



**PRECISION**  
ENERGY SERVICES

**DUAL LATEROLOG - MICRO**

**COMPENSATED SONIC**

**1:200**

COMPANY	LAKES OIL NL		
WELL	LOY YANG 2		
FIELD	EXPLORATION		
PROVINCE/COUNTRY	VICTORIA		
COUNTRY/STATE	AUSTRALIA		
LOCATION	38° 15' 13" S, 146° 33' 31" E		
LSD	SEC	TWP	RGE
API Number			Other Services
Permit Number PEP 166			PHOTO DENSITY
Permanent Datum			ACOUSTIC SCANNER
Log Measured From R. T @ 107.65 M			Elevations:
Drilling Measured From R. T			KB 107.65 metres
Date	17-MAR-2006		DF 104.00 metres
Run Number	2		
Depth Driller	1443.00		metres
Depth Logger	1442.08		metres
First Reading	1440.90		metres
Last Reading	0.00		metres
Casing Driller	215.00		metres
Casing Logger	216.00		metres
Bit Size	6.13		inches
Hole Fluid Type	KCL POLYMER		
Density / Viscosity	1.04 g/cc		
PH / Fluid Loss			
Sample Source	FLOWLINE		
Rm @ Measured Temp	0.762 @ 25.0		ohm-m
Rmf @ Measured Temp	0.711 @ 25.0		ohm-m
Rmc @ Measured Temp	0.813 @ 25.0		ohm-m
Source Rmf / Rmc	PIT		PRESS
Rm @ BHT	0.363 @ 75.0		ohm-m
Time Since Circulation	7HRS		
Max Recorded Temp	75.00		deg C
Equipment Name	OILFIELD		
Equipment / Base	8		SALE
Recorded By	TIM HANSEN		
Witnessed By	TIM O'BRIEN, BEN EDWARDS		
Circ. Stop	17:18/16-MAR		

BOREHOLE RECORD				
Bit Size inches		Depth From metres	Depth To metres	
8.500		0.00	215.00	
6.125		215.00	1441.00	
CASING RECORD				
Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
SURFACE	9.625	0.00	25.00	36.00
BUTTRESS	7.000	25.00	215.00	26.00

REMARKS	
1) SOFTWARE ISSUE: JUN 17, 2004.	
2) LAKES OIL APPROVED SCALES AND INTERVALS LOGGED.	
3) RUN ONE: HFS, MRS, DLE, DLP, ATS, WPS, SBT RAN IN COMBINATION.	
RUN TWO: HFS, PDS, CNS RAN IN COMBINATION	
RUN THREE: AST, BGN RAN IN COMBINATION	
4) HARDWARE: MRS: ONE 0.5" INCH STANDOFF	
ATS: THREE 0.5" INCH STANDOFF	
WPS: ONE 0.5" INCH STANDOFF	
CNS: ONE SINGLE BOWSPRING	
AST: ONE CENTRALISER BASKET	
BGN: ONE CENTRALISER BASKET	
5) SERVICE ORDER: 2800	
6) RIG: HUNT ENERGY 2	
PRINTS: 2 FIELD, 2 FINAL	
7) TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 27.9 CU.M.	
8) TOTAL ANNULAR VOLUME WITH 4.5 INCH CASING = 14.2 CU.M	
9) SONIC CASING SIGNAL AT 151.6 M.	
10)MAX DEVIATION UNKNOWN: OVER 10DEGREES.	
11)DRILLING FLUID VISCOSITY AND PH LEVELS NOT SUPPLIED.	

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.

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MAINLOG 1:200

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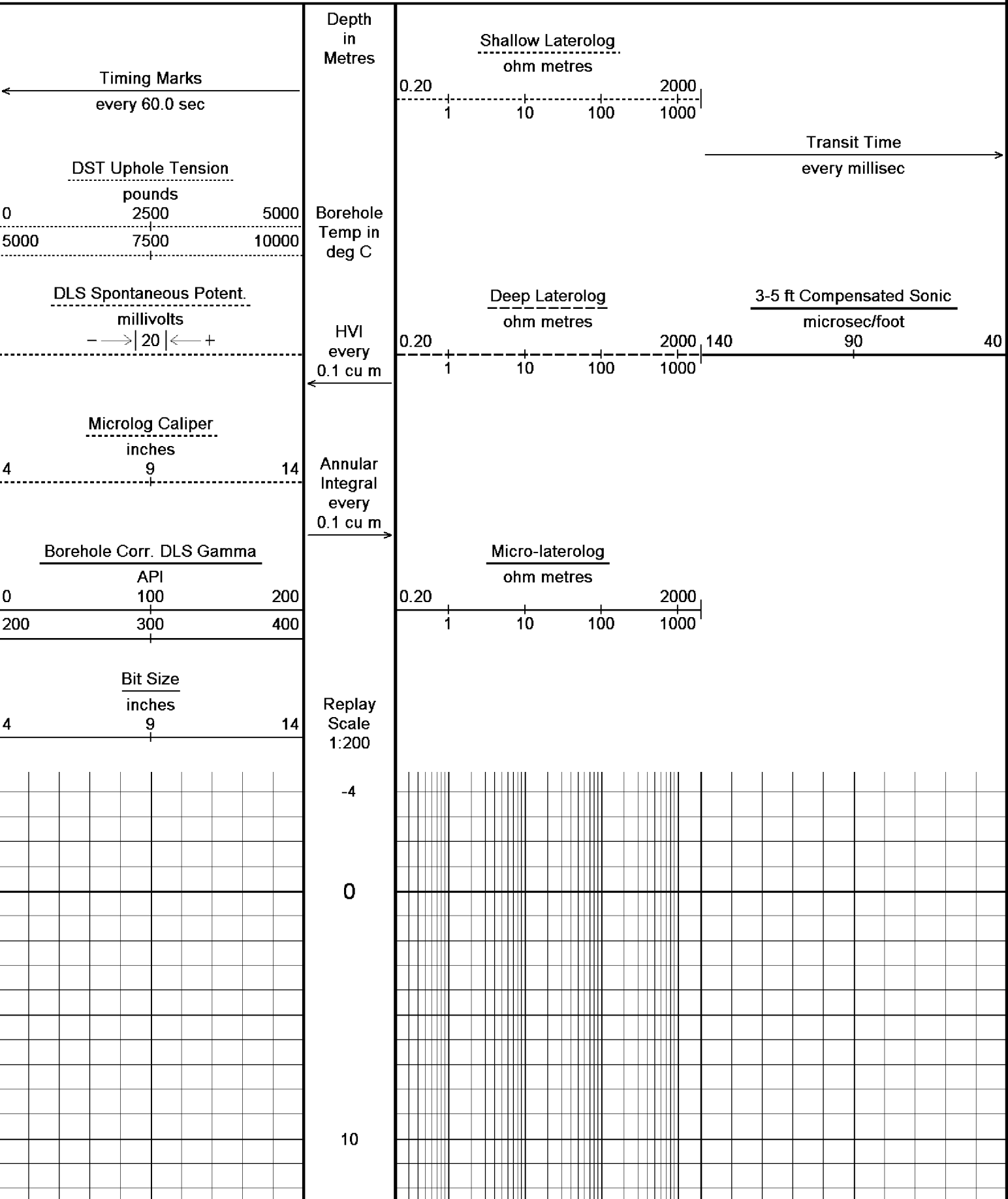
Depth Based Data - Maximum Sampling Increment 10.0cm

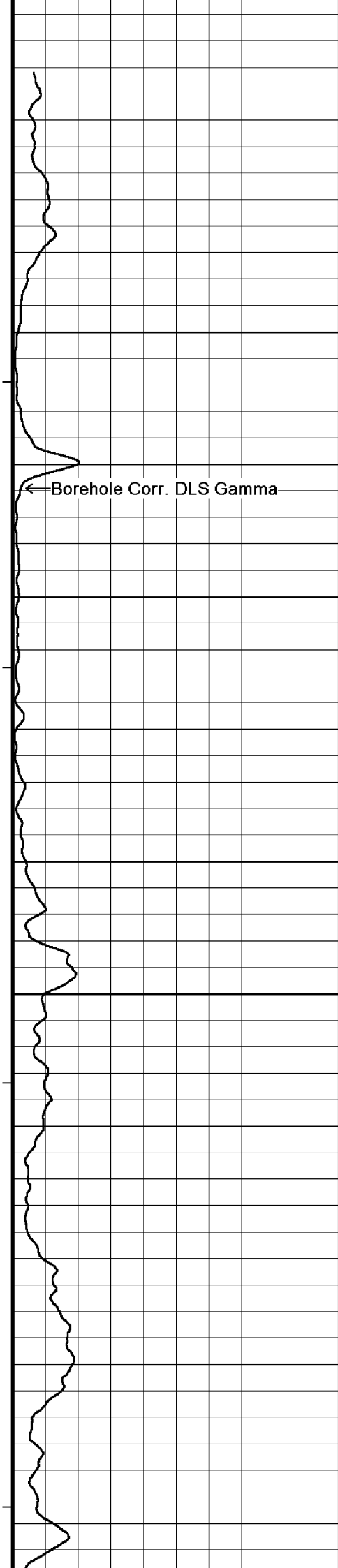
Plotted on 30-MAR-2006 10:20

Filename: W:\LakesOil\LakesOil\_LoyYang2\_DLS\_ATS.dta

Recorded on 17-MAR-2006 00:58

System Configuration Dates: Logged : Processed 17-JUN-2004: Plotted 17-JUN-2004:





