

COMPANIA: YPF S.A.

POZO: YPF.Ch.EA-670

CAMPO: EL ALBA

PROVINCIA: CHUBUT

PAIS: ARGENTINA



COMBINADA

ESCALA: 1/200

AIT-BHC-LDL-CNL-CAL RFT

Elev.: B.V. 667.08 m  
N.T. 662.53 m  
M.R. 666.78 m

Ref. Permanente: NIVEL TERRENO Elev.: 662.53 m  
Reg. Medido Desde: NIVEL TERRENO 0.0 m sobre nivel ref.  
Perforacion Medida Desde: NIVEL TERRENO

LOCACION  
UWI: AR0100006244  
Equipo Pl-245  
Longitud X: 4.949.430,15  
Latitud Y: 2.582.170,82

Perforador 2107 m

Registro 2110.2 m

Lectura 2107.8 m

Lectura 391.8 m

Perforador 9.625 in @ 391.39 m

Registro 391.8 m

Tuberia 8.750 in

Tuberia 8.750 in

Trepano CALCICO-IDCAP

De Lodo 1.17 g/cm3 56 s

Viscosidad 6 cm3 9

PH 6 cm3 9

Problema Muestra De Lodo PILETA

Logging Date	Run 1	Run 2	Run 3
Run Number			
Depth Driller			
Logger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Driller Size @ Depth			
Casing Logger			
Bit Size			
Type Fluid In Hole			
Density			
Fluid Loss			
Source Of Sample			
RM @ Measured Temperature	@	@	@
RMF @ Measured Temperature	@	@	@
RMC @ Measured Temperature	@	@	@
Source RMF	RMC		
RM @ MRT	RMF @ MRT		
Maximum Recorded Temperature			
Circulation Stopped	Time		
Logger On Bottom	Time		
Unit Number	Location		
Recorded By			
Witnessed By			

## DEPTH SUMMARY LISTING

Date Created: 27-MAR-2005 8:42:49

### Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-B	Type: CMTD-B/A	Type: 7-42P-XS
Serial Number: 4810	Serial Number: 2035	Serial Number: 5123
Calibration Date: 6-Jun-2003	Calibration Date: 7-Ene-2005	Length: 4807.92 M
Calibrator Serial Number: 5969	Calibrator Serial Number: 1028	Conveyance Method: Wireline
Calibration Cable Type: 7-42P-XS	Calibration Gain: 1.08	Rig Type: LAND
Wheel Correction 1: -2	Calibration Offset: 306.00	
Wheel Correction 2: -2		

### Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	61.20 M
Rig Up Length At Bottom:	61.20 M
Rig Up Length Correction:	0.00 M
Stretch Correction:	1.80 M
Tool Zero Check At Surface:	-0.10 M

### Depth Control Remarks

1. Primera carrera en el pozo y perfil de referencia de profundidad.
2. Procedimiento estandar de control de profundidad de Schlumberger aplicado en esta carrera.
3. Estiramiento del cable entre bajando y subiendo: 1,8metros.
4.
5.
6.

#### LIMITACION DE RESPONSABILIDAD

LA UTILIZACION Y CONFIANZA EN LOS DATOS AQUI GRABADOS POR PARTE DE LA NOMBRADA COMPANIA (Y POR CUALQUIERA DE SUS SUBSIDIARIAS, AFILIADAS, REPRESENTANTES, AGENTES, CONSULTORES Y EMPLEADOS) ESTA SUJETA A LOS TERMINOS Y CONDICIONES ACORDADOS ENTRE SCHLUMBERGER Y LA COMPANIA, INCLUYENDO: (a) RESTRICCIONES EN EL USO DE LOS DATOS GRABADOS; (b) LIMITACION DE RESPONSABILIDAD Y REVOCACION DE GARANTIAS EN RELACION A LA UTILIZACION Y CONFIANZA EN LOS DATOS GRABADOS POR PARTE DE LA COMPANIA, Y (c) LA SOLA Y TOTAL RESPONSABILIDAD DEL CLIENTE POR CUALQUIER INTERPRETACION HECHA O DECISION BASADA EN EL USO DE ESTOS DATOS.

OTROS SERVICIOS # 1	OTROS SERVICIOS # 2
OS1: AIT-BHC-LDL-CNL-CAI	OS1:
OS2: RFT	OS2:
OS3:	OS3:
OS4:	OS4:
OS5: PI-245	OS5:

OBSERVACIONES: CORRIDA # 1	OBSERVACIONES: CORRIDA # 2
1. Primera carrera en el pozo y perfil de referencia de profundidad.	
2. Herramienta corrida segun diagrama.	
3. AIT y DSLC corridos descentralizados utilizando standoff de 1,5".	
4. Esquema del pozo segun datos del perforador.	
5. Ultima circulacion termino el dia 27-Mar-2005 a las 2:15hs, duracion 1.5hs.	
6. Maxima temperatura del pozo 77degC, tomada con termometro en punta de herramienta.	
7. Maxima desviacion del pozo segun dato del perforador.	
8. Coordenadas definitivas.	
9. FPHI=SPHI, FNUM=0.81 y FEXP=2 utilizados para el calculo de RWA.	

10. Lecturas de BHC, LDL y CNL afectadas en zonas de mal caliper.

11. BHC, LDL, CNL y CALI corridos hasta 800m a pedido del cliente.

12. Datos adicionales del lodo: Cl= 500ppm, Ca= 700ppm.

13. Diametro del pozo 8,5" desde el fondo hasta 1563m y 8,75" desde 1563m hasta el zapato.

CORRIDA #1			CORRIDA #2		
ORDEN DE SERVICIO:			ORDEN DE SERVICIO:		
VERSION DEL PROGRAMA:			VERSION DEL PROGRAMA:		
NIVEL DEL LODO:			NIVEL DEL LODO:		
12C0-301	0 m				
INTERVALO REGISTRADO	COMIENZO	FINAL	INTERVALO REGISTRADO	COMIENZO	FINAL

## DESCRIPCION DEL EQUIPO

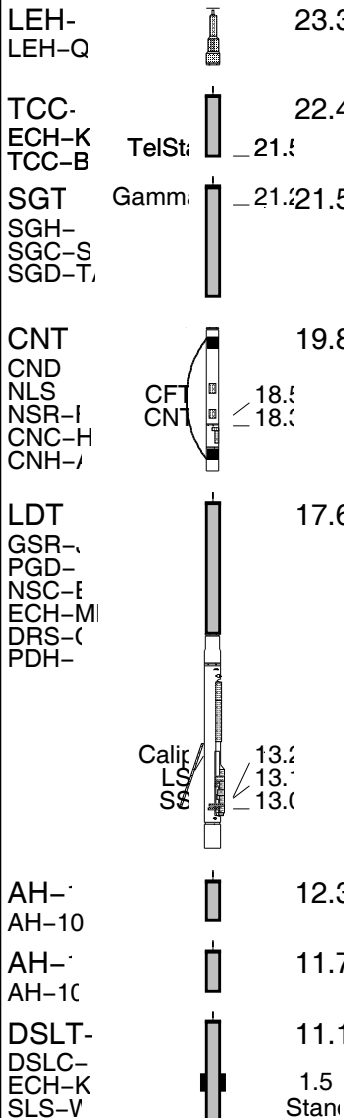
CORRIDA # 1

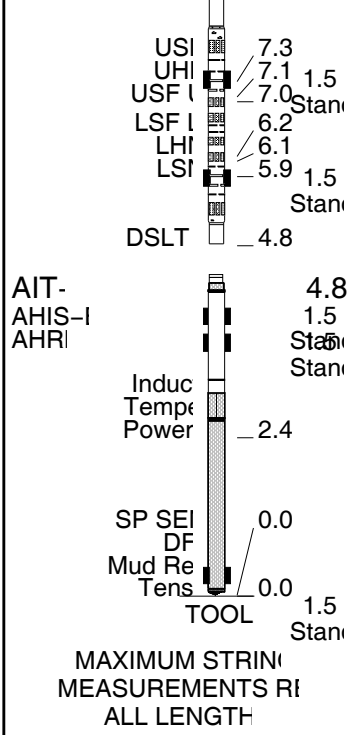
CORRIDA # 2

### SURFACE I

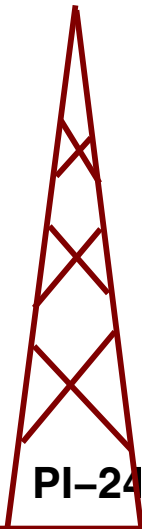
CNB-A WITM (  
NCT-  
NCS-Y  
GSR-

### DOWNHOLE





YPF.Ch.EA



Altura Mesa: 4

Nivel Terr

Nivel Refere

Casing 9  
32,3 Lb/ft

Zapato @ 391

Cota: 662,5

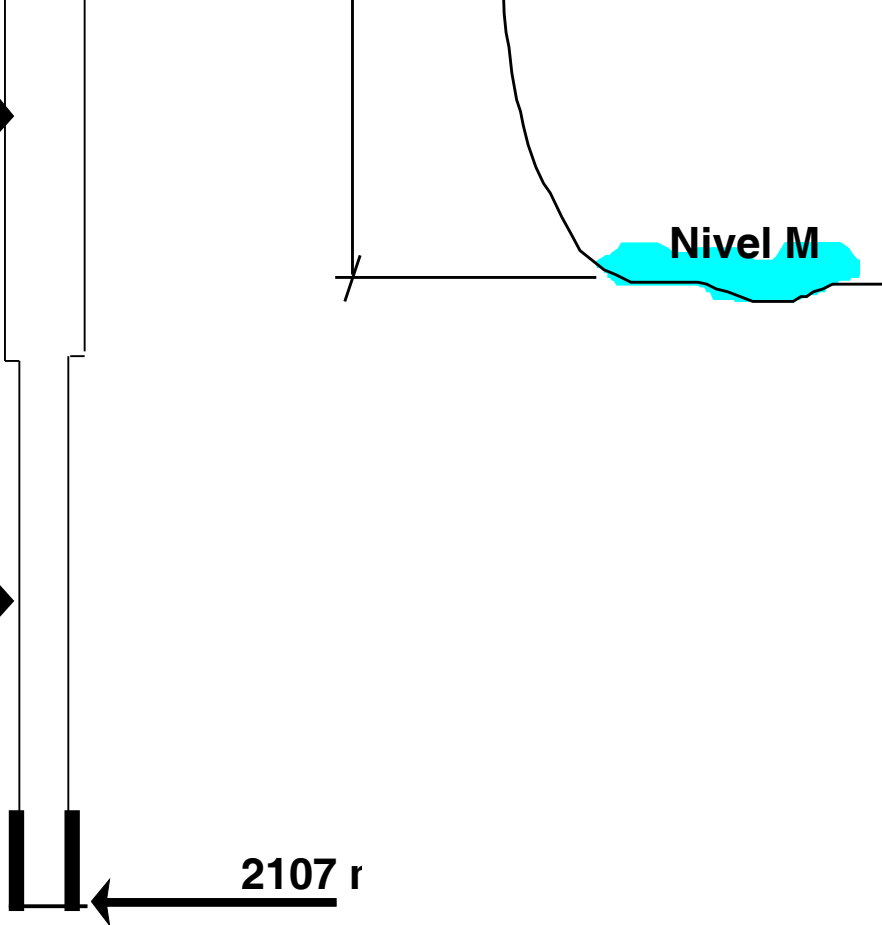
Trepano

8 3/4" @ 15¢



Trepano

8 1/2" @



**Schlumberger**

**TRAMO PRINCIPAL**

MAXIS Field Log

**Input DLIS Files**

DEFAULT	AIT_mainlog_022PUP	FN:35	PRODUCER	27-Mar-2005 12:16	2115.9 M	366.1 M
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**Output DLIS Files**

DEFAULT	AIT_mainlog_023PUP	FN:37	PRODUCER	27-Mar-2005 12:22	2115.9 M	367.4 M
B_UP	AIT_mainlog_023PUP	FN:38	PRODUCER	28-Mar-2005 12:36	2115.9 M	367.4 M

**Integrated Hole/Cement Volume Summary**

Hole Volume = 67.34 M3  
 Cement Volume = 41.00 M3 (assuming 5.50 IN casing O.D.)  
 Computed from 2110.1 M to 391.8 M using data channel(s) CALI

**OP System Version: 12C0-301**

MCM

### Changed Parameter Summary

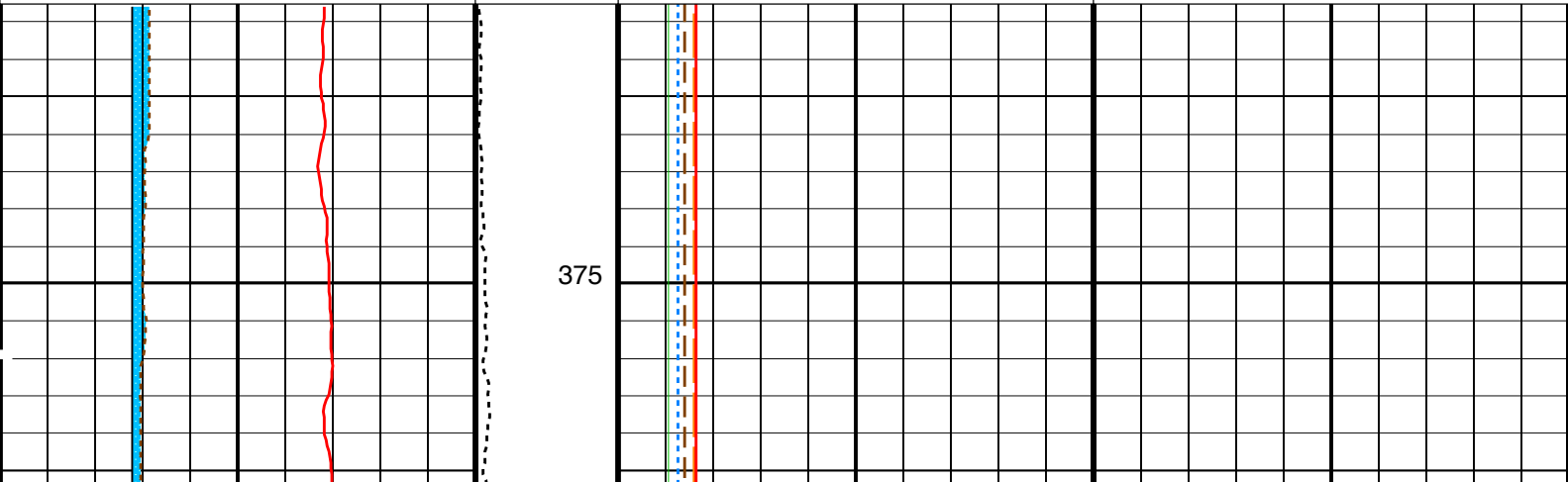
DLIS Name	New Value	Previous Value	Depth & Time
BS	8.500 IN	8.750 IN	2115.9 12:22:39
	8.500 IN	8.500 IN	2030.0 12:22:48
	8.750 IN	8.500 IN	1562.9 12:23:39
	8.750 IN	8.750 IN	1154.9 12:24:23
	8.750 IN	8.750 IN	1074.9 12:24:31
	8.750 IN	8.750 IN	849.9 12:24:56
SPDR	0 MV/M	0 MV/M	2115.9 12:22:39
	0.015 MV/M	0 MV/M	2030.0 12:22:48
	0.024 MV/M	0.015 MV/M	1562.9 12:23:39
	0 MV/M	0.024 MV/M	1154.9 12:24:23
	0.031 MV/M	0 MV/M	1074.9 12:24:31
	0 MV/M	0.031 MV/M	849.9 12:24:56

#### PIP SUMMARY

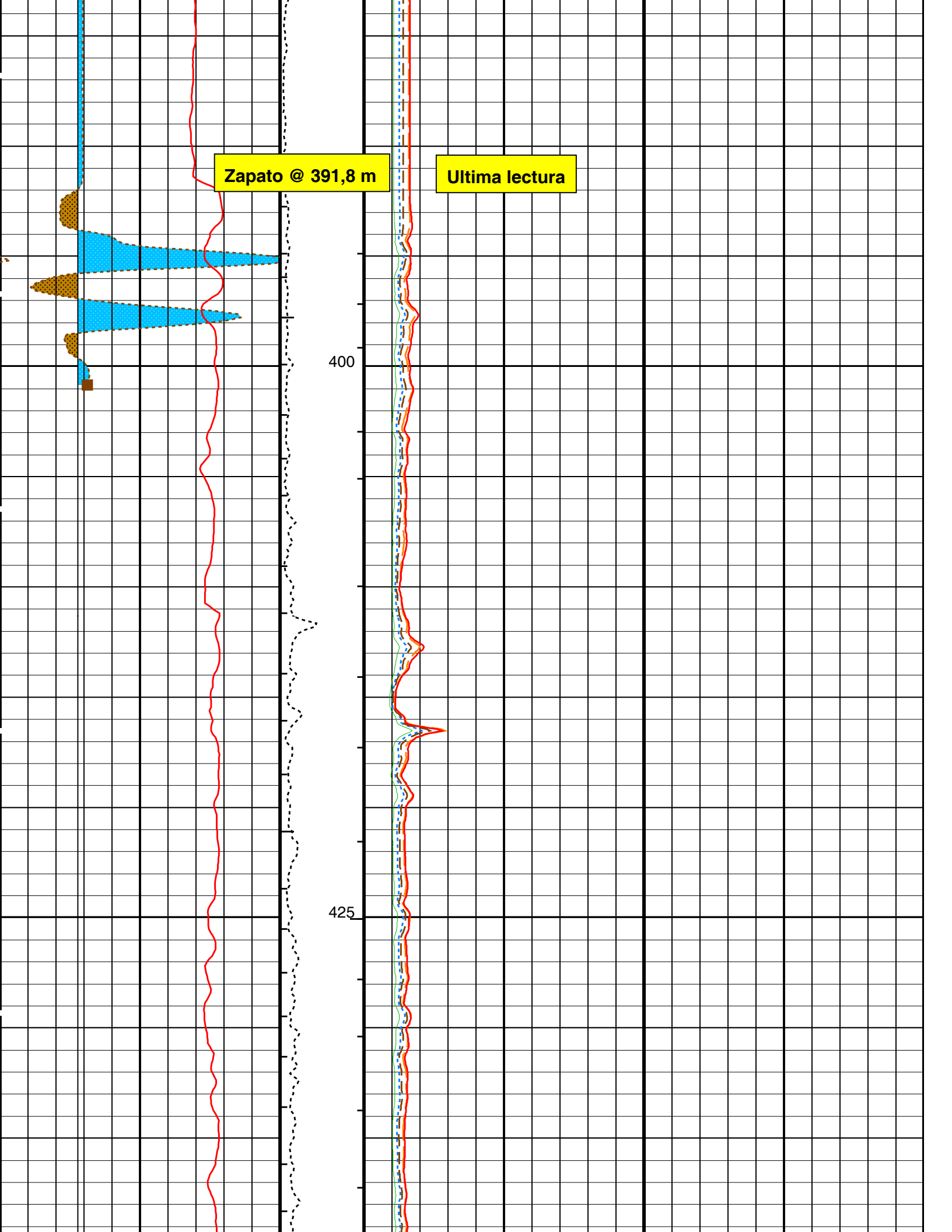
- └ Integrated Hole Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
  - └ Integrated Cement Volume Minor Pip Every 0.1 M3
  - └ Integrated Cement Volume Major Pip Every 1 M3

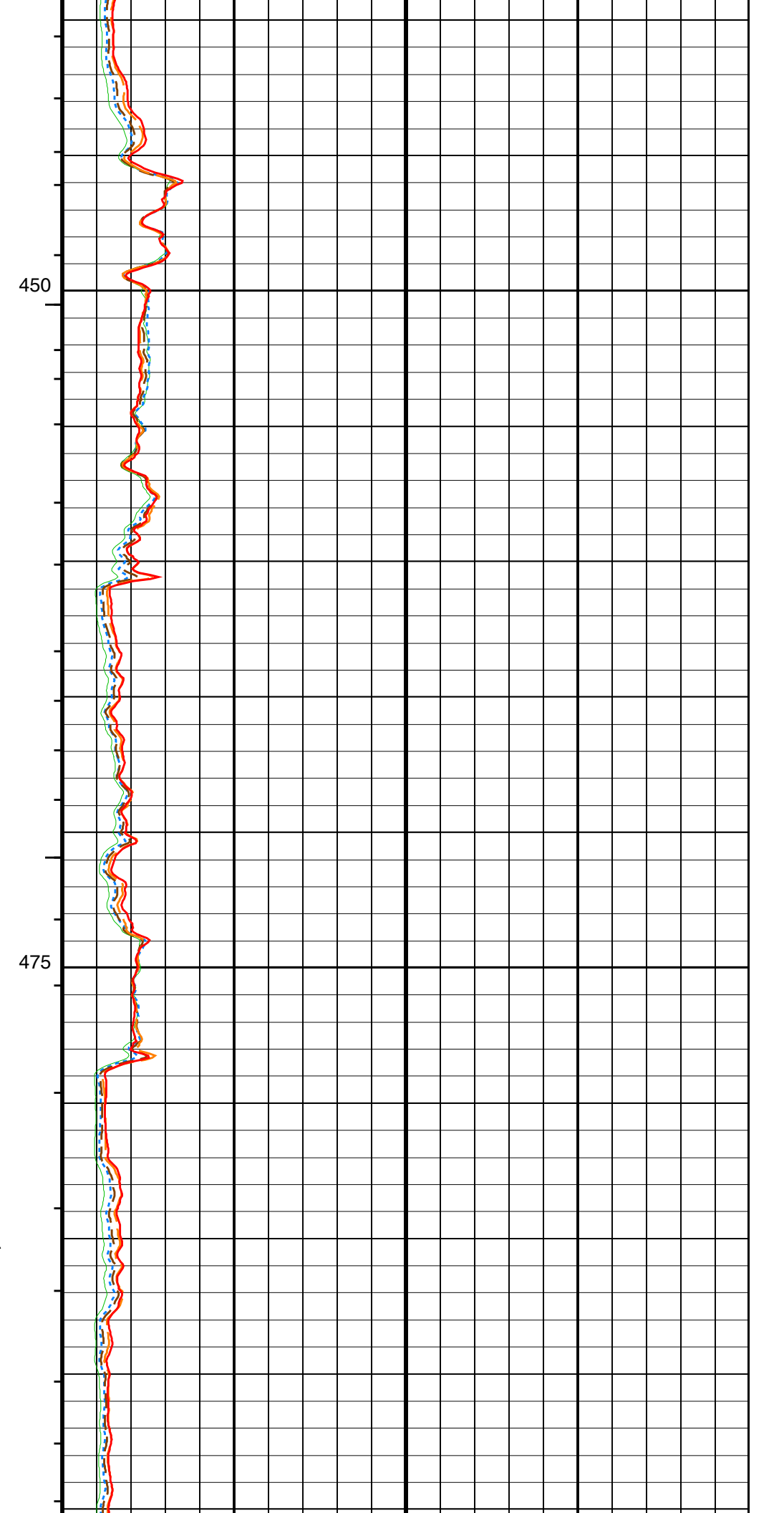
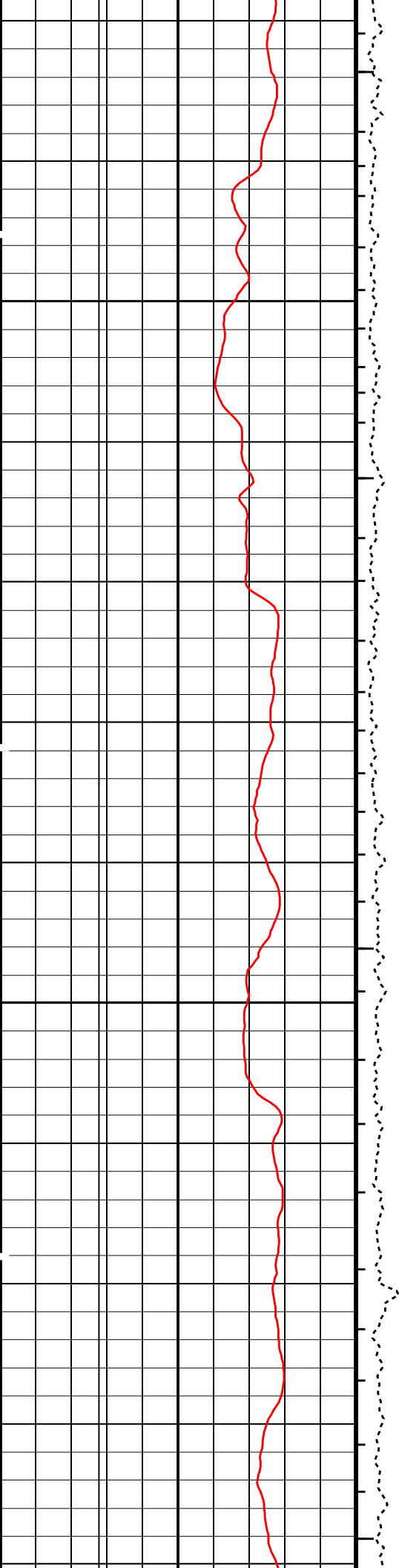
Time Mark Every 60 S

<b>REVOQUE</b> From CALI to BS			
<b>CAVERNA</b> From BS to CALI			
<div style="display: flex; justify-content: space-between;"> <span>SP (SP)</span> <span>AIT-H 90 Inch Investigation (AHT90)</span> </div> <div style="display: flex; justify-content: space-between; font-size: small;"> <span>(MV)</span> <span>(OHMM)</span> </div>	<div style="display: flex; justify-content: space-between;"> <span>0</span> <span>10</span> </div>		
<div style="display: flex; justify-content: space-between;"> <span>RWA (RWA)</span> <span>AIT-H 60 Inch Investigation (AHT60)</span> </div> <div style="display: flex; justify-content: space-between; font-size: small;"> <span>(OHMM)</span> <span>(OHMM)</span> </div>	<div style="display: flex; justify-content: space-between;"> <span>0</span> <span>10</span> </div>	<div style="display: flex; justify-content: space-between;"> <span>0.4</span> <span>0</span> </div>	<div style="display: flex; justify-content: space-between;"> <span>Env.Corr.Thermal Neutron Porosity (TNPH)</span> <span>(V/V)</span> </div>
<div style="display: flex; justify-content: space-between;"> <span>PhotoElectric Factor (PEF)</span> <span>AIT-H 30 Inch Investigation (AHT30)</span> </div> <div style="display: flex; justify-content: space-between; font-size: small;"> <span>(----</span> <span>(OHMM)</span> </div>	<div style="display: flex; justify-content: space-between;"> <span>0</span> <span>10</span> </div>		<div style="display: flex; justify-content: space-between;"> <span>Gas</span> <span>From DPHI to TNPH</span> </div>
<div style="display: flex; justify-content: space-between;"> <span>Caliper (CALI)</span> <span>AIT-H 20 Inch Investigation (AHT20)</span> </div> <div style="display: flex; justify-content: space-between; font-size: small;"> <span>(IN)</span> <span>(OHMM)</span> </div>	<div style="display: flex; justify-content: space-between;"> <span>0</span> <span>10</span> </div>	<div style="display: flex; justify-content: space-between;"> <span>0.4</span> <span>0</span> </div>	<div style="display: flex; justify-content: space-between;"> <span>Sonic Porosity (SPHI)</span> <span>(V/V)</span> </div>
<div style="display: flex; justify-content: space-between;"> <span>Bit Size (BS)</span> <span>AIT-H 10 Inch Investigation (AHT10)</span> </div> <div style="display: flex; justify-content: space-between; font-size: small;"> <span>(IN)</span> <span>(OHMM)</span> </div>	<div style="display: flex; justify-content: space-between;"> <span>0</span> <span>10</span> </div>	<div style="display: flex; justify-content: space-between;"> <span>0.4</span> <span>0</span> </div>	<div style="display: flex; justify-content: space-between;"> <span>Density Porosity (DPHI)</span> <span>(V/V)</span> </div>

