

**Weatherford****COMPENSATED SONIC  
WITH INTEGRATED TRANSIT TIME**

COMPANY

SHAKESPEARE OIL COMPANY, INC.

WELL

OTILEY #1-8

FIELD

WILDCAT

PROVINCE/COUNTY

LOGAN

COUNTRY/STATE

U.S.A. / KANSAS

LOCATION

2301' FSL &amp; 2270' FEL

SE/4

| SEC                     | TWP | RGE | Other Services |
|-------------------------|-----|-----|----------------|
| 8                       | 14S | 32W | MAI/MFE        |
| API Number 15-109-21098 |     |     | MML            |
| Permit Number           |     |     |                |

MPD/MDN

Permanent Datum G.L., Elevation 2843 feet

Log Measured From KB

Drilling Measured From K.B.

Elevations:

KB  
DF  
GL2853.00  
2852.00  
2843.00

Date 15-SEP-2012

Run Number ONE

Depth Driller 4600.00 feet

Depth Logger 4599.00 feet

First Reading 4586.00 feet

Last Reading 222.00 feet

Casing Driller 222.00 feet

Casing Logger 222.00 feet

Bit Size 7.875 inches

Hole Fluid Type CHEMICAL

Density / Viscosity 9.20 lb/USg 58.00 CP

PH / Fluid Loss 10.50 9.20 ml/30Min

Sample Source FLOWLINE

Rm @ Measured Temp 0.51 @ 88.0 ohm-m

Rmf @ Measured Temp 0.41 @ 88.0 ohm-m

Rmc @ Measured Temp 0.61 @ 88.0 ohm-m

Source Rmf / Rmc CALC CALC

Rm @ BHT 0.41 @ 111.0 ohm-m

Time Since Circulation 4 HOURS

Max Recorded Temp 111.00 deg F

Equipment Name COMPACT

Equipment / Base 13096 LIB

Recorded By LYNN SCOTT

Witnessed By TIM PRIEST

S O # / JOB# 3537885 LB12-252

**BOREHOLE RECORD**

Last Edited: 15-SEP-2012 22:29

Bit Size  
inches

7.875

Depth From  
feet

222.00

Depth To  
feet

4599.00

**CASING RECORD**

Type

Size  
inches

8.625

Depth From  
feet

0.00

Shoe Depth  
feet

222.00

Weight  
pounds/ft

24.00

**REMARKS**

Tools Used: MPD, MCG, MDN, MFE, MAI, MSS, MML

Hardware: MPD: 8 inch profile plate used. MAI, MFE, and MSS: 0.5 Inch standoffs used. MDN: Dual Bowspring used.

2.71 G/CC Limestone density matrix used to calculate porosity.

Sonic porosity calculated using 47.5 usec/ft Limestone scale.

Borehole rugosity, tight pulls, and washouts will affect data quality.

All intervals logged and scaled per customer's request.

Annular volume with 5.5 inch production casing from TD to the top of detail = 224 cubic feet

Total hole volume from TD to Surface casing= 2034 cubic feet

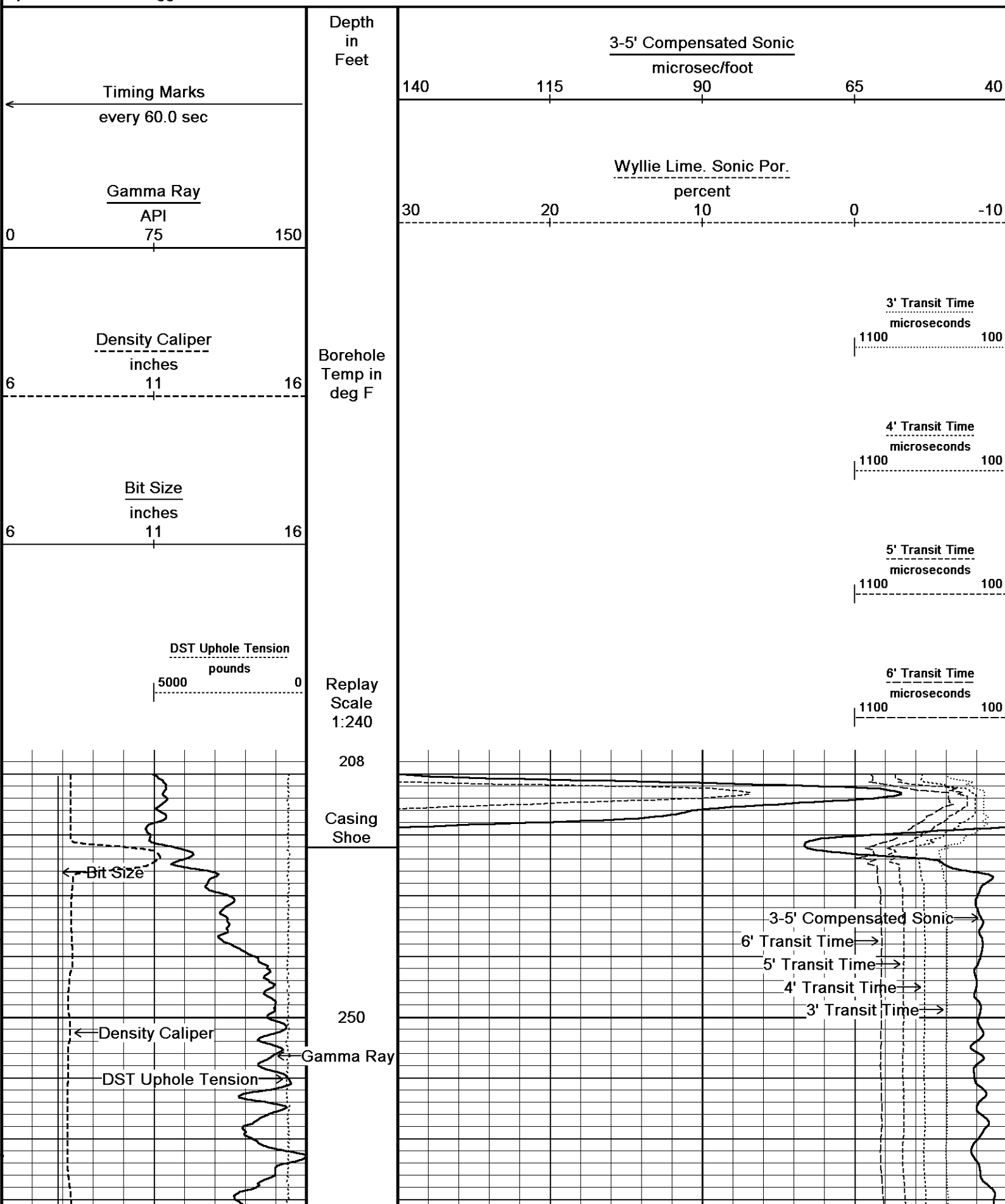
Service order #3537885

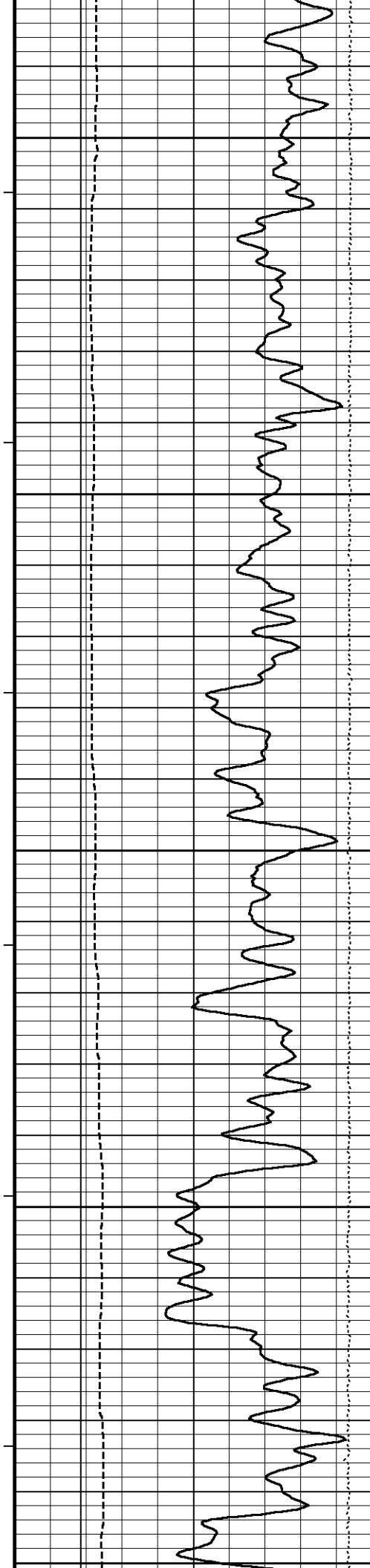
Rig: HD #2

Engineer: L. Scott

Operator(s): B. Reeves

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 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 in our price schedule.





89°

300

90°

350

90°

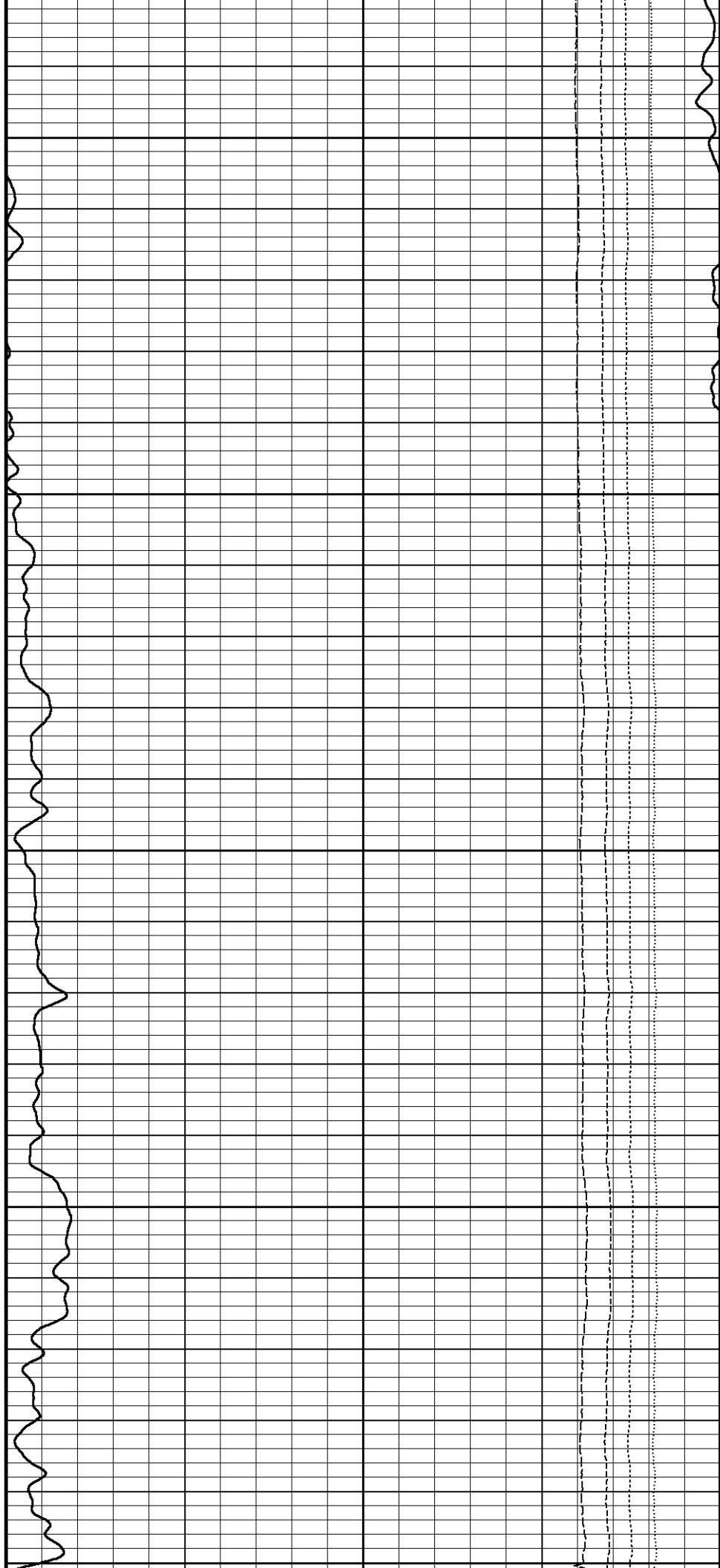
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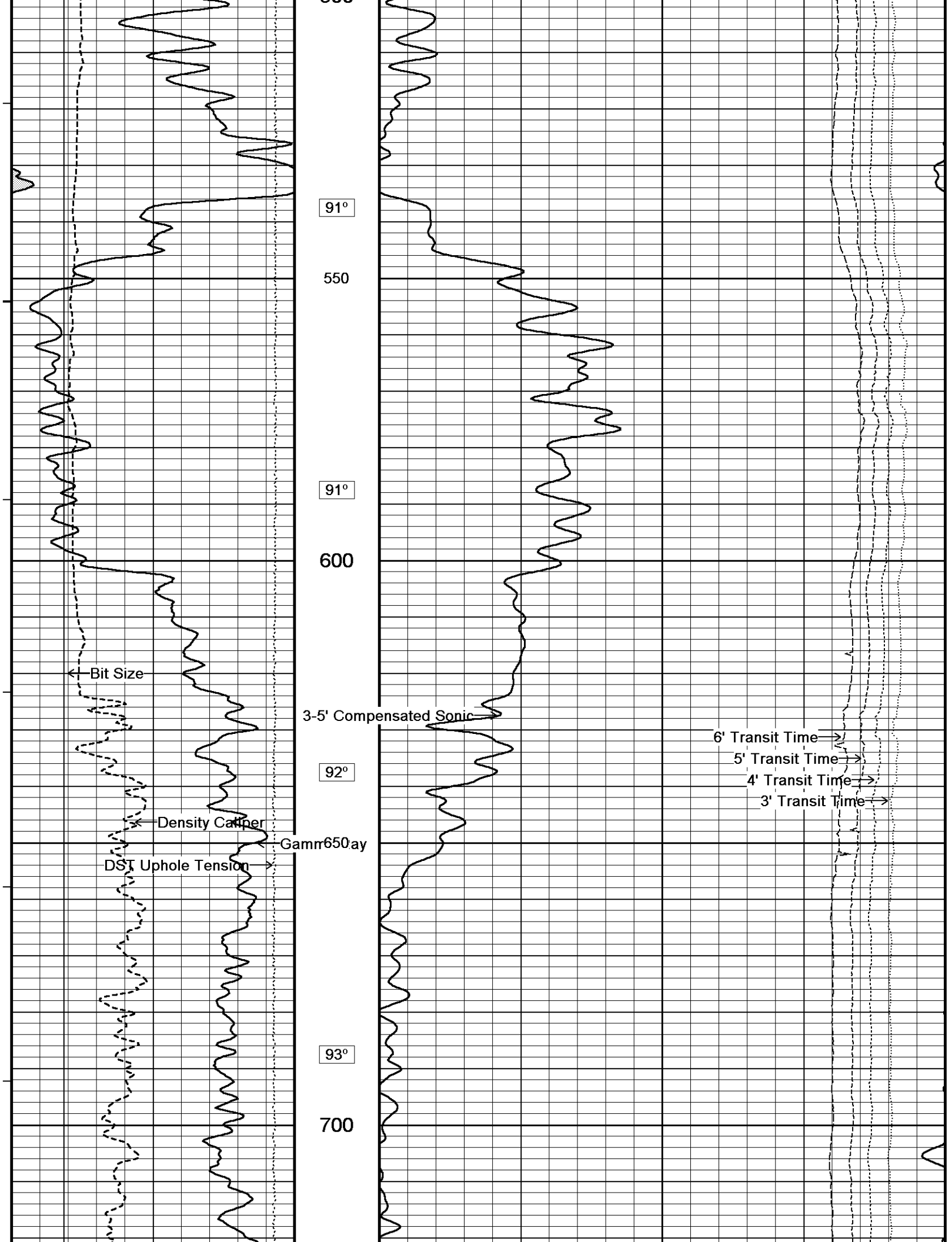
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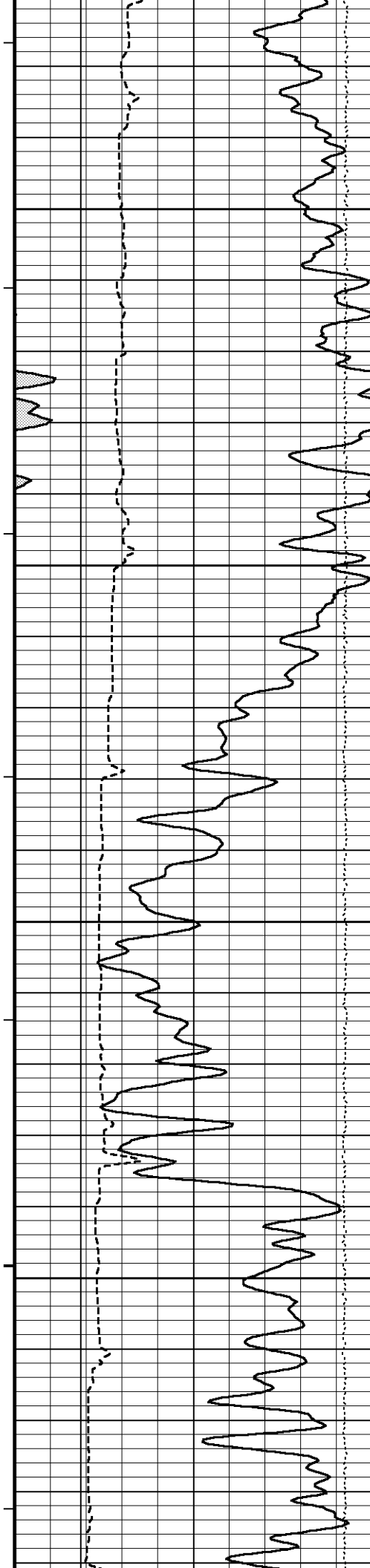
450