20

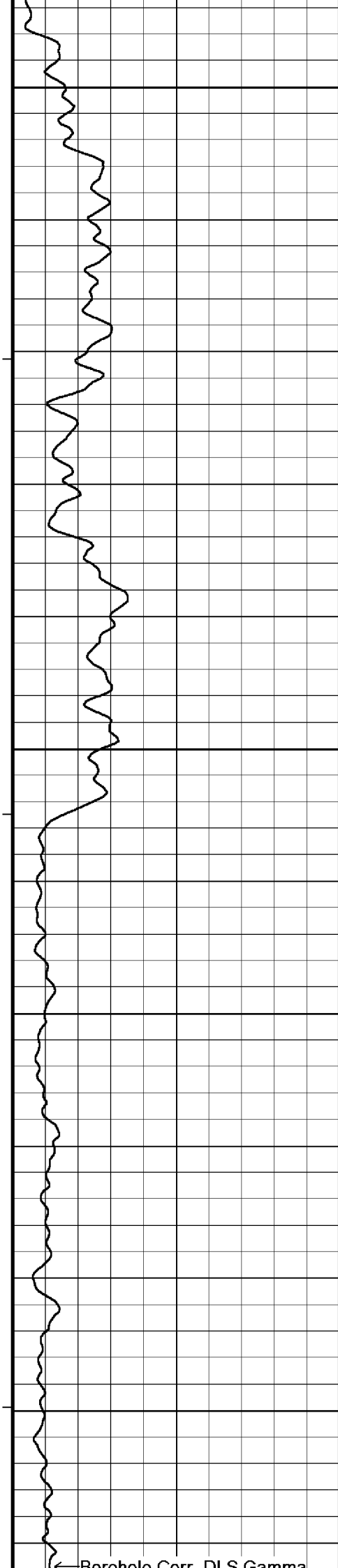
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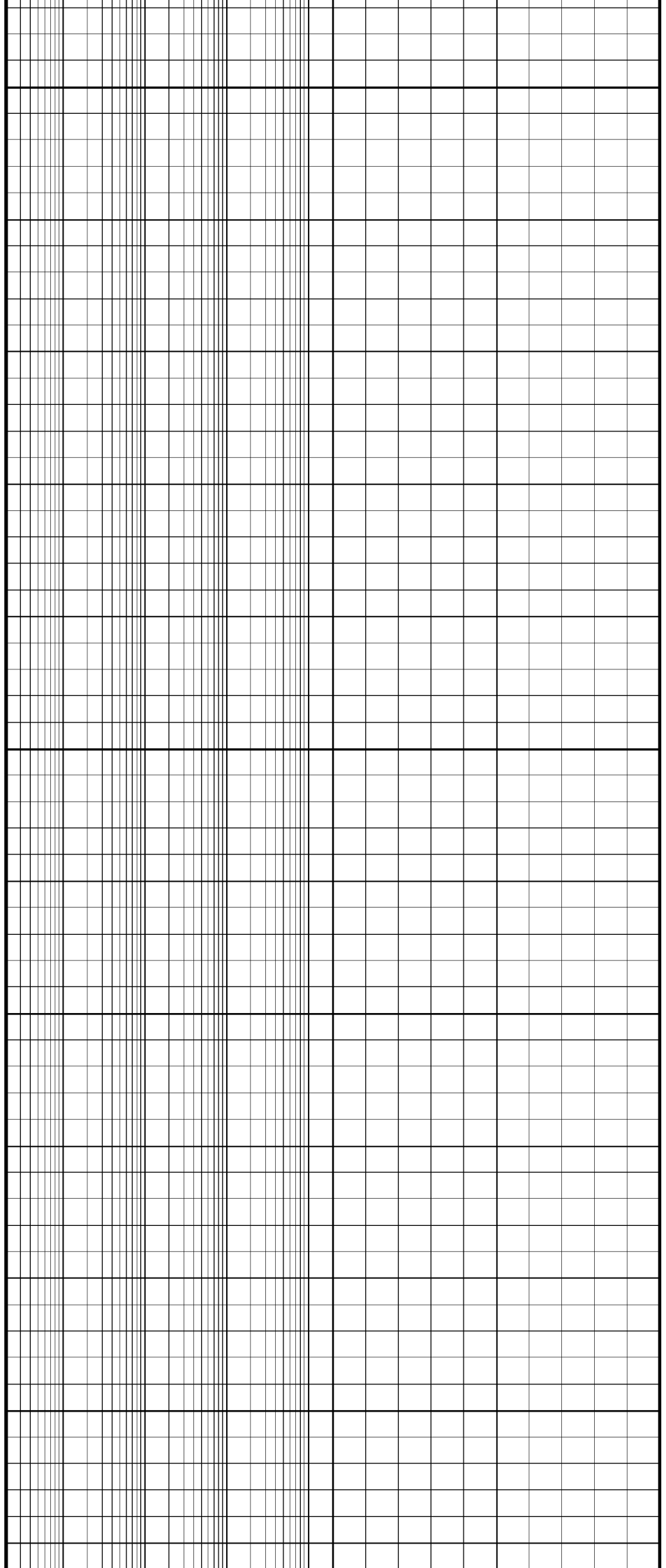
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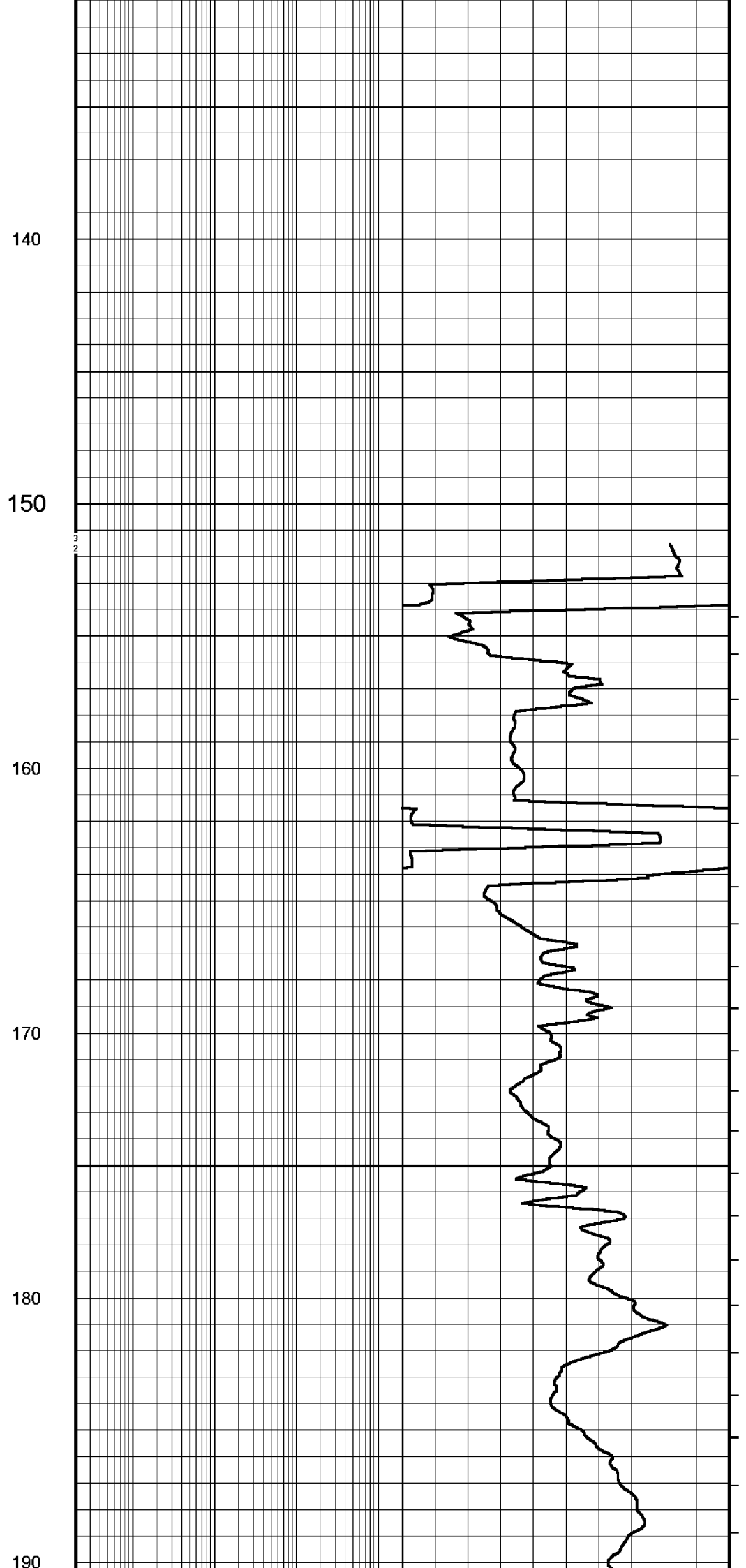
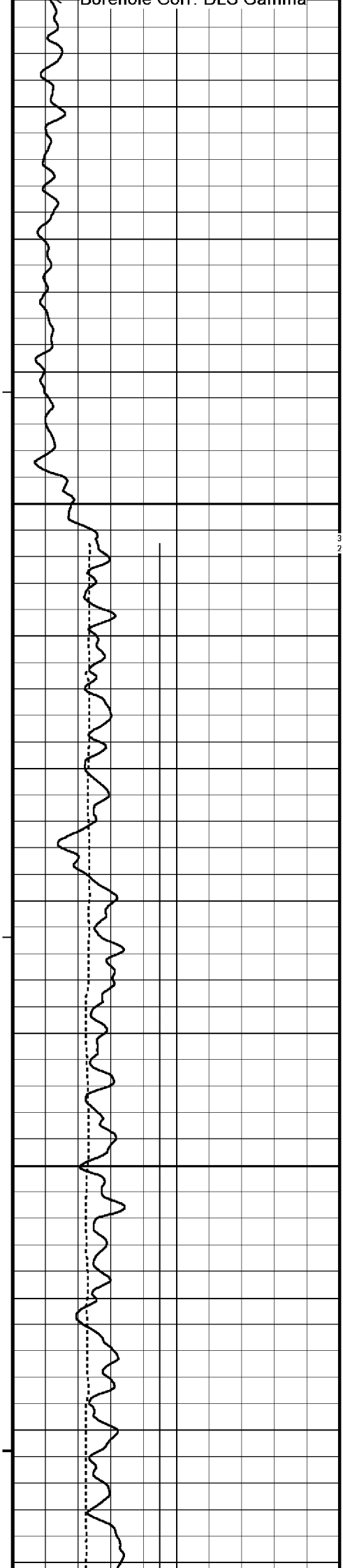
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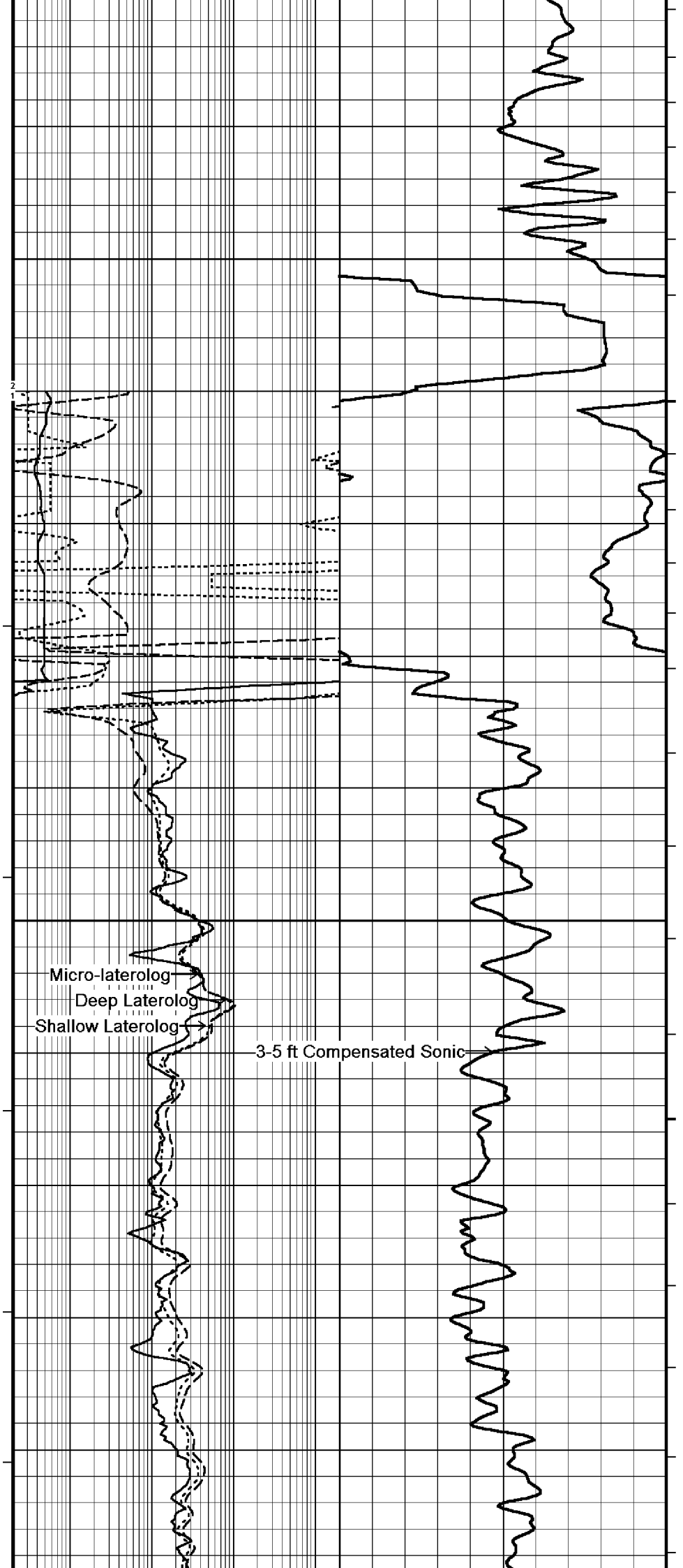
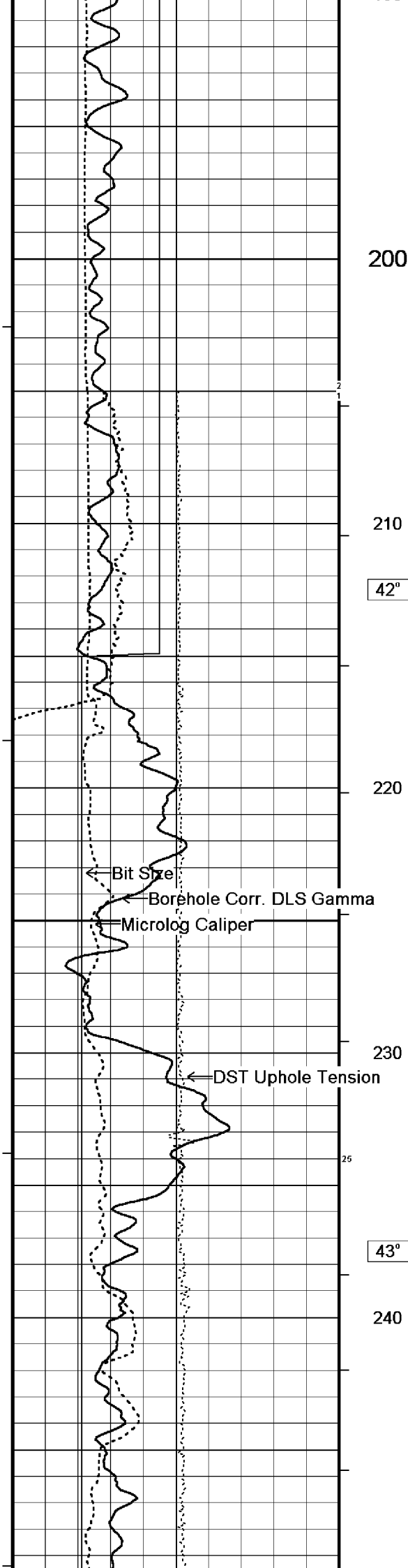
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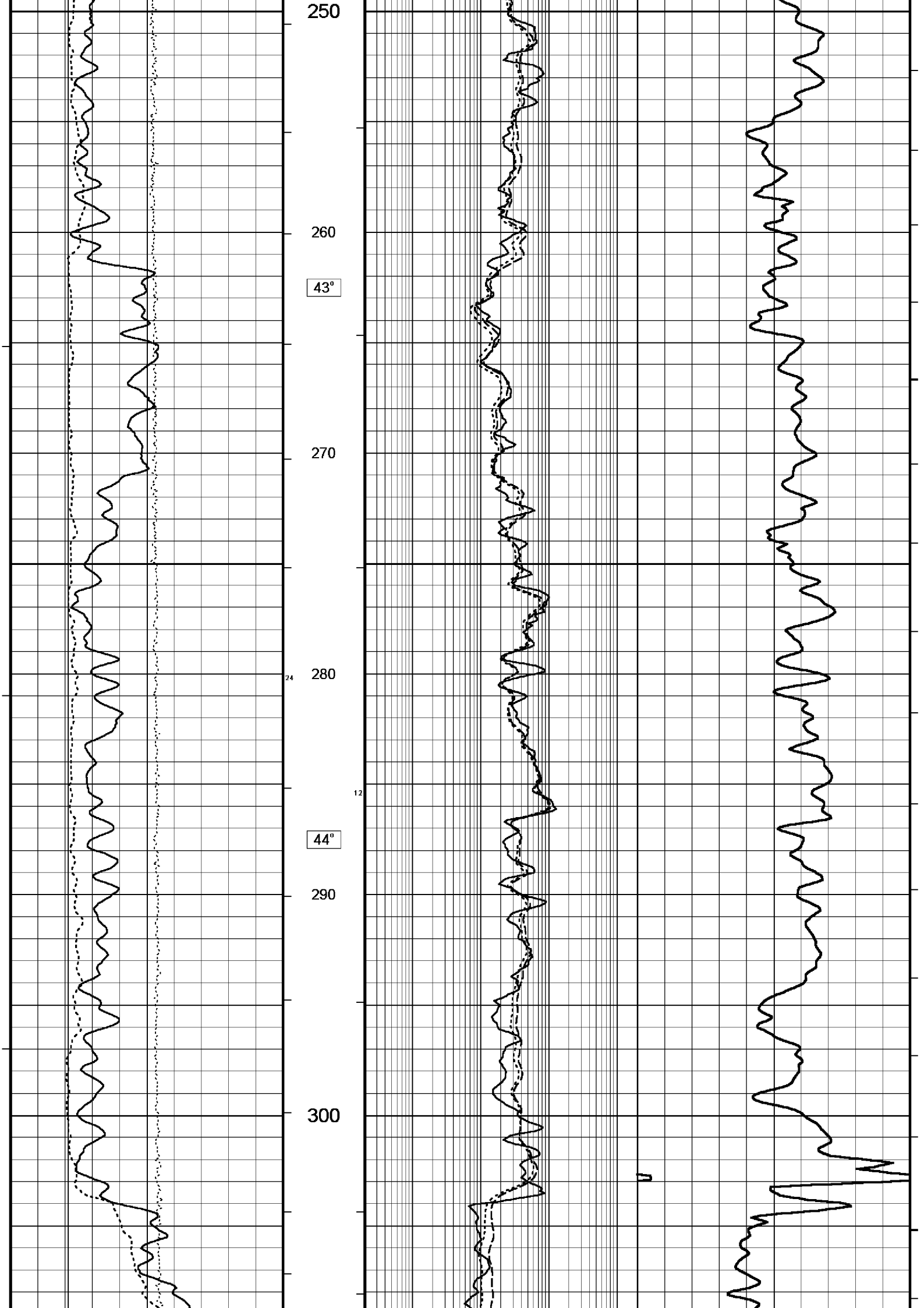
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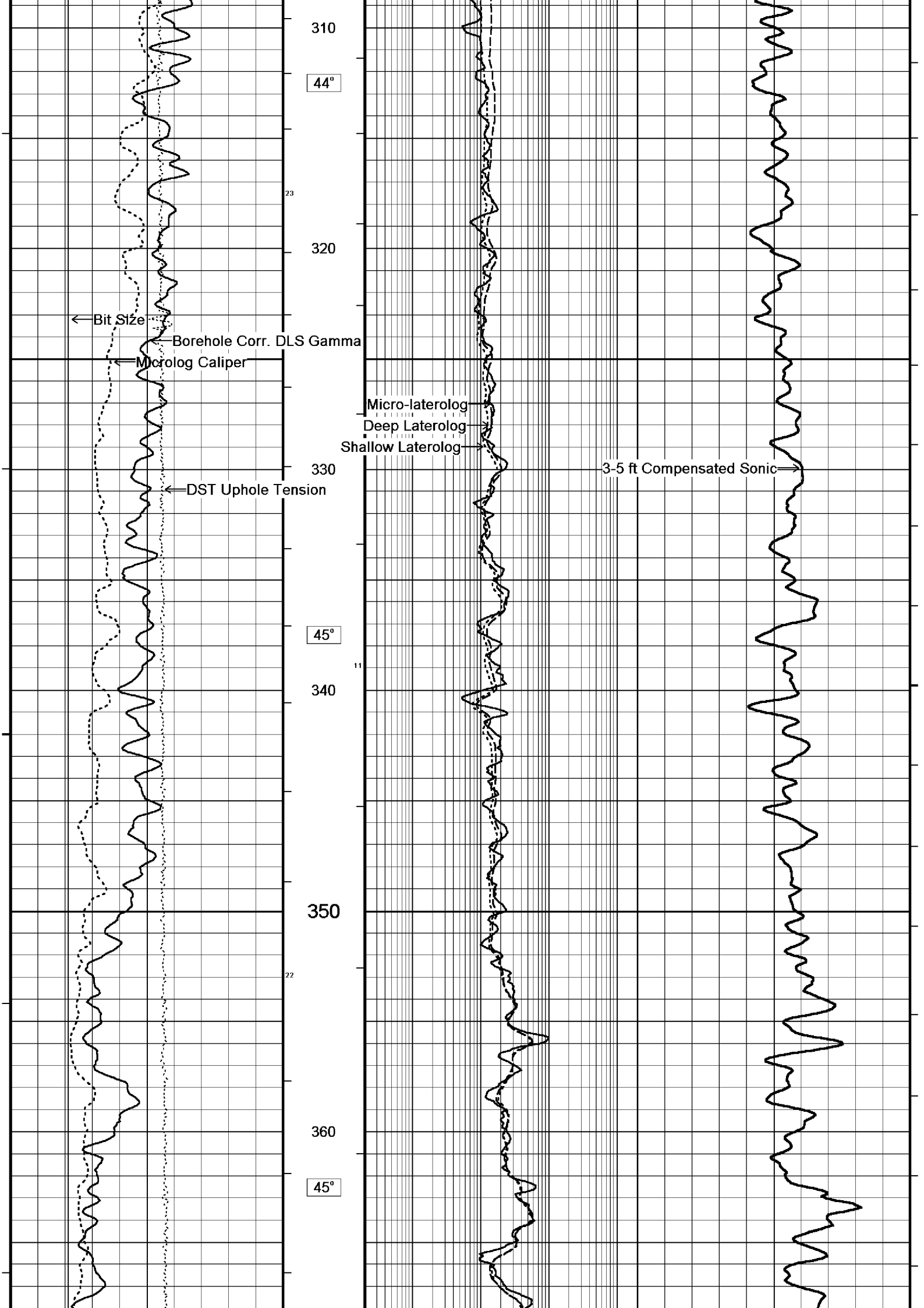
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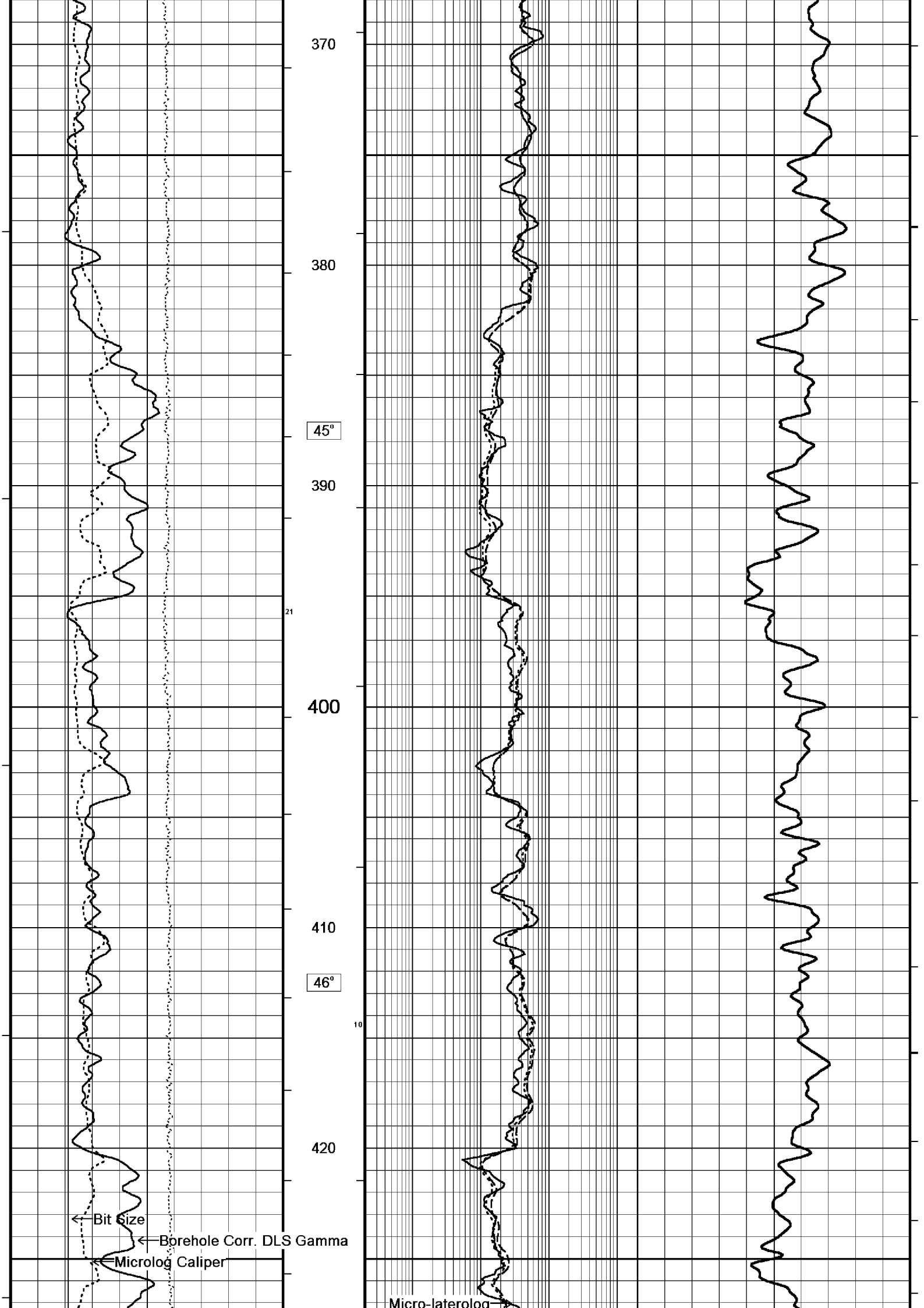


