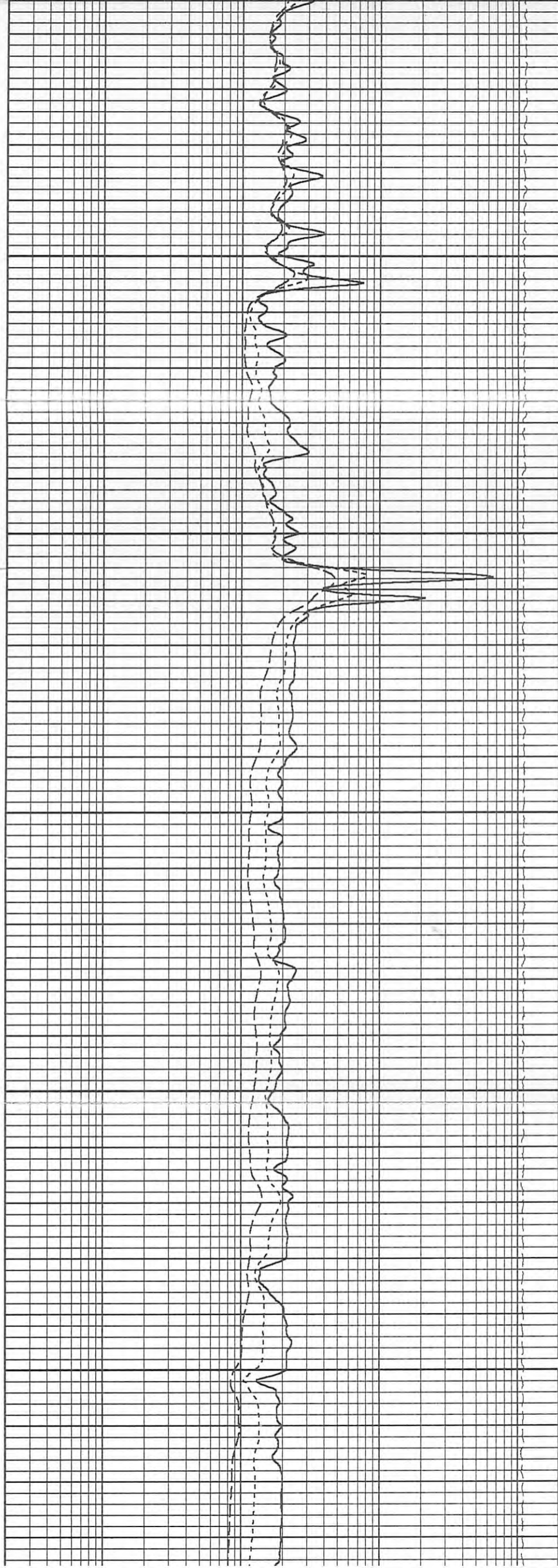
1500

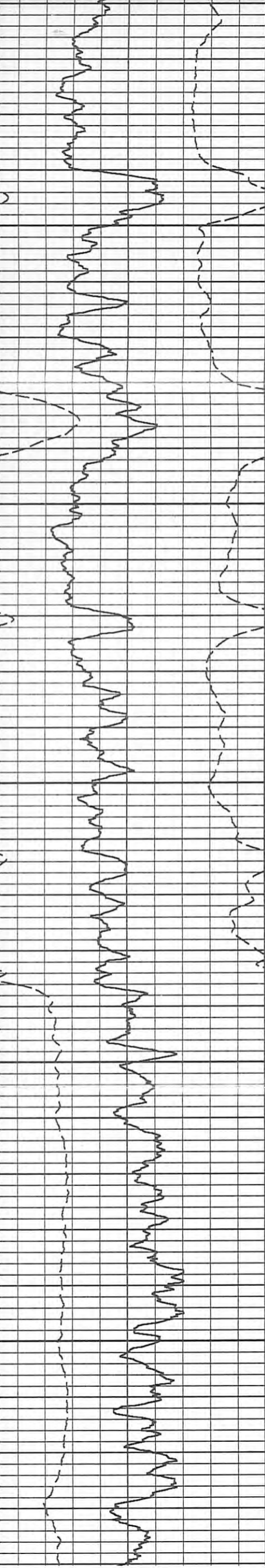




1600  
TOP  
COZZ

1700

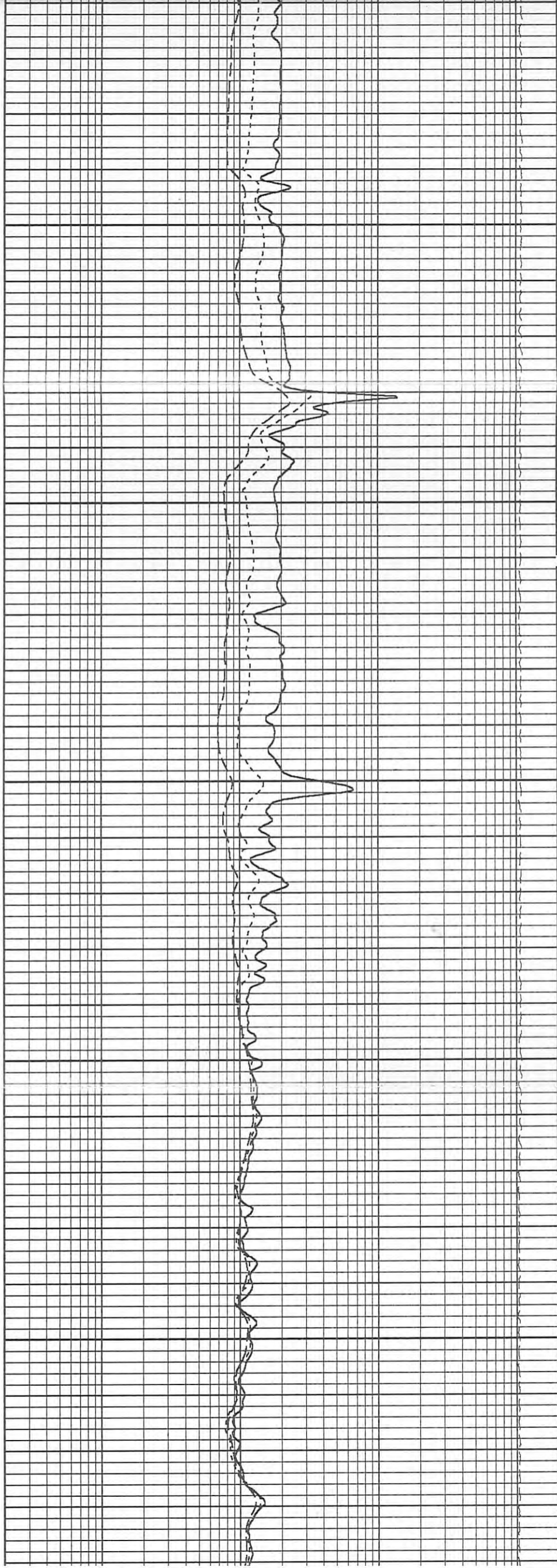


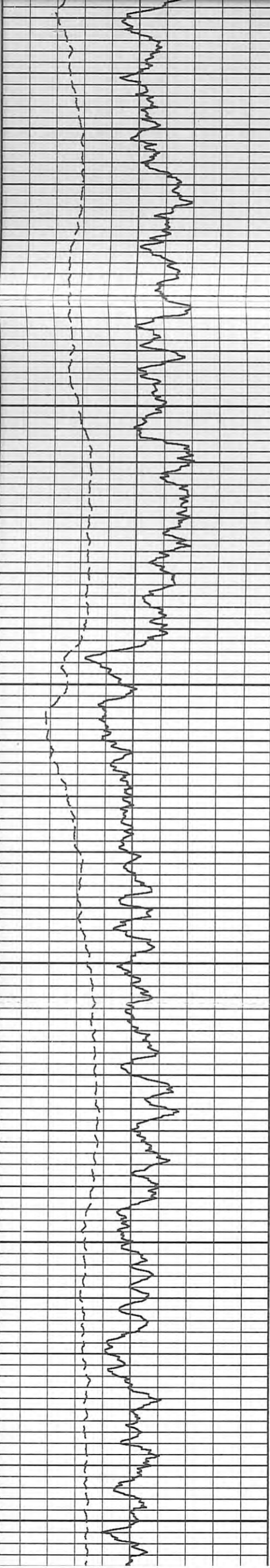


1800

1900

2000



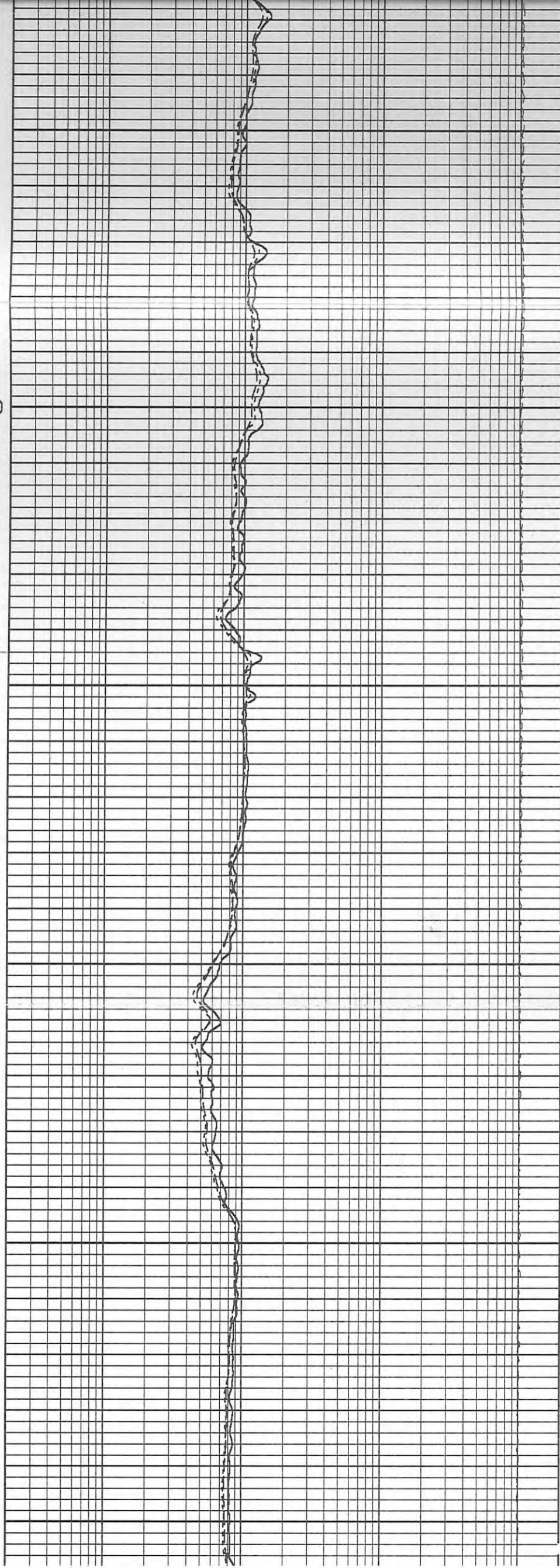


2100

TOP  
CORE

2200

2300



