| | |
|---|---|
| Company | MIDWESTERN EXPLORATION COMPANY |
| Well | MILLS-GOOCH #2-7 |
| Field | GOOCH |
| County | STEVENS |
| State | KANSAS |

RECON

BHC SONIC
GAMMA RAY
X-Y CALIPER

| SEC | TWP | RGE | |
|---|---|---|---|
| 07 | 35S | 35W | |

Location. 660' FSL & 1650' FWL — W2 SE SW
SURF. SAME — API#. 015-189-22835

Permanent Datum . Ground Level Elev 3017
Log Measured From . Kelly Bushing
Drilling Measured From Kelly Bushing

OTHER SERVICES:
DIL LDT
CNL MEL

ELEVATIONS K.B. 3027
G.L. 3017
D.F. 3026

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Date | | 25-JUN-2014 | | | | | |
| Run No. | | ONE | | | | | |
| TD Driller | | 6710 | ft. | | | ft. | |
| TD RECON | | 6713 | ft. | | | ft. | |
| Bot Logged Interval | | 6712 | ft. | | | ft. | |
| Top Logged Interval | | 3400 | ft. | | | ft. | |
| Casing Depth Driller | | 8 5/8 | in. | @ 1685 | | in. | @ |
| Casing Depth RECON | | 8 5/8 | in. | @ 1644/1714 | | in. | @ |
| Bit Size | | 7 7/8 | in. | | | in. | |
| Drilling Fluid Type | | WBM | | | | | |
| Density | Viscosity | 9.15 ppg | | 57 sec/qt | | | |
| Fluid Loss | PH | 7.6 cm/30min | | 10.0 strip | | | |
| Source Of Sample | | Flowline | | | | | |
| RM @ Measured Temp | | 1.976 | Ohmm | @ 75 | | Ohmm | @ |
| RMF @ Measured Temp | | 1.482 | Ohmm | @ 75 | | Ohmm | @ |
| RMC @ Measured Temp | | 2.470 | Ohmm | @ 75 | | Ohmm | @ |
| | | | | | | | |
| RM @ MRT | | 1.093 | Ohmm | @ 141 | | Ohmm | @ |
| Max Recorded Temp | | 141 | DegF | | | DegF | |
| Time Drilling Stopped | | 25-JUN-2014 | | 03:30 | | | |
| Time Circulation Stopped | | 25-JUN-2014 | | 10:20 | | | |
| Time Logger On Bottom | | 25-JUN-2014 | | 15:31 | | | |
| Unit Num | Location | S409 | | OKLAHOMA CITY, OK | | | |
| Recorded By | | H. GARCIA | | | | | |
| Witnessed By | | MR. B. DAUGHERTY | | | MR. T. WILLIAMS | | |

All interpretations are based on inferences from electrical or other readings, and therefore, RECON cannot and will not guarantee the accuracy of any interpretations of log data. RECON shall not be liable for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from interpretations made by any of our officers, agents or employees, except in the case of provable Gross Negligence or willfull damage. Interpretations are also subject to the terms and conditions of our Price Schedule and General Service Agreement.

RIG INFORMATION

Drill Contr/Rig# VAL ENERGY DRLG. #2

GENERAL REMARKS SECTION

FIRST RUN IN THE HOLE
CNL AND LDT LOGGED IN A LIMESTONE MATRIX
TOP MARK - 791.2, BOTTOM MARK - 6599.9
CNL/LDT LOGGED MATRIX: 2.71 g/cc.

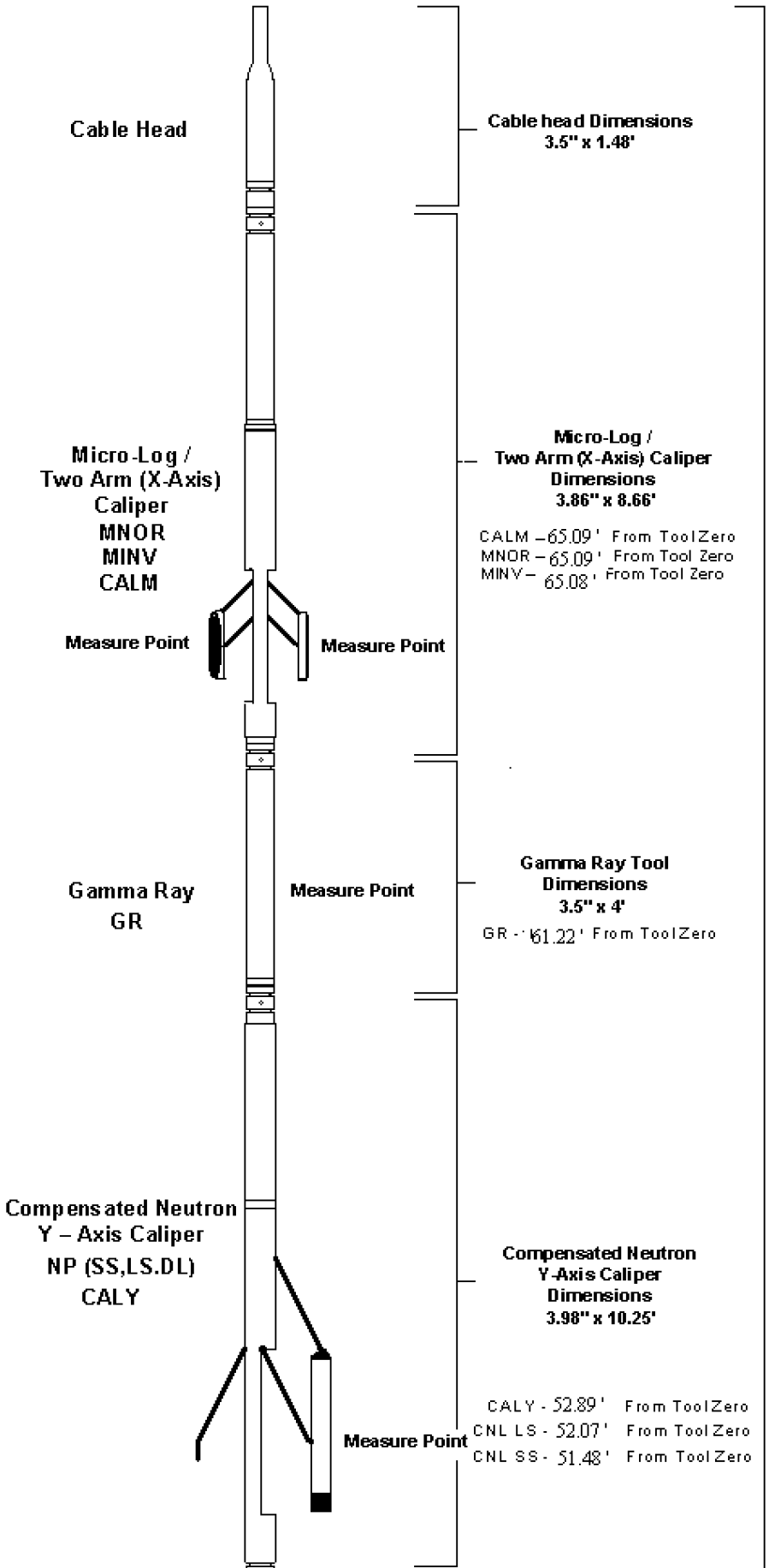
CHLORIDES: 1700 mg/l
LCM: 10 lb/bbl

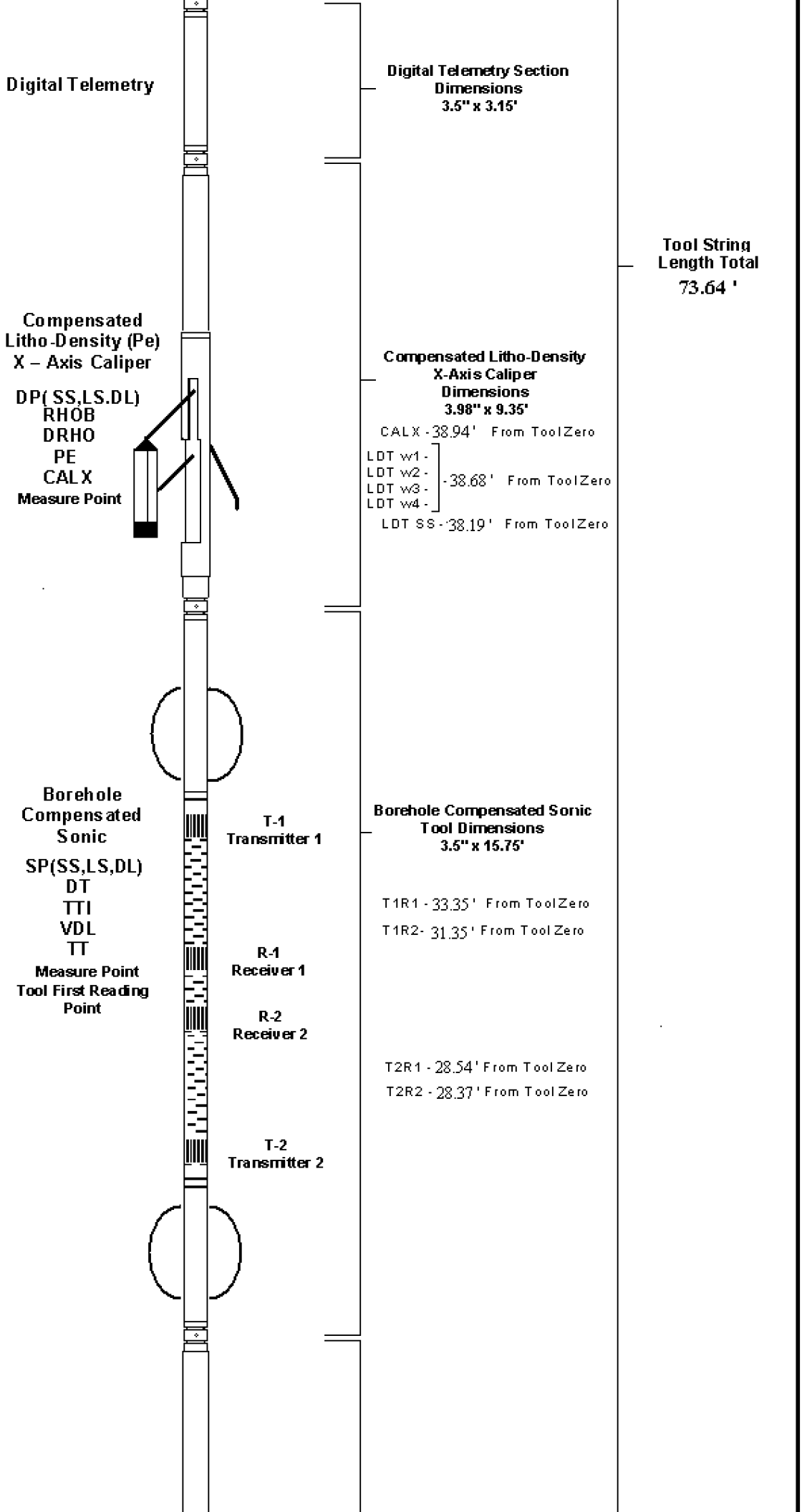
AHV CALCULATED ON 5.5" PROD. CASING

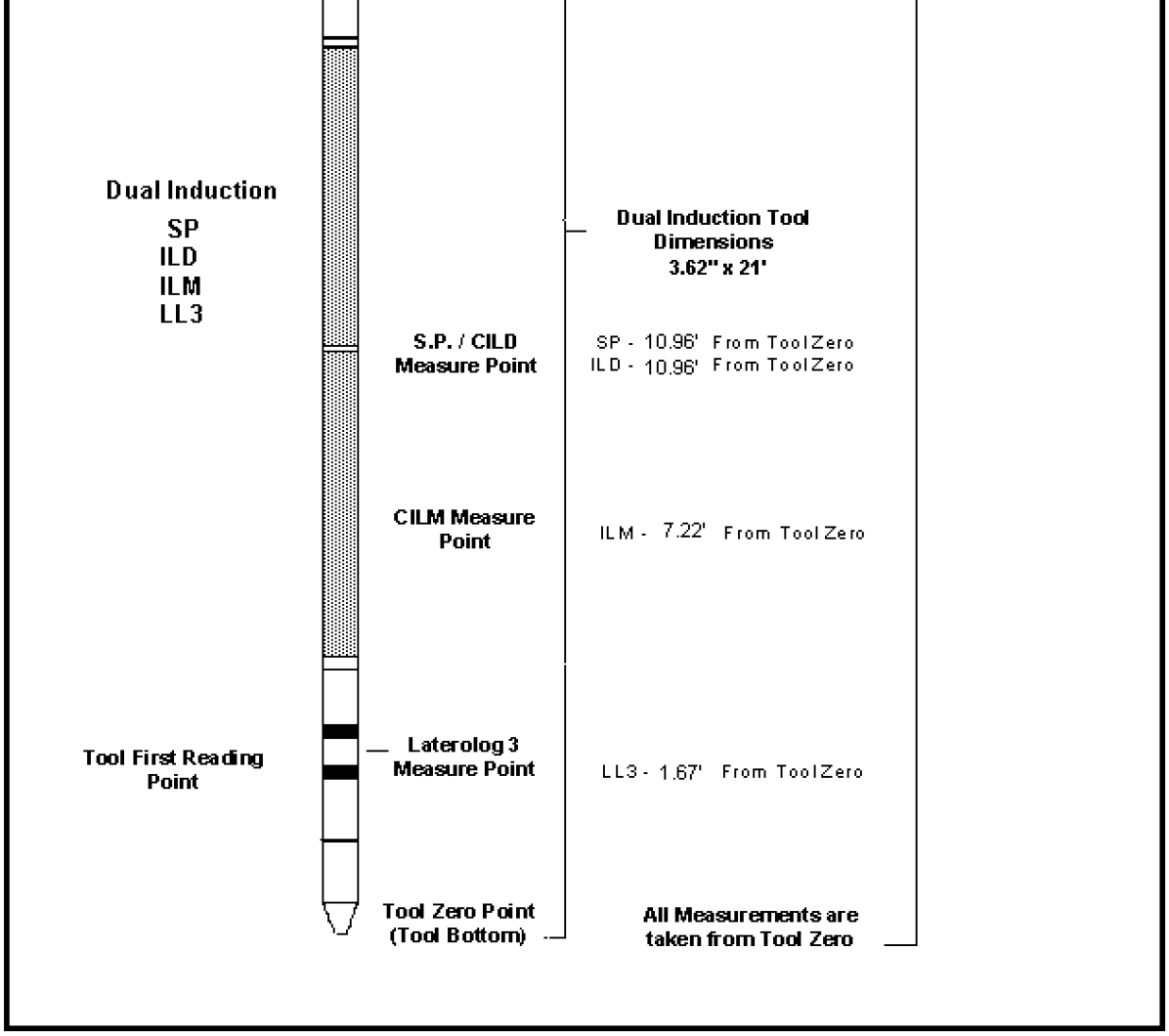
BOTTOM JOINT PARTED OFF OF SURFACE CASING STRING AND FELL 32'

THANK YOU FOR USING RECON PETROTECHNOLOGIES LTD. CREW: M. CALLENTINE, K. HELDERMON

# DUAL INDUCTION – SP / BHC SONIC / GAMMA RAY / LITHO-DENSITY / X CALIPER COMPENSATED NEUTRON / Y-CALIPER MICRO - LOG / M-CALIPER