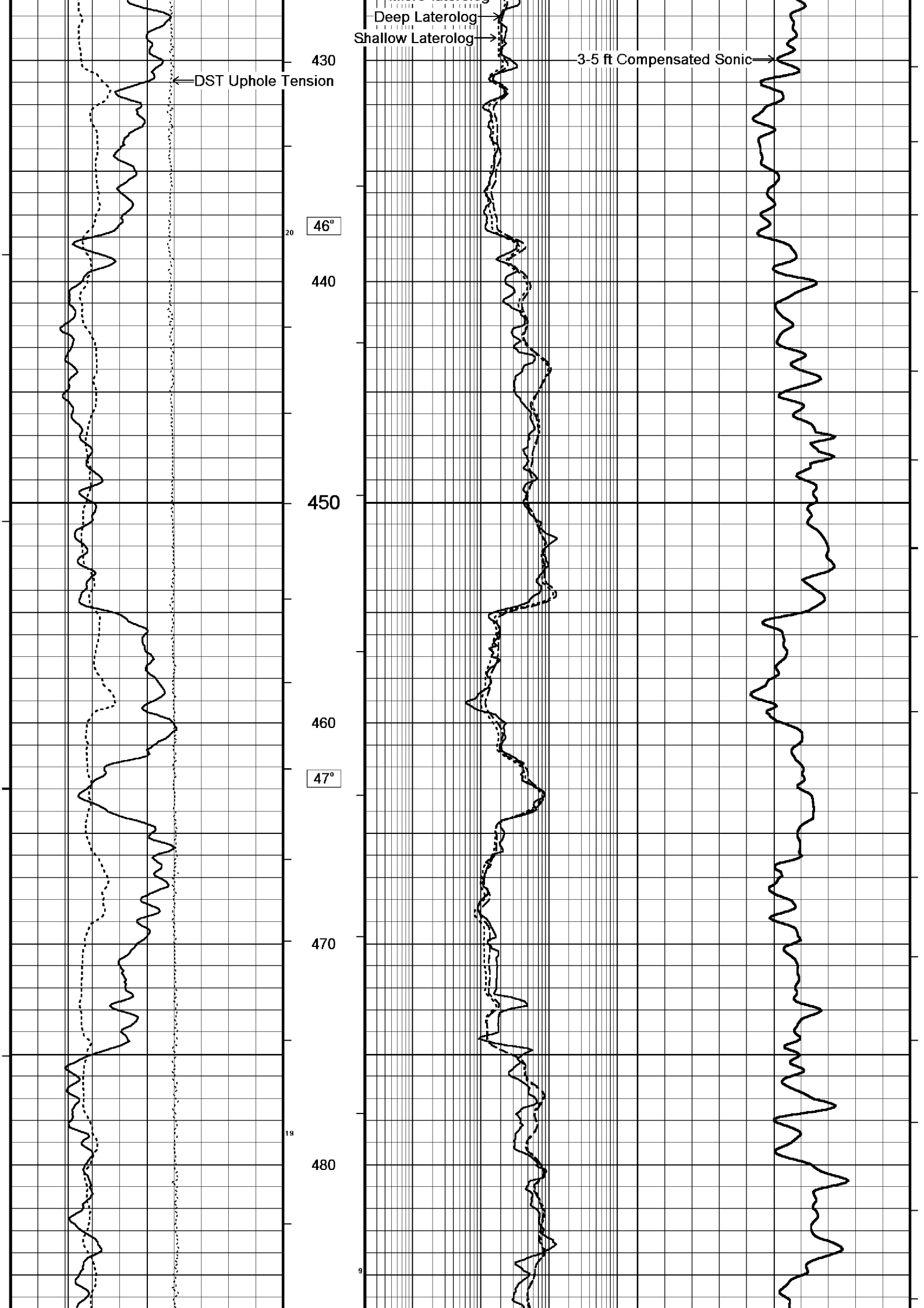


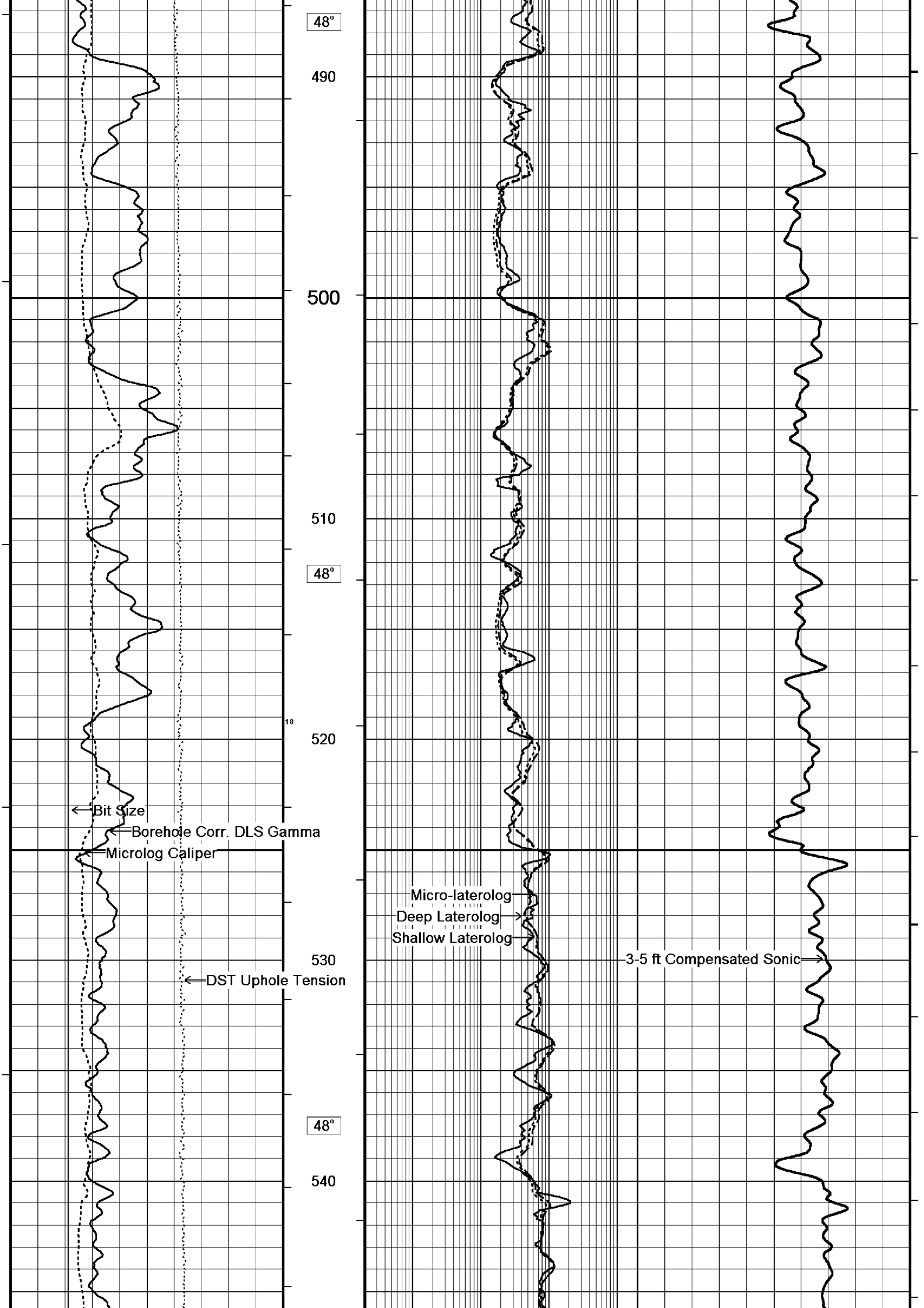


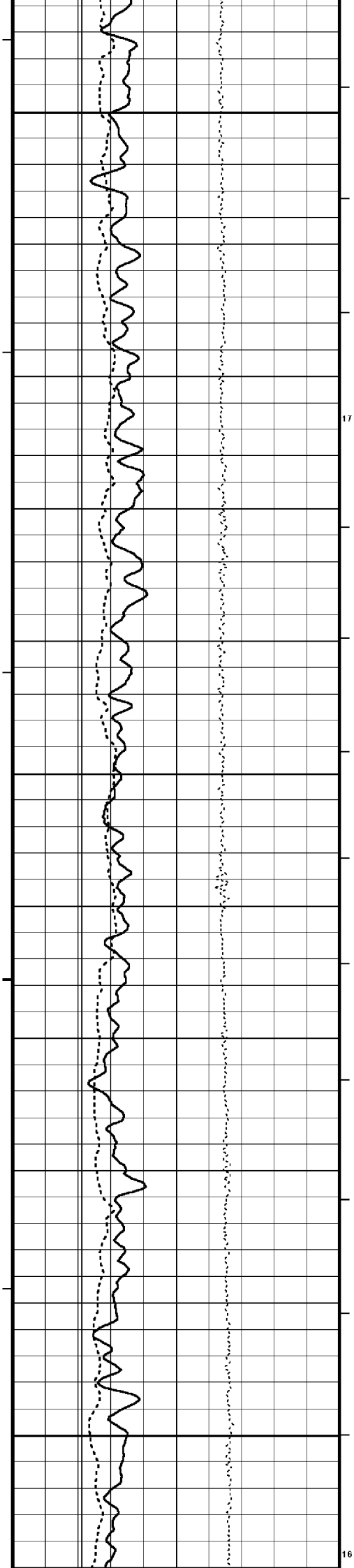












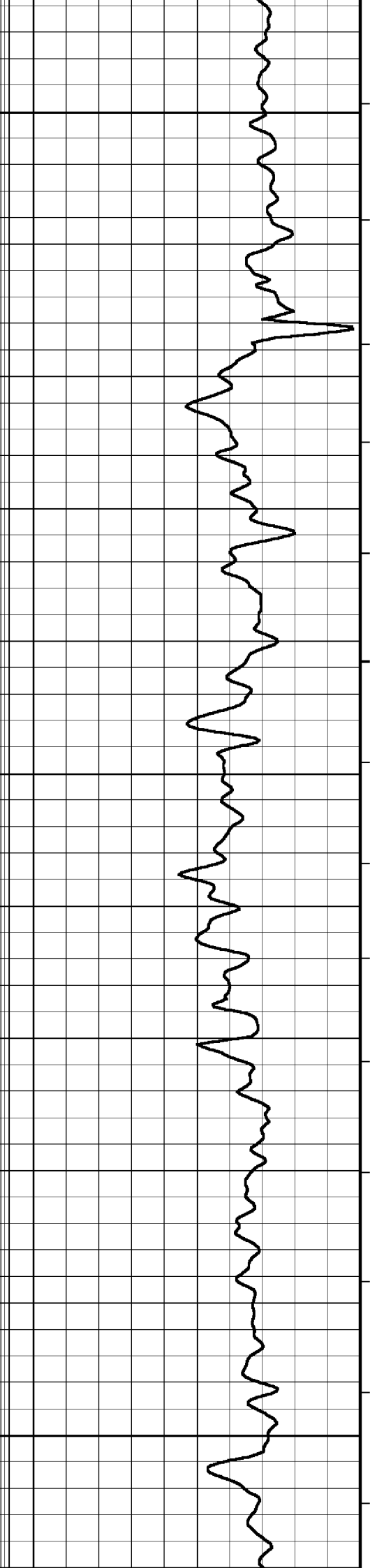
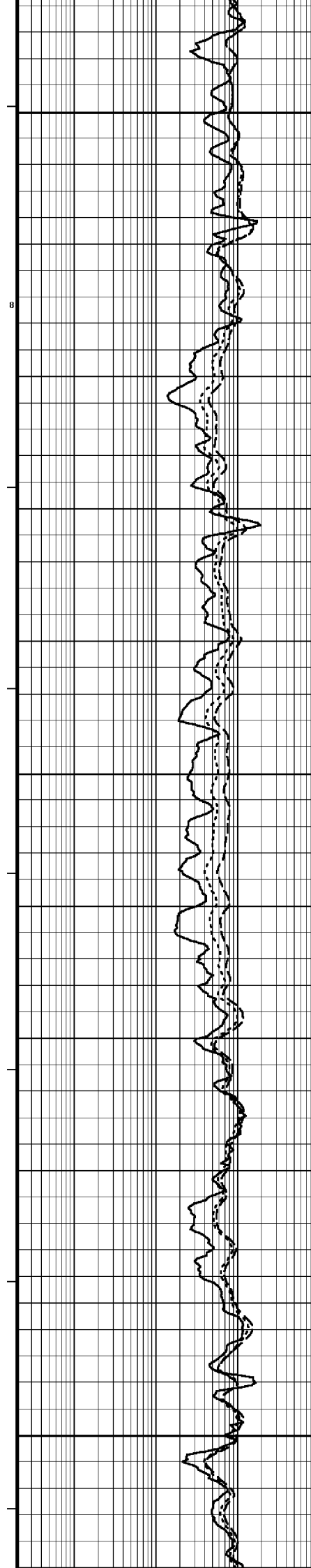
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580  
590  
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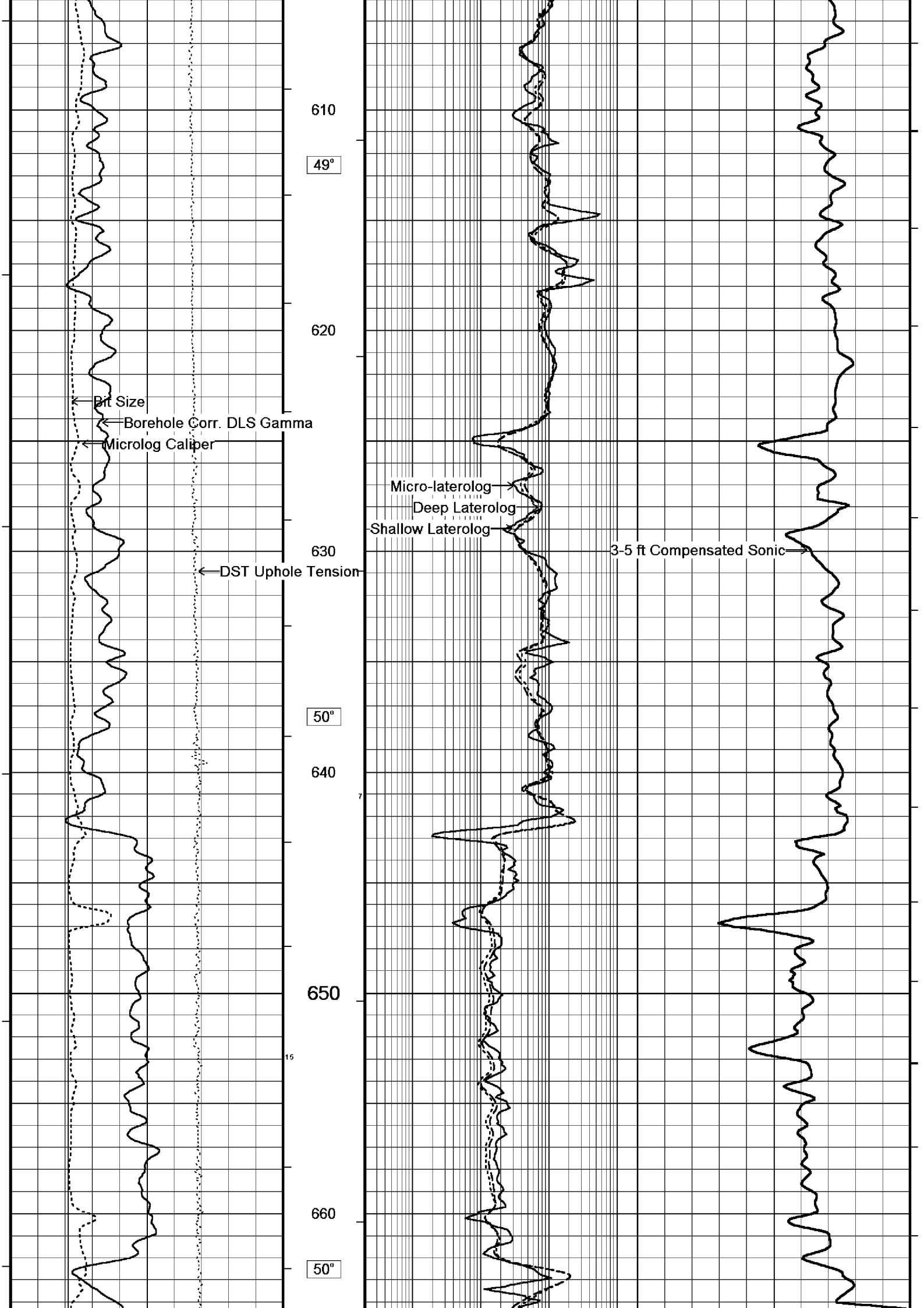