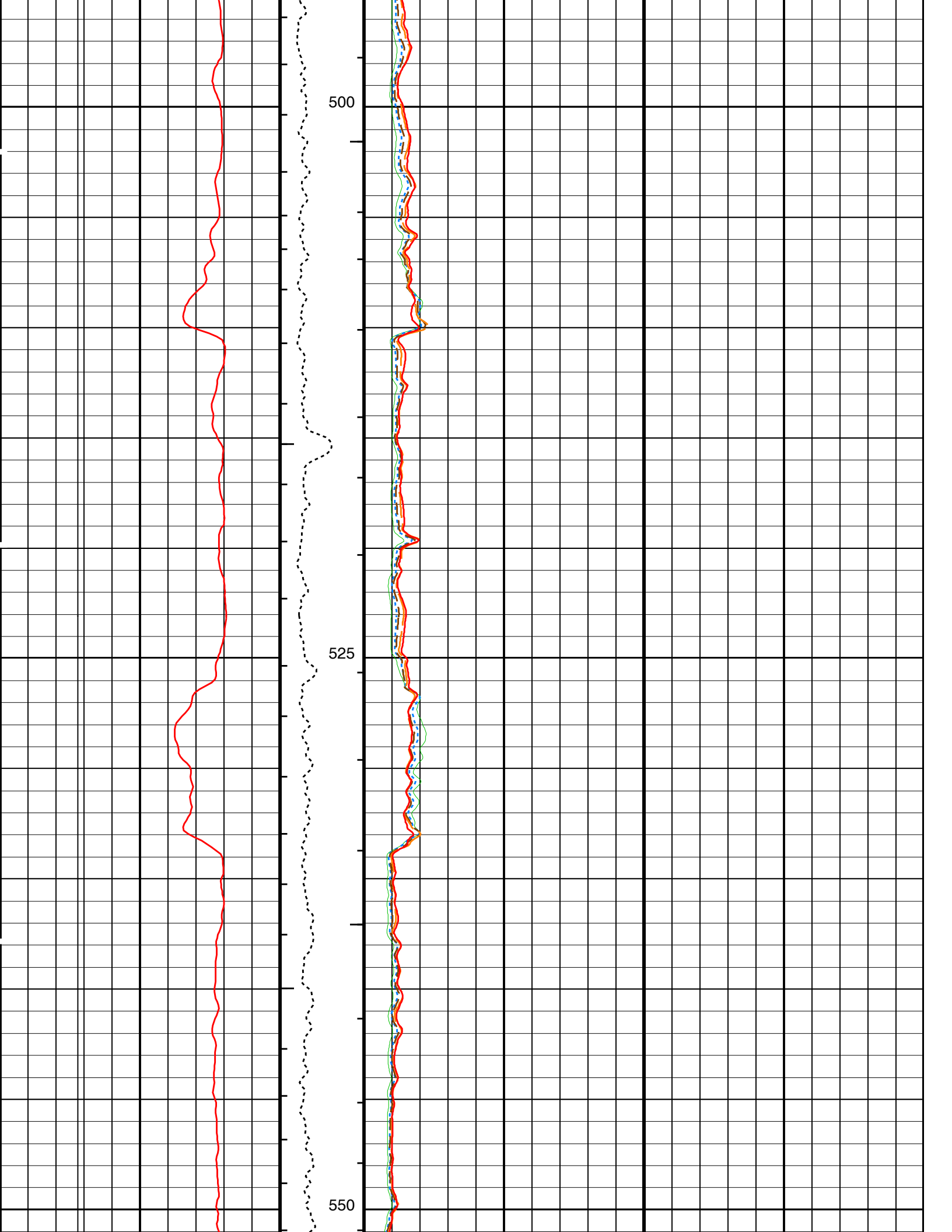


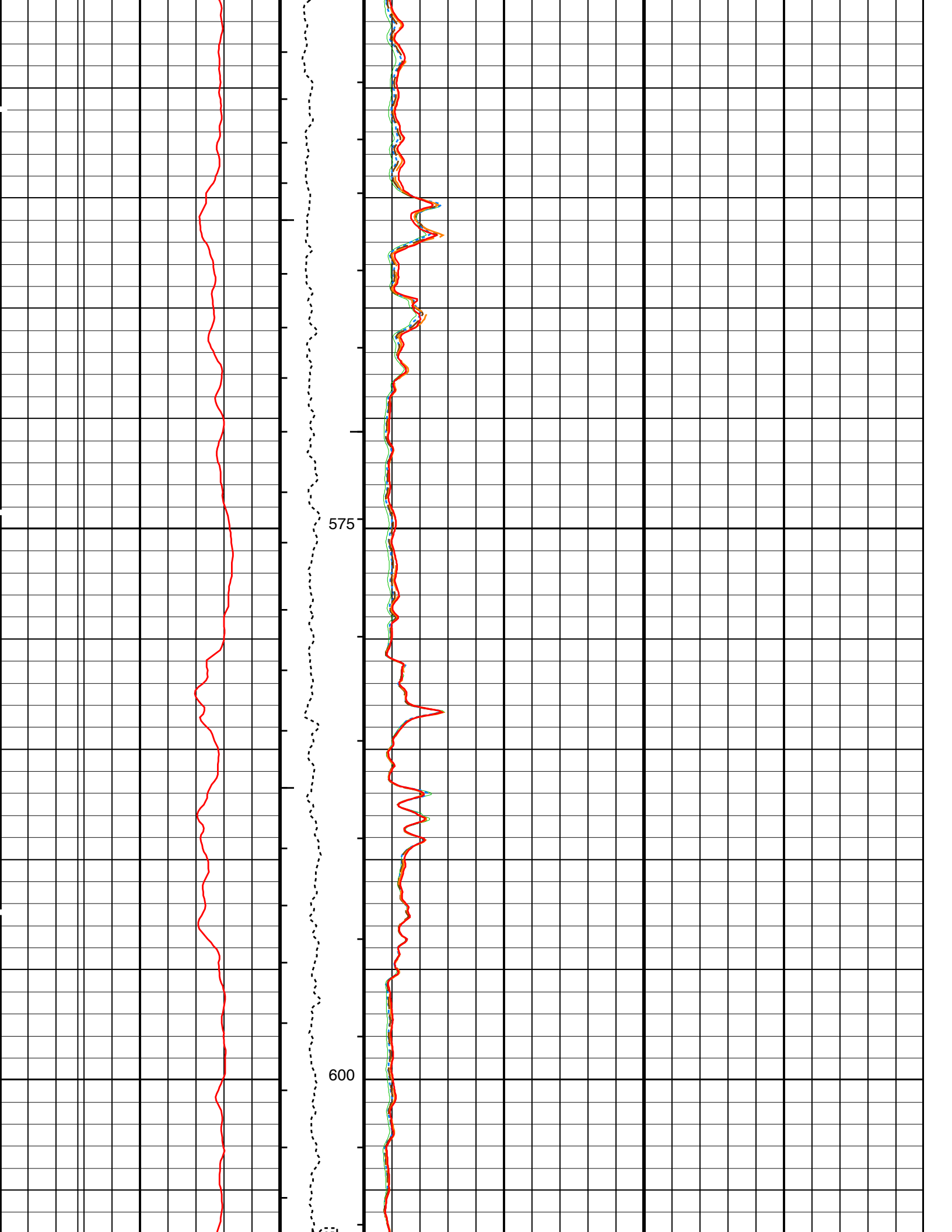
Chequeo de caliper en caneria despues del perfil