91°

500







93°

750

94°

800

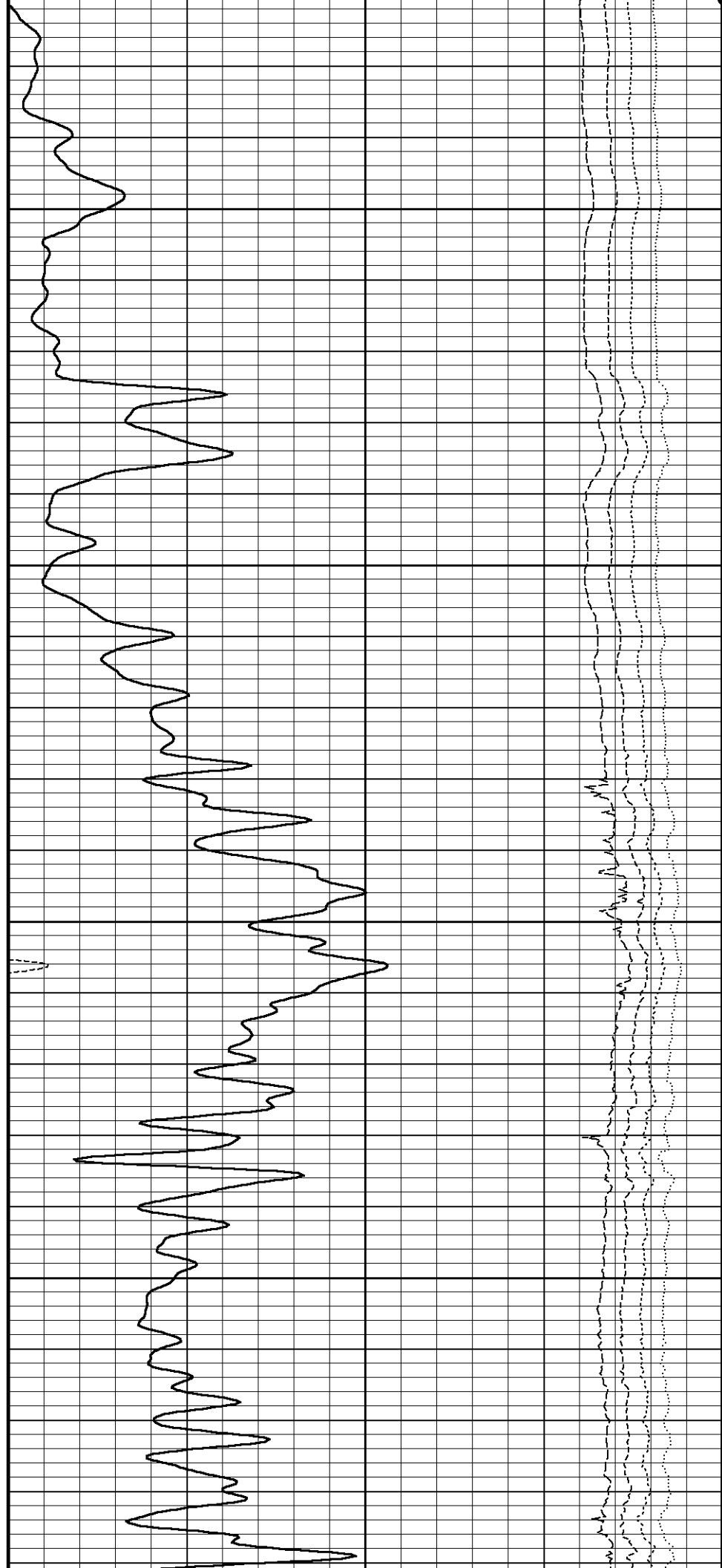
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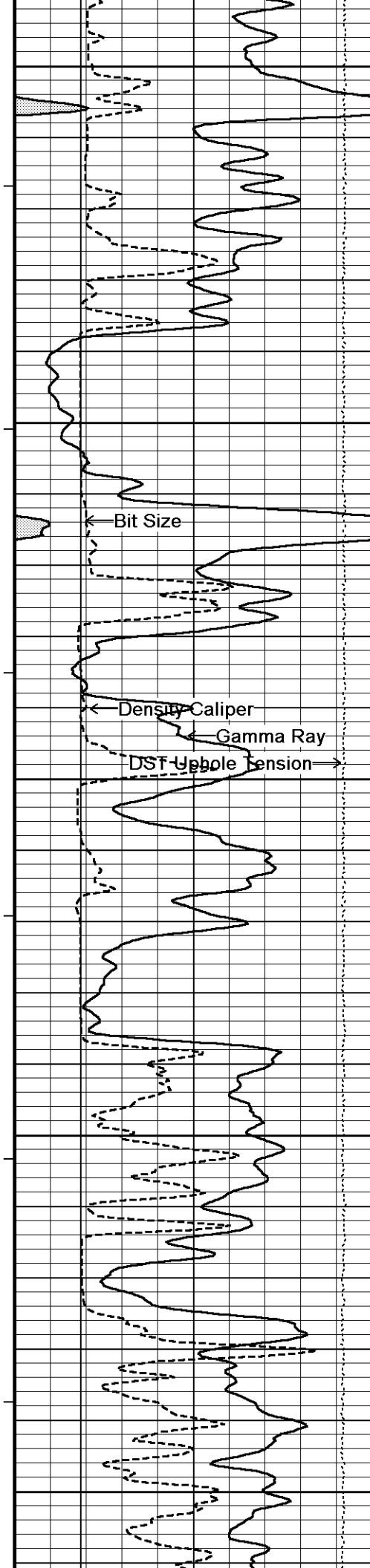
850

95°

900

95°





950

95°

1000

95°

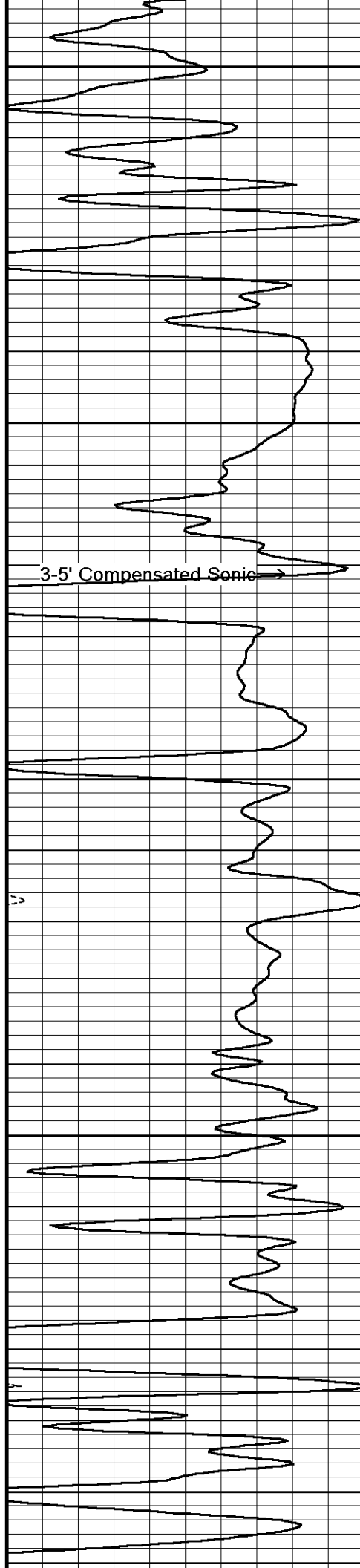
1050

95°

1100

96°

1150

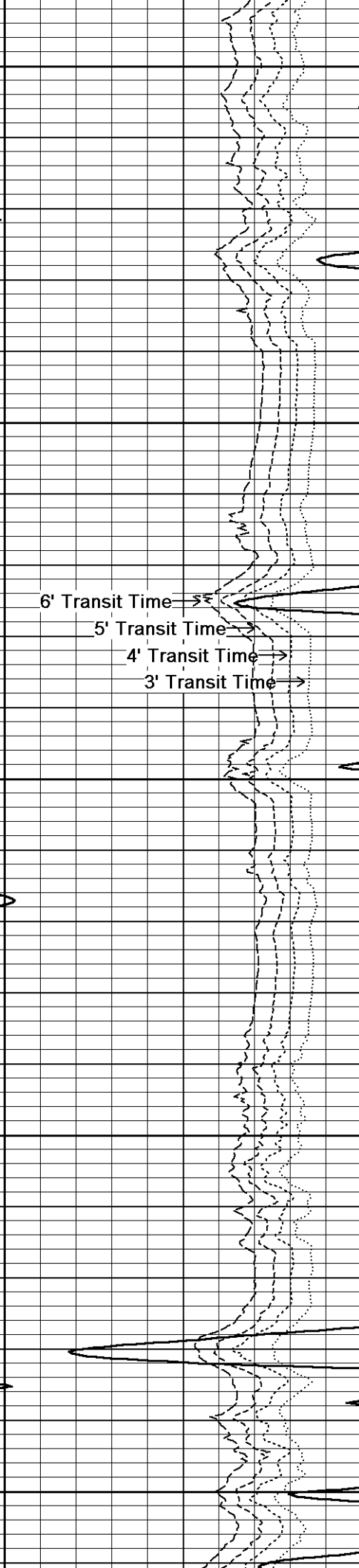


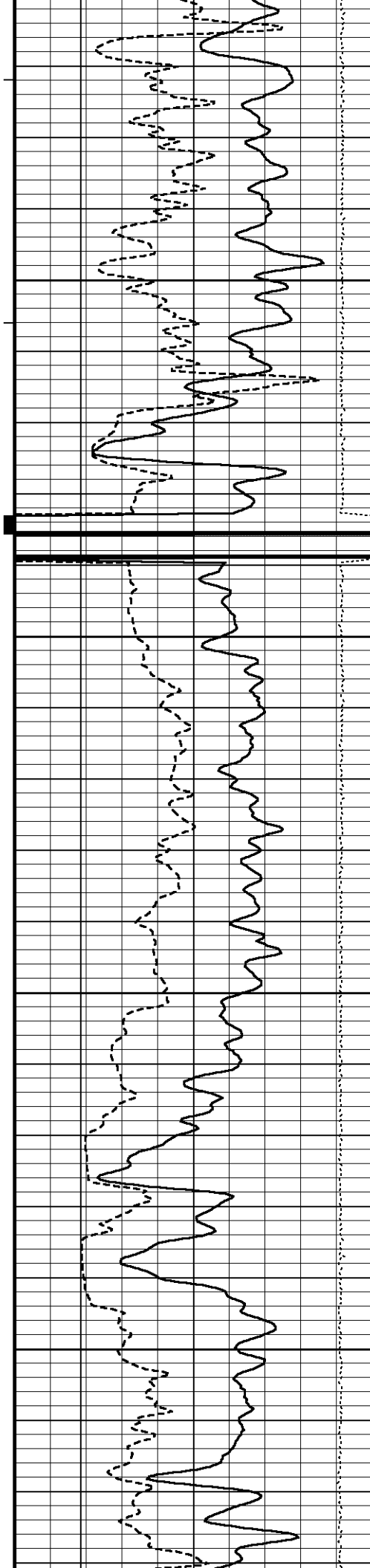
6' Transit Time

5' Transit Time

4' Transit Time

3' Transit Time





96°

1200

0°

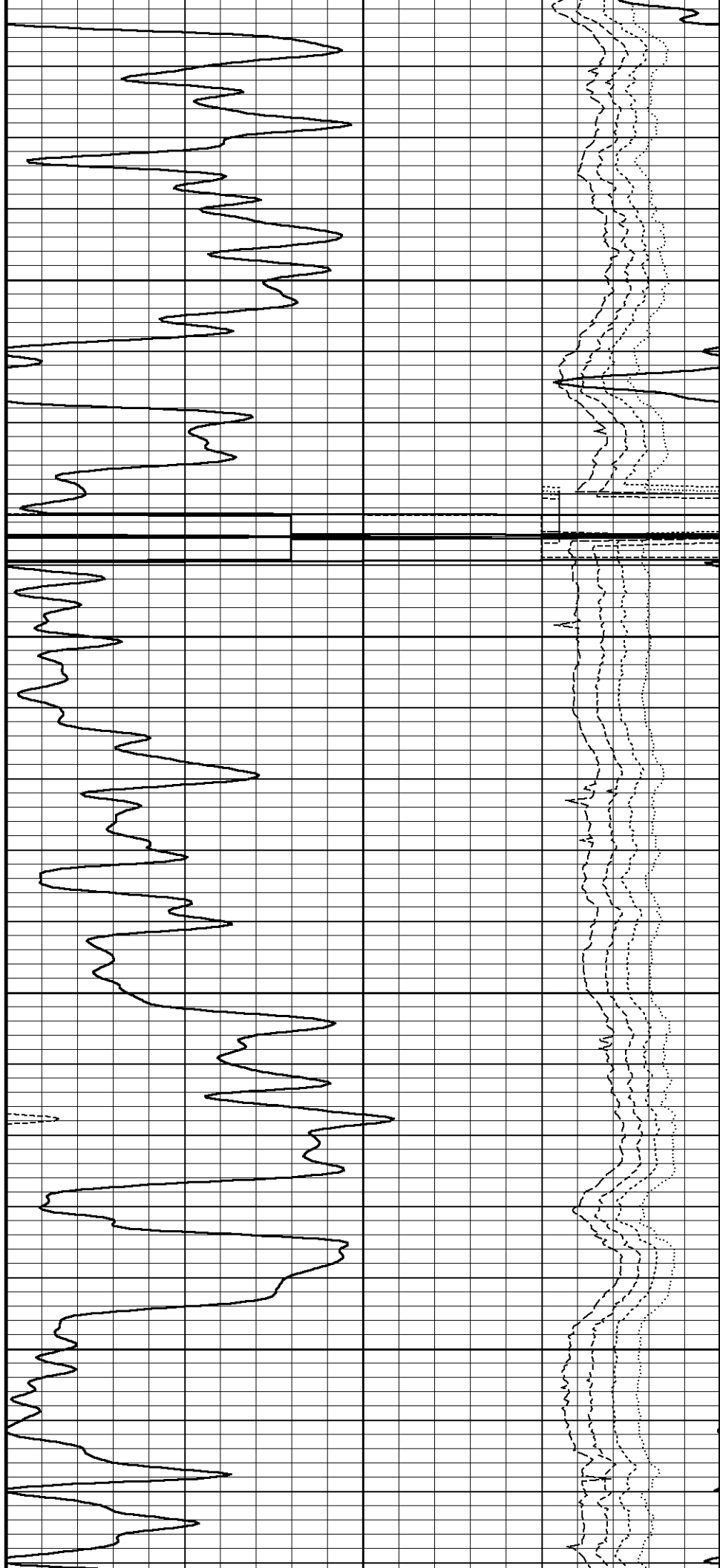
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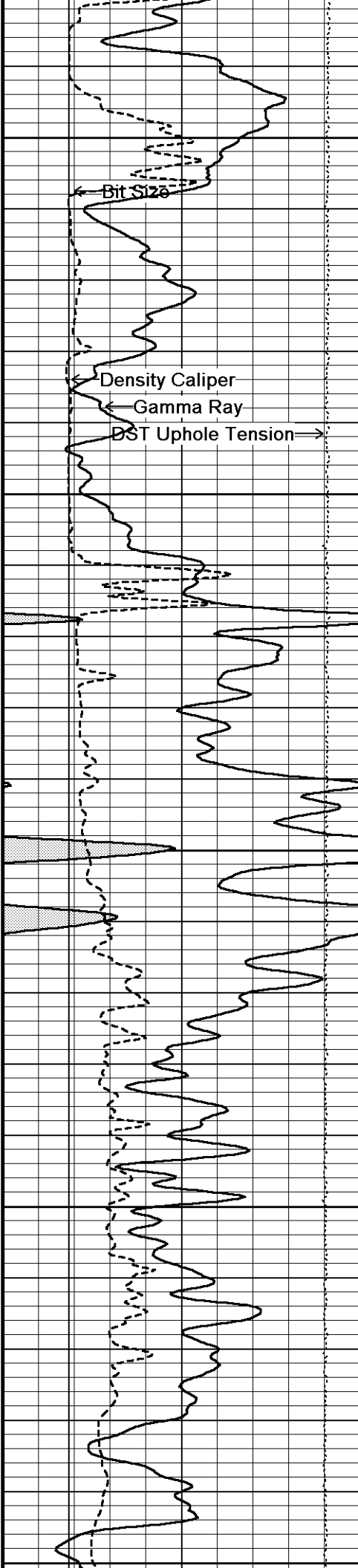
96°