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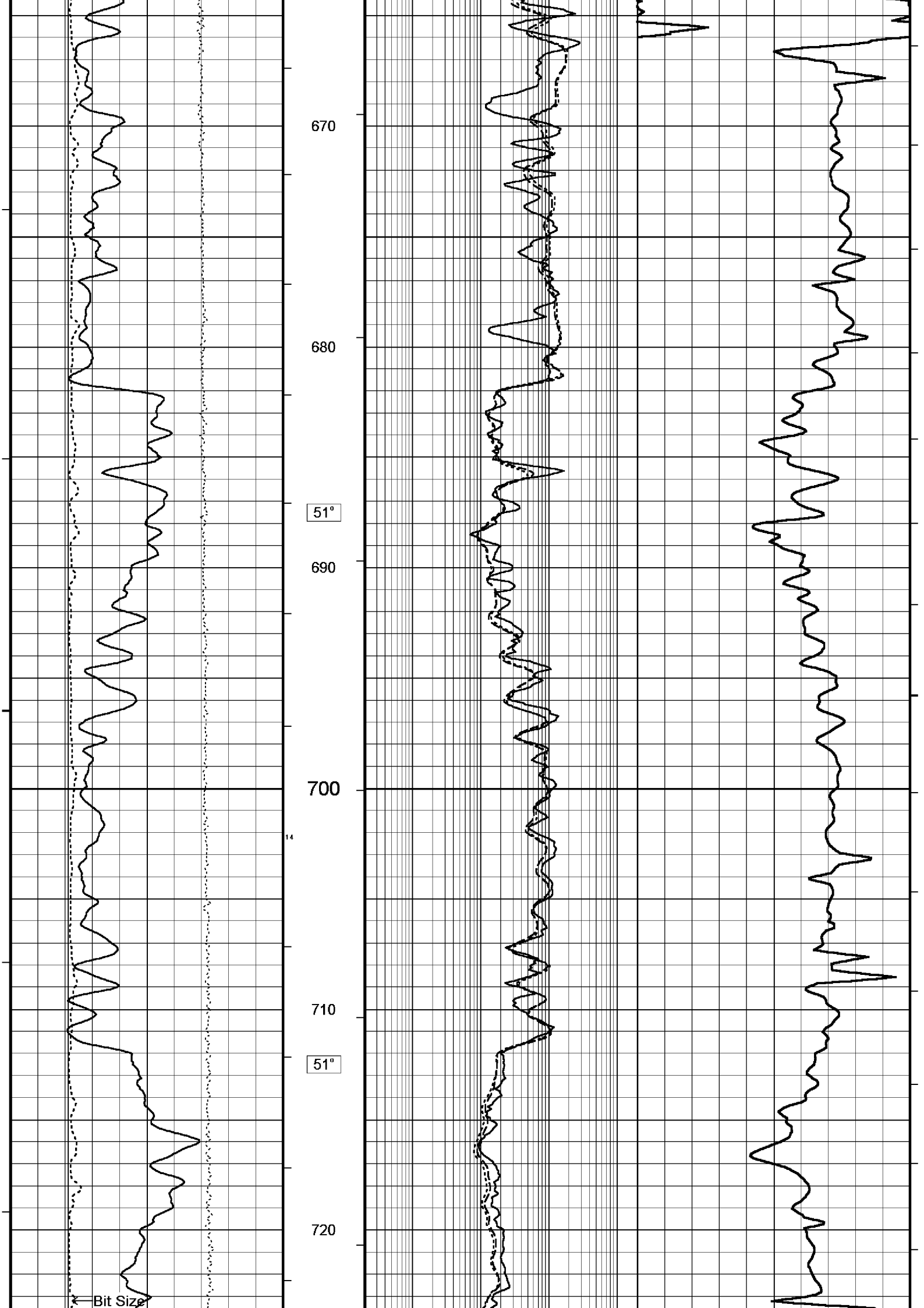
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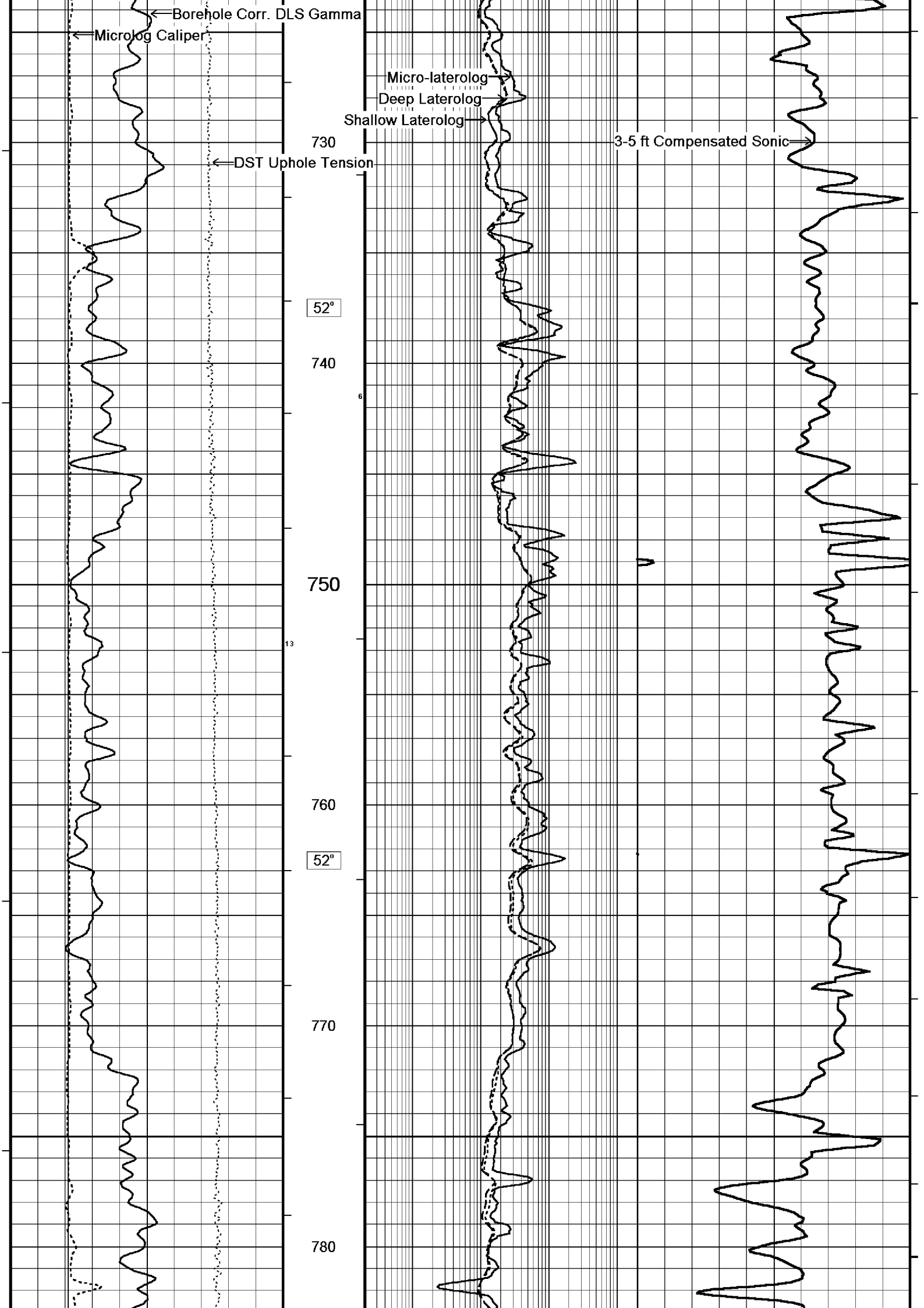
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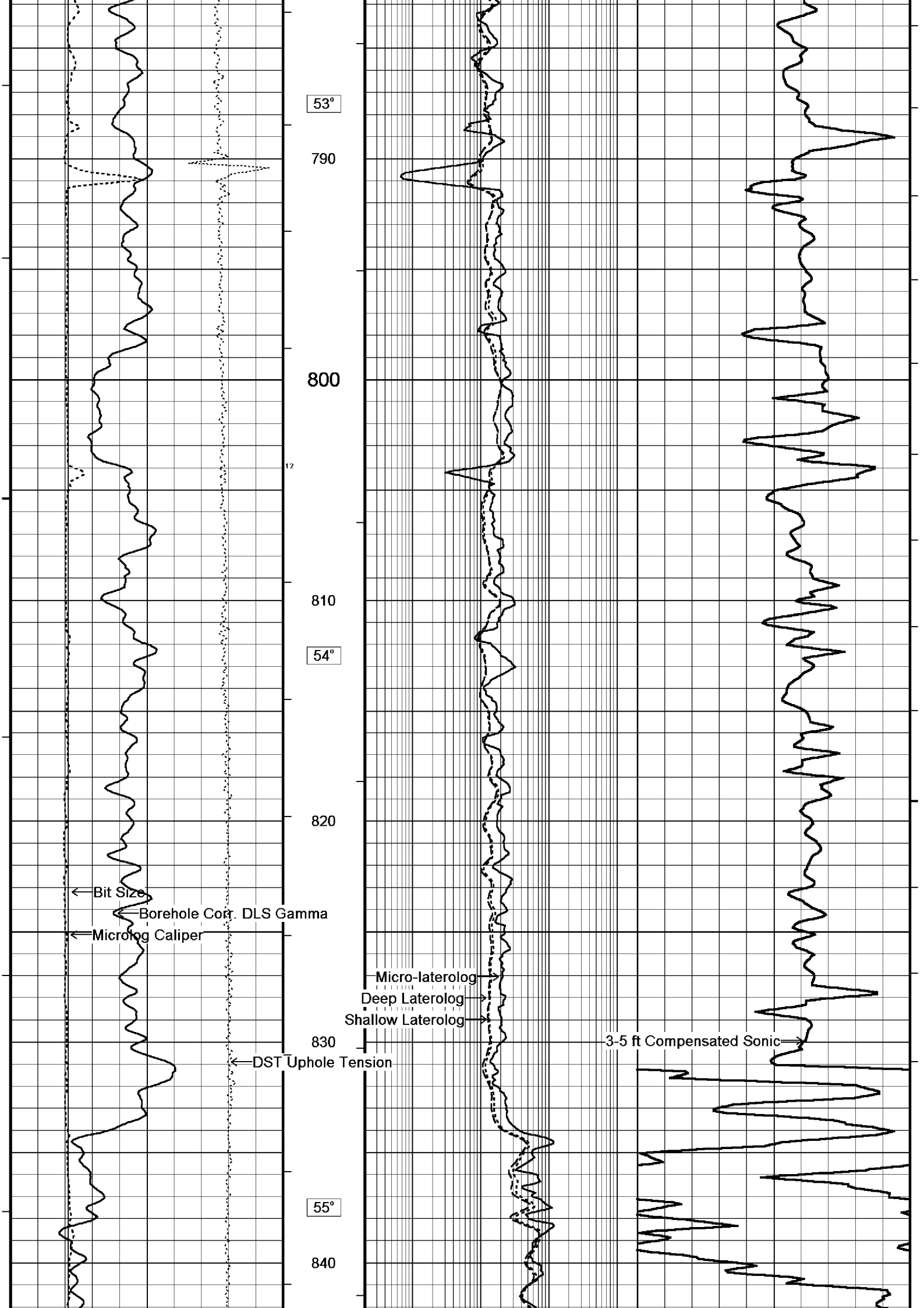
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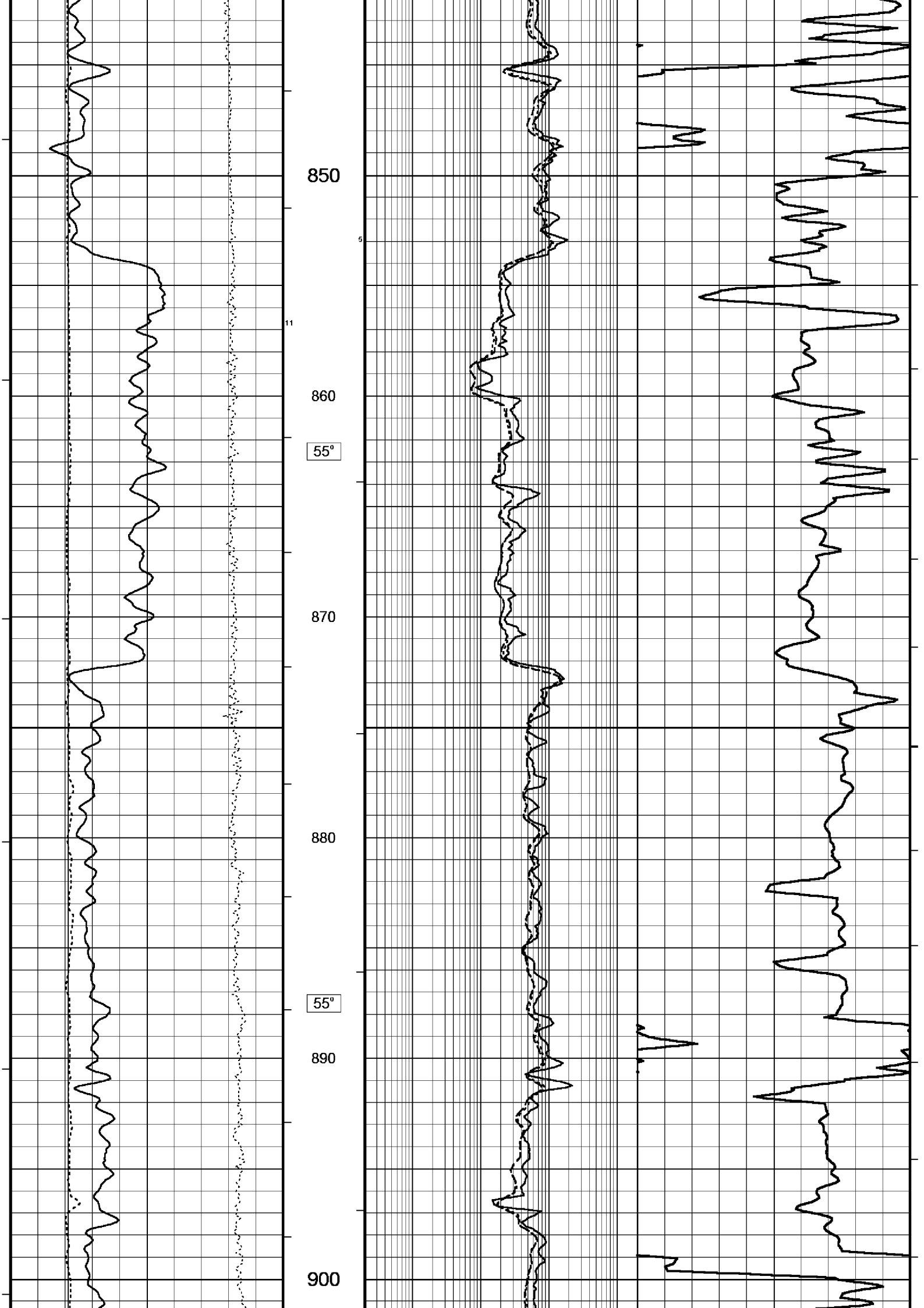