Digital Telemetry
Digital Telemetry Section
Dimensions
3.5" x 3.15'
Tool String
Length Total
73.64 '
Compensated
Litho-Density (Pe)
X – Axis Caliper
DP( SS,LS.DL)
RHOB
DRHO
PE
CALX
Measure Point
Compensated Litho-Density
X-Axis Caliper
Dimensions
3.98" x 9.35'
CALX - 38.94 ' From ToolZero
LDT w1 -
LDT w2 -
LDT w3 -
LDT w4 -
- 38.68 ' From ToolZero
LDT SS - 38.19 ' From ToolZero
Borehole
Compensated
Sonic
SP(SS,LS,DL)
DT
TTI
VDL
TT
Measure Point
Tool First Reading
Point
T-1
Transmitter 1
R-1
Receiver 1
R-2
Receiver 2
T-2
Transmitter 2
Borehole Compensated Sonic
Tool Dimensions
3.5" x 15.75'
T1R1 - 33.35 ' From ToolZero
T1R2- 31.35 ' From ToolZero
T2R1 - 28.54 ' From ToolZero
T2R2 - 28.37 ' From ToolZero



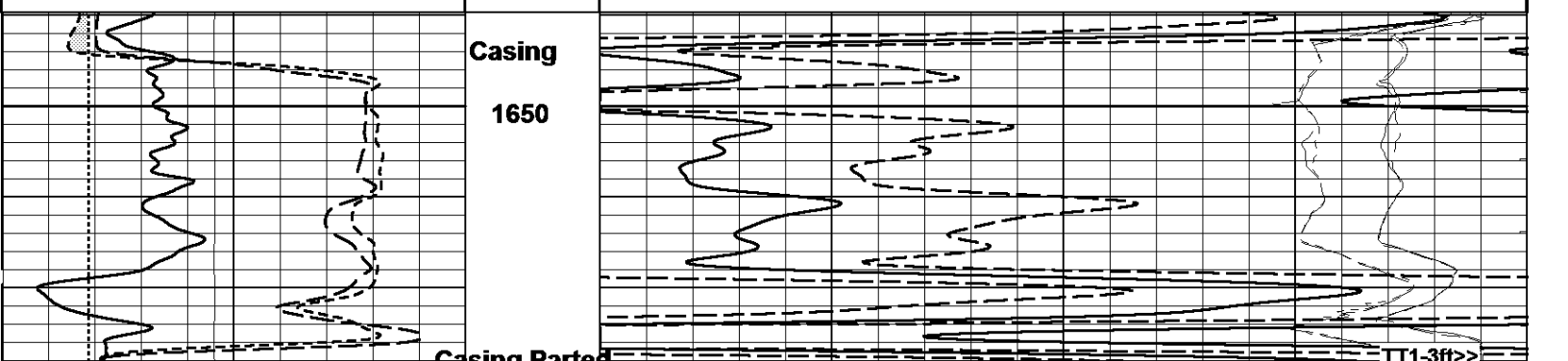

06/25/2014
18:36:46 => End Time

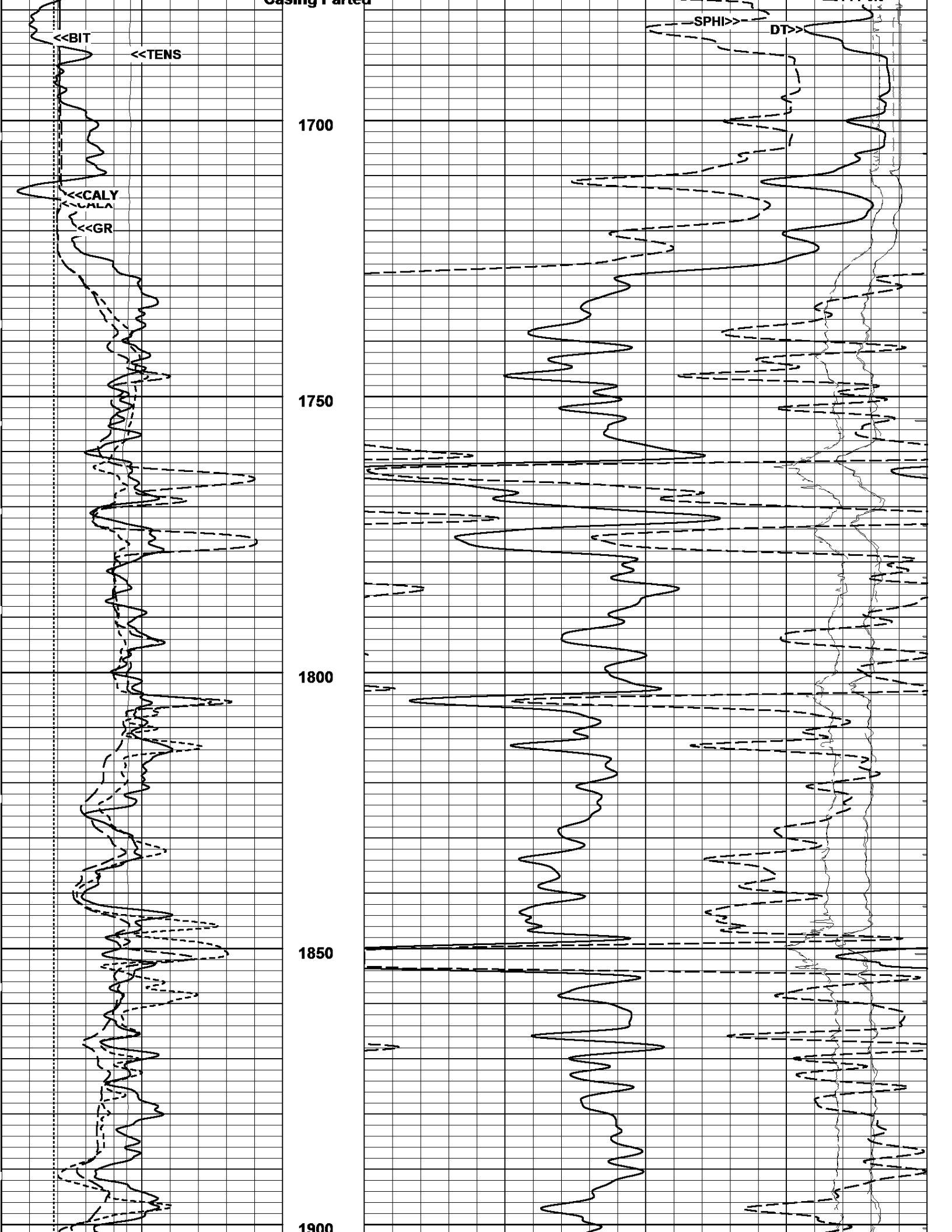
# MAIN PASS (5"/100Ft)

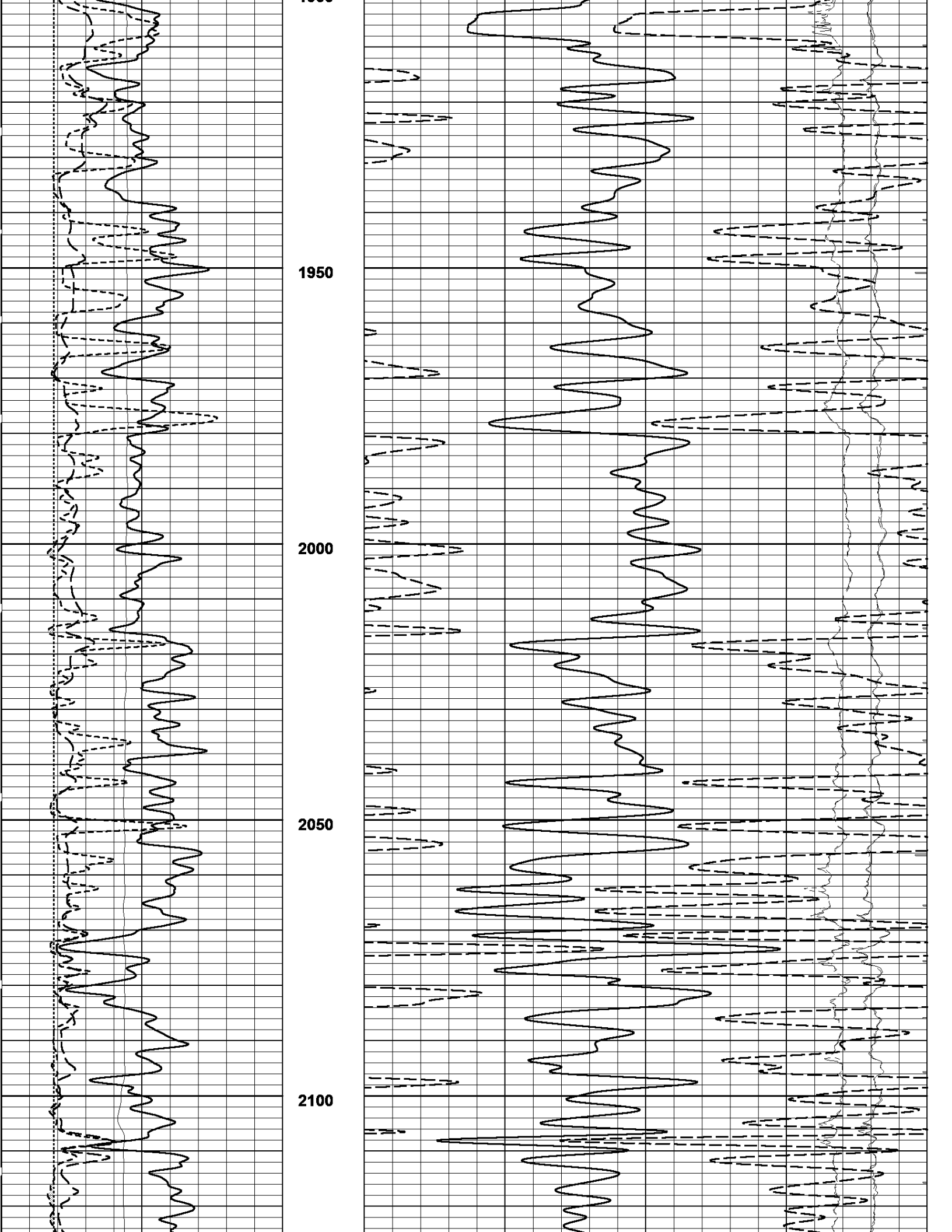
Log UP - (VER 11.19)
End Depth=> 1639.90 Feet

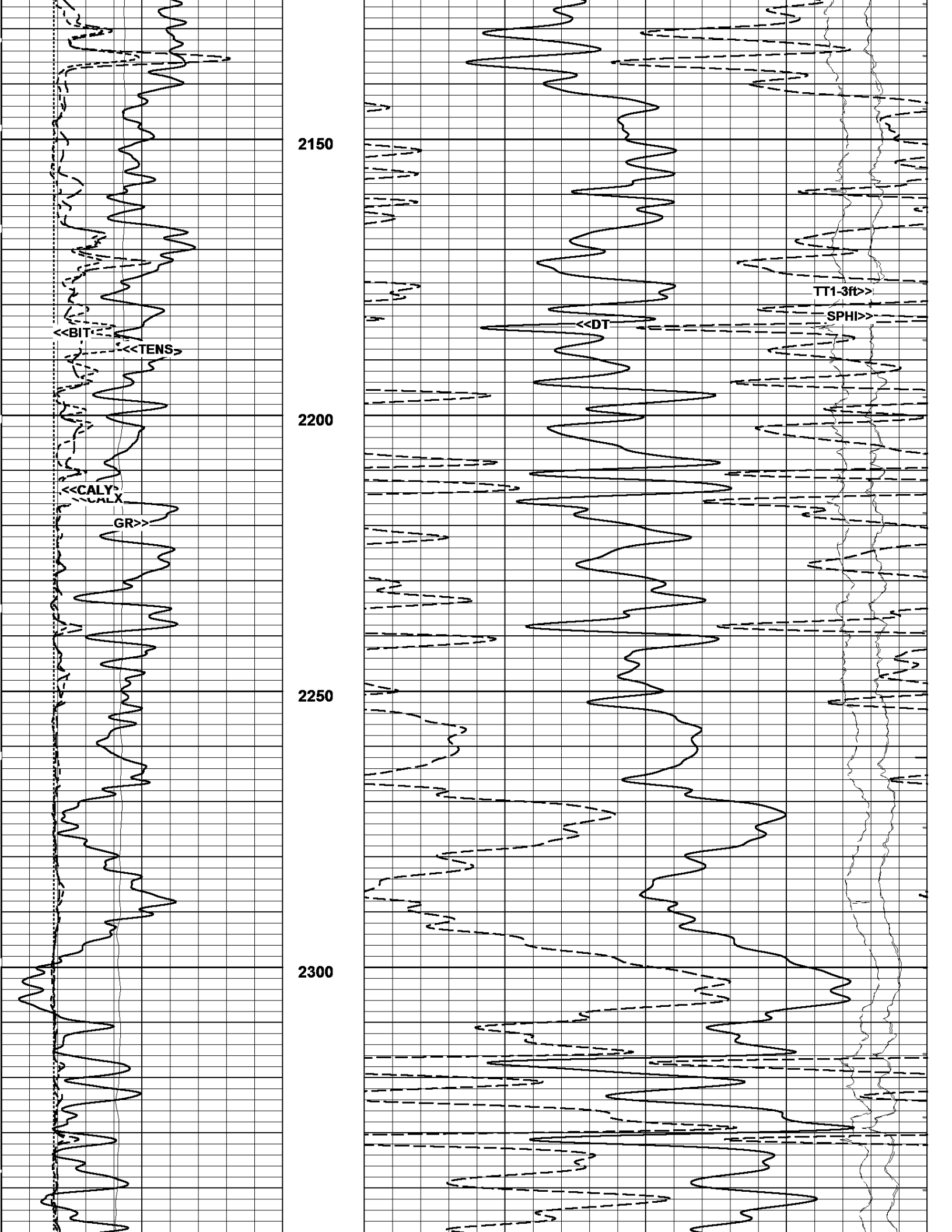
| | | |
|---|---|---|
| Bit Size (BIT) | Ref in | 6. 16. |
| Tension (TENS) | Lbs | 5000. 0. |
| Y-Caliper (CALY) | in | 6. 16. |
| X-Caliper (CALX) | in | 6. 16. |
| Gamma Ray (GR) | API | 0. 150. |