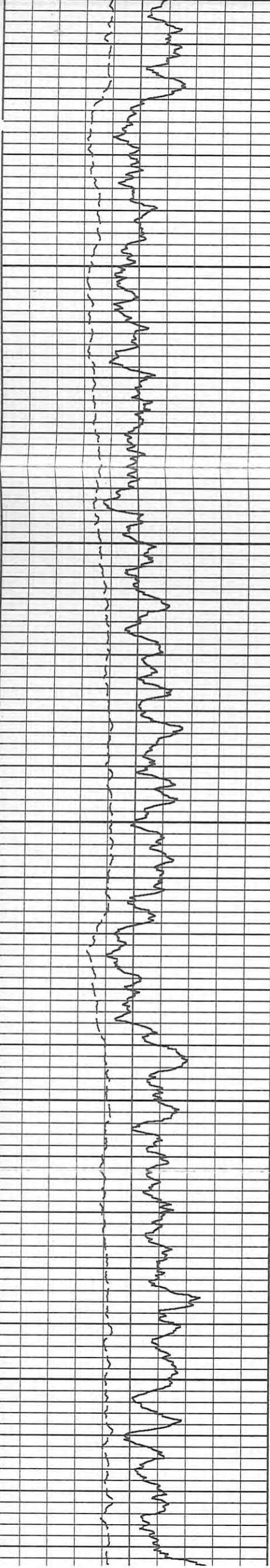
2300

2400

2500

Top

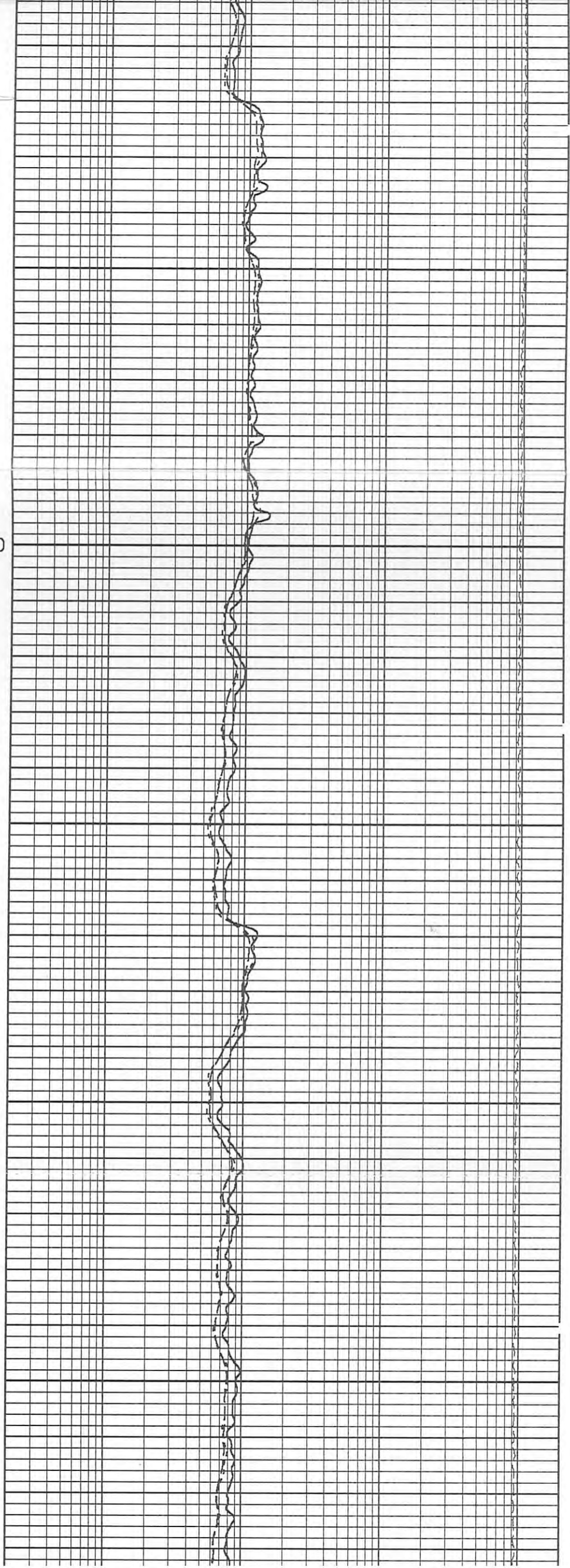
L. Sego

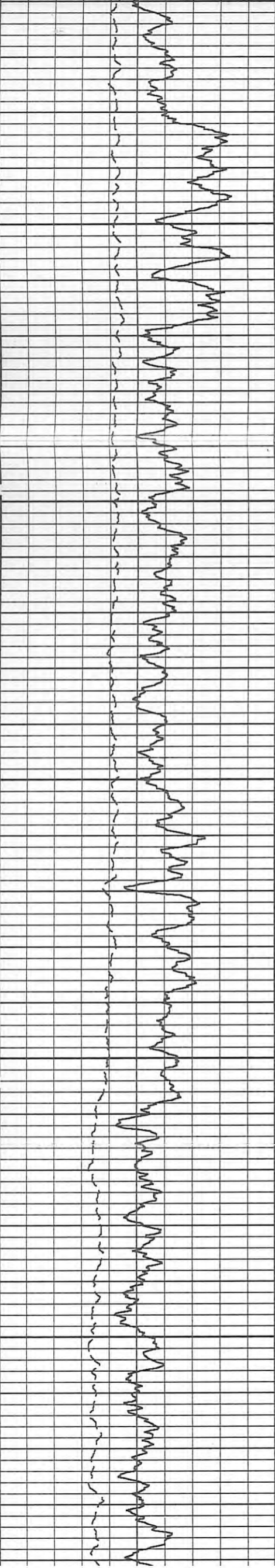


TOP  
L. 38 go

2600

2700

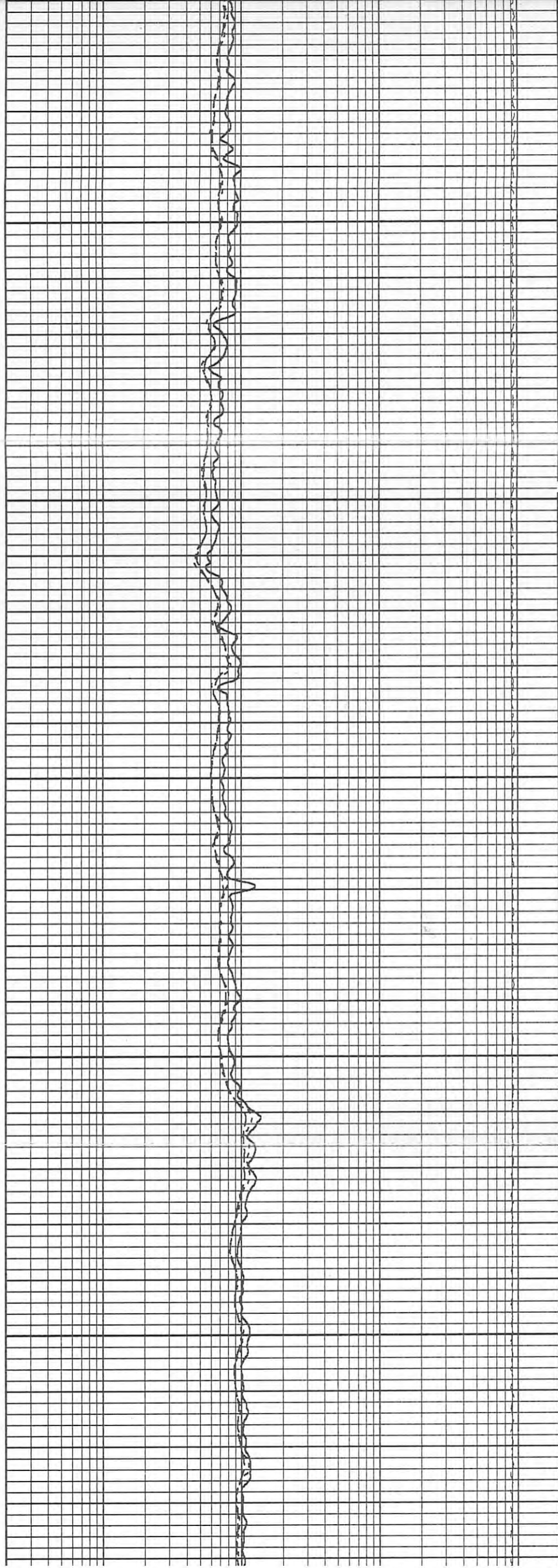


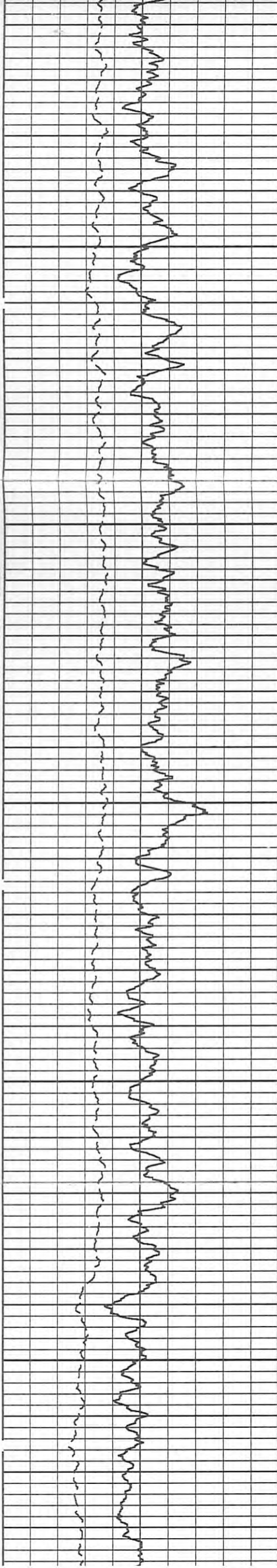


2800

2900

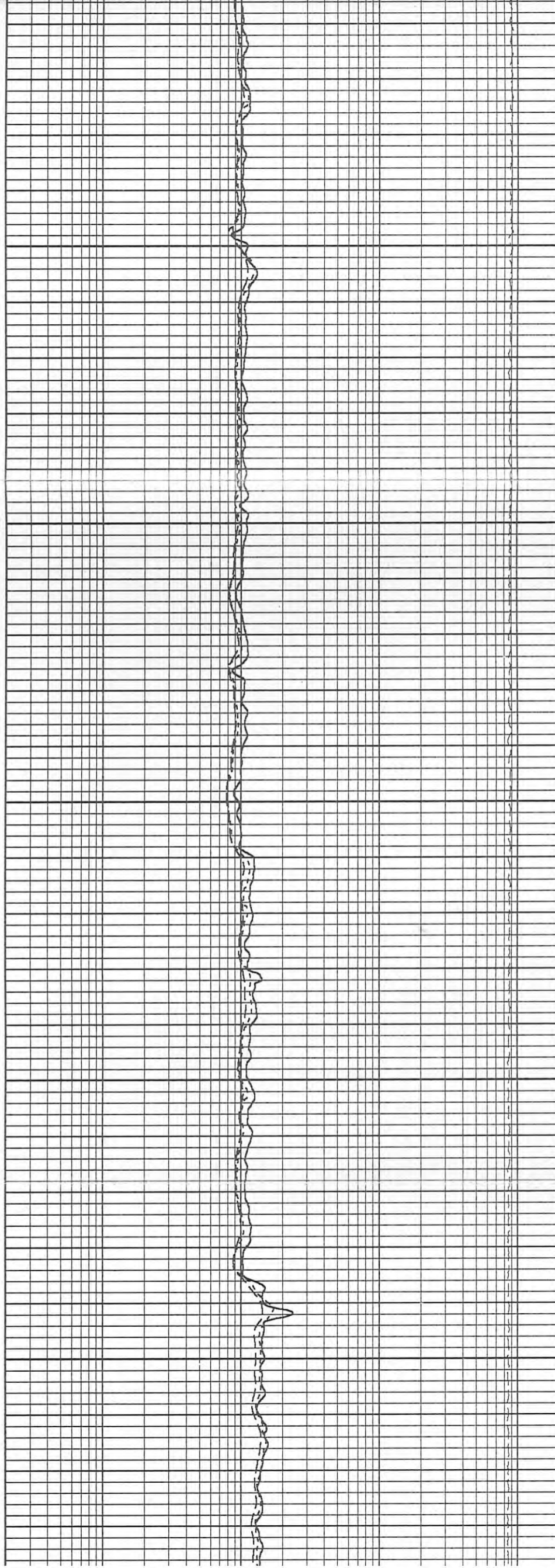
3000