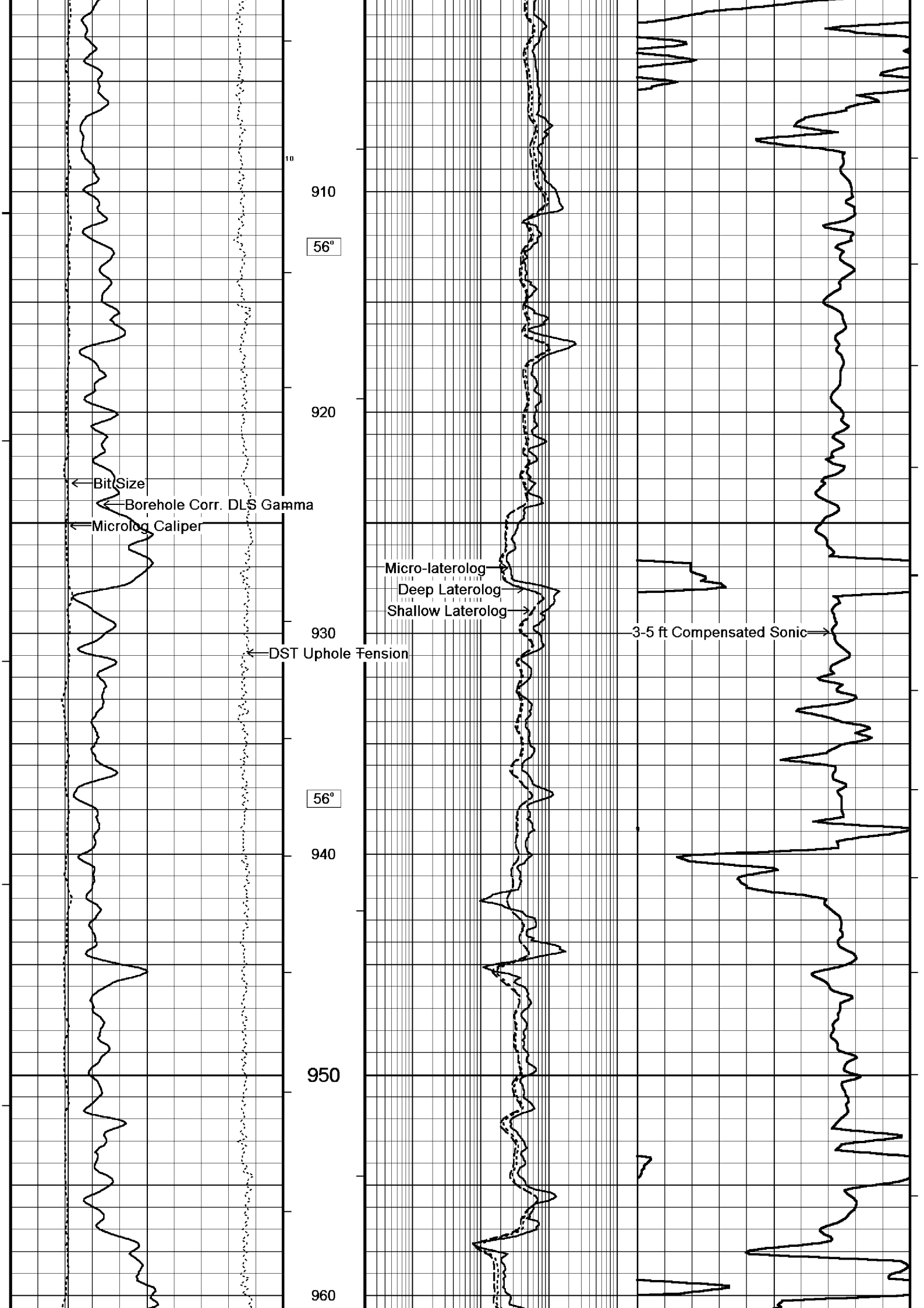


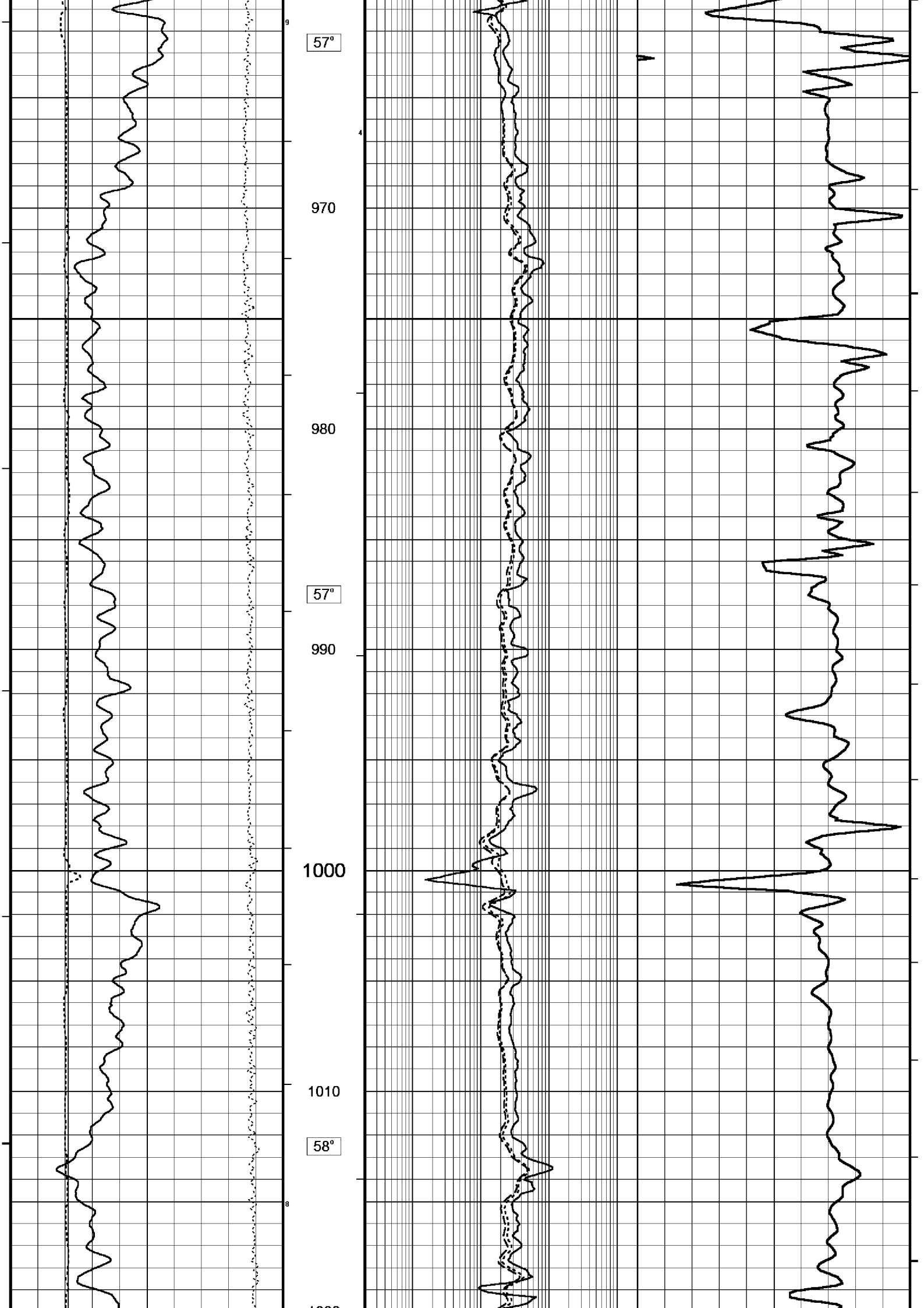


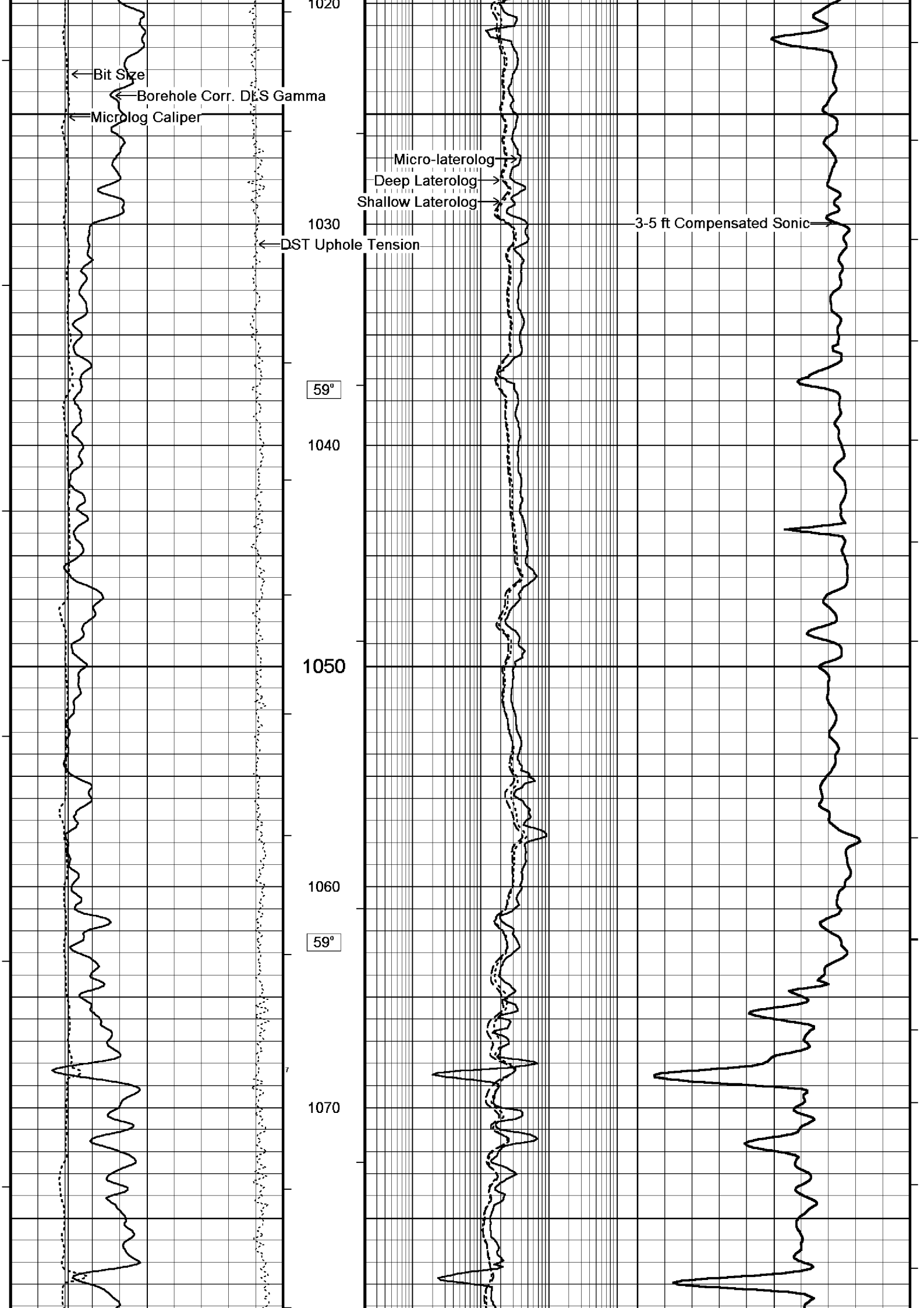


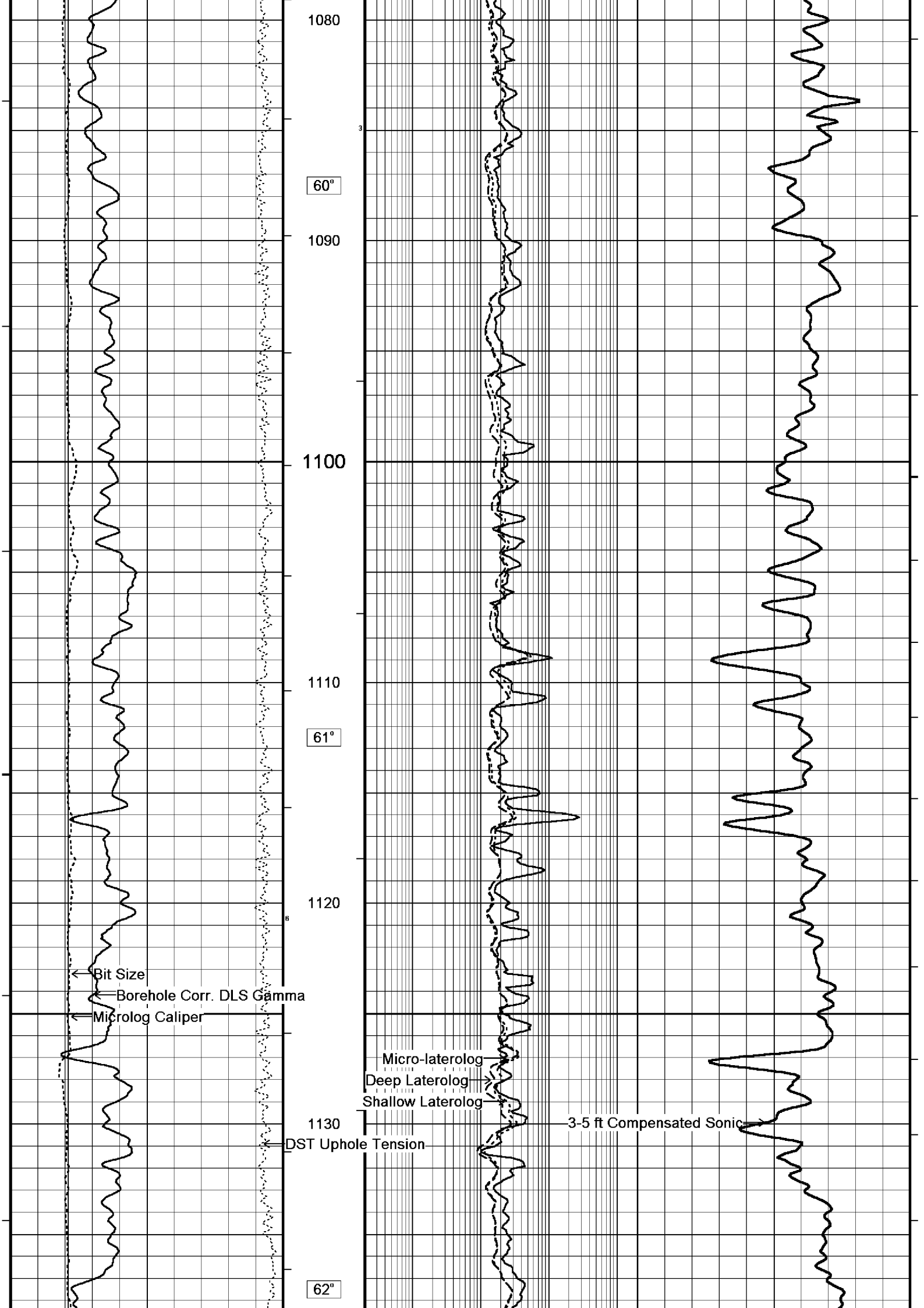


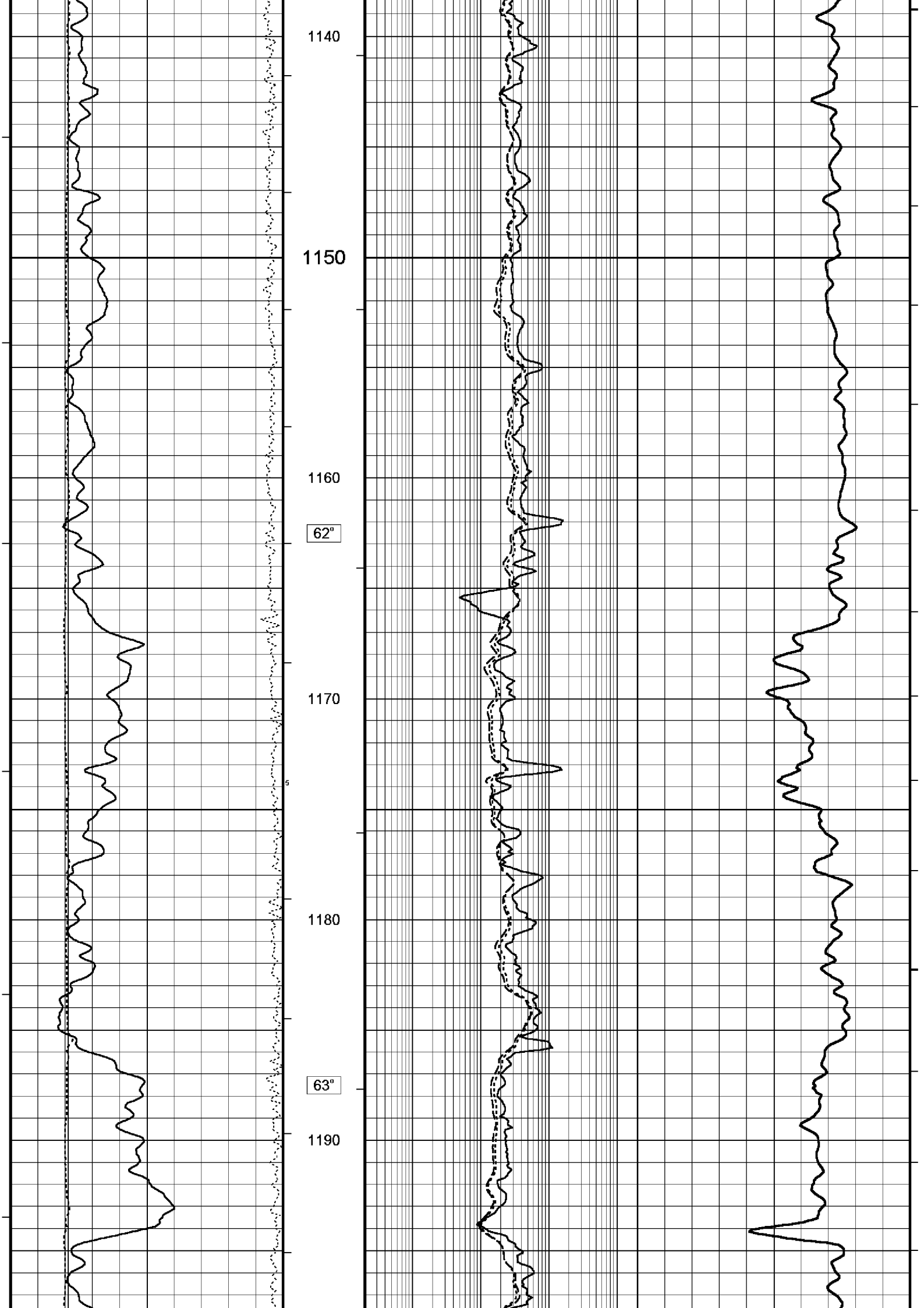