1300

97°

1350





97°

1400

97°

1450

98°

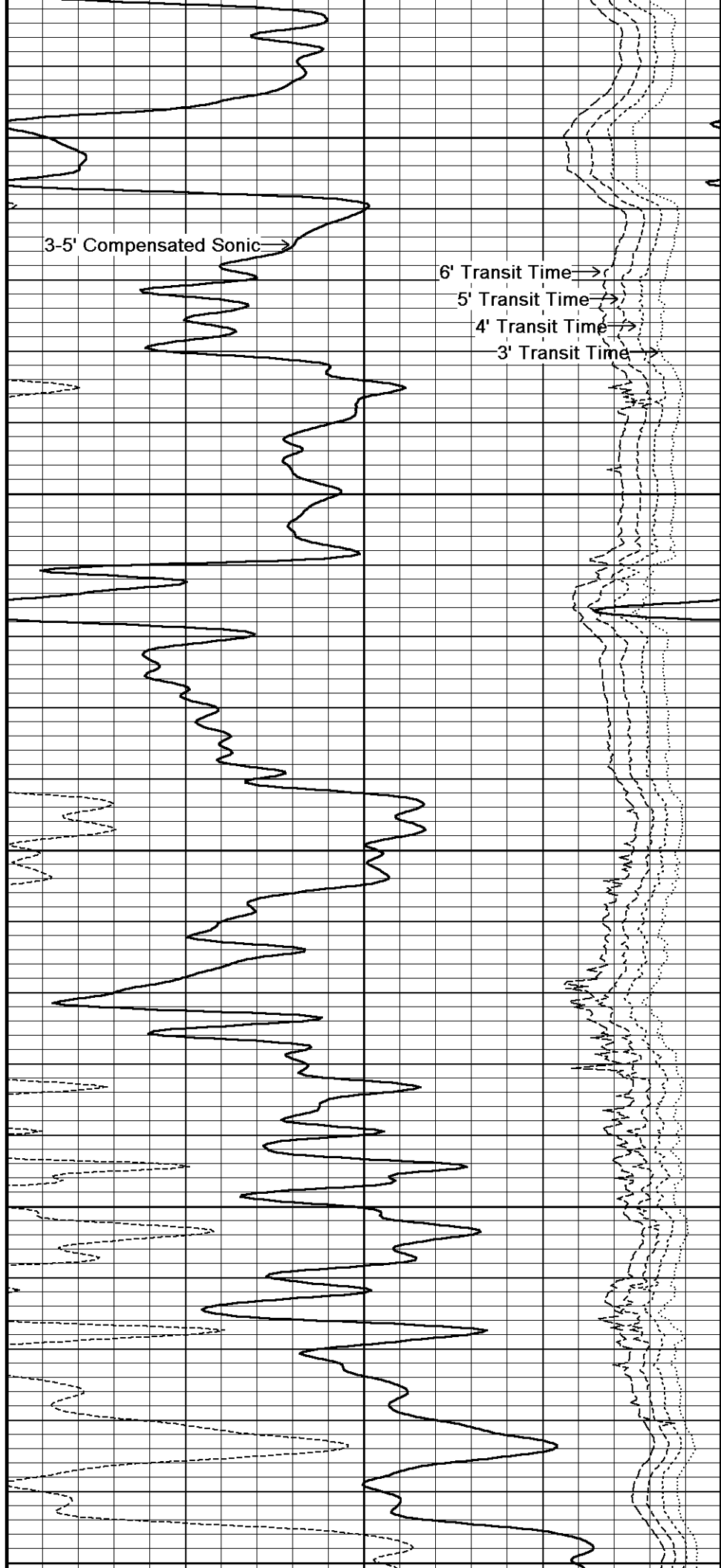
1500

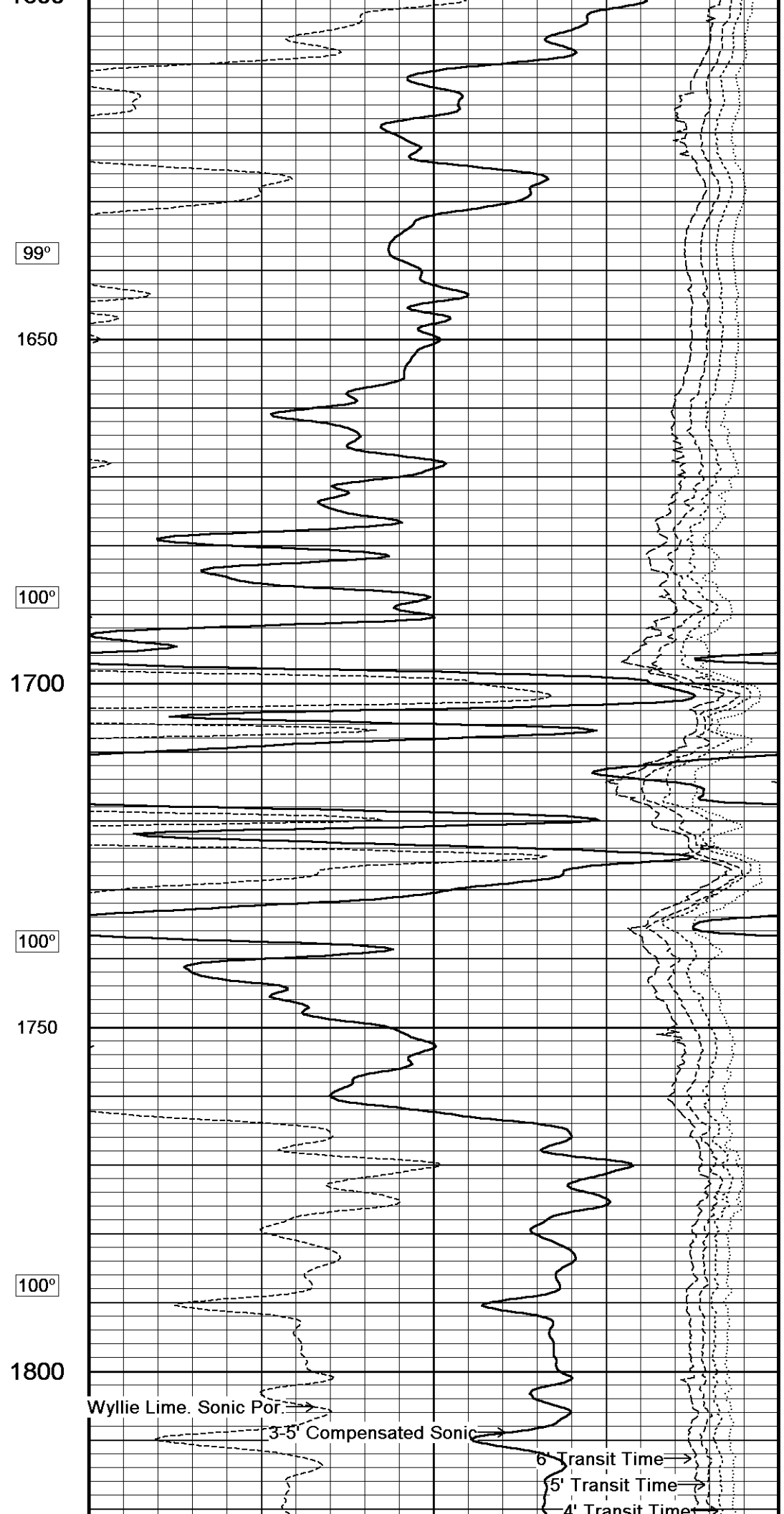
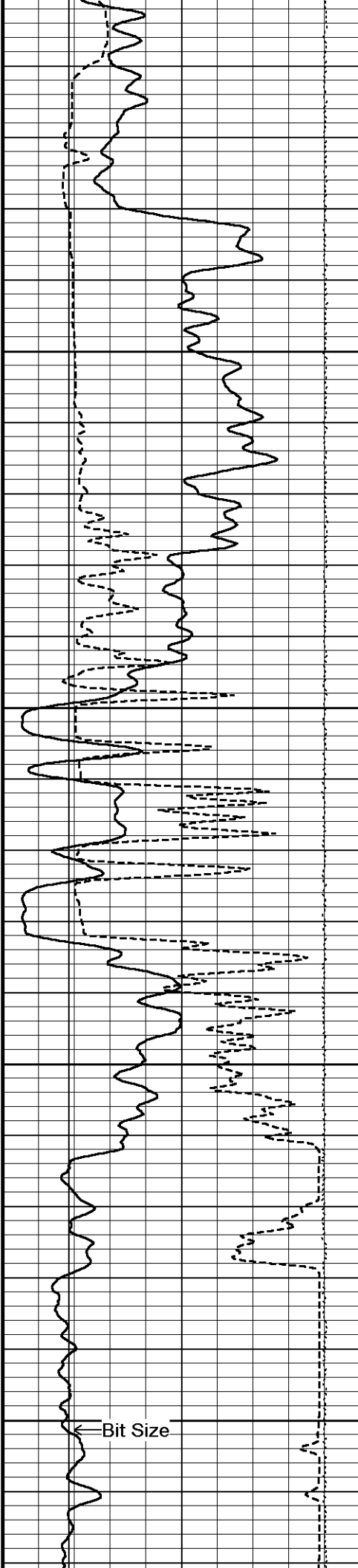
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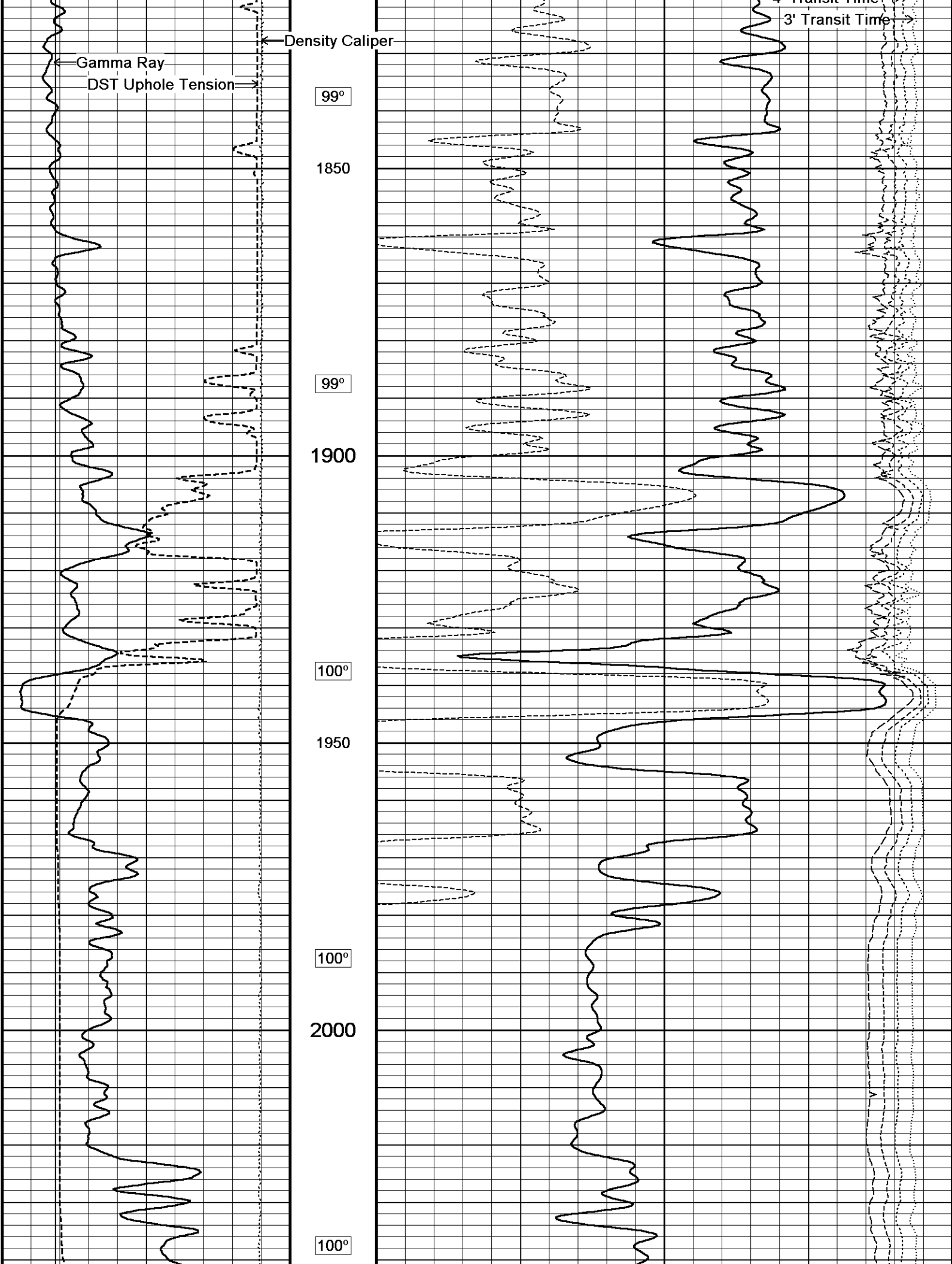
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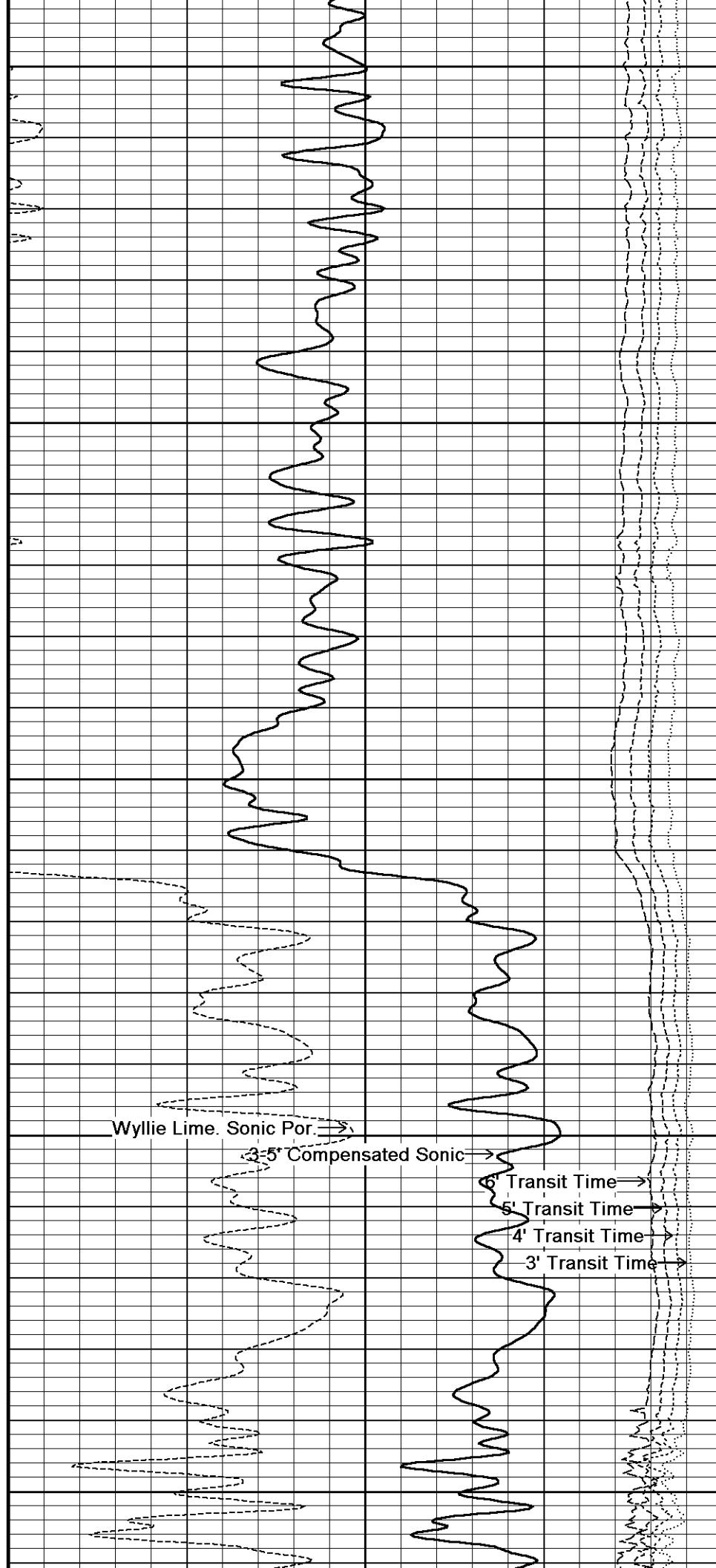
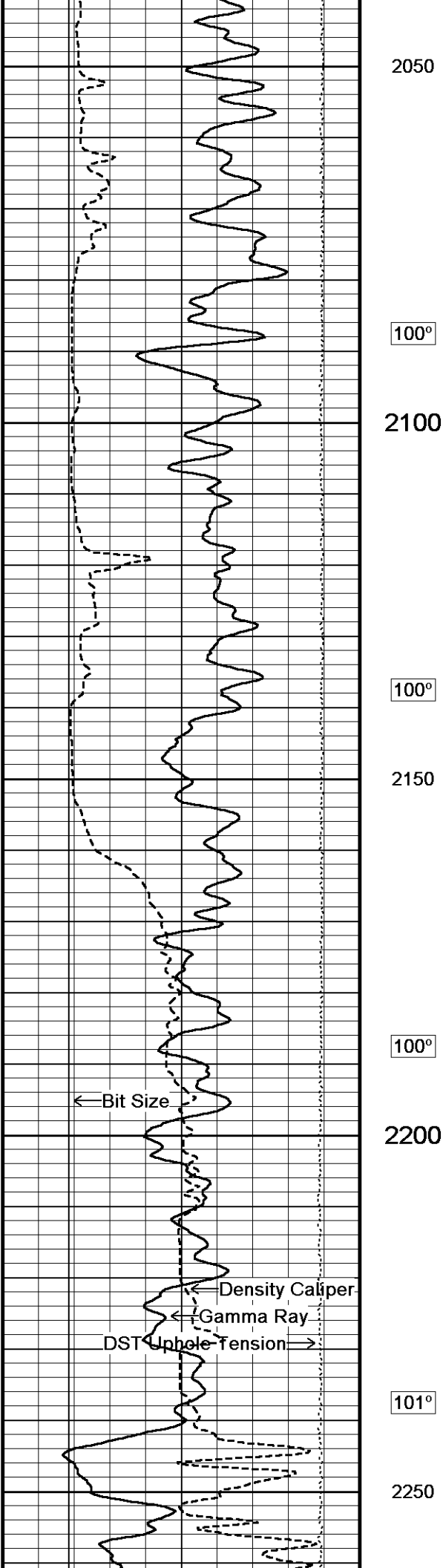
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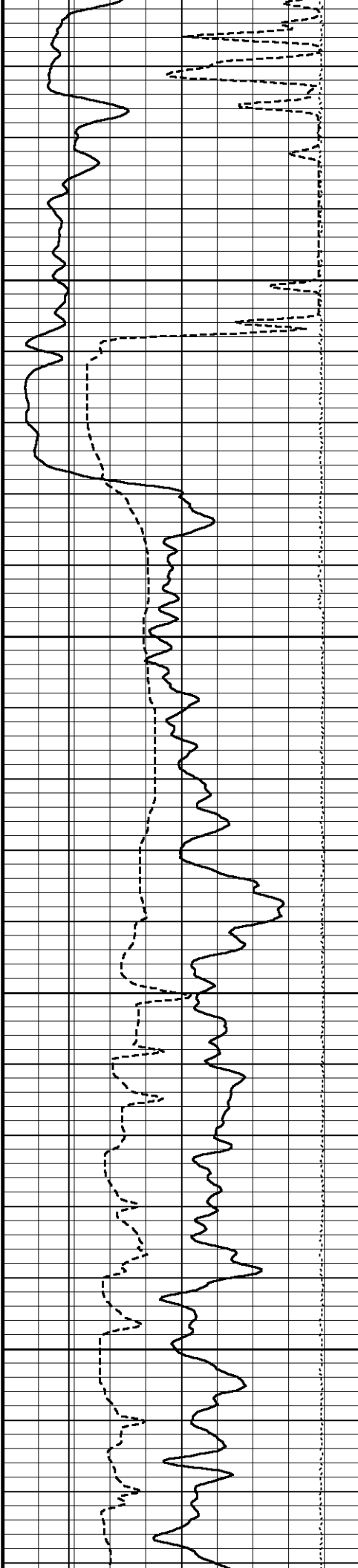
1600