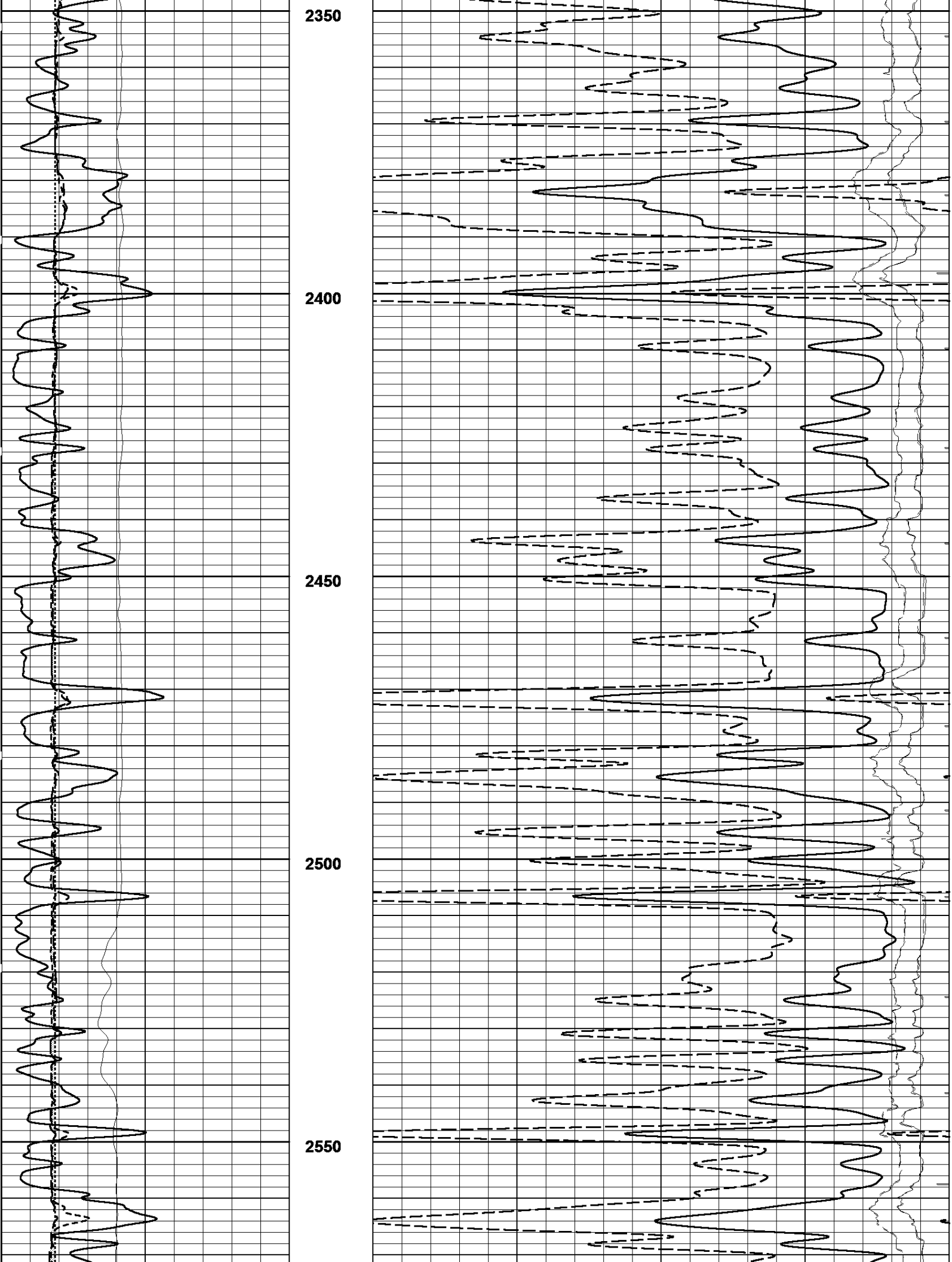
| | | |
|---|---|---|
| TT (TT4-5ft) | usecs | 1500. 0. |
| TT (TT3-5ft) | usecs | 1500. 0. |
| TT (TT2-3ft) | usecs | 1500. 0. |
| TT (TT1-3ft) | usecs | 1500. 0. |
| Sonic-Porosity (SPHI) | Percent | 30. -10. |
| Delta T (DT) | usecs/ft | 140. 40. |