3100

3200

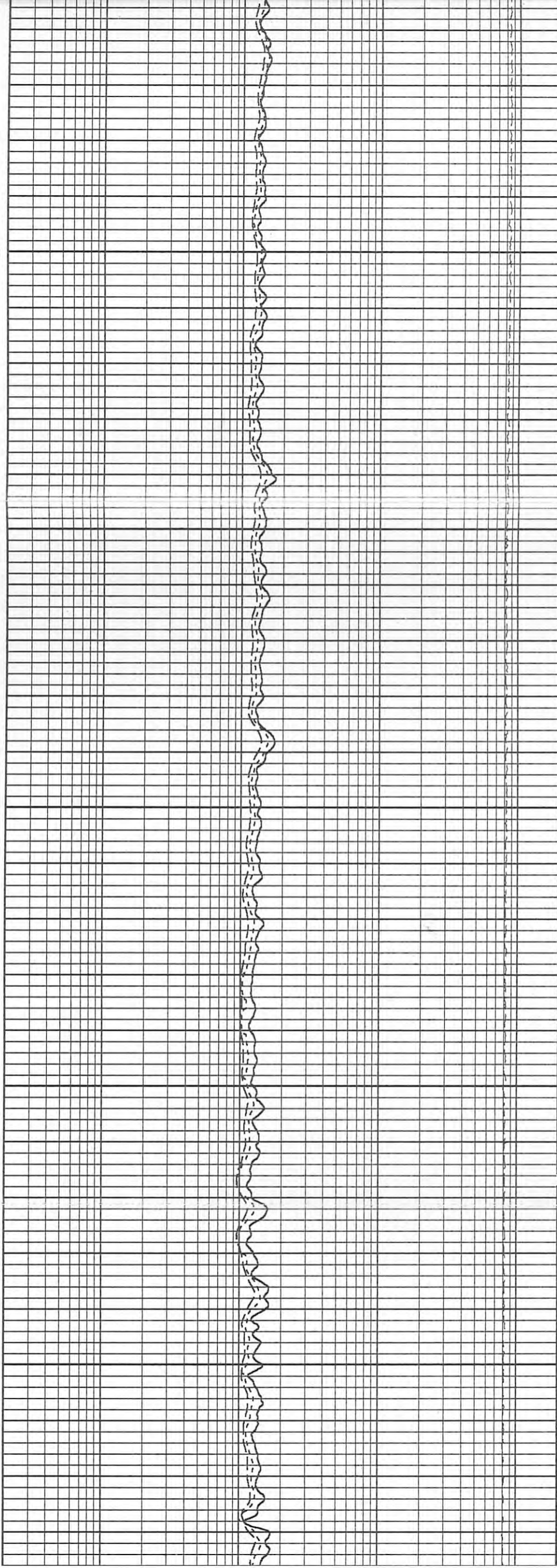


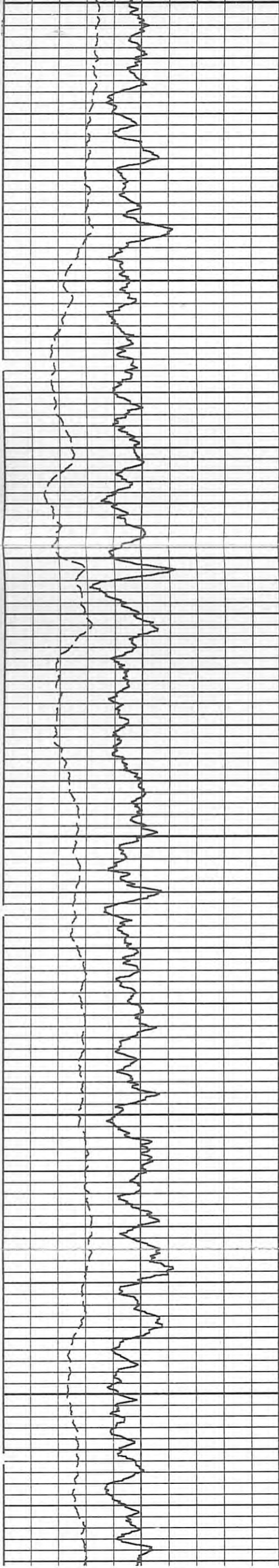


3300

3400

3500

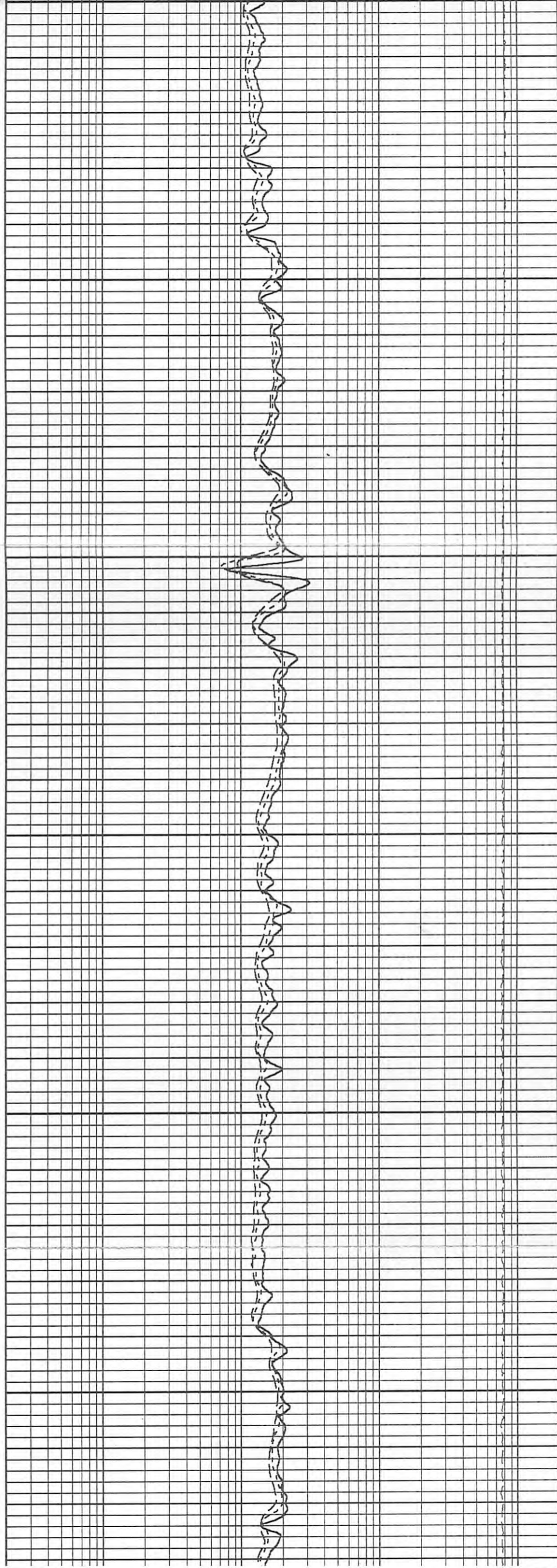


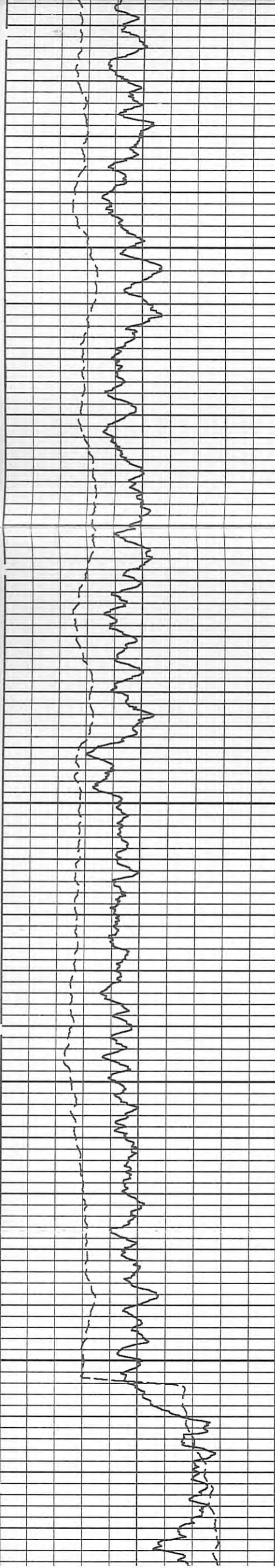


3500

3600

3700

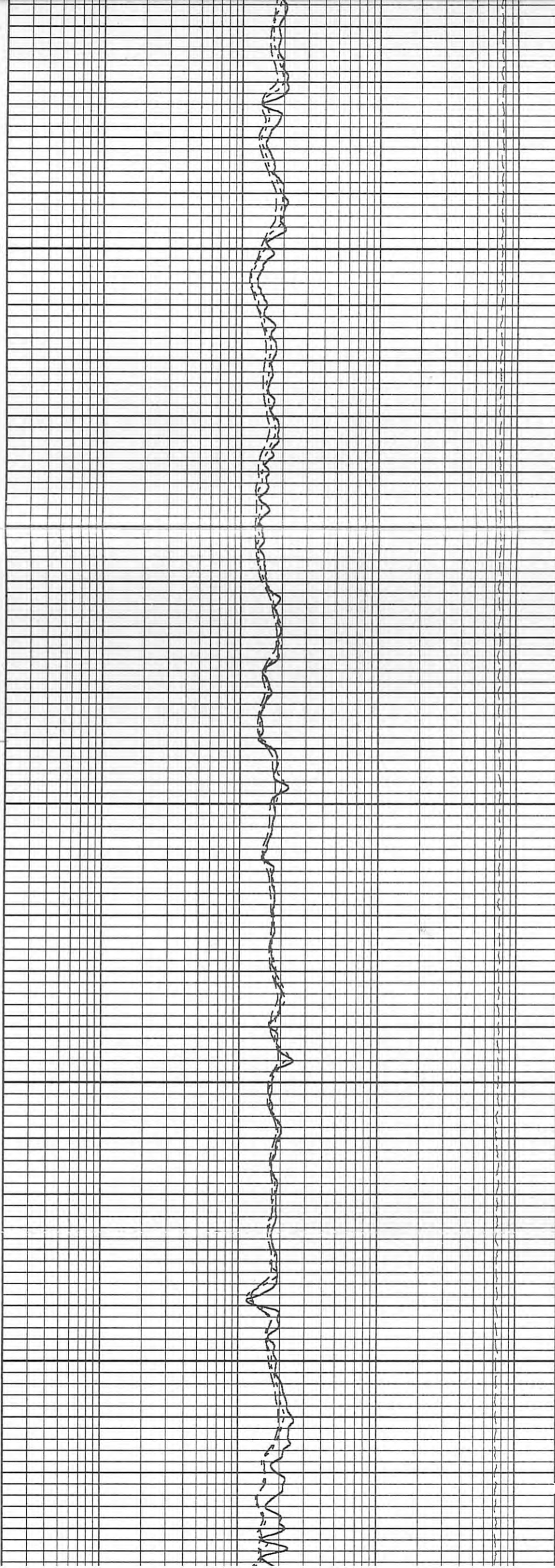


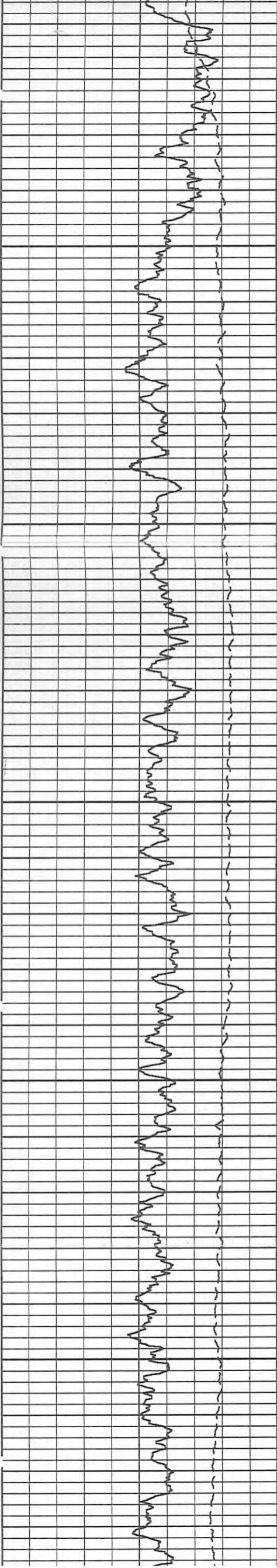


3800