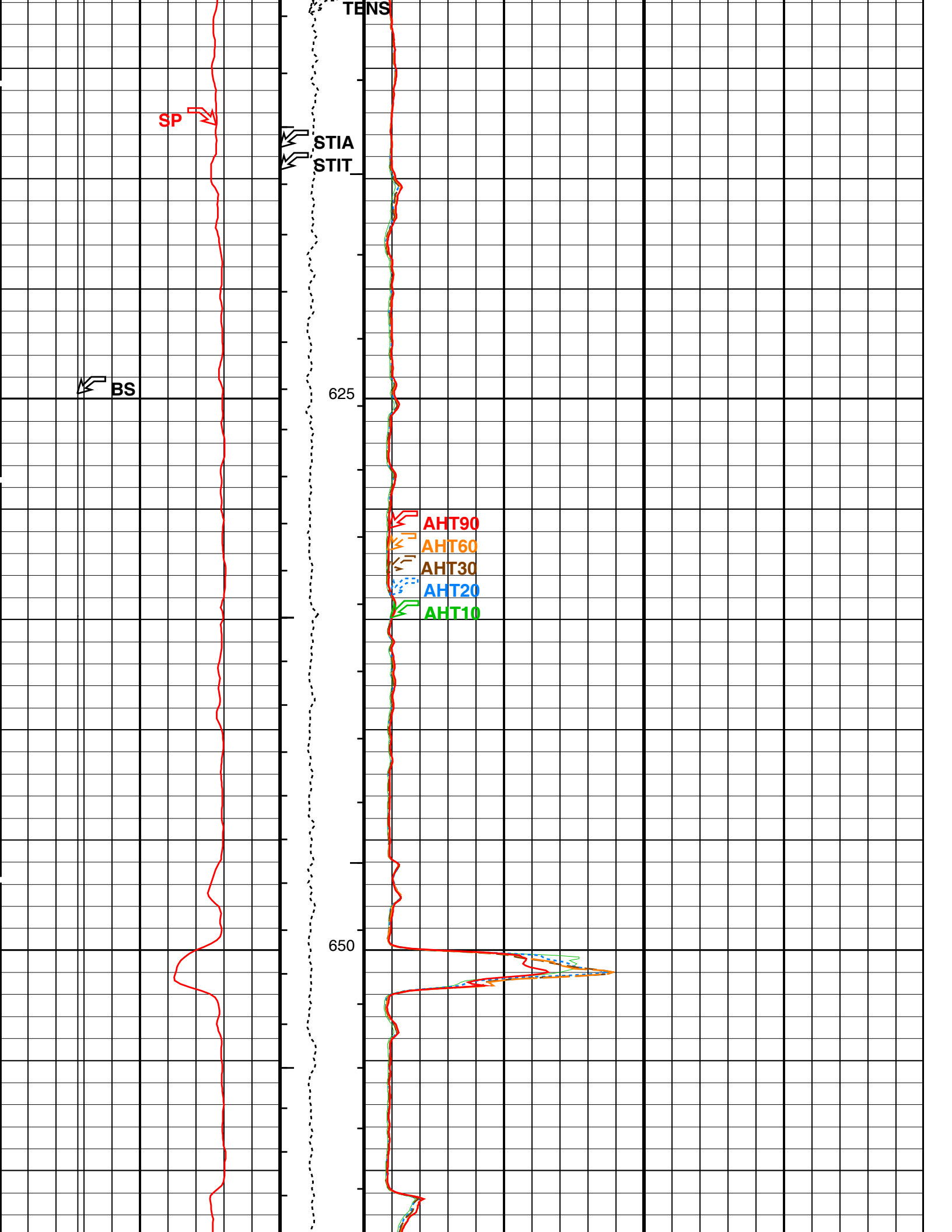




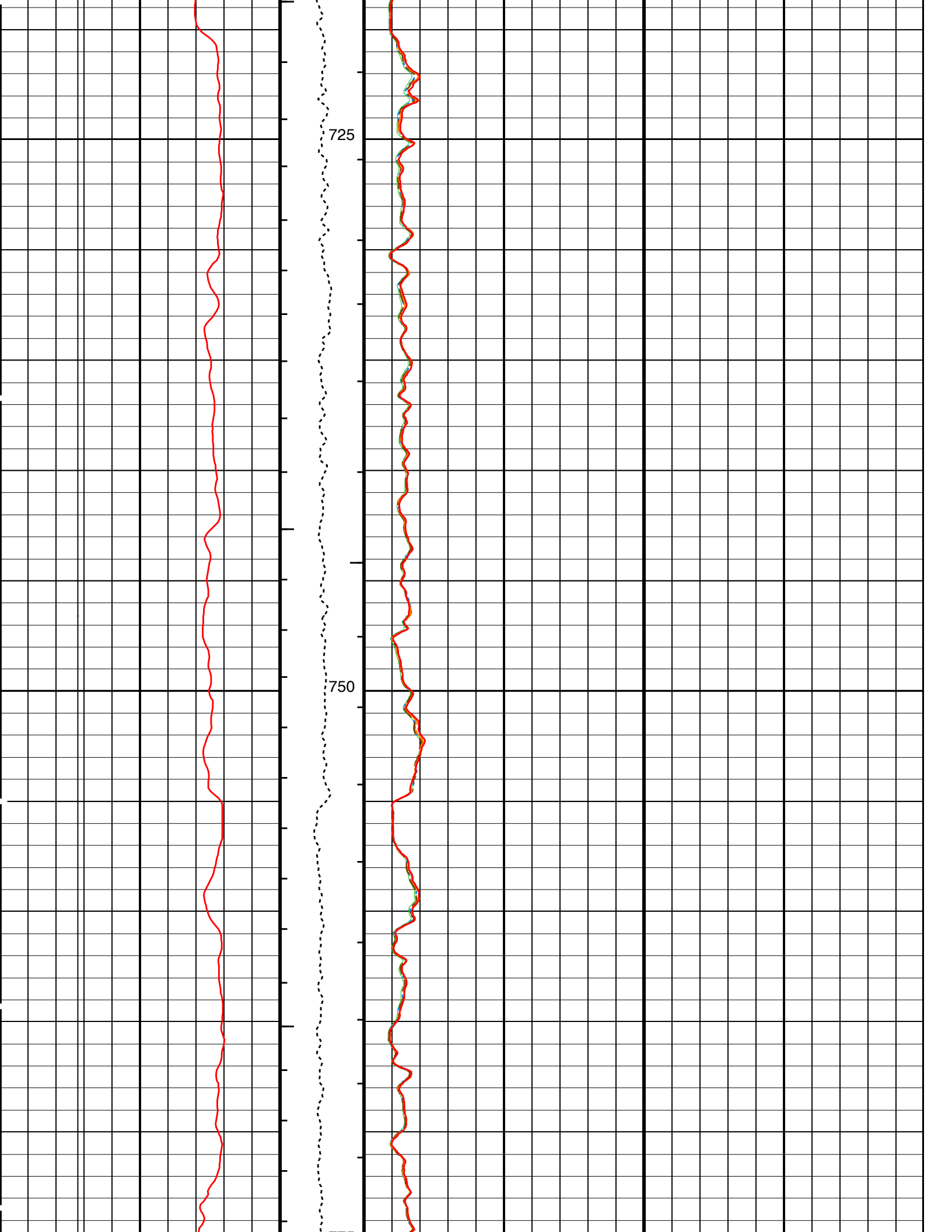


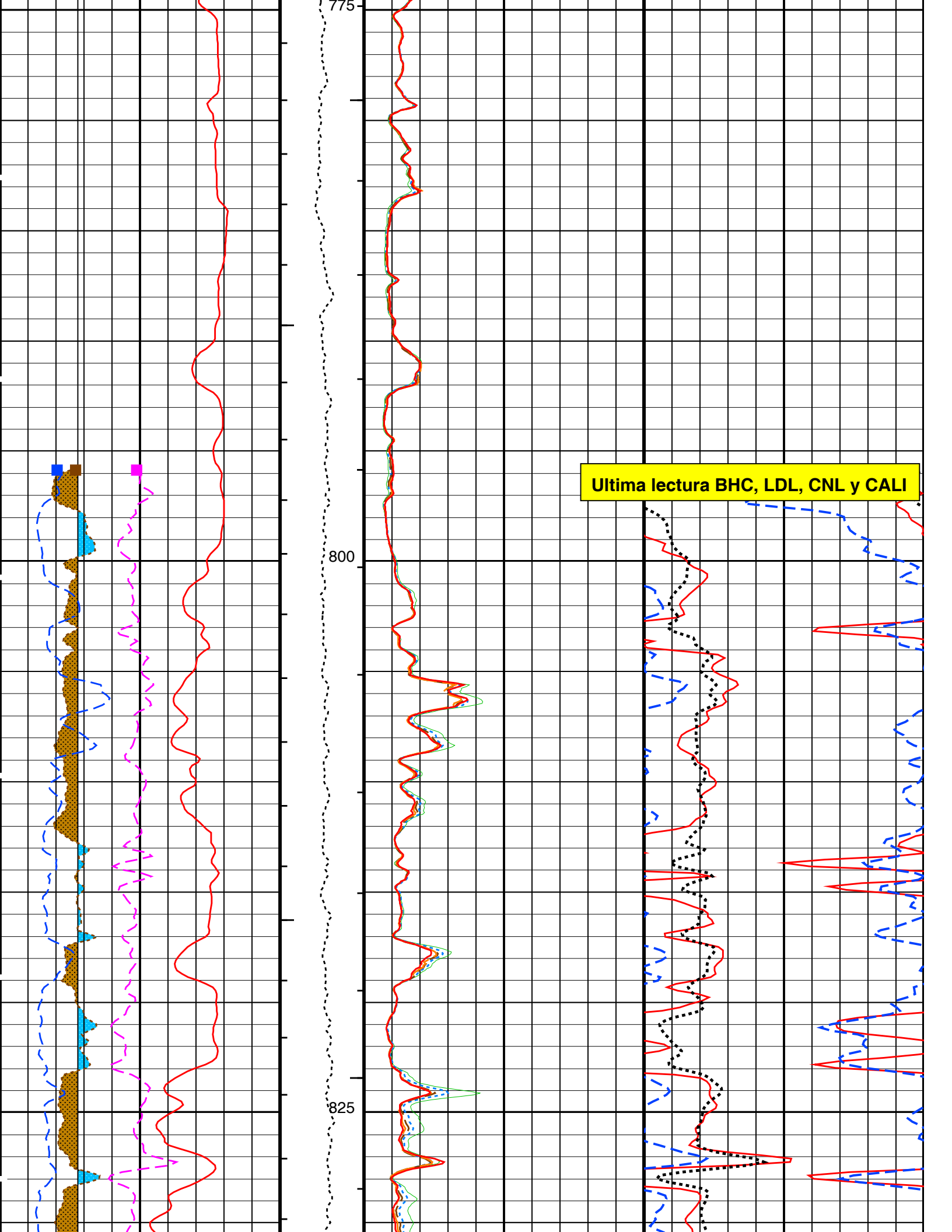


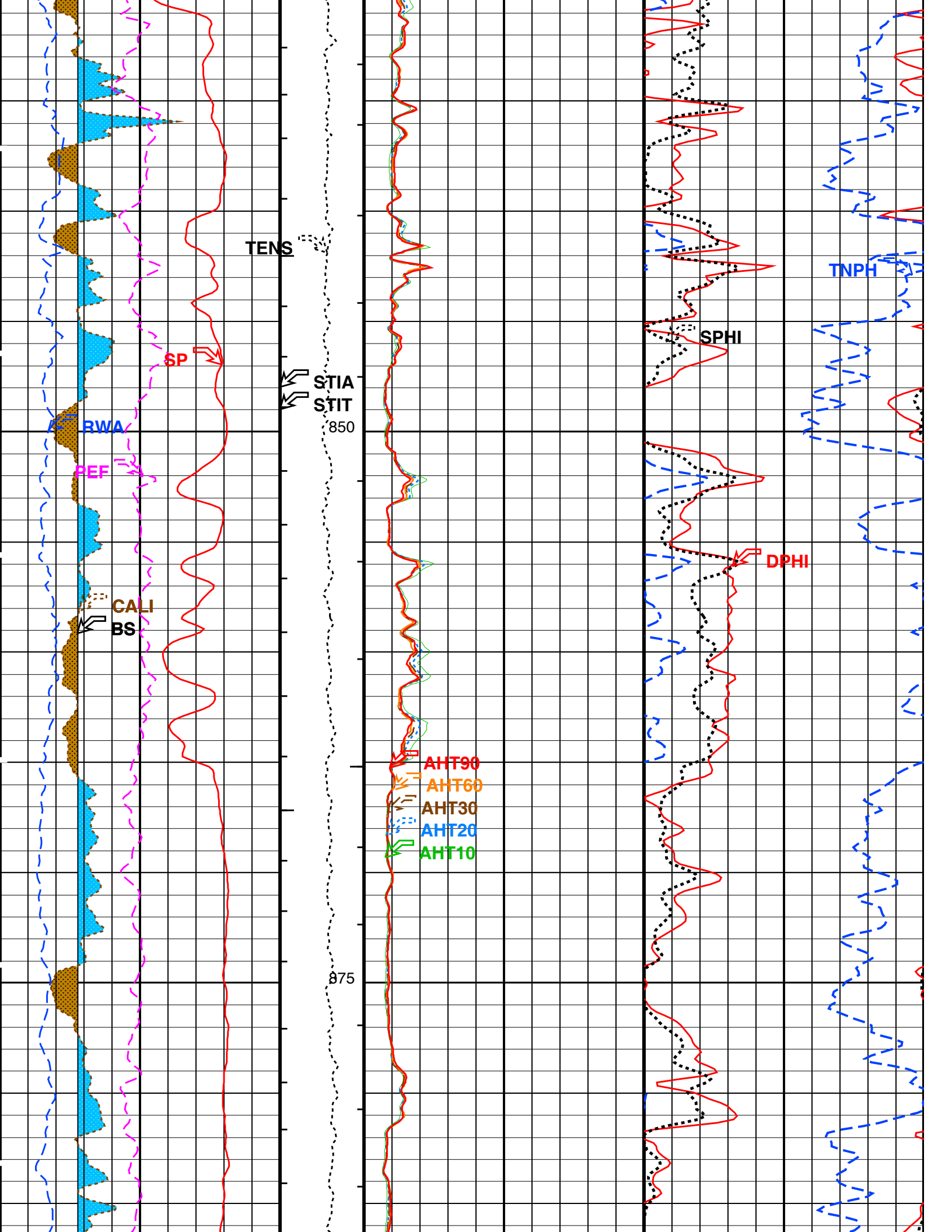


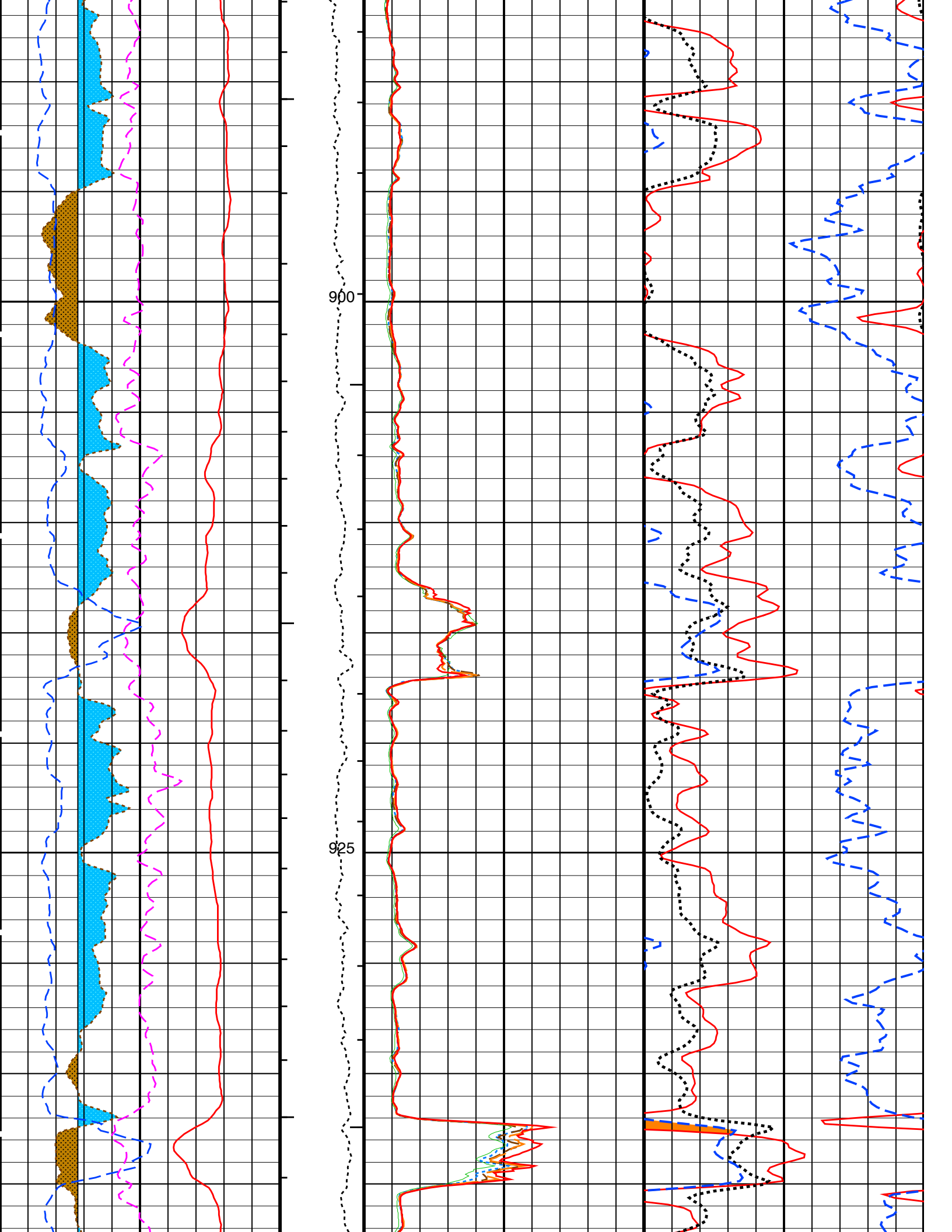




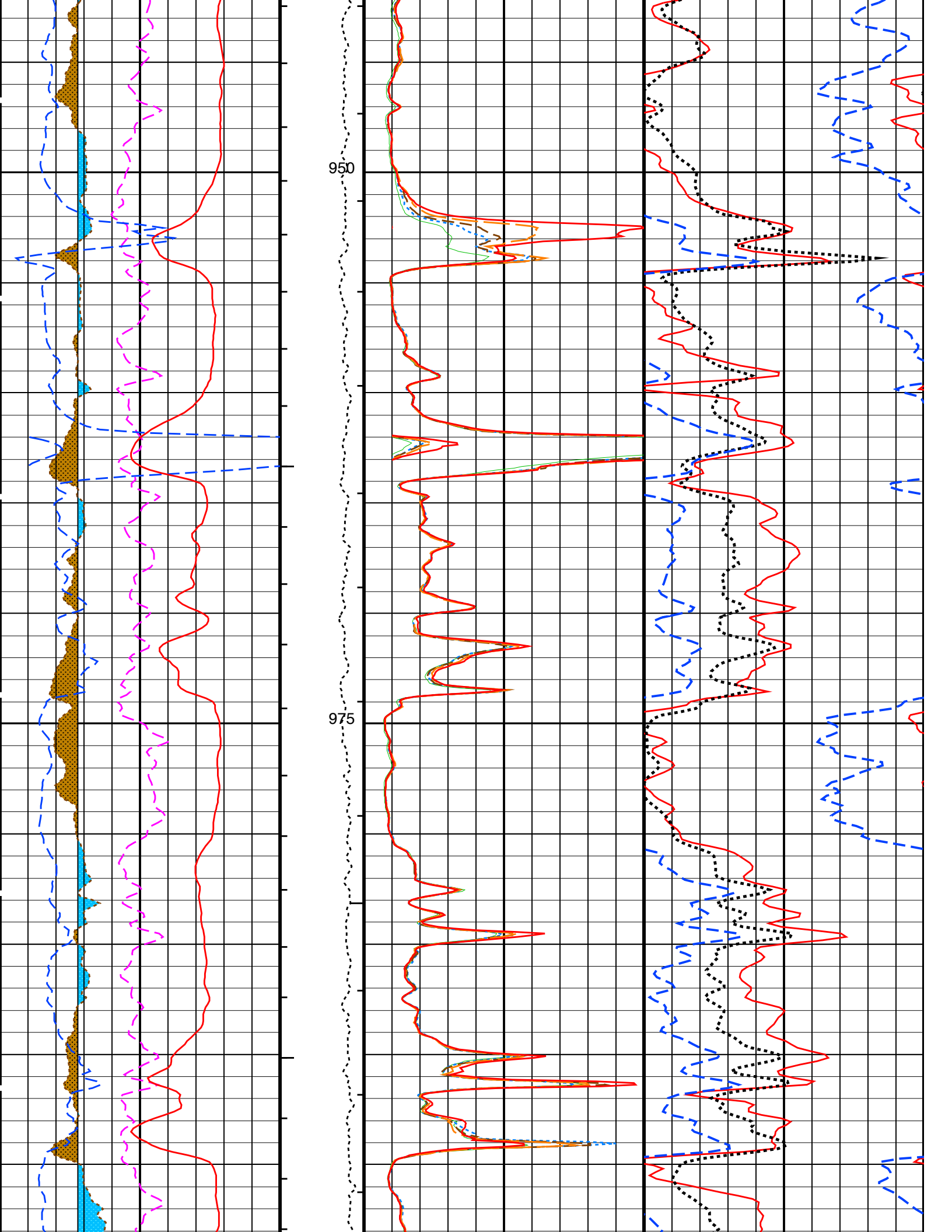


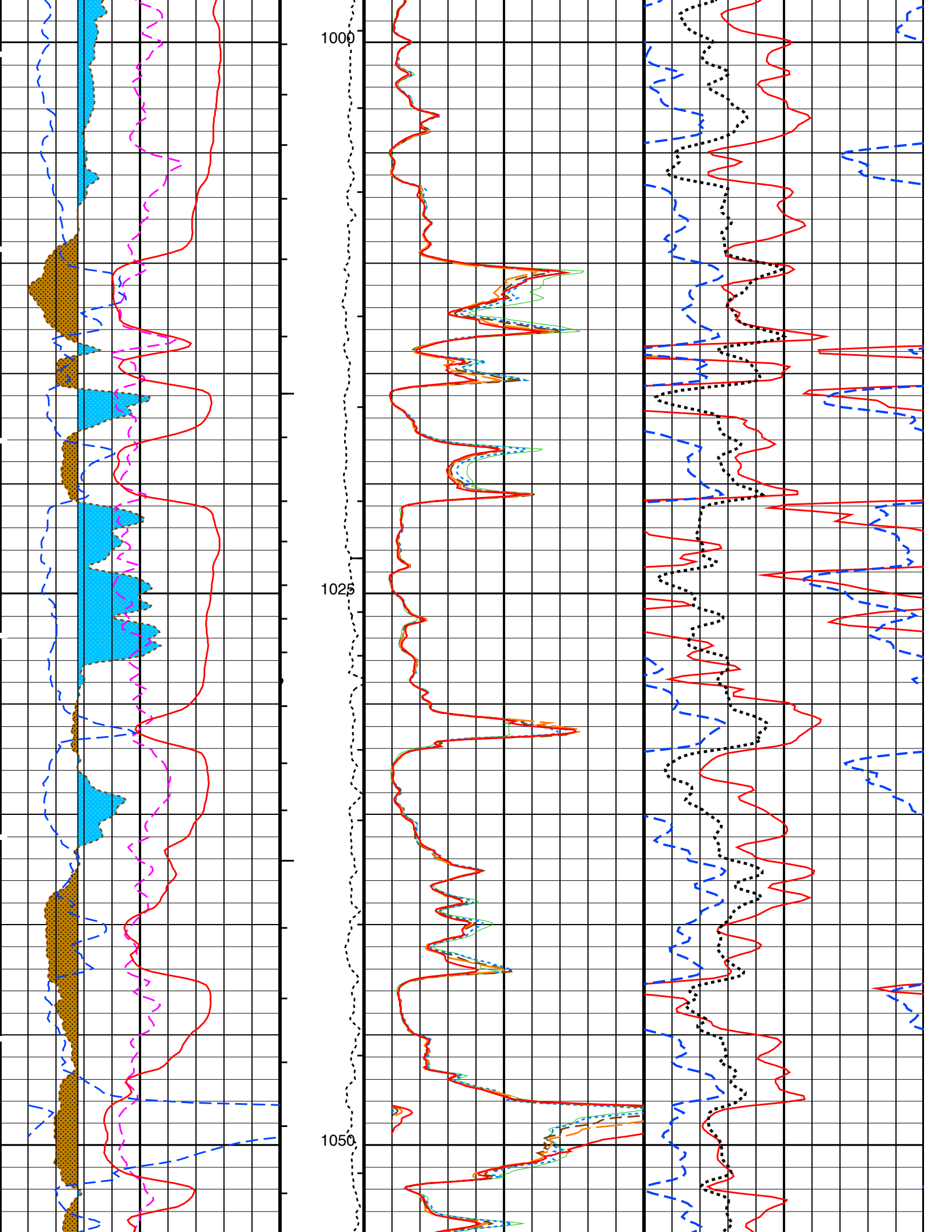


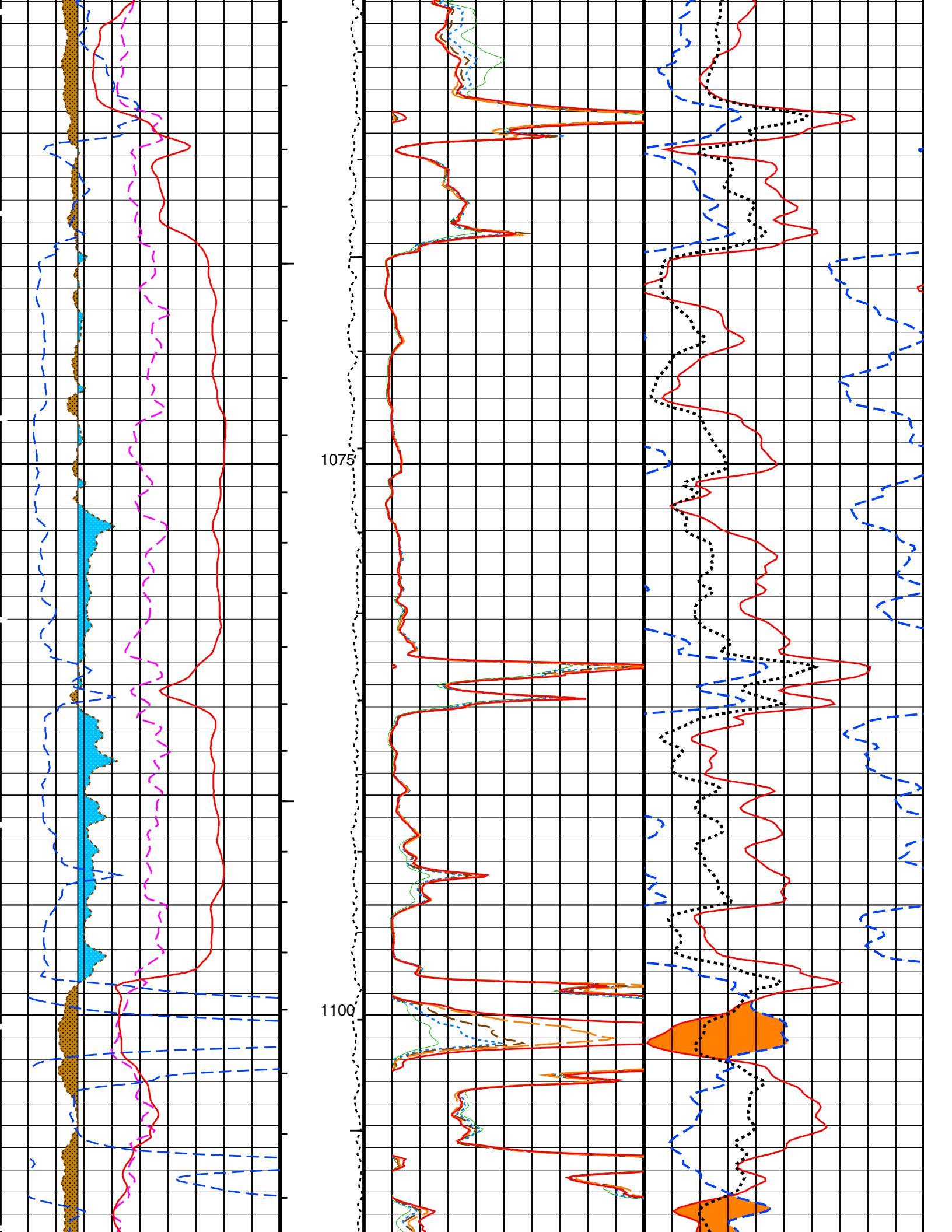


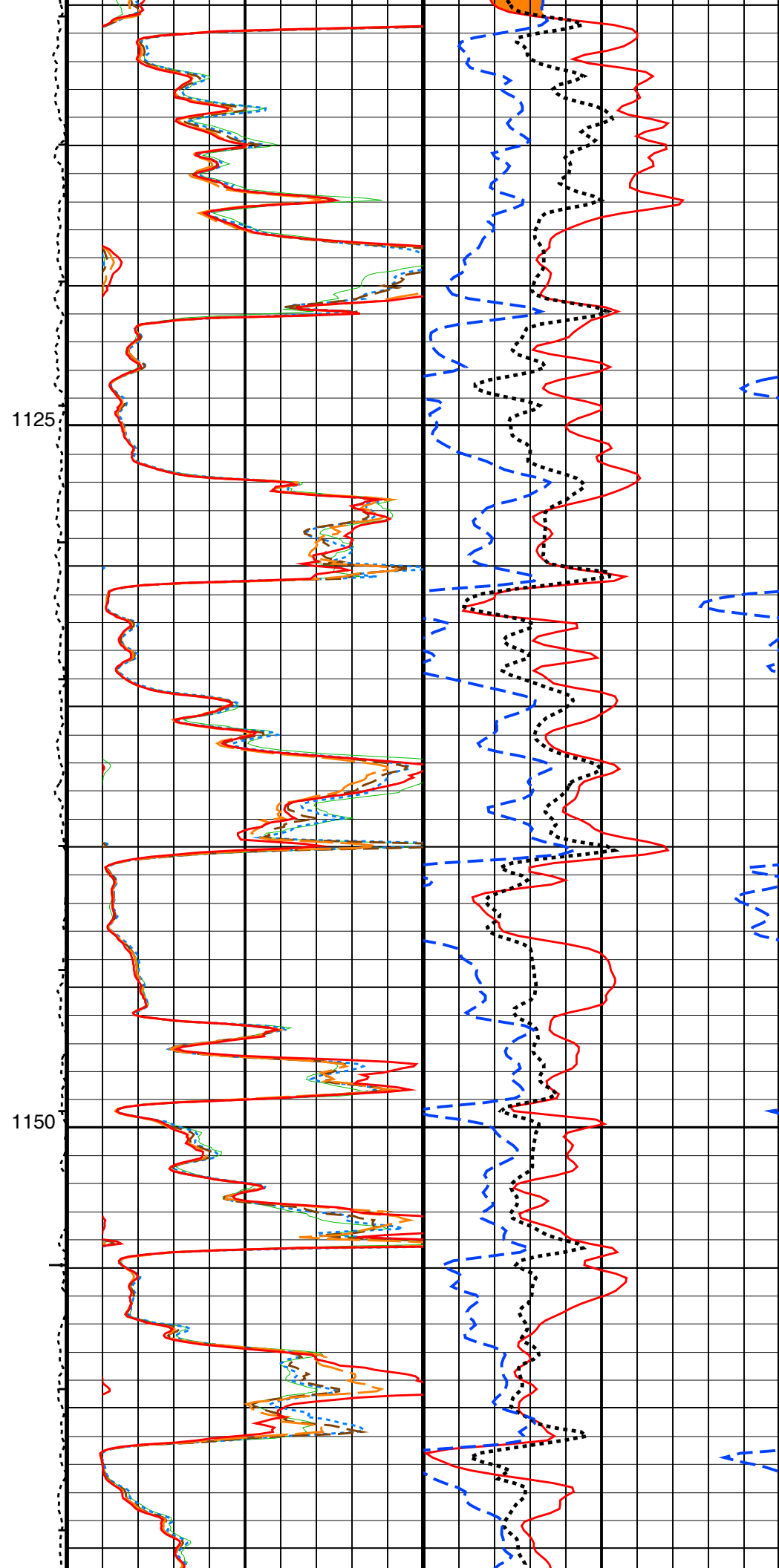
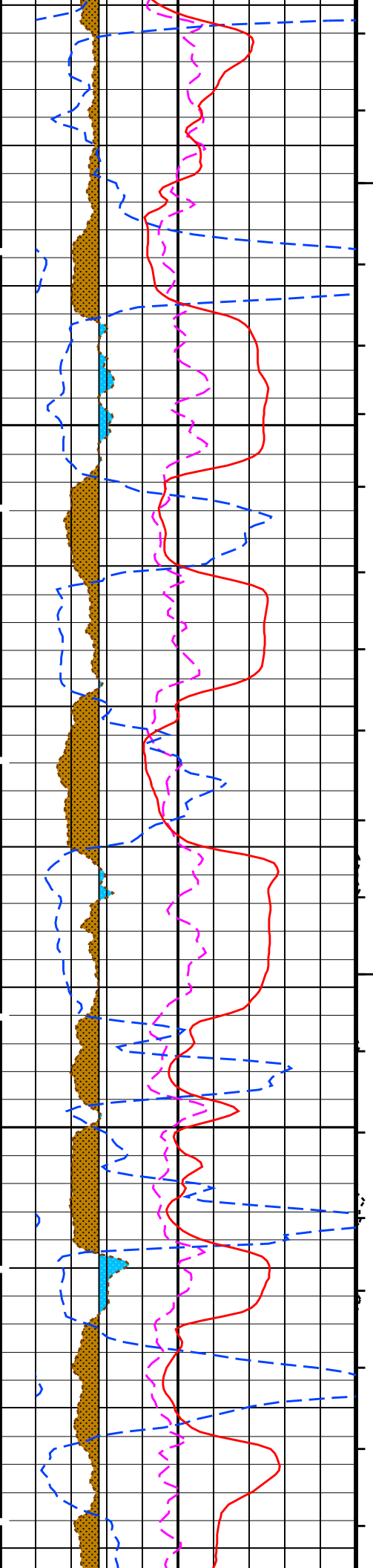


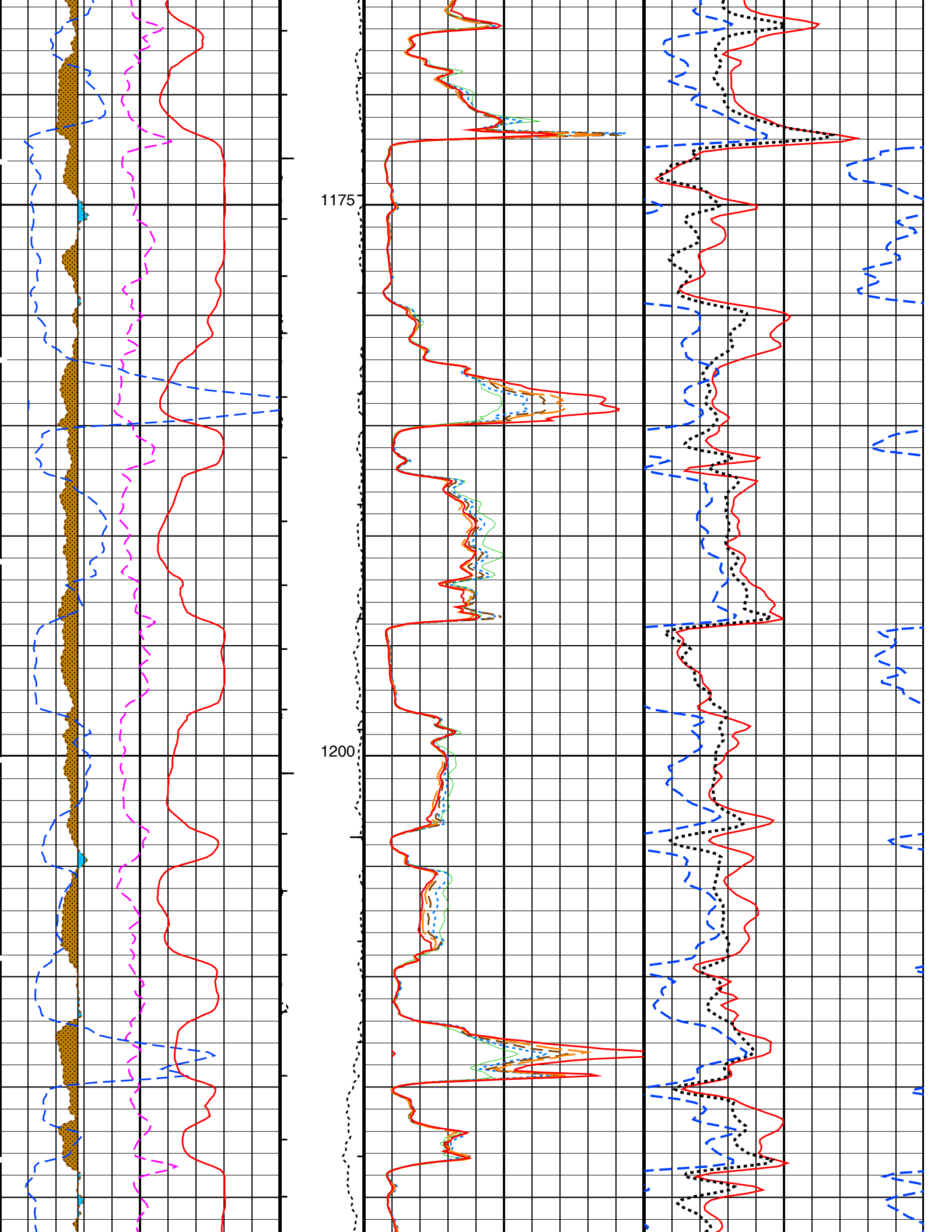


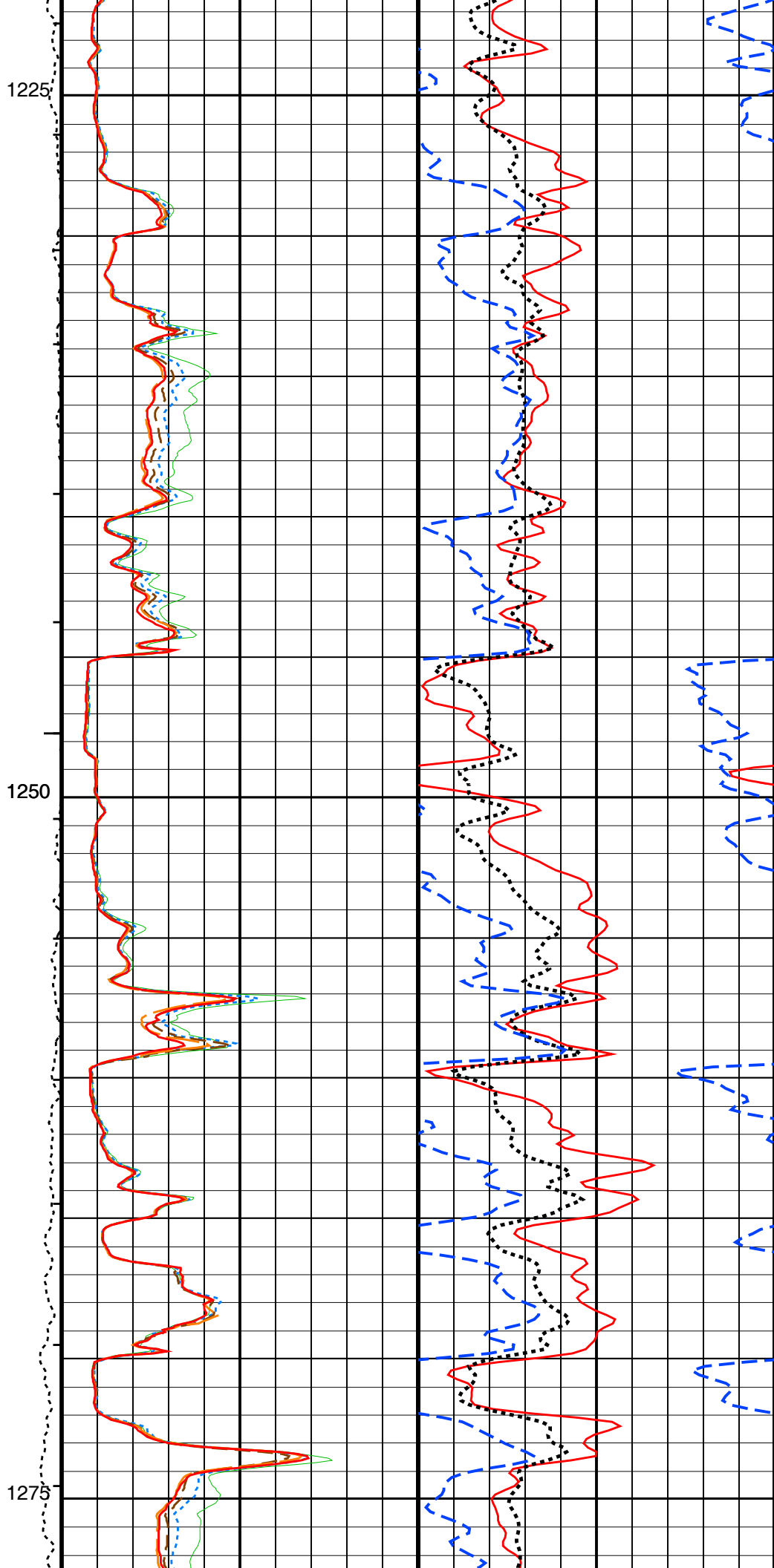
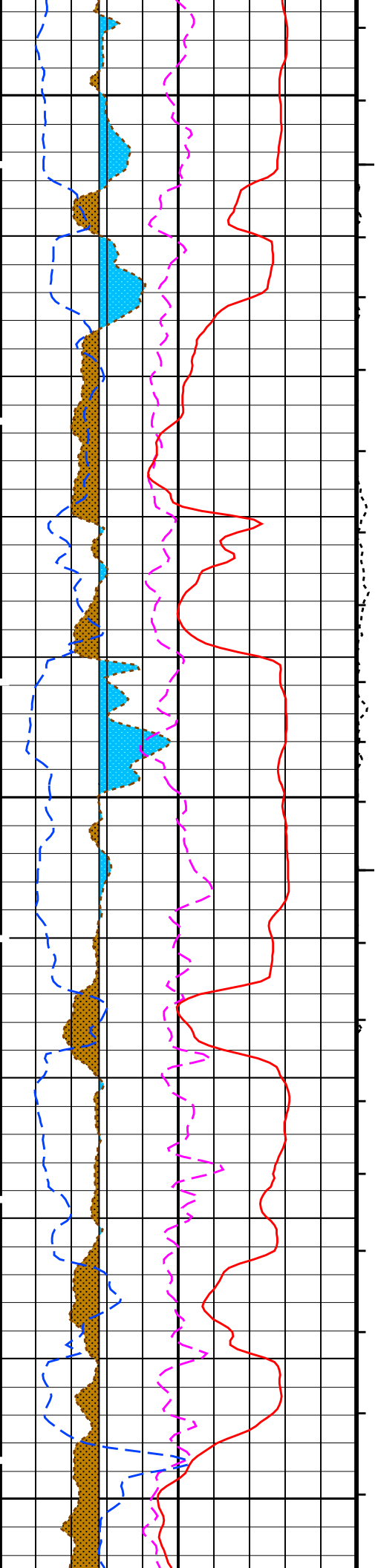


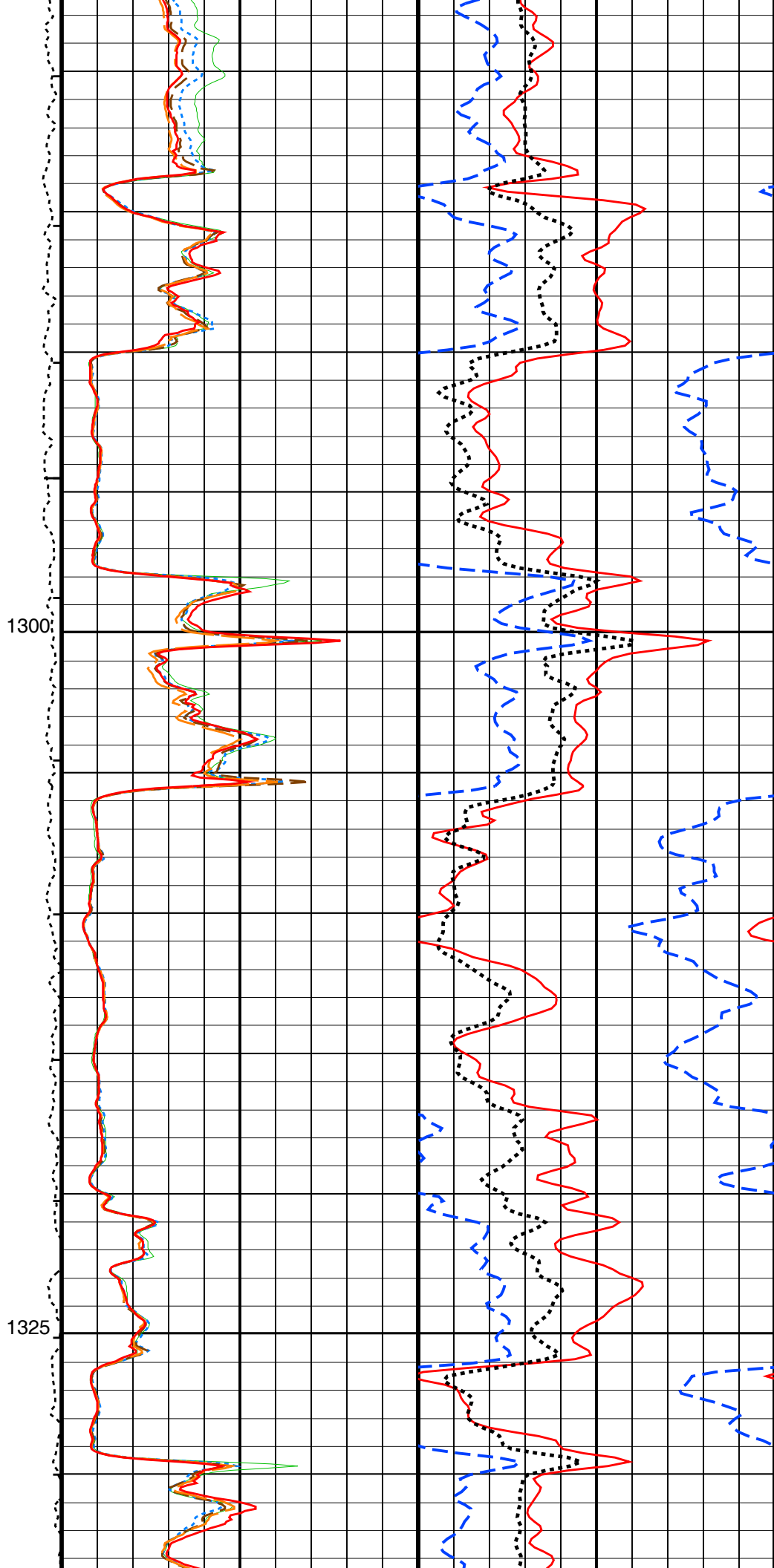
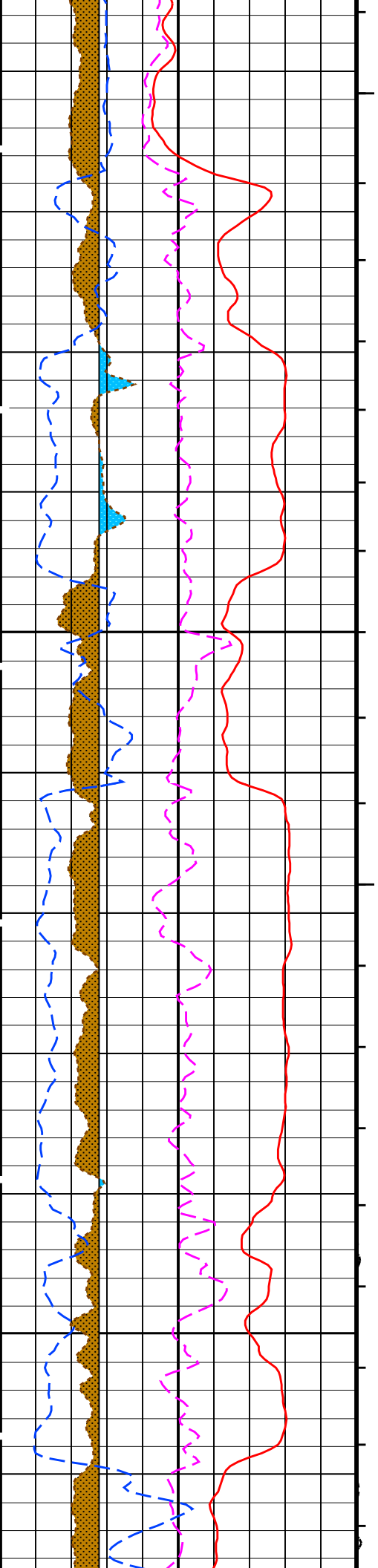


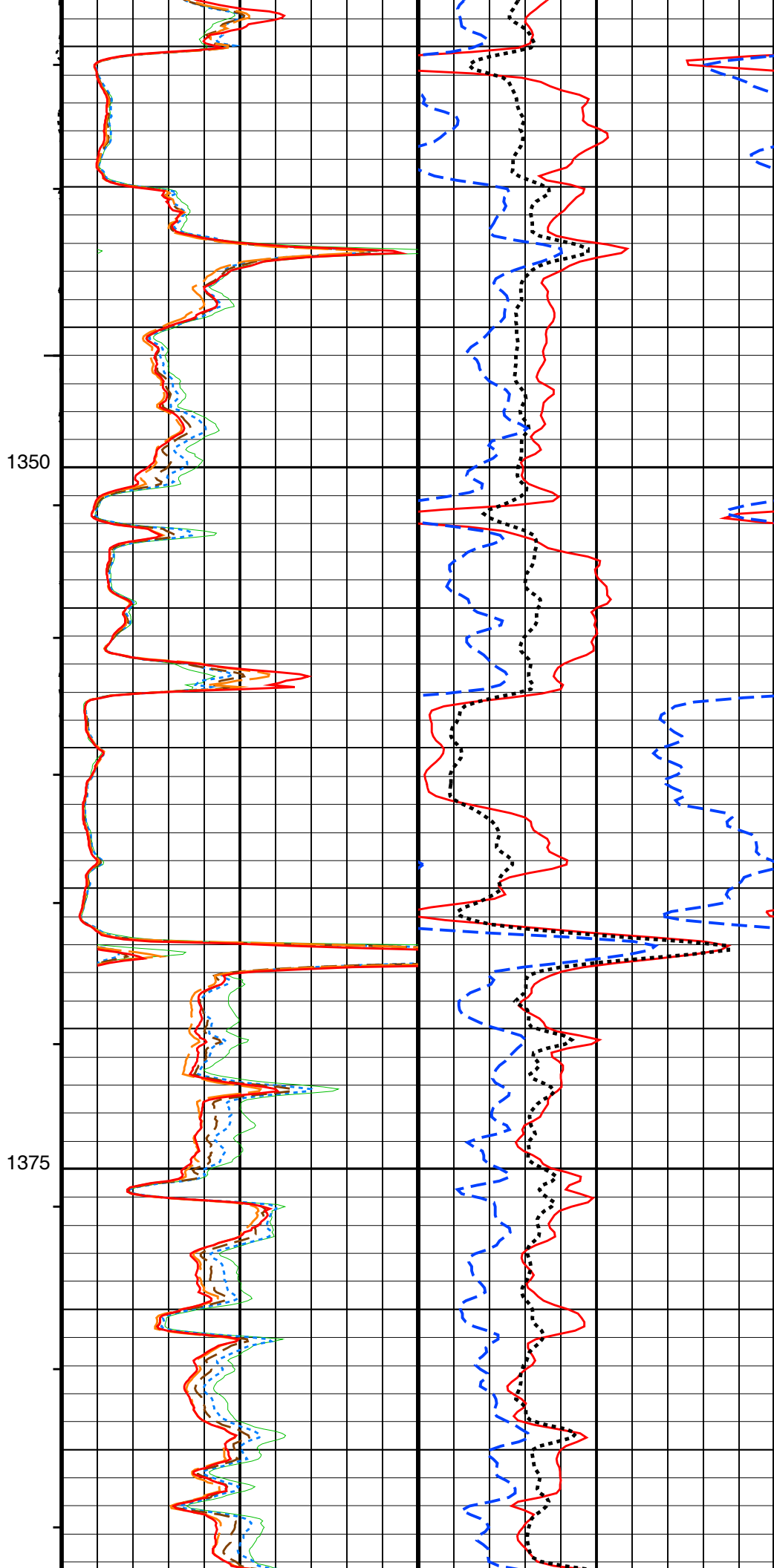
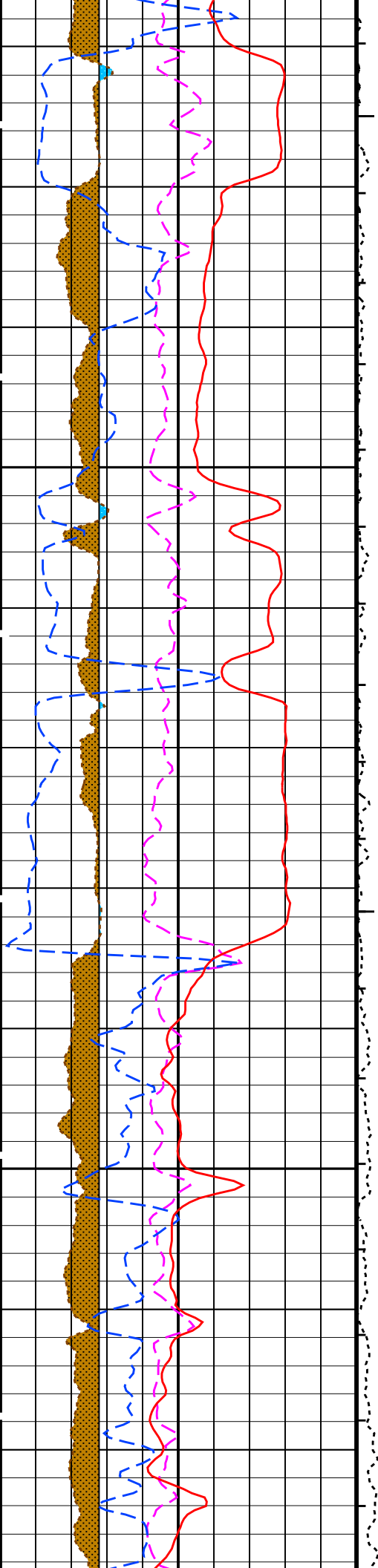