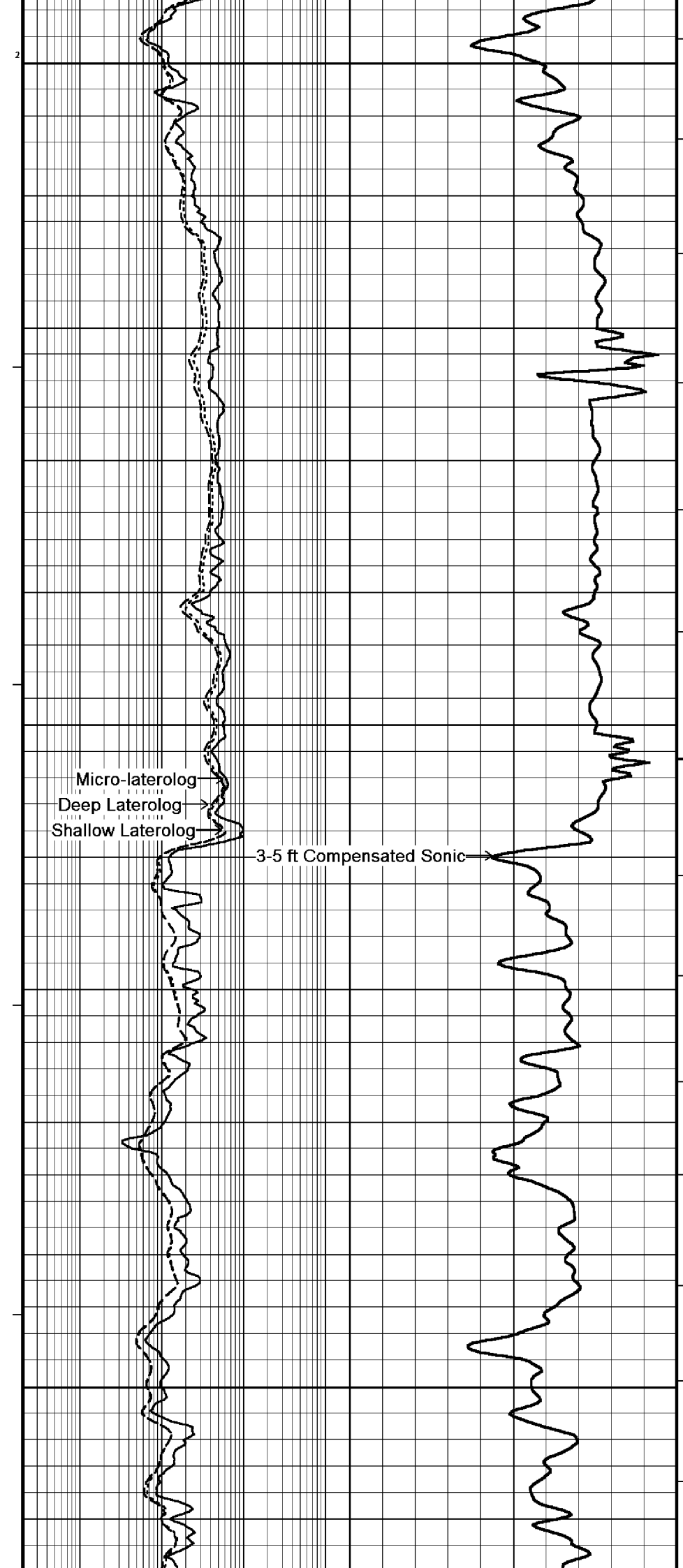
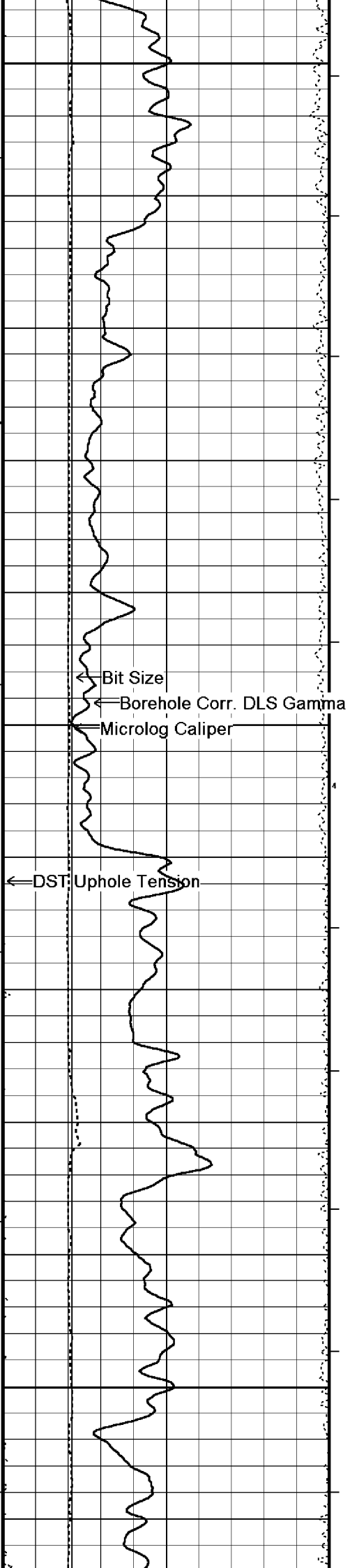


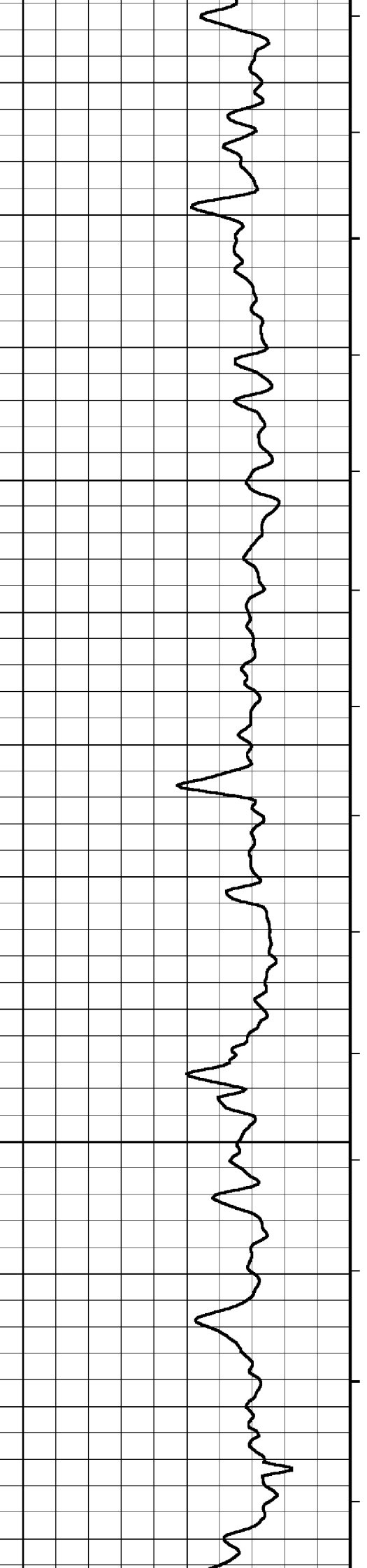
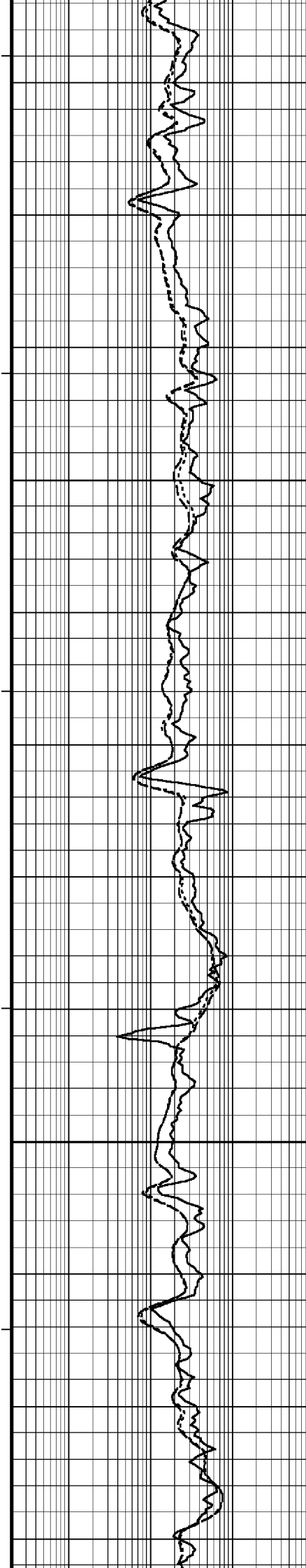
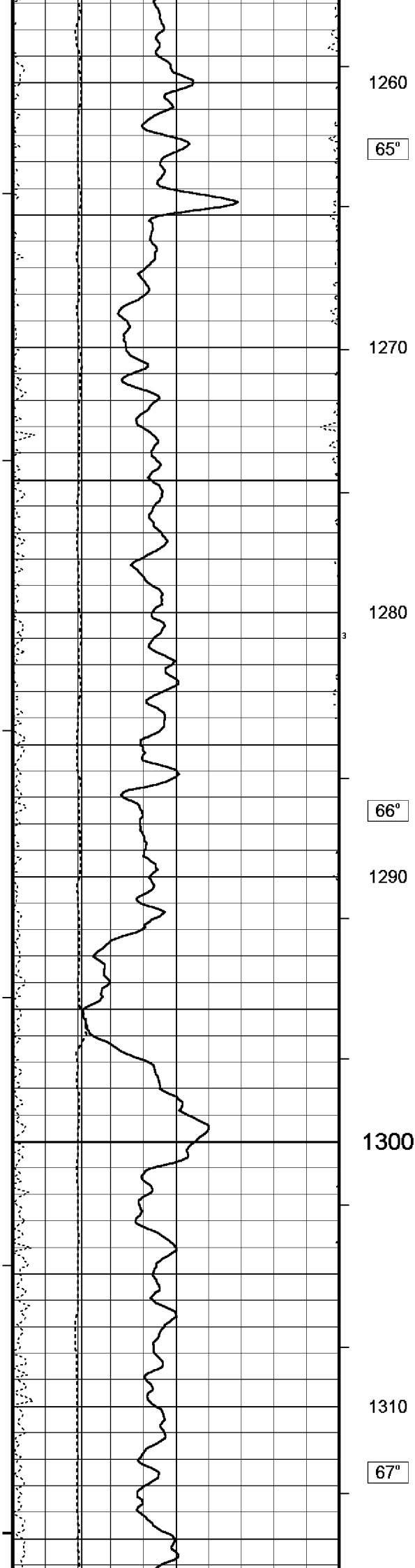