TOP  
MANCOS  
B  
3900

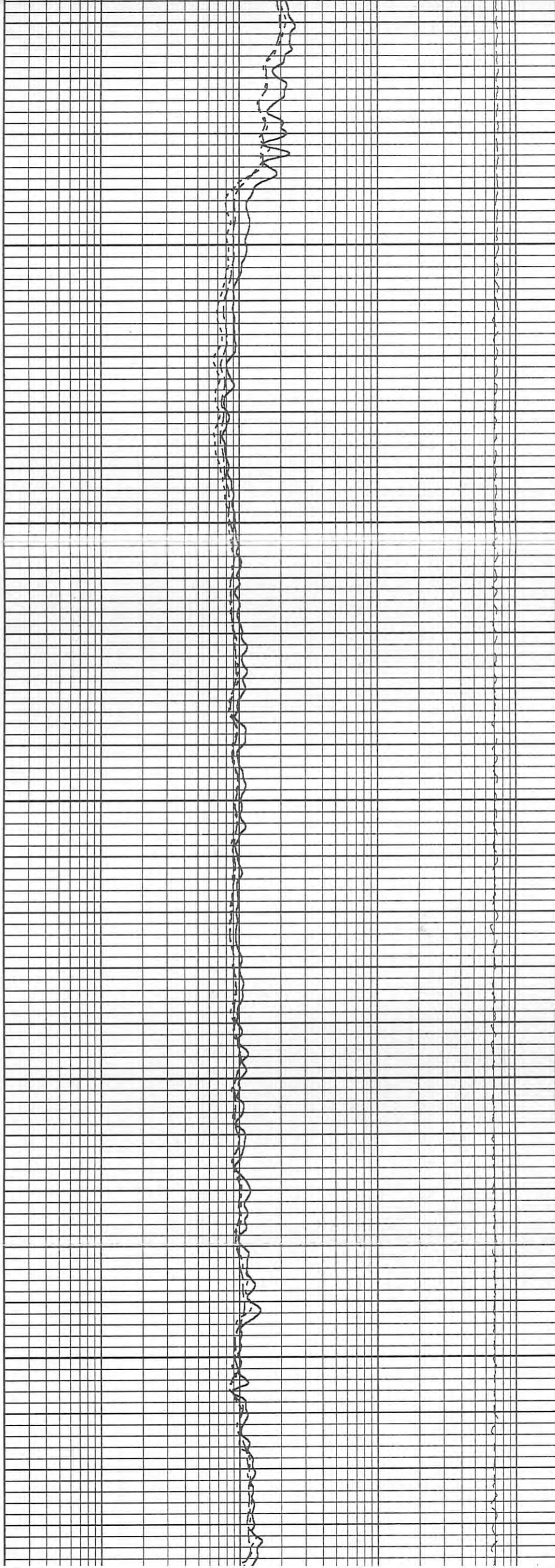
4000

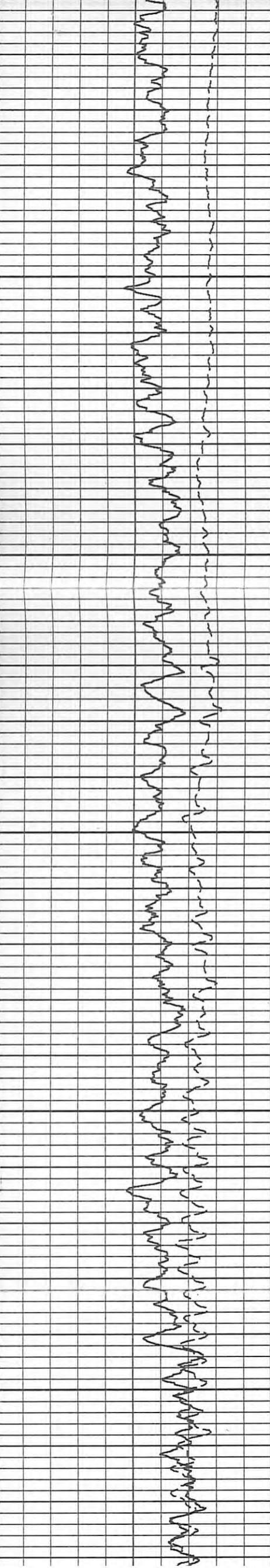




4100

4200

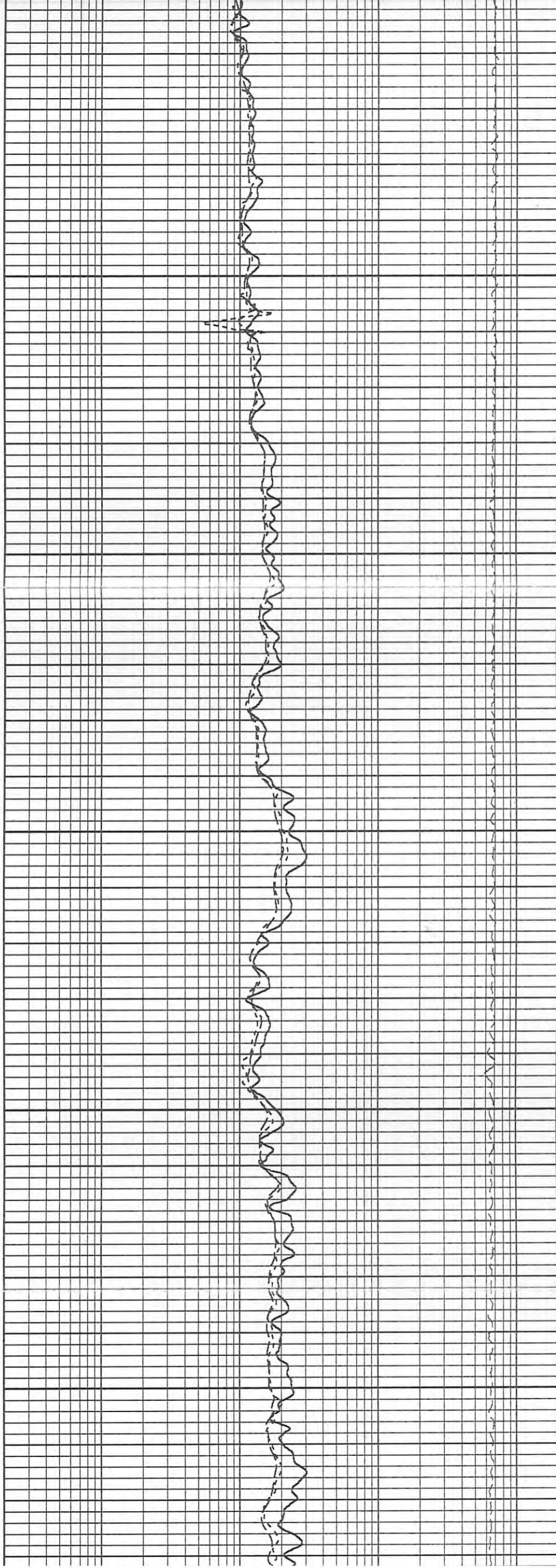


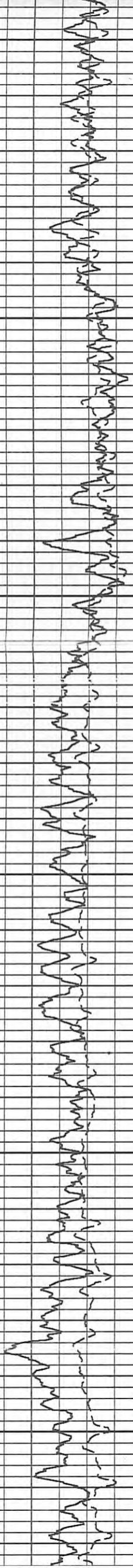


4300

4400

4500

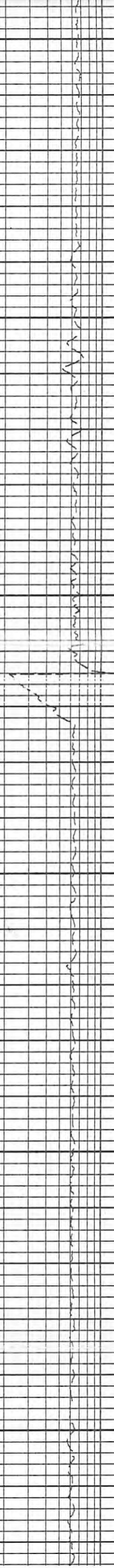
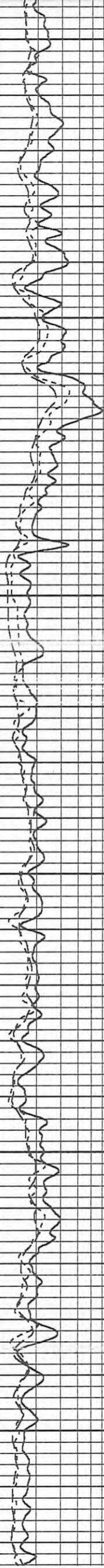