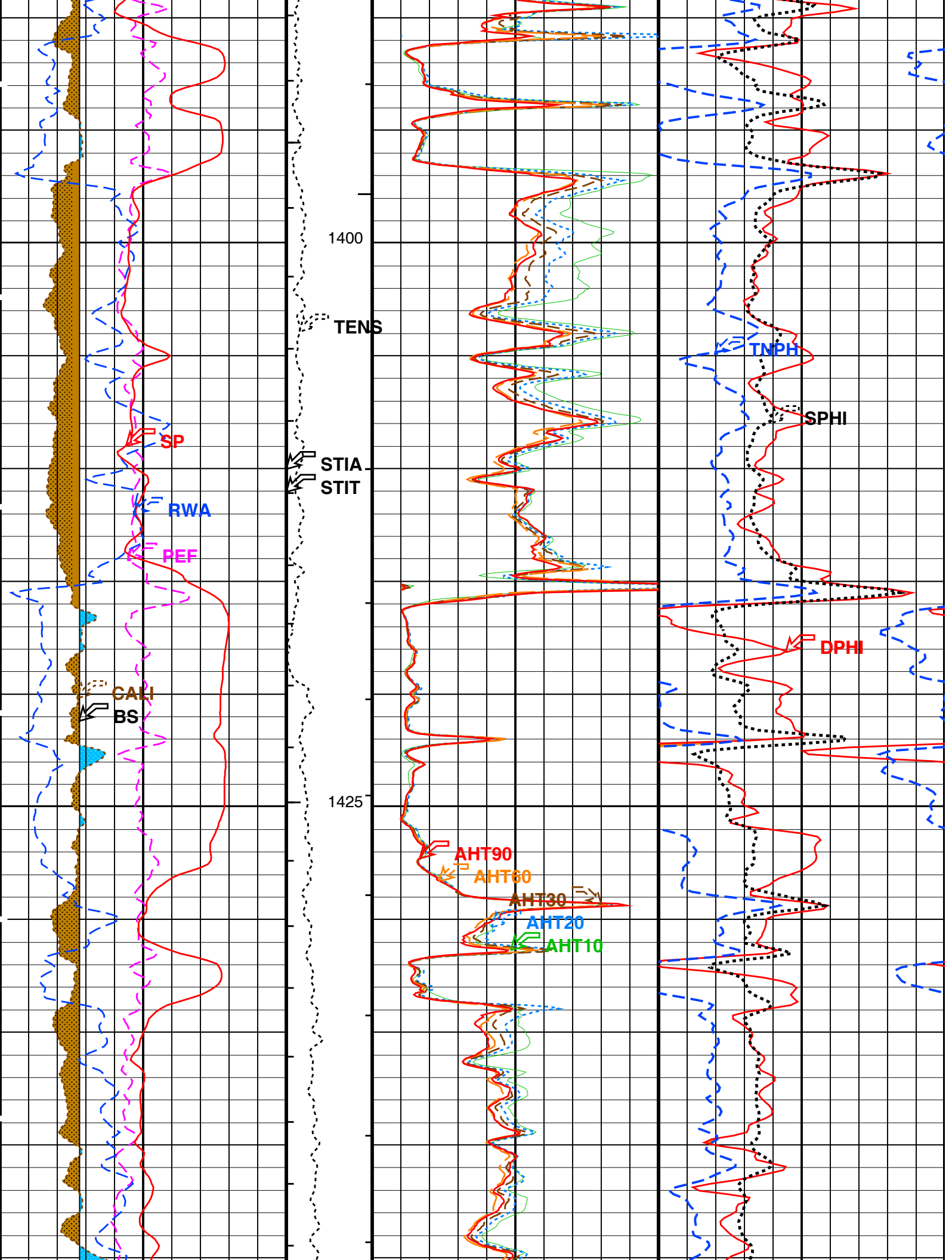


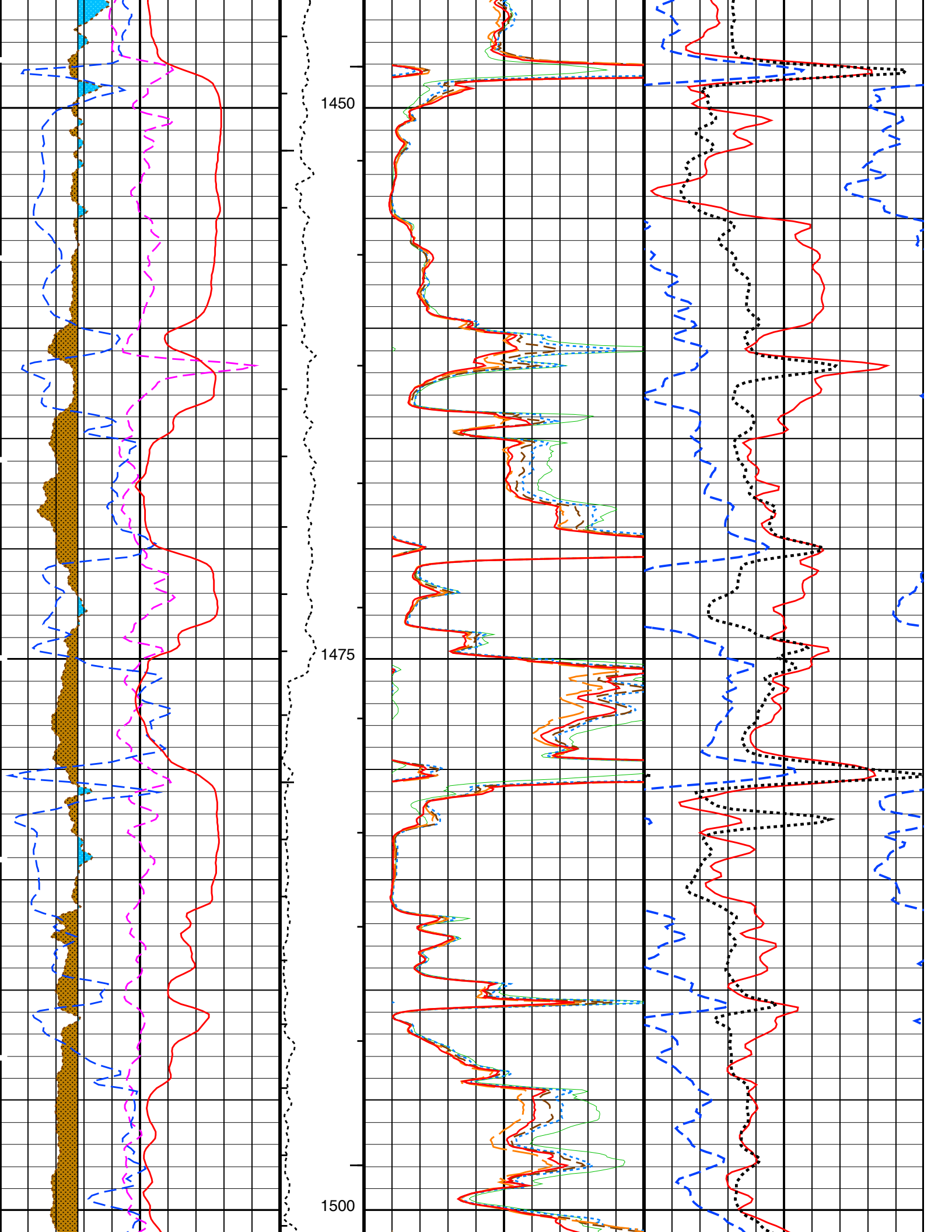


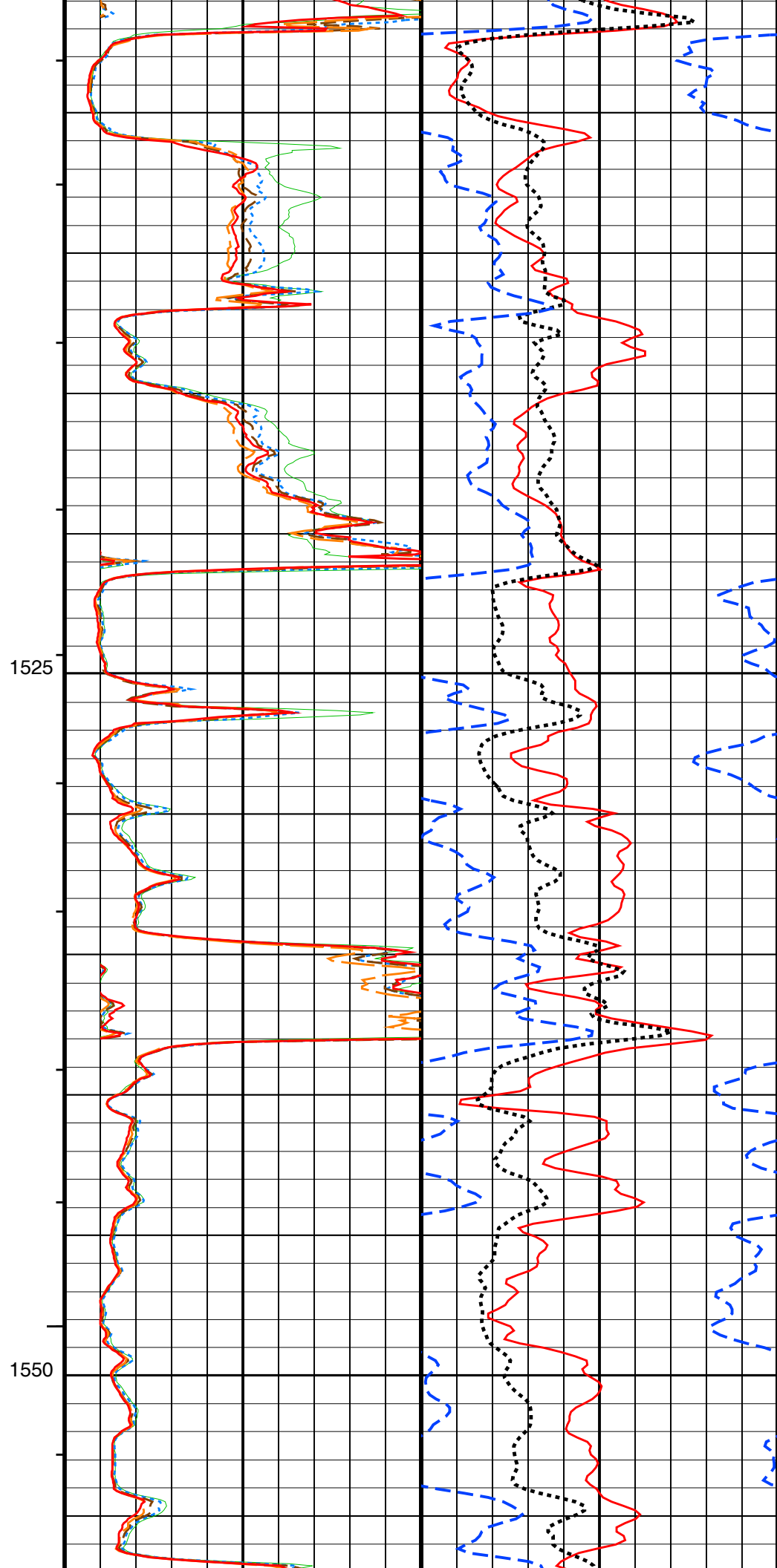
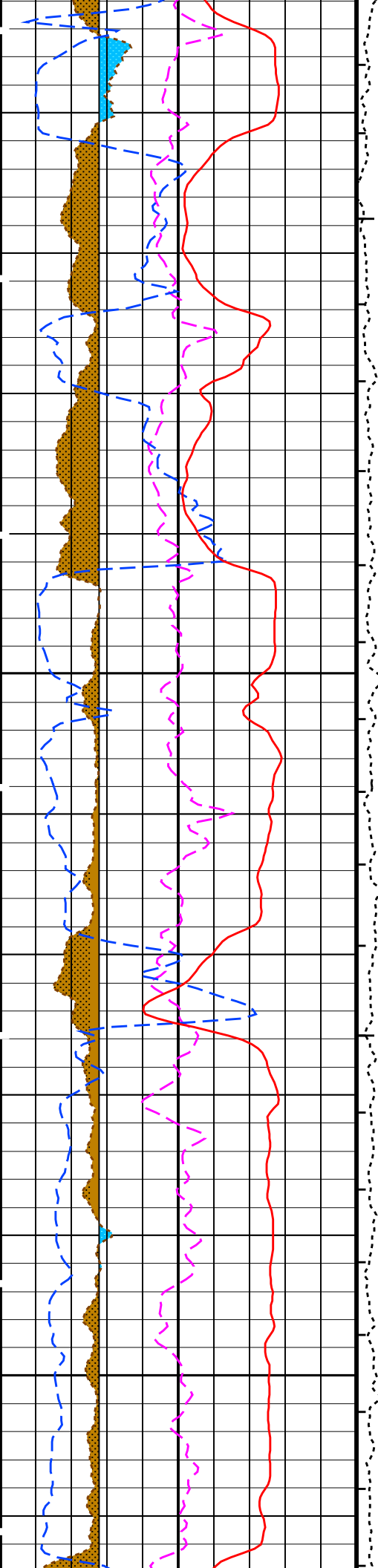


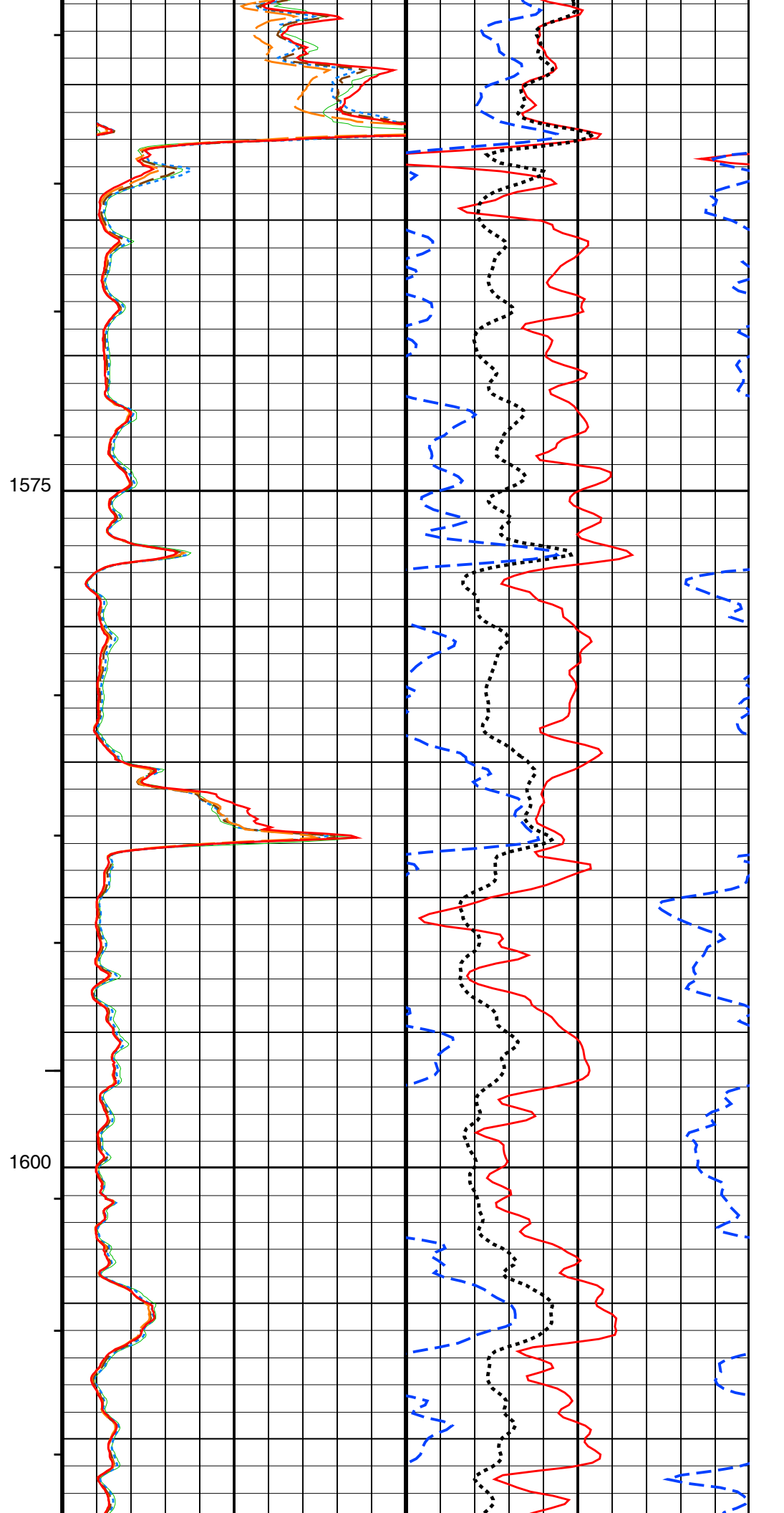
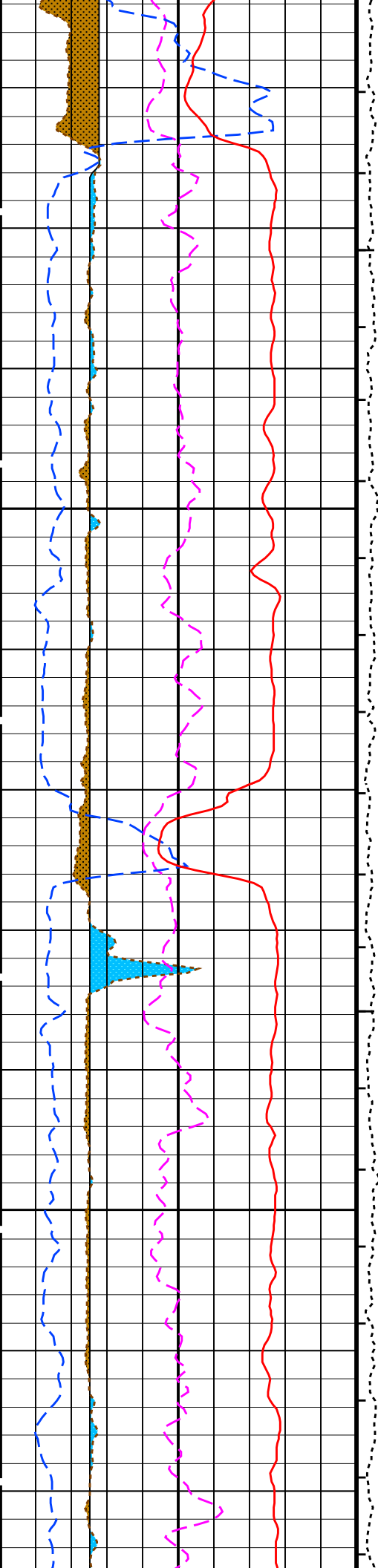


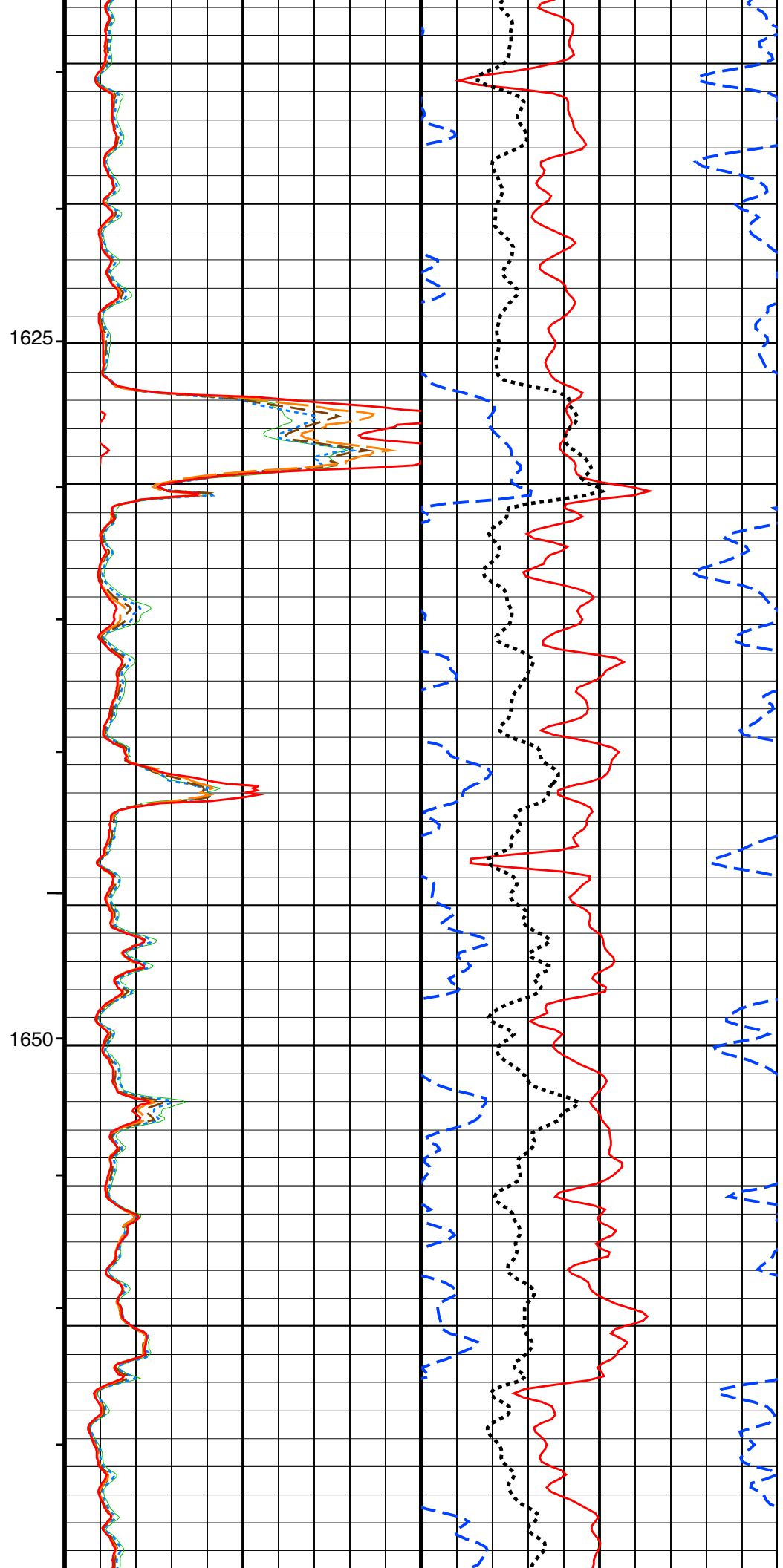
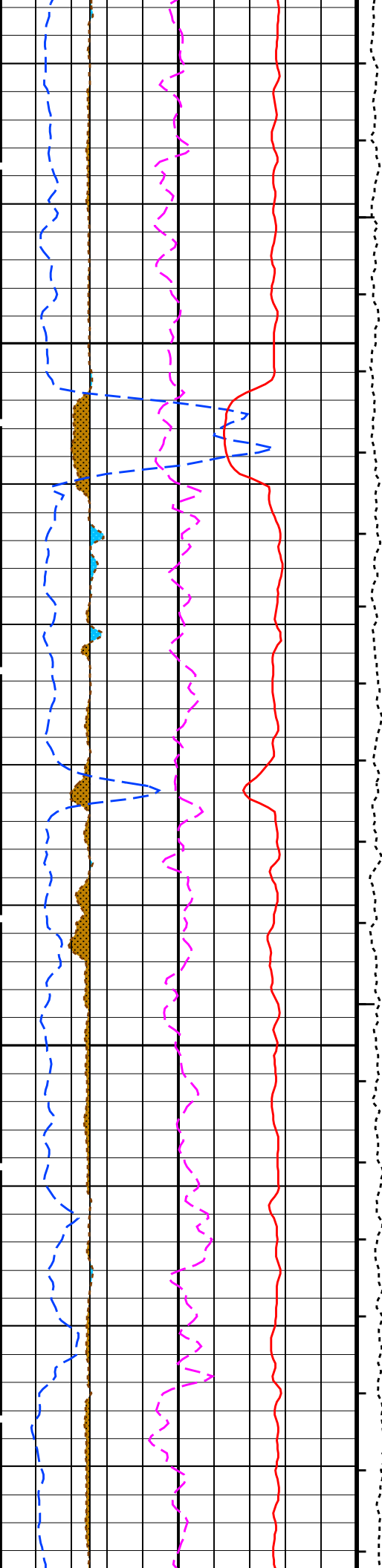






