michigan wireline services

TEMPERATURE LOG

COMPANY ENVIROMENTAL GEOTECH TECHNOLOGIES

WELL EGT #1-12

FIELD ROMULUS STORAGE

COUNTY WAYNE STATE MICHIGAN

Location 1670' FSL & 2372' FEL

SEC. 12 TWP. 3 S. RGE. 9 E.

Other Services

NUCLEAR TRACER LOG

Permanent Datum	GROUND LEVEL	Elevation 626'	Elevation
Log Measured From	KELLY BUSHING	13 Ft. Above Perm. Datum	K.B. 639'
Drilling Measured From	KELLY BUSHING		D.F. 638'
			G.L. 626'

Date	07/25/2016	
Run Number	ONE	
Type of Log	TEMPERATURE/GAMMA RAY LOG	
Depth Driller	4645'	
Depth Logger	4510'	
Logged Interval	SURFACE To 4510'	To
Operating Rig. Time	CRANE TRUCK	
Type Fluid in Hole	STORM WATER	
Salinity, PPM CL.	N/A	
Density - Viscosity	N/A	
Level	94'	
Max. Rec. Temp., °F	87.5 DegF	
Equipment - Location	116 - MT. PLEASANT, MI.	
Recorded By	McCONAHY	
Witnessed By	RICHARD SCHILDHOUSE	

Bore-Hole Record

Size	Weight	From	To

Casing Record

Size	Weight	From	To
20"	94#	SURFACE	119'
13.375"	48"	SURFACE	396'
9.625"	36#	SURFACE	824'
7"	26#	SURFACE	4080'
4.5"	FGL	SURFACE	4050'

NOTES

1. THIS LOG IS CORRELATED TO MWL NUCLEAR TRACER LOG DATED 07/28/2015.
2. BUCKET CALIBRATION: HOT TOOL=108.0 DegF COLD TOOL-55.8 DegF
   METER=108.6 DegF METER-56.0 DegF
3. 68 DEGREE WASTE ACID WAS LAST INJECTED IN EGT #1-12, 07/16/2016 WITH EXCEPTION OF 1879 GALLONS INJECTED 07/23/2016.

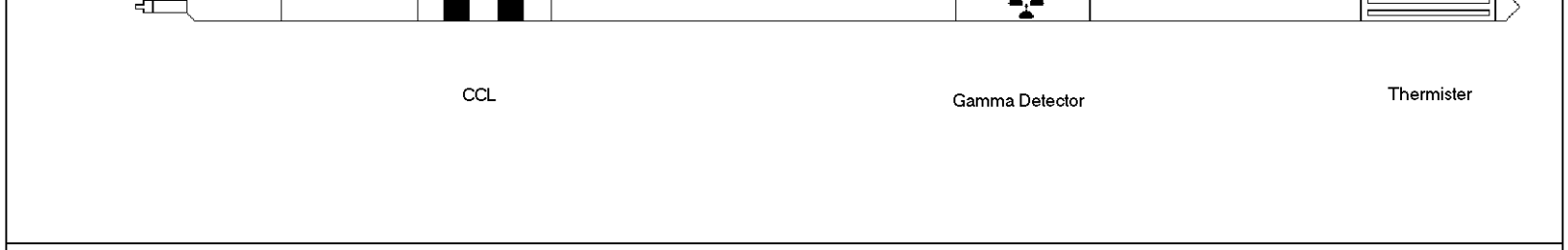
CSS Gamma Ray/Temperature

TOOL LENGTH: 8.5 ft.

3.5 Feet

4.5 Feet

MAKE: CSS

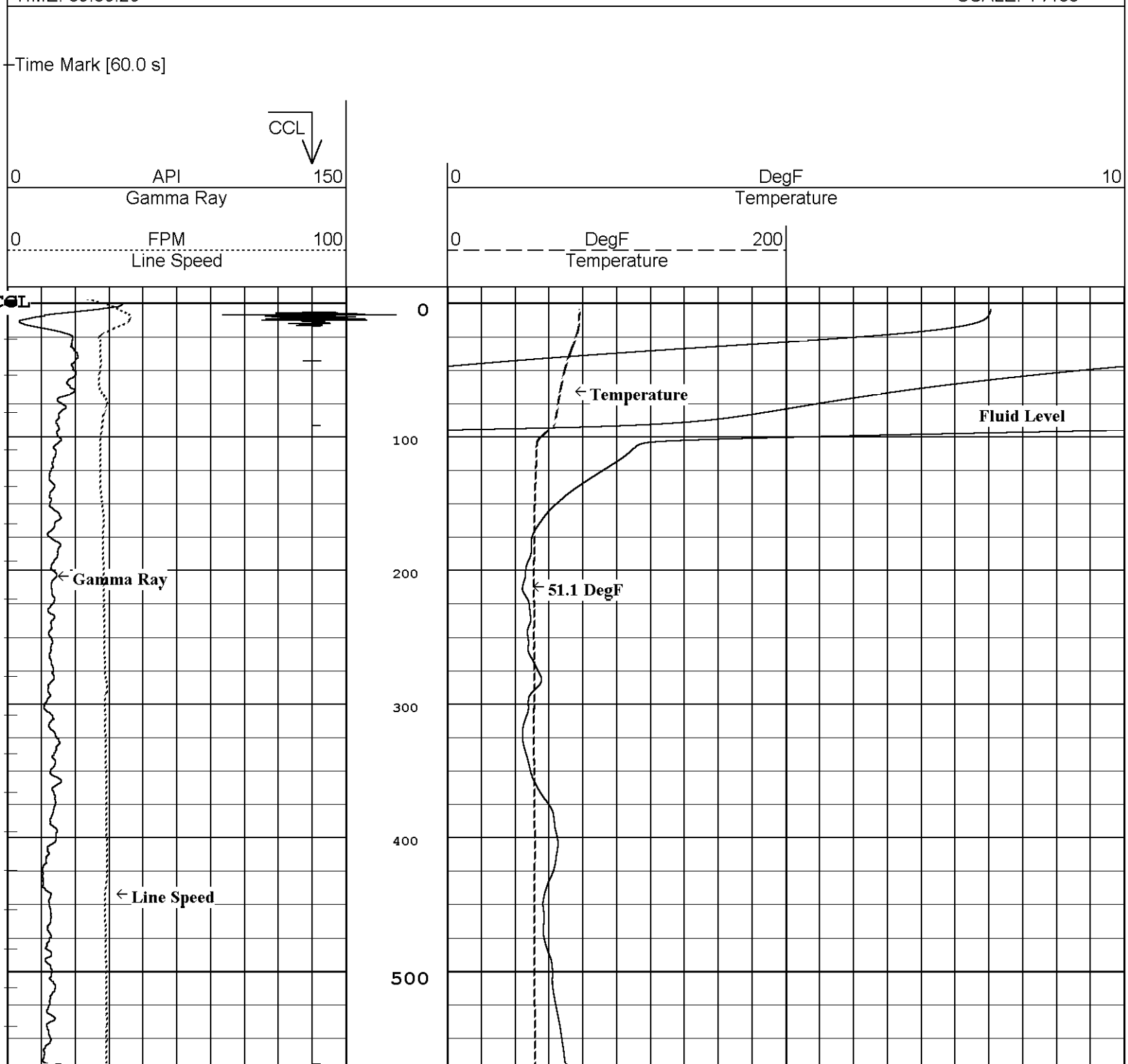


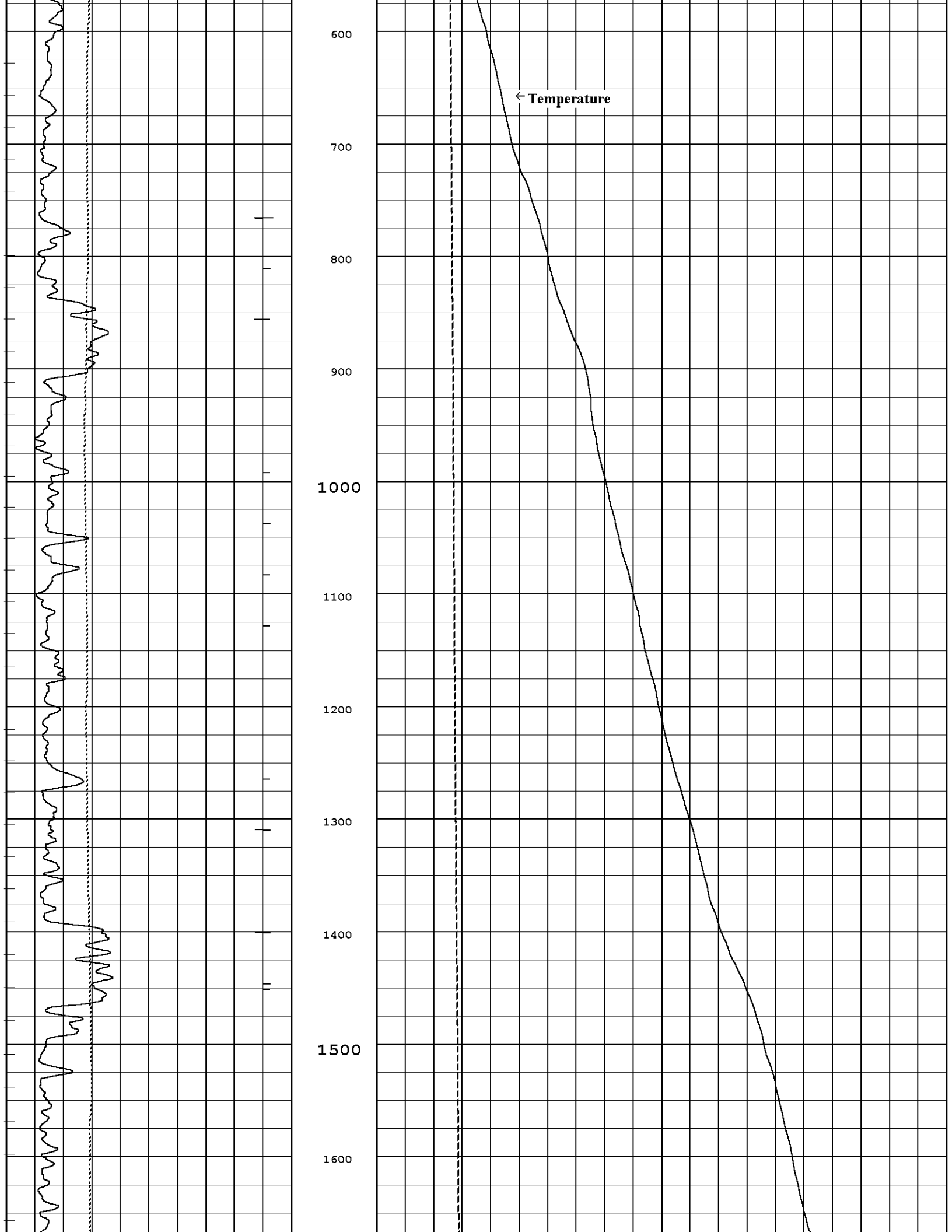
1 5/8" OD

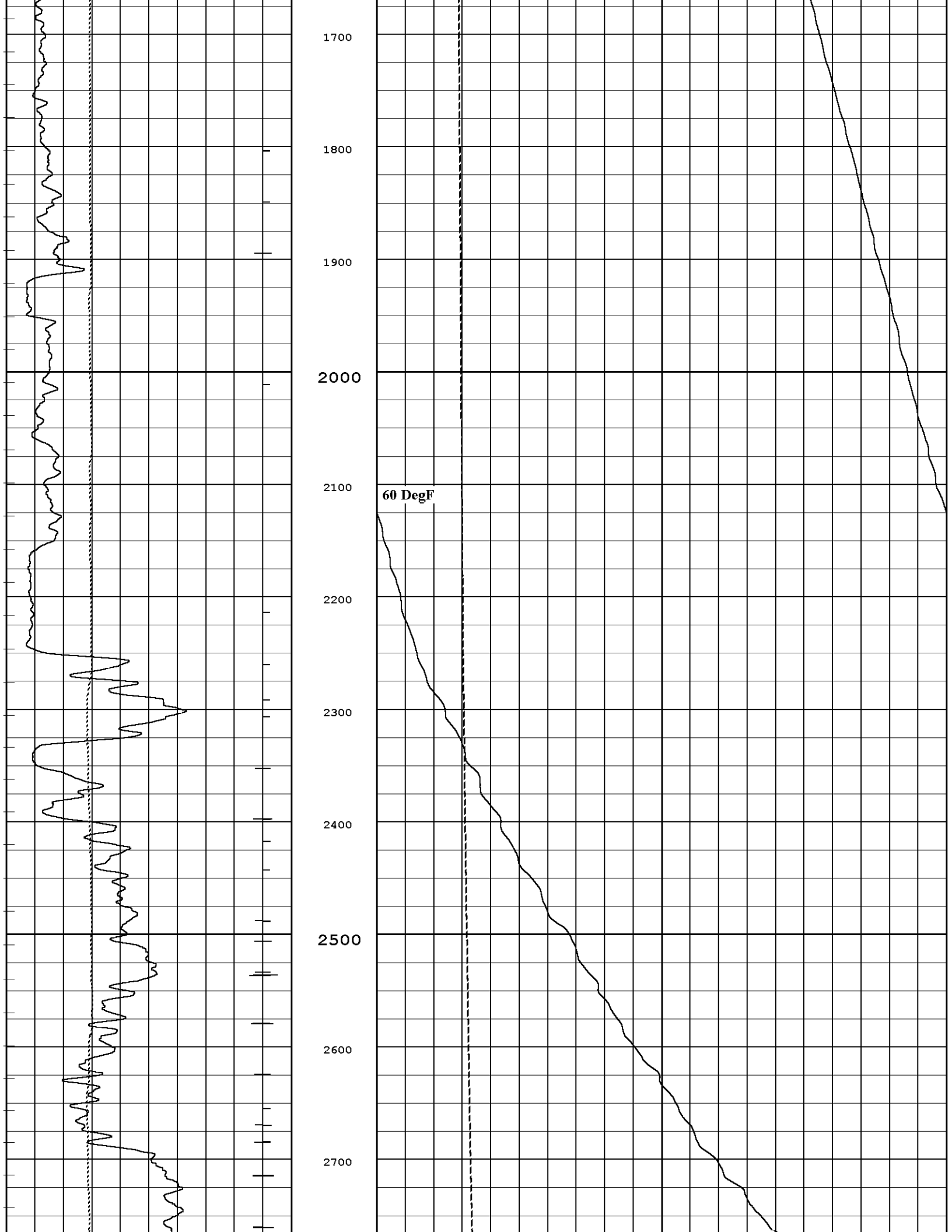
RUN: TEMPERATURE
DIR.: DOWN
DATE: 07/25/16
TIME: 09:06:26

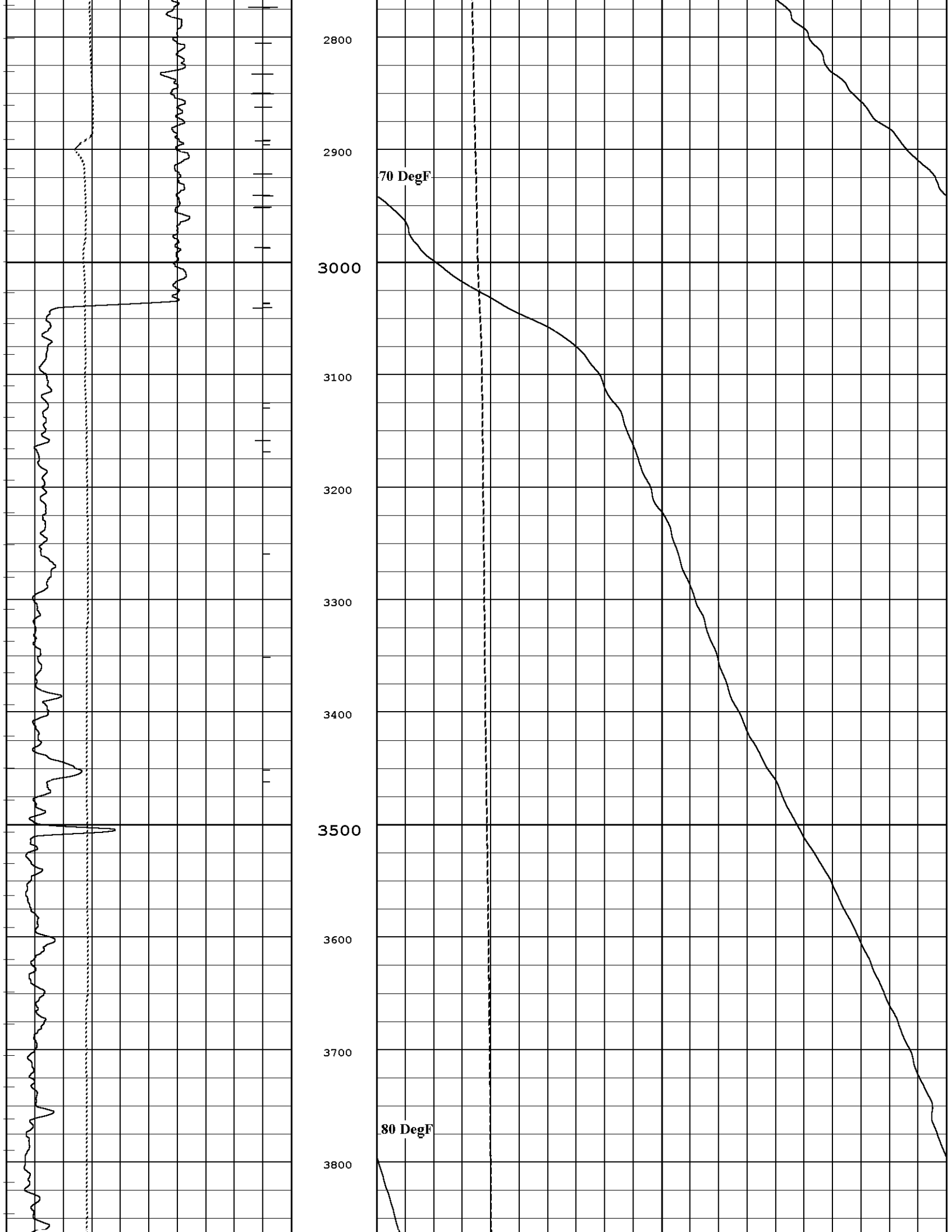
MAIN PASS

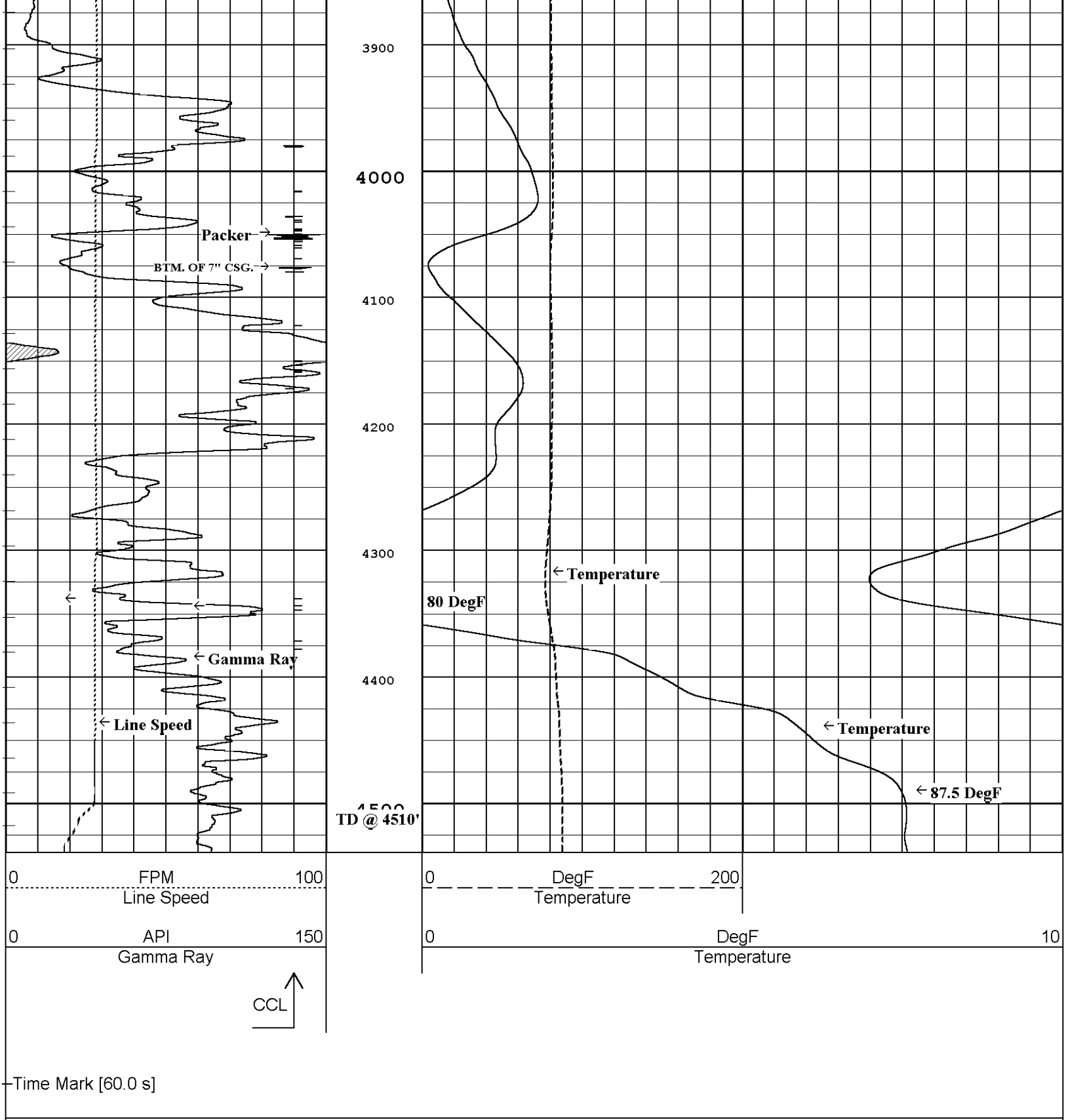
START: 4,538.50ft
STOP: -0.50ft
RES.: 0.5 ft
SCALE: 1"/100'