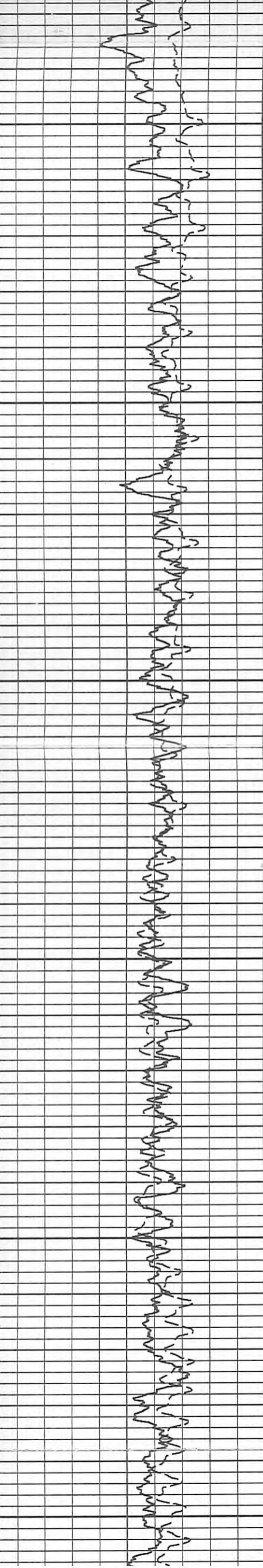


4500

4600

4700

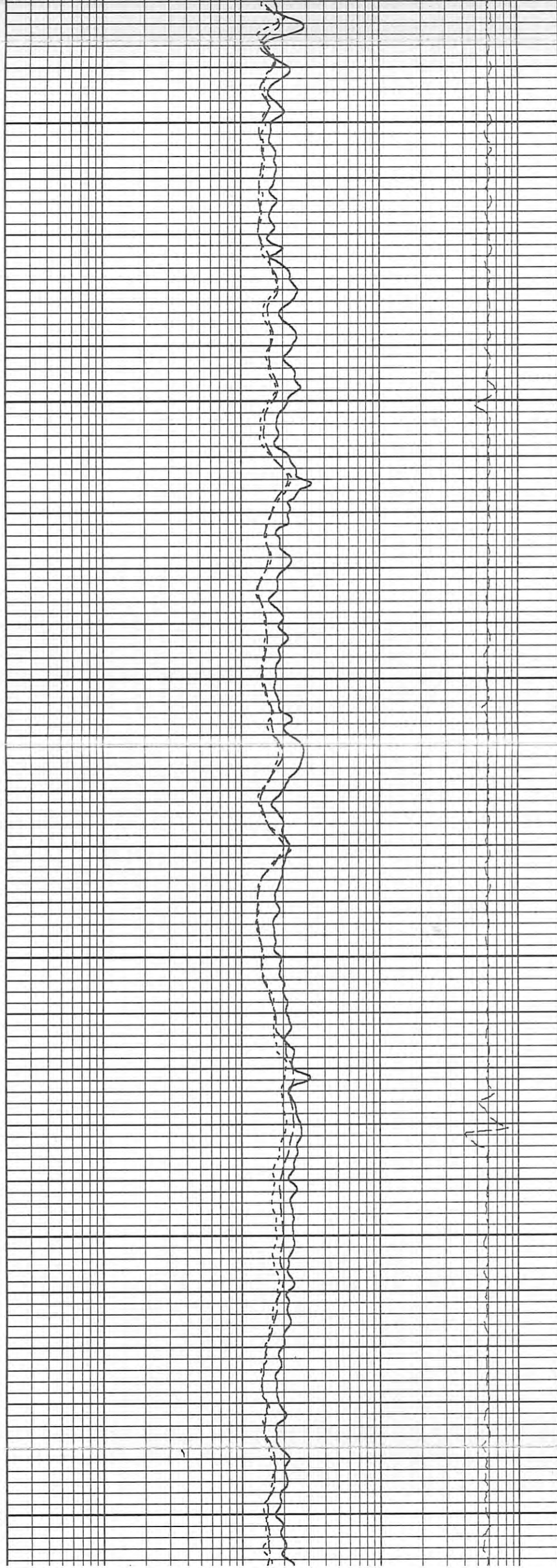


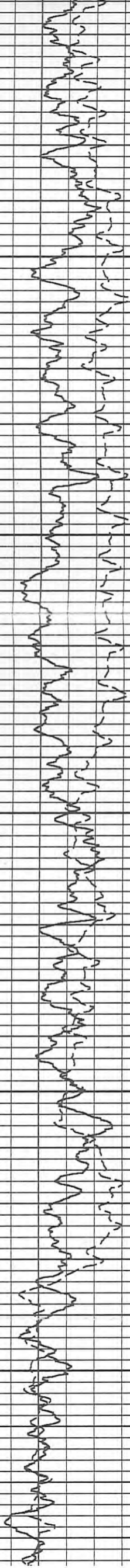


4800

4900

5000

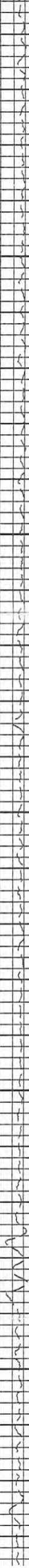
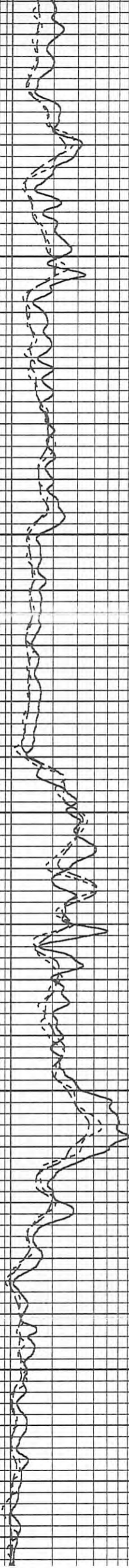