101°

2300

101°

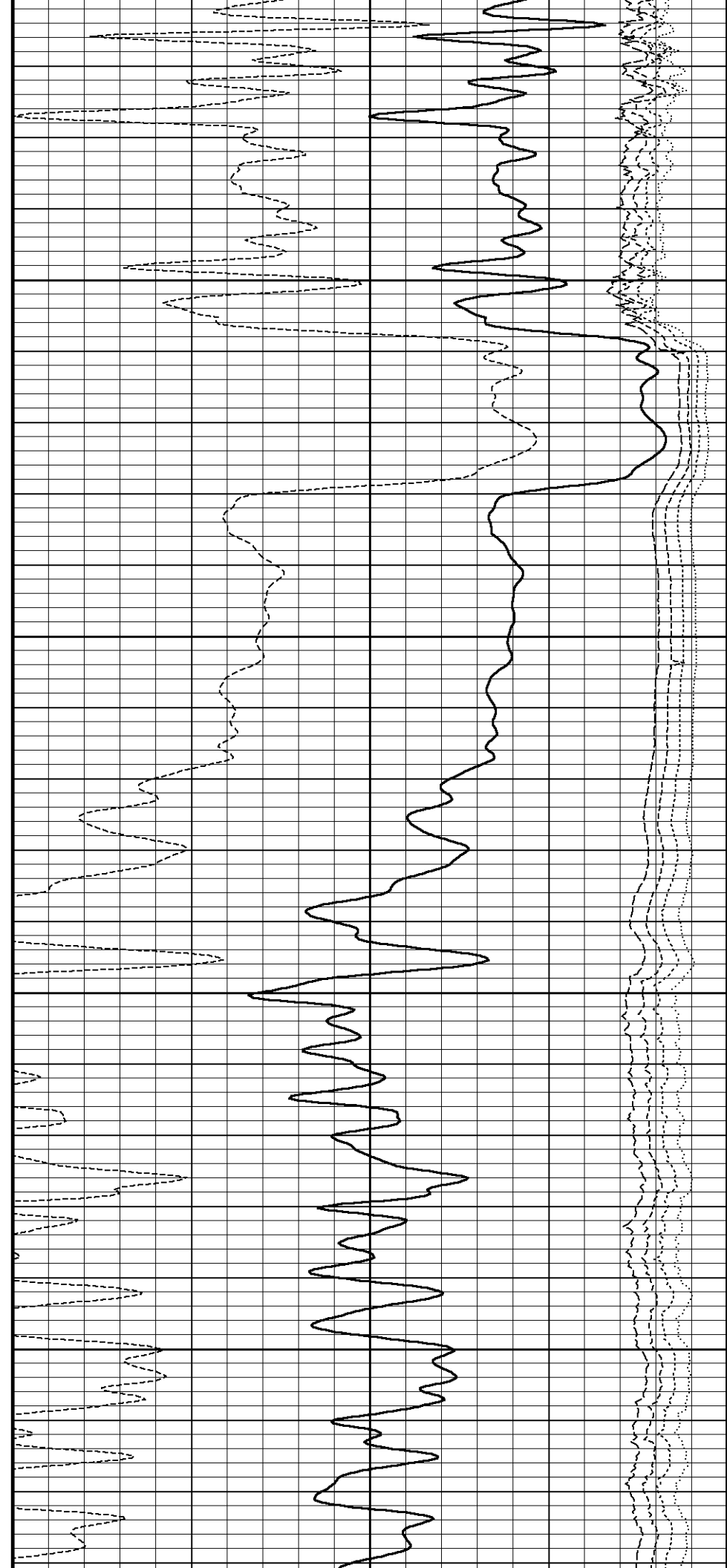
2350

101°

2400

101°

2450



102°

2500

102°

2550

102°

2600

102°

2650

102°

2700

← Bit Size

← Density Caliper

← Gamma Ray

DST Uphole Tension →

Wyllie Lime. Sonic Por. →

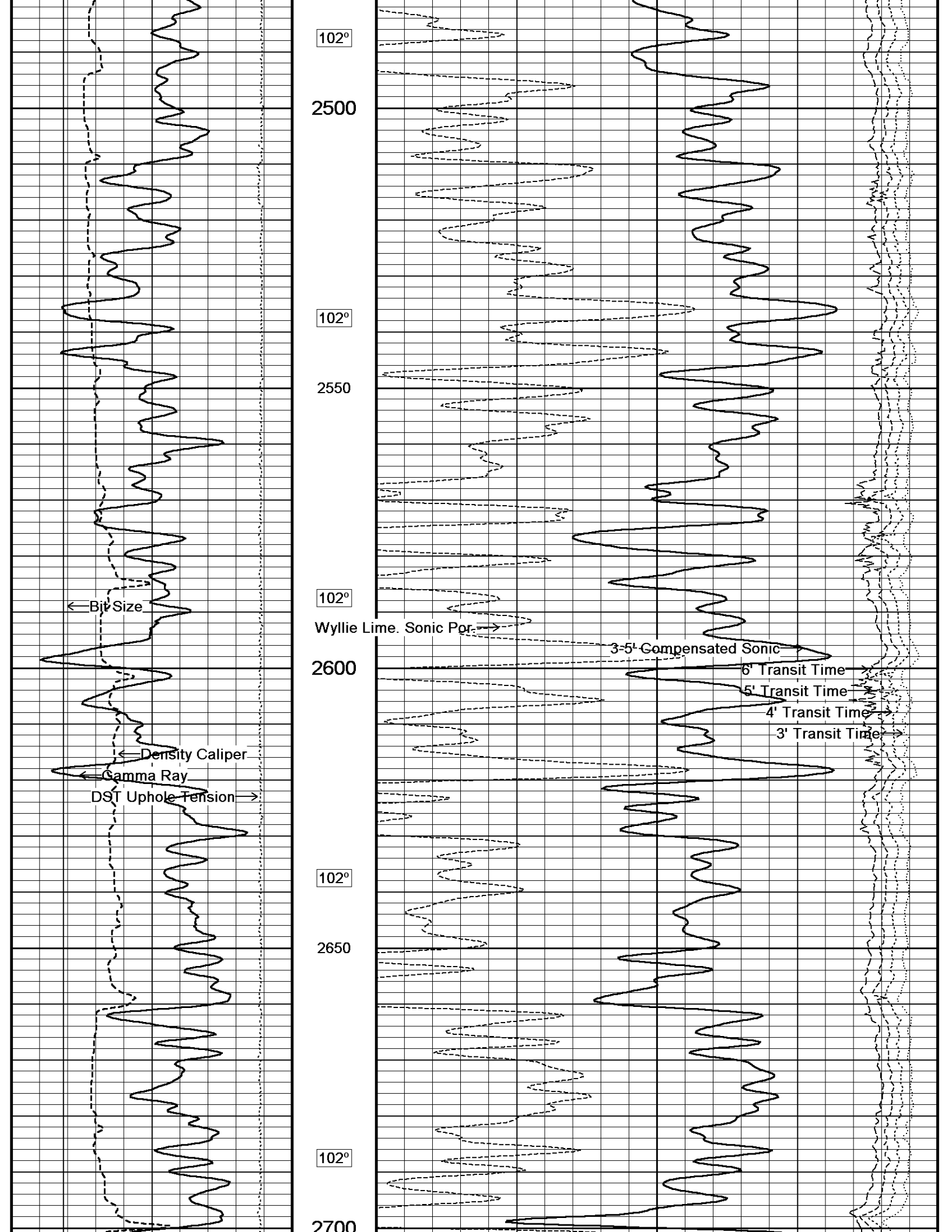
3-5' Compensated Sonic

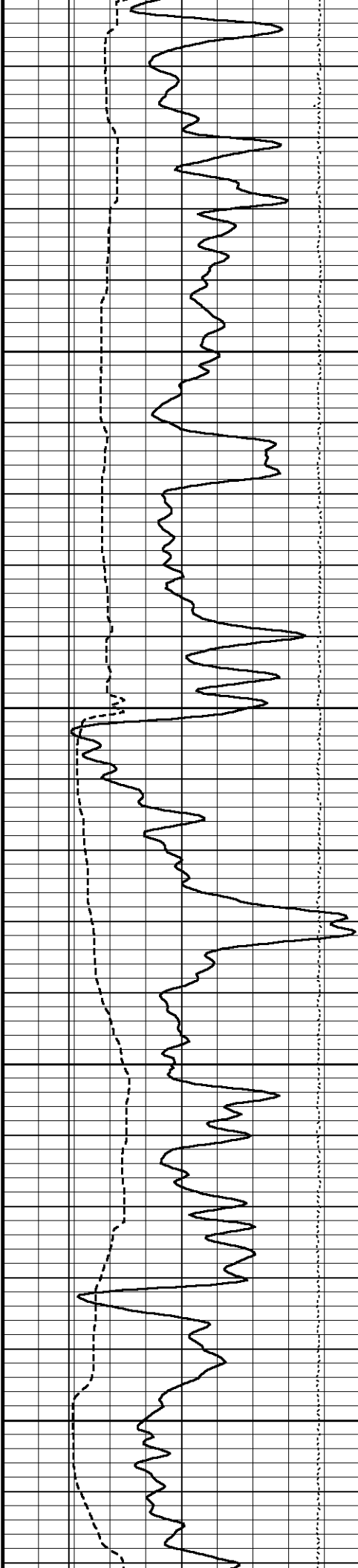
6' Transit Time →

5' Transit Time →

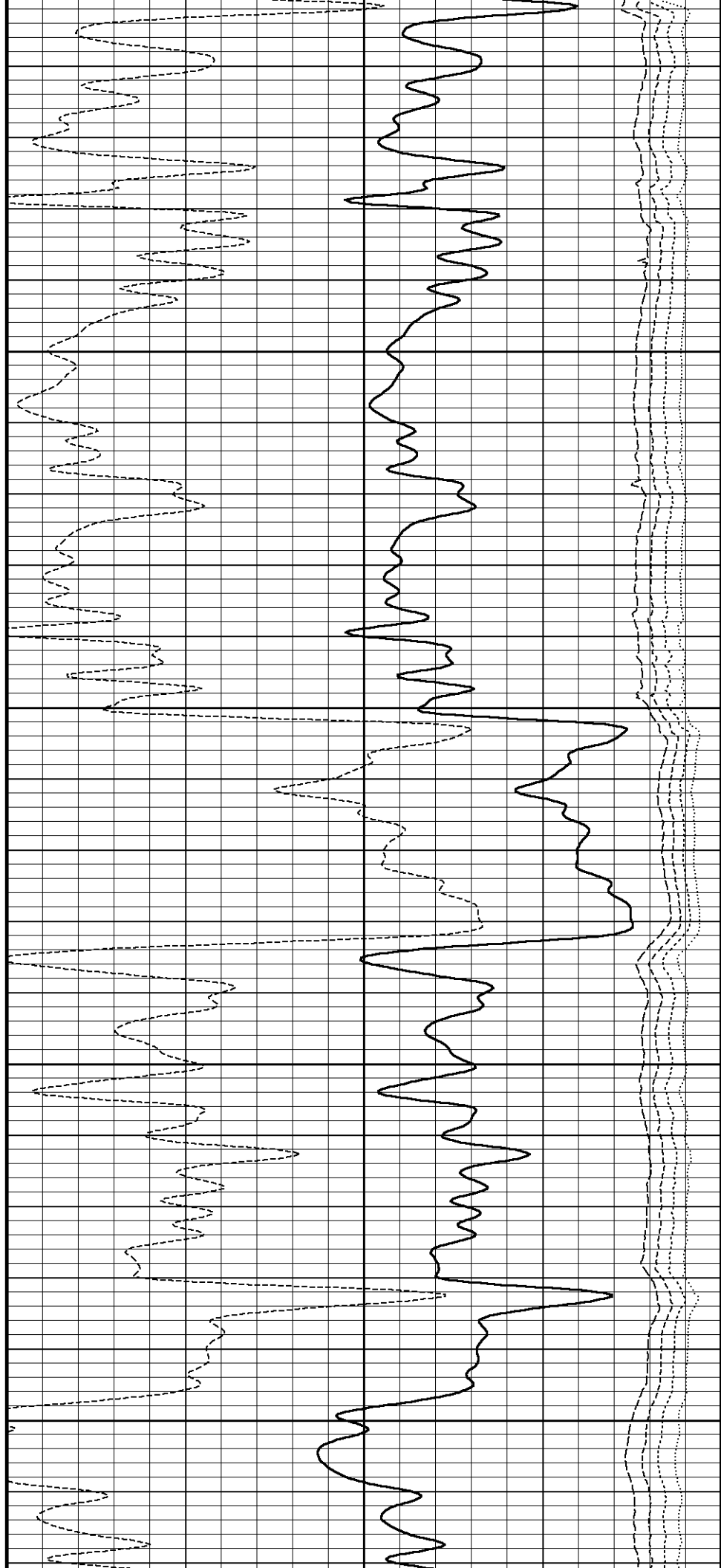
4' Transit Time →

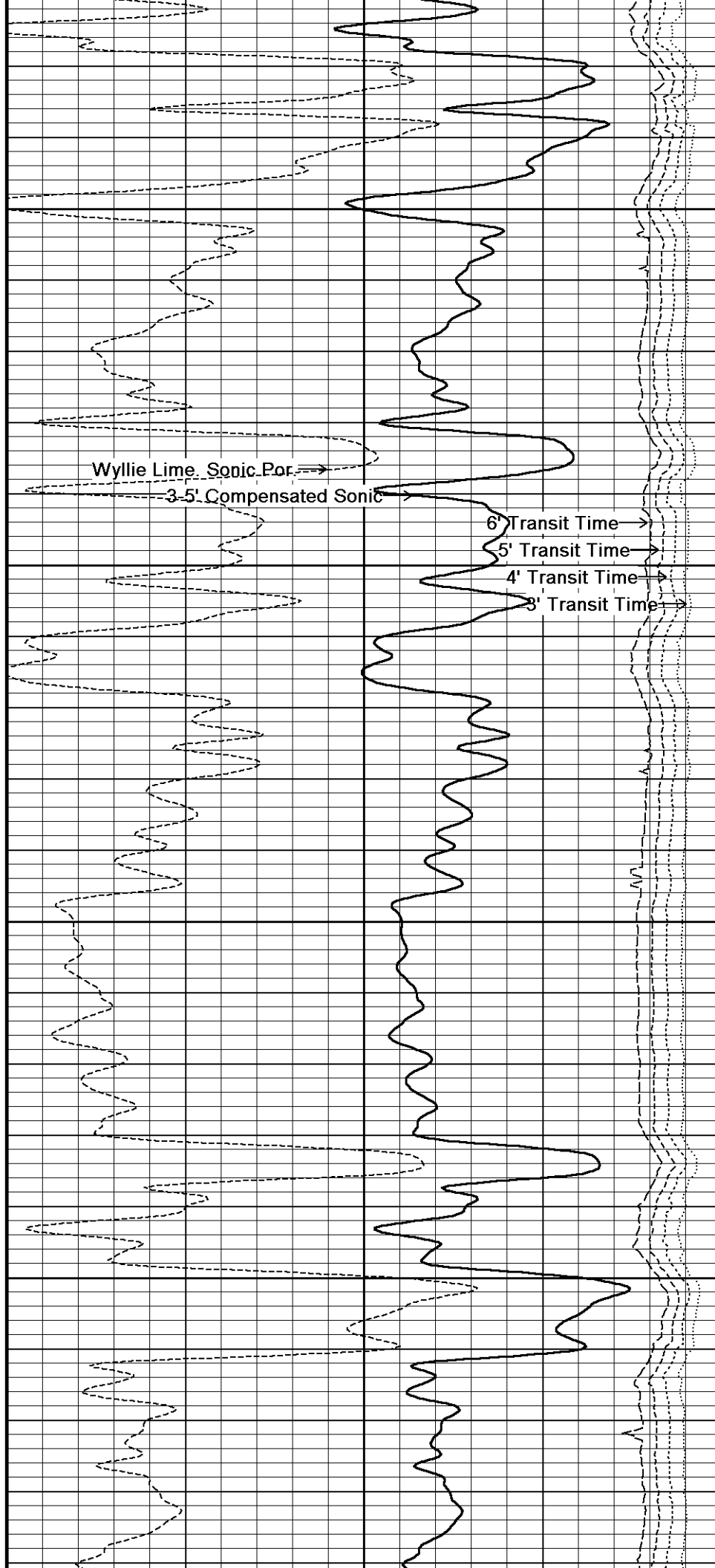
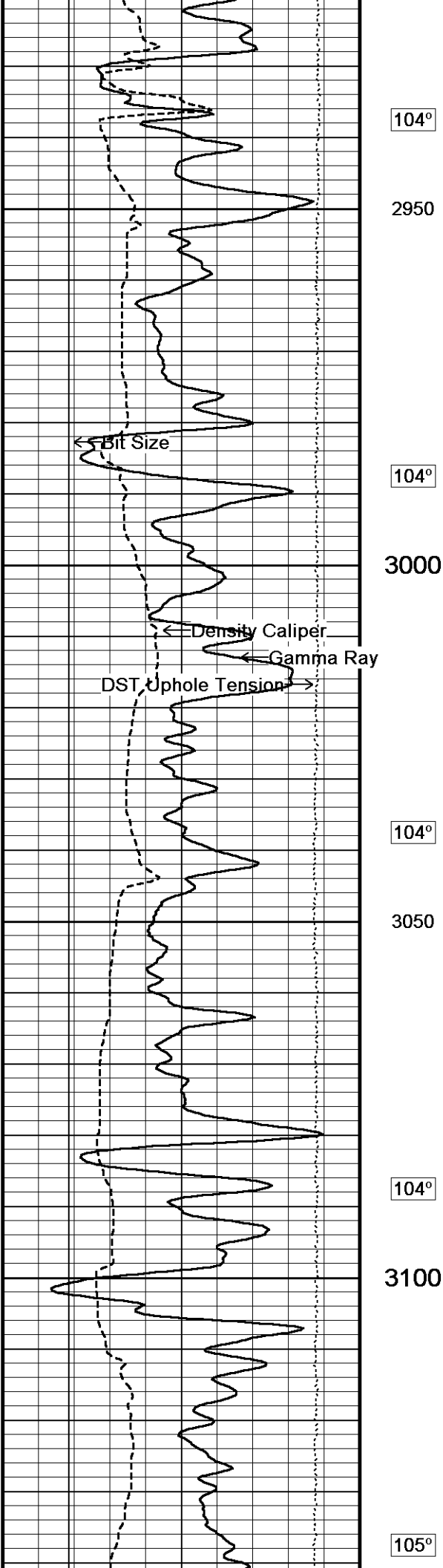
3' Transit Time →