600
700
800
900
1000
1100
1200
1300
1400
1500
1600
Temperature


1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
60 DegF


2800
2900
70 DegF
3000
3100
3200
3300
3400
3500
3600
3700
80 DegF
3800



RUN: TEMPERATURE
DIR.: DOWN
DATE: 07/25/16
TIME: 09:06:26

MAIN PASS

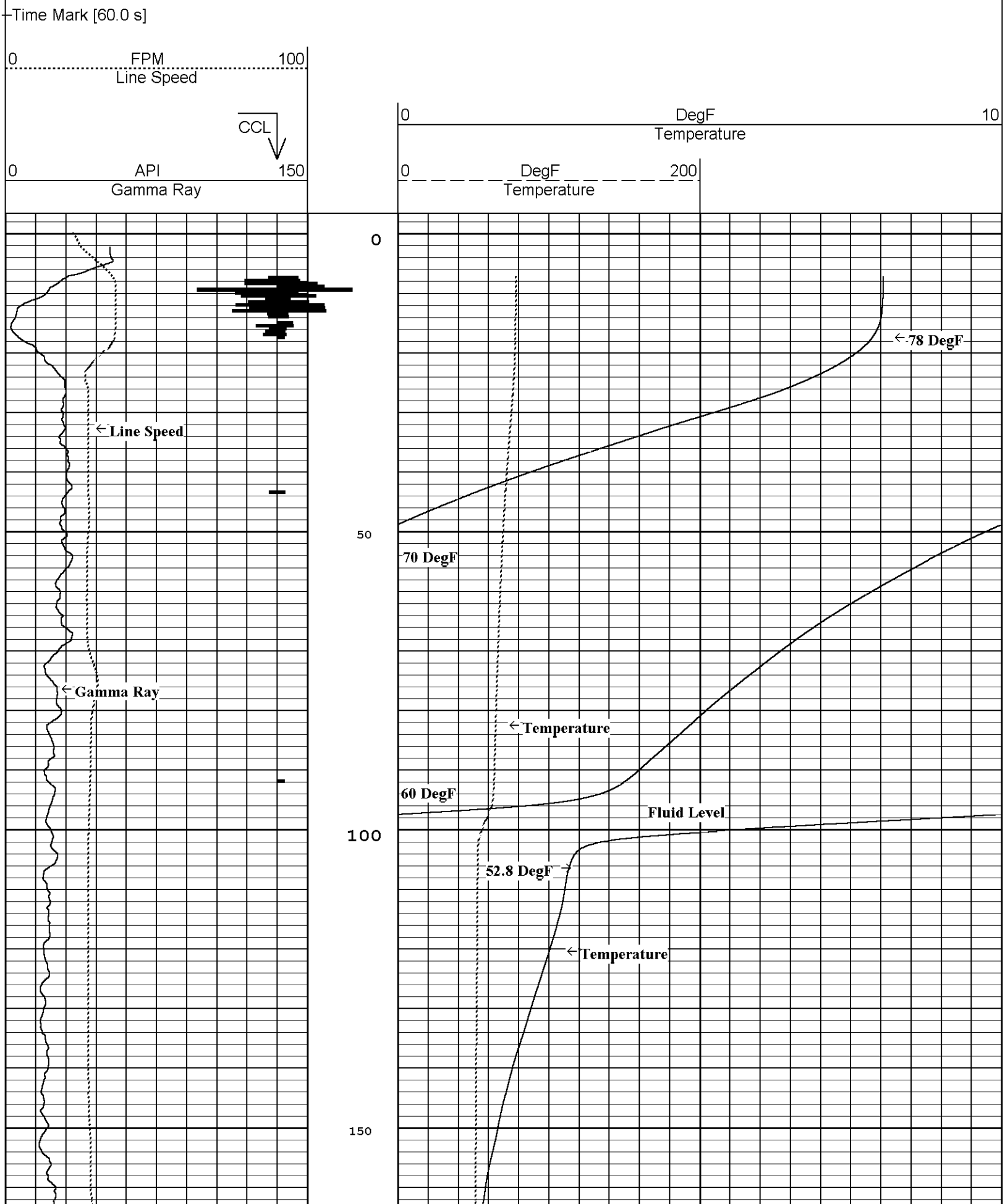
START: 4,538.50ft
STOP: -0.50ft
RES.: 0.5 ft
SCALE: 1"/100'

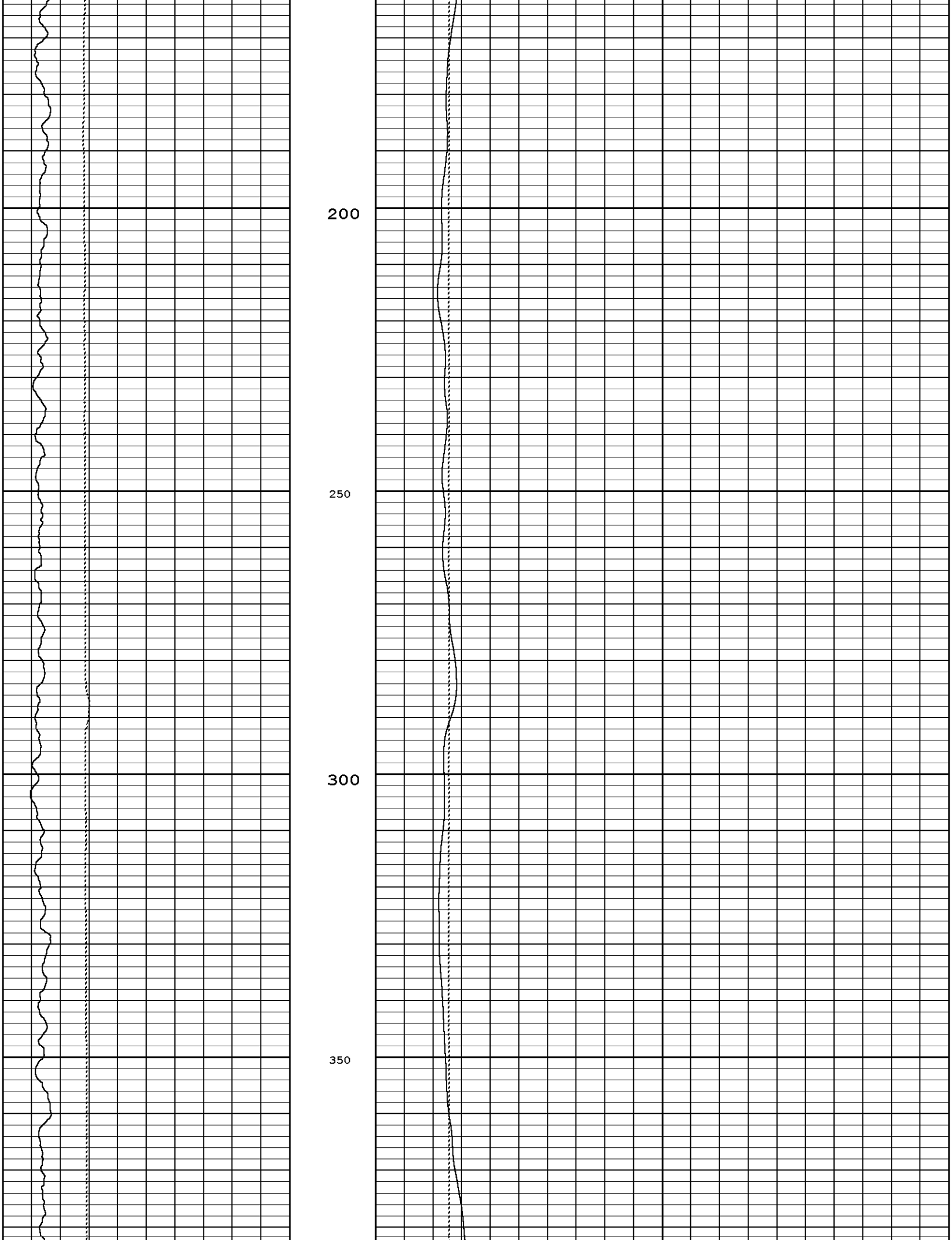
RUN: TEMPERATURE
START: 4,538.50ft

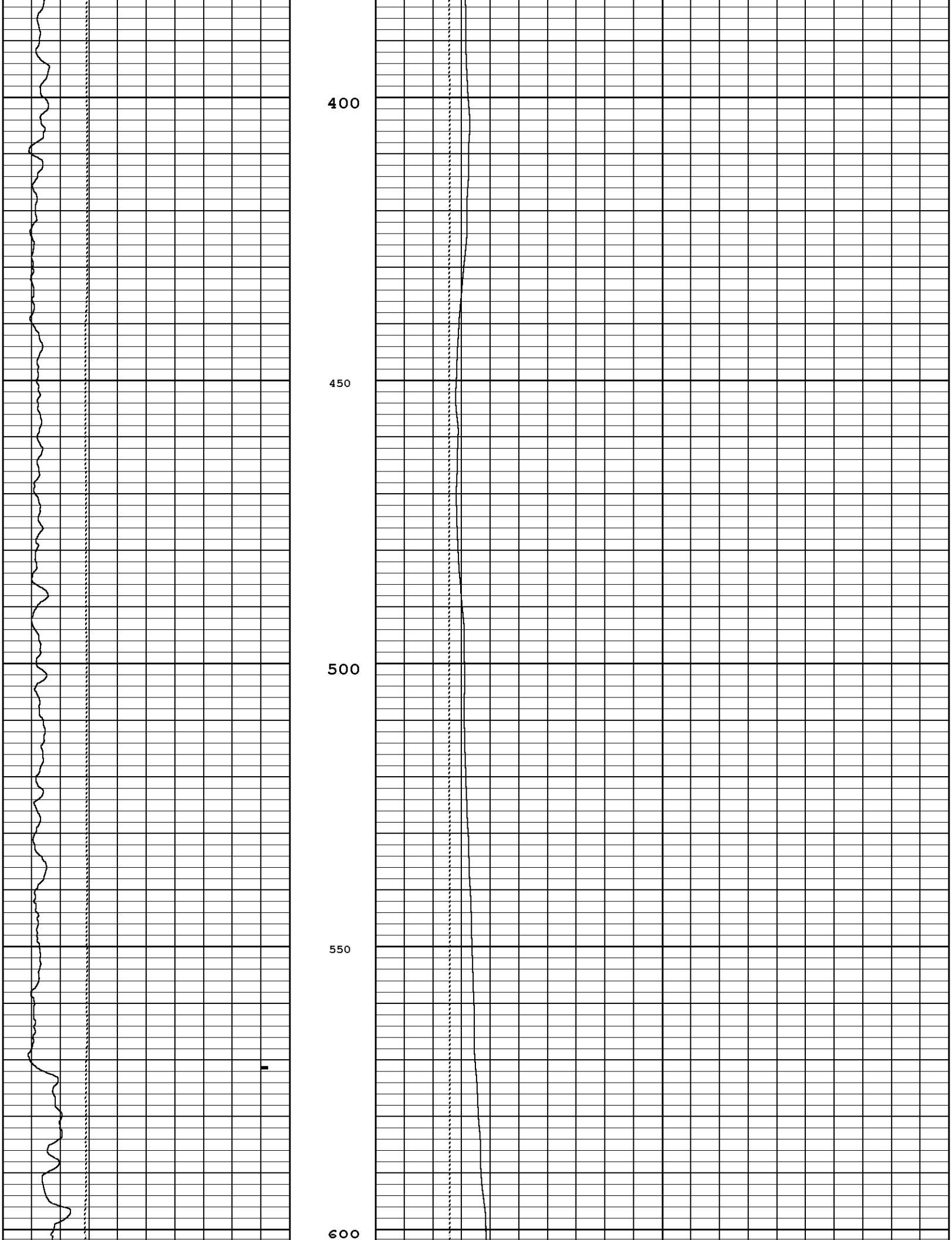
DIR.: DOWN
DATE: 07/25/16
TIME: 09:06:26

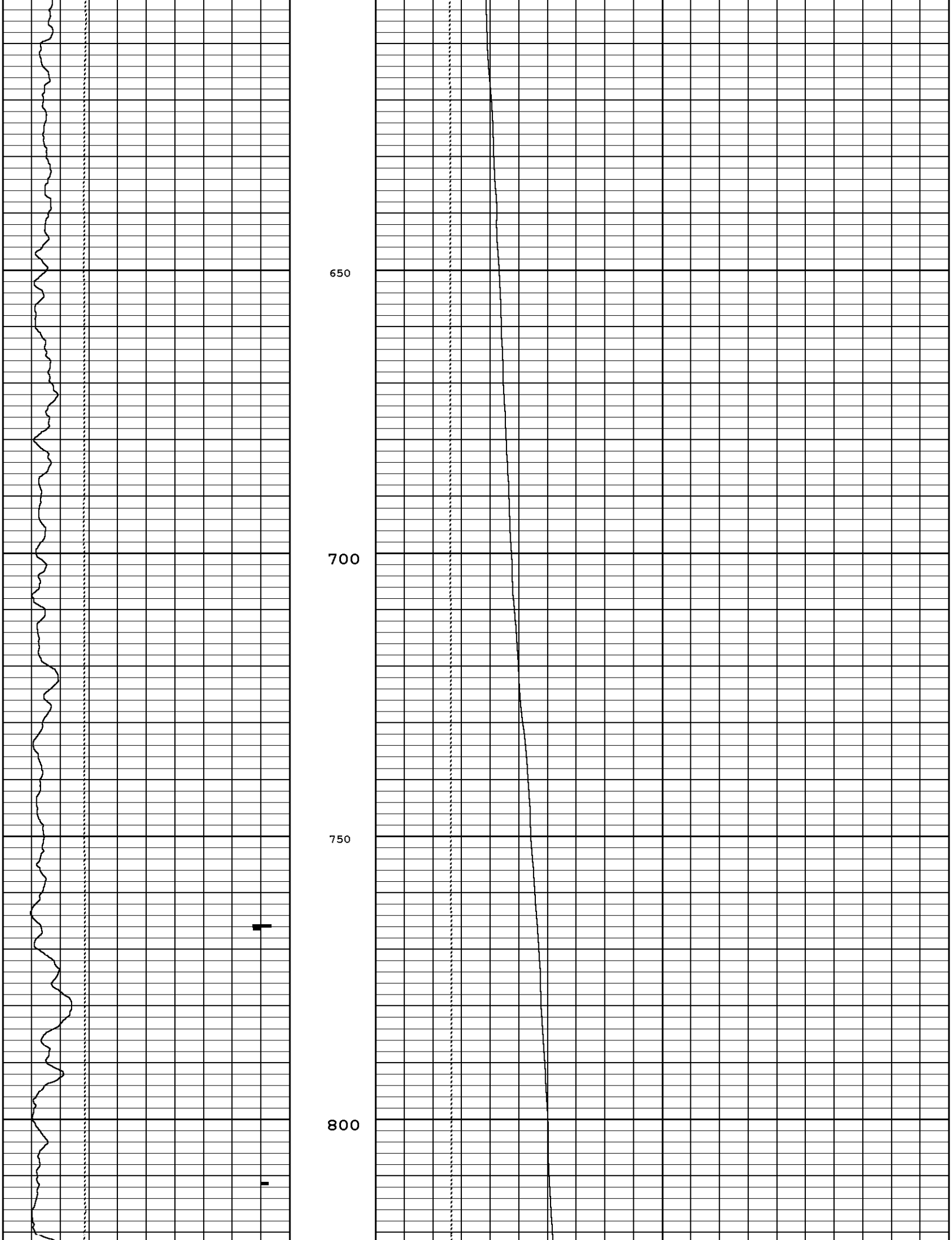
MAIN PASS

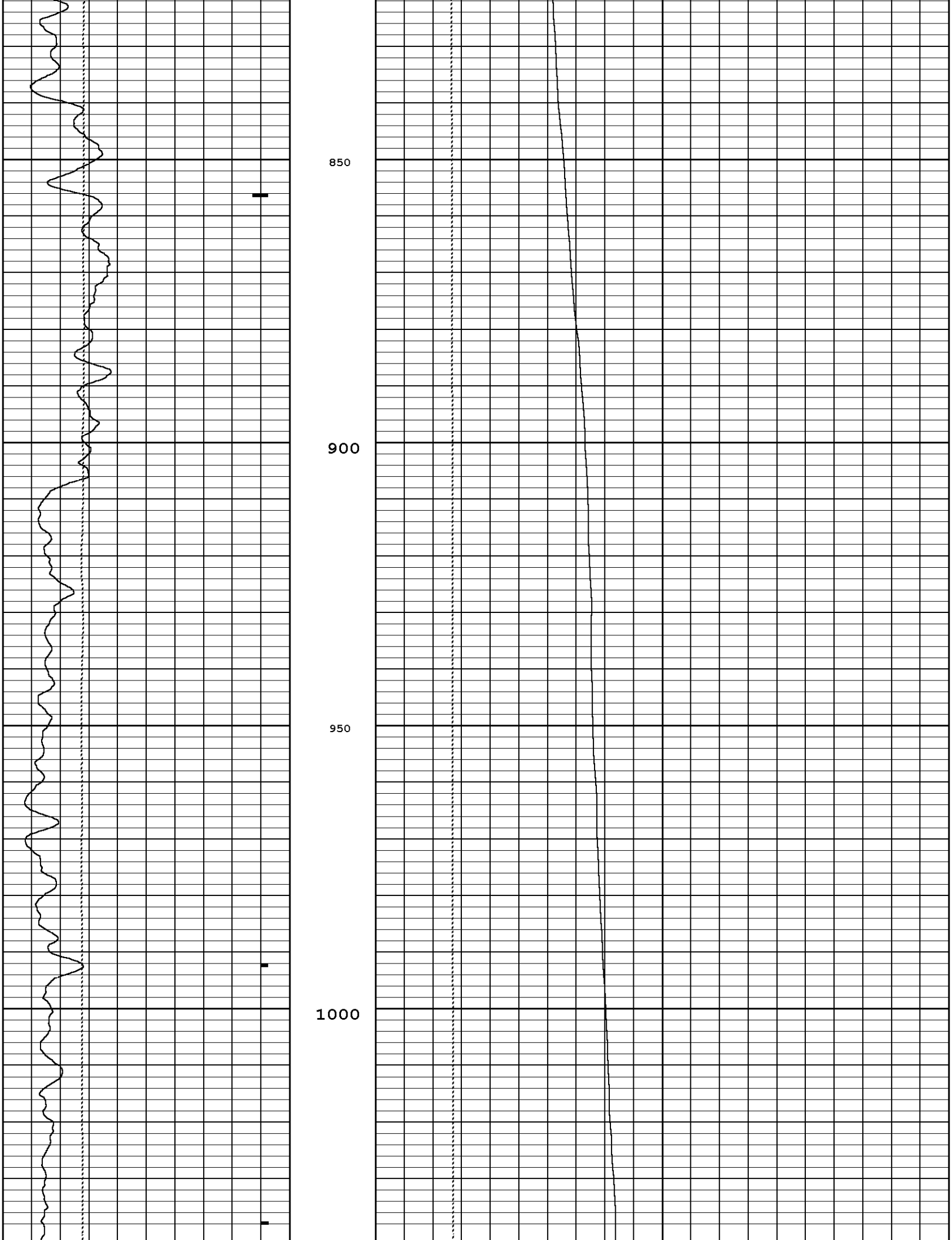
STOP: -0.50ft
RES.: 0.5 ft
SCALE: 5"/100'