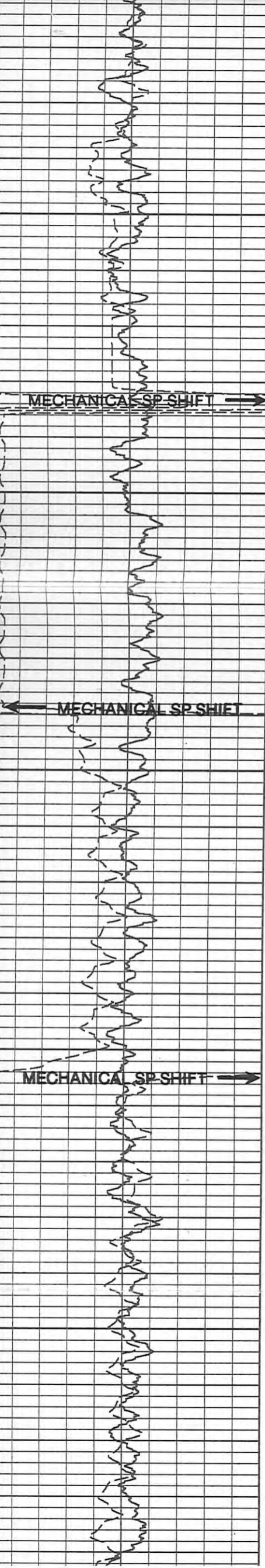


TOP  
NIORARA

5100

5200

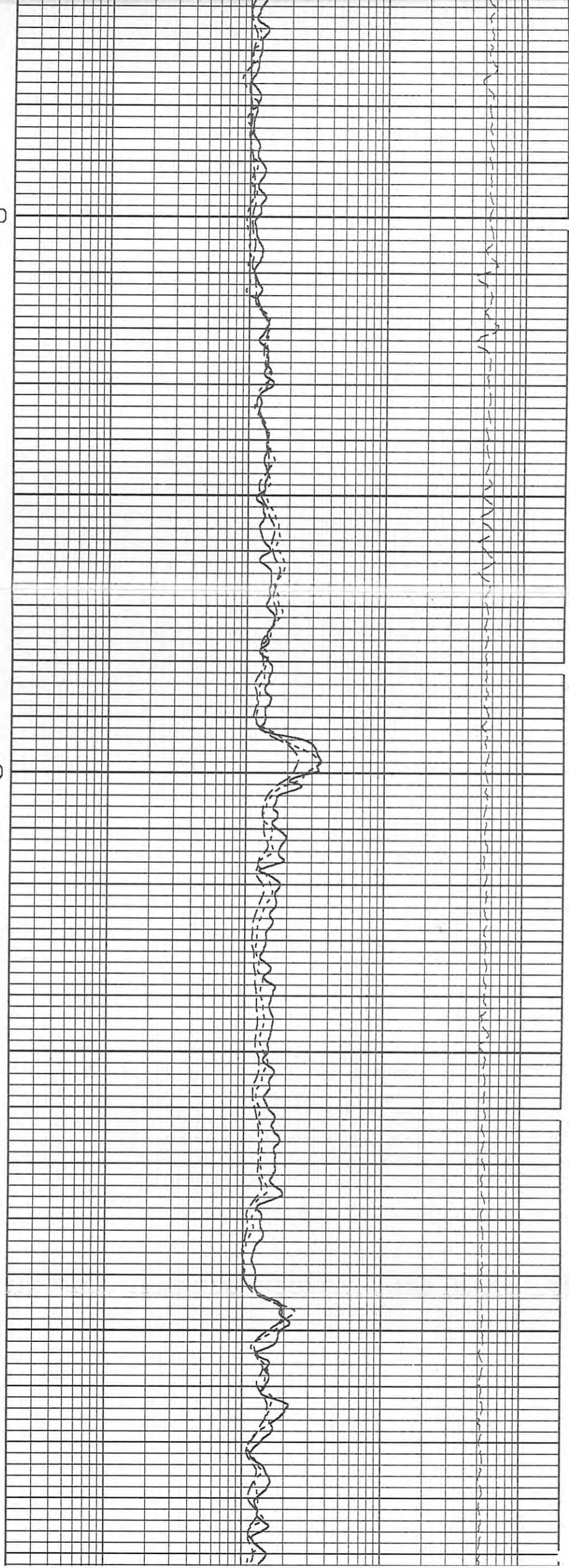


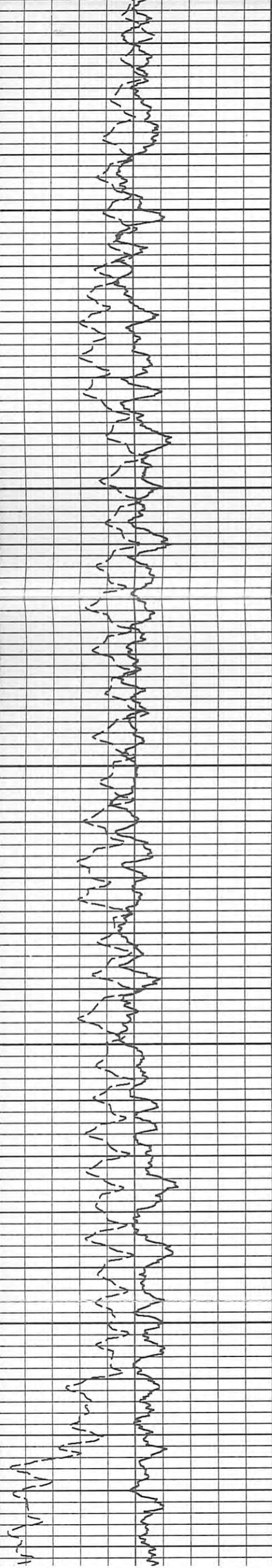


5300

5400

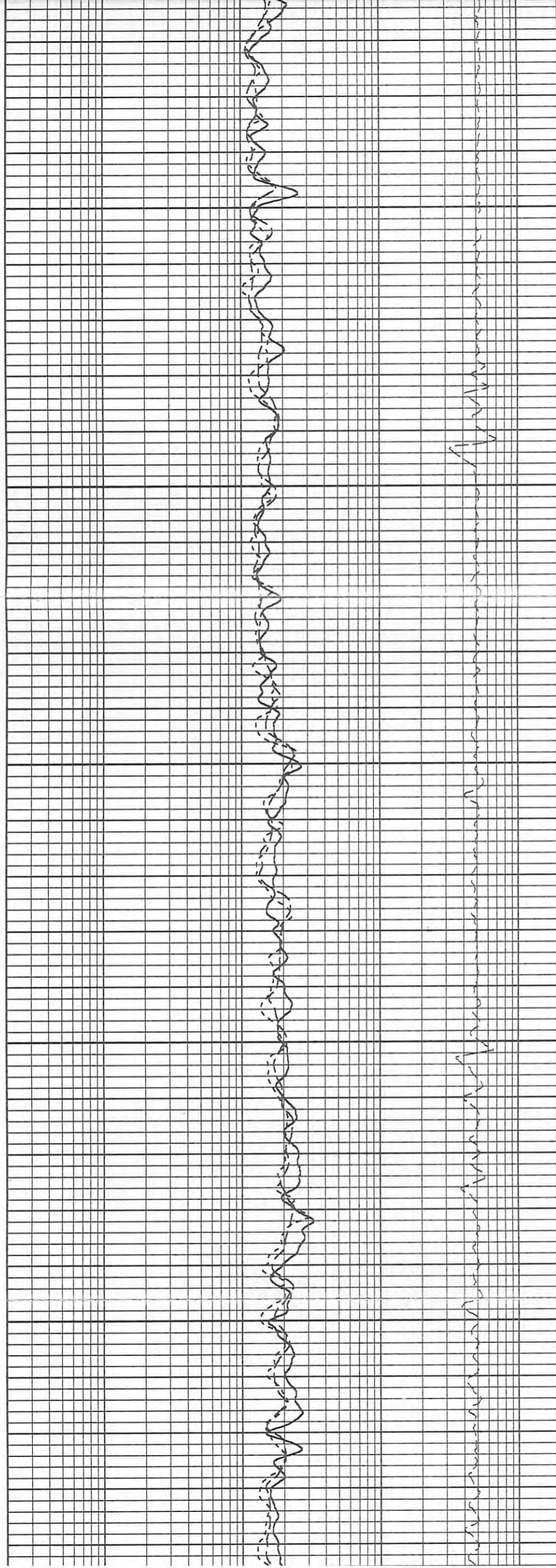
5500





5600

5700

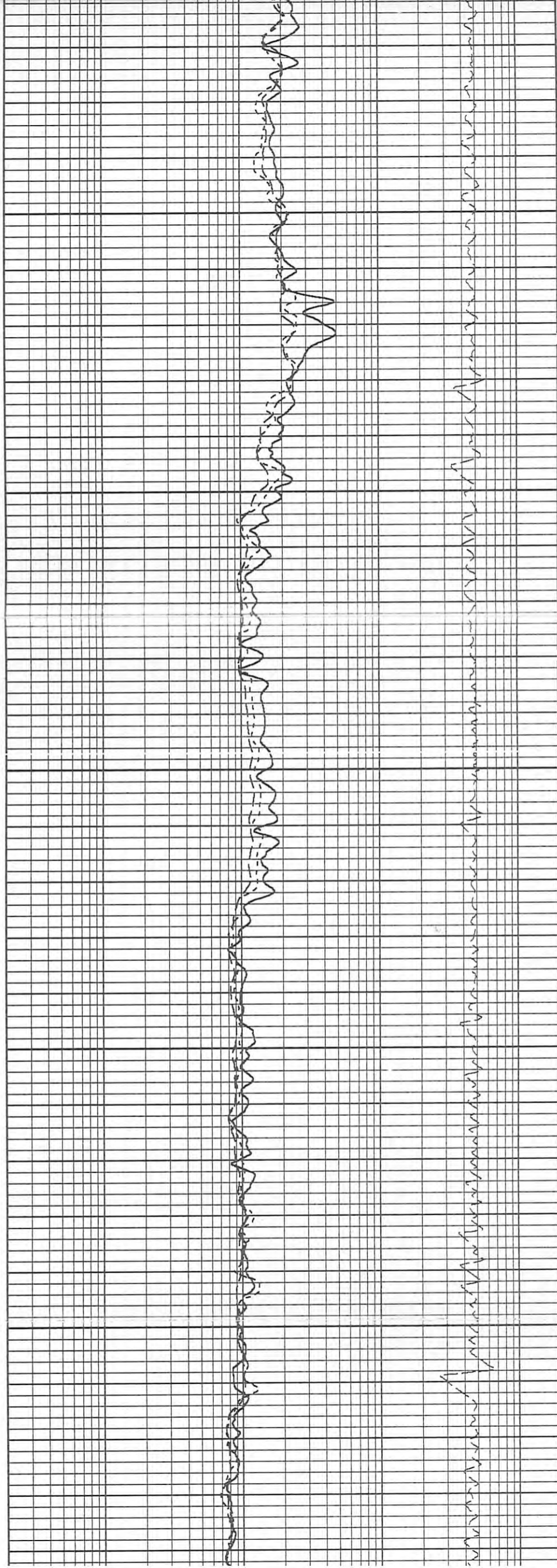


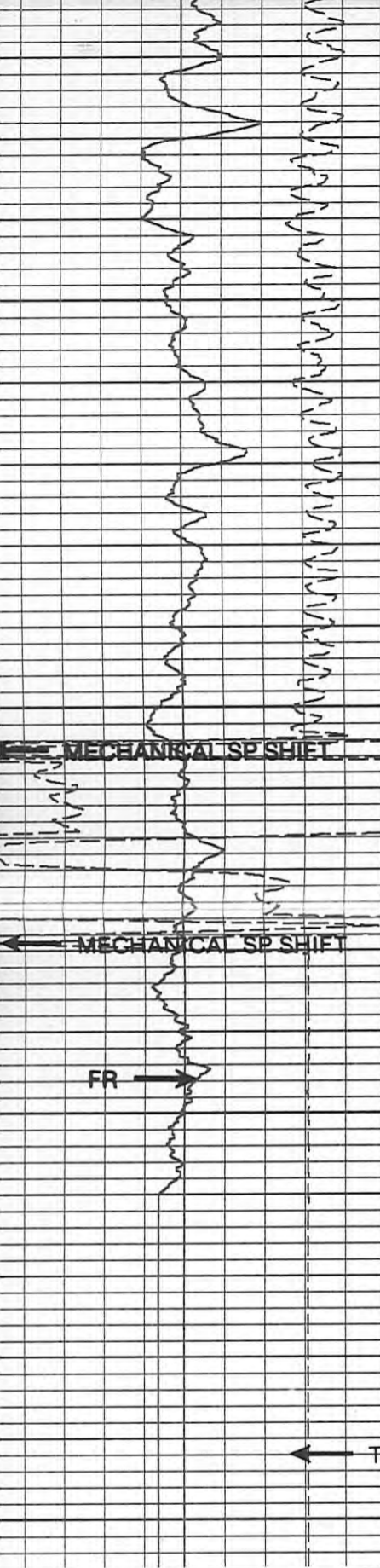


5800

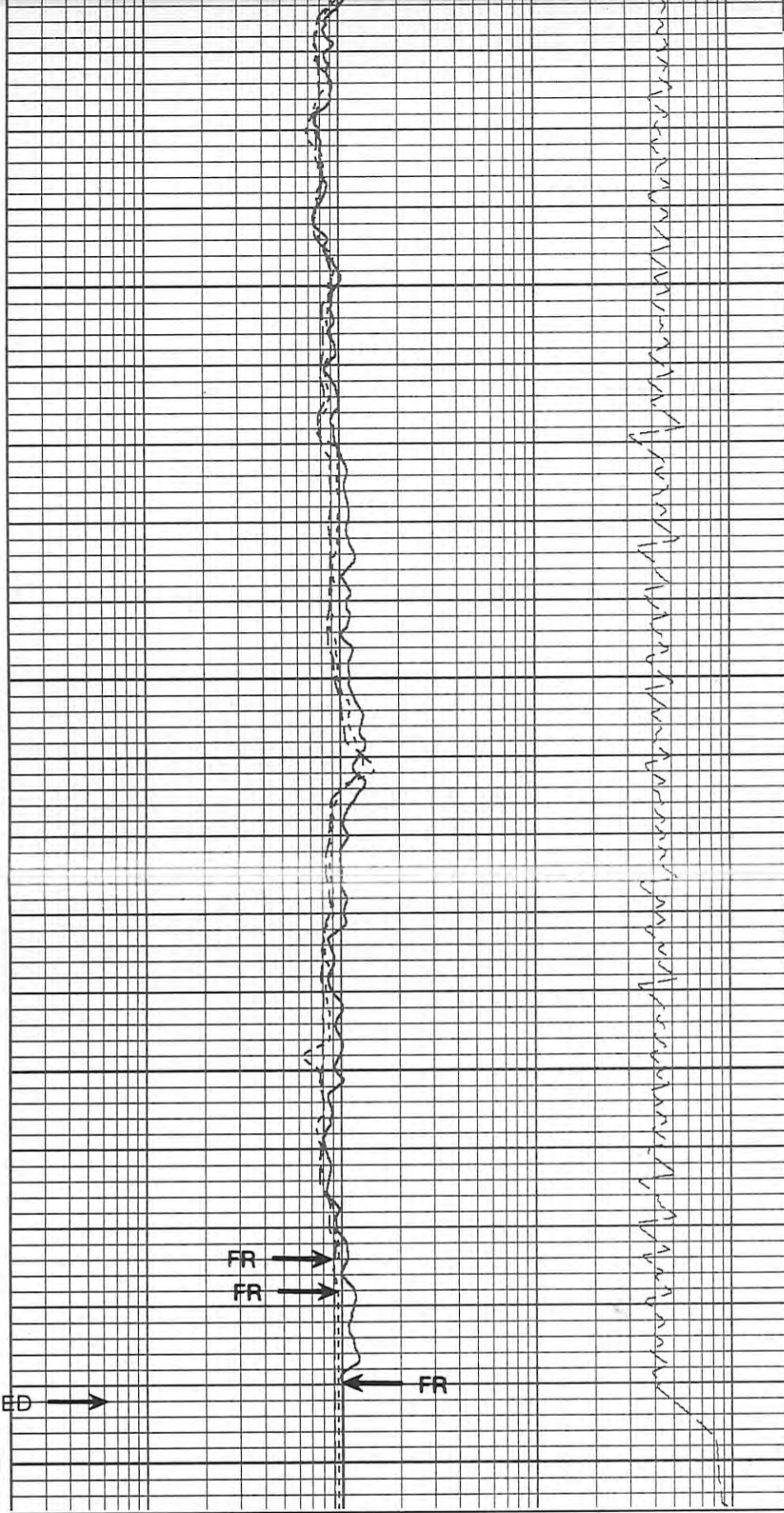
5900

6000





6100



FR  
FR

FR

← T.D. LOGGED →

6200

SP		
0	MV	100
GAMMA		
0	GAMMA API	150

TENSION		
10000	POUNDS	0
SHORT GUARD		
.2	OHMM	2000
MED RES		
.2	OHMM	2000
DEEP RES		
.2	OHMM	2000

UPLUG # 2 Depth: 6205.00 Service:2111.0001 Unit:52546  
 Realtime Log Date: 27-OCT-1993 Time: 06:10:15 Vers:2.32