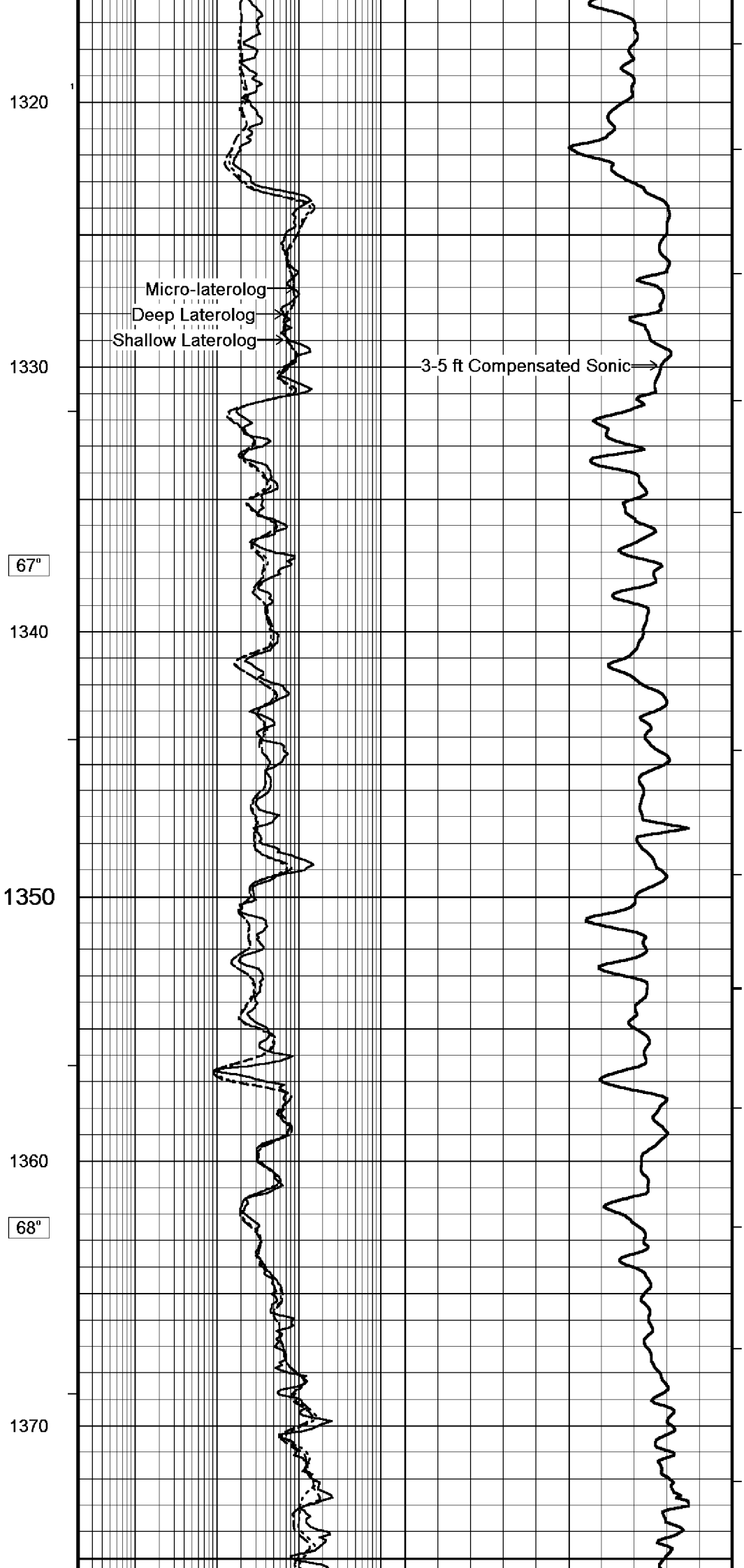
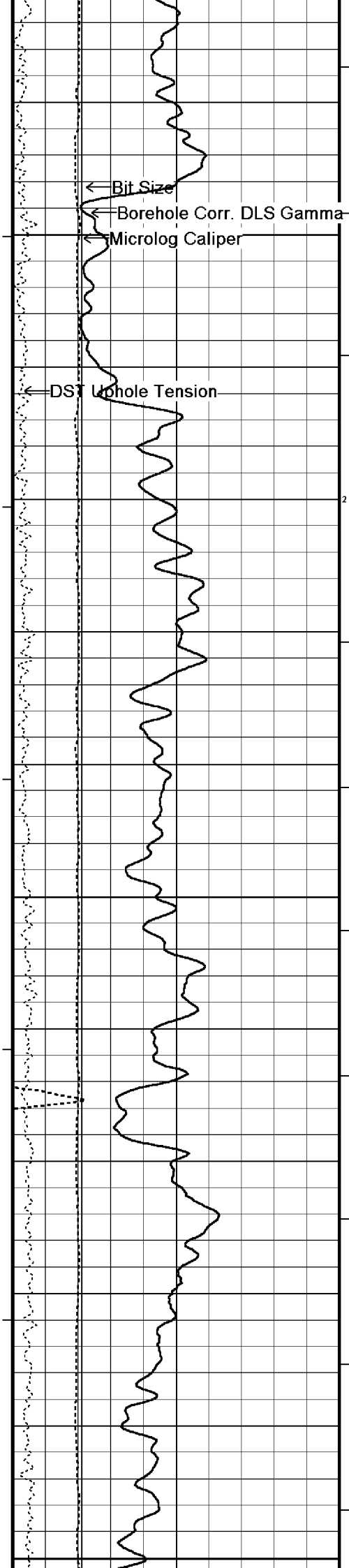