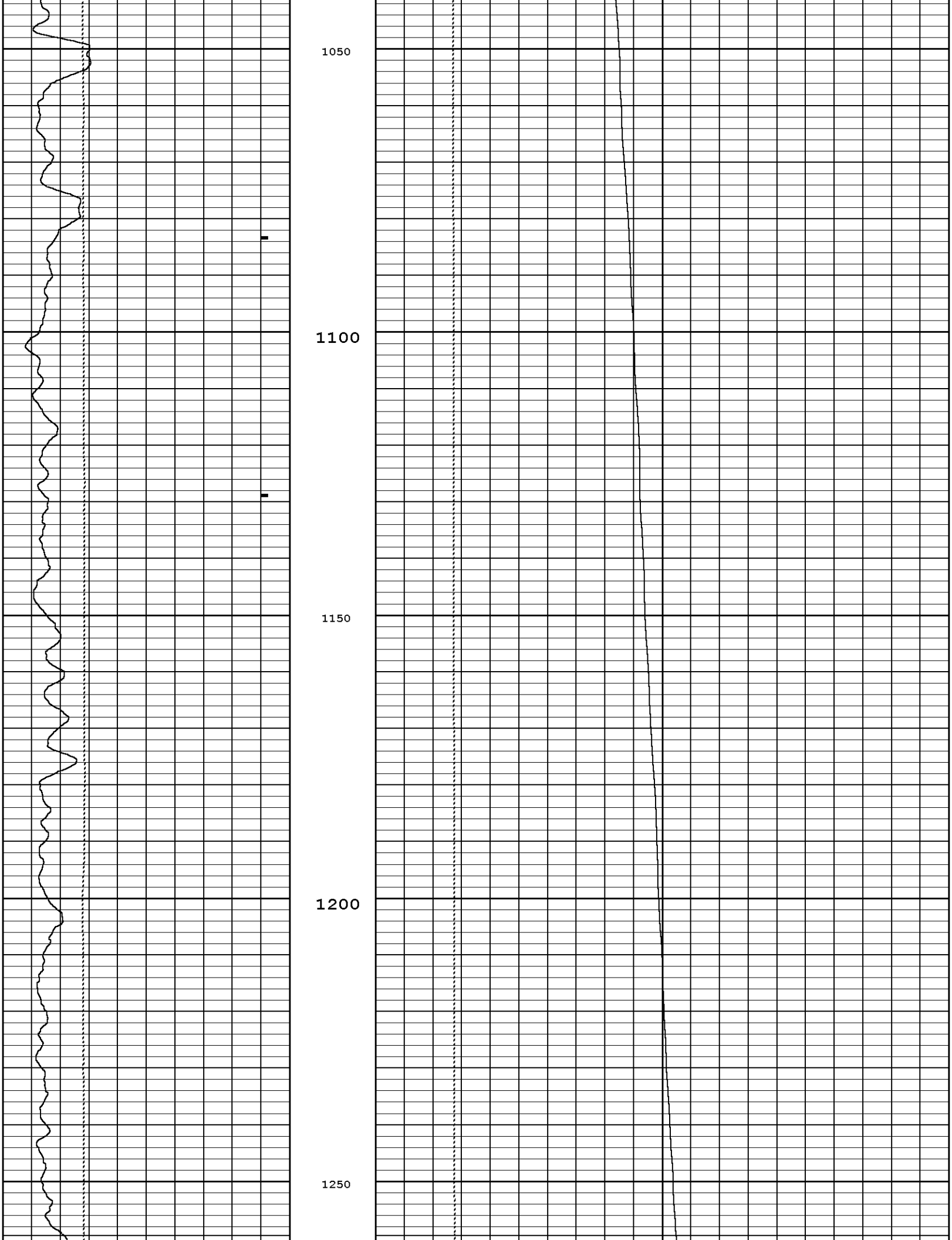


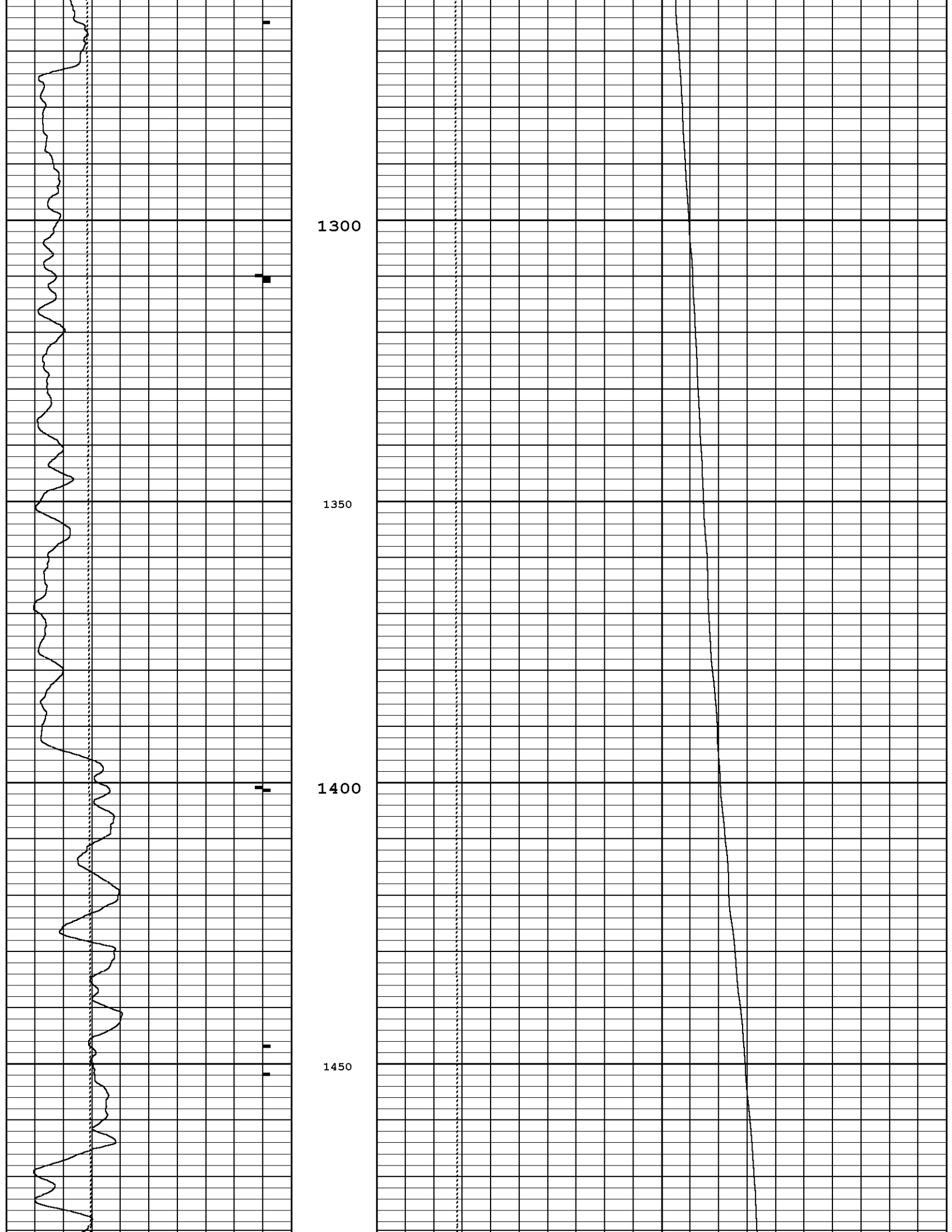

200
250
300
350

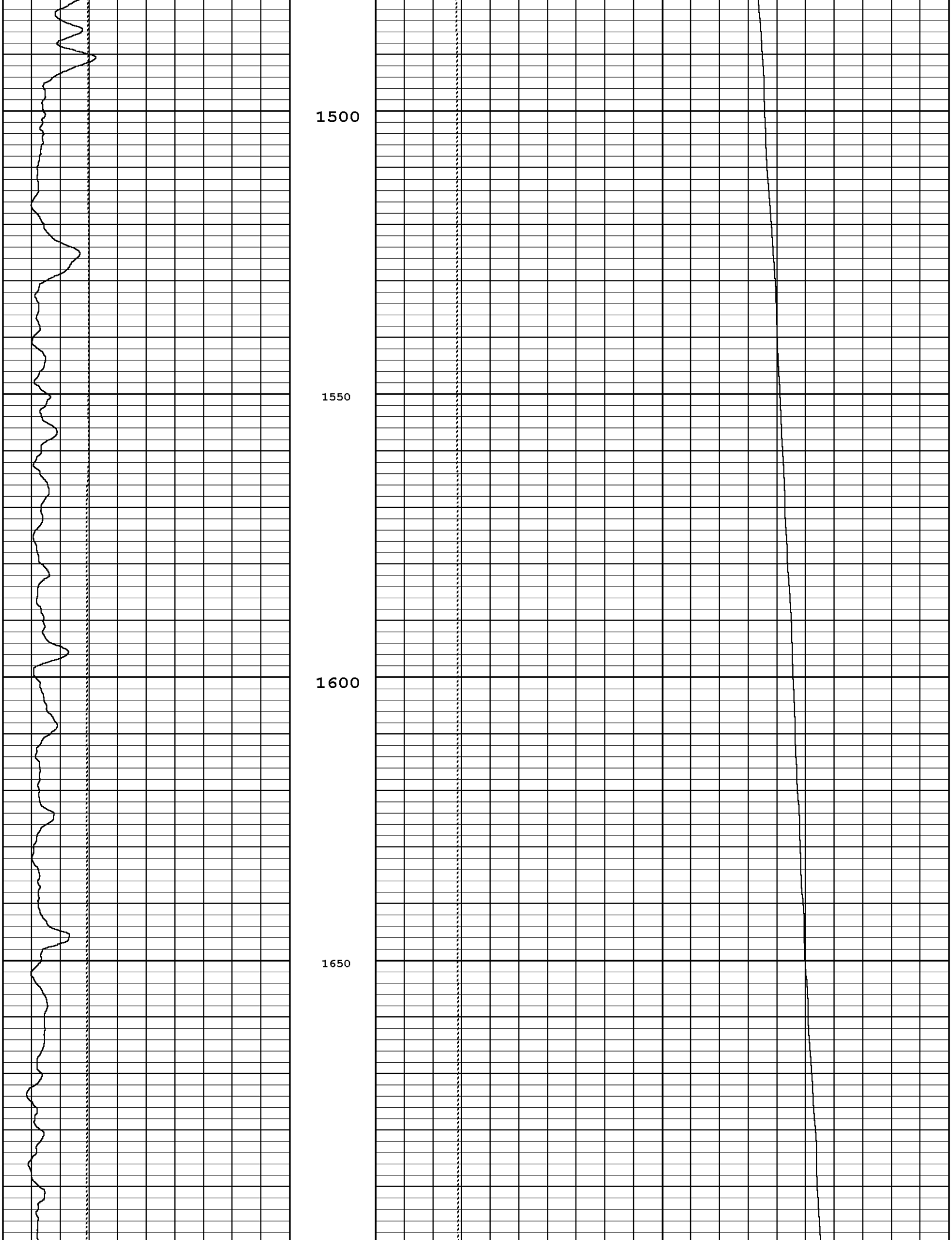

400
450
500
550
600

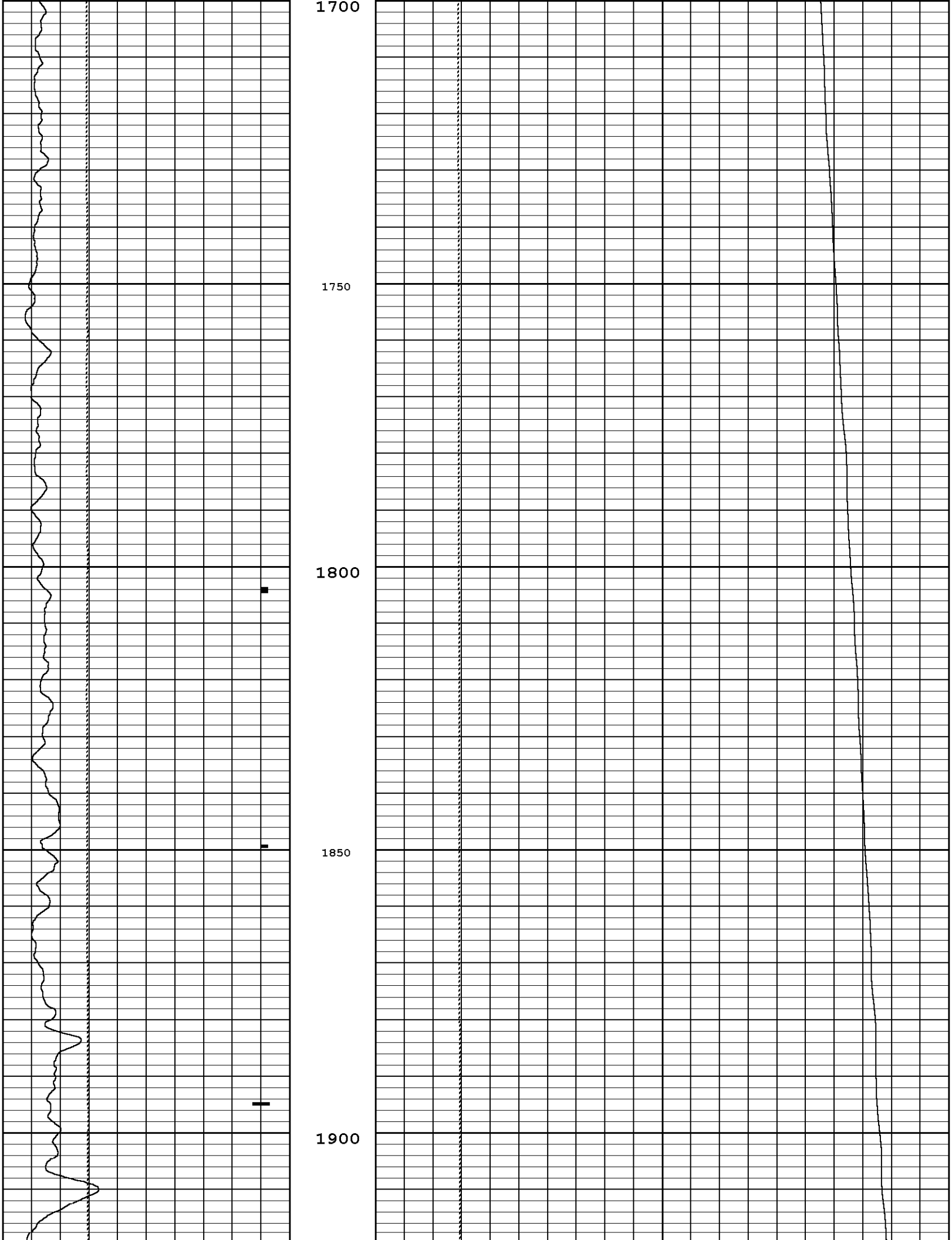

650
700
750
800

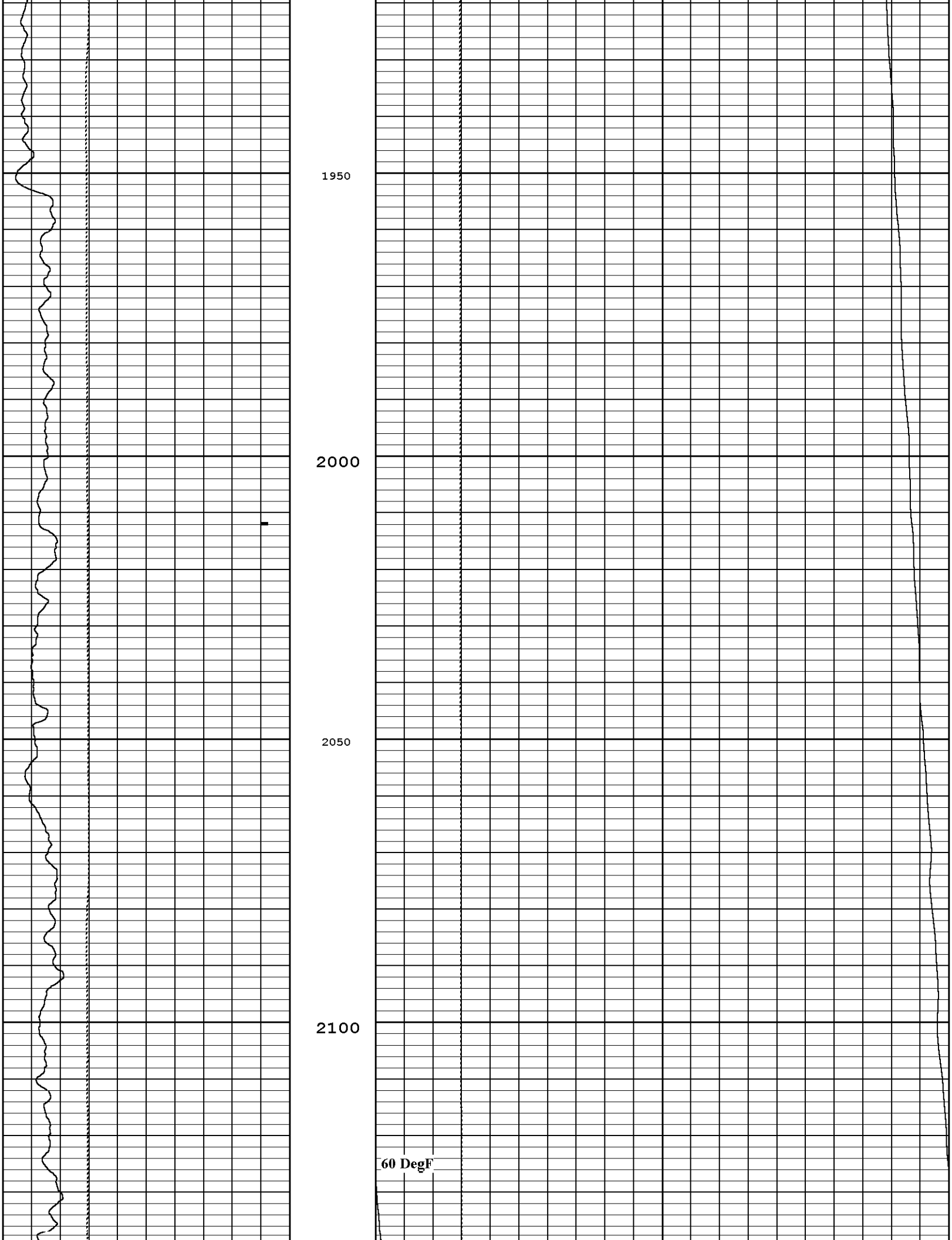

850
900
950
1000

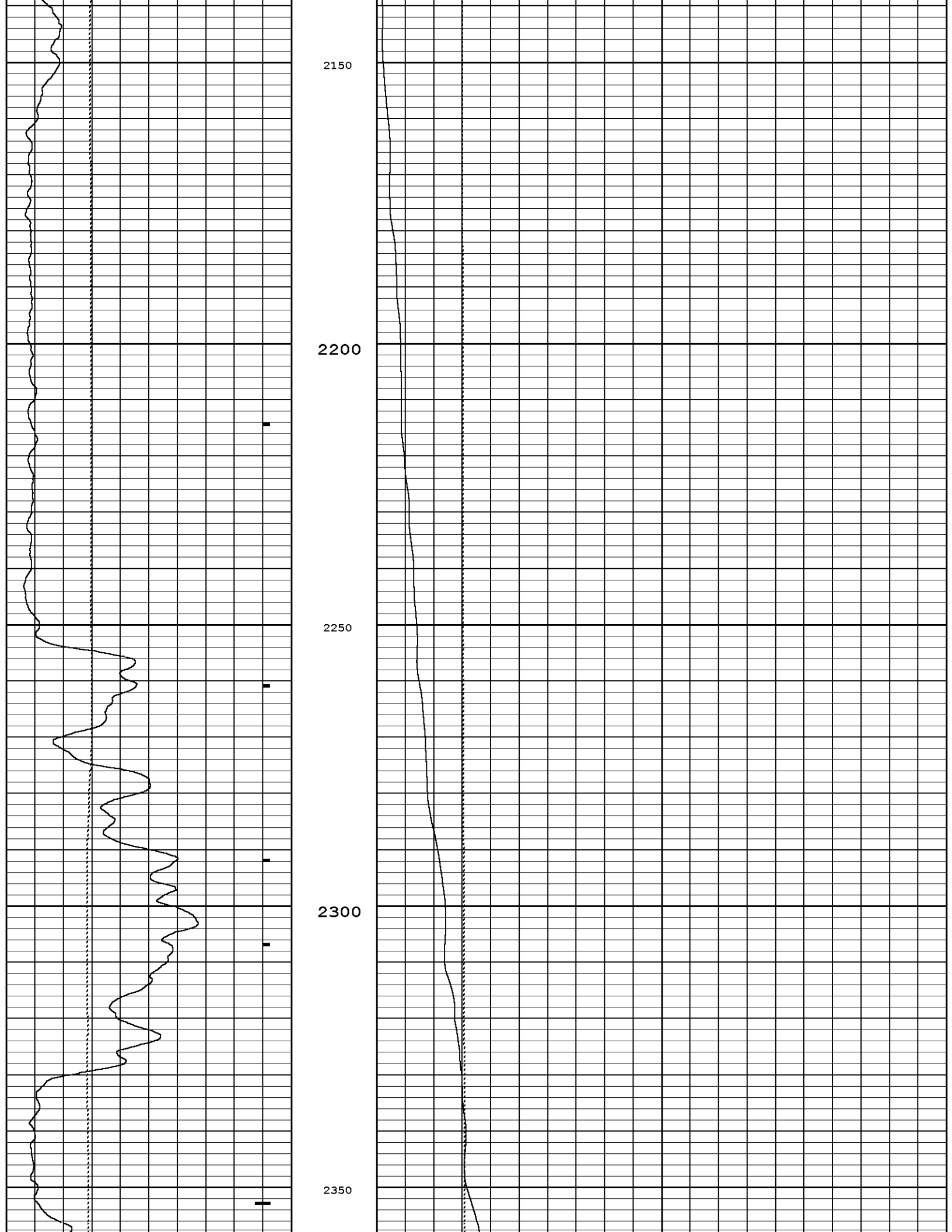

1050
1100
1150
1200
1250