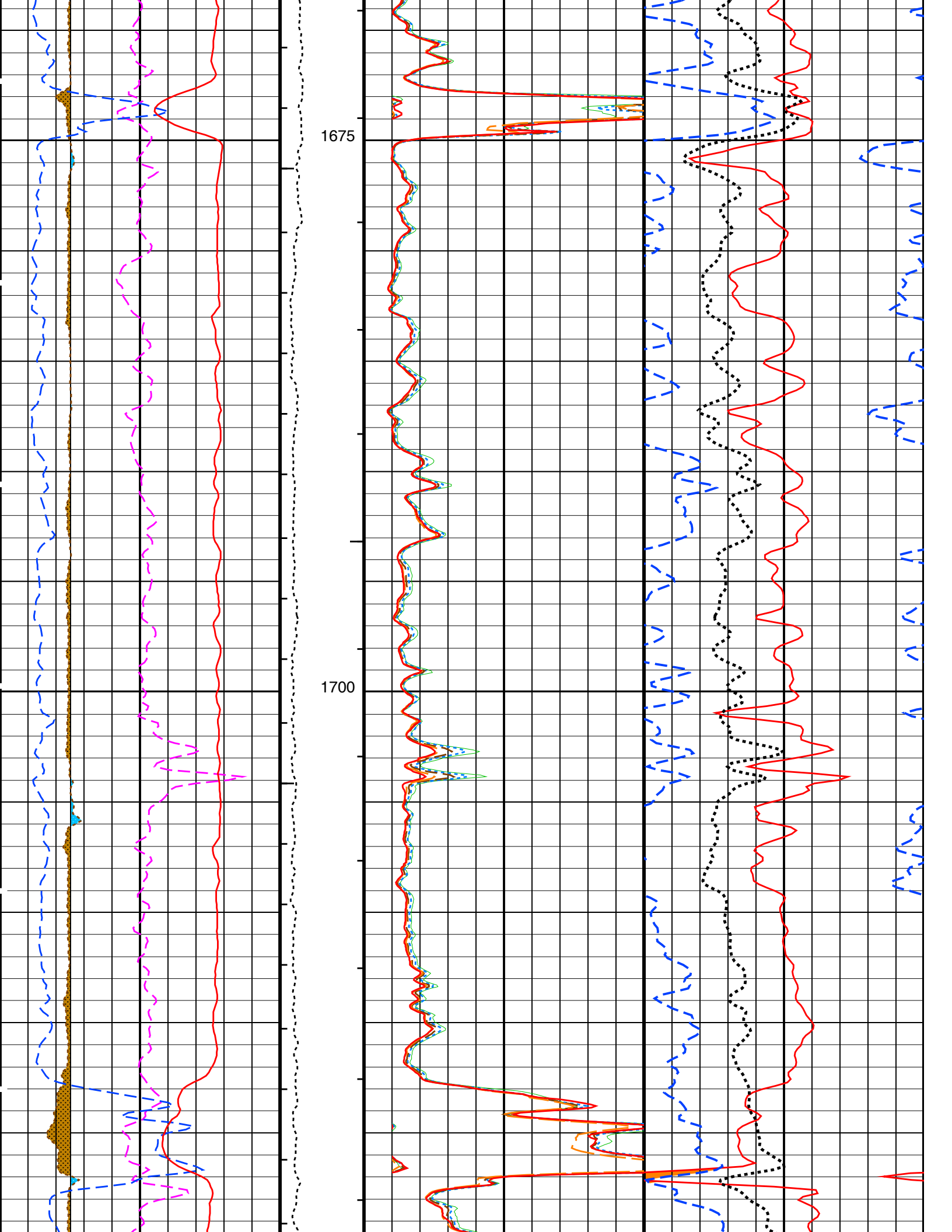


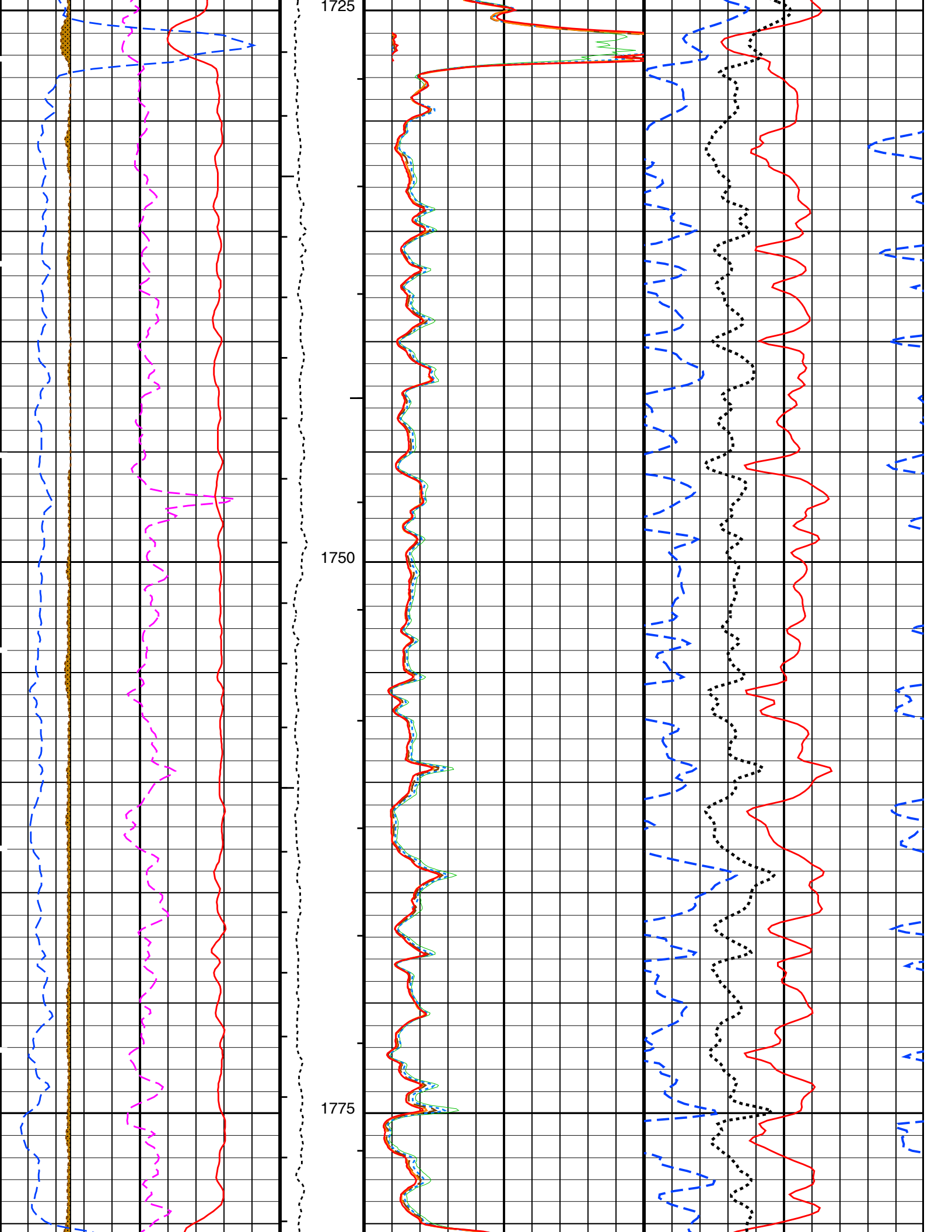


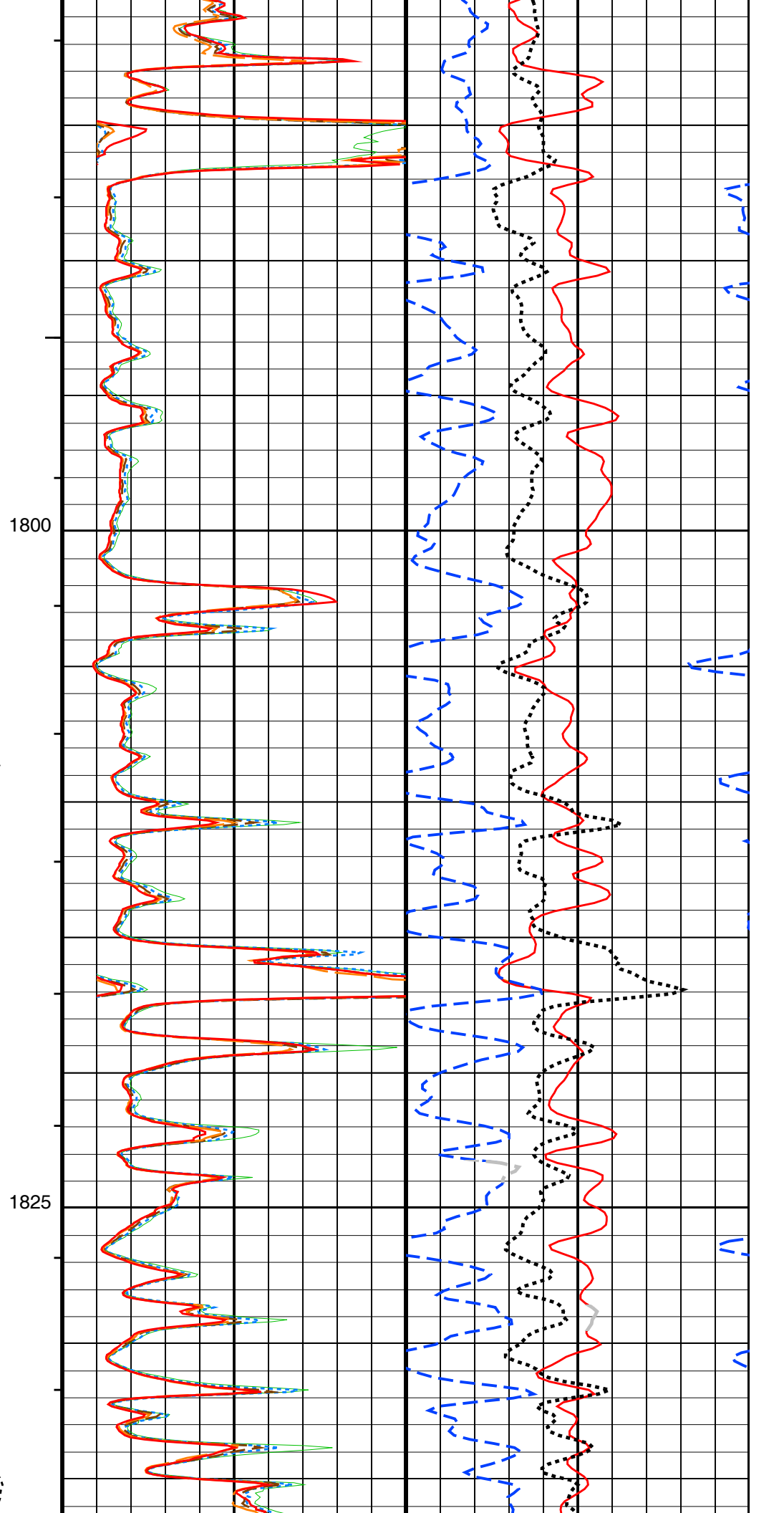
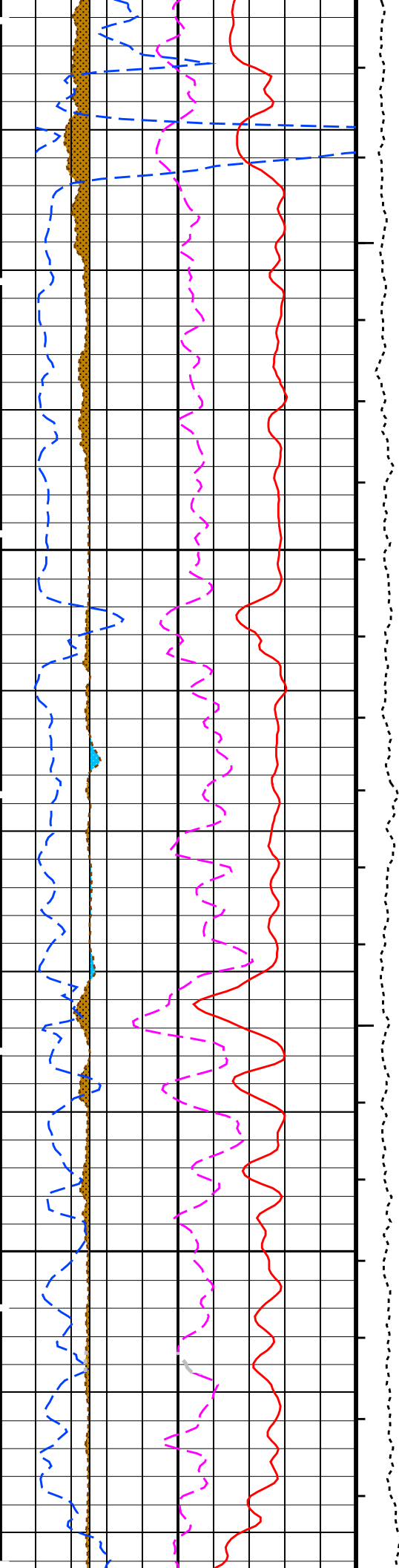


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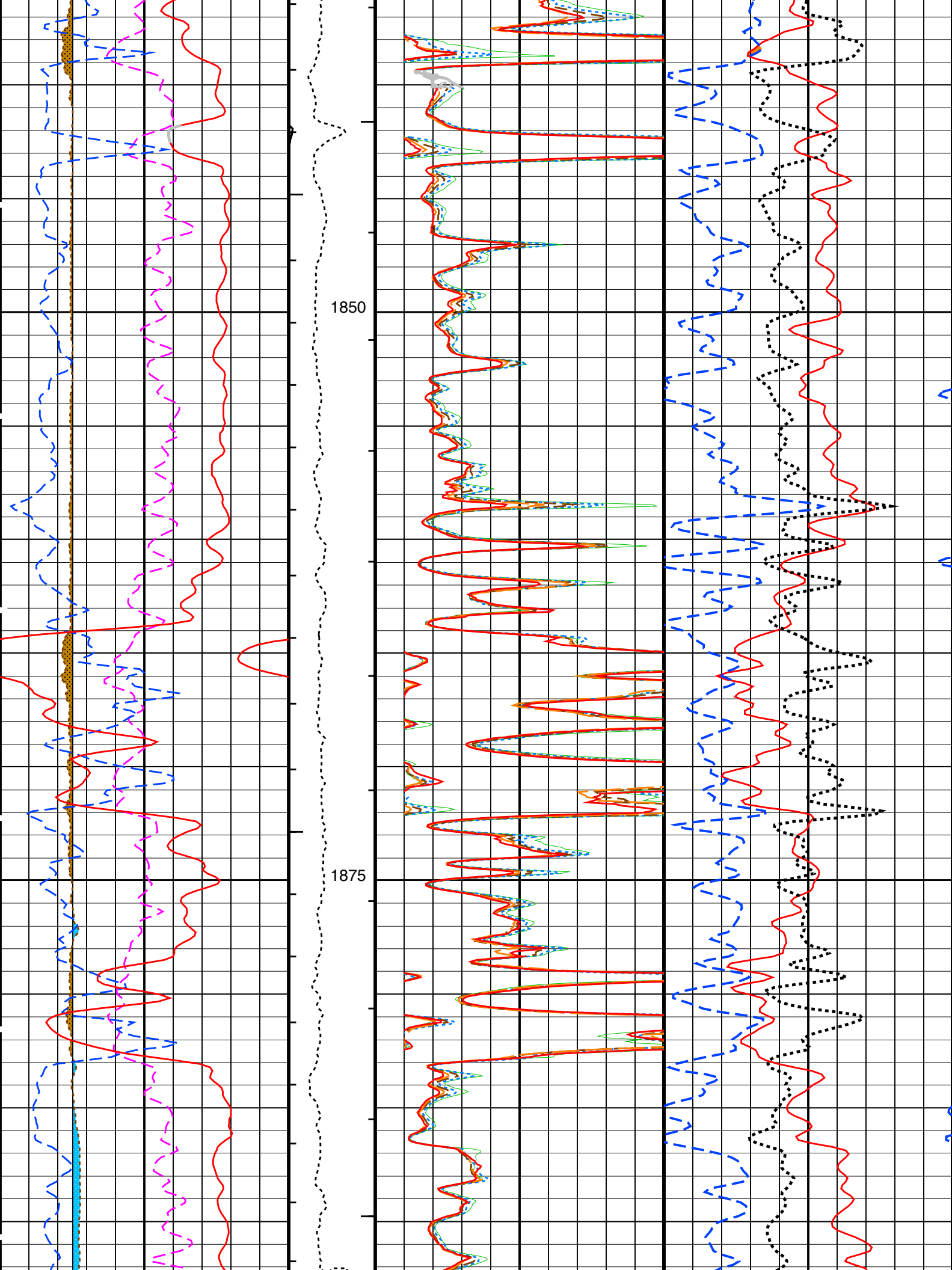
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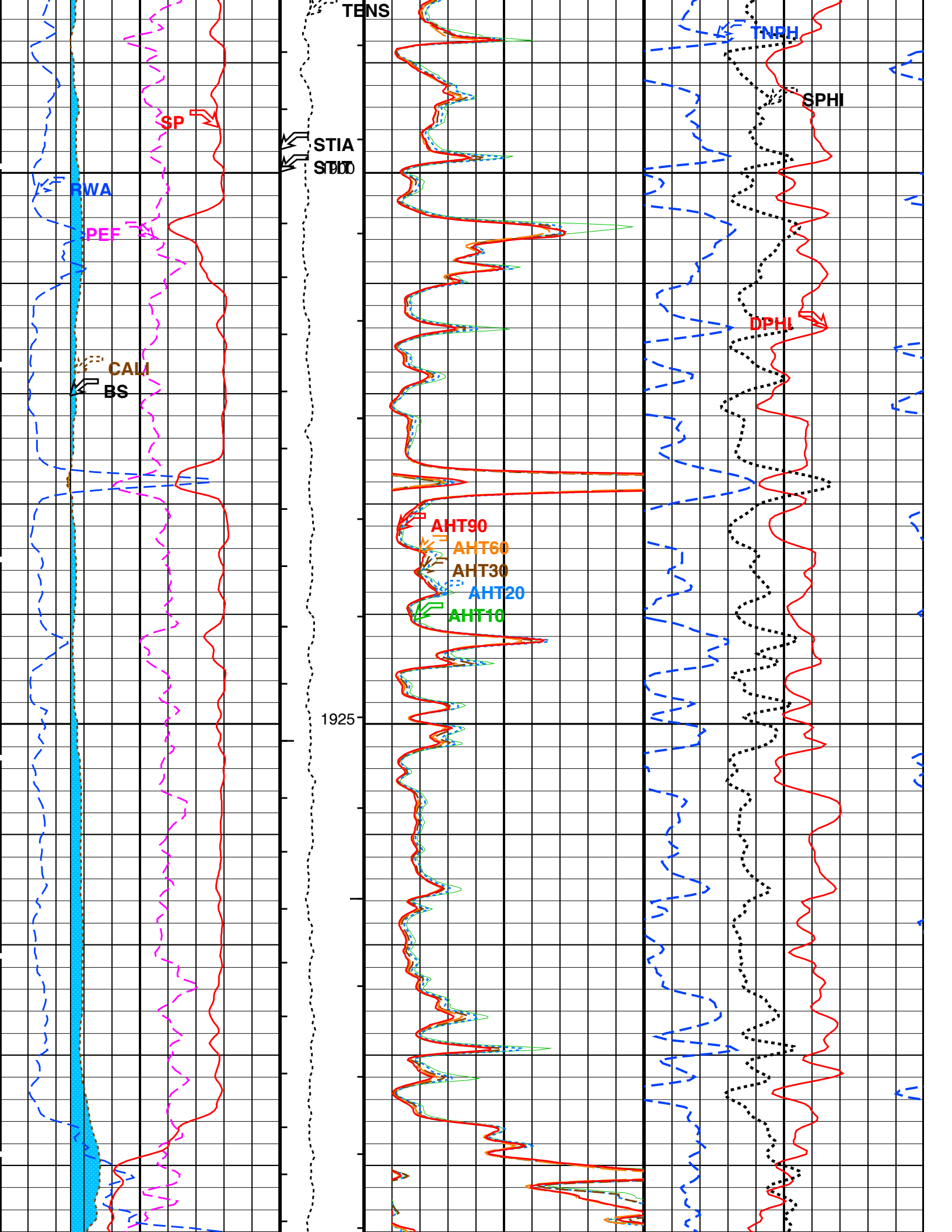


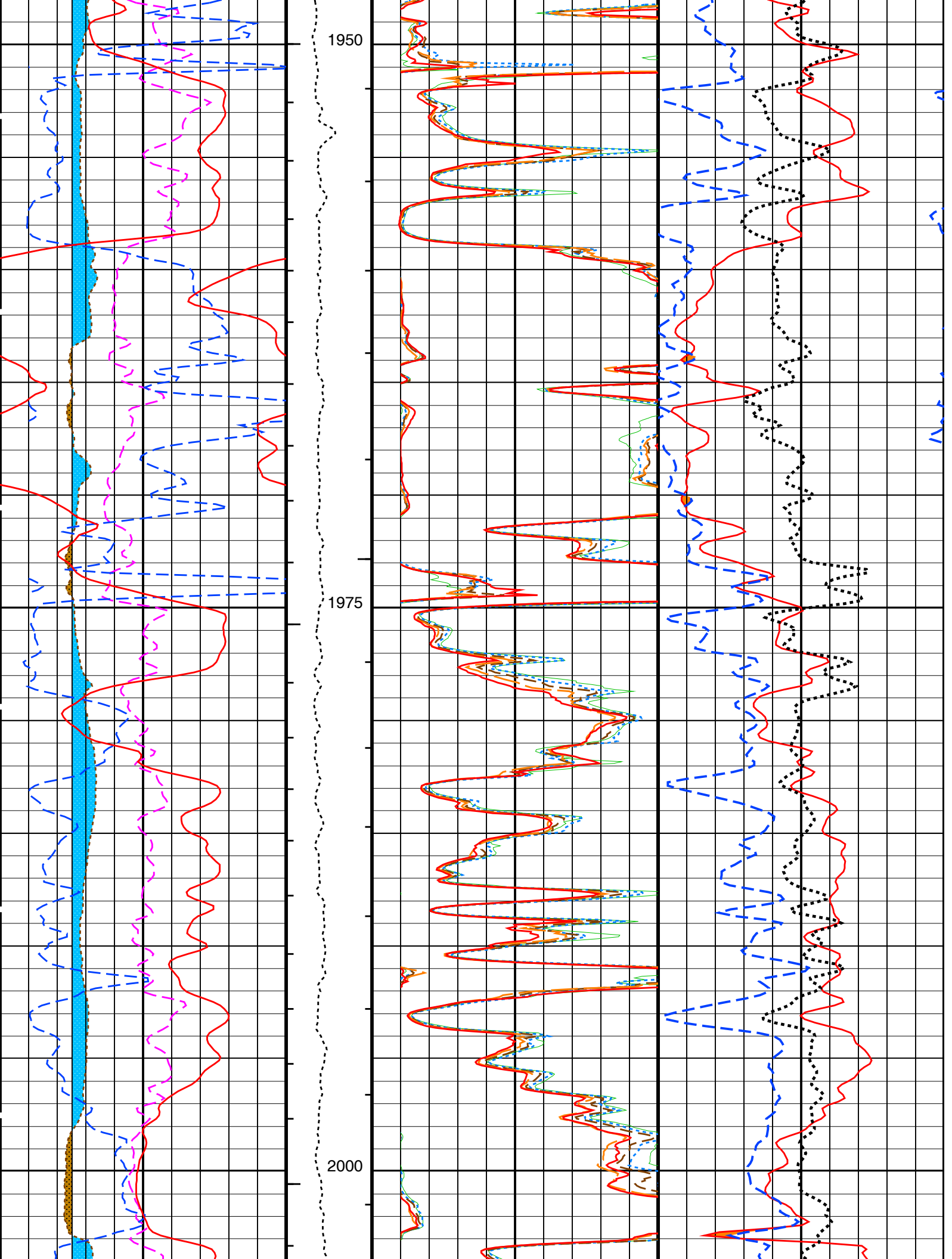


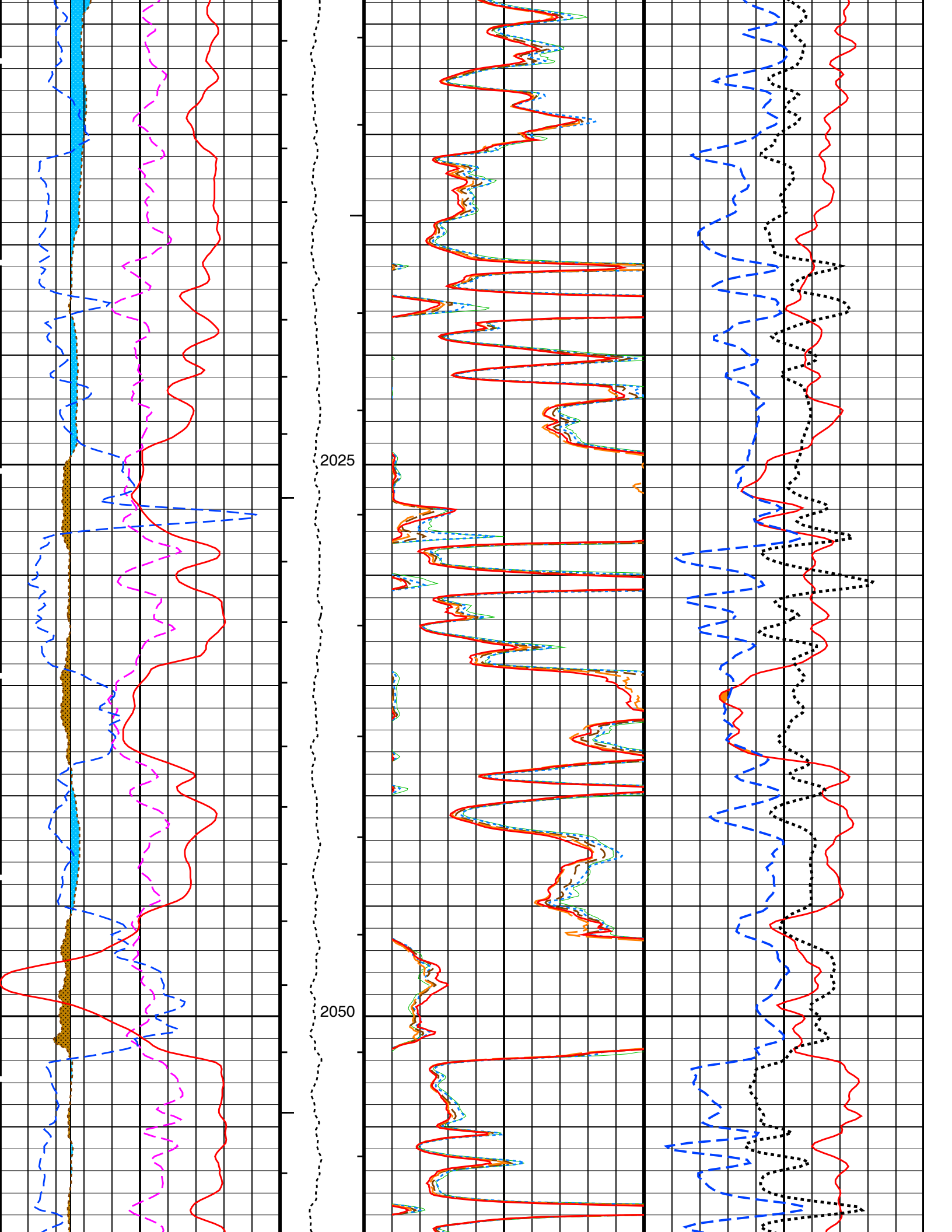


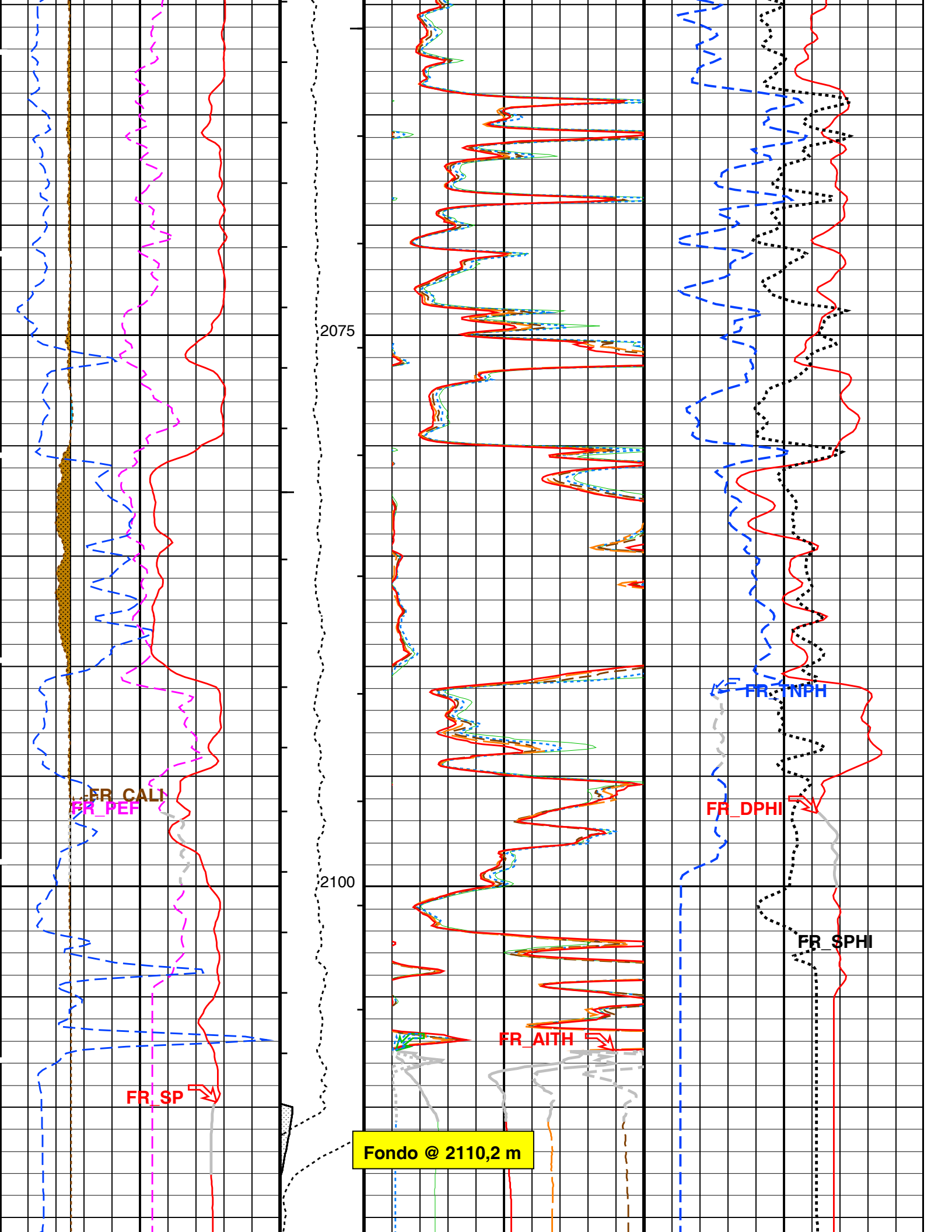












Bit Size (BS) (IN)	Tension (TENS) (LBF)	AIT-H 10 Inch Investigation (AHT10) (OHMM)	Density Porosity (DPHI) (V/V)
6 16	0 1000	0 10	0.4 0
Caliper (CALI) (IN)	Stuck Stretch (STIT)	AIT-H 20 Inch Investigation (AHT20) (OHMM)	Sonic Porosity (SPHI) (V/V)
6 16	0 (M) 20	0 10	0.4 0
PhotoElectric Factor (PEF) (---		AIT-H 30 Inch Investigation (AHT30) (OHMM)	Gas From DPPI to TNPH
0 5		0 10	
RWA (RWA) (OHMM)		AIT-H 60 Inch Investigation (AHT60) (OHMM)	Env.Corr.Thermal Neutron Porosity (TNPH) (V/V)
0 1		0 10	0.4 0
SP (SP) (MV)		AIT-H 90 Inch Investigation (AHT90) (OHMM)	
-80 20		0 10	
CAVERNA From BS to CALI			
REVOQUE From CALI to BS			

### PIP SUMMARY

- ┆ Integrated Hole Volume Minor Pip Every 0.1 M3
- ┆ Integrated Hole Volume Major Pip Every 1 M3
  - ┆ Integrated Cement Volume Minor Pip Every 0.1 M3
  - ┆ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S

### Parameters

DLIS Name	Description	Value
AIT-H: Array Induction Tool - H		
AHBHM	Array Induction Borehole Correction Mode	2_ComputeStandoff
AHBHV	Array Induction Borehole Correction Code Version Number	880
AHBLM	Array Induction Basic Logs Mode	6_One_Two_and_Four
AHBLV	Array Induction Basic Logs Code Version Number	108
AHCDE	Array Induction Casing Detection Enable	Yes
AHCEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered
AHFRSV	Array Induction Response Set Version for Four ft Resolution	40.70.24.21
AHMRF	Array Induction Mud Resistivity Factor	1
AHORSV	Array Induction Response Set Version for One ft Resolution	40.70.24.21
AHRFV	Array Induction Radial Profiling Code Version Number	700
AHRPV	Array Induction Radial Parametrization Code Version Number	223
AHSTA	Array Induction Tool Standoff	1.5 IN
AHTRSV	Array Induction Response Set Version for Two ft Resolution	40.70.24.21
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	77 DEGC
FEXP	Form Factor Exponent	2
FNUM	Form Factor Numerator	0.81
FPHI	Form Factor Porosity Source	SPHI
GCSE	Generalized Caliper Selection	CALI
GDEV	Average Angular Deviation of Borehole from Normal	0.75 DEG
GGRD	Geothermal Gradient	0.018227 DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
RTCO	RTCO - Rt Invasion Correction	YES
SHT	Surface Hole Temperature	10 DEGC
SPDR	SP Drift	0 MV/M
SPNV	SP Next Value	-4 MV
DSLTTCC: Digitizing		
	Sonic Logging Tool	
	DSLTT Firing Mode	BHC
	Telemetry Mode	DSLCTCC
CDTS	C-Delta-T Shale	100 US/F
DTF	Delta-T Fluid	189 US/F
DTM	Delta-T Matrix	56 US/F
SPFS	Sonic Porosity Formula	RAYMER_HUNT
SPSO	Sonic Porosity Source	DT
LDT-D: Litho Density - D		
BEM	Borehole Fluid Medium	LIQUID

BPM	Borehole Fluid Medium	LIQUID	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	STAN	
FD	Fluid Density	1	G/C3
MDEN	Matrix Density	2.65	G/C3
WMUD	Mud Weight	1.17	G/C3
<b>CNT-H: Compensated Neutron - H</b>			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	77	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	STAN	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0.75	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	YES	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	10	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
<b>SGT-L: Scintillation Gamma-Ray - I</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	77	DEGC
DPPM	Density Porosity Processing Mode	STAN	
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0.75	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	10	DEGC
<b>RWA: Apparent Water Resistivity</b>			
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	0.81	
FPHI	Form Factor Porosity Source	SPHI	
RTCO	RTCO - Rt Invasion Correction	YES	
<b>ALLRES: Basic Resistivity Transforms</b>			
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
RTCO	RTCO - Rt Invasion Correction	YES	
<b>HOLEV: Integrated Hole/Cement Volume</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	77	DEGC
FCD	Future Casing (Outer) Diameter	5.5	IN
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0.75	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	10	DEGC
<b>STI: Stuck Tool Indicator</b>			
LBFR	Trigger for MAXIS First Reading Label	STI	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	2107.00	M
TDL	Total Depth - Logger	2110.20	M
<b>System and Miscellaneous</b>			
BS	Bit Size	8.750	IN
BSAL	Borehole Salinity	500.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	32.30	LB/F
DFD	Drilling Fluid Density	1.17	G/C3
DO	Depth Offset for Playback	0.0	M
MST	Mud Sample Temperature	11.30	DEGC
PP	Playback Processing	OFF	
RMFS	Resistivity of Mud Filtrate Sample	1.8380	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	2110.2	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

AIT-H	12C0-301	DSLT-TCC	12C0-301
LDT-D	12C0-301	CNT-H	12C0-301
SGT-L	12C0-301	TCC-BF	12C0-301

### Input DLIS Files

DEFAULT AIT\_mainlog\_022PUP FN:35 PRODUCER 27-Mar-2005 12:16 2115.9 M 366.1 M

### Output DLIS Files

DEFAULT AIT\_mainlog\_023PUP FN:37 PRODUCER 27-Mar-2005 12:22  
 B\_UP AIT\_mainlog\_023PUP FN:38 PRODUCER 28-Mar-2005 12:36



## TRAMO REPETIDO

MAXIS Field Log

### Input DLIS Files

DEFAULT AIT\_repeatok\_013PUP FN:18 PRODUCER 27-Mar-2005 08:53 2114.1 M 1944.8 M

### Output DLIS Files

DEFAULT AIT\_SONIC\_LDL\_CNL\_004PUP FN:2 PRODUCER 28-Mar-2005 09:54 2100.1 M 2031.0 M

### Integrated Hole/Cement Volume Summary

Hole Volume = 2.45 M3  
 Cement Volume = 1.39 M3 (assuming 5.50 IN casing O.D.)  
 Computed from 2100.1 M to 2031.0 M using data channel(s) CALI

### OP System Version: 12C0-301

MCM

AIT-H	12C0-301	DSLT-TCC	12C0-301
LDT-D	12C0-301	CNT-H	12C0-301
SGT-L	12C0-301	TCC-BF	12C0-301

#### PIP SUMMARY

- ┆ Integrated Hole Volume Minor Pip Every 0.1 M3
- ┆ Integrated Hole Volume Major Pip Every 1 M3
  - ┆ Integrated Cement Volume Minor Pip Every 0.1 M3
  - ┆ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S