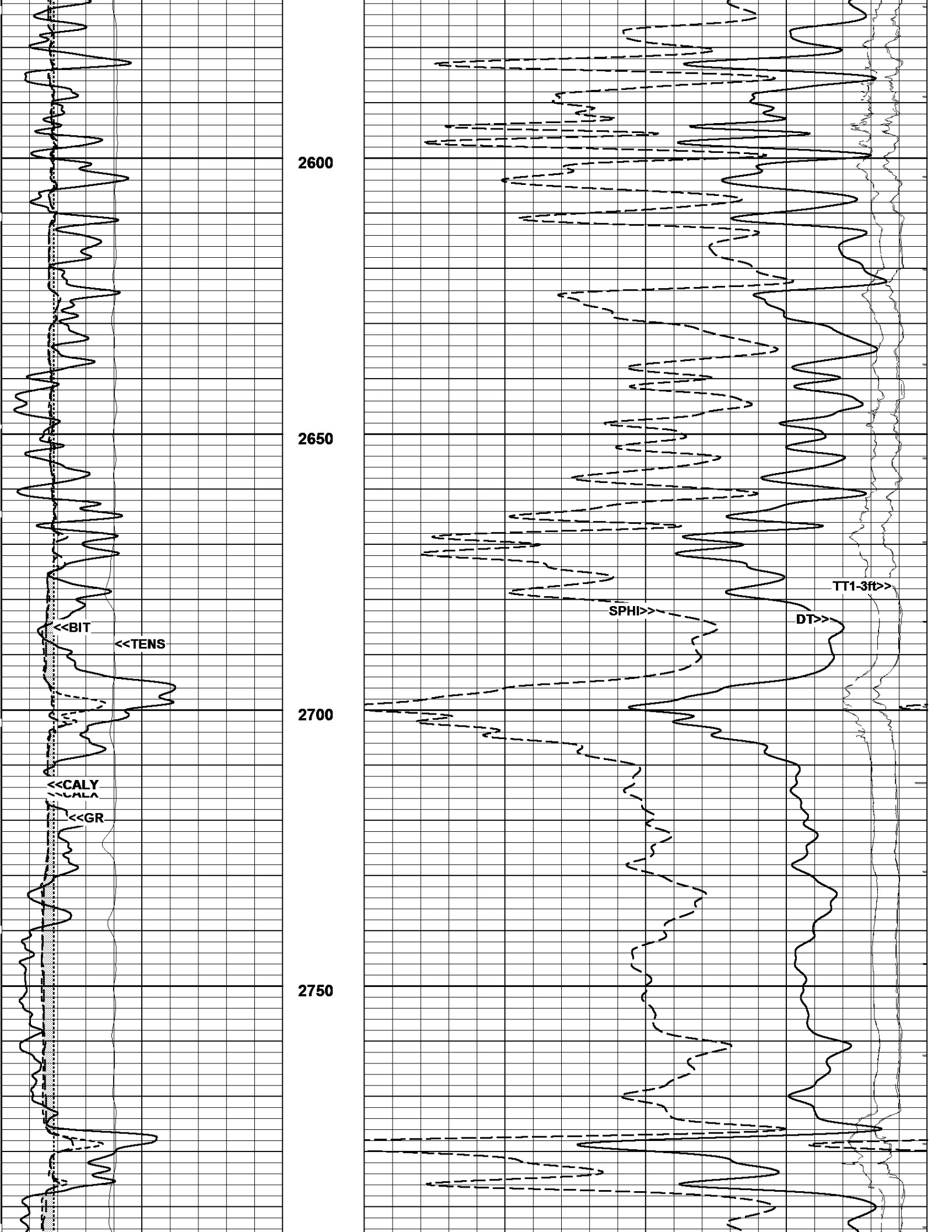


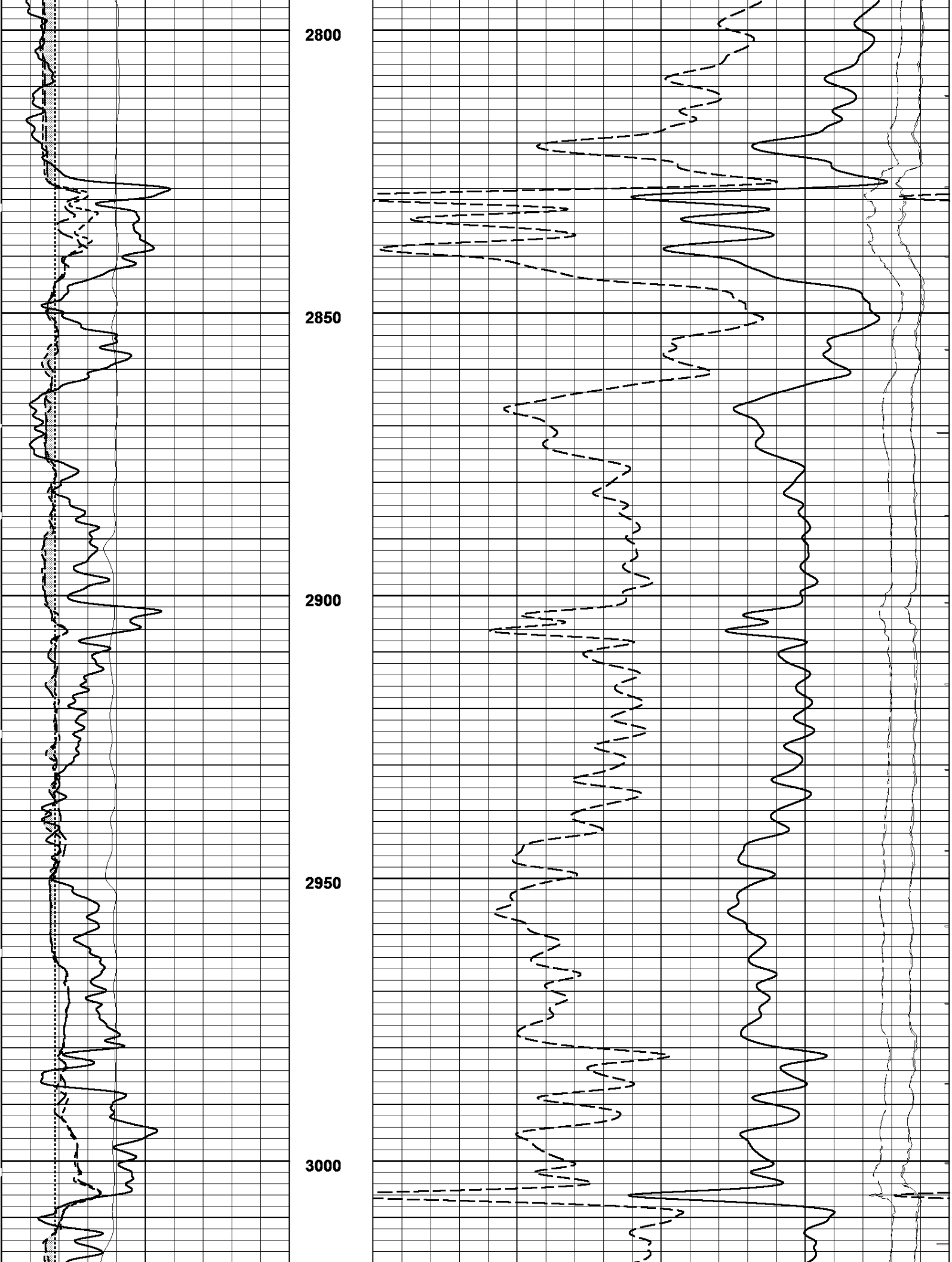

Casing Parted
<<BIT
<<TENS
<<CALY
<<GR
SPHI>>
DT>>
1700
1750
1800
1850
1900

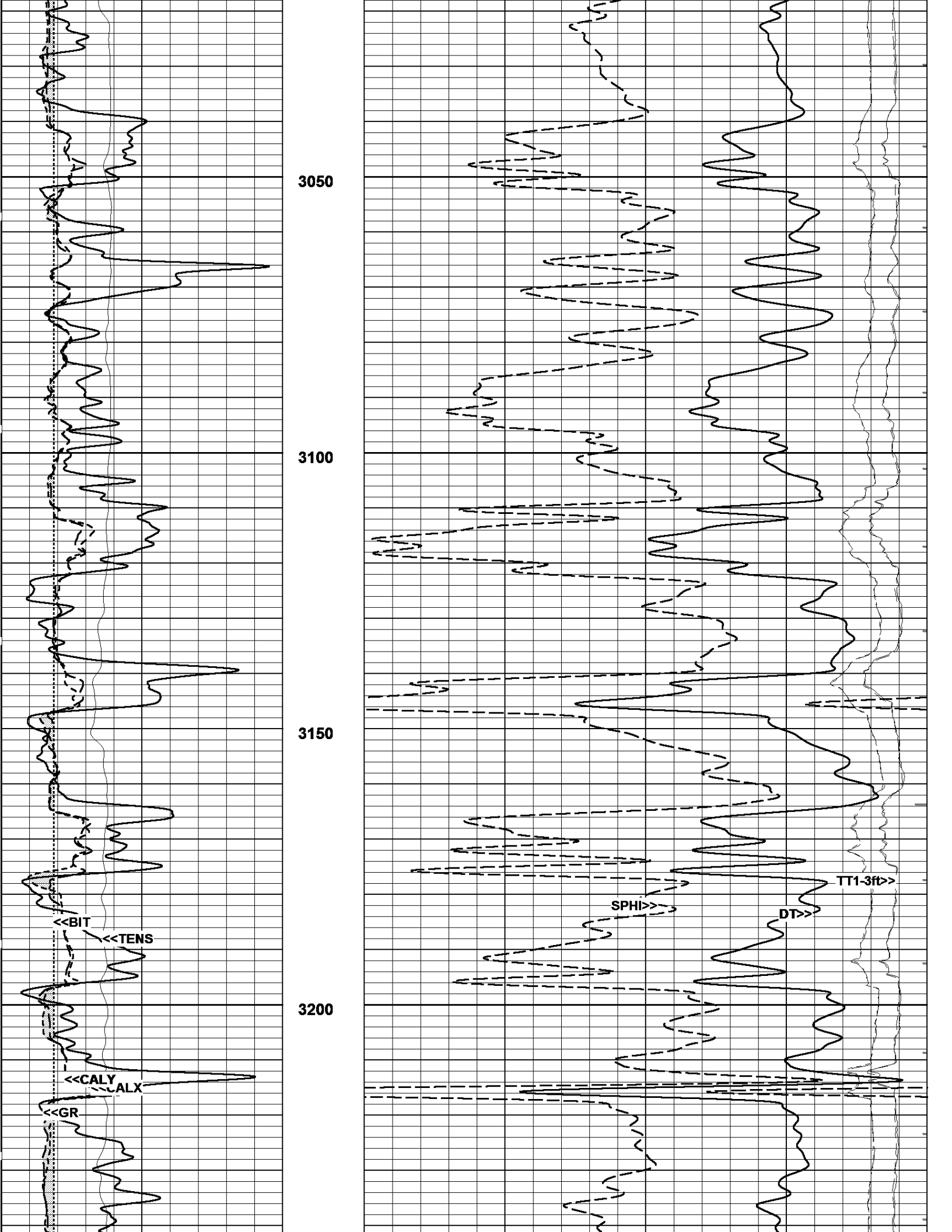

1950
2000
2050
2100

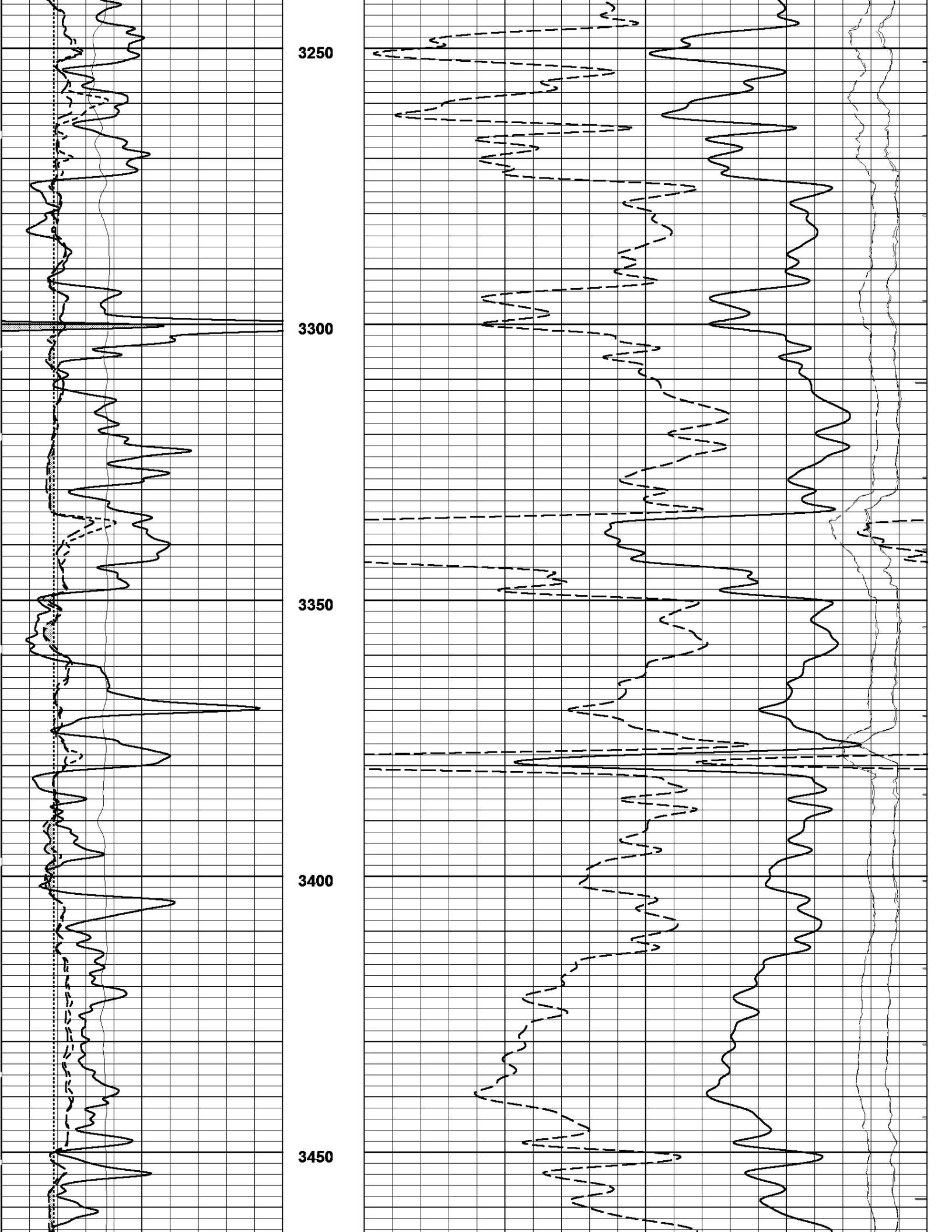

2150
2200
2250
2300
<<BIT
<<TENS>
<<CALY>
GR>>
<<DT
TT1-3ft>>
SPHI>>

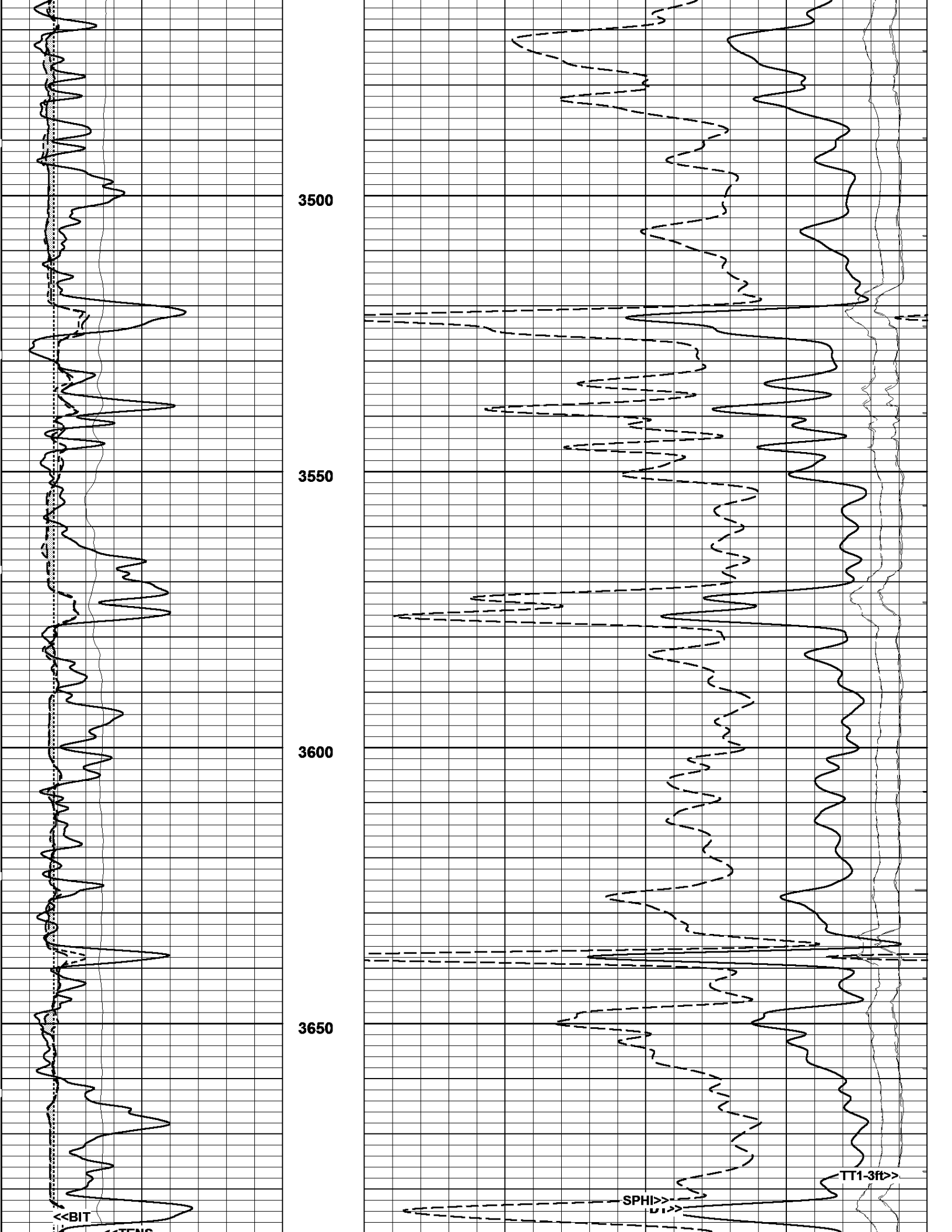

2350
2400
2450
2500
2550

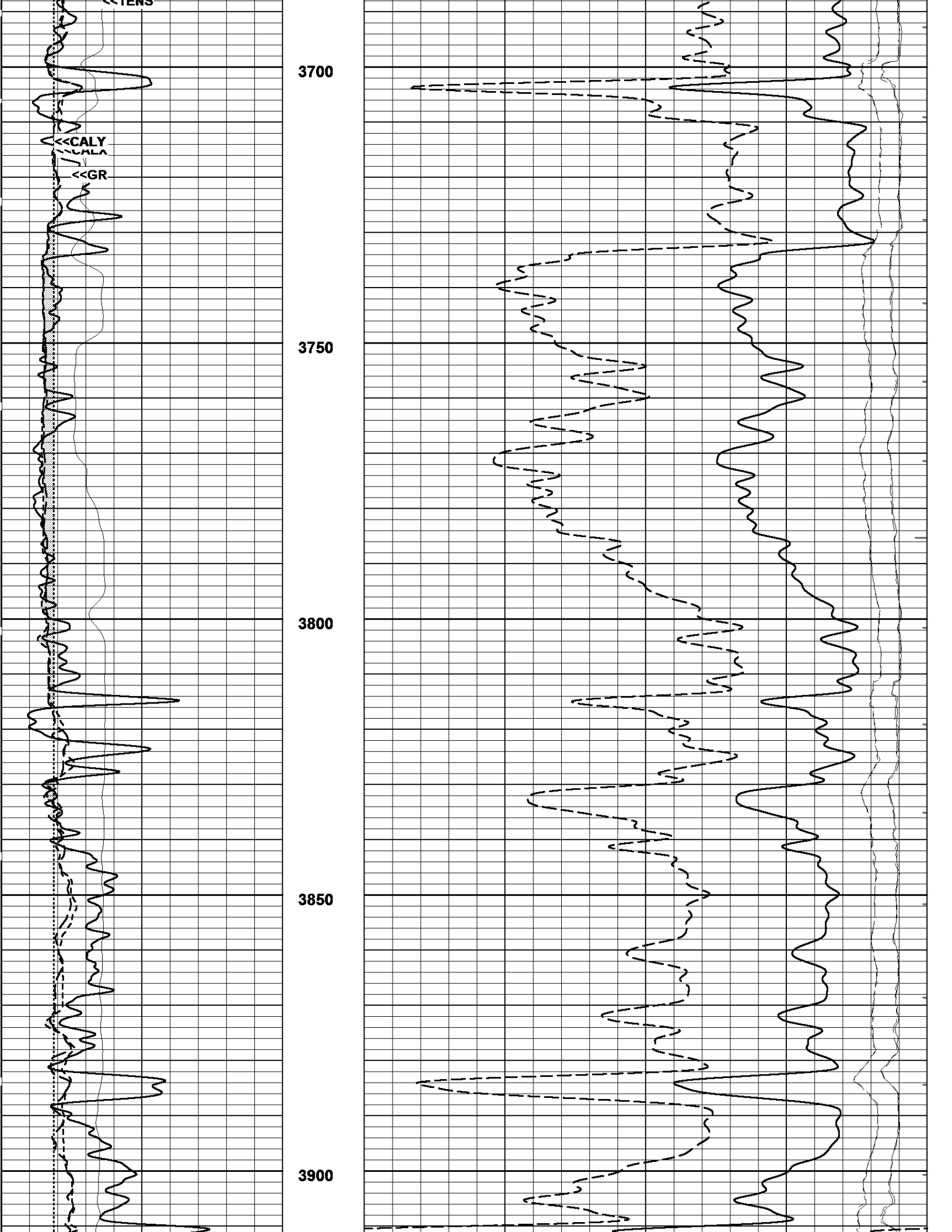

2600
2650
2700
2750
<<BIT
<<TENS
<<CALY
<<GR
SPHI>>
DT>>
TT1-3ft>>

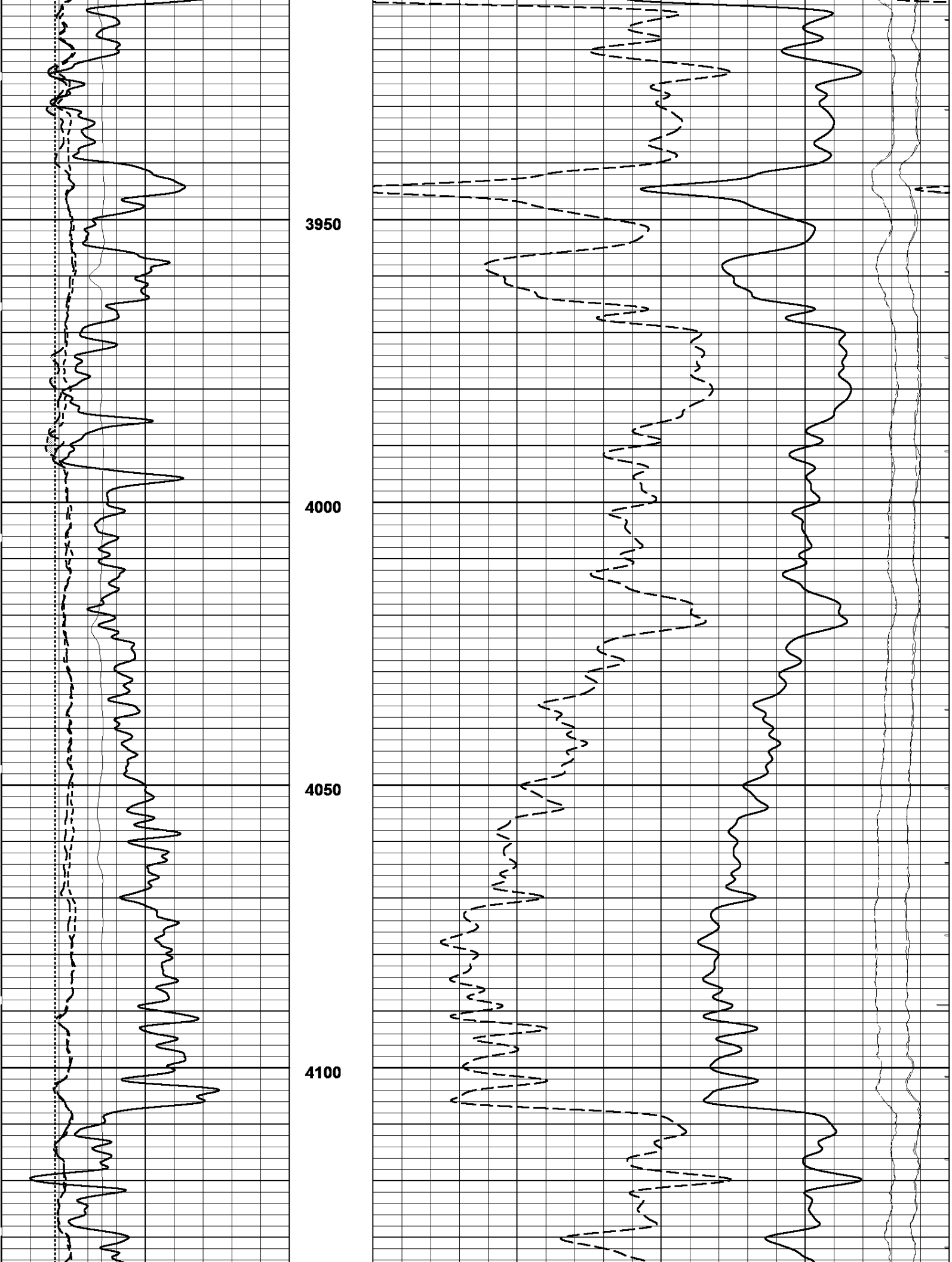

2800
2850
2900
2950
3000