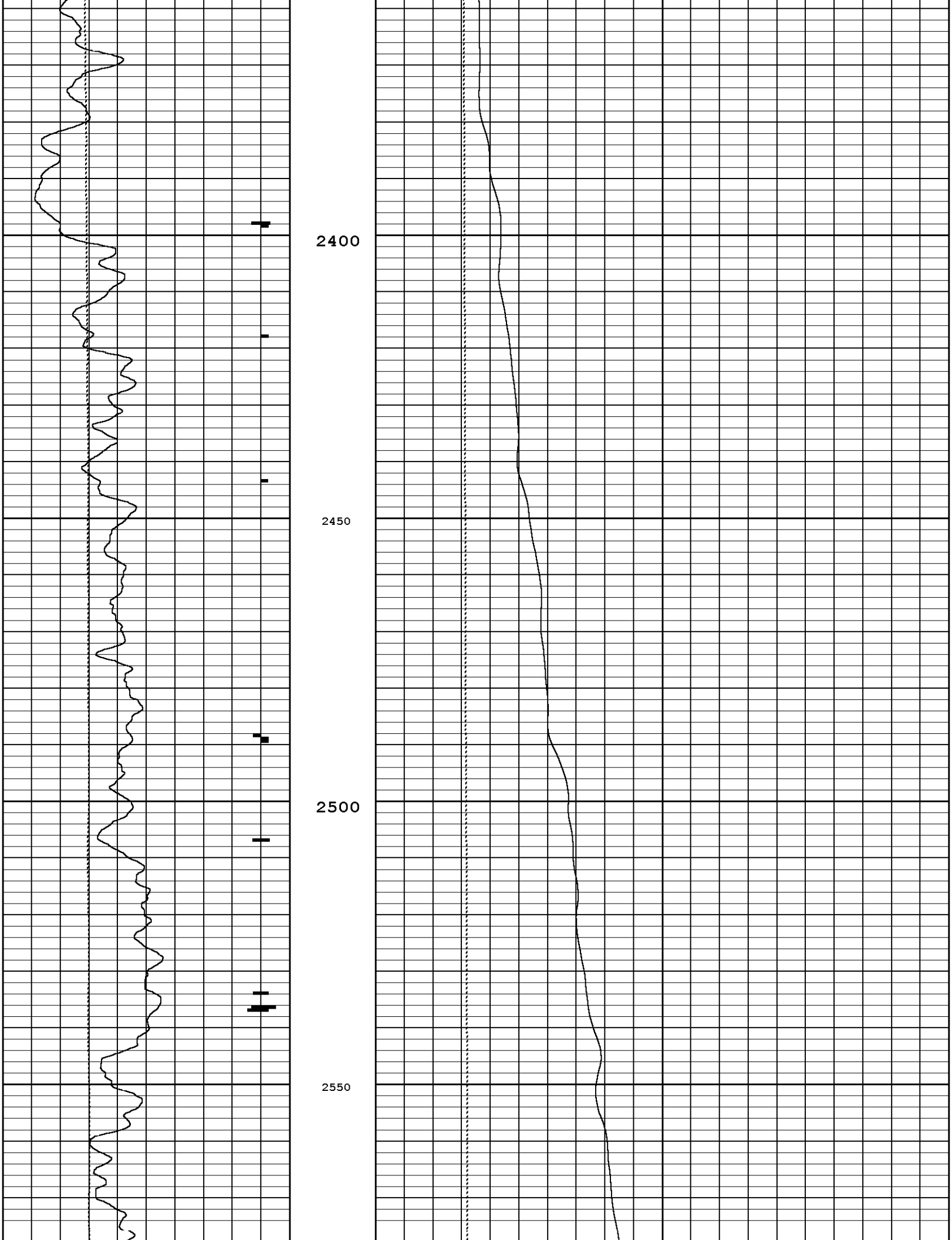

1300
1350
1400
1450

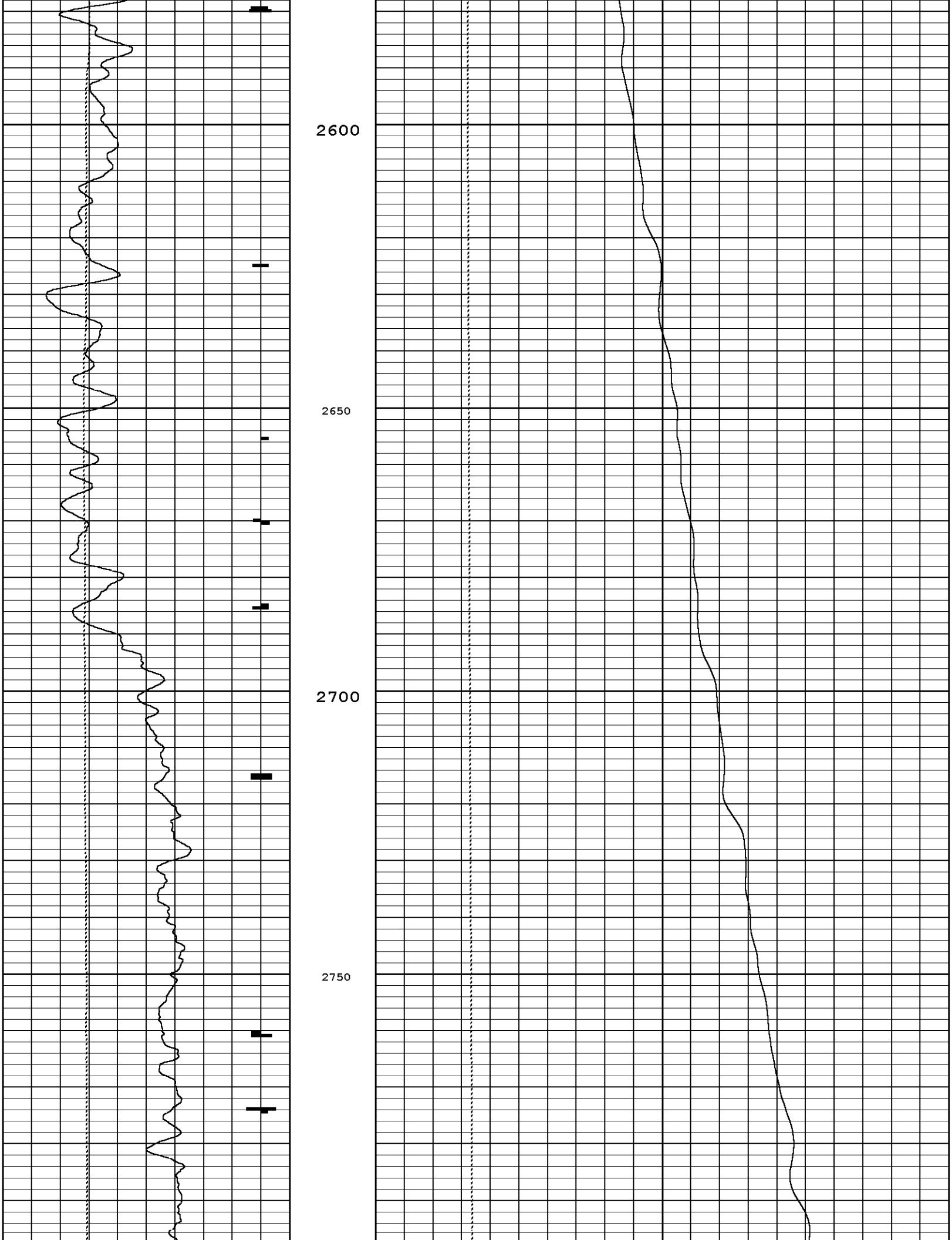

1500
1550
1600
1650

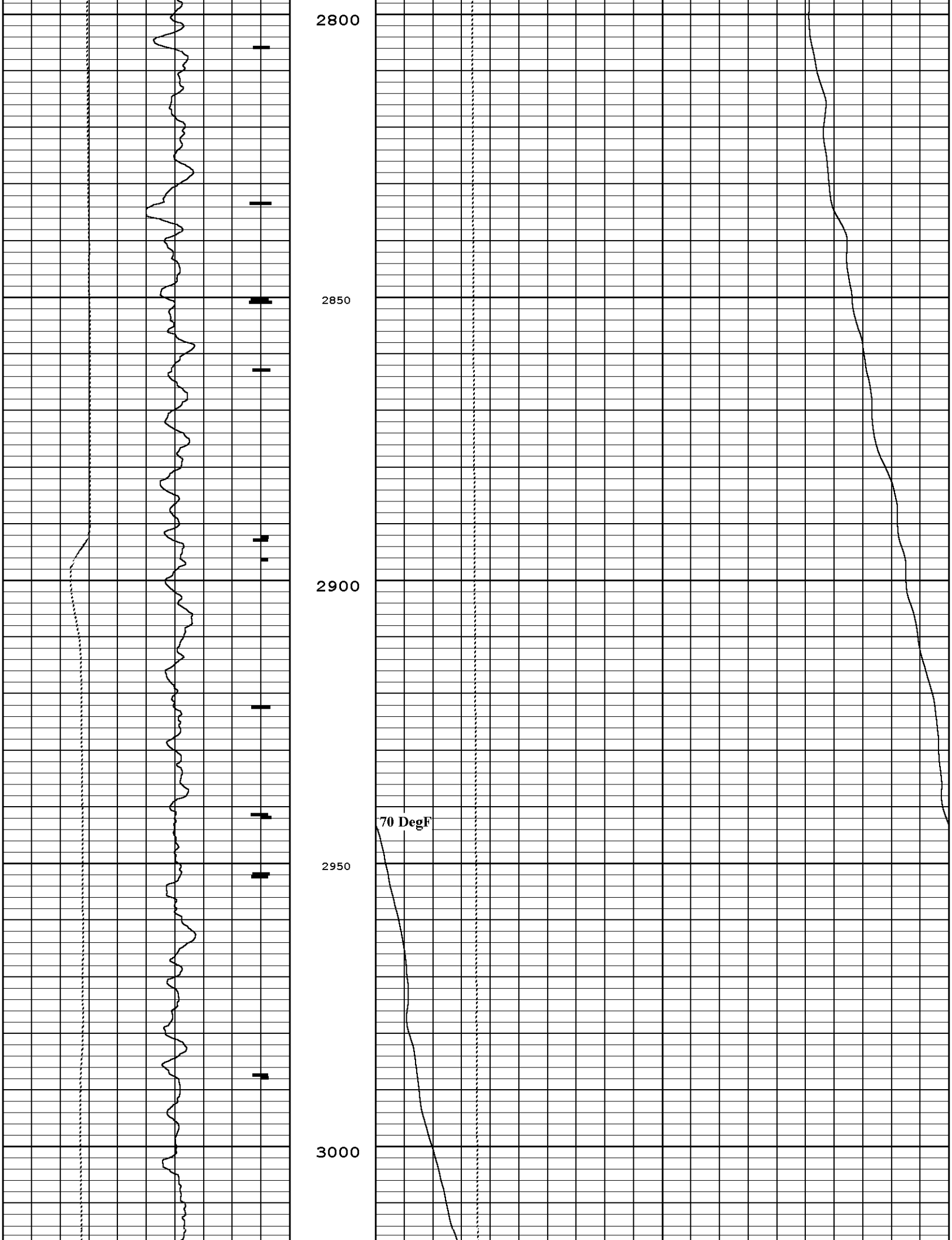

1700
1750
1800
1850
1900


1950
2000
2050
2100
60 DegF

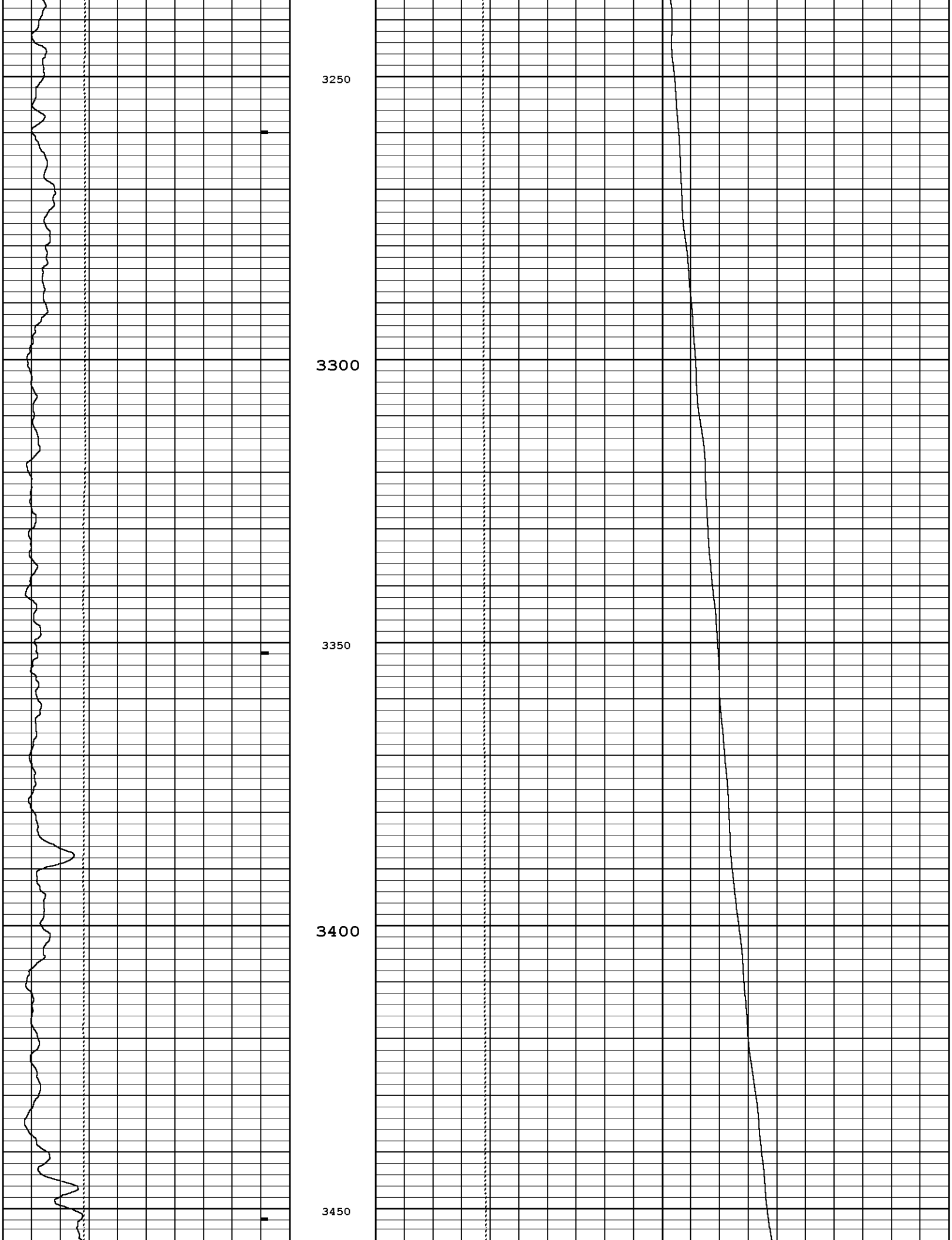

2150
2200
2250
2300
2350

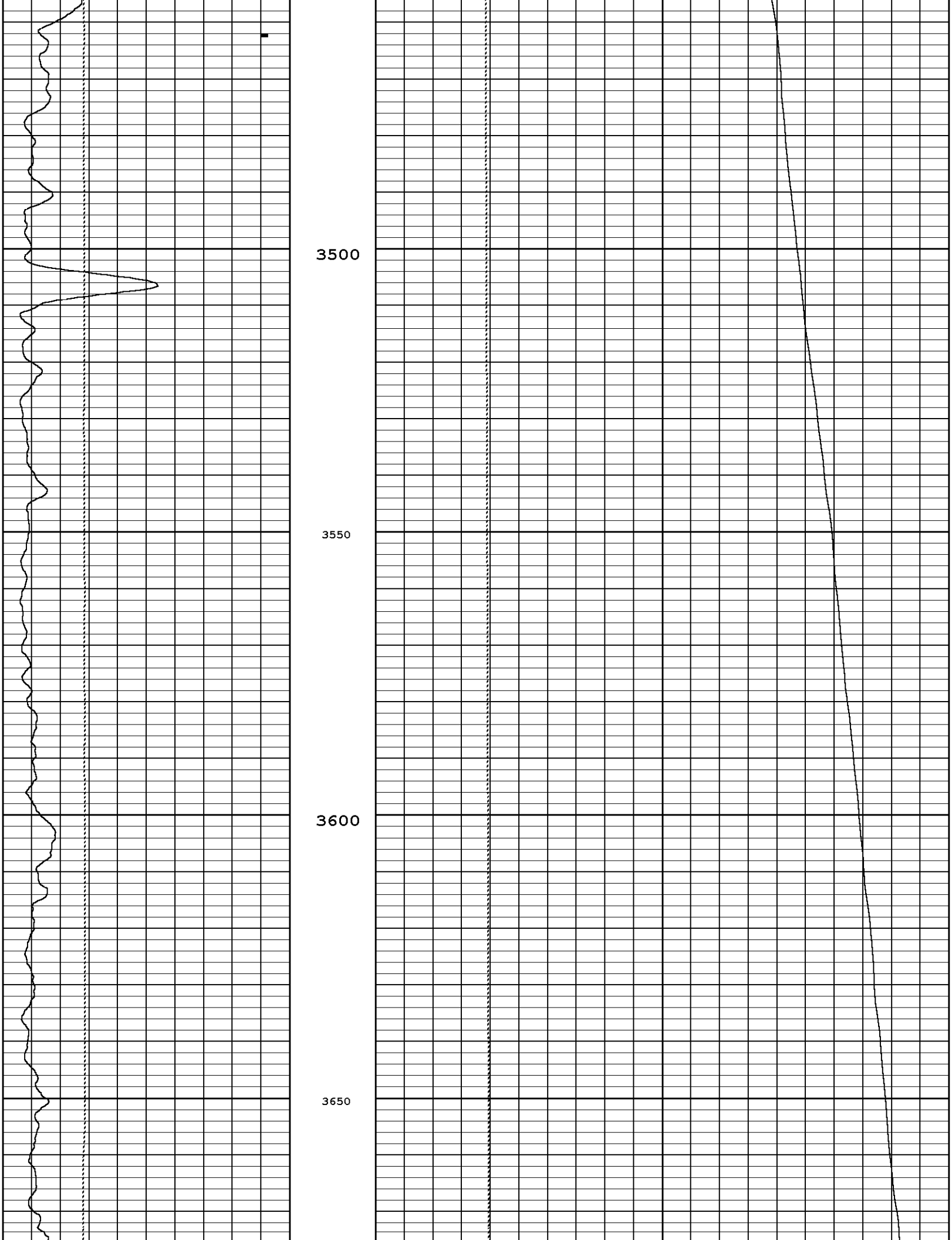

2400
2450
2500
2550