**REVOQUE**  
From CALI to BS

**CAVERNA**  
From BS to CALI

SP (SP)  
-80 (MV) 20

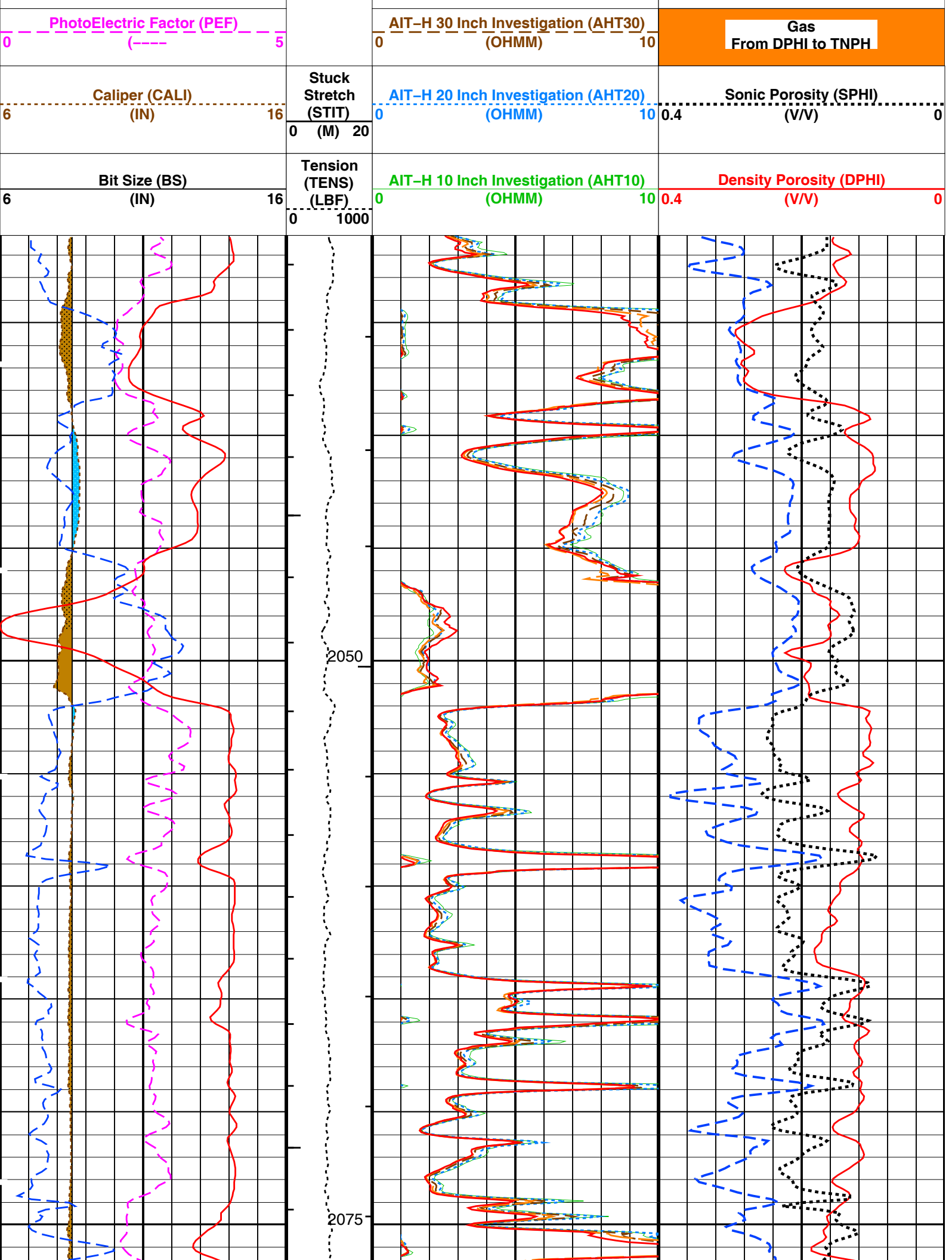
RWA (RWA)  
0 (OHMM) 1

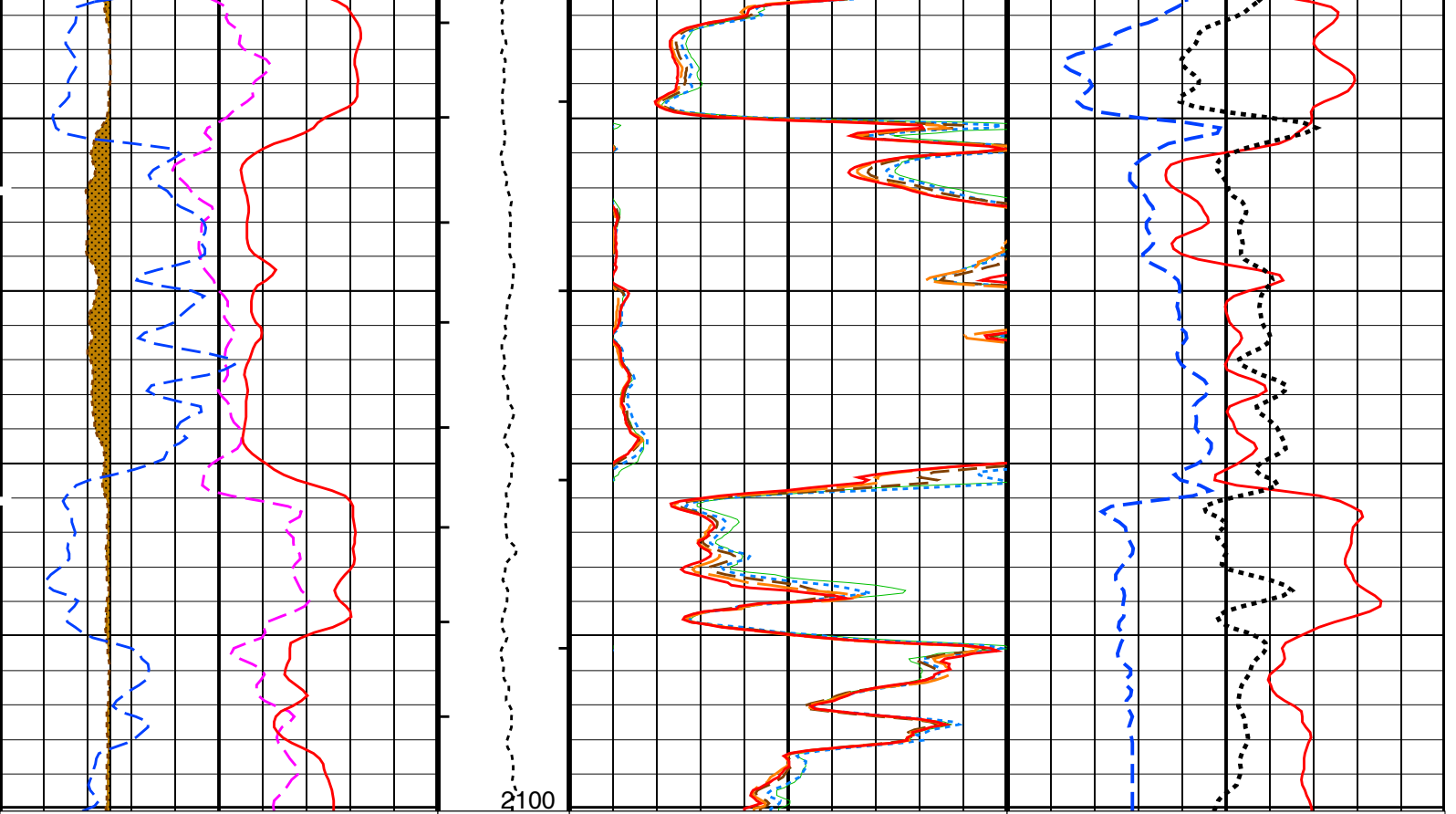
AIT-H 90 Inch Investigation (AHT90)  
0 (OHMM) 10

AIT-H 60 Inch Investigation (AHT60)  
0 (OHMM) 10

Env.Corr.Thermal Neutron Porosity  
0.4 (TNPH) (V/V) 0







6 Bit Size (BS) (IN) 16	Tension (TENS) (LBF) 0 1000	AIT-H 10 Inch Investigation (AHT10) (OHMM) 0 10	Density Porosity (DPHI) (V/V) 0.4 0
6 Caliper (CALI) (IN) 16	Stuck Stretch (STIT) (M) 20	AIT-H 20 Inch Investigation (AHT20) (OHMM) 0 10	Sonic Porosity (SPHI) (V/V) 0.4 0
0 PhotoElectric Factor (PEF) (----) 5		AIT-H 30 Inch Investigation (AHT30) (OHMM) 0 10	Gas From DPHI to TNPH
0 RWA (RWA) (OHMM) 1		AIT-H 60 Inch Investigation (AHT60) (OHMM) 0 10	Env.Corr.Thermal Neutron Porosity (TNPH) (V/V) 0.4 0
-80 SP (SP) (MV) 20		AIT-H 90 Inch Investigation (AHT90) (OHMM) 0 10	
CAVERNA From BS to CALI			
REVOQUE From CALI to BS			

**PIP SUMMARY**

- ┌ Integrated Hole Volume Minor Pip Every 0.1 M3
- ┌ Integrated Hole Volume Major Pip Every 1 M3
  - ┌ Integrated Cement Volume Minor Pip Every 0.1 M3
  - ┌ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S

**Parameters**

DLIS Name	Description	Value
AIT-H: Array Induction Tool - H		
AHBHM	Array Induction Borehole Correction Mode	2_ComputeStandoff
AHBHV	Array Induction Borehole Correction Code Version Number	880
AHBLM	Array Induction Basic Logs Mode	6_One_Two_and_Four
AHBLV	Array Induction Basic Logs Code Version Number	100

AHBLV	Array Induction Basic Logs Code Version Number	108	
AHCDE	Array Induction Casing Detection Enable	Yes	
AHCEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered	
AHFRSV	Array Induction Response Set Version for Four ft Resolution	40.70.24.21	
AHMRF	Array Induction Mud Resistivity Factor	1	
AHORSV	Array Induction Response Set Version for One ft Resolution	40.70.24.21	
AHRFV	Array Induction Radial Profiling Code Version Number	700	
AHRPV	Array Induction Radial Parametrization Code Version Number	223	
AHSTA	Array Induction Tool Standoff	1.5	IN
AHTRSV	Array Induction Response Set Version for Two ft Resolution	40.70.24.21	
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	80	DEGC
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	0.81	
FPHI	Form Factor Porosity Source	SPHI	
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0.75	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
RTCO	RTCO - Rt Invasion Correction	YES	
SHT	Surface Hole Temperature	10	DEGC
SPNV	SP Next Value	-4	MV
	<b>DSL-TCC: Digitizing</b>		
	Sonic Logging Tool		
	Telemetry Mode	DSLCT_TCC	
	DSL-T Firing Mode	BHC	
CDTS	C-Delta-T Shale	100	US/F
DTF	Delta-T Fluid	189	US/F
DTM	Delta-T Matrix	56	US/F
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DT	
	<b>LDT-D: Litho Density - D</b>		
BFM	Borehole Fluid Medium	LIQUID	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	STAN	
FD	Fluid Density	1	G/C3
MDEN	Matrix Density	2.65	G/C3
WMUD	Mud Weight	1.17	G/C3
	<b>CNT-H: Compensated Neutron - H</b>		
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	80	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	STAN	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0.75	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	YES	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	10	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
	<b>SGT-L: Scintillation Gamma-Ray - I</b>		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	80	DEGC
DPPM	Density Porosity Processing Mode	STAN	
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0.75	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	10	DEGC
	<b>RWA: Apparent Water Resistivity</b>		
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	0.81	
FPHI	Form Factor Porosity Source	SPHI	
RTCO	RTCO - Rt Invasion Correction	YES	
	<b>ALLRES: Basic Resistivity Transforms</b>		
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
RTCO	RTCO - Rt Invasion Correction	YES	
	<b>HOLEV: Integrated Hole/Cement Volume</b>		

BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	80	DEGC
FCD	Future Casing (Outer) Diameter	5.5	IN
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0.75	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	10	DEGC
	<b>STI: Stuck Tool Indicator</b>		
LBFR	Trigger for MAXIS First Reading Label	STI	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	2107.00	M
TDL	Total Depth - Logger	2110.20	M
	<b>System and Miscellaneous</b>		
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	500.00	PPM
DO	Depth Offset for Playback	0.0	M
DORL	Depth Offset for Repeat Analysis	0.0	M
PP	Playback Processing	NORMAL	
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	2107	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: COMBINADA Vertical Scale: 1:200 Graphics File Created: 28-Mar-2005 09:54

## OP System Version: 12C0-301

MCM

AIT-H	12C0-301	DSLT-TCC	12C0-301
LDT-D	12C0-301	CNT-H	12C0-301
SGT-L	12C0-301	TCC-BF	12C0-301

### Input DLIS Files

DEFAULT	AIT_repeatok_013PUP	FN:18	PRODUCER	27-Mar-2005 08:53	2114.1 M	1944.8 M
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### Output DLIS Files

DEFAULT	AIT_SONIC_LD_L_CNL_004PUP	FN:2	PRODUCER	28-Mar-2005 09:54
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## ANALISIS DE REPETIBILIDAD

MAXIS Field Log

### Input DLIS Files

DEFAULT	AIT_repeatok_013PUP	FN:18	PRODUCER	27-Mar-2005 08:53	2114.1 M	1944.8 M
DEFAULT	AIT_mainlog_014LUP	FN:20	PRODUCER	27-Mar-2005 08:57		

### Output DLIS Files

DEFAULT	AIT_SONIC_LD_L_CNL_004PUP	FN:2	PRODUCER	28-Mar-2005 09:54	2100.1 M	2031.0 M
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## Integrated Hole/Cement Volume Summary

Hole Volume = 2.45 M3

Cement Volume = 1.39 M3 (assuming 5.50 IN casing O.D.)

Computed from 2100.1 M to 2031.0 M using data channel(s) CALI

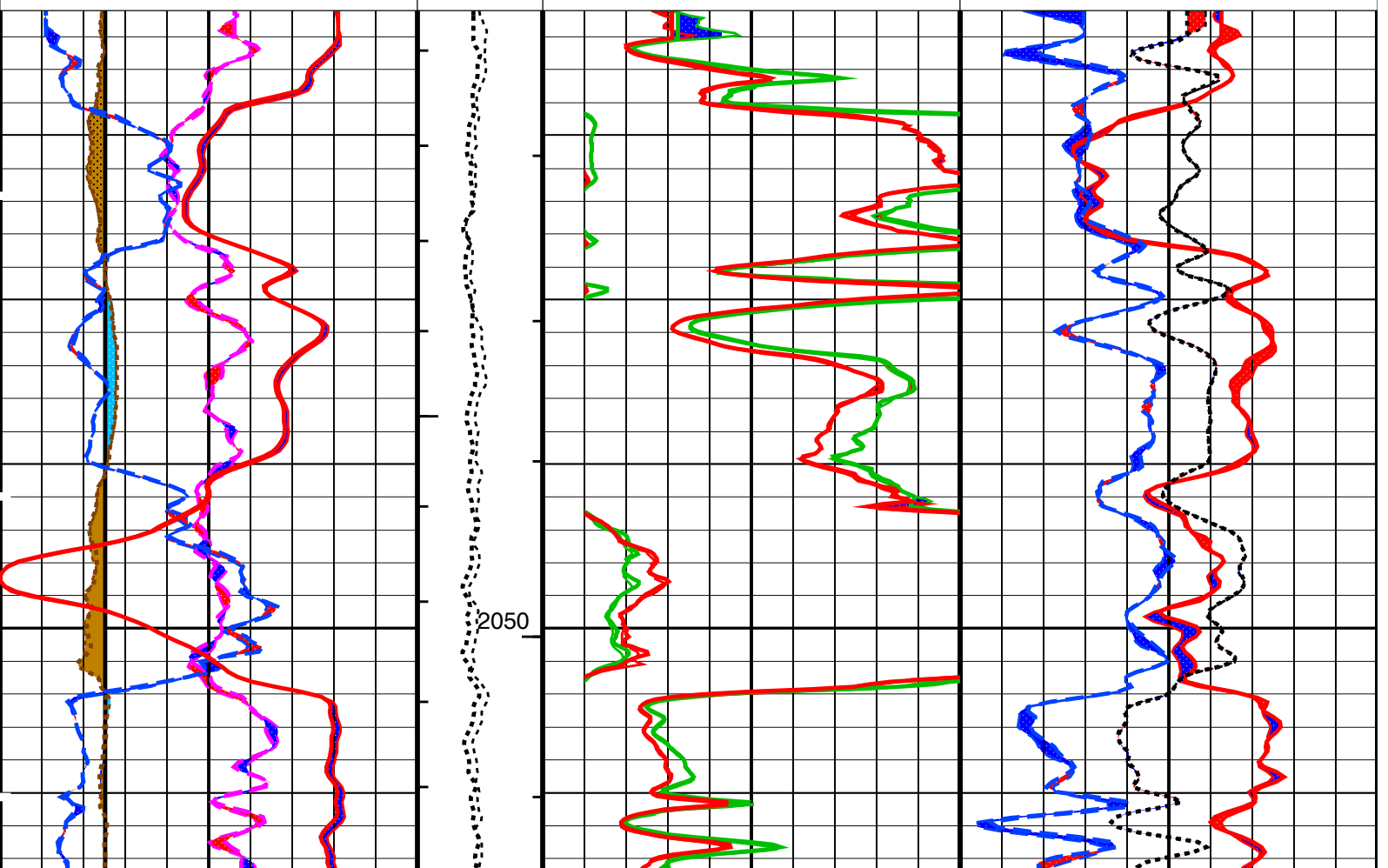
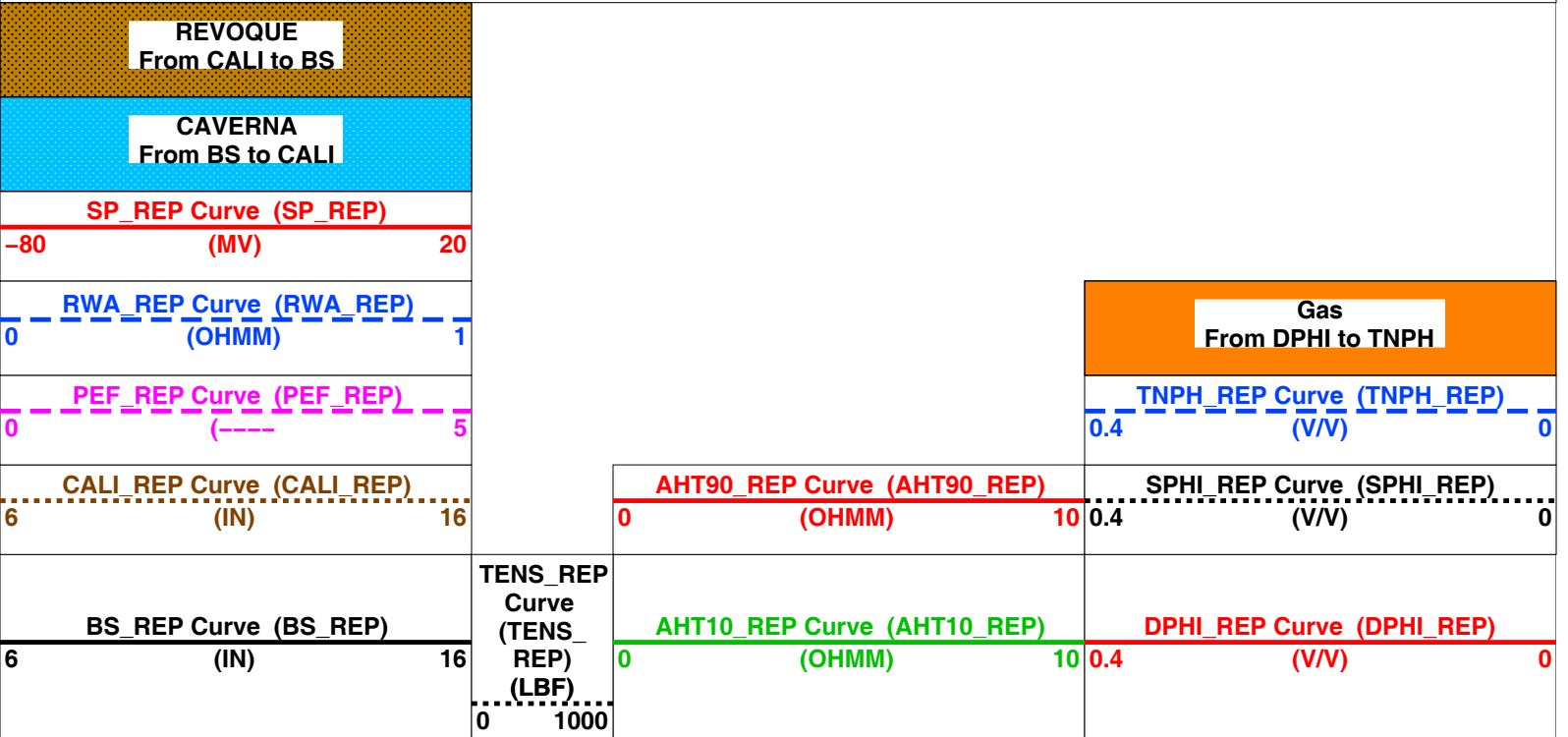
AIT-H 12C0-301  
 LDT-D 12C0-301  
 SGT-L 12C0-301

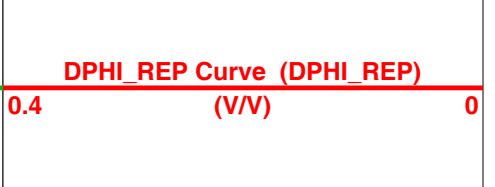
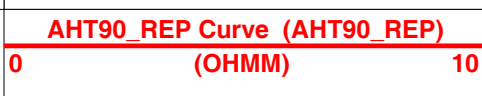
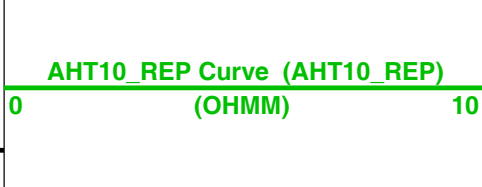
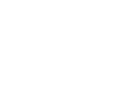
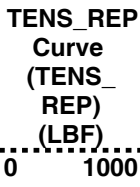
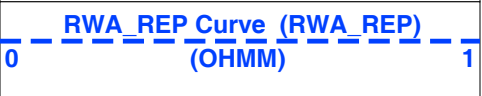
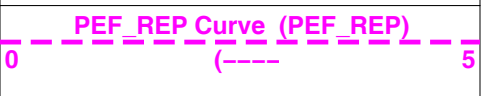
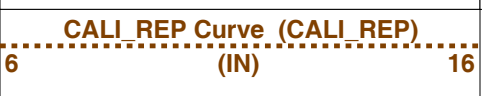
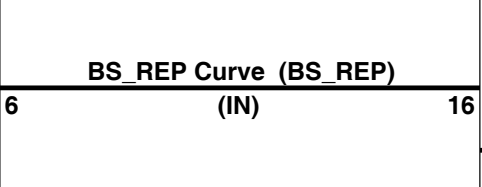
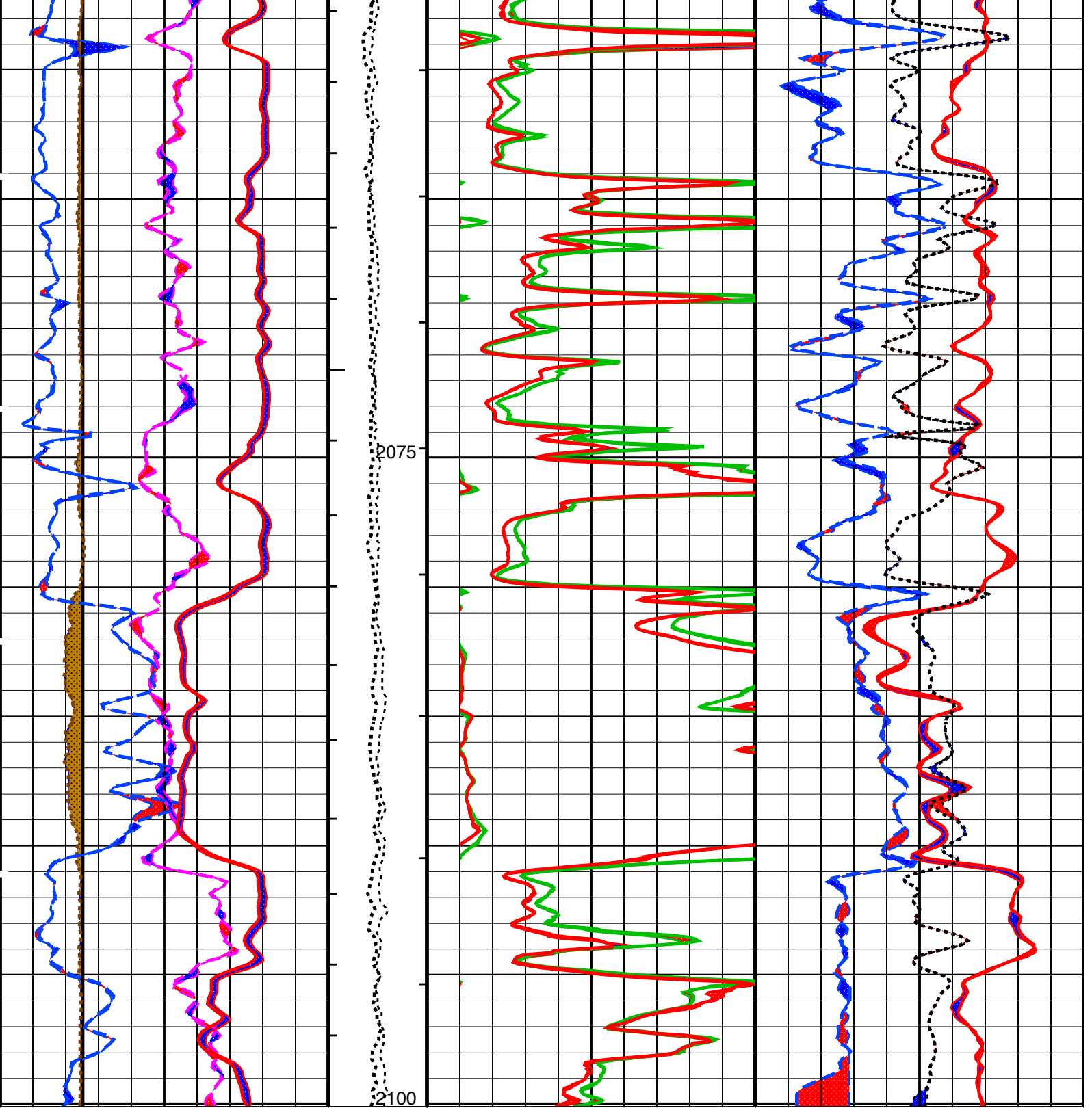
DSLT-TCC 12C0-301  
 CNT-H 12C0-301  
 TCC-BF 12C0-301

PIP SUMMARY

- ┆ Integrated Hole Volume Minor Pip Every 0.1 M3
- ┆ Integrated Hole Volume Major Pip Every 1 M3
  - ┆ Integrated Cement Volume Minor Pip Every 0.1 M3
  - ┆ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S





CAVERNA  
From BS to CALI

REVOQUE  
From CALI to BS

PIP SUMMARY

- ┆ Integrated Hole Volume Minor Pip Every 0.1 M3
- ┆ Integrated Hole Volume Major Pip Every 1 M3
  - ┆ Integrated Cement Volume Minor Pip Every 0.1 M3
  - ┆ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
<b>AIT-H: Array Induction Tool - H</b>		
AHBHM	Array Induction Borehole Correction Mode	2_ComputeStandoff
AHBHV	Array Induction Borehole Correction Code Version Number	880
AHBLM	Array Induction Basic Logs Mode	6_One_Two_and_Four
AHBLV	Array Induction Basic Logs Code Version Number	108
AHCDE	Array Induction Casing Detection Enable	Yes
AHCEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered
AHFRSV	Array Induction Response Set Version for Four ft Resolution	40.70.24.21
AHMRF	Array Induction Mud Resistivity Factor	1
AHORSV	Array Induction Response Set Version for One ft Resolution	40.70.24.21
AHRFV	Array Induction Radial Profiling Code Version Number	700
AHRPV	Array Induction Radial Parametrization Code Version Number	223
AHSTA	Array Induction Tool Standoff	1.5 IN
AHTRSV	Array Induction Response Set Version for Two ft Resolution	40.70.24.21
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	80 DEGC
FEXP	Form Factor Exponent	2
FNUM	Form Factor Numerator	0.81
FPHI	Form Factor Porosity Source	SPHI
GCSE	Generalized Caliper Selection	CALI
GDEV	Average Angular Deviation of Borehole from Normal	0.75 DEG
GGRD	Geothermal Gradient	0.018227 DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
RTCO	RTCO - Rt Invasion Correction	YES
SHT	Surface Hole Temperature	10 DEGC
SPNV	SP Next Value	-4 MV
<b>DSL-T-TCC: Digitizing</b>		
	Sonic Logging Tool	
	Telemetry Mode	DSLCT_TCC
	DSL-T Firing Mode	BHC
CDTS	C-Delta-T Shale	100 US/F
DTF	Delta-T Fluid	189 US/F
DTM	Delta-T Matrix	56 US/F
SPFS	Sonic Porosity Formula	RAYMER_HUNT
SPSO	Sonic Porosity Source	DT
<b>LDT-D: Litho Density - D</b>		
BFM	Borehole Fluid Medium	LIQUID
DHC	Density Hole Correction	BS
DPPM	Density Porosity Processing Mode	STAN
FD	Fluid Density	1 G/C3
MDEN	Matrix Density	2.65 G/C3
WMUD	Mud Weight	1.17 G/C3
<b>CNT-H: Compensated Neutron - H</b>		
BHFL	Borehole Fluid Type	WATER
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	80 DEGC
BSCO	Borehole Salinity Correction Option	YES
CCCO	Casing & Cement Thickness Correction Option	NO
DPPM	Density Porosity Processing Mode	STAN
FSAL	Formation Salinity	-50000 PPM
FSCO	Formation Salinity Correction Option	NO
GCSE	Generalized Caliper Selection	CALI
GDEV	Average Angular Deviation of Borehole from Normal	0.75 DEG
GGRD	Geothermal Gradient	0.018227 DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
HSCO	Hole Size Correction Option	YES
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
MCCO	Mud Cake Correction Option	YES

MCSO	Mud Weight Correction Option	YES	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	10	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
<b>SGT-L: Scintillation Gamma-Ray - I</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	80	DEGC
DPPM	Density Porosity Processing Mode	STAN	
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0.75	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	10	DEGC
<b>RWA: Apparent Water Resistivity</b>			
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	0.81	
FPHI	Form Factor Porosity Source	SPHI	
RTCO	RTCO - Rt Invasion Correction	YES	
<b>ALLRES: Basic Resistivity Transforms</b>			
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
RTCO	RTCO - Rt Invasion Correction	YES	
<b>HOLEV: Integrated Hole/Cement Volume</b>			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	80	DEGC
FCD	Future Casing (Outer) Diameter	5.5	IN
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0.75	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	10	DEGC
<b>STI: Stuck Tool Indicator</b>			
TDL	Total Depth - Logger	2110.20	M
<b>System and Miscellaneous</b>			
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	500.00	PPM
DO	Depth Offset for Playback	0.0	M
DORL	Depth Offset for Repeat Analysis	0.0	M
PP	Playback Processing	NORMAL	
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	2107	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: COMBINADA\_REP    Vertical Scale: 1:200    Graphics File Created: 28-Mar-2005 09:54