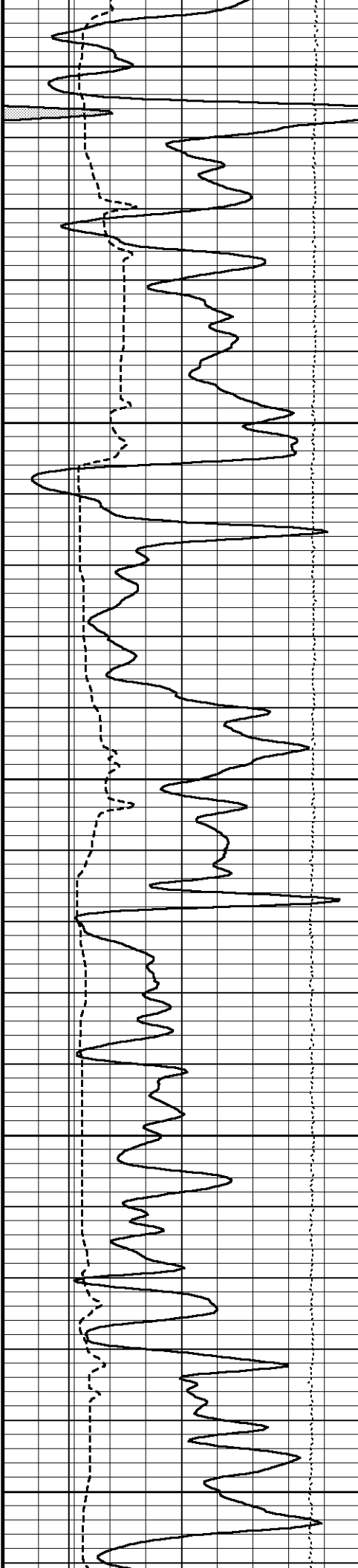




2730  
103°  
2750  
103°  
2800  
103°  
2850  
103°  
2900







3150

105°

3200

105°

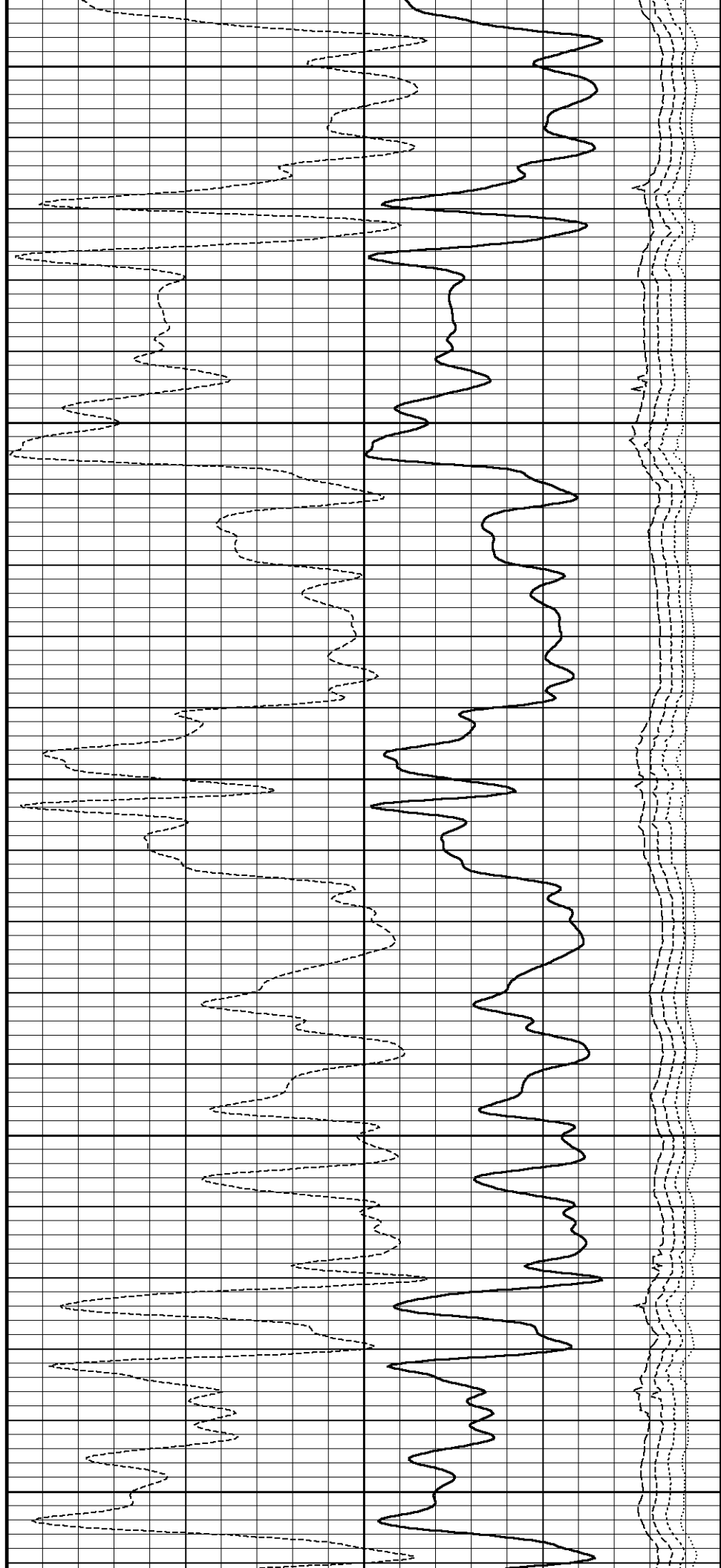
3250

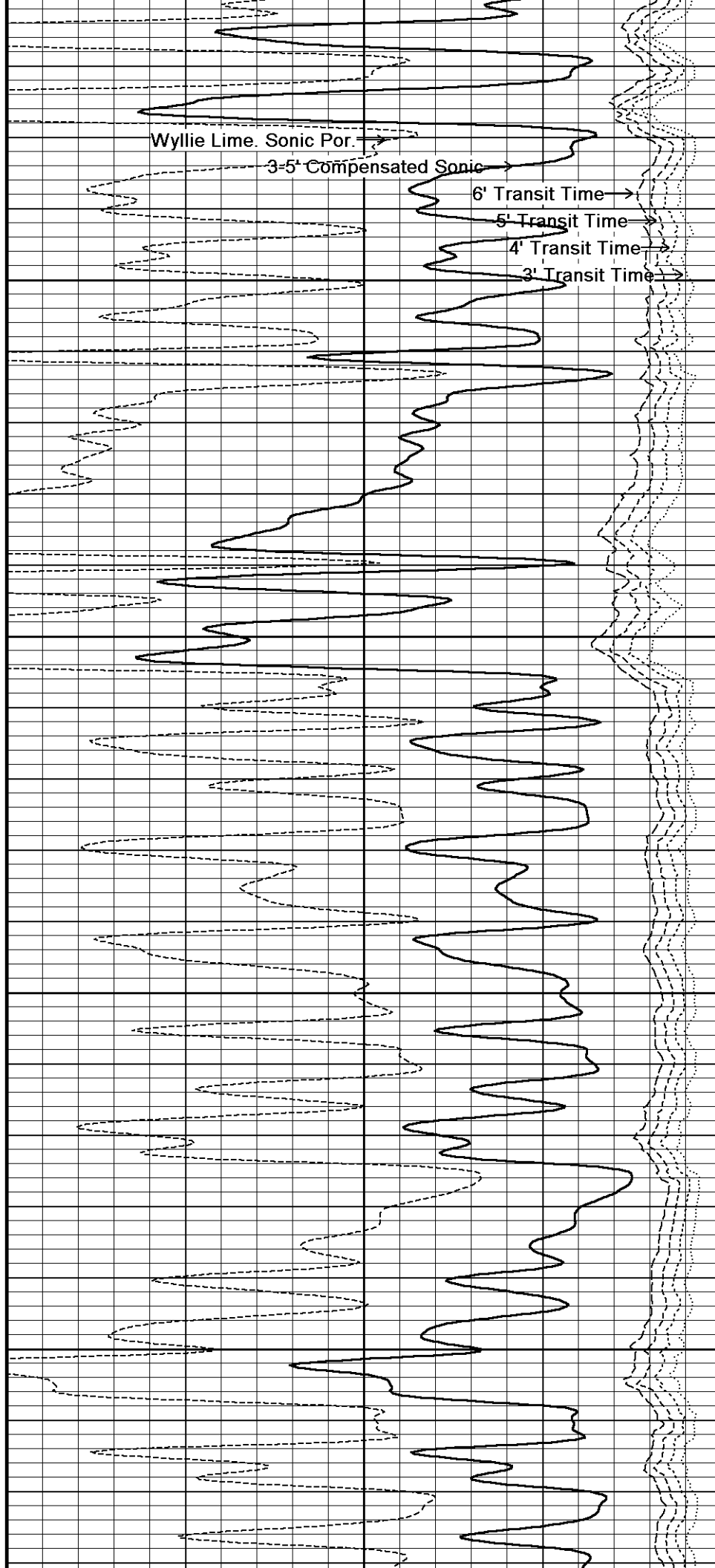
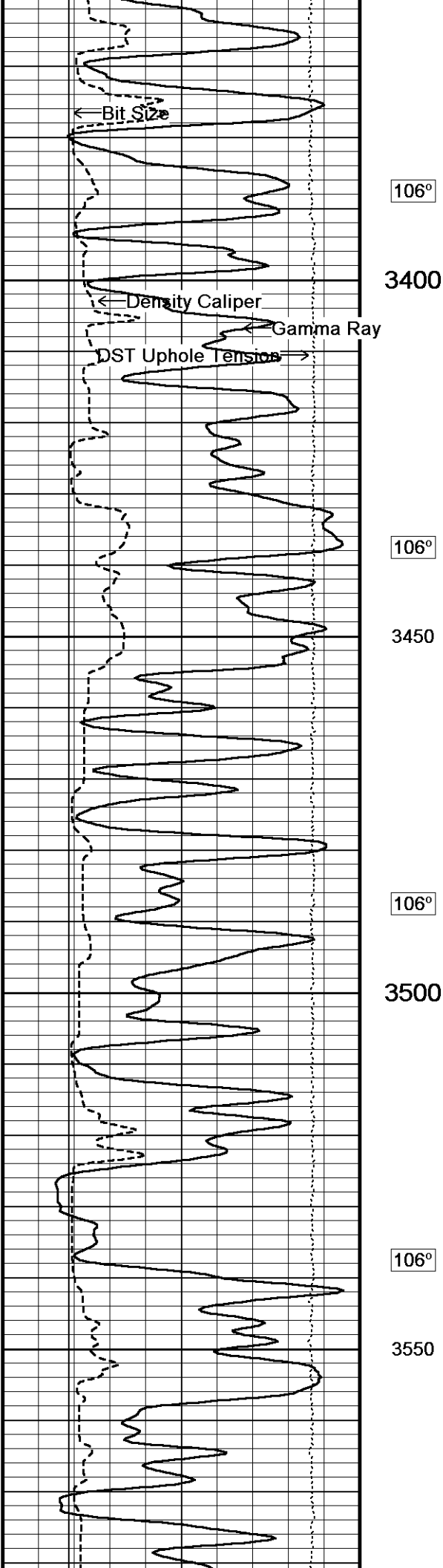
105°

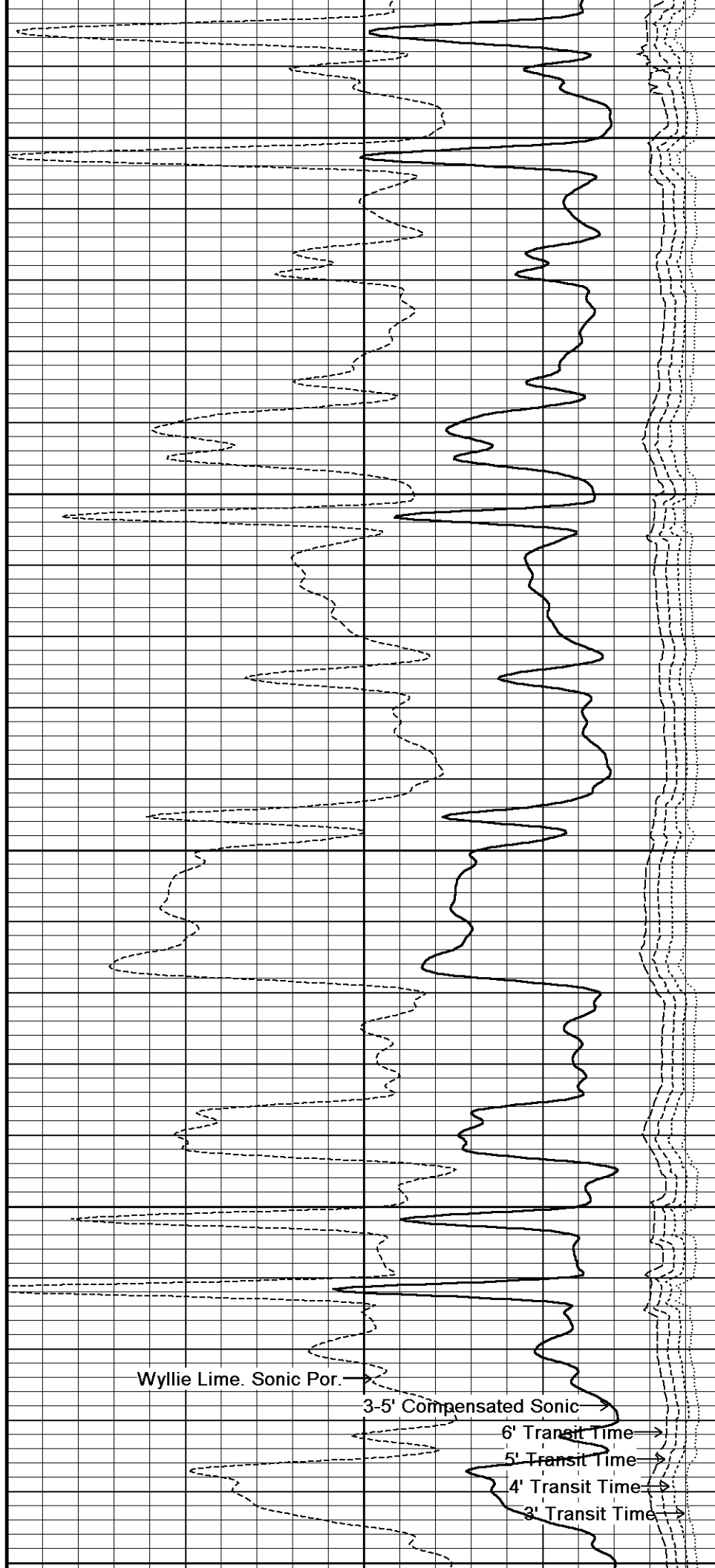
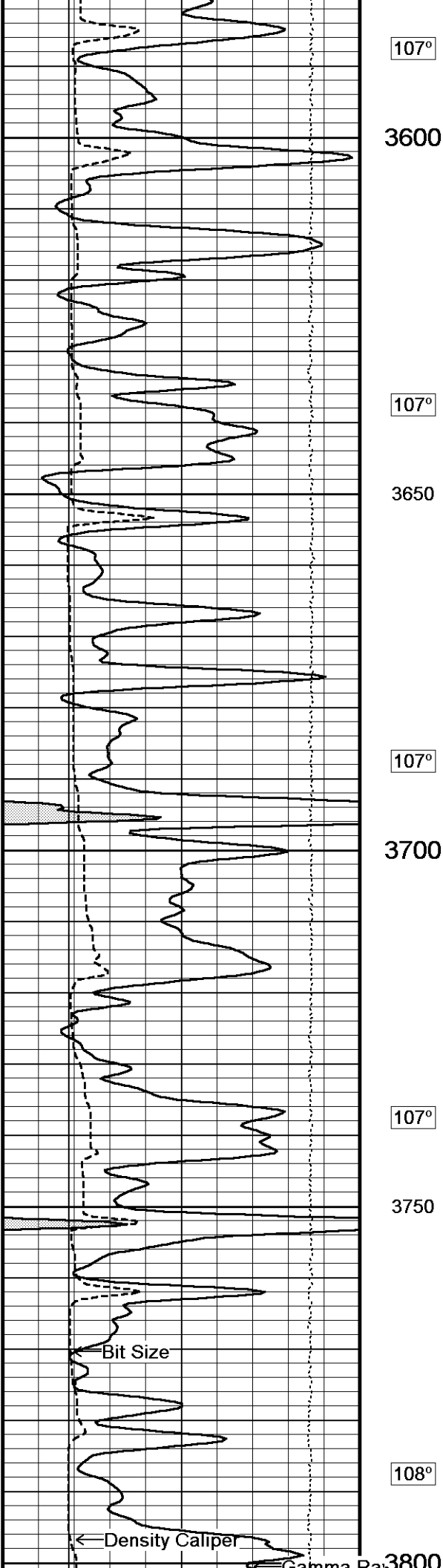
3300

105°

3350







Calima Ra 5550

DST Uphole Tension →

108°

3850

108°

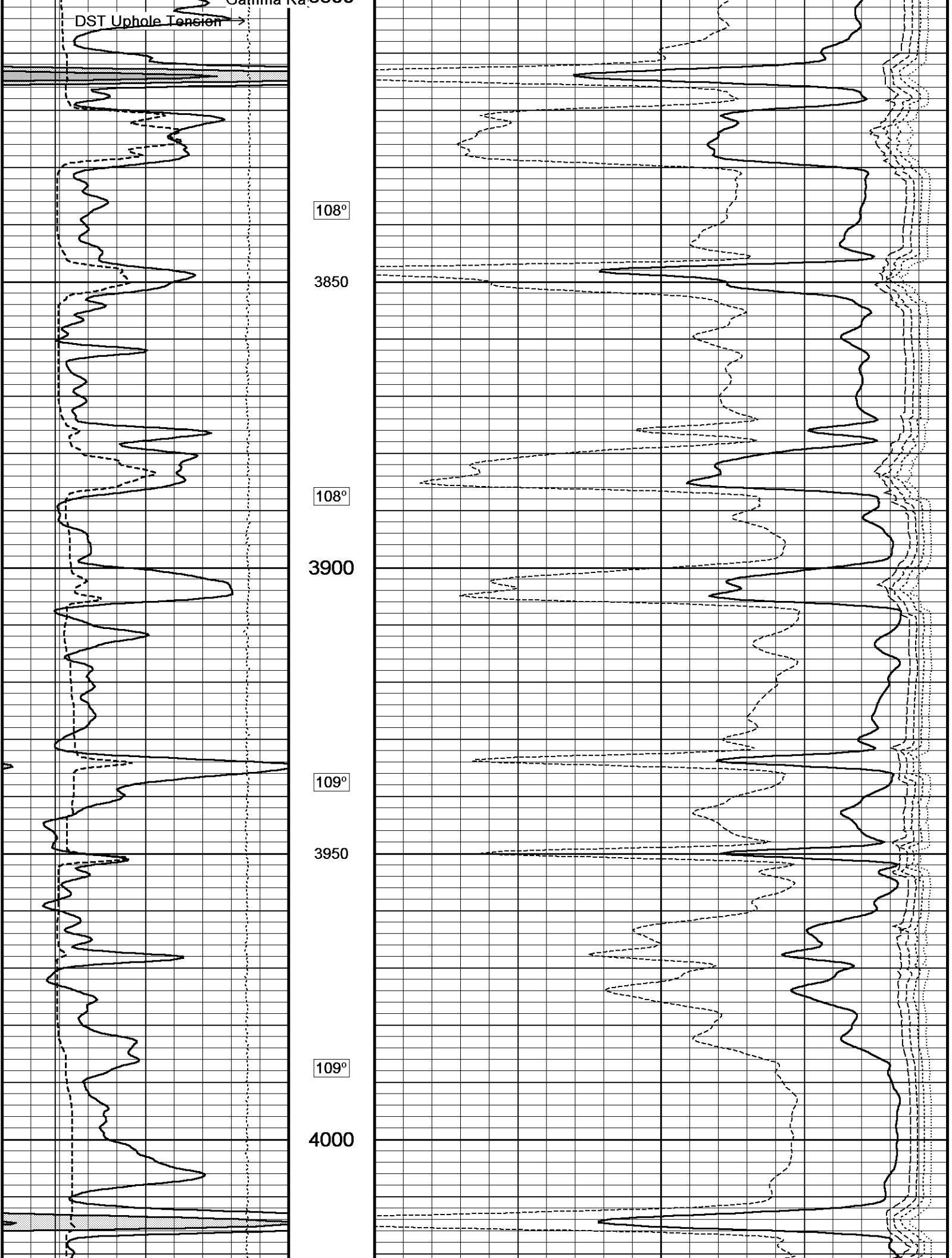
3900

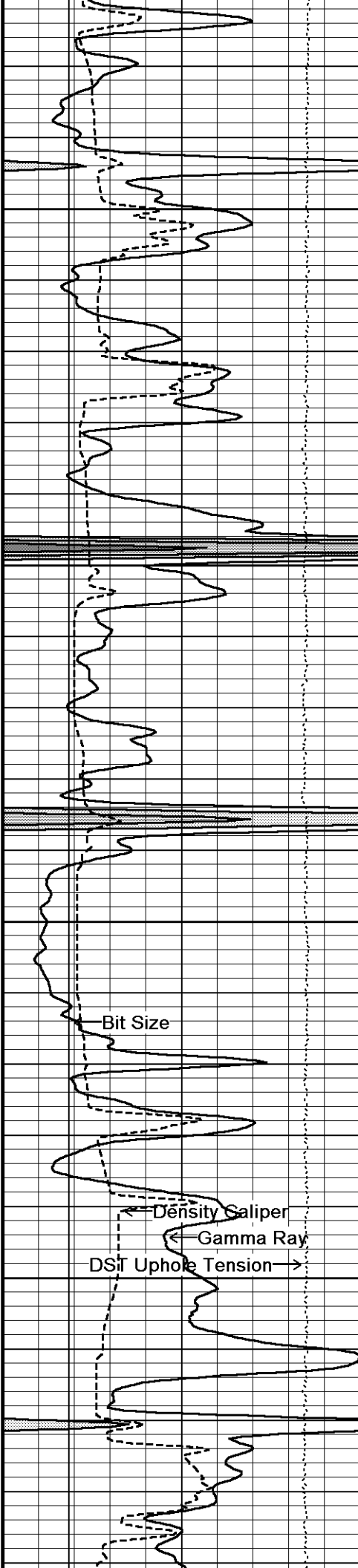
109°

3950

109°

4000





109°

4050

109°

4100

110°

4150

Bit Size

Density Caliper

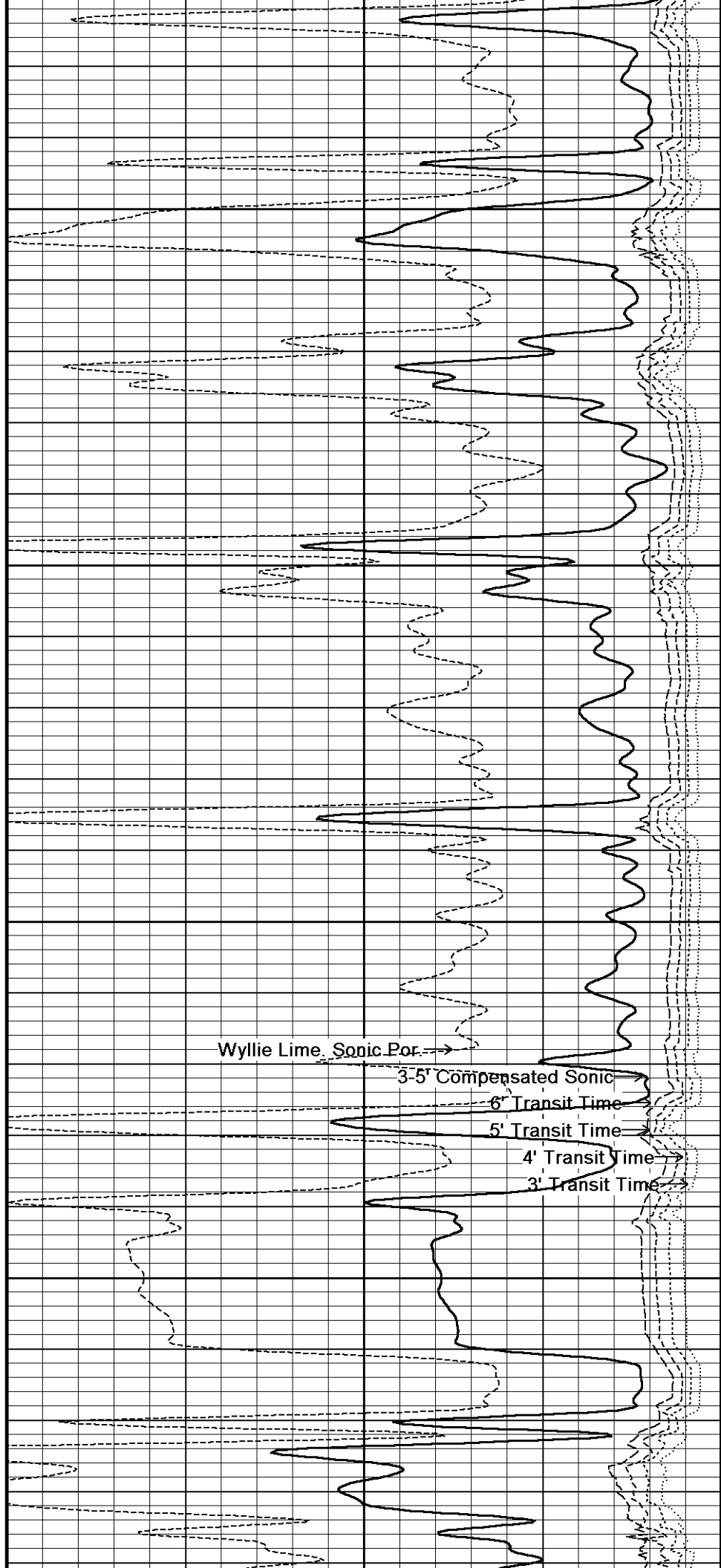
Gamma Ray

DSIT Uphole Tension

110°

4200

110°



Wyllie Lime, Sonic Por.