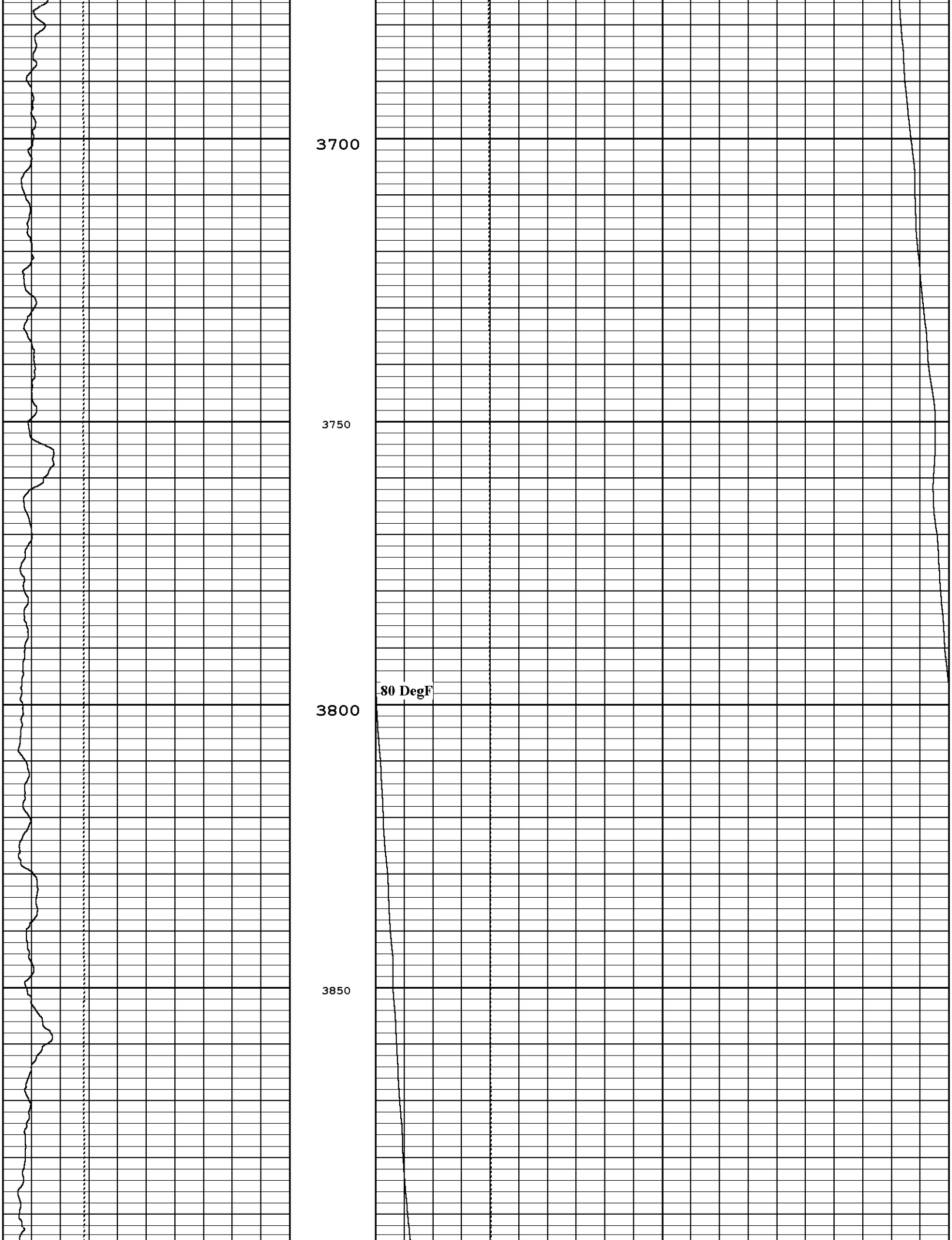

2600
2650
2700
2750

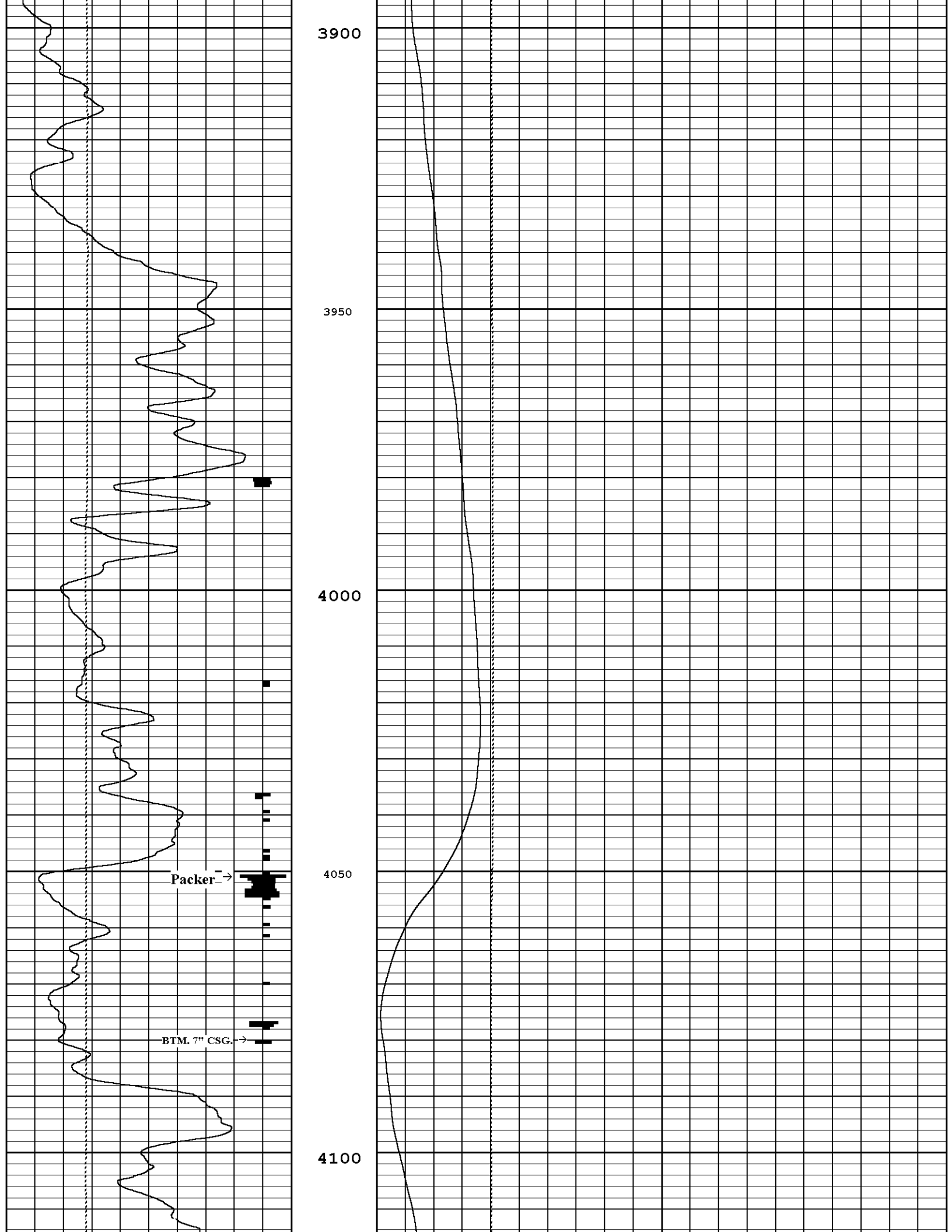

2800
2850
2900
70 DegF
2950
3000

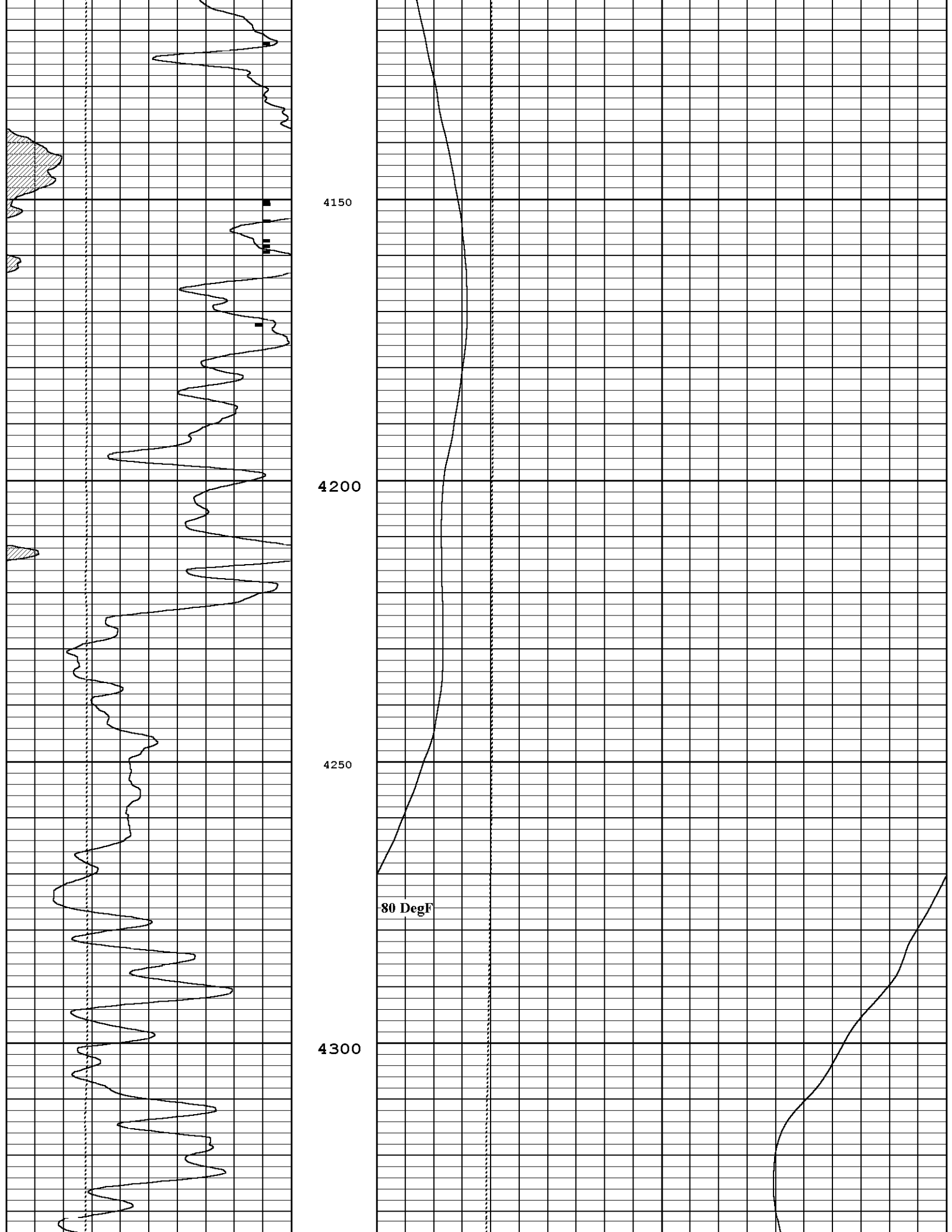
3050
3100
3150
3200

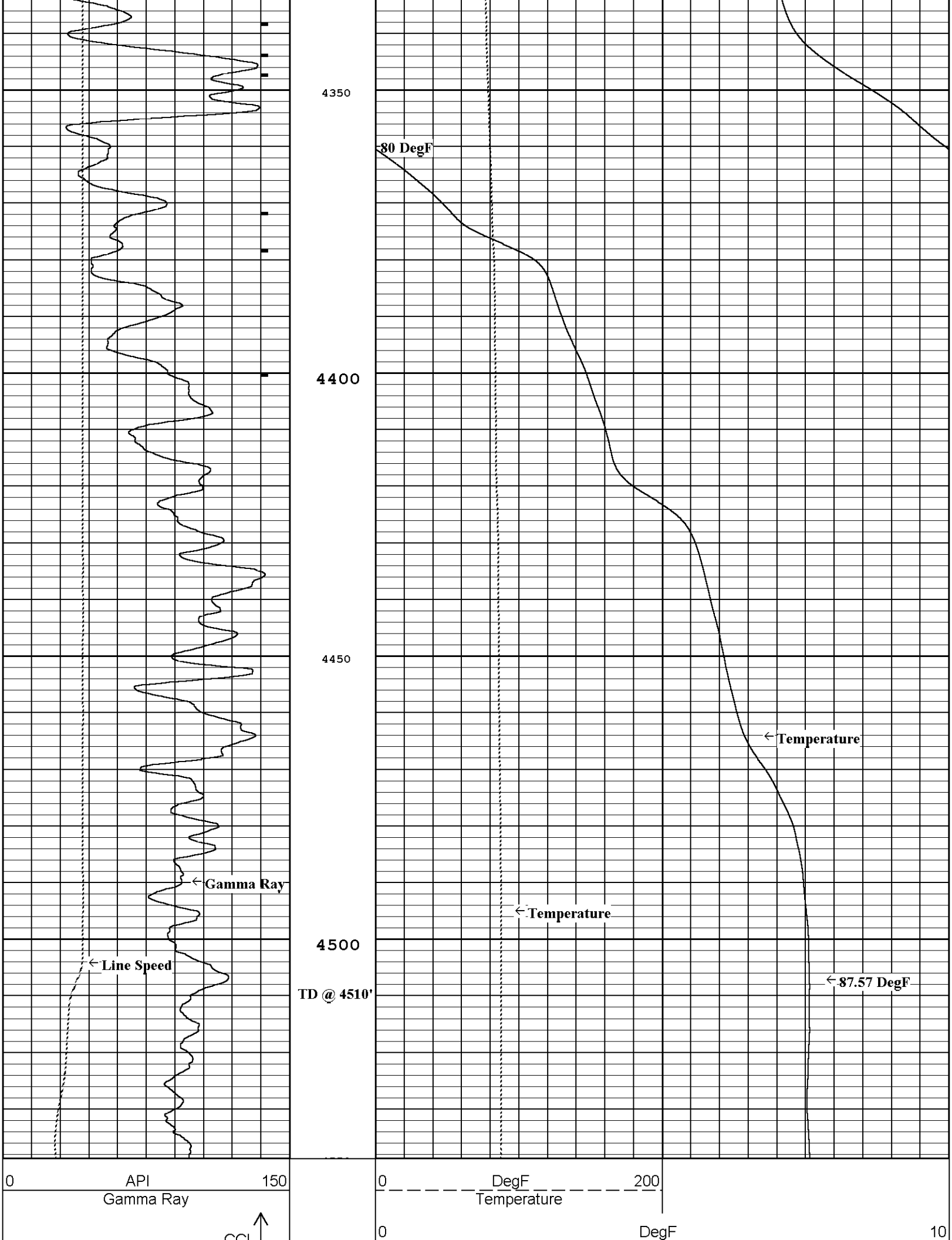

3250
3300
3350
3400
3450


3500
3550
3600
3650


3700
3750
80 DegF
3800
3850


3900
3950
4000
4050
4100
Packer
BTM. 7" CSG.