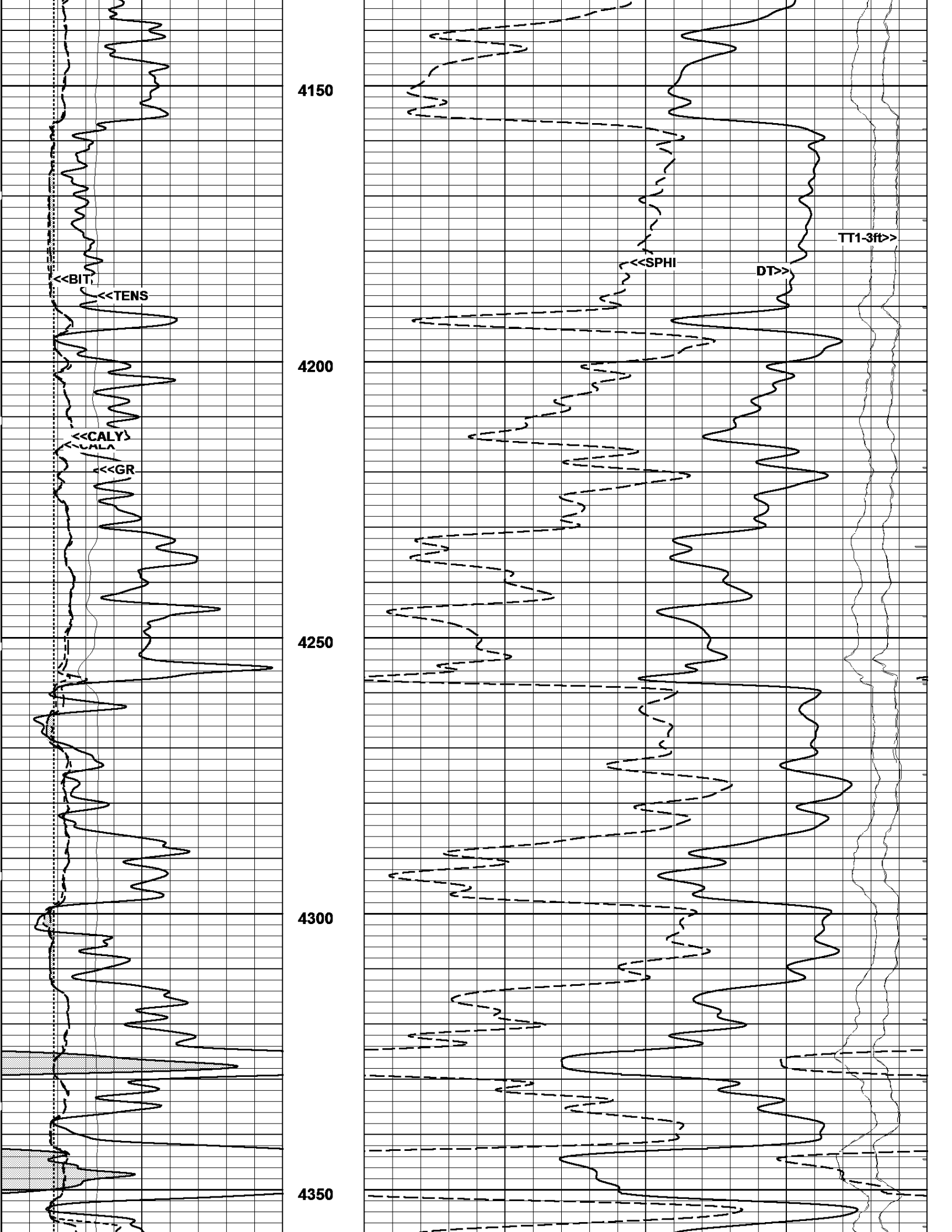

3050
3100
3150
3200
<<BIT
<<TENS
<<CALY
<<ALX
<<GR
TT1-3ft>>
SPHI>>
DT>>

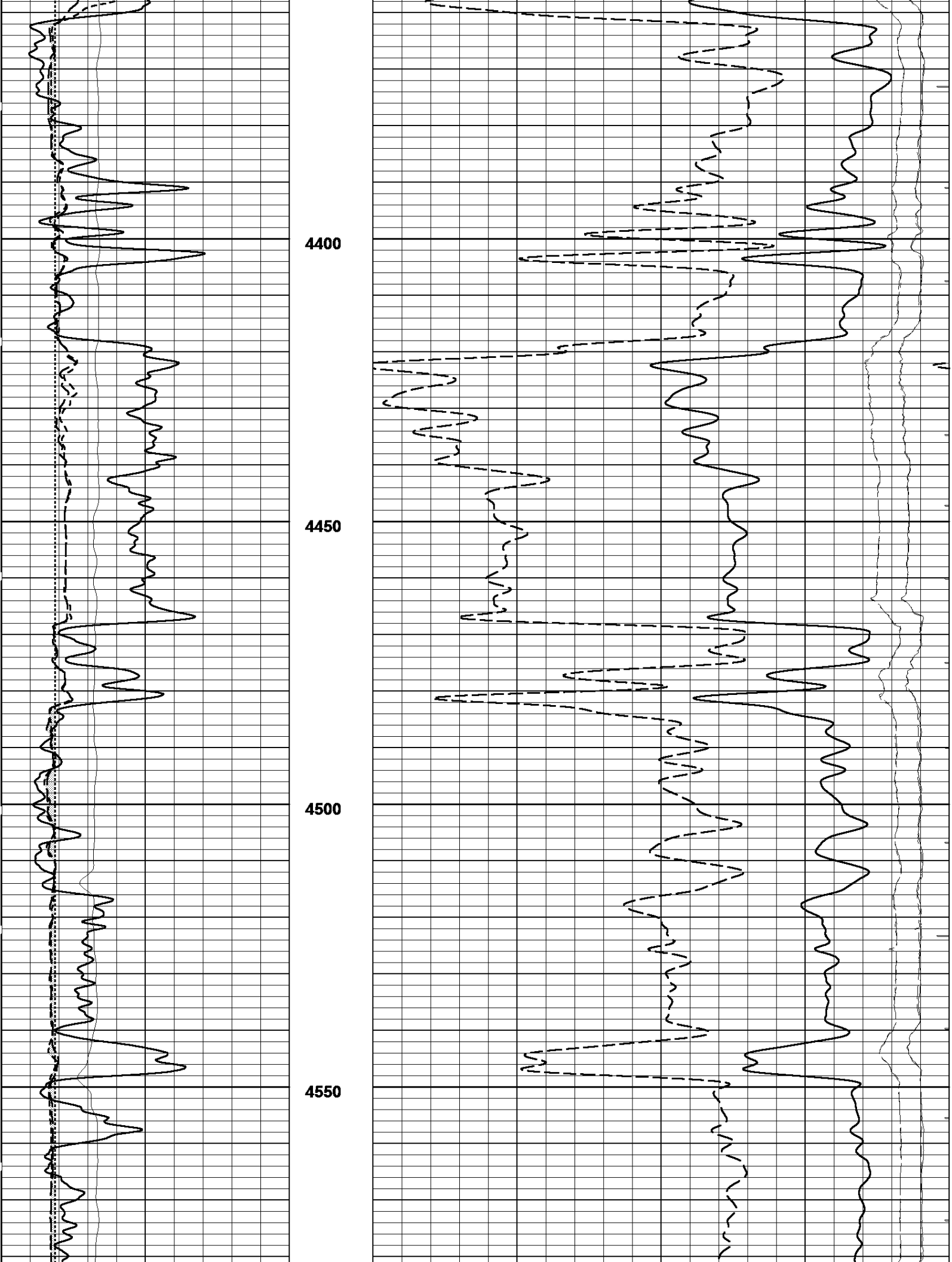

3250
3300
3350
3400
3450

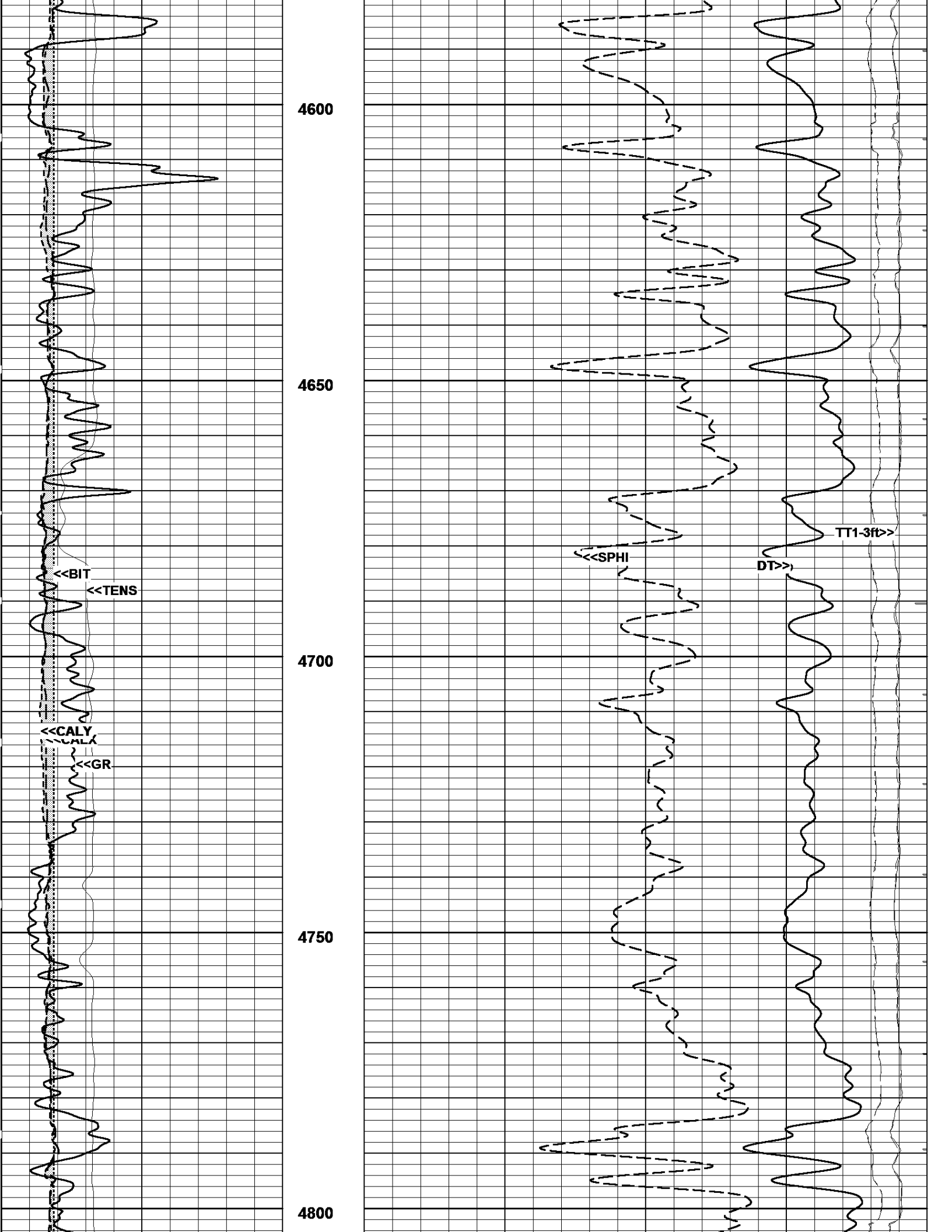

3500
3550
3600
3650
<<BIT
TT1-3ft>>
SPHI>>
DT>>

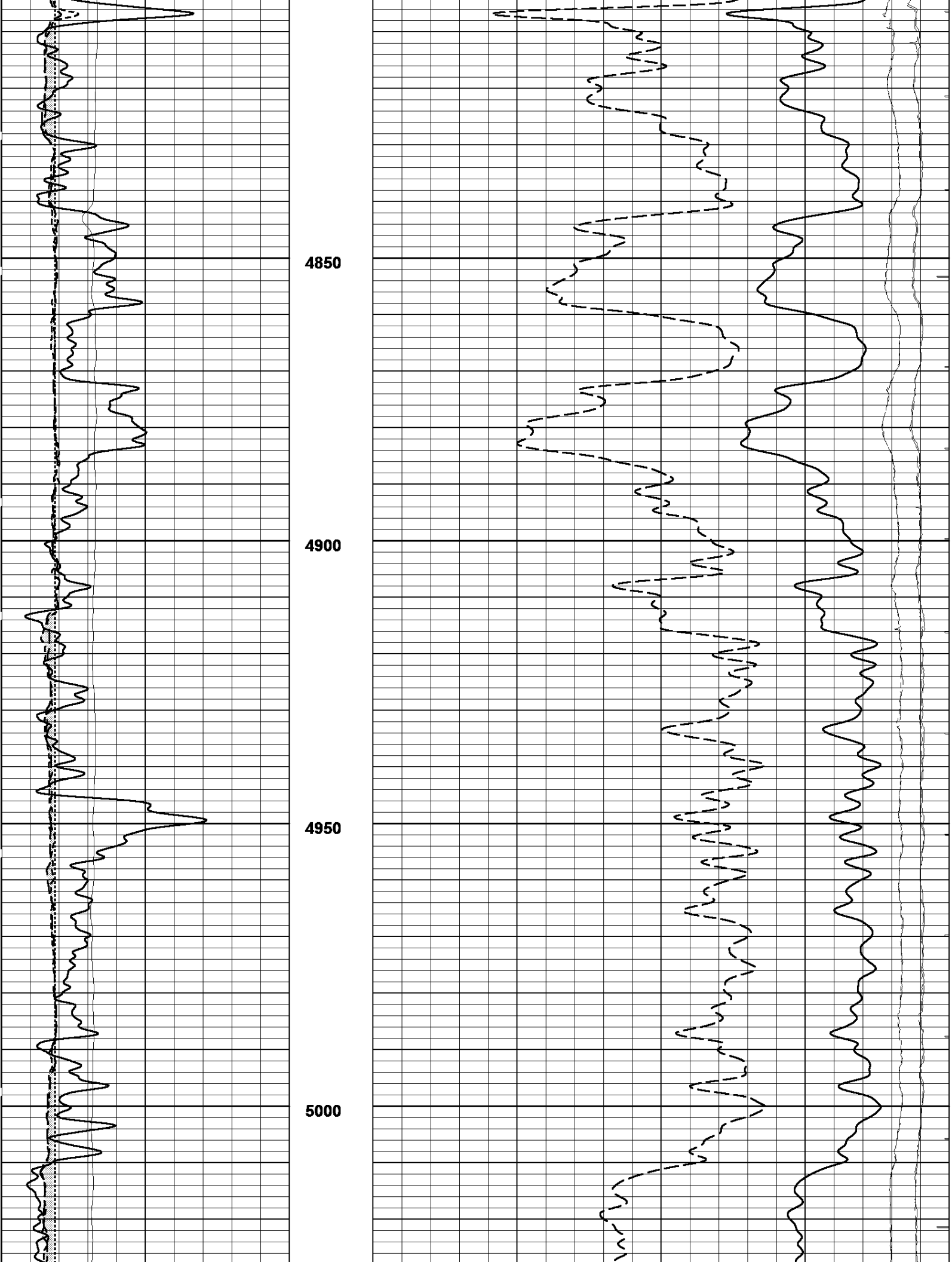

<<TENS
<<CALY
<<GR
3700
3750
3800
3850
3900

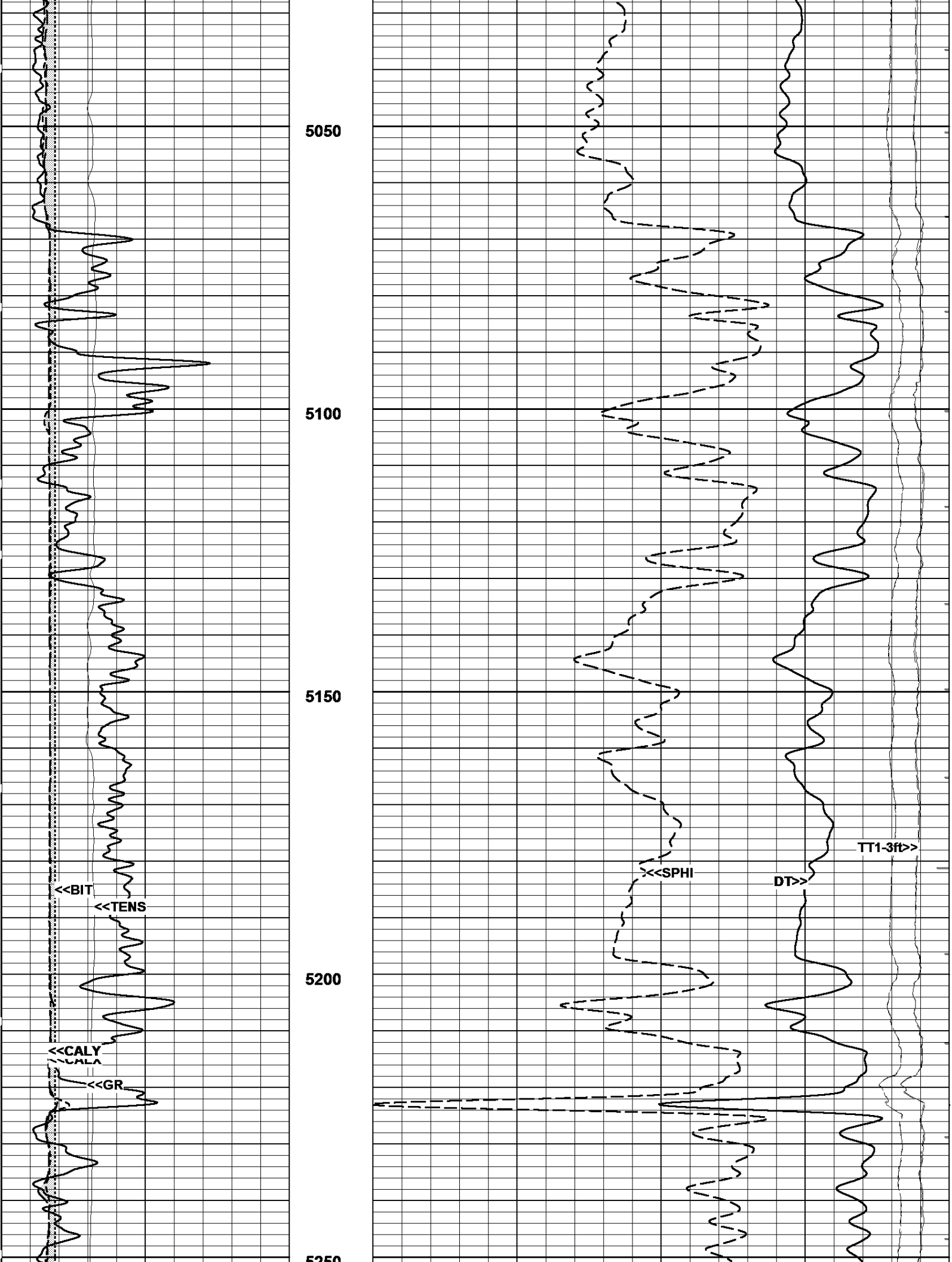

3950
4000
4050
4100

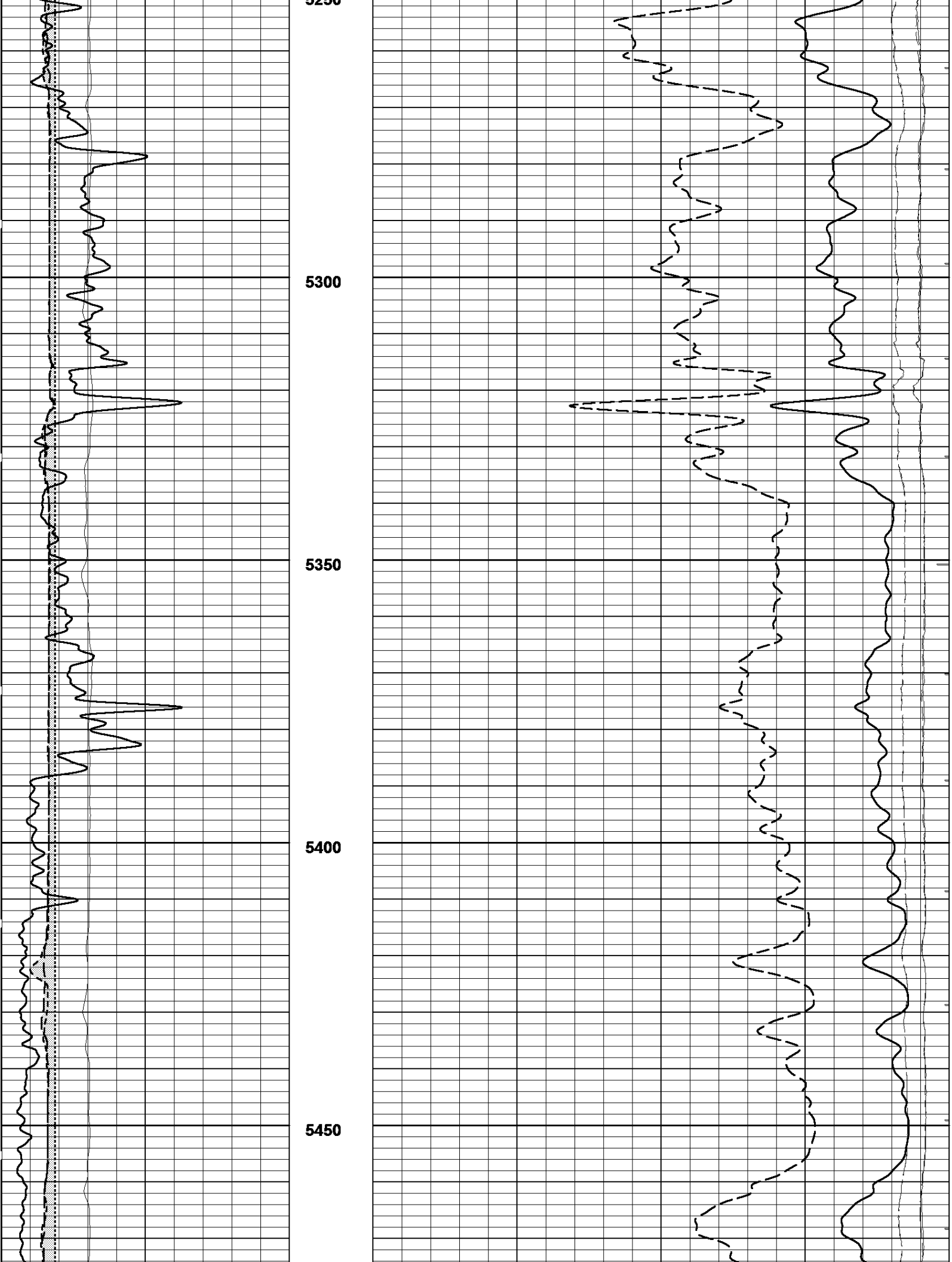

4150
4200
4250
4300
4350
<<BIT
<<TENS
<<CALY
<<GR
<<SPHI
DT>>
TT1-3ft>>

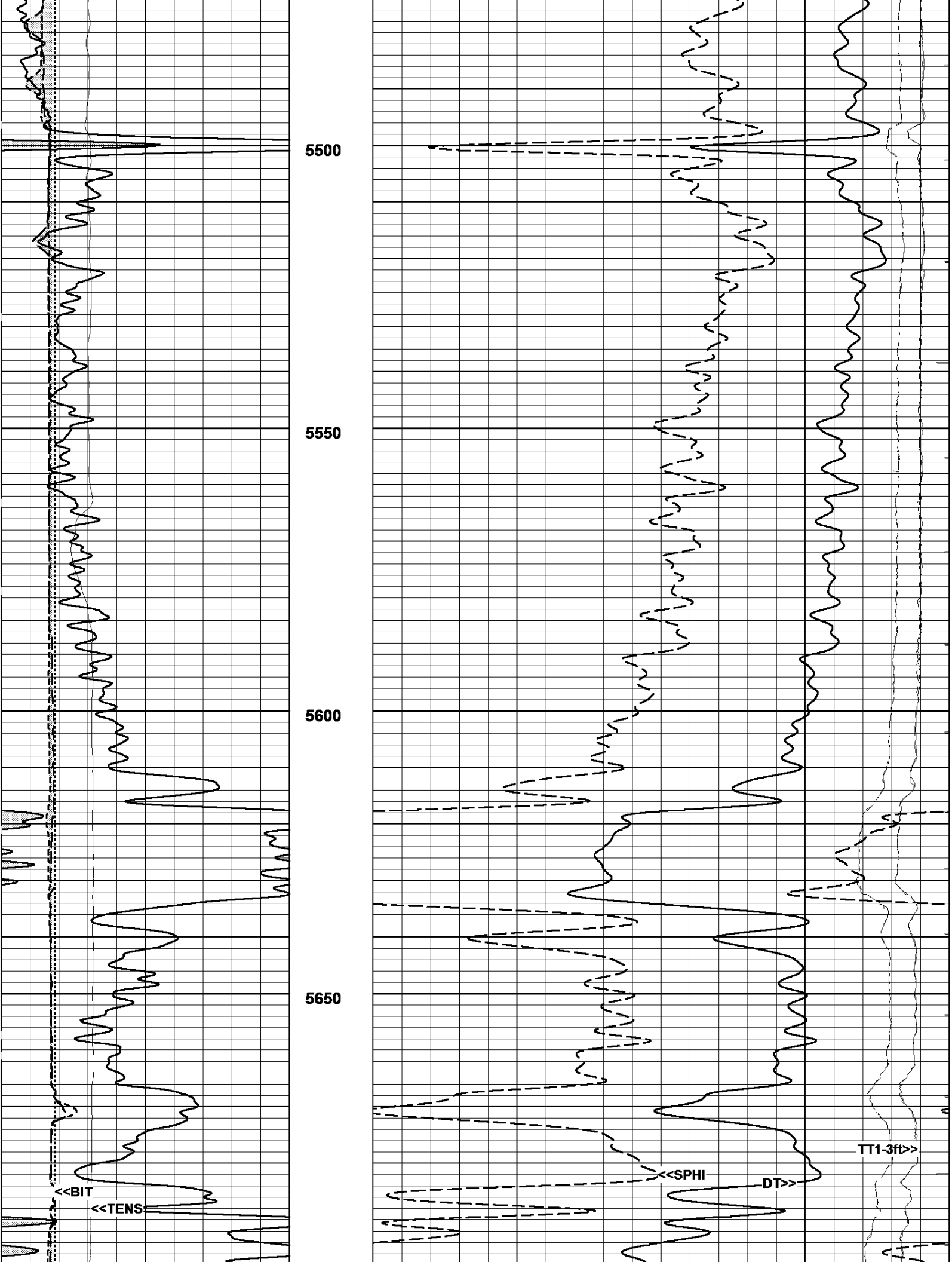

4400
4450
4500
4550