**OP System Version: 12C0-301**  
MCM

AIT-H	12C0-301	DSL-T-TCC	12C0-301
LDT-D	12C0-301	CNT-H	12C0-301
SGT-L	12C0-301	TCC-BF	12C0-301

**Input DLIS Files**

DEFAULT	AIT_repeatok_013PUP	FN:18	PRODUCER	27-Mar-2005 08:53	2114.1 M	1944.8 M
DEFAULT	AIT_mainlog_014LUP	FN:20	PRODUCER	27-Mar-2005 08:57		

**Output DLIS Files**

DEFAULT	AIT_SONIC_LDL_CNL_004PUP	FN:2	PRODUCER	28-Mar-2005 09:54		
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**CHEQUEO EN CAÑERIA**



### Input DLIS Files

DEFAULT	AIT_Calicheck_010LUP	FN:12	PRODUCER	27-Mar-2005 07:37	409.7 M	336.2 M
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### Output DLIS Files

DEFAULT	AIT_calicHECK_026PUP	FN:43	PRODUCER	27-Mar-2005 12:42	400.0 M	371.0 M
B_UP	AIT_calicHECK_026PUP	FN:44	PRODUCER	28-Mar-2005 12:56	400.0 M	371.1 M

### Integrated Hole/Cement Volume Summary

Hole Volume = 67.34 M3  
 Cement Volume = 41.00 M3 (assuming 5.50 IN casing O.D.)  
 Computed from 2110.1 M to 391.8 M using data channel(s) CALI

### OP System Version: 12C0-301

MCM

AIT-H	12C0-301	DSLT-TCC	12C0-301
LDT-D	12C0-301	CNT-H	12C0-301
SGT-L	12C0-301	TCC-BF	12C0-301

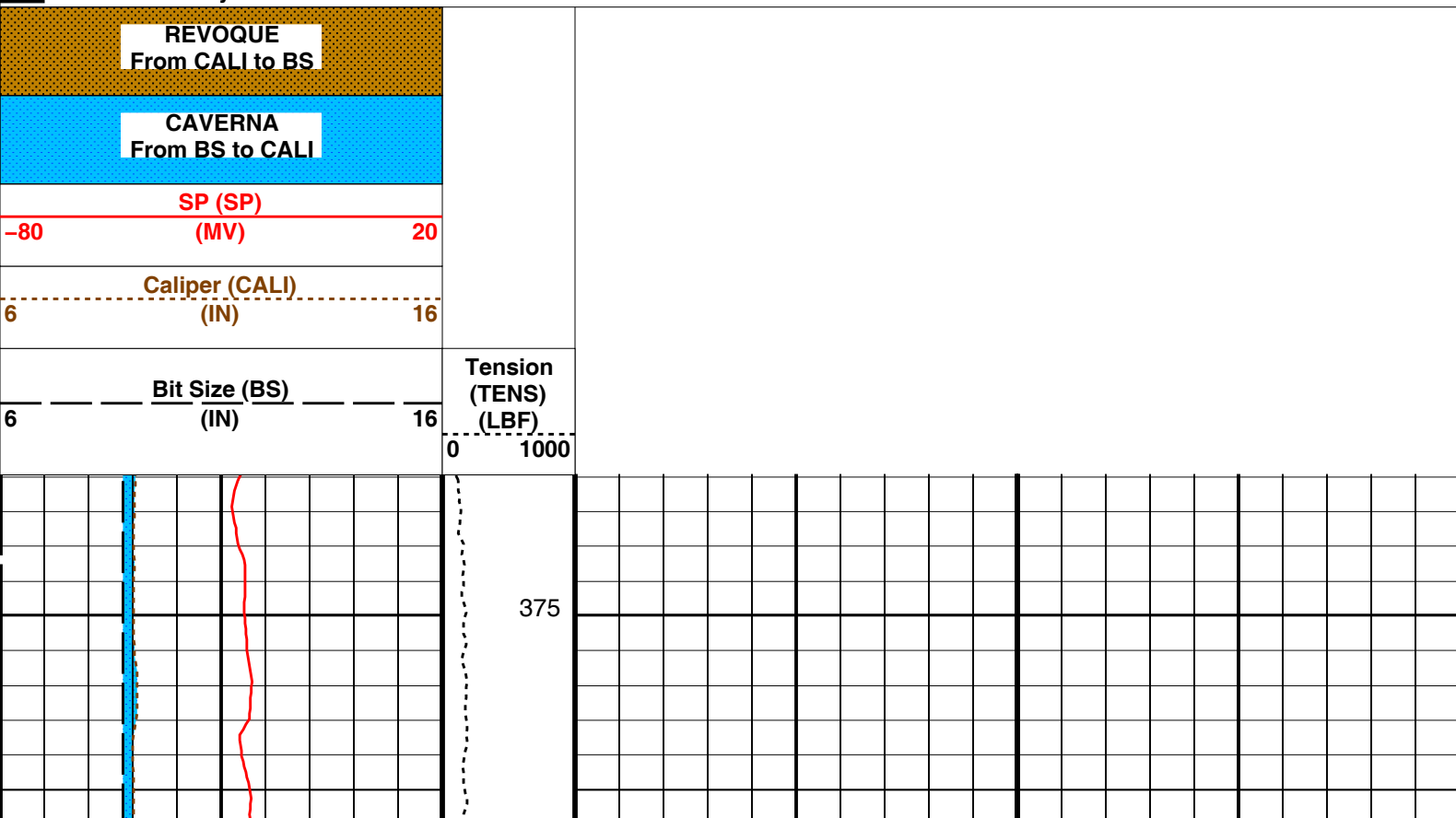
### Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
BS	8.750 IN	8.750 IN	400.0 12:42:32
SPDR	0 MV/M	0 MV/M	400.0 12:42:32

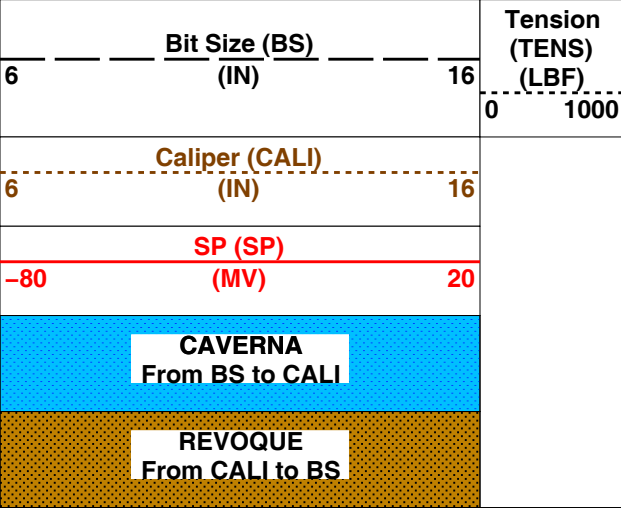
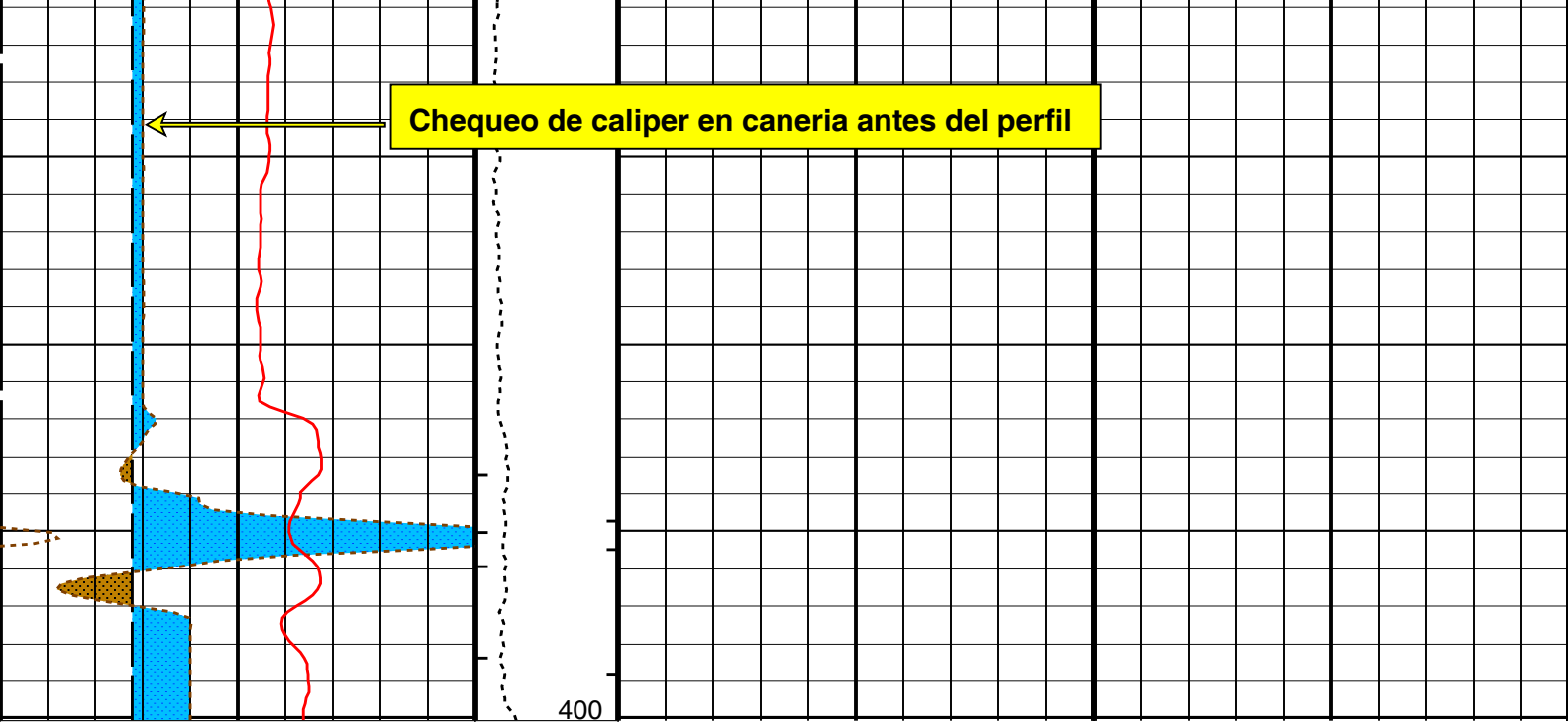
### PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
  - └ Integrated Cement Volume Minor Pip Every 0.1 M3
  - └ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S



**Chequeo de caliper en caneria antes del perfil**



Tension  
(TENS)  
(LBF)  
0 1000

**PIP SUMMARY**

- ┆ Integrated Hole Volume Minor Pip Every 0.1 M3
- ┆ Integrated Hole Volume Major Pip Every 1 M3
- ┆ Integrated Cement Volume Minor Pip Every 0.1 M3
- ┆ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S

**Parameters**

DLIS Name	Description	Value
SPDR	AIT-H: Array Induction Tool - H	
SPNV	SP Drift	0 MV/M
	SP Next Value	-4 MV
DSLTTCC	DSLTTCC: Digitizing Sonic Logging Tool	
	DSLTT Firing Mode	BHC
	Telemetry Mode	DSLTT_TCC
HOLEV	HOLEV: Integrated Hole/Cement Volume	
FCD	Future Casing (Outer) Diameter	5.5 IN
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC
	System and Miscellaneous	
BS	Bit Size	8.750 IN
DO	Depth Offset for Playback	0.4 M
PP	Playback Processing	OFF
TD	Total Depth	2110.2 M

Format: CALIPER Vertical Scale: 1:200

Graphics File Created: 27-Mar-2005 12:42

**OP System Version: 12C0-301**  
MCM

### Input DLIS Files

DEFAULT	AIT_Calicheck_010LUP	FN:12	PRODUCER	27-Mar-2005 07:37	409.7 M	336.2 M
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### Output DLIS Files

DEFAULT	AIT_calicHECK_026PUP	FN:43	PRODUCER	27-Mar-2005 12:42		
B_UP	AIT_calicHECK_026PUP	FN:44	PRODUCER	28-Mar-2005 12:56		

### Input DLIS Files

DEFAULT	AIT_mainlog_014LUP	FN:20	PRODUCER	27-Mar-2005 08:57	2115.9 M	314.6 M
DEFAULT	AIT_Calicheck_010LUP	FN:12	PRODUCER	27-Mar-2005 07:37	409.7 M	336.2 M

### Output DLIS Files

DEFAULT	AIT_mainlog_020PUP	FN:31	PRODUCER	27-Mar-2005 12:07	420.0 M	366.1 M
B_UP	AIT_mainlog_020PUP	FN:32	PRODUCER	28-Mar-2005 12:20	420.0 M	366.1 M

### Integrated Hole/Cement Volume Summary

Hole Volume = 1.30 M3  
 Cement Volume = 0.86 M3 (assuming 5.50 IN casing O.D.)  
 Computed from 420.0 M to 391.8 M using data channel(s) CALI

### OP System Version: 12C0-301

MCM

AIT-H	12C0-301	DSLT-TCC	12C0-301
LDT-D	12C0-301	CNT-H	12C0-301
SGT-L	12C0-301	TCC-BF	12C0-301

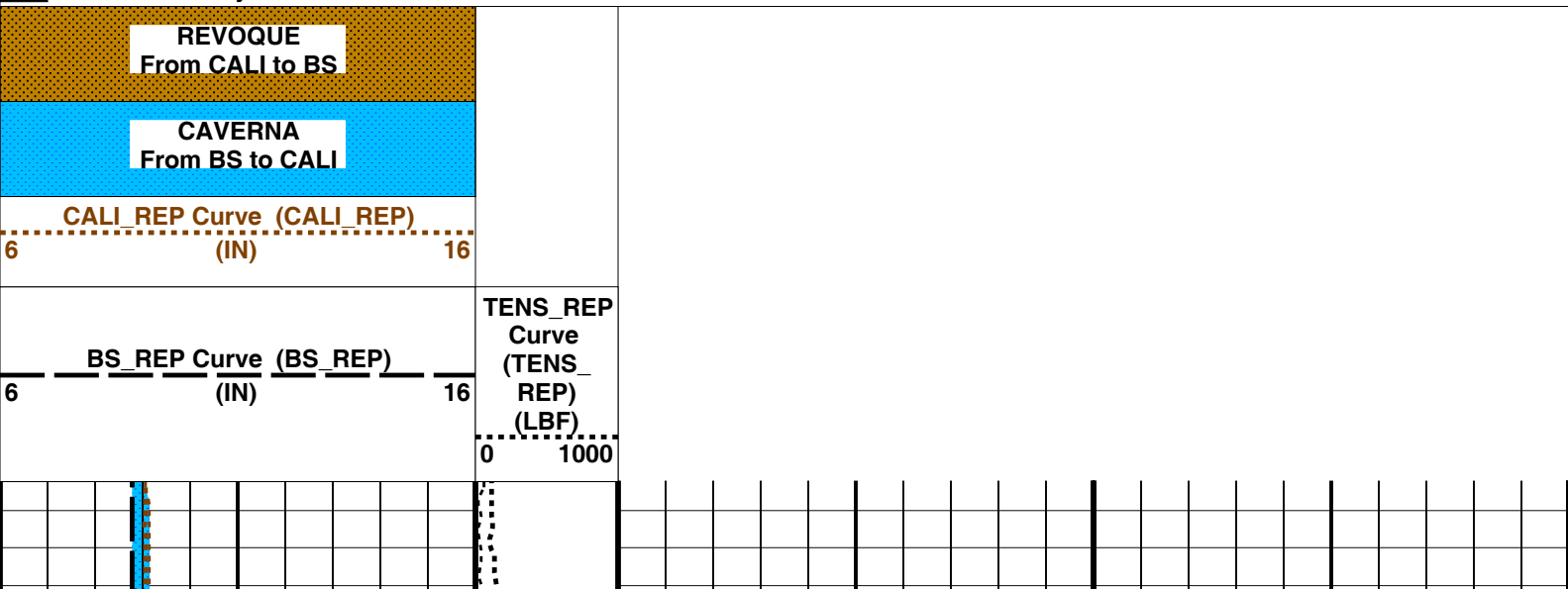
### Changed Parameter Summary

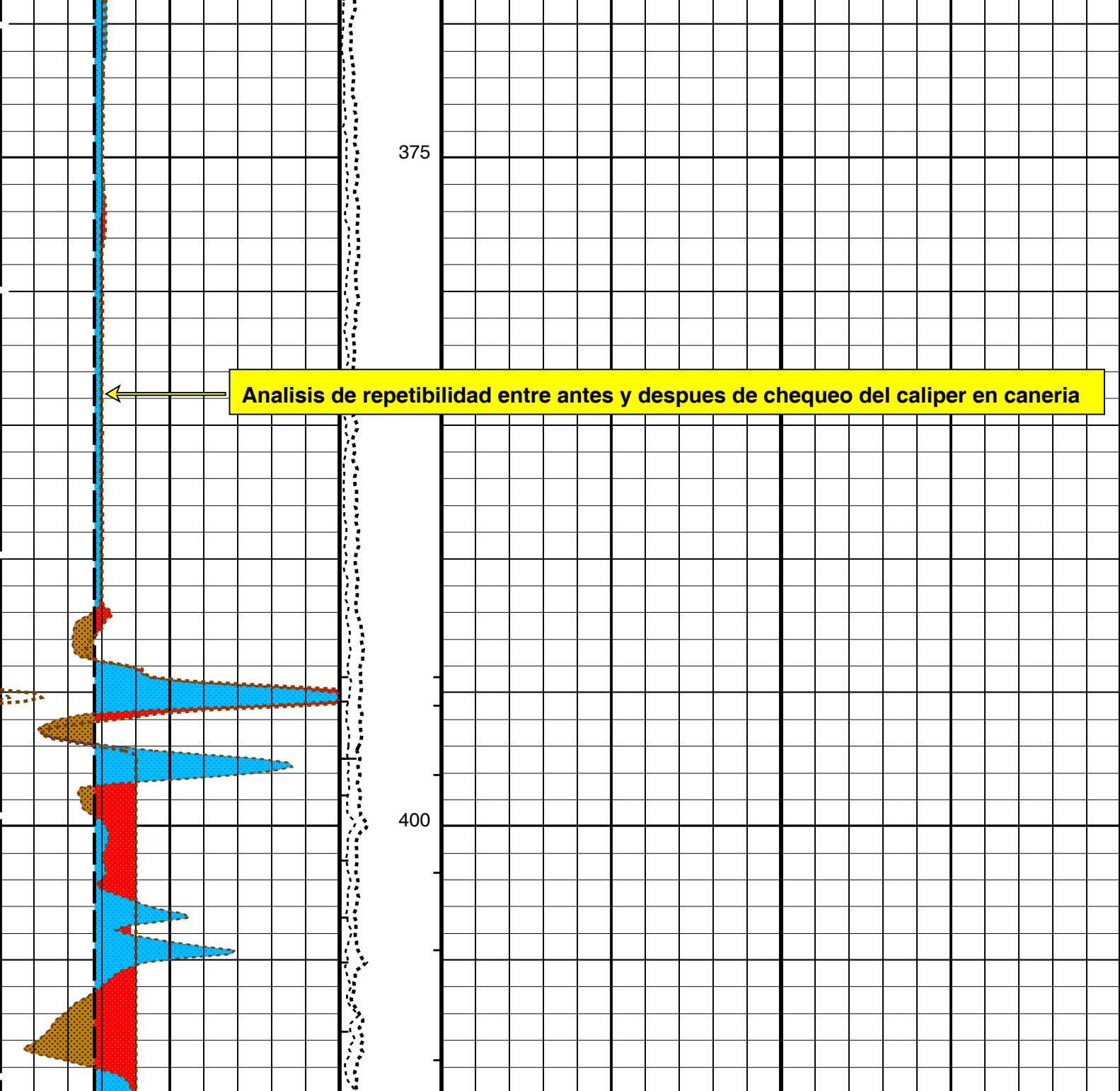
DLIS Name	New Value	Previous Value	Depth & Time
BS	8.750 IN	8.750 IN	420.0 12:07:15

#### PIP SUMMARY

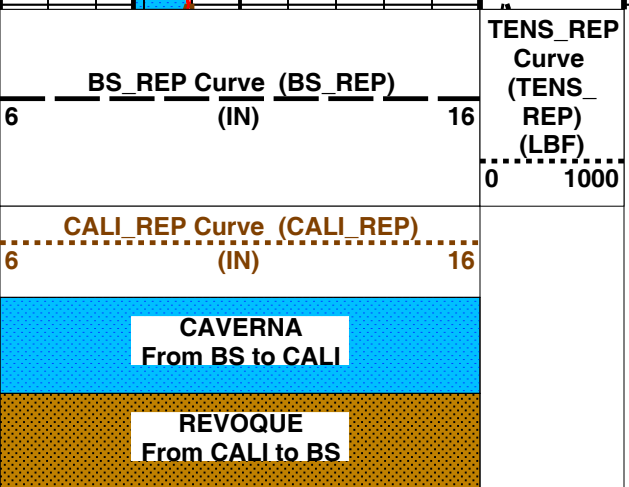
- ┆ Integrated Hole Volume Minor Pip Every 0.1 M3
- ┆ Integrated Hole Volume Major Pip Every 1 M3
  - ┆ Integrated Cement Volume Minor Pip Every 0.1 M3
  - ┆ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S





← Analisis de repetibilidad entre antes y despues de chequeo del caliper en caneria



PIP SUMMARY

┆ Integrated Hole Volume Minor Pip Every 0.1 M3  
 ┆ Integrated Hole Volume Major Pip Every 1 M3

← Integrated Hole Volume Major Pip Every 1 M3  
 → Integrated Cement Volume Minor Pip Every 0.1 M3  
 → Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S

### Parameters

DLIS Name	Description	Value
DSL-TCC: Digitizing	Sonic Logging Tool	
	DSL-T Firing Mode	BHC
	Telemetry Mode	DSL-TCC
HOLEV: Integrated Hole/Cement Volume		
FCD	Future Casing (Outer) Diameter	5.5 IN
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC
	System and Miscellaneous	
BS	Bit Size	8.750 IN
DO	Depth Offset for Playback	0.0 M
DORL	Depth Offset for Repeat Analysis	0.4 M
PP	Playback Processing	RECOMPUTE
TD	Total Depth	2110.2 M

Format: CALIPER\_REP

Vertical Scale: 1:200

Graphics File Created: 27-Mar-2005 12:07

### OP System Version: 12C0-301

MCM

AIT-H	12C0-301	DSL-TCC	12C0-301
LDT-D	12C0-301	CNT-H	12C0-301
SGT-L	12C0-301	TCC-BF	12C0-301

### Input DLIS Files

DEFAULT	AIT_mainlog_014LUP	FN:20	PRODUCER	27-Mar-2005 08:57	2115.9 M	314.6 M
DEFAULT	AIT_Calichck_010LUP	FN:12	PRODUCER	27-Mar-2005 07:37	409.7 M	336.2 M

### Output DLIS Files

DEFAULT	AIT_mainlog_020PUP	FN:31	PRODUCER	27-Mar-2005 12:07
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### Input DLIS Files

DEFAULT	AIT_mainlog_014LUP	FN:20	PRODUCER	27-Mar-2005 08:57	2115.9 M	314.6 M
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### Output DLIS Files

DEFAULT	AIT_SONICCHECK_025PUP	FN:41	PRODUCER	27-Mar-2005 12:32	350.1 M	321.0 M
B_UP	AIT_SONICCHECK_025PUP	FN:42	PRODUCER	28-Mar-2005 12:45	350.1 M	321.0 M

### OP System Version: 12C0-301

MCM

AIT-H	12C0-301	DSL-TCC	12C0-301
LDT-D	12C0-301	CNT-H	12C0-301
SGT-L	12C0-301	TCC-BF	12C0-301

### Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
BS	8.750 IN	8.750 IN	350.1 12:32:36
SPDR	0 MV/M	0 MV/M	350.1 12:32:36

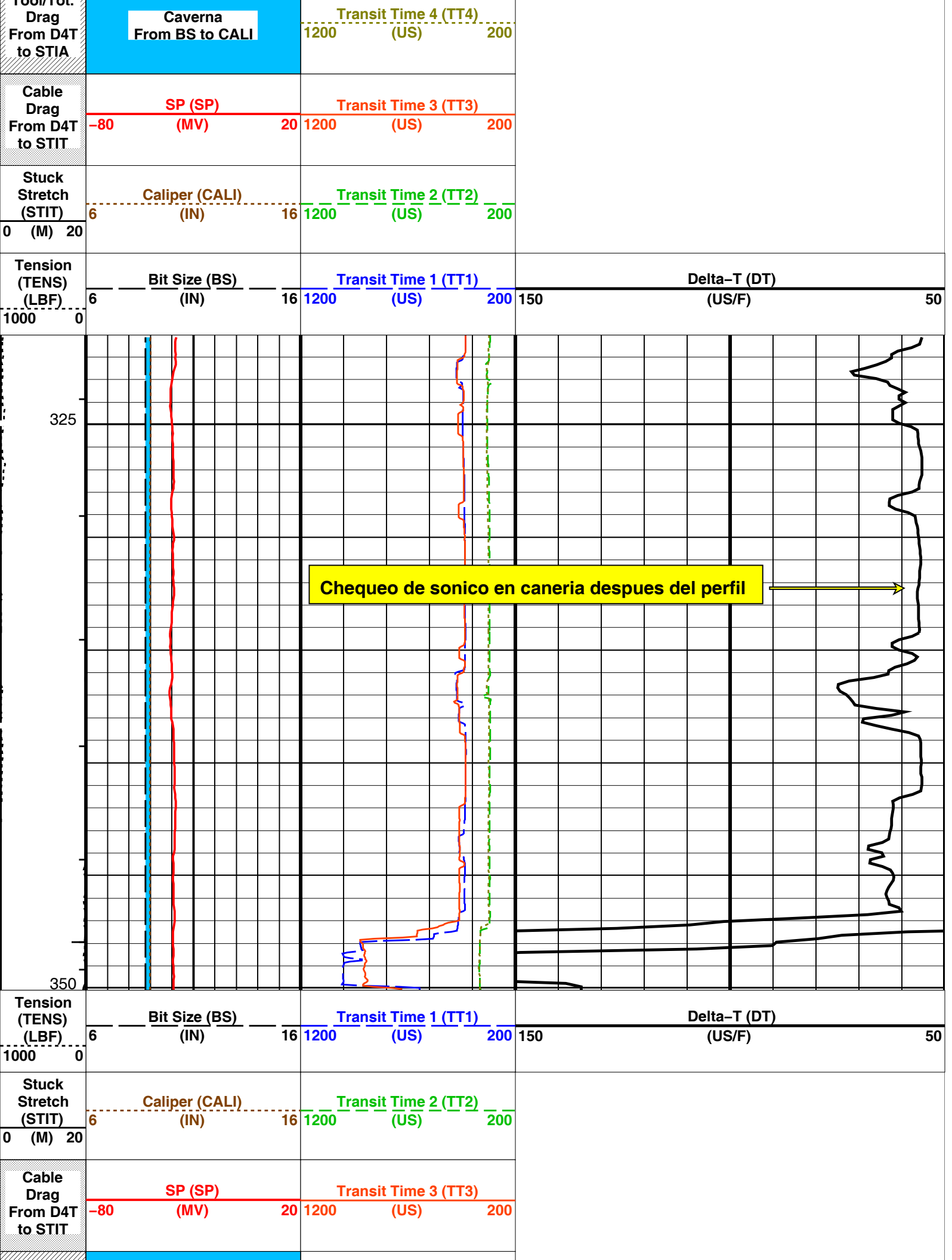
### PIP SUMMARY

→ Integrated Transit Time Minor Pip Every 1 MS  
 → Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

Revoke  
 From CALI to BS

Tool/Tot



Tool/Tot. Drag From D4T to STIA	Caverna From BS to CALI	Transit Time 4 (TT4)	
		1200	(US) 200

Revoque From CALI to BS
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**PIP SUMMARY**

- Integrated Transit Time Minor Pip Every 1 MS
- Integrated Transit Time Major Pip Every 10 MS
- Time Mark Every 60 S

**Parameters**

DLIS Name	Description	Value
<b>AIT-H: Array Induction Tool - H</b>		
SPDR	SP Drift	0 MV/M
SPNV	SP Next Value	-4 MV
<b>DSLTL-TCC: Digitizing</b>		
	Sonic Logging Tool	
	DSLTL Firing Mode	BHC
	Telemetry Mode	DSLCL_TCC
AMSG	Auxiliary Minimum Sliding Gate	140 US
CBAF	CBL Adjustment Factor	1
CBCF	CBL Correction Factor	4
CBLG	CBL Gate Width	45 US
DDEL	Digitizing Delay	200 US
DIVL	DSLTL Depth Sampling Interval	20
DRCS	DSLTL DLIS Recording Size	120
DSIN	Digitizing Sample Interval	10
DTFS	DSLCL Telemetry Frame Size	280
DWCO	Digitizing Word Count	120
GAI	Manual Gain	40
ITTS	Integrated Transit Time Source	DT
MAHTR	Manual High Threshold Reference	140
MGAI	Maximum Gain	60
MNHTR	Minimum High Threshold Reference	120
NMSG	Near Minimum Sliding Gate	260 US
NMXG	Near Maximum Sliding Gate	750 US
RATE	Firing Rate	R15
SFAF	Sonic Formation Attenuation Factor	0 DB/M
SGCL	Sliding Gate Closing Delta-T	250 US/F
SGDT	Sliding Gate Delta-T	65 US/F
SGW	Sliding Gate Width	80 US
SLEV	Signal Level for AGC	5000
WAGC	Waveform AGC Allow/Disallow	OFF
WMOD	Waveform Firing Mode	FULL
<b>STI: Stuck Tool Indicator</b>		
LBFR	Trigger for MAXIS First Reading Label	STI
STKT	STI Stuck Threshold	0.762 M
TDD	Total Depth - Driller	2107.00 M
TDL	Total Depth - Logger	2110.20 M
<b>System and Miscellaneous</b>		
BS	Bit Size	8.750 IN
DO	Depth Offset for Playback	0.0 M
PP	Playback Processing	OFF

Format: SONIC    Vertical Scale: 1:200    Graphics File Created: 27-Mar-2005 12:32

**OP System Version: 12C0-301**  
MCM

AIT-H	12C0-301	DSLTL-TCC	12C0-301
LDT-D	12C0-301	CNT-H	12C0-301
SGT-L	12C0-301	TCC-BF	12C0-301

**Input DLIS Files**

DEFAULT	AIT_mainlog_014LUP	FN:20	PRODUCER	27-Mar-2005 08:57	2115.9 M	314.6 M
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**Output DLIS Files**