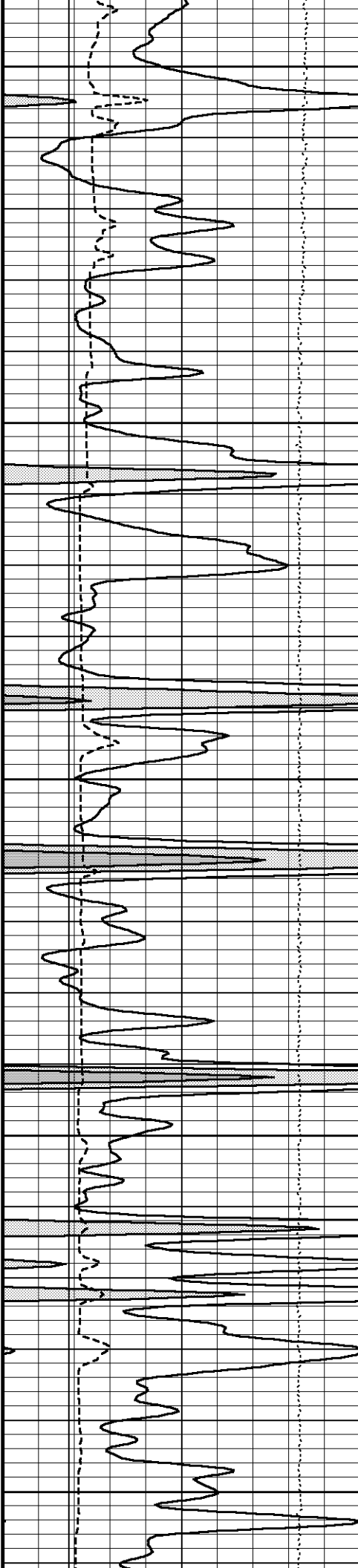
3-5' Compensated Sonic

6' Transit Time

5' Transit Time

4' Transit Time

3' Transit Time



4250

110°

4300

111°

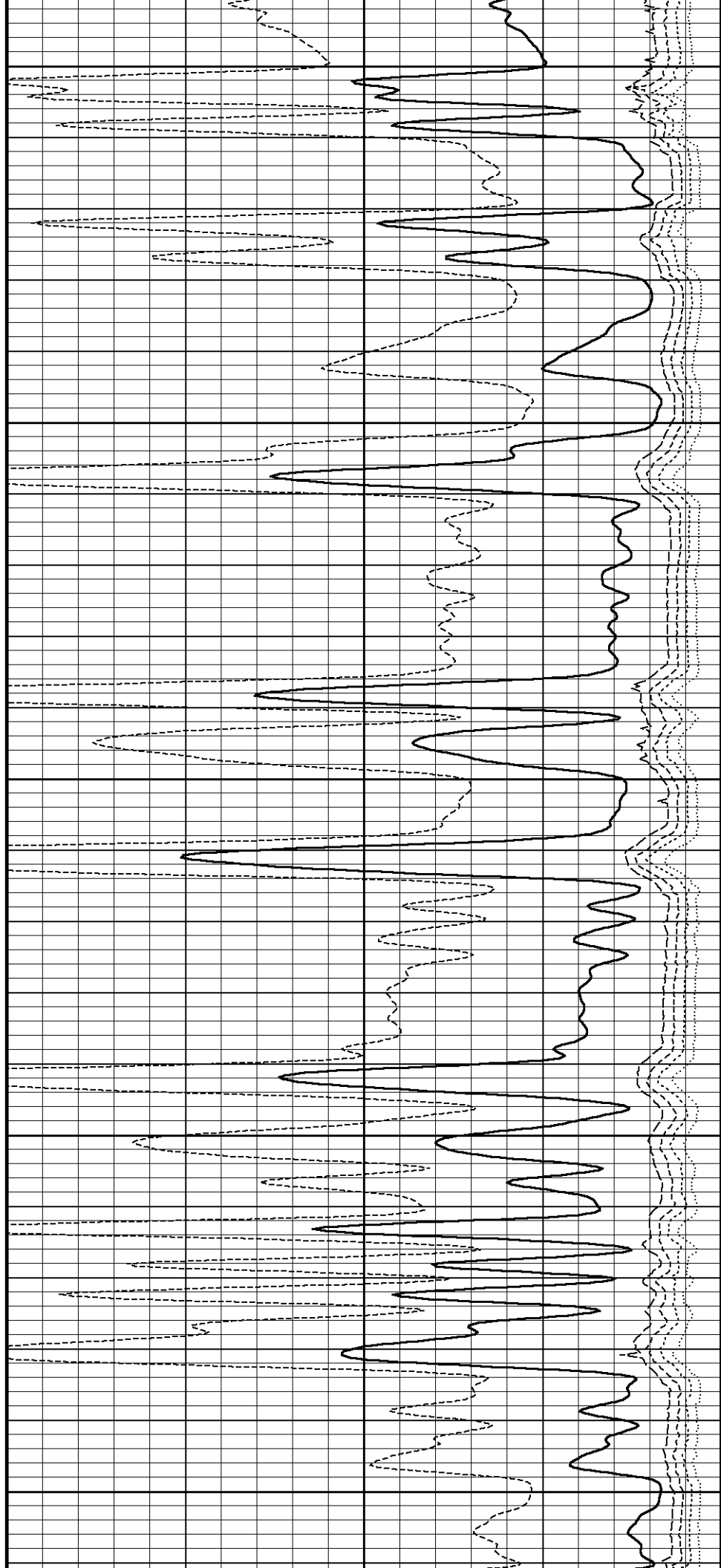
4350

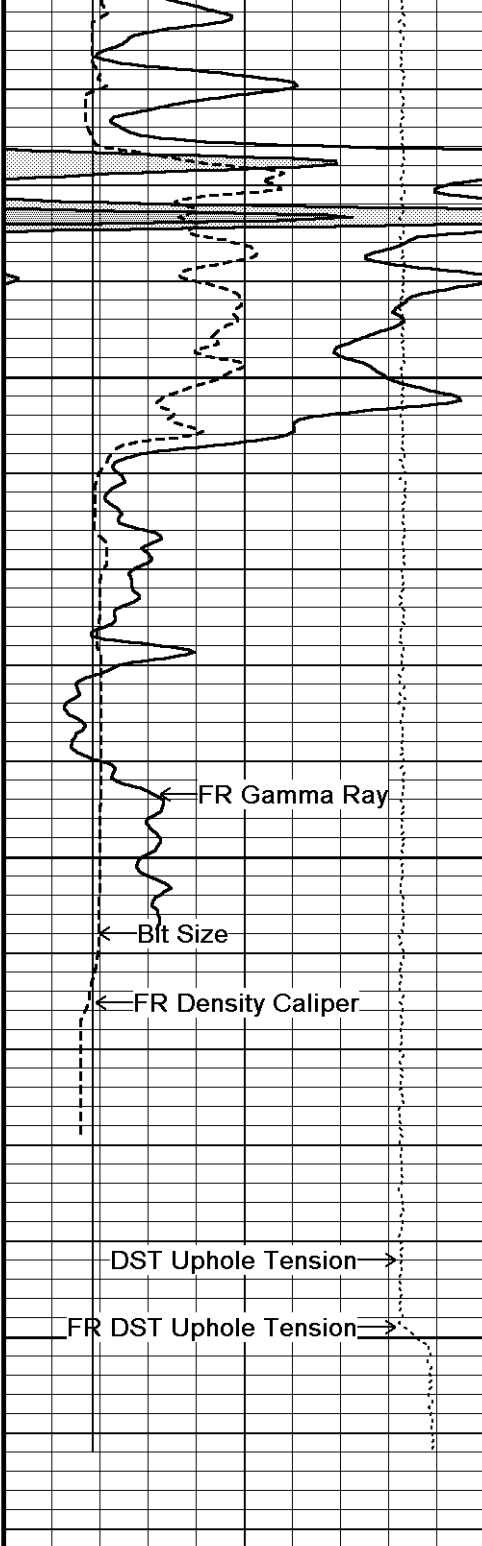
111°

4400

111°

4450





112°

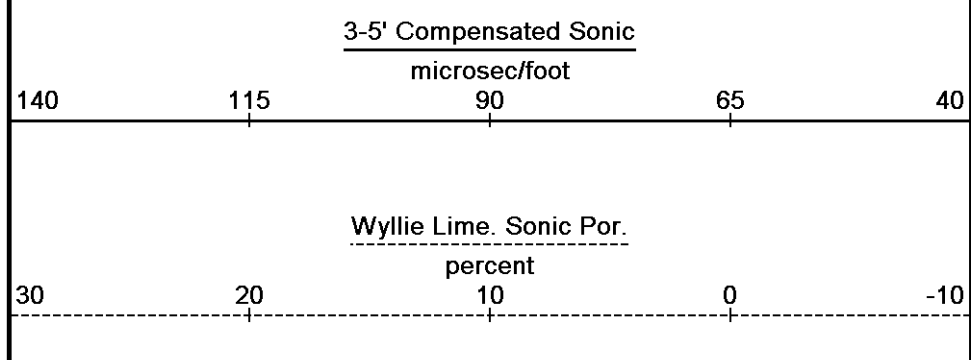
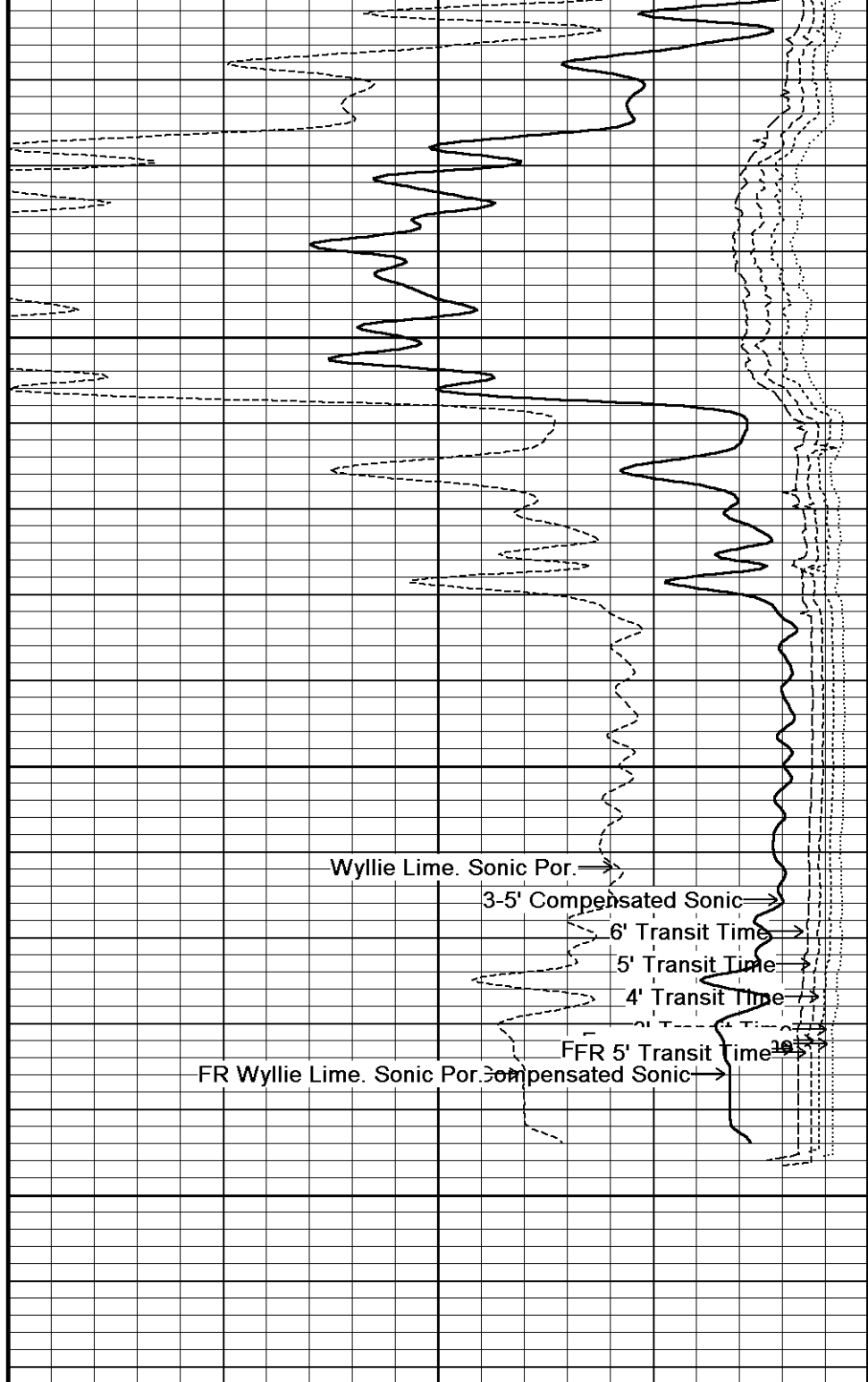
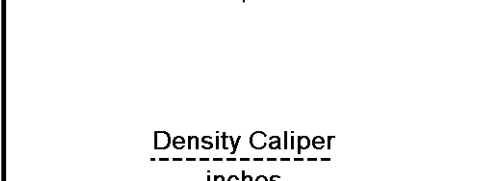
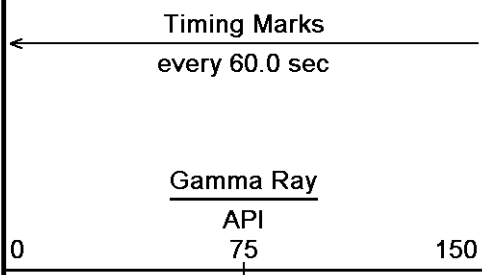
4500