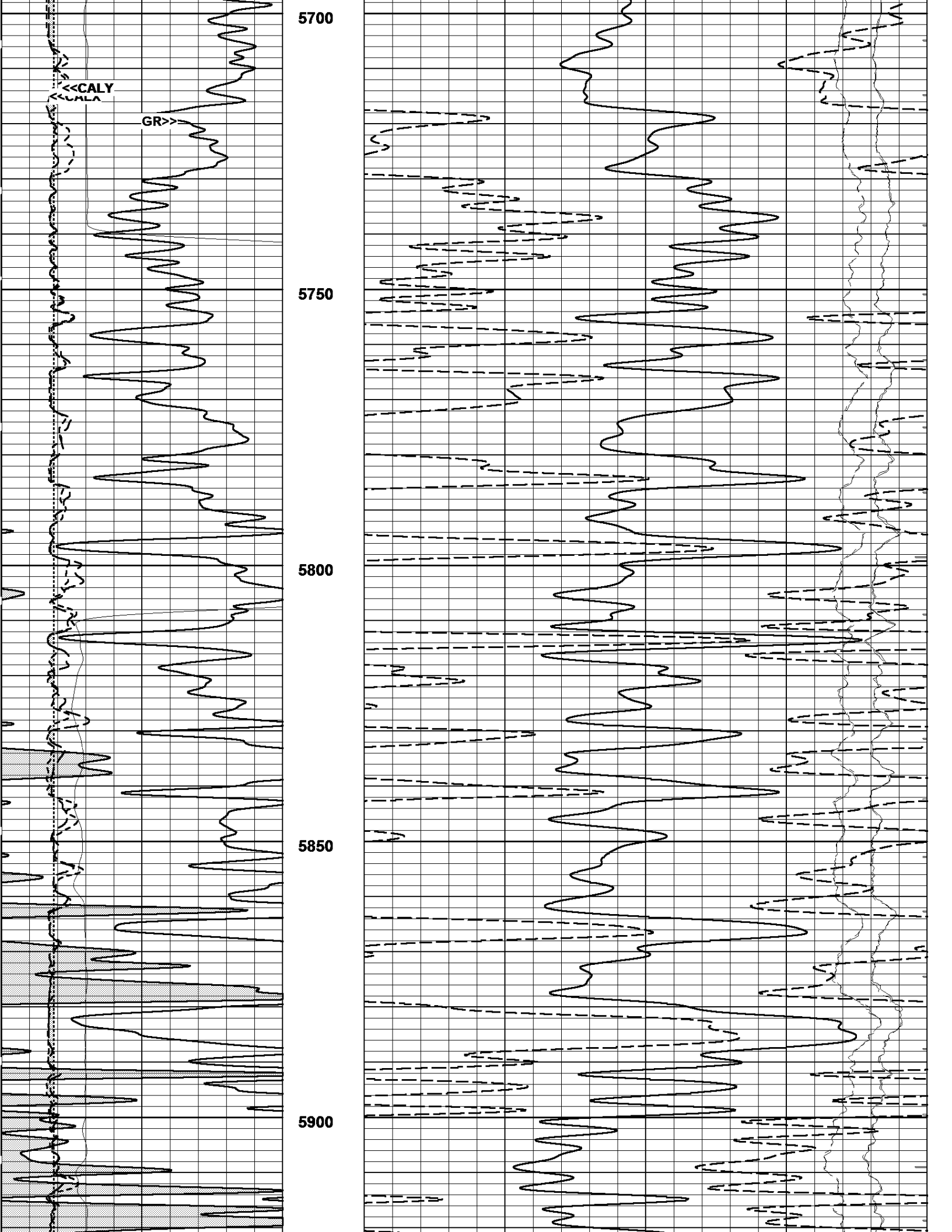

4600
4650
4700
4750
4800
<<BIT
<<TENS
<<CALY
<<GR
<<SPHI
TT1-3ft>>
DT>>

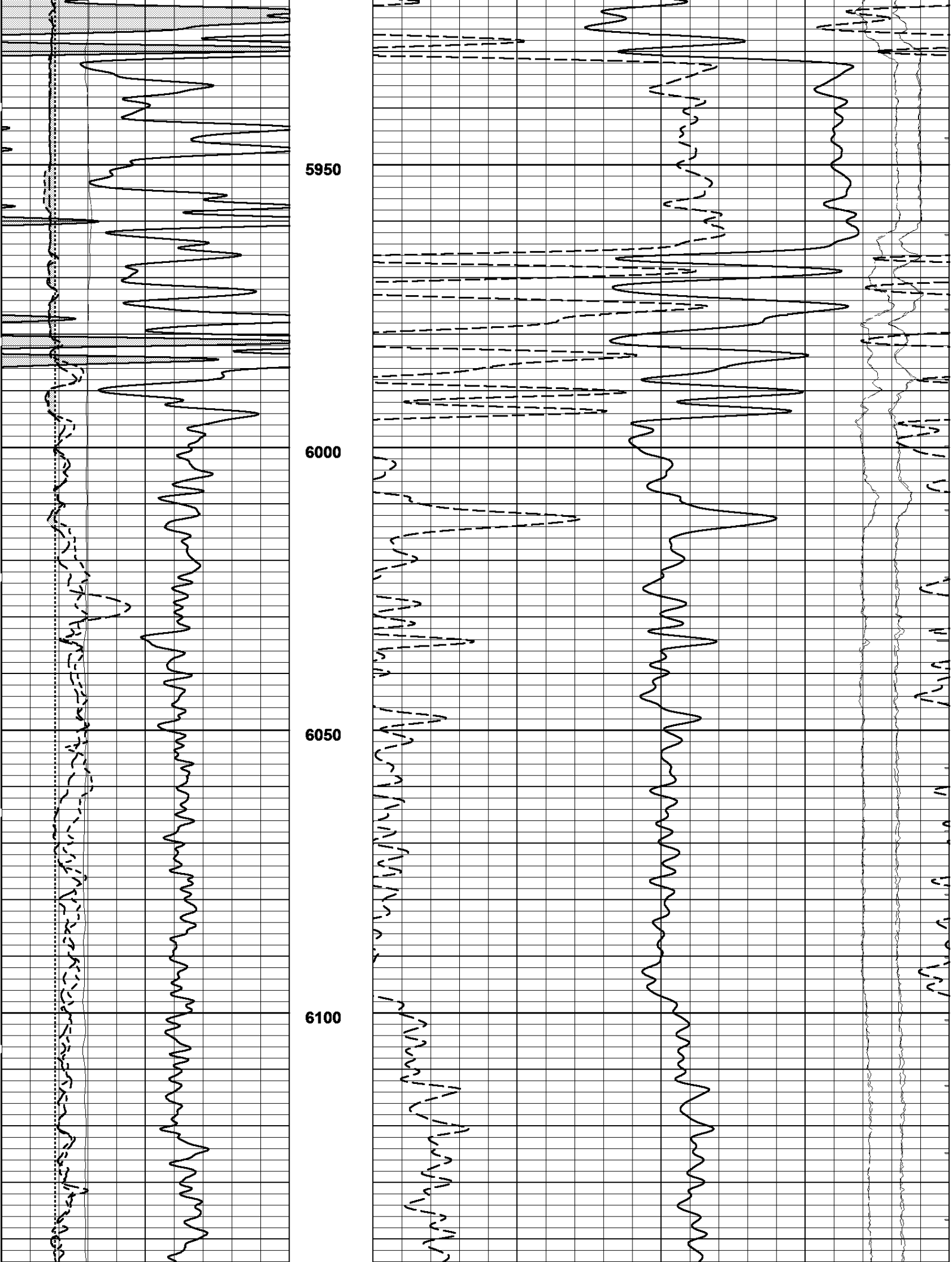

4850
4900
4950
5000

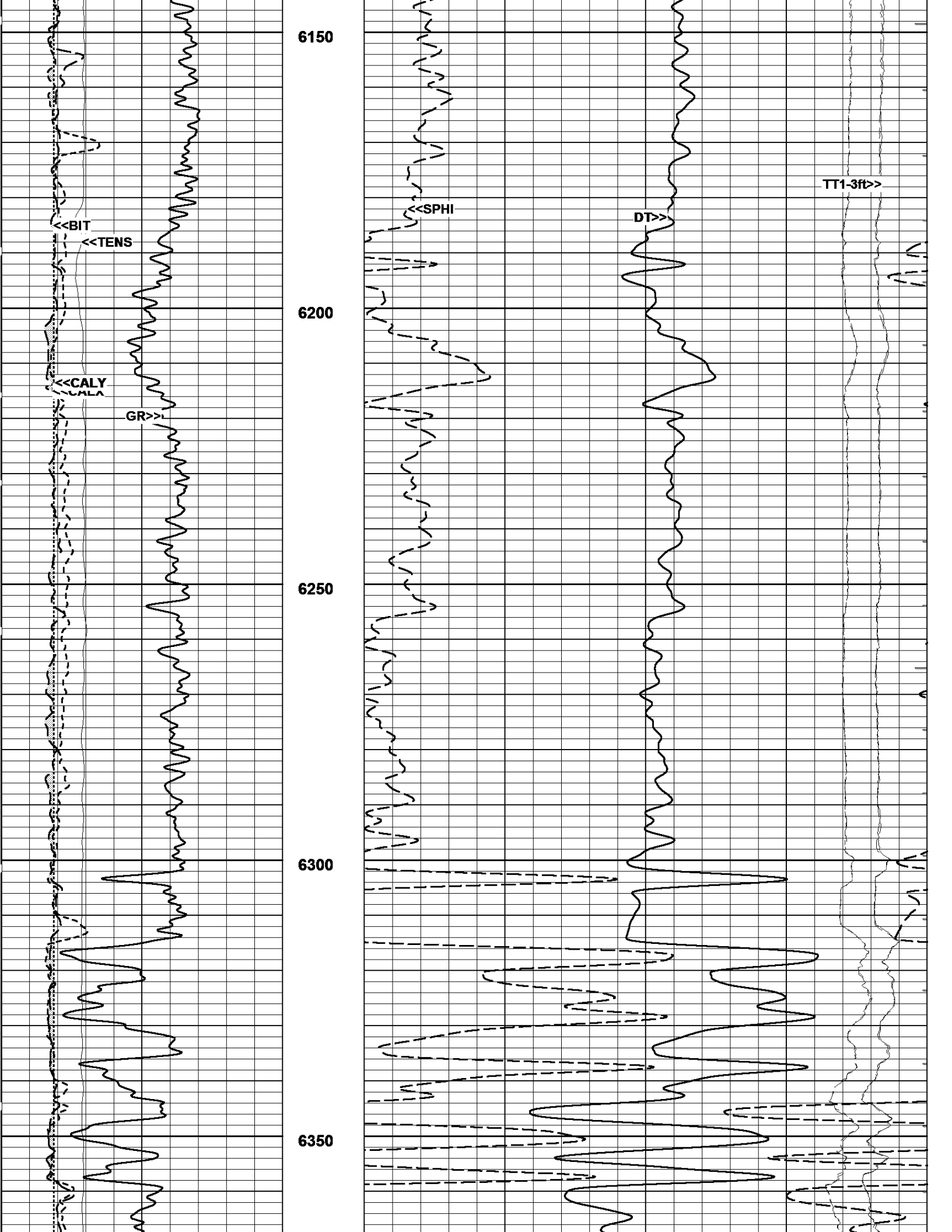

5050
5100
5150
5200
5250
<<BIT
<<TENS
<<CALY
<<GR
><<SPHI
DT>>
TT1-3ft>>

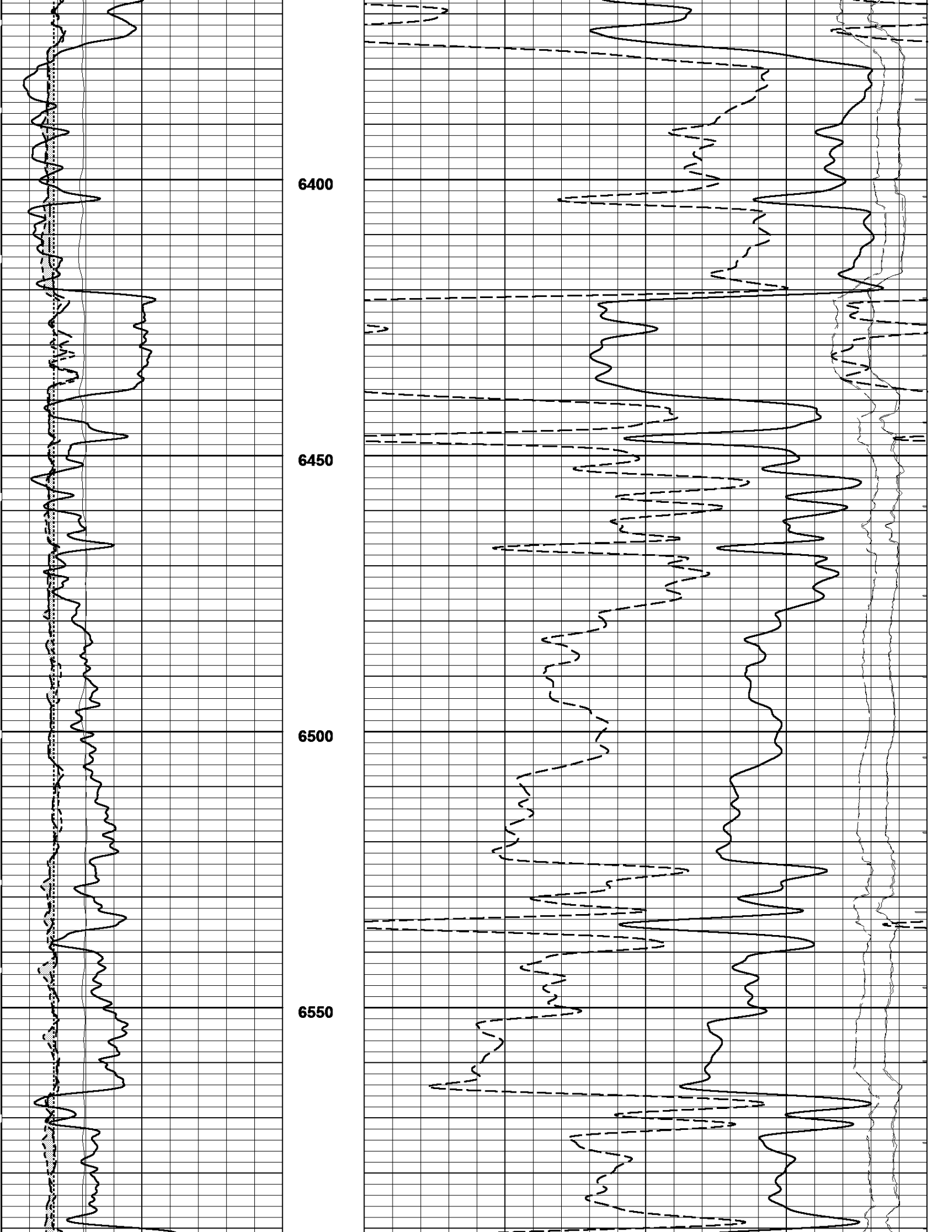

5250
5300
5350
5400
5450

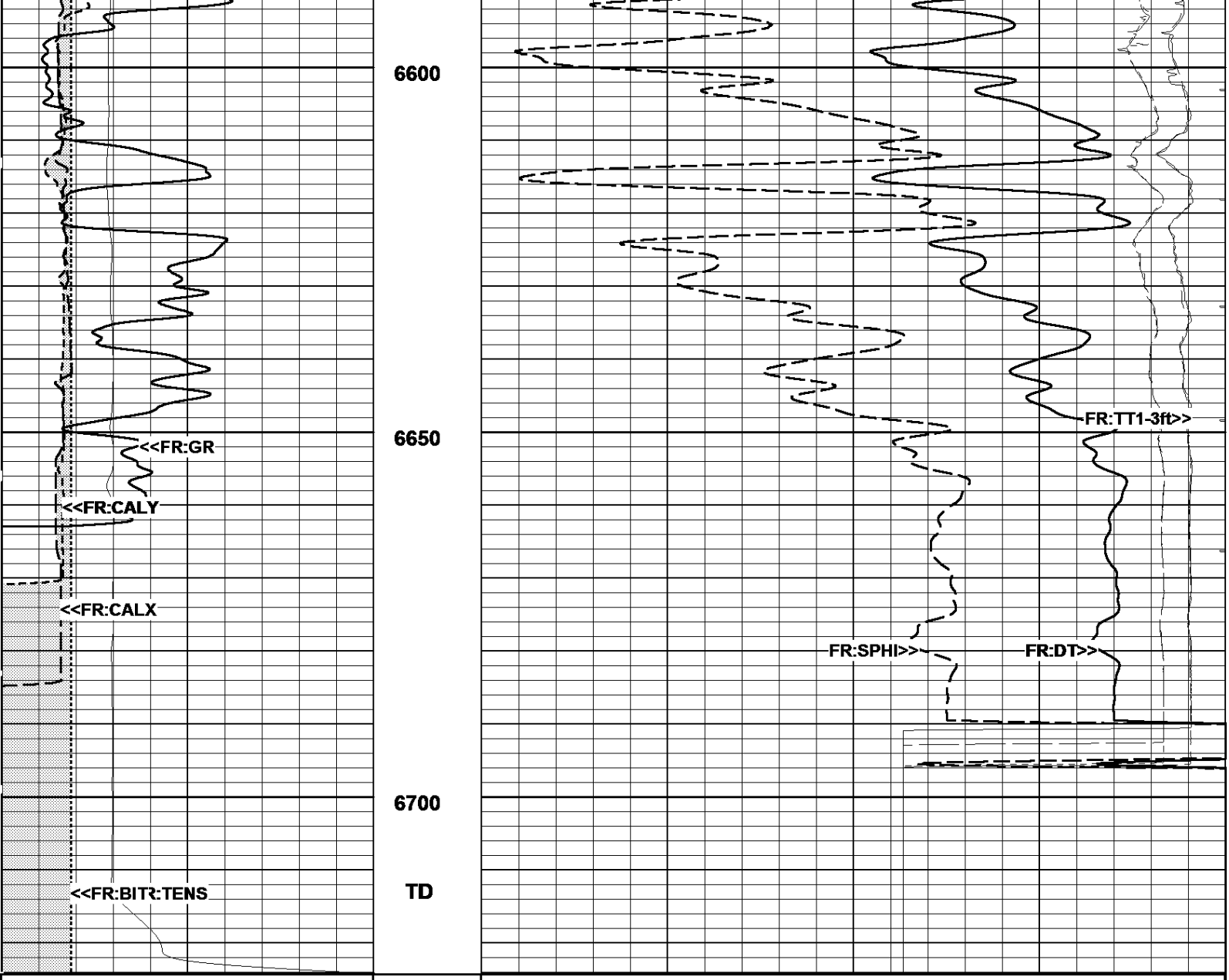

5500
5550
5600
5650
<<BIT
<<TENS
<<SPHI
DT>>
TT1-3ft>>


<<CALY
GR>>
5700
5750
5800
5850
5900


5950
6000
6050
6100


<<BIT
<<TENS
<<CALY
GR>>
6150
6200
6250
6300
6350
<<SPHI
DT>>
TT1-3ft>>


6400
6450
6500
6550




| | | |
|---|---|---|
| Gamma Ray (GR) | | |
| 0. | API | 150. |
| X-Caliper (CALX) | | |
| 6. | in | 16. |
| Y-Caliper (CALY) | | |
| 6. | in | 16. |
| Tension (TENS) | | |
| 5000. | Lbs | 0. |
| Bit Size (BIT) | | |
| 6. | Ref in | 16. |

| | | |
|---|---|---|
| Delta T (DT) | | |
| 140. | usecs/ft | 40. |
| Sonic-Porosity (SPHI) | | |
| 30. | Percent | -10. |

| | | |
|---|---|---|
| TT (TT1-3ft) | | |
| 1500. | usecs | 0. |
| TT (TT2-3ft) | | |
| 1500. | usecs | 0. |
| TT (TT3-5ft) | | |
| 1500. | usecs | 0. |
| TT (TT4-5ft) | | |
| 1500. | usecs | 0. |