4150
4200
4250
80 DegF
4300


4350
4400
4450
4500
TD @ 4510'
80 DegF
Temperature
Temperature
87.57 DegF
Gamma Ray
Line Speed
0
API
150
Gamma Ray
0
DegF
200
Temperature
0
DegF
10

CCL

0 FPM 100

Line Speed

Temperature

Time Mark [60.0 s]

RUN: TEMPERATURE
DIR.: DOWN
DATE: 07/25/16
TIME: 09:06:26

MAIN PASS

START: 4,538.50ft
STOP: -0.50ft
RES.: 0.5 ft
SCALE: 5"/100'

RUN: THERMISTER 600
DIR.: DOWN
DATE: 07/25/16
TIME: 13:06:33

THERMISTER 600

START: 0.50ft
STOP: 195.00ft
RES.: 0.5 ft
SCALE: 5"/100'

Time Mark [60.0 s]

CCL

0 FPM 100

Line Speed

0 API 150

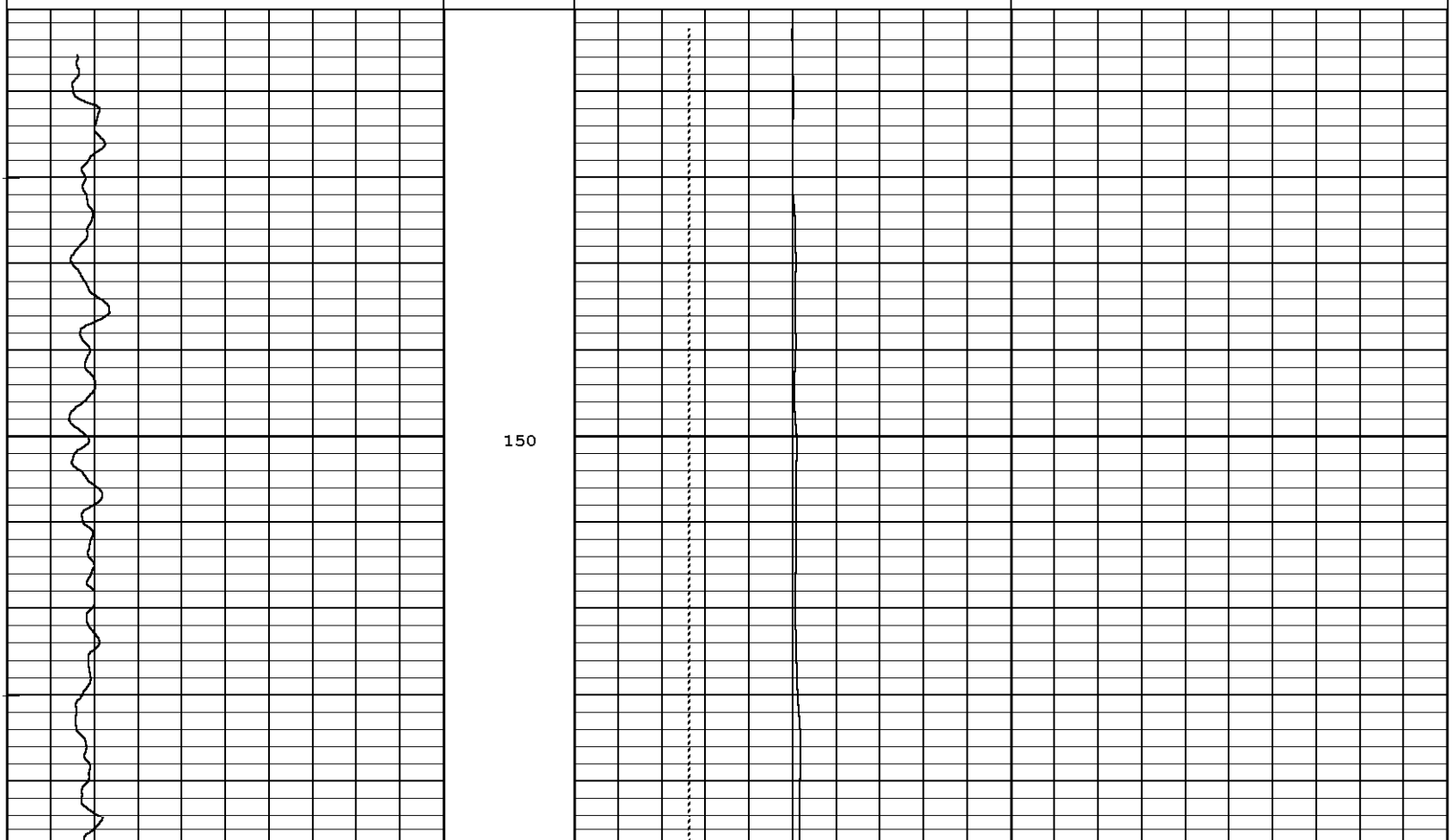
Gamma Ray

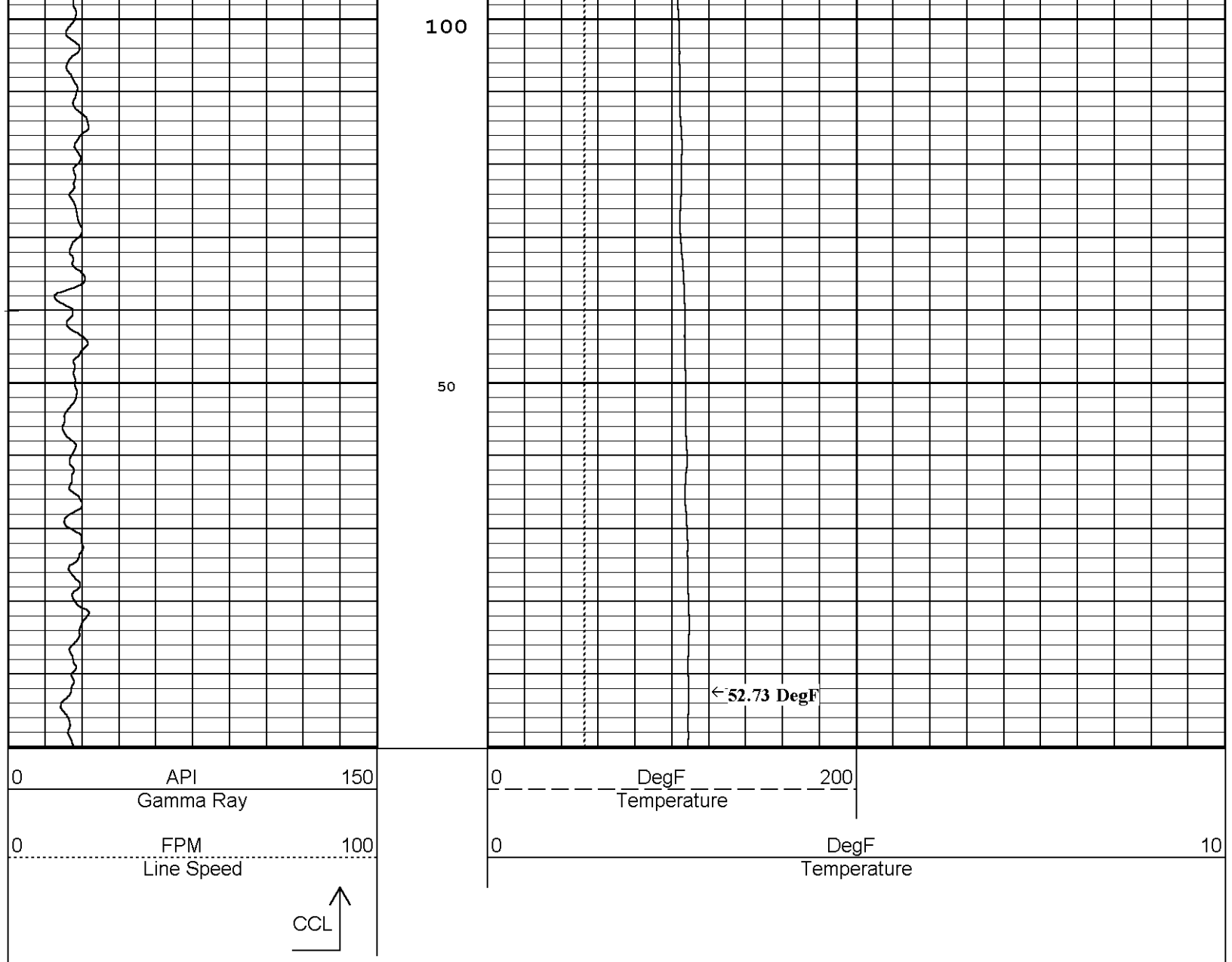
0 DegF 10

Temperature

0 DegF 200

Temperature





RUN: THERMISTER 600
DIR.: DOWN
DATE: 07/25/16
TIME: 13:06:33

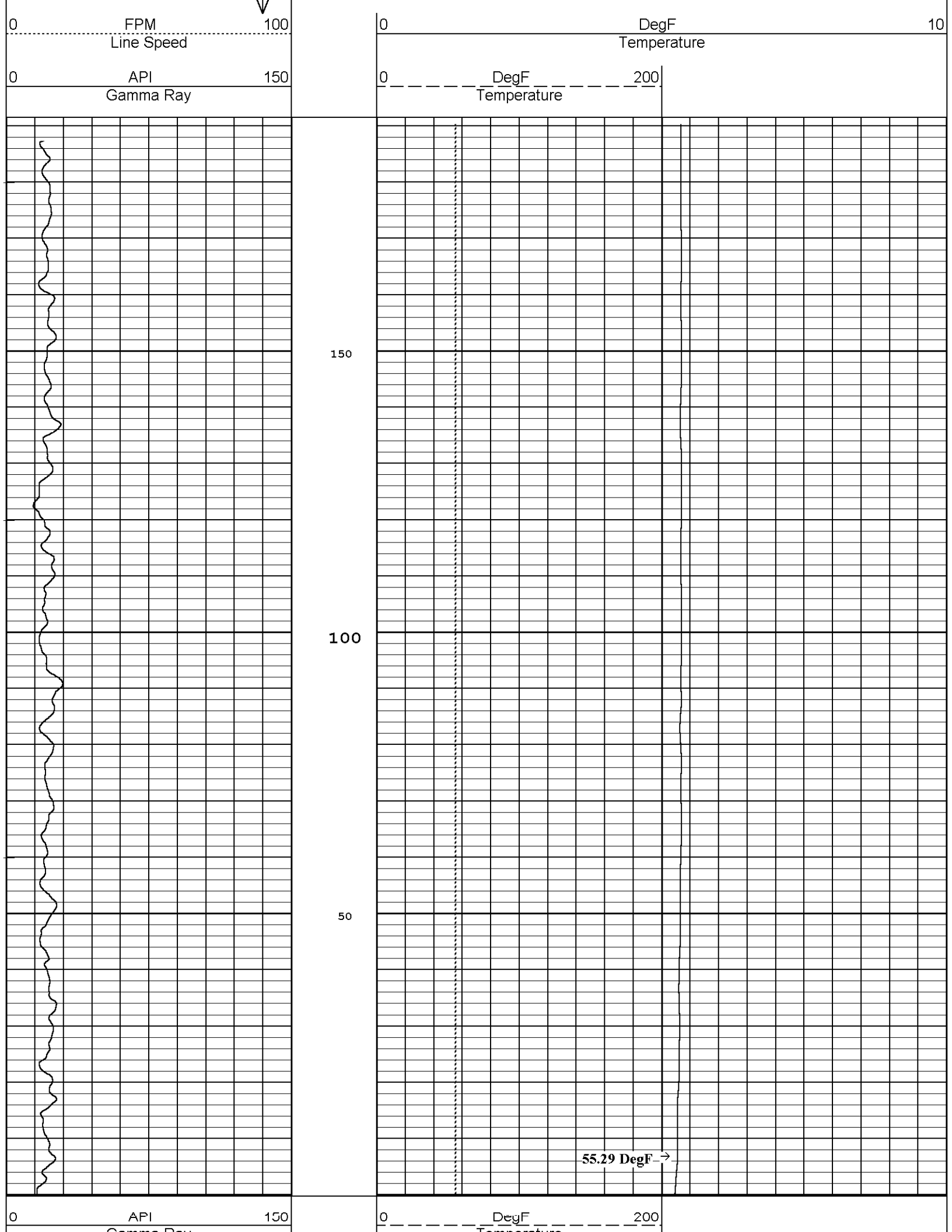
THERMISTER 600

START: 0.50ft
STOP: 195.00ft
RES.: 0.5 ft
SCALE: 5"/100'

RUN: THERMISTER 1100
DIR.: DOWN
DATE: 07/25/16
TIME: 13:00:16

THERMISTER 1100

START: 0.50ft
STOP: 188.00ft
RES.: 0.5 ft
SCALE: 5"/100'


0
FPM
100
Line Speed
0
API
150
Gamma Ray
0
DegF
10
Temperature
0
DegF
200
Temperature
150
100
50
55.29 DegF
0
API
150
Gamma Ray
0
DegF
200
Temperature

Gamma Ray

Temperature

0 FPM 100

Line Speed

0 DegF 10

Temperature

CCL

Time Mark [60.0 s]

RUN: THERMISTER 1100
DIR.: DOWN
DATE: 07/25/16
TIME: 13:00:16

THERMISTER 1100

START: 0.50ft
STOP: 188.00ft
RES.: 0.5 ft
SCALE: 5"/100'

RUN: THERMISTER 1600
DIR.: DOWN
DATE: 07/25/16
TIME: 12:56:04

THERMISTER 1600

START: 0.50ft
STOP: 183.50ft
RES.: 0.5 ft
SCALE: 5"/100'

Time Mark [60.0 s]

CCL

0 FPM 100

Line Speed

0 DegF 10

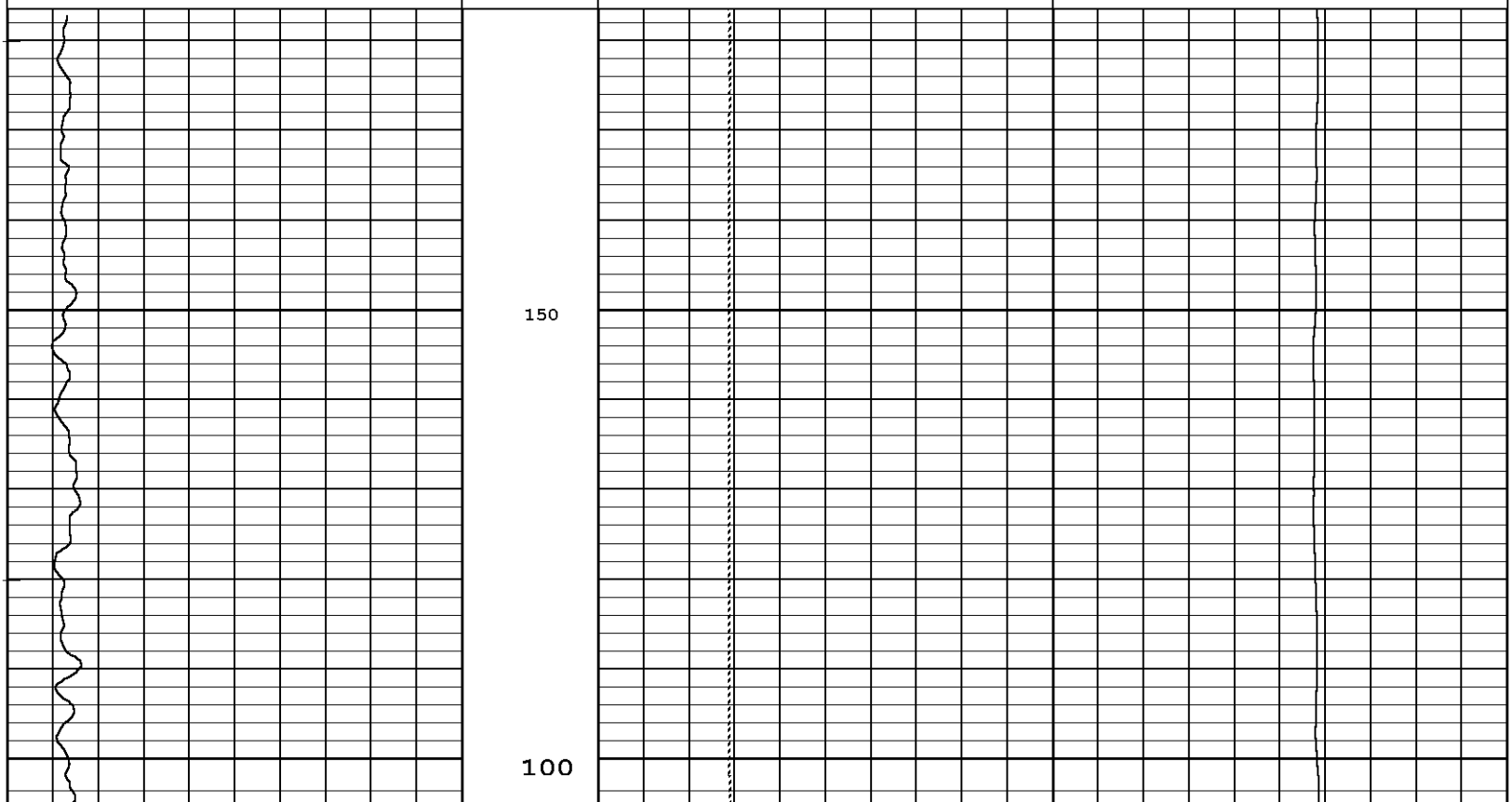
Temperature

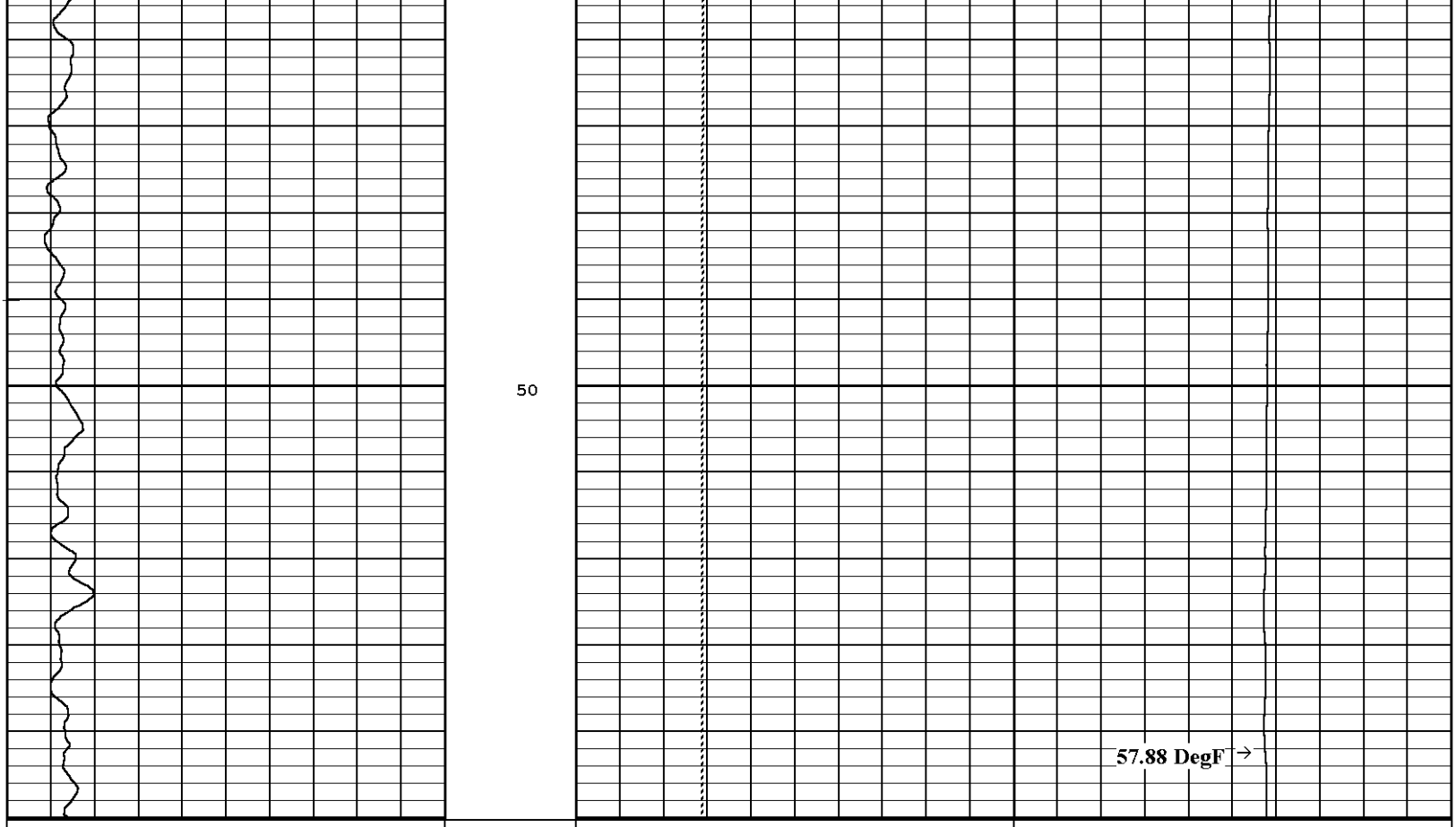
0 API 150

Gamma Ray

0 DegF 200

Temperature





Time Mark [60.0 s]