REPEAT SECTION

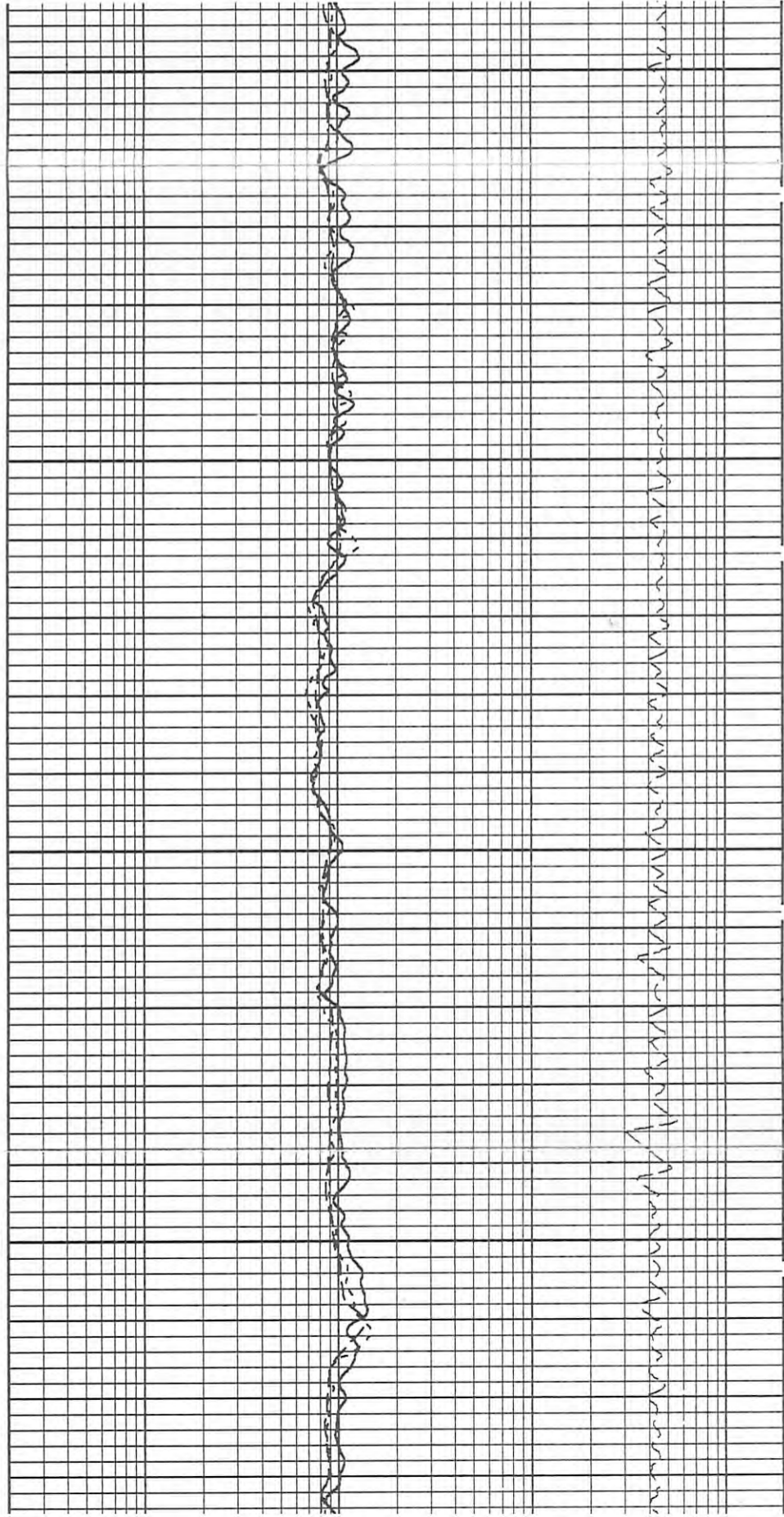
REPEAT SECTION

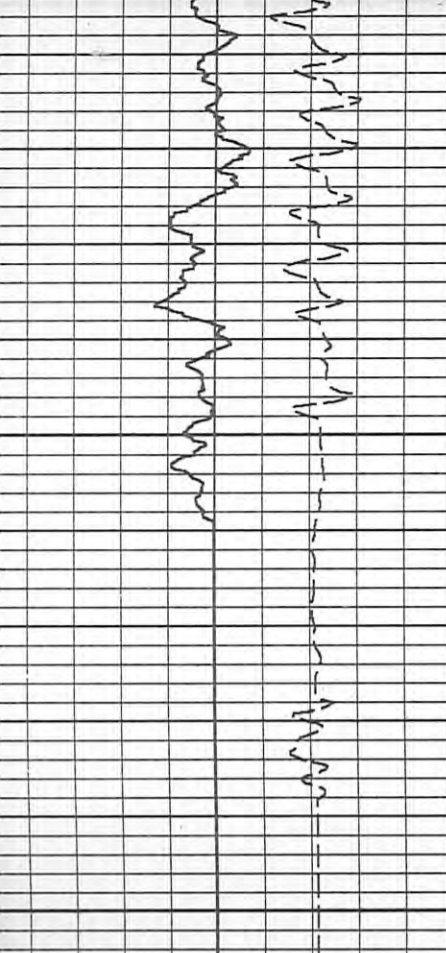
GAMMA		DEEP RES	
GAMMA API	150	.2	OHMM 2000
SP			MED RES
MV	100	.2	OHMM 2000
			SHORT GUARD
		.2	OHMM 2000
			TENSION
			10000 POUNDS 0



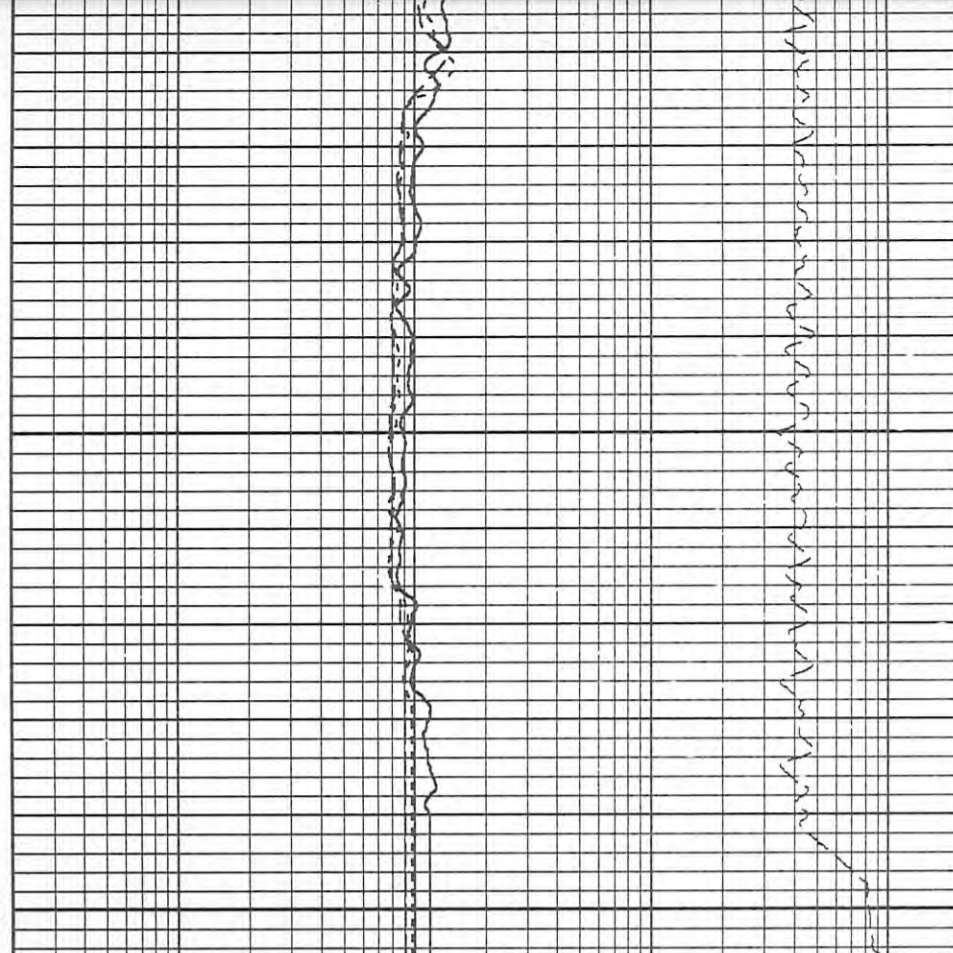
6000

6100





6200



SP		
MV	100	
GAMMA		
GAMMA API	150	

TENSION		
10000	POUNDS	0
SHORT GUARD		
.2	OHMM	2000
MED RES		
.2	OHMM	2000
DEEP RES		
.2	OHMM	2000

UPLOG # 1 Depth: 6205.00 Service:2111.0001 Unit:52546  
Realtime Log Date: 27-OCT-1993 Time: 06:01:37 Vers:2.32

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#### GAMMA RAY TOOL SHOP CALIBRATION SUMMARY

PERFORMED: 15:33:44 09/30/93 LAST SHOP CALIBRATION: 12:52:08 09/12/93  
SERIAL NUMBER: BL108642 MODEL: NGRT-A  
TRUCK UNIT NUMBER: 52546 PROGRAM VERSION: 2.32  
PERFORMED BY: KIRK EVATT

	MEASURED	CALIBRATED	UNITS
	-----	-----	-----
BACKGROUND	36	34	GAPI
BACKGROUND+CALIBRATOR	264	248	GAPI
CALIBRATOR	228	214	GAPI

#### GAMMA RAY TOOL BEFORE SURVEY FIELD CHECK SUMMARY

PERFORMED: 01:40:26 10/27/93 LAST SHOP CALIBRATION: 15:33:44 09/30/93

	SHOP	FIELD	UNITS
	-----	-----	-----
BACKGROUND	34	38	GAPI
BACKGROUND+CALIBRATOR	248	247	GAPI
CALIBRATOR	214	209	GAPI

BACKGROUND	34	38	GAPI
BACKGROUND+CALIBRATOR	248	247	GAPI
CALIBRATOR	214	209	GAPI

\*\*\*\*\*

FACT CALIPER MANDREL SHOP CALIBRATION SUMMARY  
PERFORMED: 00:01:41 10/11/93 LAST SHOP CALIBRATION: 23:44:06 10/10/93  
SERIAL NUMBER: 113527 MODEL: FACT-A  
TRUCK UNIT NUMBER: 52546 PROGRAM VERSION: 2.32  
PERFORMED BY: KIRK EVATT

	CALIPER 1-3		CALIPER 2-4		UNITS
	MEASURED	CALIBRATED	MEASURED	CALIBRATED	
RING # 1	7.74	8.00	8.15	8.00	INCH
RING # 2	11.62	12.00	11.97	12.00	INCH
RING # 3	16.20	16.00	15.92	16.00	INCH

FACT CALIPER MANDREL BEFORE SURVEY FIELD CHECK SUMMARY  
PERFORMED: 05:23:26 10/27/93 LAST SHOP CALIBRATION: 00:01:41 10/11/93

	SHOP	BEFORE	UNITS
CALIPER 13	8.00	8.01	INCH
CALIPER 24	8.00	8.17	INCH

\*\*\*\*\*

DITS DUAL INDUCTION SHOP CALIBRATION SUMMARY  
PERFORMED: 11:18:14 10/15/93 LAST SHOP CALIBRATION: 09:30:36 09/15/93  
SERIAL NUMBER: B109600 MODEL: DILT-A B  
TRUCK UNIT NUMBER: 52546 PROGRAM VERSION: 2.32  
PERFORMED BY: EHV

	DEEP INDUCTION		MEDIUM INDUCTION		UNITS
	MEASURED	CALIBRATED	MEASURED	CALIBRATED	
TOOL ZERO	-0.122	0.000	-0.933	0.000	MMHOS/M
INTERNAL REFERENCE	500.278	499.427	498.678	502.098	MMHOS/M
WHEEL	501.793	500.000	496.562	500.000	MMHOS/M
MANDREL BASE	1.363	2.018	3.574	2.630	MMHOS/M

DITS DUAL INDUCTION BEFORE SURVEY FIELD CHECK SUMMARY  
PERFORMED: 05:28:29 10/27/93 LAST SHOP CALIBRATION: 11:18:14 10/15/93

	DEEP INDUCTION		MEDIUM INDUCTION		UNITS
	SHOP	FIELD	SHOP	FIELD	
TOOL ZERO	0.000	-0.165	0.000	0.068	MMHOS/M
INTERNAL REFERENCE	499.427	499.440	502.098	499.106	MMHOS/M
MANDREL BASE	2.018	2.018	2.630	2.630	MMHOS/M