06/25/2014
15:56:22 => Start Time

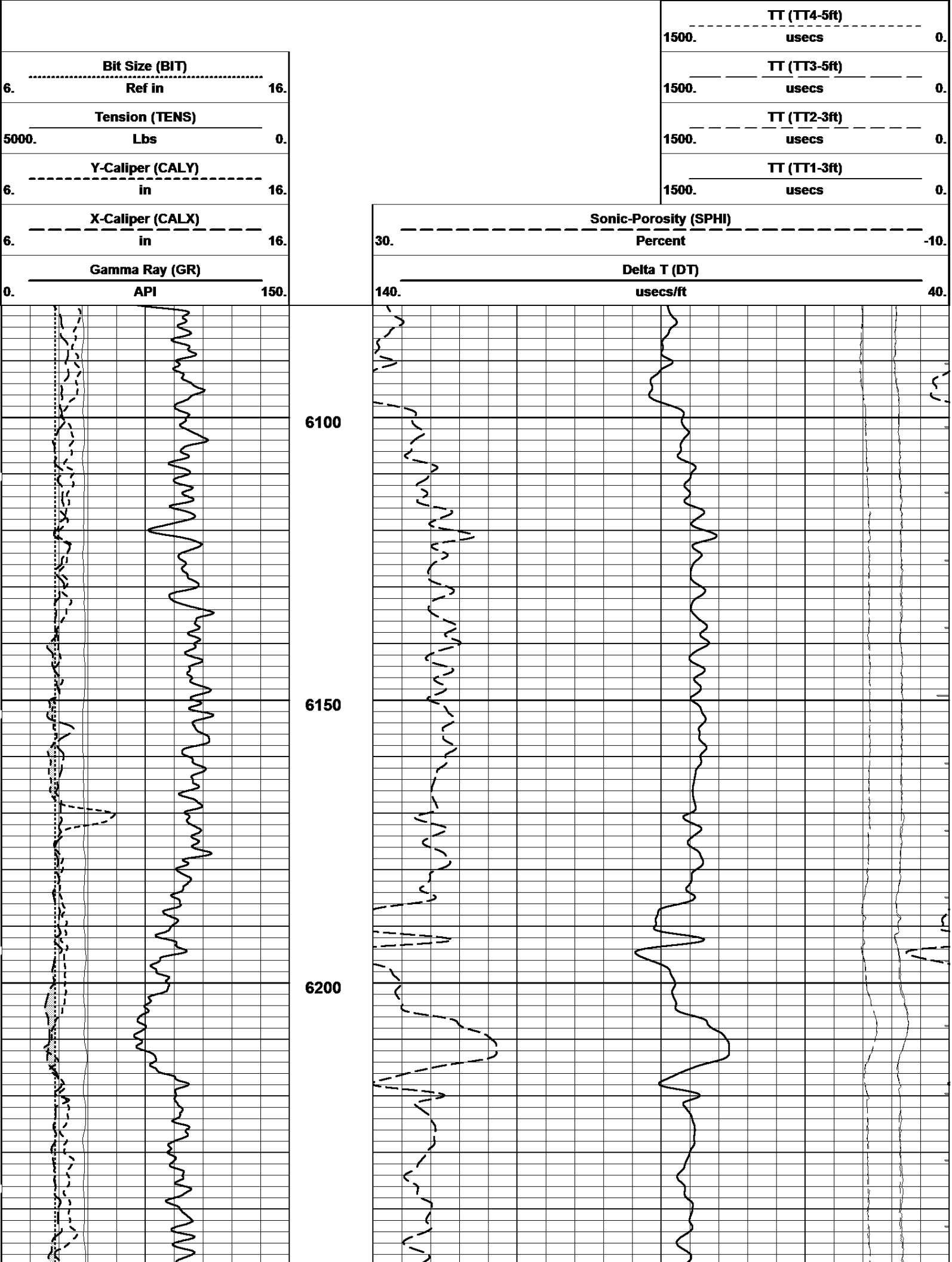
# MAIN PASS (5"/100Ft)

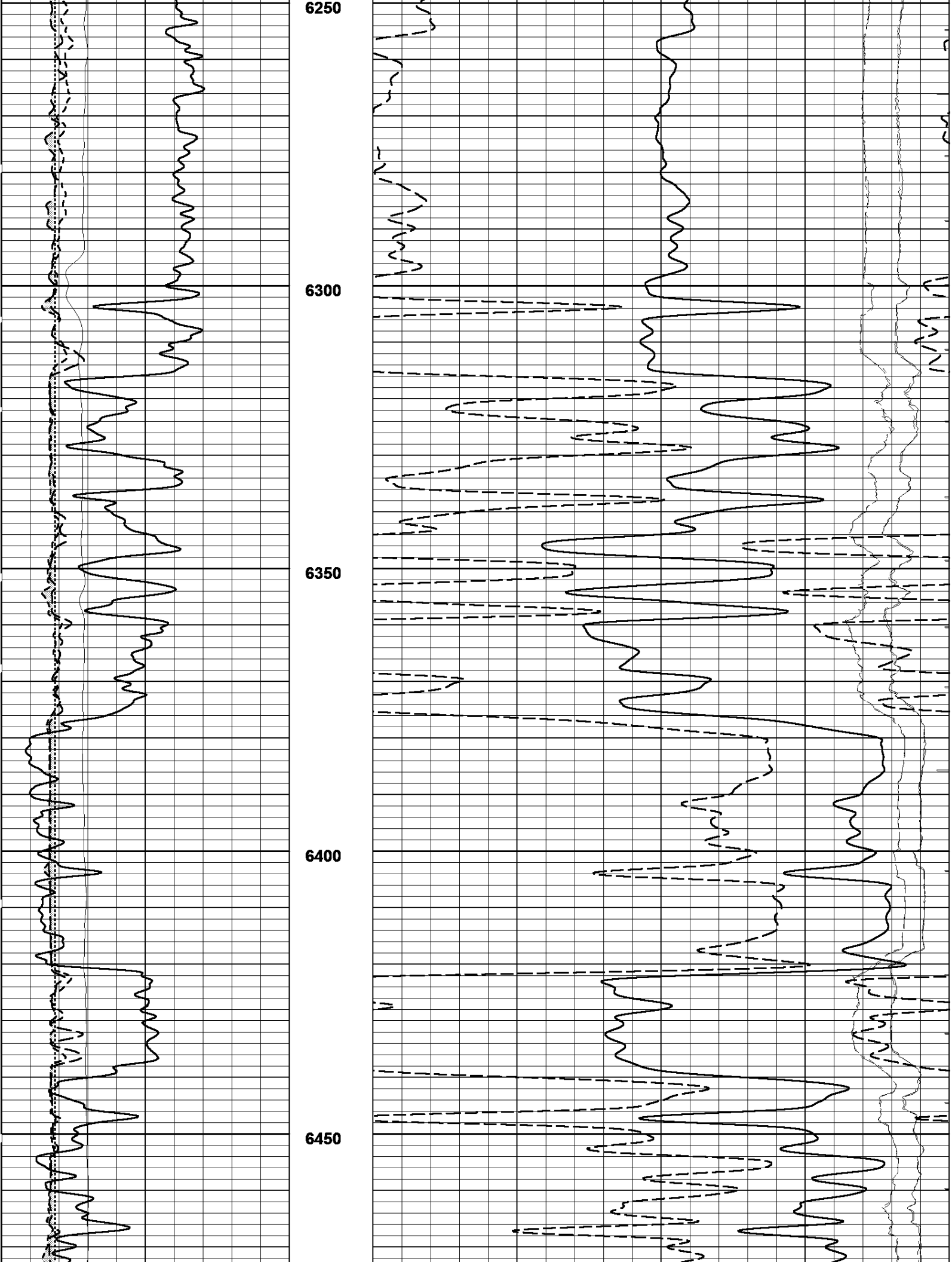
Log UP - (VER 11.19)
Start Depth=> 6724.10 Feet

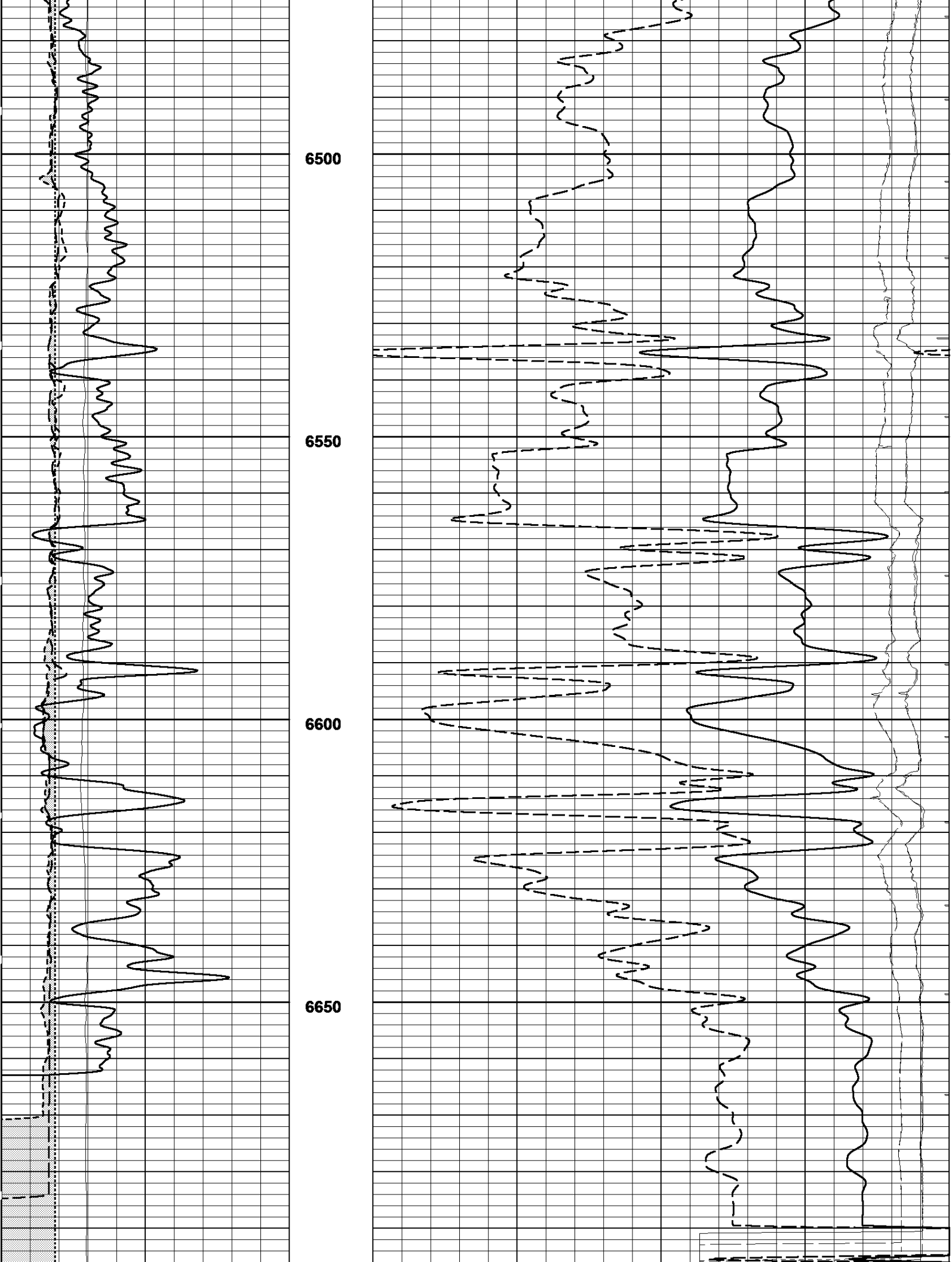
06/25/2014
15:48:29 => End Time

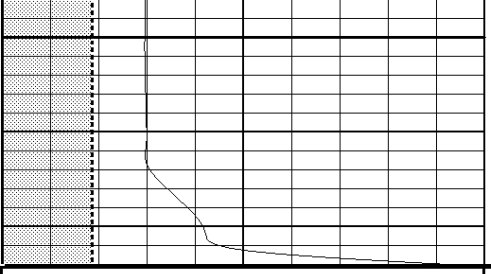
# REPEAT PASS (5"/100Ft)

Log UP - (VER 11.19)
End Depth=> 6080.40 Feet


Bit Size (BIT)
6.
Ref in
16.
Tension (TENS)
5000.
Lbs
0.
Y-Caliper (CALY)
6.
in
16.
X-Caliper (CALX)
6.
in
16.
Gamma Ray (GR)
0.
API
150.
TT (TT4-5ft)
1500.
usecs
0.
TT (TT3-5ft)
1500.
usecs
0.
TT (TT2-3ft)
1500.
usecs
0.
TT (TT1-3ft)
1500.
usecs
0.
Sonic-Porosity (SPHI)
30.
Percent
-10.
Delta T (DT)
140.
usecs/ft
40.
6100
6150
6200


6250
6300
6350
6400
6450


6500
6550
6600
6650




| | | |
|---|---|---|
| Gamma Ray (GR) | | |
| 0. | API | 150. |
| X-Caliper (CALX) | | |
| 6. | in | 16. |
| Y-Caliper (CALY) | | |
| 6. | in | 16. |
| Tension (TENS) | | |
| 5000. | Lbs | 0. |
| Bit Size (BIT) | | |
| 6. | Ref in | 16. |

| | | |
|---|---|---|
| Delta T (DT) | | |
| 140. | usecs/ft | 40. |
| Sonic-Porosity (SPHI) | | |
| 30. | Percent | -10. |

| | | |
|---|---|---|
| TT (TT1-3ft) | | |
| 1500. | usecs | 0. |
| TT (TT2-3ft) | | |
| 1500. | usecs | 0. |
| TT (TT3-5ft) | | |
| 1500. | usecs | 0. |
| TT (TT4-5ft) | | |
| 1500. | usecs | 0. |

06/25/2014
15:31:32 => Start Time

# REPEAT PASS (5"/100Ft)

Log UP - (VER 11.19)
Start Depth=> 6724.10 Feet

## GAMMA RAY CALIBRATION

| | |
|---|---|
| SERIAL NUM | RG3005 |
| BLANKET NUM | 1A |

**MASTER CALIBRATIONS**

| | LowVal: 0.000 API | HighVal: 122.000 API | Gain/Offset | CALIBRATION DATE | CALIBRATION TIME |
|---|---|---|---|---|---|
| BASE CALS | 0.000 - raw | 462.227 - raw | 0.305 - gain<br>0.000 - off | M/D/Y> 5/15/2014 | H:M:S> 15:28:13 |

**WELL SITE CALIBRATIONS**

| | LowVal: 0.000 API | CalVal: 100.000 Mknuts | Gain/Offset | CALIBRATION DATE | CALIBRATION TIME |
|---|---|---|---|---|---|
| PRE CAL | -0.059 - raw | 26.967 - raw | 3.700 - gain | M/D/Y> 11/12/2004 | H:M:S> 12:40:27 |

## X-CALIPER CALIBRATION

| | |
|---|---|
| SERIAL NUM | RL4112 |

**MASTER CALIBRATIONS**

| | LowVal: 6.000 mm | HighVal: 10.000 mm | Gain/Offset | CALIBRATION DATE | CALIBRATION TIME |
|---|---|---|---|---|---|
| BASE CALS | 3116.507 - raw | 5195.836 - raw | 0.002 - gain<br>0.005 - off | M/D/Y> 6/12/2014 | H:M:S> 11:42:9 |

## Y CALIPER CALIBRATIONS

| | |
|---|---|
| SERIAL NUM | RN2002 |

| MASTER CALIBRATIONS | | | | | |
|---|---|---|---|---|---|
| | LowVal: 6.000 in | HighVal: 10.000 in | Gain/Offset | CALIBRATION DATE | CALIBRATION TIME |
| BASE CALS | 1221.320 - raw | 1889.117 - raw | 0.006 - gain<br>-1.316 - off | M/D/Y> 5/15/2014 | H:M:S> 12:17:4 |

| | |
|---|---|
| Company | MIDWESTERN EXPLORATION COMPANY |
| Well | MILLS-GOOCH #2-7 |
| Field | GOOCH |
| County | STEVENS |
| State | KANSAS |

RECON

BHC SONIC
GAMMA RAY
X-Y CALIPER

RECON PETROTECHNOLOGIES LTD

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