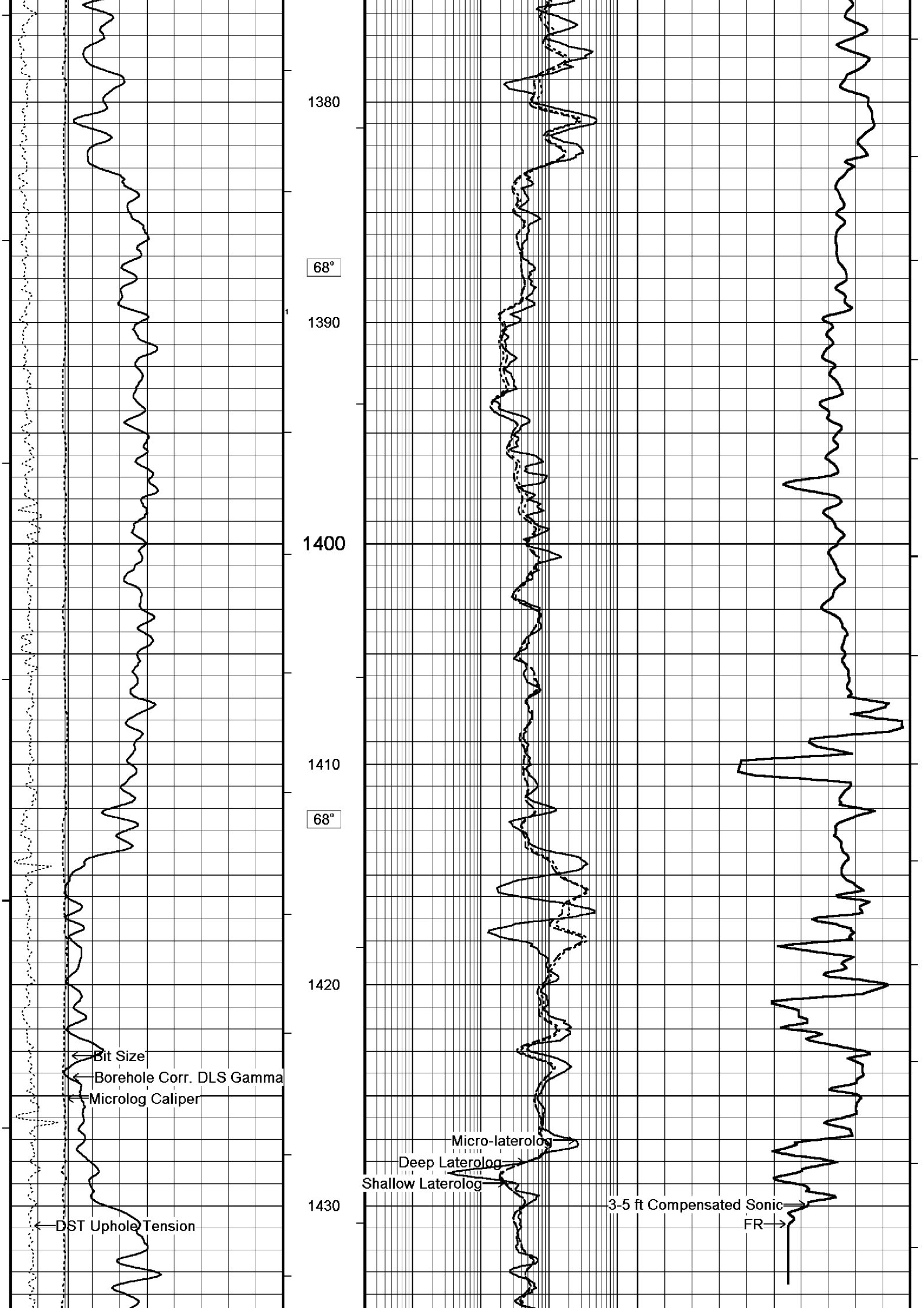




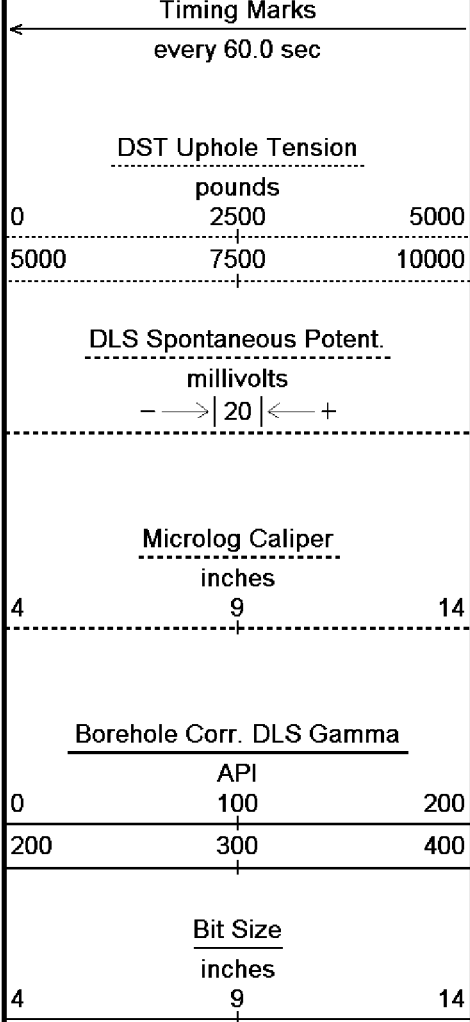










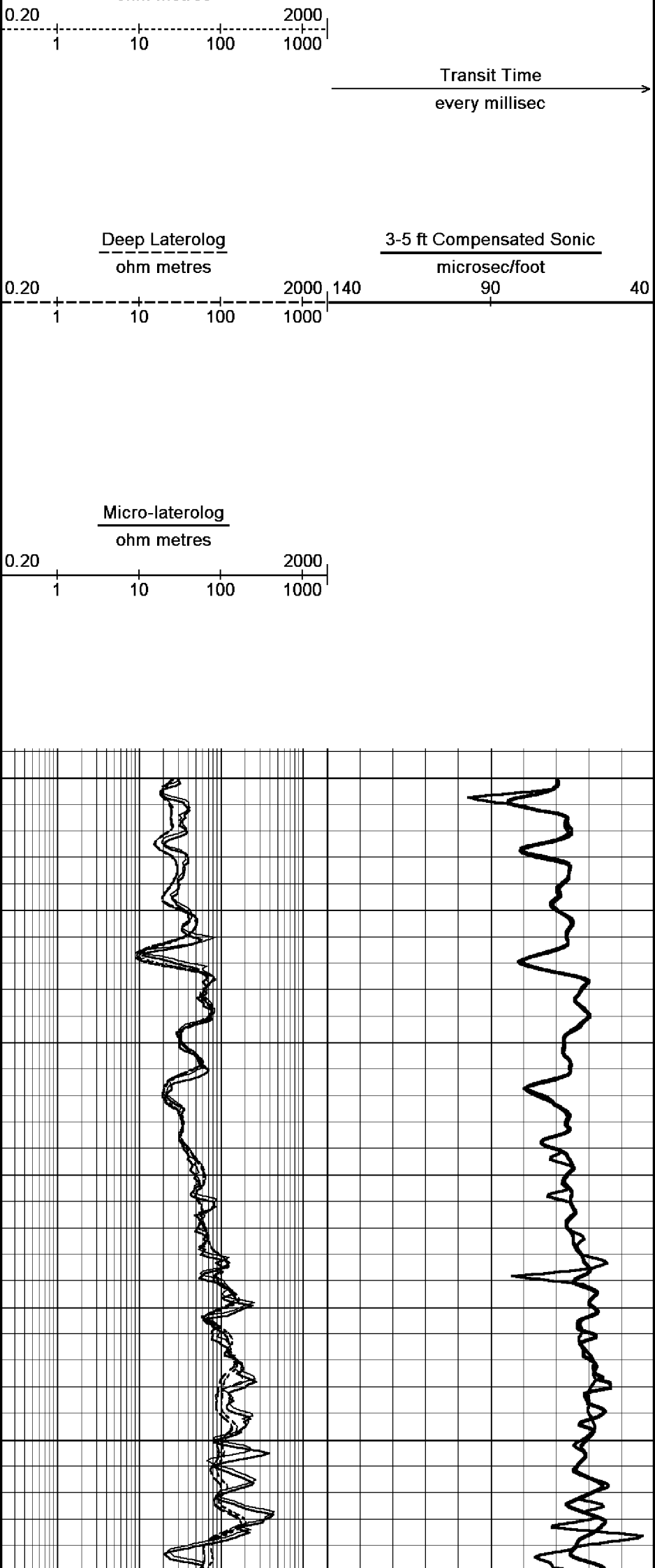


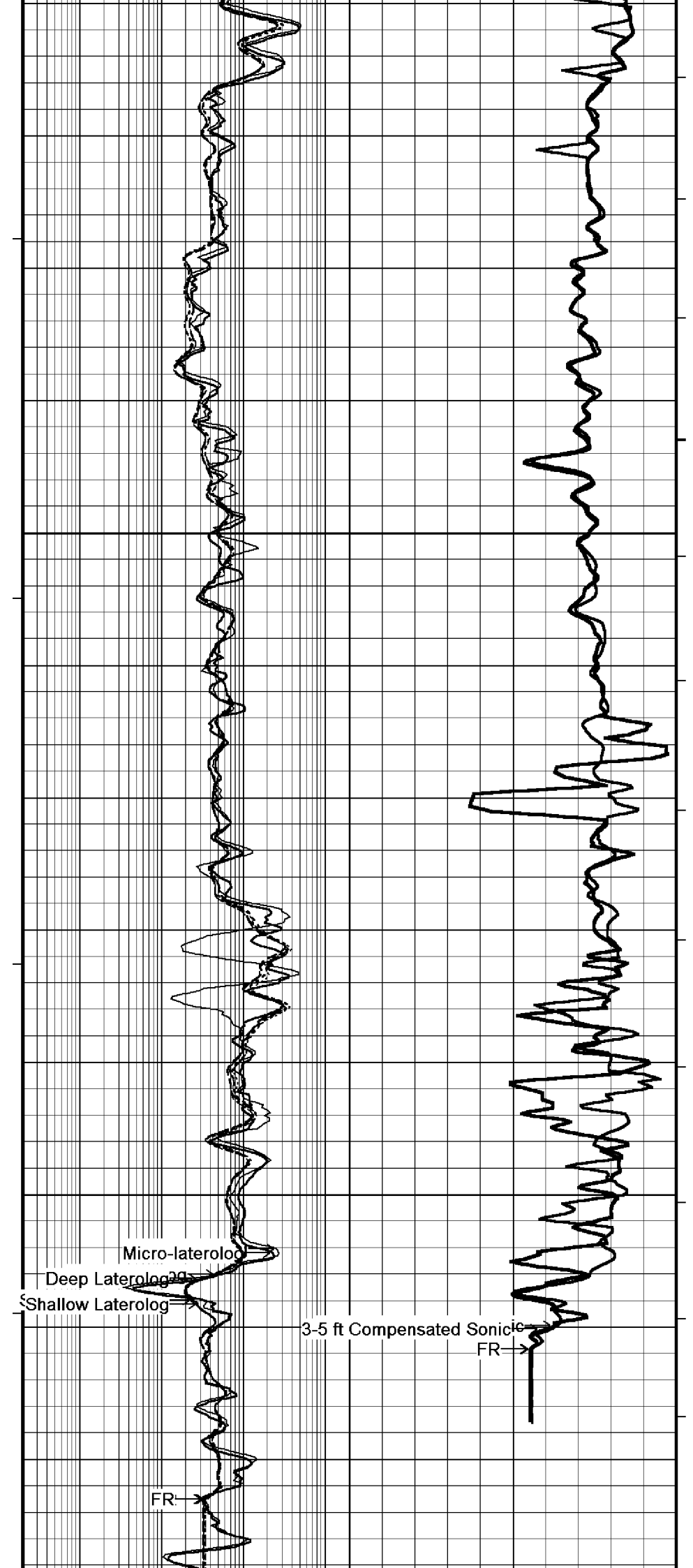
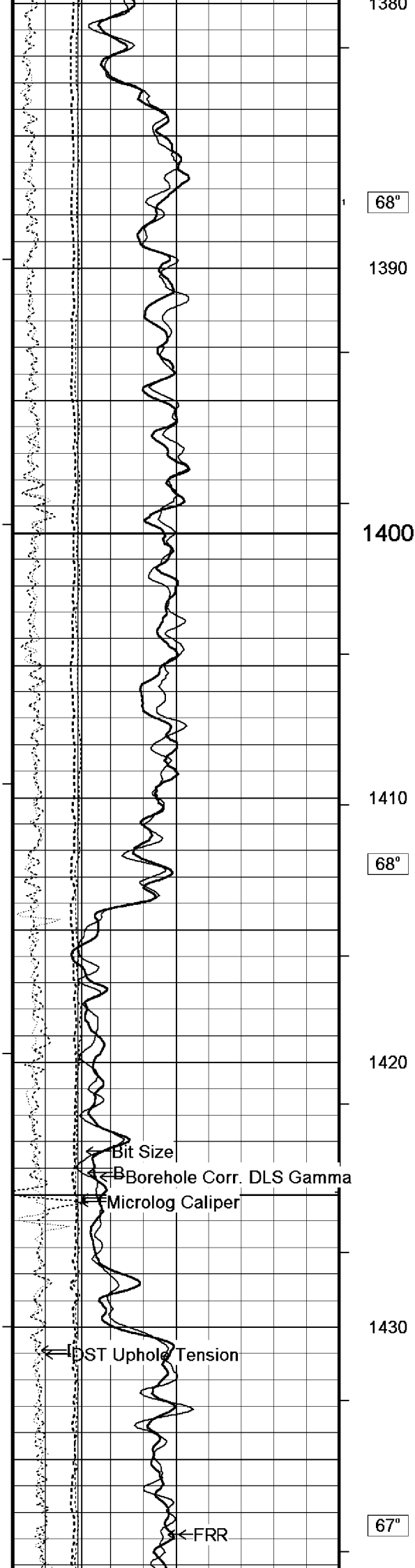
Borehole  
Temp in  
deg C

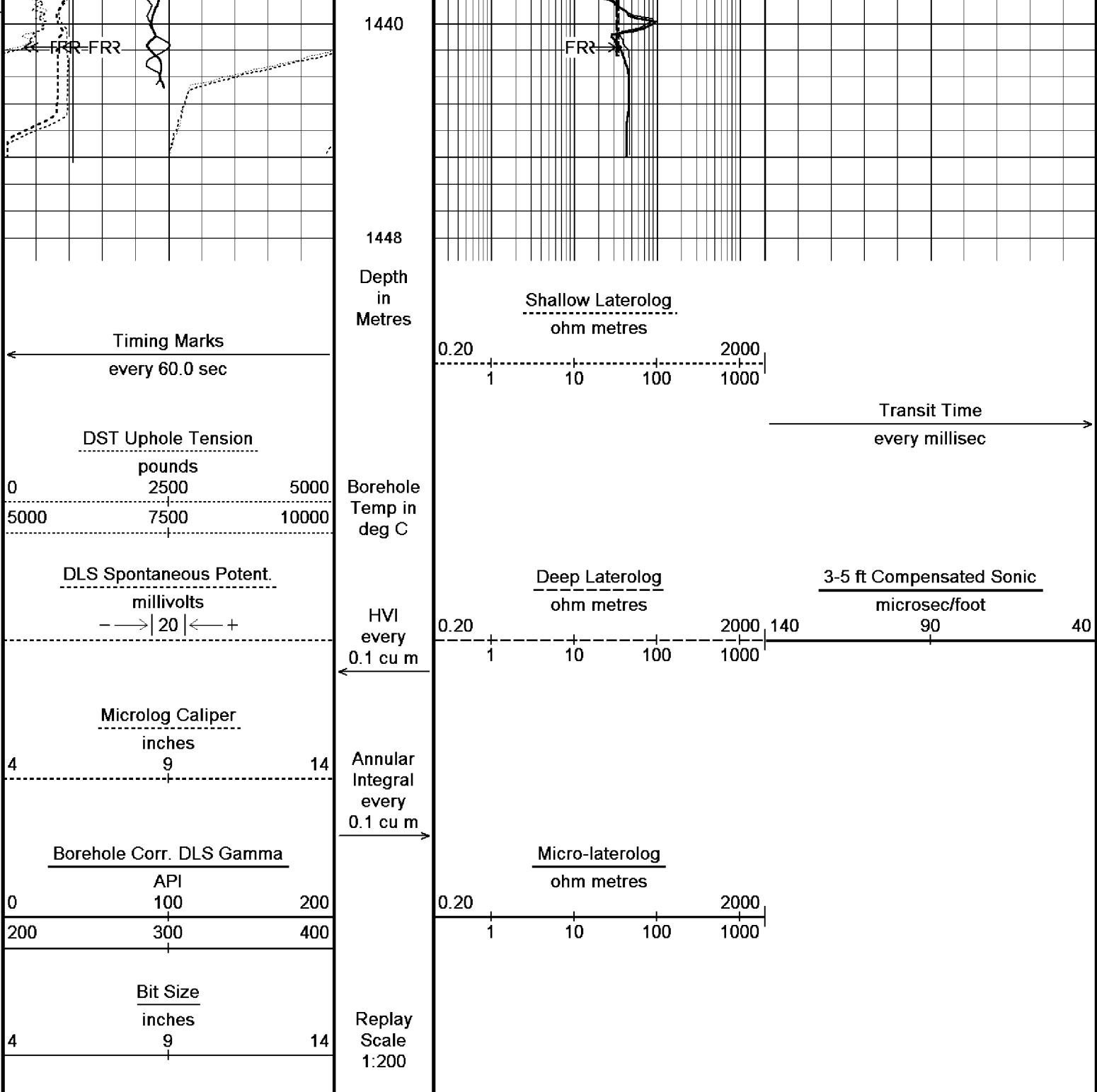
HVI  
every  
0.1 cu m

Annular  
Integral  
every  
0.1 cu m

Replay  
Scale  
1:200







Depth Based Data - Maximum Sampling Increment 10.0cm  
Filename: W:\LakesOil\RepeatSection2.dta  
Filename: W:\LakesOil\LakesOil\_LoyYang2\_DLS\_ATS.dta  
System Configuration Dates: Logged 17-JUN-2004: Processed 17-MAR-2005: Plotted 17-JUN-2004:

Plotted on 30-MAR-2006 10:20  
Recorded on 17-MAR-2006 00:19  
Recorded on 17-MAR-2006 00:58

↑ REPEAT SECTION MAINLOG 1:200 ↑

### BEFORE SURVEY CALIBRATION

W:\LakesOil\LakesOil\_LoyYang2\_DLS\_ATS.dta

General Constants All 000

General Parameters

Mud Resistivity	0.762	ohm-metres
Mud Resistivity Temperature	25.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Caliper 1	Microlog Caliper
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HVOL Caliper 1	Microlog Caliper	
HVOL Caliper 2	Microlog Caliper	
Annular Volume Diameter	4.500	inches
Caliper for Differential Caliper	Microlog Caliper	
Rwa Parameters		
Porosity used	Limestone Sonic Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.610	
RWA Constant M	2.150	

Long Spaced Sonic Constants ATS 042		
Sonde Mode	Compensated	
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	0	
Correction for Sonde Skew	Applied	
Initial Discriminator Level 1	1.00	volts
Initial Discriminator Level 2	1.00	volts
Initial Discriminator Level 3	1.00	volts
Initial Discriminator Level 4	1.00	volts
Transmitter 1 Switch	Normal	
Transmitter 2 Switch	Normal	
Received Signal Polarity	Normal	
MN3FT	N/A	micro-sec
MX3FT	N/A	micro-sec
Waveform Parameters		
Standoff	N/A	N/A
Window Width	N/A	
Time Factor	N/A	
Significance Level	N/A	
S Velocity Despiker	N/A	N/A
P Velocity Despiker	N/A	N/A
Interval Pair 1	N/A	
Interval Pair 2	N/A	
Auto Range	N/A	
Waveform Gain Applied	N/A	
Invert W3TN	N/A	
Waveform 1 for Attenuation	N/A	
Waveform 2 for Attenuation	N/A	
CBL Waveform Parameters		
Peak Channel	N/A	
Peak Window Position	N/A	
Peak Window Start	N/A	micro-sec
Peak Window Width	N/A	micro-sec
Peak Gain Factor	N/A	
Waveform	N/A	
Waveform Gain Factor	N/A	
Transmitters Enabled	N/A	

SP Calibration DLP 003			Field Calibration on 17-NOV-2005 09:49
	Measured	Calibrated (mV)	
Reference 1	104.6	100.5	
Reference 2	-103.7	-100.6	

SP Constants DLP 003	
Interference Rejection	50 Hz

Gamma Calibration DLE 003			Field Calibration on 7-DEC-2005 13:13
	Measured	Calibrated (API)	
Background	42	38	
Calibrator (Gross)	955	862	
Calibrator (Net)	913	824	

Gamma Constants DLE 003		
Gamma Calibrator Number	30	
Mud Density	1.04	gm/cc

Caliper Source for Processing	Microlog Caliper
Tool Position	Centred
Concentration of KCl	0.00 kppm

# Laterolog Calibration DLE 003

Base Calibration on 11-MAR-2006 17:57  
Field Check on 15-MAR-2006 10:39

## Base Calibration

Channel	Resistor 1	Measured		Calibrated (ohm-m)	
		Resistor 2		Resistor 1	Resistor 2
Shallow	0.0	1008.2		0.0	1430.0
Deep	0.0	1008.4		0.0	820.0
Groningen	0.0	120.8		0.0	820.0

Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Shallow	113.0		0.0	
Deep	64.8		0.0	
Groningen	546.2		0.0	

# Laterolog Constants DLE 003

Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.4300	
Deep Laterolog K Factor	0.8200	
Groningen Laterolog K Factor	0.8200	
Voltage Reference	Armour	
Deep Drive	On	
Interference Rejection	50 Hz	

# Micro Normal and Micro Inverse Calibration MRS 032

Base Calibration on 17-NOV-2005 10:59  
Field Check on 7-DEC-2005 14:30

## Base Calibration

Channel	Resistor 1	Measured		Calibrated (ohm-m)	
		Resistor 2		Resistor 1	Resistor 2
Micro Normal	9.7	49.4		6.1	30.6
Micro Inverse	10.0	49.9		3.4	16.9

Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Micro Normal	62.0		62.0	
Micro Inverse	33.8		33.8	

# Micro Normal and Micro Inverse Constants MRS 032

Micro Normal K Factor	0.6130	
Micro Inverse K Factor	0.3380	
Standoff Offset	N/A	inches

# Caliper Calibration MRS 032

Base Calibration on 17-NOV-2005 11:18  
Field Calibration on 16-MAR-2006,23:17

## Base Calibration

Reading No	Measured	Calibrator Size (in)
1	107520	8.01
2	139520	10.01
3	168960	11.82
4	212736	14.01
5	0	0.00
6	N/A	N/A

## Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.39	6.28

# Micro Laterolog Calibration MRS 032

Base Calibration on 11-MAR-2006 18:19  
Field Check on 15-MAR-2006 10:42

## Base Calibration

	Measured		Calibrated (ohm-m)	
	Ref 1	Ref 2	Ref 1	Ref 2
	898.2	8778.8	23.0	230.0

Base Check (ohm-m)	Field Check (ohm-m)
12.5	0.0

# Micro Laterolog Constants MRS 032

Micro Laterolog K Factor	0.0230	
Standoff Offset	N/A	inches



## DOWNHOLE EQUIPMENT

W:\LakesOil\LakesOil\_LoyYang2\_DLS\_ATS.dta

Stiff Bridle B  
SBT 4      Length: 3.38 m      Weight: 163.1 lb

19.94 m      SPLL - DLS Spontaneous Potent.

Sonic Processing Sub  
WPS 12      Length: 2.63 m      Weight: 92.6 lb

Acoustic Transducer Sub  
ATS 42      Length: 5.24 m      Weight: 154.3 lb

10.06 m      SPRL - Limestone Sonic Porosity  
10.06 m      DTC1 - 3-5 ft Compensated Sonic  
10.06 m      R4T1 - Sonic R4T1  
10.06 m      R4T2 - Sonic R4T2  
10.06 m      R3T1 - Sonic R3T1  
10.06 m      R3T2 - Sonic R3T2  
10.06 m      R2T1 - Sonic R2T1  
10.06 m      R2T2 - Sonic R2T2  
10.06 m      R1T1 - Sonic R1T1  
10.06 m      R1T2 - Sonic R1T2

Laterolog Processing Sub  
DLP 3      Length: 2.52 m      Weight: 169.8 lb

6.51 m      TEXTL - DLS Borehole Temperature

Laterolog Electrode Sub  
DLE 3      Length: 4.29 m      Weight: 160.9 lb

4.41 m      DLL - Deep Laterolog  
4.41 m      SLL - Shallow Laterolog  
3.04 m      GLLE - Borehole Corr. DLS Gamma

Micro Resistivity Sub  
MRS 32      Length: 2.86 m      Weight: 108.0 lb

0.00 m      MLL - Micro-laterolog  
0.00 m      CADF - Microlog Caliper  
0.00 m      AVOL - Annular Volume  
0.00 m      HVOL - Hole Volume  
Tool Zero      (1.18m from bottom)

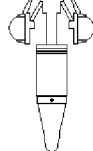
Hole Finder (37 way tools)

All measurements relative to tool zero

Hole Finder (37-way tools)

HFS 3 Length: 0.54 m Weight: 11.0 lb

Total Length: 21.46 m Weight: 859.8 lb



All measurements relative to tool zero.

COMPANY LAKES OIL NL  
WELL LOY YANG 2  
FIELD EXPLORATION  
PROVINCE/COUNTY VICTORIA  
COUNTRY/STATE AUSTRALIA

Elevation Kelly Bushing	107.65	metres	First Reading	1440.90	metres
Elevation Drill Floor		metres	Depth Driller	1443.00	metres
Elevation Ground Level	104.00	metres	Depth Logger	1442.08	metres



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