RUN: THERMISTER 1600
DIR.: DOWN
DATE: 07/25/16
TIME: 12:56:04

THERMISTER 1600

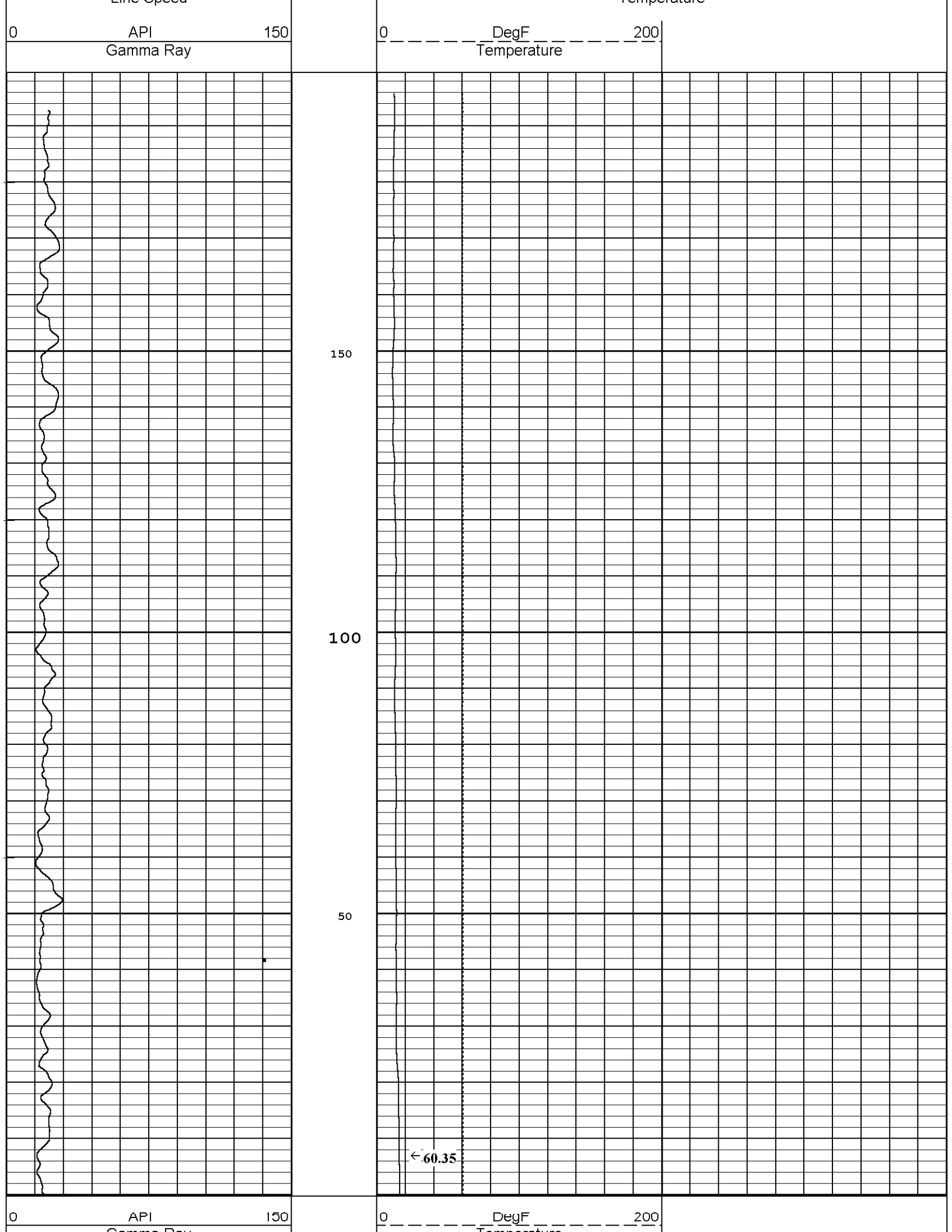
START: 0.50ft
STOP: 183.50ft
RES.: 0.5 ft
SCALE: 5"/100'

RUN: THERMISTER 2100
DIR.: DOWN
DATE: 07/25/16
TIME: 12:48:55

THERMISTER 2100

START: 0.50ft
STOP: 193.50ft
RES.: 0.5 ft
SCALE: 5"/100'

Time Mark [60.0 s]


Line Speed
0
API
150
Gamma Ray
Temperature
0
DegF
200
Temperature
150
100
50
60.35
0
API
150
0
DegF
200

Gamma Ray

Temperature

0 FPM 100

Line Speed

0 DegF 10

Temperature

CCL

Time Mark [60.0 s]

RUN: THERMISTER 2100
DIR.: DOWN
DATE: 07/25/16
TIME: 12:48:55

THERMISTER 2100

START: 0.50ft
STOP: 193.50ft
RES.: 0.5 ft
SCALE: 5"/100'

RUN: THERMISTER 2600
DIR.: DOWN
DATE: 07/25/16
TIME: 12:42:35

THERMISTER 2600

START: 0.50ft
STOP: 169.50ft
RES.: 0.5 ft
SCALE: 5"/100'

Time Mark [60.0 s]

CCL

0 FPM 100

Line Speed

0 DegF 10

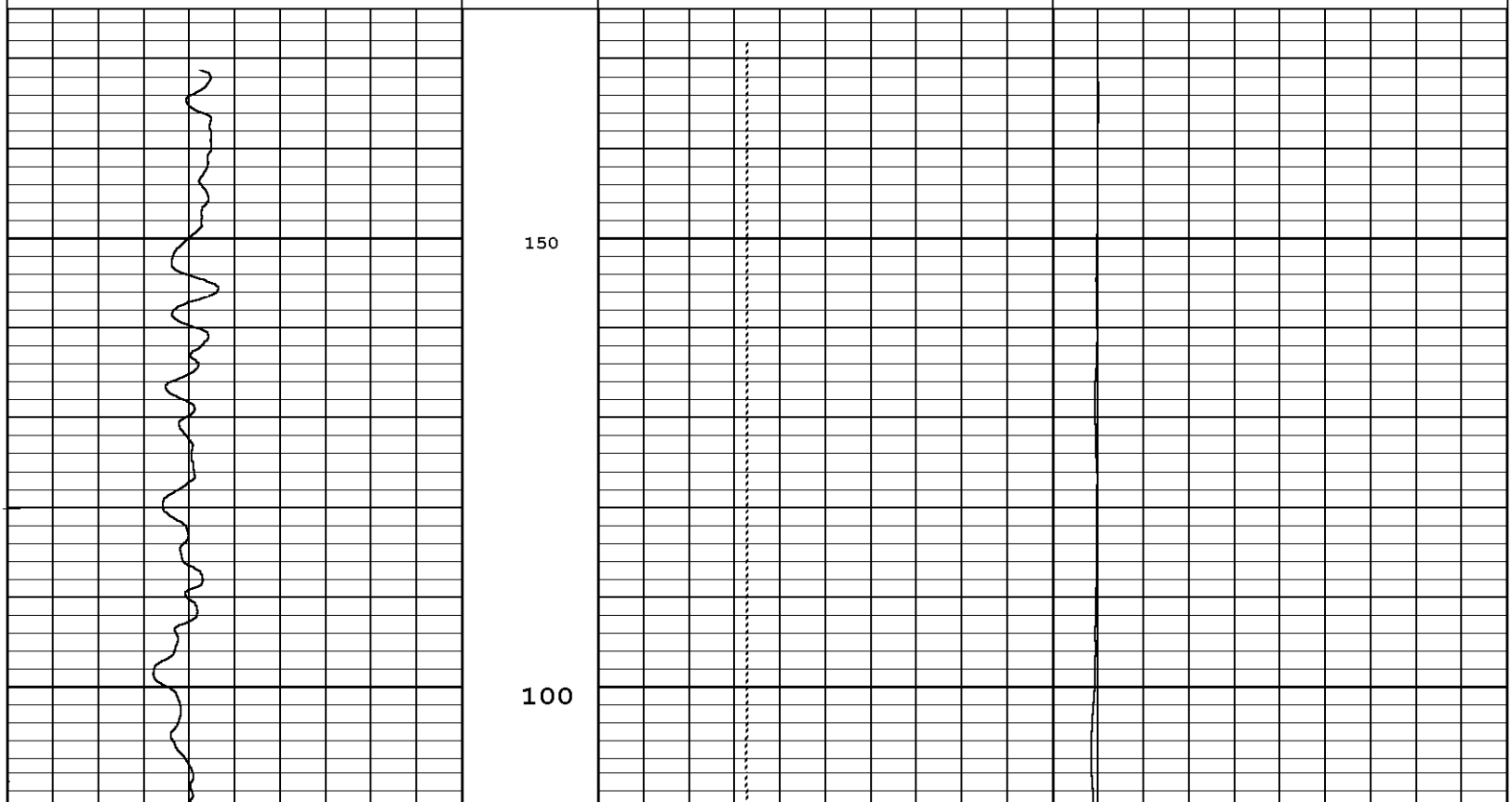
Temperature

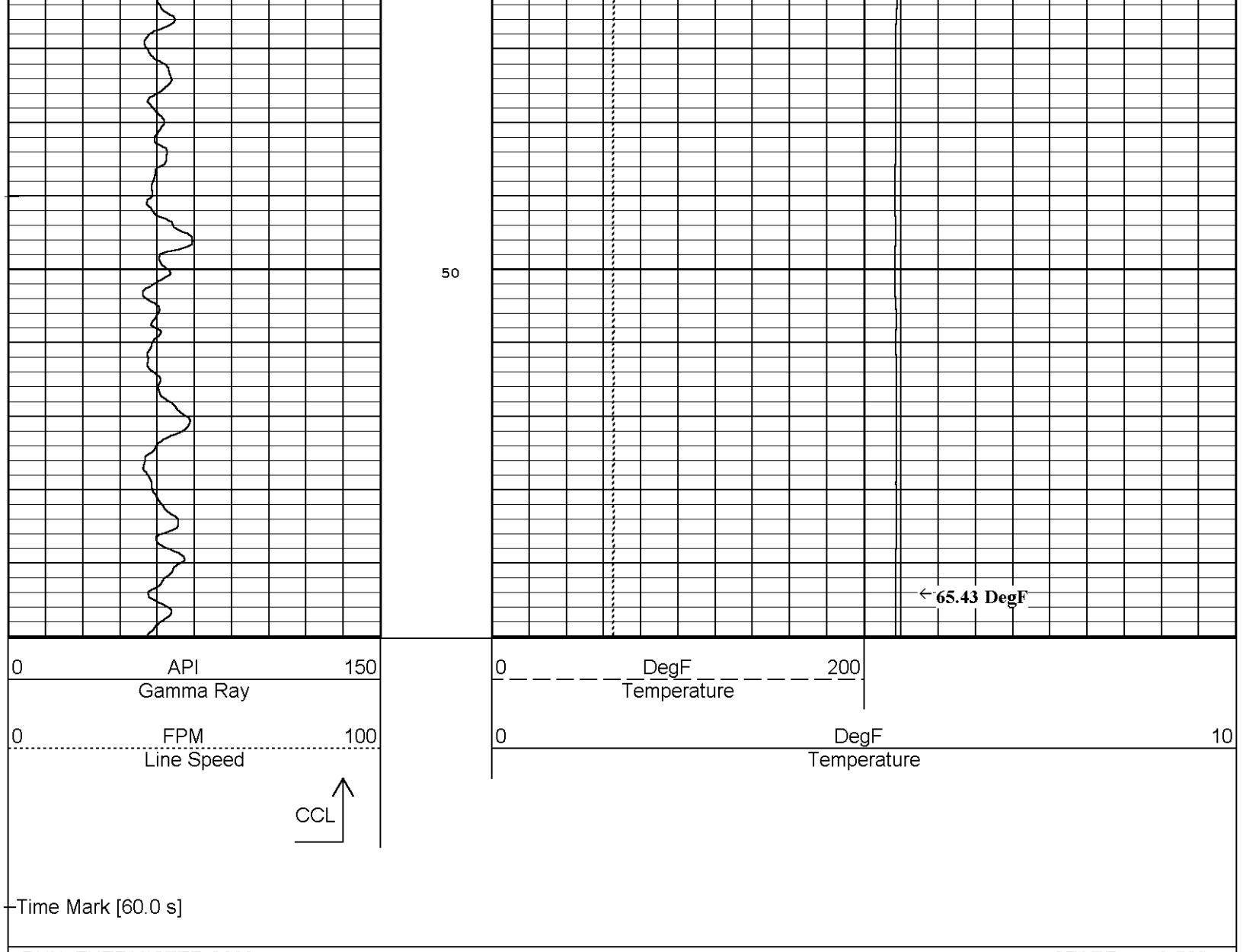
0 API 150

Gamma Ray

0 DegF 200

Temperature





RUN: THERMISTER 2600
DIR.: DOWN
DATE: 07/25/16
TIME: 12:42:35

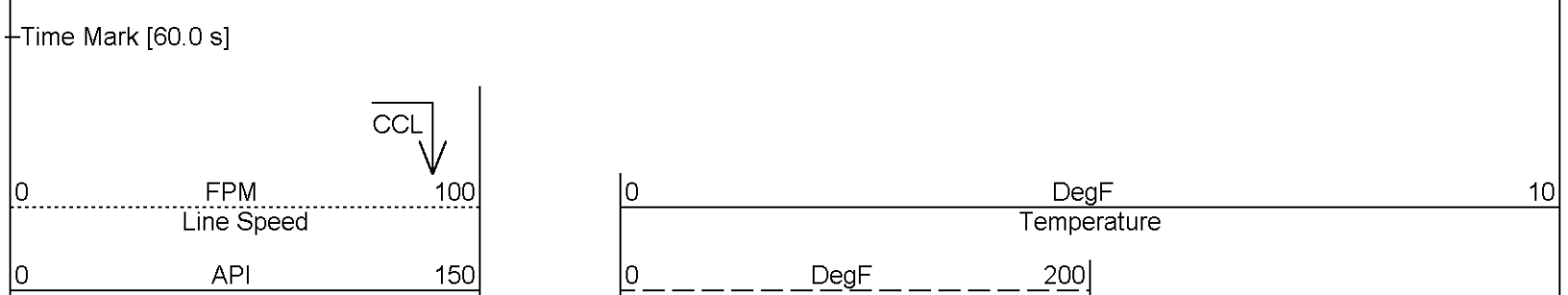
THERMISTER 2600

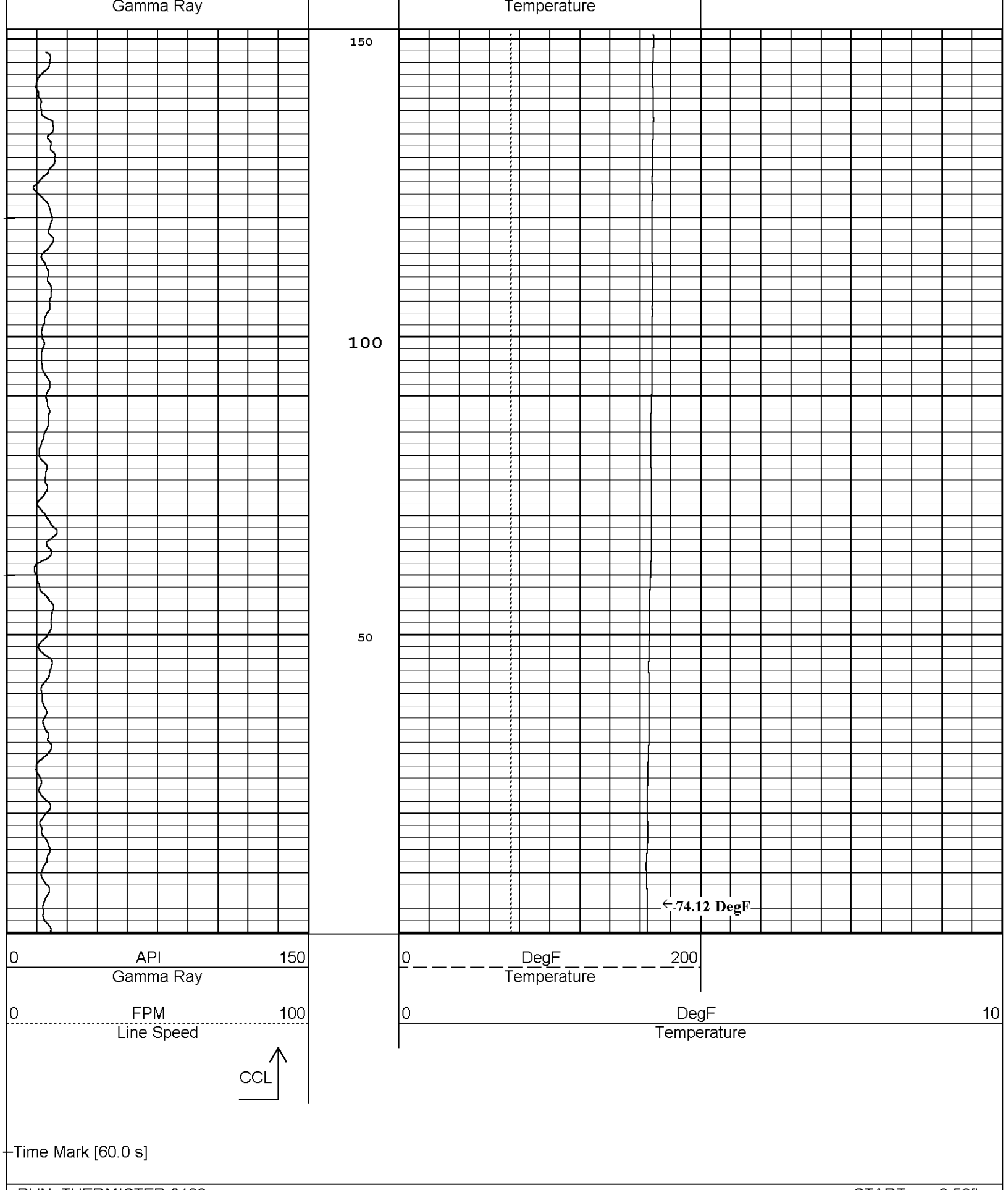
START: 0.50ft
STOP: 169.50ft
RES.: 0.5 ft
SCALE: 5"/100'

RUN: THERMISTER 3100
DIR.: DOWN
DATE: 07/25/16
TIME: 12:36:59

THERMISTER 3100

START: 0.50ft
STOP: 148.50ft
RES.: 0.5 ft
SCALE: 5"/100'