DITS DUAL INDUCTION AFTER SURVEY FIELD CHECK SUMMARY  
PERFORMED: 07:40:31 10/27/93 LAST SHOP CALIBRATION: 11:18:14 10/15/93

	DEEP INDUCTION		MEDIUM INDUCTION		UNITS
	BEFORE	AFTER	BEFORE	AFTER	
TOOL ZERO	-0.165	-0.115	0.068	0.141	MMHOS/M
INTERNAL REFERENCE	499.440	499.440	499.106	500.541	MMHOS/M
MANDREL BASE	2.018	2.018	2.630	2.630	MMHOS/M

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SHORT GUARD SHOP CALIBRATION SUMMARY  
PERFORMED: 11:14:13 10/15/93 LAST SHOP CALIBRATION: 15:06:56 09/12/93  
SERIAL NUMBER: BL108965 MODEL: DSGT-A B  
TRUCK UNIT NUMBER: 52546 PROGRAM VERSION: 2.32  
PERFORMED BY: EHV

MEASURED CALIBRATED UNITS

\*\*\*\*\*

SHORT GUARD SHOP CALIBRATION SUMMARY

PERFORMED: 11:14:13 10/15/93 LAST SHOP CALIBRATION: 15:06:56 09/12/93  
SERIAL NUMBER: BL108965 MODEL: DSGT-A B  
TRUCK UNIT NUMBER: 52546 PROGRAM VERSION: 2.32  
PERFORMED BY: EHV

	MEASURED	CALIBRATED	UNITS
	-----	-----	-----
EXT. CAL. POINT #1	0.196	0.200	OHM-M
EXT. CAL. POINT #2	20.001	20.000	OHM-M
EXT. CAL. POINT #3	1912.968	2000.000	OHM-M
INTERNAL REFERENCE	19.998	19.995	OHM-M

SHORT GUARD BEFORE SURVEY FIELD CHECK SUMMARY

PERFORMED: 05:19:45 10/27/93 LAST SHOP CALIBRATION: 11:14:13 10/15/93

	SHOP	FIELD	UNITS
	-----	-----	-----
INTERNAL REFERENCE	19.995	20.002	OHM-M

SHORT GUARD AFTER SURVEY FIELD CHECK SUMMARY

PERFORMED: 07:45:53 10/27/93 LAST SHOP CALIBRATION: 11:14:13 10/15/93

	BEFORE	AFTER	UNITS
	-----	-----	-----
INTERNAL REFERENCE	20.002	19.908	OHM-M

PLS-III CALIBRATION SUMMARY TABLE

SERVICE or SIGNAL	SHOP	BEFORE	AFTER	CHANGE	TOLERANCE
-----	-----	-----	-----	-----	-----
GAMMA	214	209		4	+/- 9.0
FACT CALIPER 13	8.00	8.01	0	-0.01	+/-0.25
FACT CALIPER 24	8.00	8.17	0	-0.17	+/-0.25
DEEP INTERNAL REFERENCE	499.427	499.440	499.440	0.000	+/-20
MEDIUM INTERNAL REFERENCE	502.098	499.106	500.541	-1.435	+/-20
DEEP TOOL ZERO	0.000	-0.165	-0.115	-0.049	+/-2
MEDIUM TOOL ZERO	0.000	0.068	0.141	-0.073	+/-2
CHORD	10.005	20.002	10.000	0.004	+/-0.0

CURRENT PLS-III PARAMETER VALUES

DATE: 27-OCT-1993 07:54:25

MNEMONIC	DESCRIPTION	VALUE
-----	-----	-----
GR_OK	DO GAMMA CALCULATIONS?	YES
CASED	IS THE HOLE CASED?	NO
MUDWT	MUD WEIGHT	9.50
OUTFLT	OUTPUT FILTER WEIGHT?	0.50
DI_OK	DO DUAL INDUCTION CALCULATION?	YES
SG_OK	DO SHORT GUARD CALCULATIONS?	YES
FACTOK	DO FACT CALCULATIONS?	YES
BS	BIT SIZE	7.88
AHVOK	DO ANNULAR VOLUME CALCULATION?	YES
CASEOD	CASING DIAMETER (OD)	5.50

HLS

PLS-III TOOL STRING DIAGRAM

27-OCT-1993 07:54:22

+==+ <---- 60.3000 = TELEMETRY SUB

! !

PLS-III EVENT FILE

1	0.00	0 01:35:07 Version: 2.32	Released: 7-MAY-1993 / R1	0 C
2	0.00	0 01:35:08 ***** Final Release Version *****		0 C
3	0.00	0 01:35:08 Today's date:	27-OCT-1993 01:35:08	0 C
4	0.00	0 01:35:15 Your HLS Engineer is:	KIRK EVATT	0 C
5	0.00	0 01:35:16 Entering CLASS logging setup!		0 C
6	0.00	0 01:40:41 Exiting PLS-II/III tool calibrations.	FIELD	0 C
7	95.52	0 05:21:19 FACT OPEN MANDREL COMMAND		0 C

Line	Time	Event	Field	Post	Log Date	Log Time	Section	Count	Status
1	0.00	0 01:35:07 Version: 2.32	Released: 7-MAY-1993 / R1						0 C
2	0.00	0 01:35:08 ***** Final Release Version *****							0 C
3	0.00	0 01:35:08 Today's date: 27-OCT-1993 01:35:08							0 C
4	0.00	0 01:35:15 Your HLS Engineer is: KIRK EVATT							0 C
5	0.00	0 01:35:16 Entering CLASS logging setup!							0 C
6	0.00	0 01:40:41 Exiting PLS-II/III tool calibrations.	FIELD						0 C
7	95.52	0 05:21:19 FACT OPEN MANDREL COMMAND							0 C
8	95.52	0 05:21:41 FACT OPEN MANDREL COMMAND							0 C
9	95.52	0 05:22:16 FACT CLOSE MANDREL COMMAND							0 C
10	95.52	0 05:22:32 FACT CLOSE MANDREL COMMAND							0 C
11	107.00	0 05:23:51 Exiting PLS-II/III tool calibrations.	FIELD						0 C
12	1363.02	0 05:31:08 Exiting PLS-II/III tool calibrations.	POST						0 C
13	6271.13	1 06:02:07 FACT OPEN MANDREL COMMAND							0 C
14	6205.00	1 06:02:42 LOGGING DATE	27-OCT-1993						0 C
15	6205.00	1 06:02:42 LOGGING TIME	06:02:42						0 C
16	6205.00	1 06:02:45 Beginning new UPLOG section.					1 2		0 C
17	5939.92	1 06:08:32 END LOGGING SECTION					1		0 C
18	5931.85	1 06:08:42 FACT CLOSE MANDREL COMMAND							0 C
19	6208.19	2 06:20:29 FACT OPEN MANDREL COMMAND							0 C
20	6206.00	2 06:21:11 LOGGING DATE	27-OCT-1993						0 C
21	6206.00	2 06:21:11 LOGGING TIME	06:21:11						0 C
22	6206.00	2 06:21:15 Beginning new UPLOG section.					2 2		0 C
23	4615.25	2 06:50:04 FACT CLOSE MANDREL COMMAND							0 C
24	4611.50	2 06:51:15 FACT OPEN MANDREL COMMAND							0 C
25	505.00	2 07:35:06 &ILD Y/N changed Y	-->LR NO						0 C
26	505.00	2 07:35:06 &ILM Y/N changed Y	-->LR NO						0 C
27	505.00	2 07:35:06 &SGRD Y/N changed Y	-->LR NO						0 C
28	505.00	2 07:35:06 &C13 Y/N changed Y	-->LR NO						0 C
29	505.00	2 07:35:06 &C24 Y/N changed Y	-->LR NO						0 C
30	505.00	2 07:35:06 &AHV Y/N changed Y	-->LR NO						0 C
31	505.00	2 07:35:06 &BHV Y/N changed Y	-->LR NO						0 C
32	505.00	2 07:35:06 &SP Y/N changed Y	-->LI NO						0 C
33	505.00	2 07:35:06 &SGRD Y/N changed Y	-->LR NO						0 C
34	505.00	2 07:35:06 &SGRD Y/N changed Y	-->LR REPEATED: 2				2		2 C
35	505.00	2 07:35:06 &ILD Y/N changed Y	-->LR NO						0 C
36	505.00	2 07:35:06 &CILD Y/N changed Y	-->LR NO						0 C
37	505.00	2 07:35:06 DGR plot curve rescale triggered.					2		0 C
38	498.75	2 07:35:14 FACT CLOSE MANDREL COMMAND							0 C
39	95.00	2 07:40:27 &ILD Y/N changed N	-->LR YES						0 C
40	95.00	2 07:40:27 &ILM Y/N changed N	-->LR YES						0 C
41	95.00	2 07:40:27 &SGRD Y/N changed N	-->LR YES						0 C
42	95.00	2 07:40:27 &C13 Y/N changed N	-->LR YES						0 C
43	95.00	2 07:40:27 &C24 Y/N changed N	-->LR YES						0 C
44	95.00	2 07:40:27 &AHV Y/N changed N	-->LR YES						0 C
45	95.00	2 07:40:27 &BHV Y/N changed N	-->LR YES						0 C
46	95.00	2 07:40:27 &SP Y/N changed N	-->LI YES						0 C
47	95.00	2 07:40:27 &SGRD Y/N changed N	-->LR YES						0 C
48	95.00	2 07:40:27 &SGRD Y/N changed N	-->LR REPEATED: 2				2		2 C
49	95.00	2 07:40:27 &ILD Y/N changed N	-->LR YES						0 C
50	94.75	2 07:40:27 &CILD Y/N changed N	-->LR YES						0 C
51	94.75	2 07:40:27 DGR plot curve rescale triggered.					2		0 C
52	90.53	2 07:40:31 END LOGGING SECTION					2		0 C
53	505.00	2 07:49:15 &C13 Y/N changed Y	-->L NO						0 C
54	505.00	2 07:49:15 &C24 Y/N changed Y	-->L NO						0 C
55	505.00	2 07:49:15 &AHV Y/N changed Y	-->L NO						0 C
56	505.00	2 07:49:15 &BHV Y/N changed Y	-->L NO						0 C
57	505.00	2 07:49:15 &SP Y/N changed Y	-->L NO						0 C
58	505.00	2 07:49:15 &SGRD Y/N changed Y	-->L NO						0 C
59	505.00	2 07:49:15 &SGRD Y/N changed Y	-->L REPEATED: 2				2		2 C
60	505.00	2 07:49:15 &ILD Y/N changed Y	-->L NO						0 C
61	505.00	2 07:49:15 &CILD Y/N changed Y	-->L NO						0 C
62	96.00	2 07:50:13 &C13 Y/N changed N	-->L YES						0 C
63	96.00	2 07:50:13 &C24 Y/N changed N	-->L YES						0 C
64	96.00	2 07:50:13 &AHV Y/N changed N	-->L YES						0 C
65	96.00	2 07:50:13 &BHV Y/N changed N	-->L YES						0 C
66	96.00	2 07:50:13 &SP Y/N changed N	-->L YES						0 C
67	96.00	2 07:50:13 &SGRD Y/N changed N	-->L YES						0 C
68	96.00	2 07:50:13 &SGRD Y/N changed N	-->L REPEATED: 2				2		2 C
69	96.00	2 07:50:13 &ILD Y/N changed N	-->L YES						0 C
70	96.00	2 07:50:13 &CILD Y/N changed N	-->L YES						0 C