111°

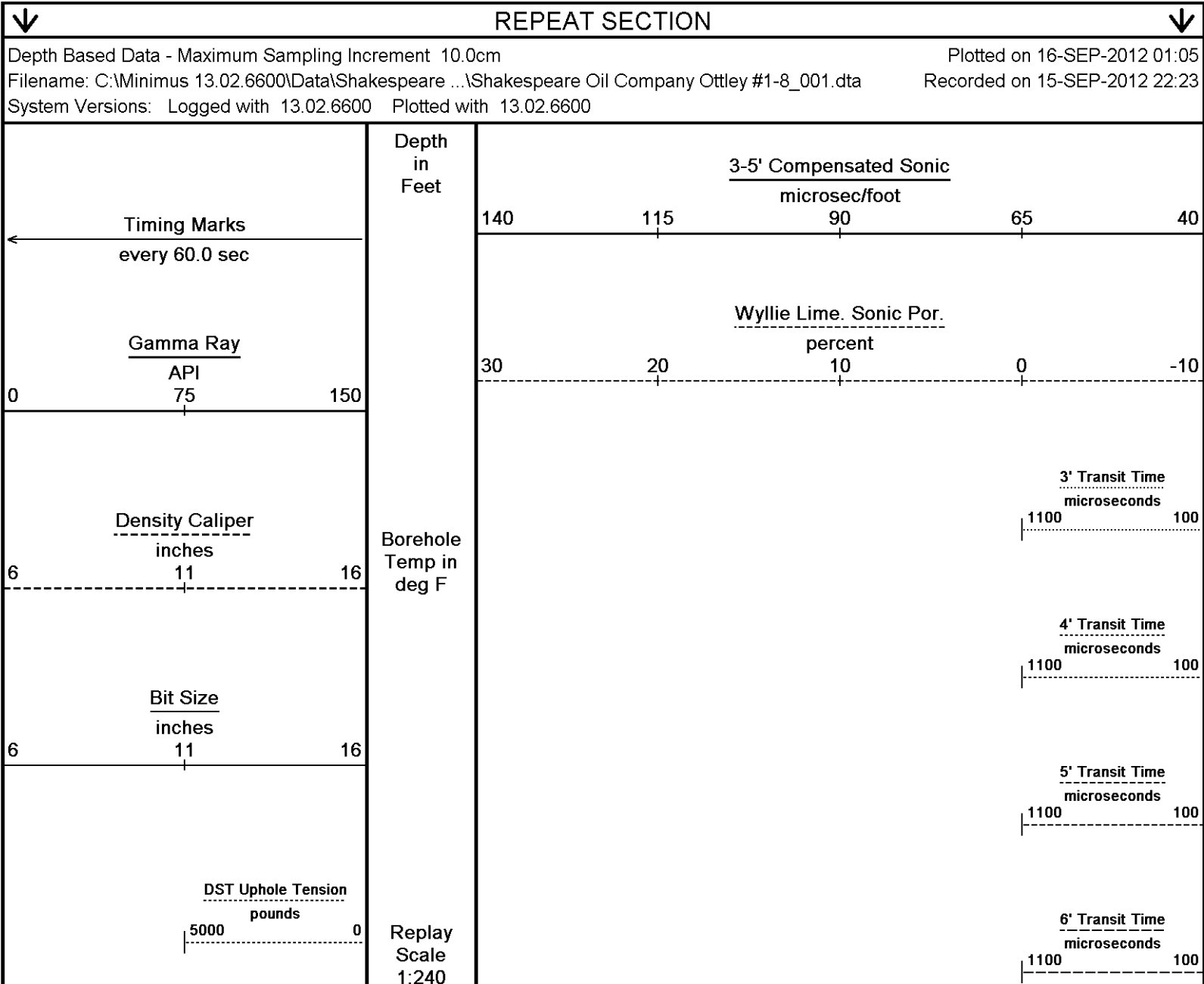
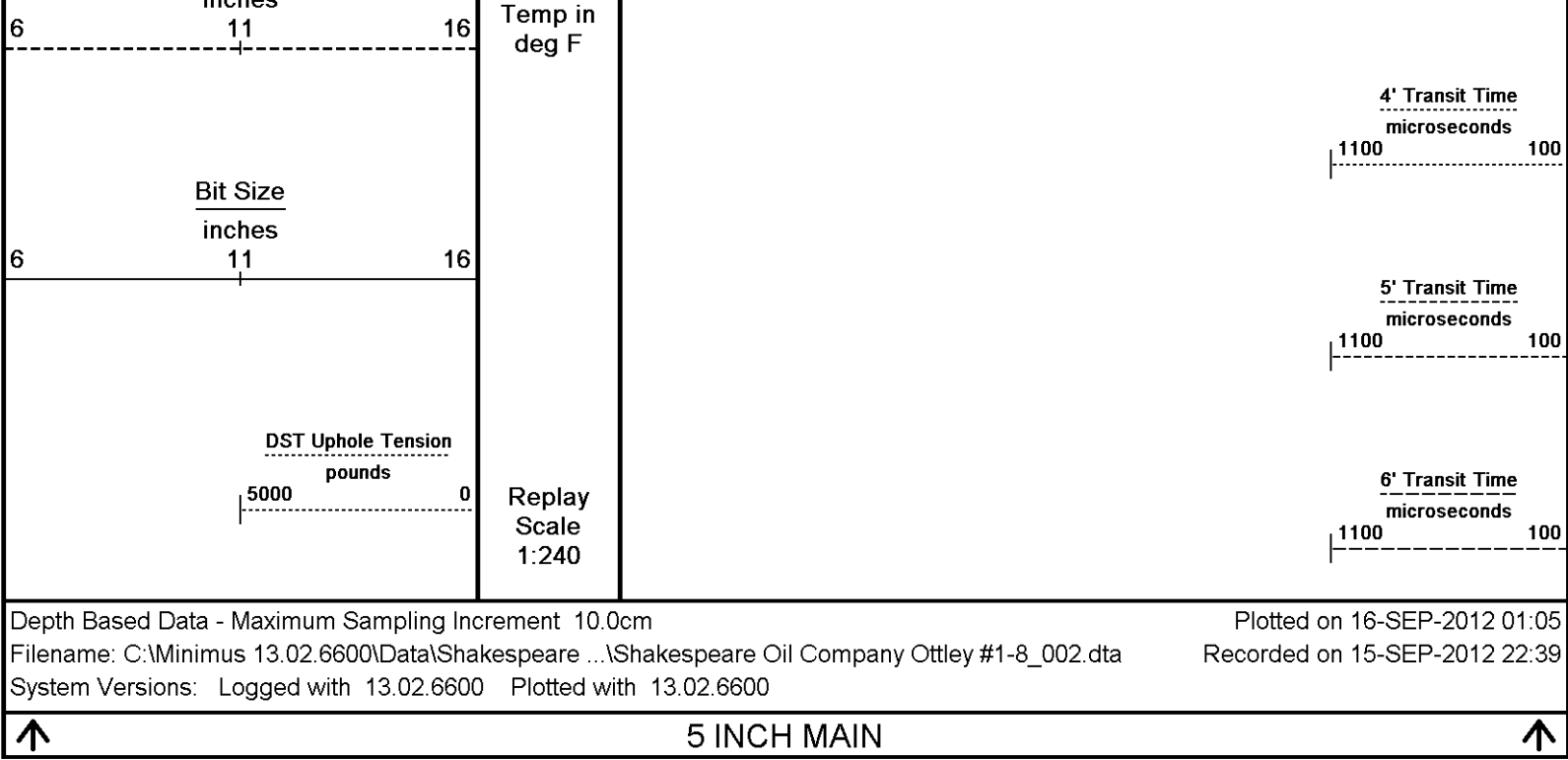
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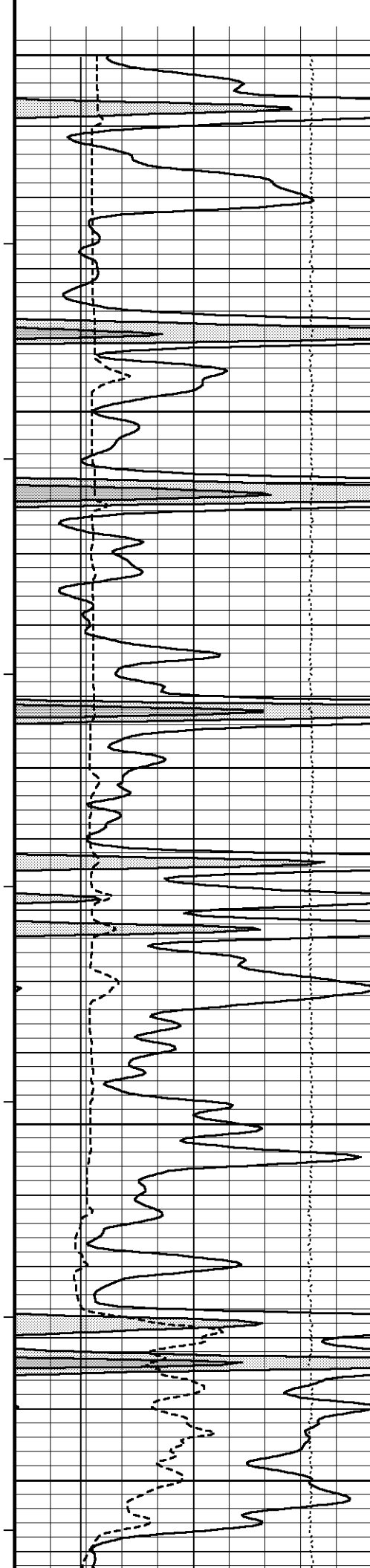
4600

4620  
Depth  
in  
Feet



Borehole





4300

110°

4350

110°

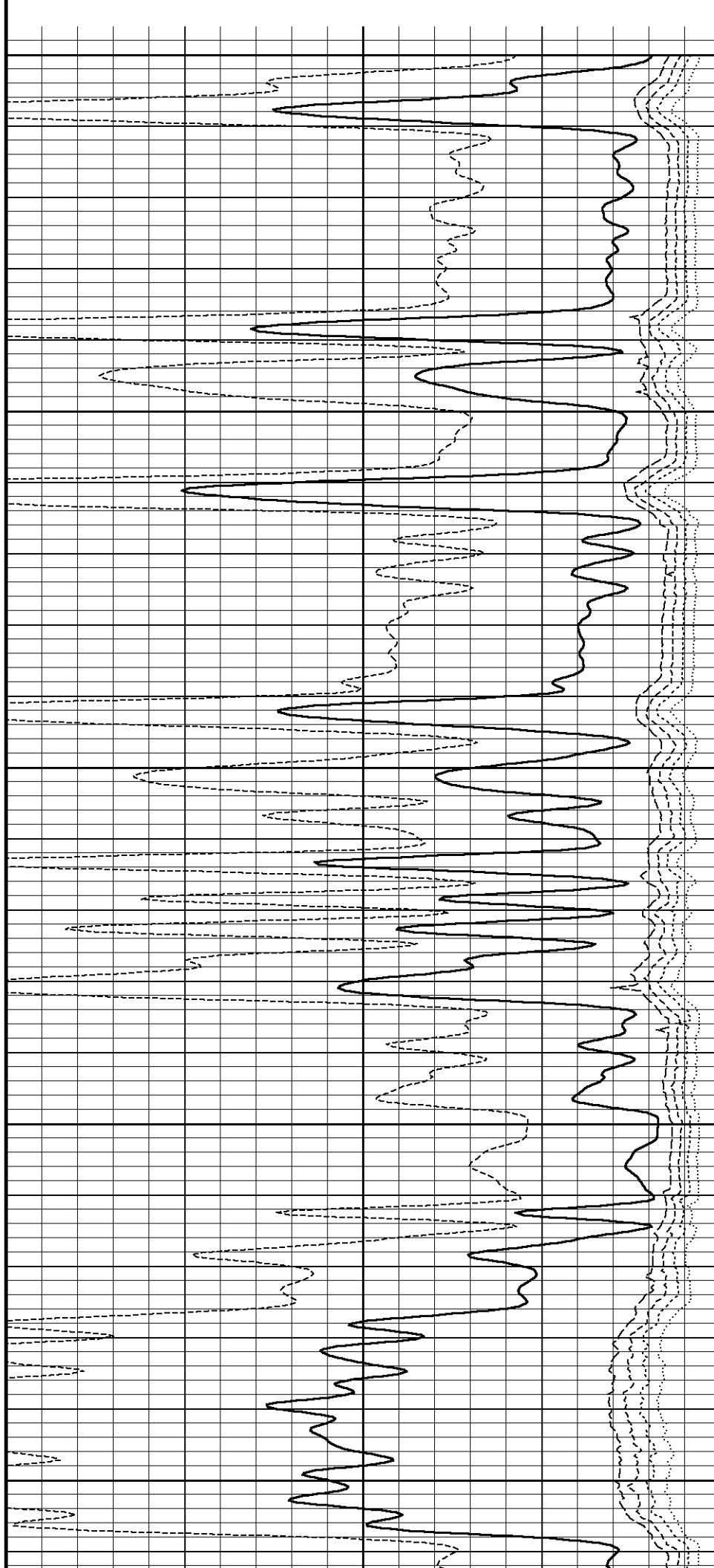
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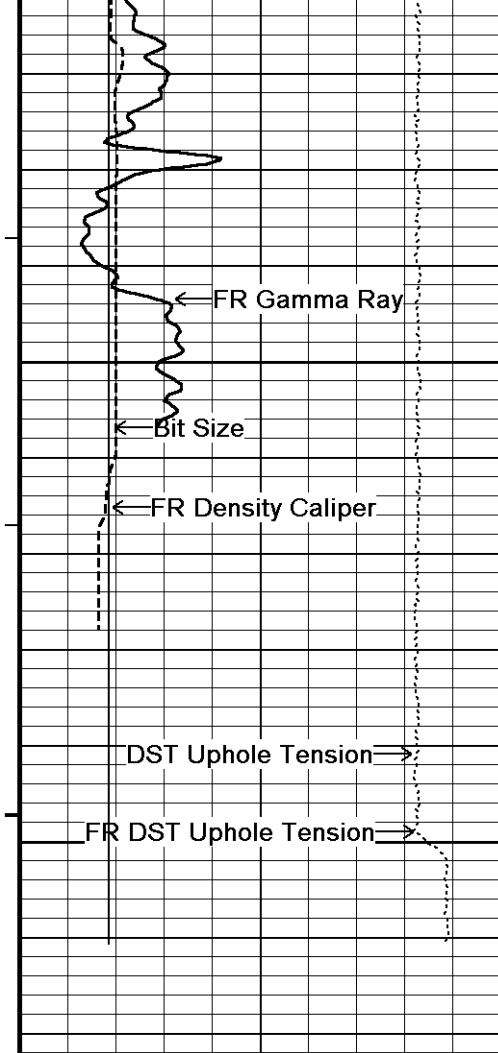
110°

4450

111°

4500





111°

4550

4600

4620

Depth  
in  
Feet

Timing Marks  
every 60.0 sec

Gamma Ray

API

75

Density Caliper

inches

11

Bit Size

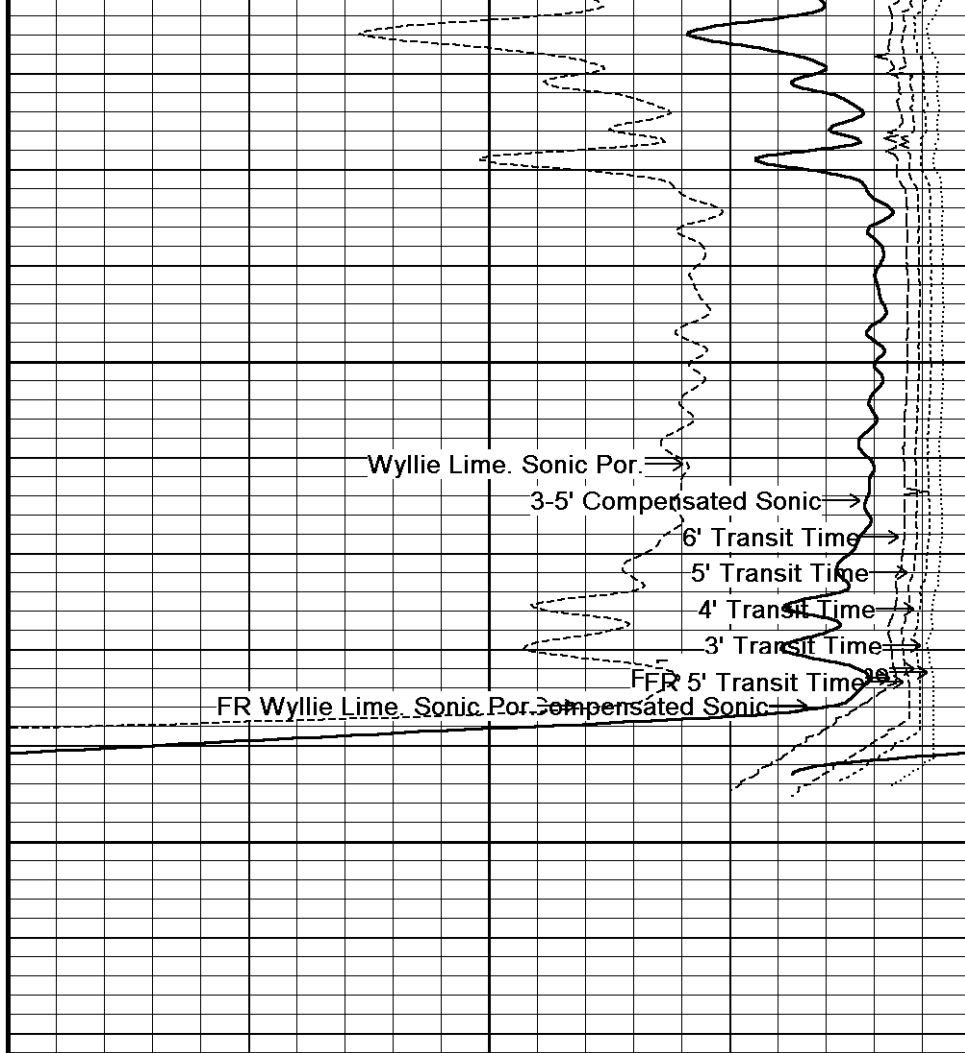
inches

11

DST Uphole Tension

pounds

Borehole  
Temp in  
deg F



3-5' Compensated Sonic

microsec/foot

140

115

90

65

40

Wyllie Lime. Sonic Por.

percent

30

20

10

0

-10

3' Transit Time

microseconds

1100

100

4' Transit Time

microseconds

1100

100

5' Transit Time

microseconds

1100

100

6' Transit Time

5000

Replay  
Scale  
1:240microseconds  
1100 100

Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 16-SEP-2012 01:05

Filename: C:\Minimus 13.02.6600\Data\Shakespeare ...\Shakespeare Oil Company Ottley #1-8\_001.dta

Recorded on 15-SEP-2012 22:23

System Versions: Logged with 13.02.6600 Plotted with 13.02.6600



REPEAT SECTION



## BEFORE SURVEY CALIBRATION

C:\Minimus 13.02.6600\Data\Shakespeare Oil Company Ottley 1-8\Shakespeare Oil Company Ottley #1-8\_001.dta

General Constants All 000

Last Edited on 15-SEP-2012,21:35

## General Parameters

|                             |          |            |
|-----------------------------|----------|------------|
| Mud Resistivity             | 0.510    | ohm-metres |
| Mud Resistivity Temperature | 88.000   | degrees F  |
| Water Level                 | 0.000    | feet       |
| Density/Neutron Processing  | Wet Hole |            |

## Hole/Annular Volume and Differential Caliper Parameters

|                                  |                 |        |
|----------------------------------|-----------------|--------|
| HVOL Method                      | Single Caliper  |        |
| HVOL Caliper 1                   | Density Caliper |        |
| HVOL Caliper 2                   | N/A             |        |
| Annular Volume Diameter          | 5.500           | inches |
| Caliper for Differential Caliper | Density Caliper |        |

## Rwa Parameters

|                  |                        |
|------------------|------------------------|
| Porosity used    | Base Density Porosity  |
| Resistivity used | Array Ind. Four Res Rt |
| RWA Constant A   | 0.610                  |
| RWA Constant M   | 2.150                  |

Down-hole Tension Calibration SMS 0

Field Calibration on 10-SEP-2012 04:28

| Reading No | Measured | Calibrated (lbs) |
|------------|----------|------------------|
| 1          | 15456.86 | 0.00             |
| 2          | 16071.78 | 384.00           |

Gamma Calibration MCG-D.K 442

Field Calibration on 15-SEP-2012 17:27

|                    | Measured | Calibrated (API) |
|--------------------|----------|------------------|
| Background         | 72       | 49               |
| Calibrator (Gross) | 1147     | 774              |
| Calibrator (Net)   | 1074     | 725              |

Gamma Constants MCG-D.K 442

Last Edited on 15-SEP-2012,21:26

|                               |                 |       |
|-------------------------------|-----------------|-------|
| Gamma Calibrator Number       | GRC38           |       |
| Mud Density                   | 1.10            | gm/cc |
| Caliper Source for Processing | Density Caliper |       |
| Tool Position                 | Eccentred       |       |
| Concentration of KCl          | 0.00            | kppm  |

SP Calibration MCG-D.K 442

Field Calibration on 17-JUL-2012 16:34

|             | Measured | Calibrated (mV) |
|-------------|----------|-----------------|
| Reference 1 | 100.2    | 100.0           |
| Reference 2 | -99.9    | -100.0          |

High Resolution Temperature Calibration MCG-D.K 442

Field Calibration on 17-JUL-2012,16:35

|       | Measured | Calibrated(Deg F) |
|-------|----------|-------------------|
| Lower | 50.00    | 50.00             |
| Upper | 100.00   | 100.00            |

High Resolution Temperature Constants MCG-D.K 442

Last Edited on

|                   |    |
|-------------------|----|
| Pre-filter Length | 11 |
|-------------------|----|

Caliper Calibration MML-A 16

Base Calibration on 07-SEP-2012 10:01

## Base Calibration

| Reading No | Measured | Calibrator Size (in) |
|------------|----------|----------------------|
| 1          | 13823    | 5.98                 |
| 2          | 16876    | 7.97                 |
| 3          | 20058    | 9.86                 |
| 4          | 23883    | 11.92                |
| 5          | 0        | 0.00                 |
| 6          | N/A      | N/A                  |