RUN: THERMISTER 3100
DIR.: DOWN
DATE: 07/25/16
TIME: 12:36:59

THERMISTER 3100

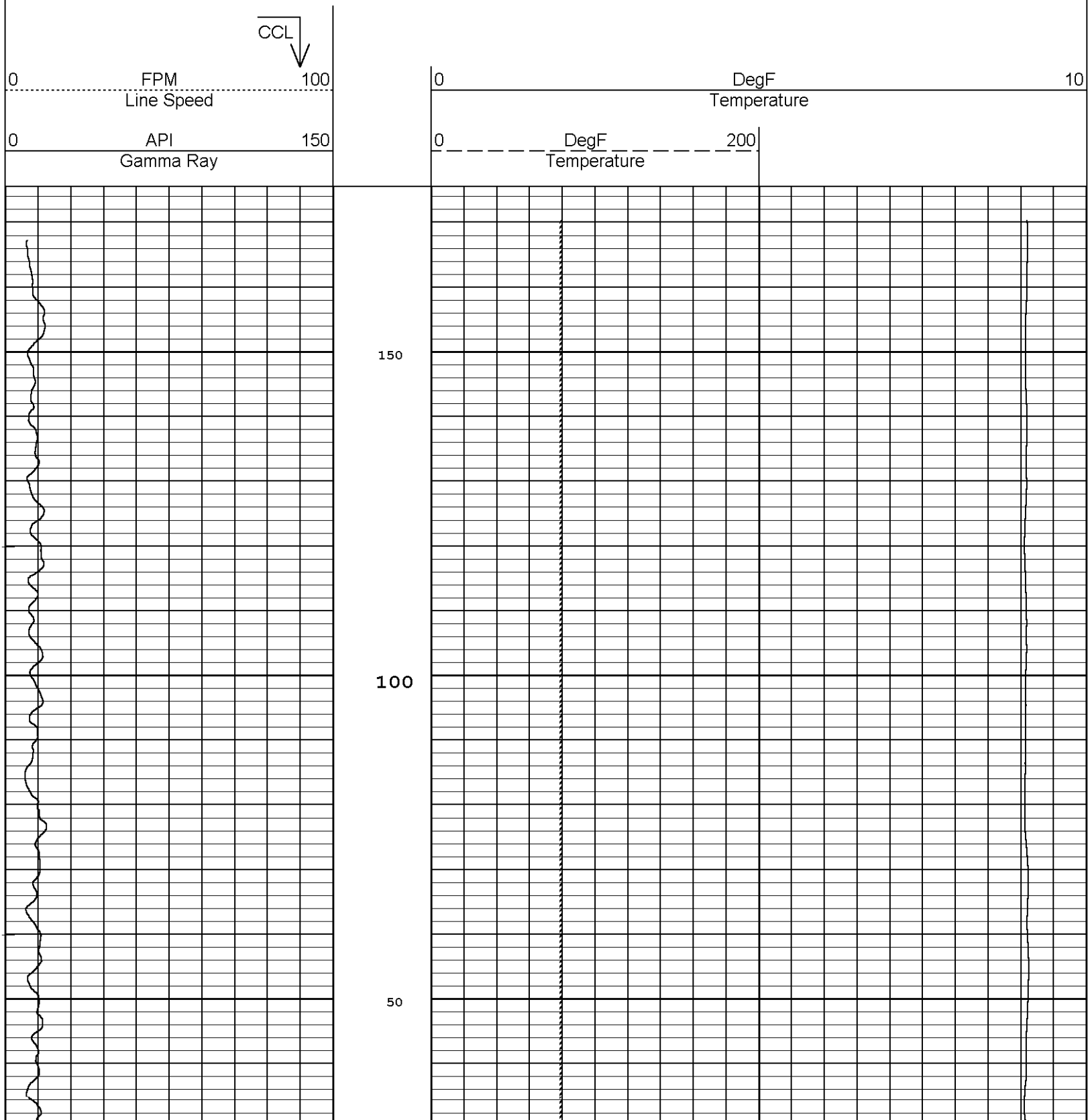
START: 0.50ft
STOP: 148.50ft
RES.: 0.5 ft
SCALE: 5"/100'

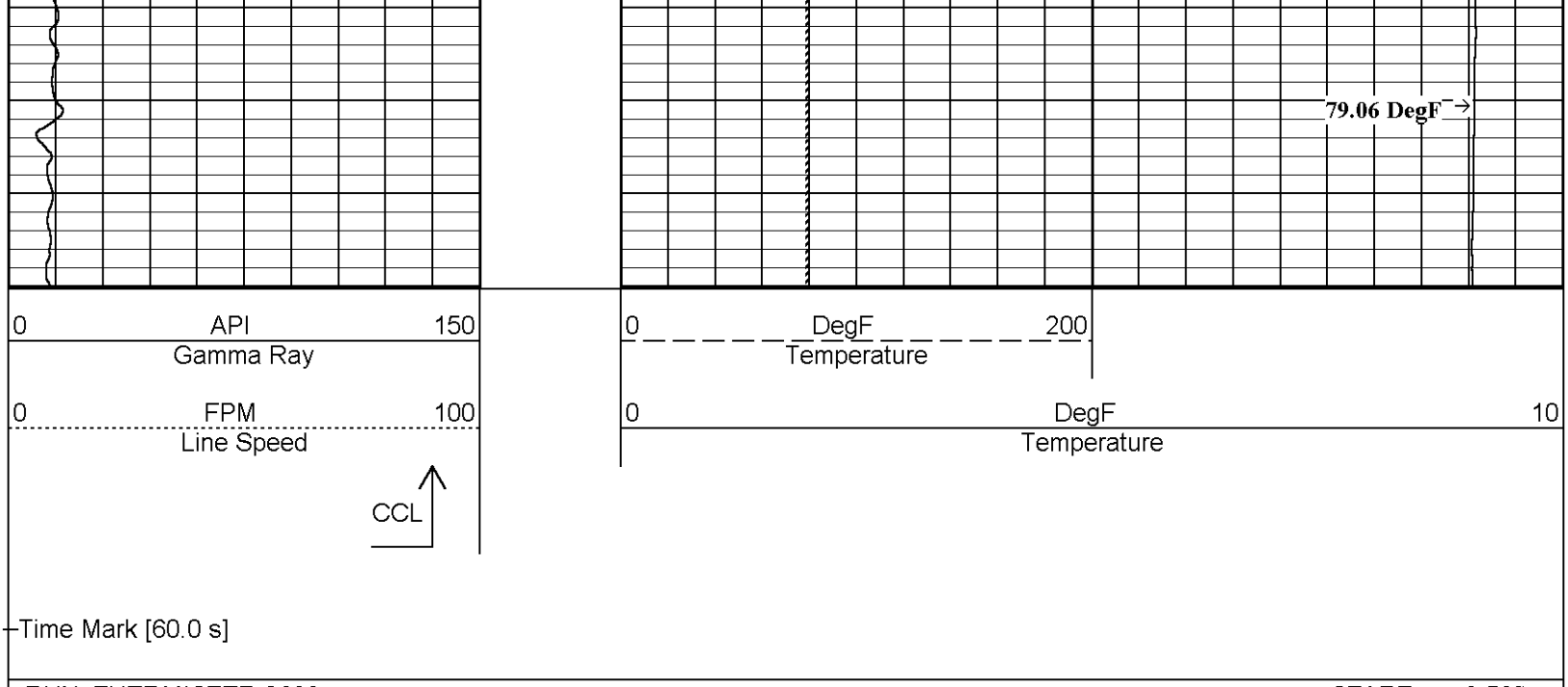
RUN: THERMISTER 3600
DIR.: DOWN
DATE: 07/25/16
TIME: 12:30:09

THERMISTER 3600

START: 0.50ft
STOP: 168.00ft
RES.: 0.5 ft
SCALE: 5"/100'

Time Mark [60.0 s]





RUN: THERMISTER 3600
DIR.: DOWN
DATE: 07/25/16
TIME: 12:30:09

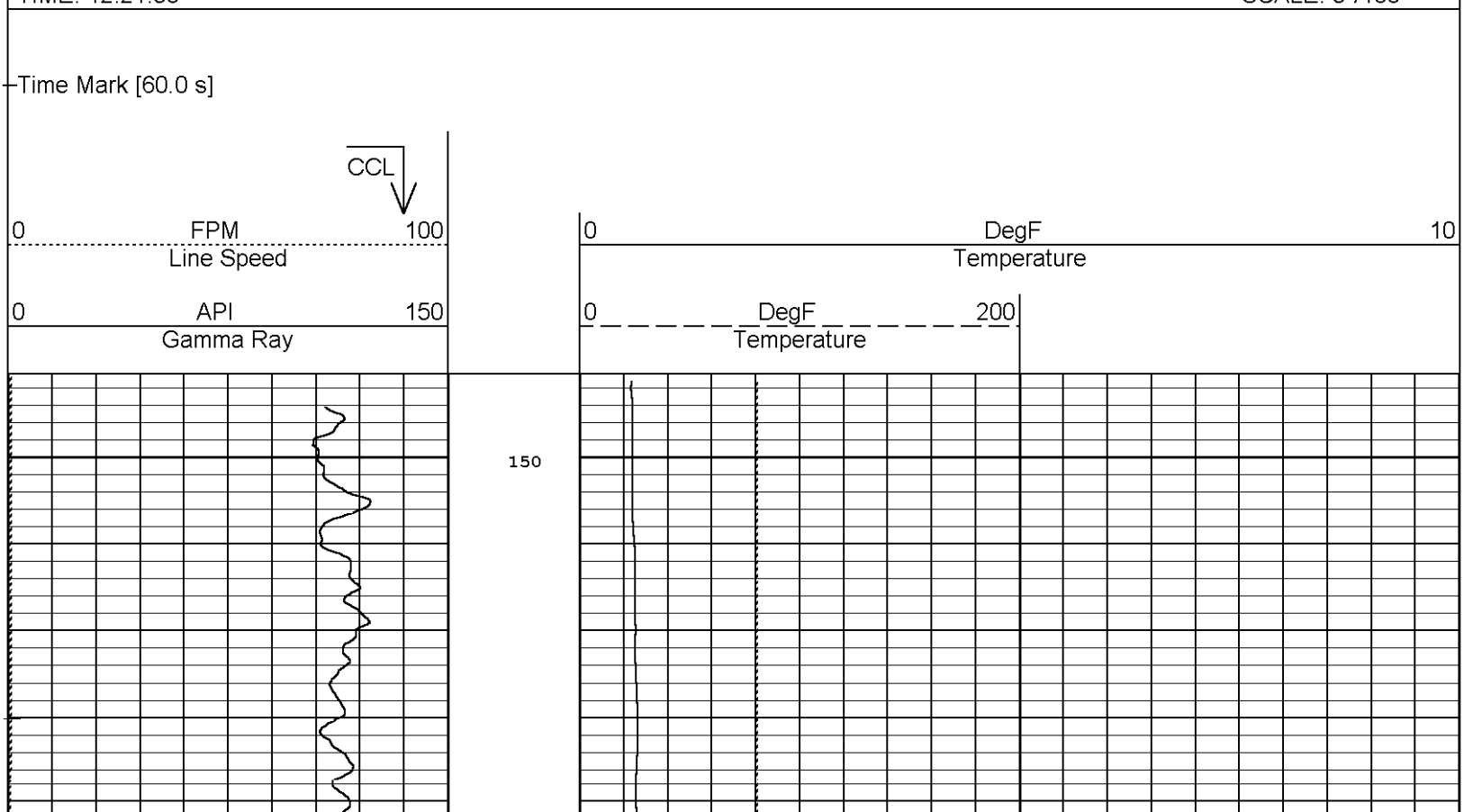
THERMISTER 3600

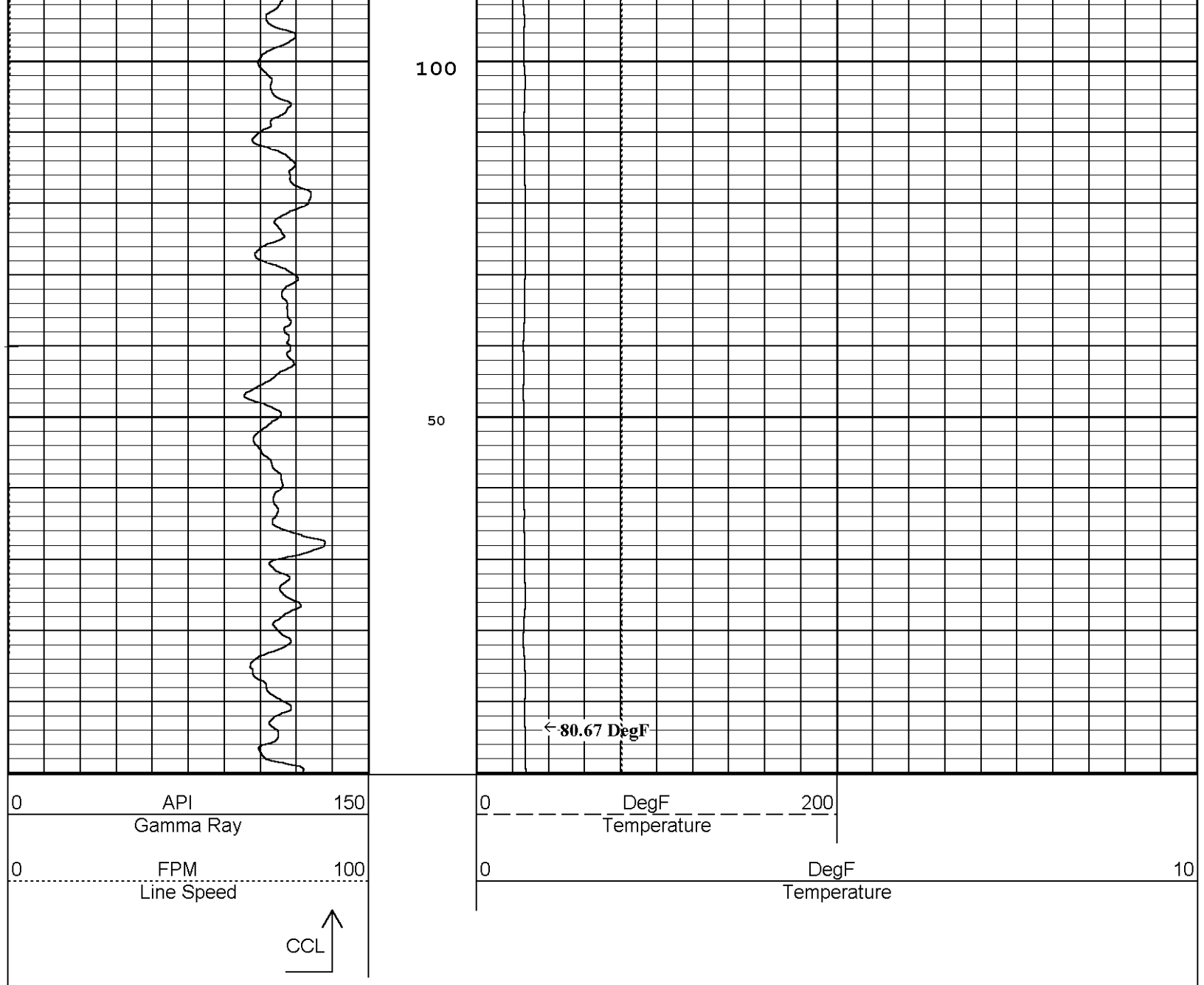
START: 0.50ft
STOP: 168.00ft
RES.: 0.5 ft
SCALE: 5"/100'

RUN: THERMISTER 4100
DIR.: DOWN
DATE: 07/25/16
TIME: 12:21:50

THERMISTER 4100

START: 0.50ft
STOP: 156.50ft
RES.: 0.5 ft
SCALE: 5"/100'





RUN: THERMISTER 4100
DIR.: DOWN
DATE: 07/25/16
TIME: 12:21:50

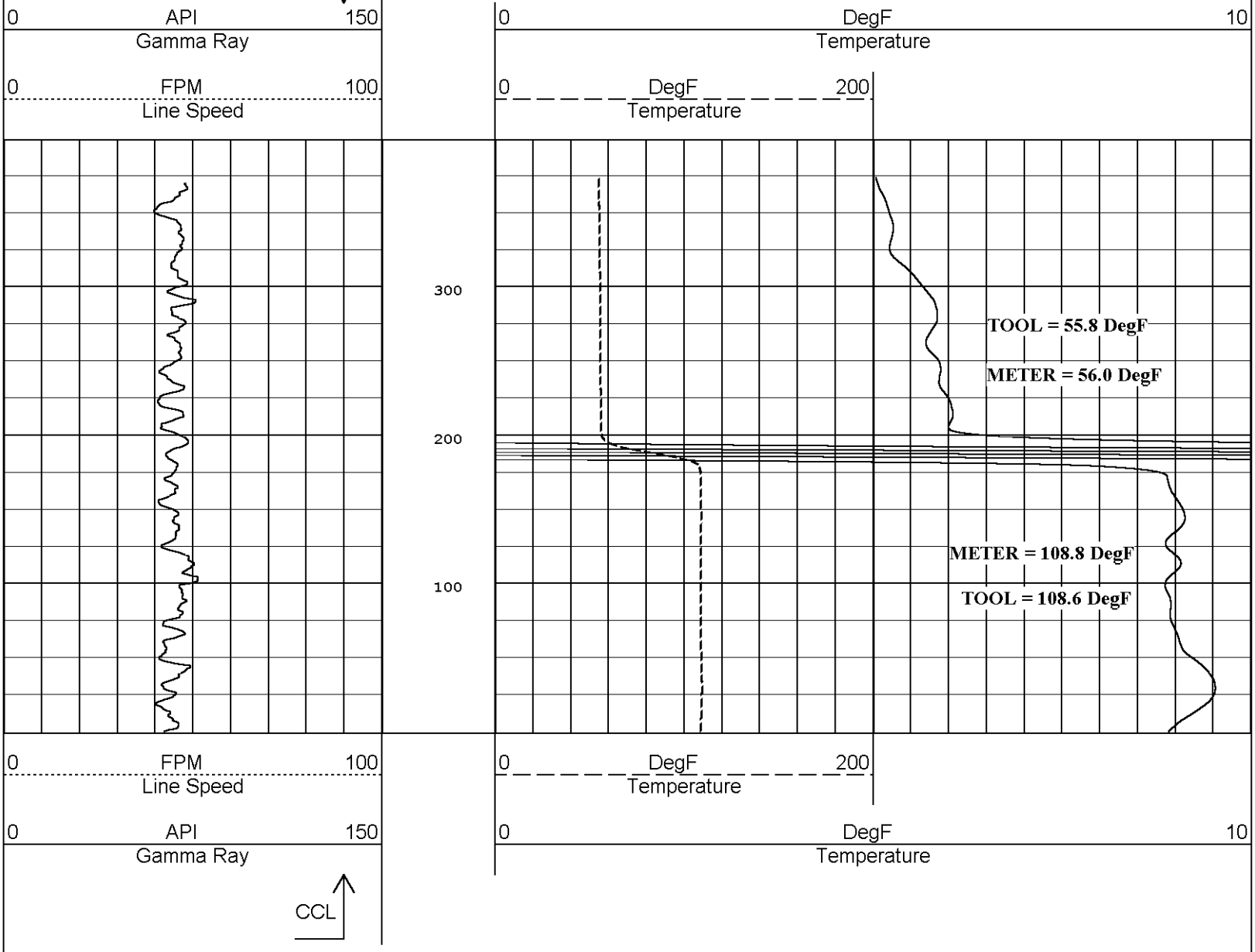
THERMISTER 4100

START: 0.50ft
STOP: 156.50ft
RES.: 0.5 ft
SCALE: 5"/100'

RUN: BUCKET CALIBRATION
DIR.: DOWN
DATE: 07/25/16
TIME: 08:56:50

BUCKET CALIBRATION

START: 0.50ft
STOP: 370.00ft
RES.: 0.5 ft
SCALE: 1"/100'



RUN: BUCKET CALIBRATION
DIR.: DOWN
DATE: 07/25/16
TIME: 08:56:50

BUCKET CALIBRATION

START: 0.50ft
STOP: 370.00ft
RES.: 0.5 ft
SCALE: 1"/100'