## Field Calibration

| Measured Caliper (in) | Actual Caliper (in) |
|-----------------------|---------------------|
| 6.02                  | 5.98                |

## Micro Normal and Micro Inverse Calibration MML-A 16

Base Calibration on 07-SEP-2012 10:10

Field Check on 15-SEP-2012 17:21

## Base Calibration

| Channel       | Measured   |            | Calibrated (ohm-m) |            |
|---------------|------------|------------|--------------------|------------|
|               | Resistor 1 | Resistor 2 | Resistor 1         | Resistor 2 |
| Micro Normal  | 12.1       | 60.2       | 5.0                | 25.0       |
| Micro Inverse | 15.6       | 78.3       | 5.0                | 25.0       |

| Channel       | Base Check (ohm-m) | Field Check (ohm-m) |
|---------------|--------------------|---------------------|
| Micro Normal  | 62.9               | 62.9                |
| Micro Inverse | 48.2               | 48.2                |

## Micro Normal and Micro Inverse Constants MML-A 16

Last Edited on 15-SEP-2012,17:20

|                        |                                             |        |  |
|------------------------|---------------------------------------------|--------|--|
| Pad Type               | 8-12 in Soft Rubber Inflatable 006-9011-159 |        |  |
| Micro Normal K Factor  | 1.0000                                      |        |  |
| Micro Inverse K Factor | 1.0000                                      |        |  |
| Standoff Offset        | N/A                                         | inches |  |

## Neutron Calibration MDN-A.B 66

Base Calibration on 07-SEP-2012 14:38

Field Check on 15-SEP-2012 17:32

## Base Calibration

|       | Measured |     | Calibrated (cps) |     |
|-------|----------|-----|------------------|-----|
|       | Near     | Far | Near             | Far |
|       | 3154     | 98  | 3714             | 110 |
| Ratio | 32.161   |     | 33.764           |     |

## Field Calibrator at Base

|       | Calibrated (cps) |
|-------|------------------|
|       | 1643 2350        |
| Ratio | 0.699            |

## Field Check

|       | Calibrated (cps) |
|-------|------------------|
|       | 1632 2346        |
| Ratio | 0.696            |

## Neutron Constants MDN-A.B 66

Last Edited on 15-SEP-2012,17:28

|                                 |                 |           |
|---------------------------------|-----------------|-----------|
| Neutron Source Id               | P0204NN         |           |
| Neutron Jig Number              | 5824NE          |           |
| Epithermal Neutron              | No              |           |
| Caliper Source for Processing   | Density Caliper |           |
| Stand-off                       | 0.00            | inches    |
| Mud Density                     | 1.00            | gm/cc     |
| Limestone Sigma                 | 7.10            | cu        |
| Sandstone Sigma                 | 4.26            | cu        |
| Dolomite Sigma                  | 4.70            | cu        |
| Formation Pressure Source       | Constant Value  |           |
| Formation Pressure              | 0.00            | kpsi      |
| Temperature Source              | Constant Value  |           |
| Temperature                     | 68.00           | degrees F |
| Mud Salinity                    | 0.00            | kppm      |
| Salinity Correction             | Not Applied     |           |
| Formation Fluid Salinity Source | Constant Value  |           |
| Formation Fluid Salinity        | 0.00            | kppm      |
| Barite Mud Correction           | Not Applied     |           |

## FE Calibration MFE-B.J 353

Base Calibration on 27-AUG-2012 09:28

Field Check on 15-SEP-2012 17:12

## Base Calibration

|             |          |                    |
|-------------|----------|--------------------|
|             | Measured | Calibrated (ohm-m) |
| Reference 1 | 0.0      | 0.0                |
| Reference 2 | 964.3    | 126.8              |
| Base Check  |          | 281.0              |
| Field Check |          | 281.0              |

## FE Constants MFE-B.J 353

Last Edited on 15-SEP-2012,17:11

|                                  |                          |        |
|----------------------------------|--------------------------|--------|
| Running Mode                     | No Sleeve                |        |
| MFE K Factor                     | 0.1268                   |        |
| Caliper Source for FE correction | Density Caliper          |        |
| Caliper Value for FE correction  | N/A                      | inches |
| Rm Source for FE correction      | Temperature Corr         |        |
| Temp. for Rm Corr.               | MCG External Temperature |        |
| Stand-off                        | 0.5                      | inches |

## Sonic Constants MSS-A.A 126

Last Edited on 15-SEP-2012,21:16

|                           |                        |              |
|---------------------------|------------------------|--------------|
| Maximum Boundary Contrast | 100.00                 | micro-sec/ft |
| Fluid Transit Time        | 189.00                 | micro-sec/ft |
| Limestone Transit Time    | 47.50                  | micro-sec/ft |
| Sandstone Transit Time    | 55.50                  | micro-sec/ft |
| Dolomite Transit Time     | 43.50                  | micro-sec/ft |
| Sonic used for Porosities | 3-5' Compensated Sonic |              |
| Correction for Sonde Skew | Applied                |              |
| Cycle Stretch Algorithm   | Applied                |              |
| MN3FT                     | N/A                    | micro-sec    |
| MX3FT                     | N/A                    | micro-sec    |
| Hunt-Raymer Constant      | 83.13                  | micro-sec/ft |

|            |             |
|------------|-------------|
| Sonde Mode | Compensated |
| Hole Type  | Open Hole   |

## Sonde Parameters

|                       |          |            |
|-----------------------|----------|------------|
|                       | Measured | Calibrated |
| Offset                | N/A      | 0.0000     |
| Free Pipe             | N/A      | N/A        |
| Peak Amplitude Source |          | N/A        |

| Waveform | Start Time (micro-sec) | Width (micro-sec) | Pre Gain | Start Gain | Discriminator (mV) |
|----------|------------------------|-------------------|----------|------------|--------------------|
| 3'       | N/A                    | N/A               | N/A      | N/A        | N/A                |
| 4'       | N/A                    | N/A               | N/A      | N/A        | N/A                |
| 5'       | N/A                    | N/A               | N/A      | N/A        | N/A                |
| 6'       | N/A                    | N/A               | N/A      | N/A        | N/A                |

## Processed Fixed Gate Parameters

| Waveform Used For Processing | N/A                  |                    |     |     |
|------------------------------|----------------------|--------------------|-----|-----|
| Start Time (micro-sec)       | End Time (micro-sec) | Discriminator (mV) |     | N/A |
| N/A                          | N/A                  | N/A                |     |     |
| N/A                          | N/A                  | N/A                | N/A |     |
| N/A                          | N/A                  | N/A                | N/A |     |
| N/A                          | N/A                  | N/A                | N/A |     |
| N/A                          | N/A                  | N/A                | N/A |     |

## Full Waveform Parameters

|                                 |     |    |
|---------------------------------|-----|----|
| Use 3' Waveform to derive TR    | N/A |    |
| Use 4' Waveform to derive TR    | N/A |    |
| Use 5' Waveform to derive TR    | N/A |    |
| Use 6' Waveform to derive TR    | N/A |    |
| 3' Waveform Discriminator Level | N/A | mV |
| 4' Waveform Discriminator Level | N/A | mV |
| 5' Waveform Discriminator Level | N/A | mV |
| 6' Waveform Discriminator Level | N/A | mV |
| 3' Waveform Filter              | N/A |    |
| 4' Waveform Filter              | N/A |    |
| 5' Waveform Filter              | N/A |    |
| 6' Waveform Filter              | N/A |    |

|                                                     |                          |                                       |
|-----------------------------------------------------|--------------------------|---------------------------------------|
| Semblance Level                                     | N/A                      |                                       |
| Semblance Window Width                              | N/A                      | micro-sec                             |
| Sonic 1 Despiker                                    | N/A                      | N/A                                   |
| Sonic 2 Despiker                                    | N/A                      | N/A                                   |
| High Resolution Temperature Calibration MAI-A.A 167 |                          |                                       |
|                                                     | Measured                 | Calibrated(Deg F)                     |
| Lower                                               | 1.00                     | 33.80                                 |
| Upper                                               | 11.00                    | 51.80                                 |
| High Resolution Temperature Constants MAI-A.A 167   |                          |                                       |
| Pre-filter Length                                   | 11                       |                                       |
| Induction Calibration MAI-A.A 167                   |                          |                                       |
| Base Calibration                                    |                          | Base Calibration on 17-JUL-2012,13:55 |
| Test Loop Calibration                               |                          | Field Check on 15-SEP-2012 17:10      |
| Channel                                             | Measured                 | Calibrated (mmho/m)                   |
|                                                     | Low High                 | Low High                              |
| 1                                                   | 17.3 474.2               | 9.3 966.2                             |
| 2                                                   | 6.3 388.4                | 7.6 821.4                             |
| 3                                                   | 3.3 259.4                | 5.2 566.0                             |
| 4                                                   | 1.9 133.0                | 2.6 279.2                             |
| Array Temperature                                   | 76.8                     | Deg F                                 |
| Channel                                             | Base Check (mmho/m)      | Field Check (mmho/m)                  |
|                                                     | Low High                 | Low High                              |
| 1                                                   | 0.0 0.0                  | 13.3 3839.2                           |
| 2                                                   | 0.0 0.0                  | 29.7 3476.8                           |
| 3                                                   | 0.0 0.0                  | 29.2 3053.0                           |
| 4                                                   | 0.0 0.0                  | 19.8 2081.7                           |
| Deep                                                | 0.0 0.0                  | 18.7 2049.0                           |
| Medium                                              | 0.0 0.0                  | 42.2 3991.1                           |
| Shallow                                             | 0.0 0.0                  | 43.0 5053.9                           |
| Array Temperature                                   | 0.0                      | 79.1 Deg F                            |
| Induction Constants MAI-A.A 167                     |                          |                                       |
| Last Edited on 15-SEP-2012,21:16                    |                          |                                       |
| Induction Model                                     | RtAP-WBM                 |                                       |
| Caliper for Borehole Corr.                          | Density Caliper          |                                       |
| Hole Size for Borehole Correction                   | N/A                      | inches                                |
| Tool Centred                                        | No                       |                                       |
| Stand-off Type                                      | Fins                     |                                       |
| Stand-off                                           | 0.50                     | inches                                |
| Number of Fins on Stand-off                         | 8.0000                   |                                       |
| Stand-off Fin Angle                                 | 45.00                    | degrees                               |
| Stand-off Fin Width                                 | 0.5000                   | inches                                |
| Borehole Corr. Rm Source                            | Temperature Corr         |                                       |
| Temp. for Rm Corr.                                  | MCG External Temperature |                                       |
| Squasher Start                                      | 0.0020                   | mhos/metre                            |
| Squasher Offset                                     | N/A                      | mhos/metre                            |
| Borehole Normalisation                              |                          |                                       |
| DRM1                                                | 0.0000                   | DRC1 0.0000                           |
| DRM2                                                | 0.0000                   | DRC2 0.0000                           |
| MRM1                                                | 0.0000                   | MRC1 0.0000                           |
| MRM2                                                | 0.0000                   | MRC2 0.0000                           |
| SRM1                                                | 0.0000                   | SRC1 0.0000                           |
| SRM2                                                | 0.0000                   | SRC2 0.0000                           |
| Calibration Site Corrections                        |                          |                                       |
| Channel 1                                           | 0.00                     | mmhos/metre                           |
| Channel 2                                           | 0.00                     | mmhos/metre                           |
| Channel 3                                           | 0.00                     | mmhos/metre                           |
| Channel 4                                           | 0.00                     | mmhos/metre                           |
| Apparent Porosity and Water Saturation Constants    |                          |                                       |
| Archie Constant (A)                                 | 1.00                     |                                       |

|                                      |        |         |
|--------------------------------------|--------|---------|
| Cementation Exponent (M)             | 2.00   |         |
| Saturation Exponent (N)              | 2.00   |         |
| Saturation of Water for Apor         | 100.00 | percent |
| Resistivity of Water for Apor and Sw | 0.05   | ohm-m   |
| Resistivity of Mud Filtrate for Sw   | 0.00   | ohm-m   |
| Source for Rt                        | 0.00   |         |
| Source for Rxo                       | 0.00   |         |

#### Caliper Calibration MPD-B 64

Base Calibration on 07-SEP-2012 15:19

Field Calibration on 15-SEP-2012 17:14

##### Base Calibration

| Reading No | Measured | Calibrator Size (in) |
|------------|----------|----------------------|
| 1          | 12187    | 3.99                 |
| 2          | 20933    | 5.98                 |
| 3          | 29363    | 7.97                 |
| 4          | 37866    | 9.86                 |
| 5          | 47152    | 11.92                |
| 6          | N/A      | N/A                  |

##### Field Calibration

| Measured Caliper (in) | Actual Caliper (in) |
|-----------------------|---------------------|
| 5.92                  | 5.98                |

#### Photo Density Calibration MPD-B 64

Base Calibration on 07-SEP-2012 15:36

Field Check on 15-SEP-2012 17:19

##### Density Calibration

| Base Calibration | Measured |       | Calibrated (sdu) |       |
|------------------|----------|-------|------------------|-------|
|                  | Near     | Far   | Near             | Far   |
| Reference 1      | 63262    | 35109 | 59556            | 30836 |
| Reference 2      | 26458    | 3017  | 24941            | 2541  |

##### Field Check at Base

1187.6 1377.3

##### Field Check

1184.2 1371.4

##### PE Calibration

| Base Calibration | WS    | Measured |       | Calibrated |
|------------------|-------|----------|-------|------------|
|                  |       | WH       | Ratio | Ratio      |
| Background       | 215   | 1060     |       |            |
| Reference 1      | 23956 | 63052    | 0.383 | 0.371      |
| Reference 2      | 7220  | 26320    | 0.277 | 0.272      |

##### Field Check at Base

215.3 1059.6

##### Field Check

212.7 1055.5

#### Density Constants MPD-B 64

Last Edited on 15-SEP-2012,21:26

|                               |                 |       |
|-------------------------------|-----------------|-------|
| Density Source Id             | 18235B          |       |
| Nylon Calibrator Number       | DNCE695         |       |
| Aluminium Calibrator Number   | DACD698         |       |
| Density Shoe Profile          | 8 inch          |       |
| Caliper Source for Processing | Density Caliper |       |
| PE Correction to Density      | Not Applied     |       |
| Mud Density                   | 1.10            | gm/cc |
| Mud Density Z/A Multiplier    | 1.11            |       |
| Mud Filtrate Density          | 1.00            | gm/cc |
| Dry Hole Mud Filtrate Density | 1.00            | gm/cc |
| DNCT                          | 0.00            | gm/cc |
| CRCT                          | 0.00            | gm/cc |
| Density Z/A Correction        | Hybrid          |       |

##### Matrix Density (gm/cc) Depth (ft)

|      |      |
|------|------|
| 2.87 | 0.00 |
| 0.00 | 0.00 |
| 0.00 | 0.00 |
| 0.00 | 0.00 |
| 0.00 | 0.00 |

0.00  
0.00  
0.00

0.00  
0.00  
0.00

## DOWNHOLE EQUIPMENT

C:\Minimus 13.02.6600\Data\Shakespeare Oil Company Ottley 1-8\Shakespeare Oil Company Ottley #1-8\_001.dta

Compact Comms Gamma  
MCG-D.K 442 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log  
MML-A 16 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron  
MDN-A.B 66 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

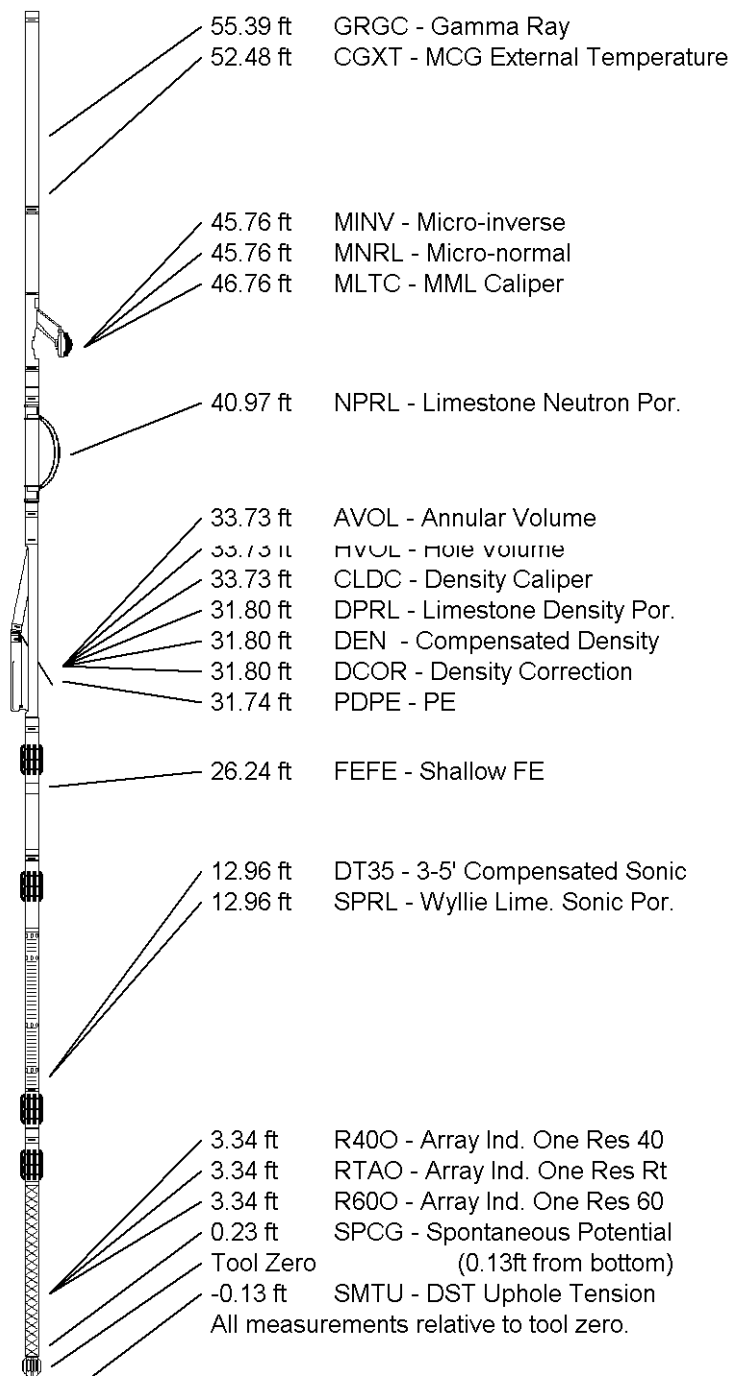
Compact Density/Caliper  
MPD-B 64 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Focussed Electric  
MFE-B.J 353 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Sonic  
MSS-A.A 126 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Induction  
MAI-A.A 167 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 60.68 ft Weight: 456.4 lb



COMPANY

SHAKESPEARE OIL COMPANY, INC.

WELL

OTTLEY #1-8

FIELD

WILDCAT

PROVINCE/COUNTY

LOGAN

COUNTRY/STATE

U.S.A. / KANSAS

|                         |         |      |
|-------------------------|---------|------|
| Elevation Kelly Bushing | 2853.00 | feet |
| Elevation Drill Floor   | 2852.00 | feet |
| Elevation Ground Level  | 2843.00 | feet |

|               |         |      |
|---------------|---------|------|
| First Reading | 4586.00 | feet |
| Depth Driller | 4600.00 | feet |
| Depth Logger  | 4599.00 | feet |



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COMPENSATED SONIC  
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