DEFAULT	AIT_SONICCHECK_025PUP	FN:41	PRODUCER	27-Mar-2005 12:32
B_UP	AIT_SONICCHECK_025PUP	FN:42	PRODUCER	28-Mar-2005 12:45

## MAXIS Field Log

## Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Array Induction Tool – H Wellsite Calibration – Electronics Calibration Check – Thru Cal Mag. & Phase							
Master: 23-Mar-2005 10:45 Before: 27-Mar-2005 7:10							
Thru Cal Magnitude – 0	0	0.6250	0.6302	N/A	N/A	N/A	V
Thru Cal Magnitude – 1	0	1.281	1.292	N/A	N/A	N/A	V
Thru Cal Magnitude – 2	0	0.6353	0.6406	N/A	N/A	N/A	V
Thru Cal Magnitude – 3	0	0.7184	0.7245	N/A	N/A	N/A	V
Thru Cal Magnitude – 4	0	1.344	1.355	N/A	N/A	N/A	V
Thru Cal Magnitude – 5	0	1.941	1.958	N/A	N/A	N/A	V
Thru Cal Magnitude – 6	0	1.938	1.955	N/A	N/A	N/A	V
Thru Cal Magnitude – 7	0	1.373	1.385	N/A	N/A	N/A	V
Phase – 0	0	62.90	63.54	N/A	N/A	N/A	DEG
Phase – 1	0	61.90	62.54	N/A	N/A	N/A	DEG
Phase – 2	0	57.73	58.38	N/A	N/A	N/A	DEG
Phase – 3	0	56.86	57.50	N/A	N/A	N/A	DEG
Phase – 4	0	49.95	50.61	N/A	N/A	N/A	DEG
Phase – 5	0	47.90	48.56	N/A	N/A	N/A	DEG
Phase – 6	0	47.92	48.58	N/A	N/A	N/A	DEG
Phase – 7	0	43.19	43.88	N/A	N/A	N/A	DEG
Array Induction Tool – H Wellsite Calibration – Electronics Calibration Check – Auxilliary							
Master: 23-Mar-2005 10:45 Before: 27-Mar-2005 7:10							
Array Induction SPA Plus	990.5	990.6	990.8	N/A	N/A	N/A	MV
Array Induction SPA Zero	0	-0.2154	-0.1942	N/A	N/A	N/A	MV
Array Induction Temperature PI	0.9150	0.9173	0.9175	N/A	N/A	N/A	V
Array Induction Temperature Ze	0	-0.0002081	-0.0001924	N/A	N/A	N/A	V
Array Induction Tool – H Wellsite Calibration – Test Loop Gain Correction							
Master: 23-Mar-2005 10:45							
Test Loop Gain Magnitude – 0	0	1.012	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 1	0	1.014	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 2	0	1.013	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 3	0	1.013	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 4	0	0.9968	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 5	0	1.010	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 6	0	1.019	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 7	0	1.028	N/A	N/A	N/A	N/A	V
Phase – 0	0	0.4739	N/A	N/A	N/A	N/A	DEG
Phase – 1	0	0.4739	N/A	N/A	N/A	N/A	DEG
Phase – 2	0	-0.05033	N/A	N/A	N/A	N/A	DEG
Phase – 3	0	-0.03367	N/A	N/A	N/A	N/A	DEG
Phase – 4	0	-0.06864	N/A	N/A	N/A	N/A	DEG
Phase – 5	0	-0.2328	N/A	N/A	N/A	N/A	DEG
Phase – 6	0	0.1055	N/A	N/A	N/A	N/A	DEG
Phase – 7	0	-0.3723	N/A	N/A	N/A	N/A	DEG

## Array Induction Tool – H Wellsite Calibration – Sonde Error Correction

Master: 23-Mar-2005 10:45

R Sonde Error Correction – 0	0	-121.5	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 1	0	160.7	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 2	0	109.4	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 3	0	53.58	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 4	0	26.27	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 5	0	11.03	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 6	0	8.905	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 7	0	-0.6484	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 0	0	67.82	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 1	0	-178.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 2	0	-100.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 3	0	109.2	N/A	N/A	N/A	N/A	MM/M



X Sonde Error Correction - 4	0	2.318	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 5	0	9.466	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 6	0	0.7747	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 7	0	1.103	N/A	N/A	N/A	N/A	MM/M

Array Induction Tool - H Wellsite Calibration - Mud Gain Correction

Master: 23-Mar-2005 10:45

Coarse - Mag, Real, Imag - 0	0	0.9329	N/A	N/A	N/A	N/A	
Coarse - Mag, Real, Imag - 1	0	0.9332	N/A	N/A	N/A	N/A	
Coarse - Mag, Real, Imag - 2	0	0.9332	N/A	N/A	N/A	N/A	
Fine - Mag, Real, Imag - 0	0	0.9356	N/A	N/A	N/A	N/A	
Fine - Mag, Real, Imag - 1	0	0.9358	N/A	N/A	N/A	N/A	
Fine - Mag, Real, Imag - 2	0	0.9358	N/A	N/A	N/A	N/A	

Litho Density - D Wellsite Calibration - Background Measurement

Master: 5-Mar-2005 10:44 Before: 27-Mar-2005 7:10

LL Background	20.00	15.23	15.11	N/A	N/A	1.000	CPS
LU Background	76.00	58.78	58.14	N/A	N/A	1.000	CPS
LS Background	57.00	44.62	44.18	N/A	N/A	1.000	CPS
LITH Background	5.500	4.332	4.385	N/A	N/A	0.3000	CPS
SS1 Background	16.00	13.09	13.10	N/A	N/A	0.5000	CPS
SS2 Background	11.00	8.956	8.946	N/A	N/A	0.5000	CPS

Litho Density - D Wellsite Calibration - Tool Quality Control Information HV

Master: 5-Mar-2005 10:44 Before: 27-Mar-2005 7:10

LSHV Background	1500	1662	1661	N/A	N/A	N/A	V
SSHV Background	1500	1361	1368	N/A	N/A	N/A	V

Litho Density - D Wellsite Calibration - Detectors Resolution From BKG Measurements

Master: 5-Mar-2005 10:45 Before: 27-Mar-2005 7:12

LS Resolution Background	8.000	8.790	8.583	N/A	N/A	N/A	
SS Resolution Background	8.000	9.475	10.01	N/A	N/A	N/A	

Litho Density - D Wellsite Calibration - Caliper Calibration

Before: 27-Mar-2005 7:15

Caliper Small Ring	8.000	N/A	8.017	N/A	N/A	N/A	IN
Caliper Large Ring	12.00	N/A	12.38	N/A	N/A	N/A	IN

Litho Density - D Master Calibration - Aluminum Measurement

Master: 5-Mar-2005 11:08

LL Aluminum	90.00	96.27	--	--	--	--	CPS
LU Aluminum	135.0	151.4	--	--	--	--	CPS
LS Aluminum	155.0	172.0	--	--	--	--	CPS
LITH Aluminum	50.00	65.22	--	--	--	--	CPS
SS1 Aluminum	175.0	213.6	--	--	--	--	CPS
SS2 Aluminum	260.0	280.9	--	--	--	--	CPS

Litho Density - D Master Calibration - Litholog Measurement

Master: 5-Mar-2005 11:01

LL Iron	80.00	86.37	--	--	--	--	CPS
LU Iron	120.0	135.7	--	--	--	--	CPS
LS Iron	135.0	154.2	--	--	--	--	CPS
LITH Iron	30.00	42.17	--	--	--	--	CPS
SS1 Iron	155.0	192.2	--	--	--	--	CPS
SS2 Iron	245.0	256.4	--	--	--	--	CPS

Litho Density - D Master Calibration - Spectrum Quality Ratios

Master: 5-Mar-2005 11:09

QRLS Calculated	0.6500	0.6358	--	--	--	--	
QRSS Calculated	0.7200	0.7604	--	--	--	--	
QRLI Calculated	0.3900	0.3792	--	--	--	--	
QLIR Calculated	1.390	1.387	--	--	--	--	
QR Calculated	1.000	1.003	--	--	--	--	

Compensated Neutron - H Wellsite Calibration - Zero Measurement

Master: 23-Mar-2005 14:30 Before: 27-Mar-2005 7:16

CNTC Background	1.000	0	0	N/A	N/A	N/A	CPS
CFTC Background	0	0	1.025	N/A	N/A	N/A	CPS

Compensated Neutron - H Wellsite Calibration - Jig Measurement

Master: 23-Mar-2005 14:49 Before: 27-Mar-2005 7:20

CNTC Jig	2928	2928	2923	N/A	N/A	N/A	CPS
CFTC Jig	1325	1325	1336	N/A	N/A	N/A	CPS
CNTC/CFTC (Jig)	2.210	2.210	2.187	N/A	N/A	N/A	

Compensated Neutron - H Master Calibration - Tank Measurement

Master: 23-Mar-2005 14:39

Thermal Near Corr. (Tank)	6031	5759	--	--	--	--	CPS
Thermal Far Corr. (Tank)	2793	2388	--	--	--	--	CPS
CNTC/CFTC (Tank)	2.159	2.412	--	--	--	--	

Scintillation Gamma Ray - D Wellsite Calibration - Detector Calibration

Before: 27-Mar-2005 7:14								
Gamma Ray Background	30.00	N/A	54.99	N/A	N/A	N/A	N/A	GAPI
Gamma Ray (Jig - Bkg)	165.4	N/A	165.4	N/A	N/A	N/A	15.04	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	N/A	15.00	GAPI

The CNT Master Calibration Was Done With The Following Parameters :

NCT-B Water Temperature 16.0 DEGC.  
 Thermal Housing Size 3.369 IN.

**Array Induction Tool - H / Equipment Identification**

Primary Equipment:  
 Rm/SP Bottom Nose  
 Array Induction Sonde

AHRM - A  
 AHIS - BA

379

Auxiliary Equipment:

Array Induction Tool - H Wellsite Calibration								
Electronics Calibration Check - Thru Cal Mag. & Phase								
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Phase DEG	Nominal	
0	Master	0.6250		0.6050	62.90		71.00	
	Before	0.6302			63.54			
1	Master	1.281		1.270	61.90		70.00	
	Before	1.292			62.54			
2	Master	0.6353		0.6230	57.73		66.00	
	Before	0.6406			58.38			
3	Master	0.7184		0.7040	56.86		65.00	
	Before	0.7245			57.50			
4	Master	1.344		1.337	49.95		59.00	
	Before	1.355			50.61			
5	Master	1.941		1.955	47.90		57.00	
	Before	1.958			48.56			
6	Master	1.938		1.955	47.92		57.00	
	Before	1.955			48.58			
7	Master	1.373		1.415	43.19		53.00	
	Before	1.385			43.88			
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)		(Nominal)	Nom + 60.00 (Maximum)
Master: 23-Mar-2005 10:45				Before: 27-Mar-2005 7:10				

Array Induction Tool - H Wellsite Calibration						
Electronics Calibration Check - Auxilliary						
Phase	Array Induction SPA Plus MV	Value	Phase	Array Induction SPA Zero MV	Value	
Master		990.6	Master		-0.2154	
Before		990.8	Before		-0.1942	
		941.0 (Minimum)	990.5 (Nominal)	1040 (Maximum)		
				-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
Phase	Array Induction Temperature Plus V	Value	Phase	Array Induction Temperature Zero V	Value	
Master		0.9173	Master		-0.0002081	
Before		0.9175	Before		-0.0001924	
		0.8700 (Minimum)	0.9150 (Nominal)	0.9600 (Maximum)		
				-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Master: 23-Mar-2005 10:45			Before: 27-Mar-2005 7:10			

Array Induction Tool - H Wellsite Calibration

Test Loop Gain Correction

Idx	Value	Test Loop Gain Magnitude V			Value	Phase DEG		
0	1.012				0.4739			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
1	1.014				0.4739			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
2	1.013				-0.05033			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
3	1.013				-0.03367			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
4	0.9968				-0.06864			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
5	1.010				-0.2328			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
6	1.019				0.1055			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
7	1.028				-0.3723			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)

Master: 23-Mar-2005 10:45

Array Induction Tool - H Wellsite Calibration

Sonde Error Correction

Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
0	-121.5				67.82			
		-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	160.7				-178.5			
		114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal)	625.0 (Maximum)
2	109.4				-100.2			
		66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)
3	53.58				109.2			
		39.00 (Minimum)	64.00 (Nominal)	89.00 (Maximum)		-250.0 (Minimum)	0 (Nominal)	250.0 (Maximum)
4	26.27				2.318			
		15.00 (Minimum)	25.00 (Nominal)	35.00 (Maximum)		-63.00 (Minimum)	0 (Nominal)	63.00 (Maximum)
5	11.03				9.466			
		4.000 (Minimum)	14.00 (Nominal)	24.00 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
6	8.905				0.7747			
		5.000 (Minimum)	10.00 (Nominal)	15.00 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
7	-0.6484				1.103			
		-5.000 (Minimum)	0 (Nominal)	5.000 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)

Master: 23-Mar-2005 10:45

Array Induction Tool - H Wellsite Calibration

Mud Gain Correction

Idx	Value	Coarse - Mag, Real, Imag			Value	Fine - Mag, Real, Imag		
0	0.9329				0.9356			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
1	0.9332				0.9358			

		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
2	0.9332				0.9358			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)

Master: 23-Mar-2005 10:45

Array Induction Tool – H Master Calibration								
Electronics Calibration Check – Thru Cal Mag. & Phase								
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Phase DEG	Nominal	
0	Master	0.6250		0.6050	62.90		71.00	
1	Master	1.281		1.270	61.90		70.00	
2	Master	0.6353		0.6230	57.73		66.00	
3	Master	0.7184		0.7040	56.86		65.00	
4	Master	1.344		1.337	49.95		59.00	
5	Master	1.941		1.955	47.90		57.00	
6	Master	1.938		1.955	47.92		57.00	
7	Master	1.373		1.415	43.19		53.00	
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)		Nom -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)

Master: 23-Mar-2005 10:45

Array Induction Tool – H Master Calibration						
Electronics Calibration Check – Auxilliary						
Phase	Array Induction SPA Plus MV	Value	Phase	Array Induction SPA Zero MV	Value	
Master		990.6	Master		-0.2154	
	941.0 (Minimum)	990.5 (Nominal)	1040 (Maximum)	-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
Phase	Array Induction Temperature Plus V	Value	Phase	Array Induction Temperature Zero V	Value	
Master		0.9173	Master		-0.0002081	
	0.8700 (Minimum)	0.9150 (Nominal)	0.9600 (Maximum)	-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)

Master: 23-Mar-2005 10:45

Array Induction Tool – H Master Calibration							
Test Loop Gain Correction							
Idx	Value	Test Loop Gain Magnitude V	Value	Phase DEG			
0	1.012		0.4739				
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
1	1.014		0.4739				
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
2	1.013		-0.05033				
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
3	1.013		-0.03367				
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
4	0.9968		-0.06864				
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
5	1.010		-0.2328				
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
6	1.019		0.1055				
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
7	1.028		-0.3723				
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)

Master: 23-Mar-2005 10:45

Array Induction Tool - H Master Calibration								
Sonde Error Correction								
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
0	-121.5				67.82			
		-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	160.7				-178.5			
		114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal)	625.0 (Maximum)
2	109.4				-100.2			
		66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)
3	53.58				109.2			
		39.00 (Minimum)	64.00 (Nominal)	89.00 (Maximum)		-250.0 (Minimum)	0 (Nominal)	250.0 (Maximum)
4	26.27				2.318			
		15.00 (Minimum)	25.00 (Nominal)	35.00 (Maximum)		-63.00 (Minimum)	0 (Nominal)	63.00 (Maximum)
5	11.03				9.466			
		4.000 (Minimum)	14.00 (Nominal)	24.00 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
6	8.905				0.7747			
		5.000 (Minimum)	10.00 (Nominal)	15.00 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
7	-0.6484				1.103			
		-5.000 (Minimum)	0 (Nominal)	5.000 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)

Master: 23-Mar-2005 10:45

Array Induction Tool - H Master Calibration								
Mud Gain Correction								
Idx	Value	Coarse - Mag, Real, Imag			Value	Fine - Mag, Real, Imag		
0	0.9329				0.9356			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
1	0.9332				0.9358			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
2	0.9332				0.9358			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)

Master: 23-Mar-2005 10:45

### Litho Density - D / Equipment Identification

#### Primary Equipment:

Nuclear Services Cartridge  
 Powered Gamma Detector  
 Gamma Source Radioactive

NSC - E            2878  
 PGD - G            815  
 GSR - J            5064

#### Auxiliary Equipment:

Density Resistivity Sonde  
 Electronics Cartridge Housing  
 Powered Detector Housing

DRS - C            6934  
 ECH - MKA        2868  
 PDH - L            833

Litho Density - D Wellsite Calibration									
Background Measurement									
Phase	LL Background CPS			Value	Phase	LU Background CPS			Value
Master				15.23	Master				58.78
Before				15.11	Before				58.14
	15.00 (Minimum)	20.00 (Nominal)	25.00 (Maximum)			58.00 (Minimum)	76.00 (Nominal)	94.00 (Maximum)	
Phase	LITH Background CPS			Value	Phase	SS1 Background CPS			Value
Master				4.332	Master				13.09
Phase	LS Background CPS			Value	Phase	SS2 Background CPS			Value
Master				44.62	Master				8.956
Before				44.18					
	43.00 (Minimum)	57.00 (Nominal)	72.00 (Maximum)						

Before		4.385	Before		13.10	Before		8.946
	4.000 (Minimum)      5.500 (Nominal)	7.000 (Maximum)		12.00 (Minimum)      16.00 (Nominal)	19.50 (Maximum)		8.000 (Minimum)      11.00 (Nominal)	13.50 (Maximum)
Master: 5-Mar-2005 10:44			Before: 27-Mar-2005 7:10					

Litho Density - D Wellsite Calibration							
Detectors Resolution From BKG Measurements							
Phase	LS Resolution Background		Value	Phase	SS Resolution Background		Value
Master			8.790	Master			9.475
Before			8.583	Before			10.01
	5.000 (Minimum)	8.000 (Nominal)	11.50 (Maximum)		5.000 (Minimum)	8.000 (Nominal)	11.50 (Maximum)
Master: 5-Mar-2005 10:45			Before: 27-Mar-2005 7:12				

Litho Density - D Master Calibration														
Aluminum Measurement														
Phase	LL Aluminum CPS			Value	Phase	LU Aluminum CPS			Value					
Master				96.27	Master				151.4					
	70.00 (Minimum)	90.00 (Nominal)	125.0 (Maximum)		100.0 (Minimum)	135.0 (Nominal)	194.0 (Maximum)		120.0 (Minimum)	155.0 (Nominal)	217.0 (Maximum)			
Phase	LITH Aluminum CPS			Value	Phase	SS1 Aluminum CPS			Value	Phase	SS2 Aluminum CPS			Value
Master				65.22	Master				213.6	Master				280.9
	35.00 (Minimum)	50.00 (Nominal)	74.00 (Maximum)		125.0 (Minimum)	175.0 (Nominal)	256.0 (Maximum)		210.0 (Minimum)	260.0 (Nominal)	353.0 (Maximum)			
Master: 5-Mar-2005 11:08														

Litho Density - D Master Calibration														
Litholog Measurement														
Phase	LL Iron CPS			Value	Phase	LU Iron CPS			Value					
Master				86.37	Master				135.7					
	60.00 (Minimum)	80.00 (Nominal)	114.0 (Maximum)		85.00 (Minimum)	120.0 (Nominal)	177.0 (Maximum)		100.0 (Minimum)	135.0 (Nominal)	193.0 (Maximum)			
Phase	LITH Iron CPS			Value	Phase	SS1 Iron CPS			Value	Phase	SS2 Iron CPS			Value
Master				42.17	Master				192.2	Master				256.4
	15.00 (Minimum)	30.00 (Nominal)	51.00 (Maximum)		105.0 (Minimum)	155.0 (Nominal)	234.0 (Maximum)		190.0 (Minimum)	245.0 (Nominal)	325.0 (Maximum)			
Master: 5-Mar-2005 11:01														

Litho Density - D Master Calibration											
Spectrum Quality Ratios											
Phase	QRLS Calculated			Value	Phase	QRSS Calculated			Value		
Master				0.6358	Master				0.7604		
	0.6000 (Minimum)	0.6500 (Nominal)	0.7000 (Maximum)		0.6200 (Minimum)	0.7200 (Nominal)	0.8200 (Maximum)		0.2900 (Minimum)	0.3900 (Nominal)	0.4500 (Maximum)
Phase	QLIR Calculated			Value	Phase	QR Calculated			Value		
Master				1.387	Master				1.003		
	1.290 (Minimum)	1.390 (Nominal)	1.450 (Maximum)		0.9800 (Minimum)	1.000 (Nominal)	1.020 (Maximum)				
Master: 5-Mar-2005 11:09											

Compensated Neutron - H / Equipment Identification		
<b>Primary Equipment:</b>		
Compensated Neutron Cartridge	CNC - HA	2683
Neutron Logging Source	NLS - KL	
Neutron Source Radioactive	NSR - F	1472
Compensated Neutron Box	CNB - AB	3522
Neutron Detector without Alpha Source	CND - NA	
Compensated Neutron Box	CNB - AB	3522
<b>Auxiliary Equipment:</b>		
Compensated Neutron Housing	CNH - A	3278
Neutron Calibration Tank	NCT - B	190

**Zero Measurement**

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		0	Master		0
Before		0	Before		1.025
	-0.010000 (Minimum)    1.000 (Nominal)    5.000 (Maximum)			-0.010000 (Minimum)    0 (Nominal)    5.000 (Maximum)	

Master: 23-Mar-2005 14:30                      Before: 27-Mar-2005 7:16

**Compensated Neutron – H Wellsite Calibration**

**Jig Measurement**

Phase	CNTC Jig CPS	Value	Phase	CFTC Jig CPS	Value	Phase	CNTC/CFTC (Jig)	Value
Master		2928	Master		1325	Master		2.210
Before		2923	Before		1336	Before		2.187
	2782 (Minimum)    2928 (Nominal)    3074 (Maximum)			1259 (Minimum)    1325 (Nominal)    1391 (Maximum)			2.170 (Minimum)    2.210 (Nominal)    2.250 (Maximum)	

Master: 23-Mar-2005 14:49                      Before: 27-Mar-2005 7:20

**Compensated Neutron – H Master Calibration**

**Tank Measurement**

Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value
Master		5759	Master		2388	Master		2.412
	5000 (Minimum)    6031 (Nominal)    7200 (Maximum)			2075 (Minimum)    2793 (Nominal)    3125 (Maximum)			2.120 (Minimum)    2.159 (Nominal)    2.540 (Maximum)	

Master: 23-Mar-2005 14:39

**Scintillation Gamma-Ray – L / Equipment Identification**

**Primary Equipment:**

Scintillation Gamma Cartridge  
Scintillation Gamma Detector

SGC – SA  
SGD – TAA

**Auxiliary Equipment:**

Scintillation Gamma Housing  
Gamma Source Radioactive

SGH – K  
GSR – U/Y

**Scintillation Gamma-Ray – L Wellsite Calibration**

**Detector Calibration**

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig – Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		54.99	Before		165.4	Before		165.0
	0 (Minimum)    30.00 (Nominal)    120.0 (Maximum)			150.4 (Minimum)    165.4 (Nominal)    180.4 (Maximum)			150.0 (Minimum)    165.0 (Nominal)    180.0 (Maximum)	

Before: 27-Mar-2005 7:14

<b>COMPANIA:</b> <b>YPF S.A.</b>  <b>POZO:</b> <b>YPF.Ch.EA-670</b> <b>CAMPO:</b> <b>EL ALBA</b> <b>PROVINCIA:</b> <b>CHUBUT</b> <b>PAIS:</b> <b>ARGENTINA</b>	PRIMERA LECTURA	2107.8 m
	PROFUNDIDAD PERFIL	2110.2 m
	PROF. PERFORADOR	2107 m
	BUJE DE VASTAGO	667.08 m
	MESA ROTATIVA	666.78 m
	NIVEL TERRENO	662.53 m

**COMBINADA**



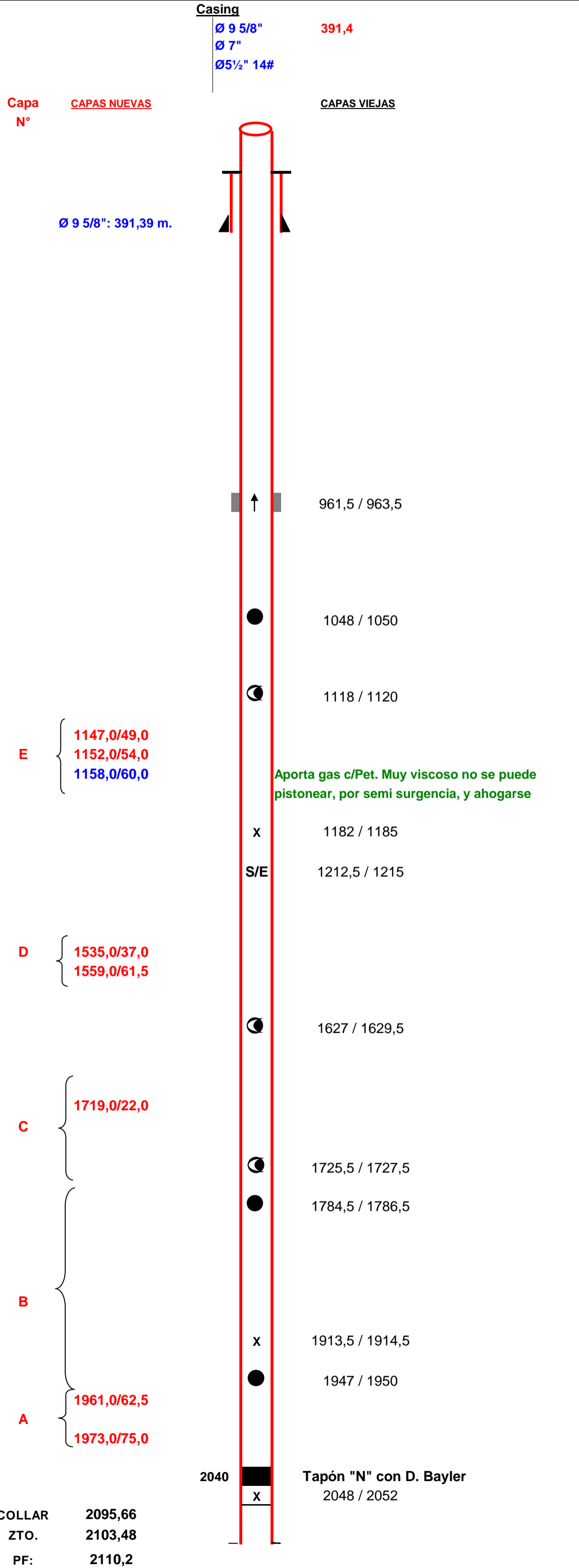


**YACIMIENTO MANANTIALES BEHR**  
Programa de reparación 1<sup>ra</sup> con Equipo RTP

**POZO EA-670**

Fecha Terminación: 11/04/2005

<b>PRODUCCIÓN INICIAL</b> Fluido: 8,5 m <sup>3</sup> /d Agua: 29,11 % Petróleo: 6,03 m <sup>3</sup> /d	<b>06/05/2005</b>	<b>FECHA ULTIMO CONTROL: 14/06/2009</b> Fluido: 7 m <sup>3</sup> /d Agua: 46 % Petróleo: 3,78 m <sup>3</sup> /d
<b>FECHA PRODUCCIÓN ACUMULADA:</b> Petróleo: 9.038 m <sup>3</sup> Agua: 6.078 m <sup>3</sup> Gas: 478.540 m <sup>3</sup>	jun-09	Estado antes de la Intervención: en Producción Motivo de la Intervención: <i>aumentar la producción</i>



- 1- Montar equipo de acuerdo procedimientos
- 2- Retirar Instalación de producción.
- 3- Calibrar hasta 2040 mbbp (tapon)
- 4- Punzar con cañón 4", 4TPP, 32gr-0-90°, la siguiente zona:
 

Prof Inducción	Espesor	Carga
1973,0/75,0	4,0	32gr.
1961,0/62,5	1,5	32gr.
1719,0/22,0	3,0	32gr.
1559,0/61,5	2,5	32gr.
1535,0/37,0	2,0	32gr.
1158,0/60,0	2,0	22gr.
1152,0/54,0	2,0	32gr.
1147,0/49,0	2,0	32gr.
- 5- Ensayar A-F individual hasta estabilizar caudal, nivel e IT
- 6- Si resultase SE probar admisión y reensayar.
- 7- Según resultado : se darán los pasos a seguir

**En caso de extraer hidrocarburo tomar muestras para análisis y enviar a Epsilon.  
En caso de ser gas medir presiones, tomar muestra y medir caudal**

Prever cementación  
 NOTA: CAPAS CON PORCENTAJES DE AGUA MAYORES A 50%: TOMAR MUESTRA PARA ANALISIS COMPLETO DE AGUA Y RESISTIVIDAD



Compania: **YPF S.A.**

Pozo: **YPF.Ch.EA-670**

Campo: **EL ALBA**

Provincia: **CHUBUT**

Pais: **ARGENTINA**

## CONTROL DE CEMENTO CBL VDL CNL CCL 1/200

Campo: EL ALBA  
Locacion: CAS  
Pozo: YPF.Ch.EA-670  
Compania: YPF S.A.

LOCACION		Elev.:	
CAS	X:4.949.430,15	B.V.	667.08 m
	Y:2.582.170,82	N.T.	662.53 m
		M.R.	666.78 m
Ref. Permanente:		NIVEL DE TERRENO	Elev.: 662.53 m
Reg. Medido Desde:		NIVEL DE TERRENO	0.0 m sobre Ref. Permanente
Perforacion Medida Desde:		NIVEL DE TERRENO	
Equipo	Desviacion Maxima del Hoyo	Longitud	Latitud
	2-Apr-2005	X:4.949.430,15	Y:2.582.170,82
	1		

Fecha de Registro	2-Apr-2005
Corrida Numero	1
Prof. Perforador	2107 m
Prof. Schlumberger	2090.5 m
Primera Lectura	2090.5 m
Ultima Lectura	750 m
Pozo de Fluido en la Caneria	AGUA
Salinidad	
Densidad	1 g/cm3
Nivel del Fluido	0 m
BROCA/CANERIA/TUBERIA	
Broca	8.500 in
Desde	0 m
Hasta	0 m
Caneria / Tuberia	391.8 m
Peso	5.500 in
Grado	15.5 lbm/ft
Desde	0 m
Hasta	2107 m
Temperaturas Maximadas	91 degC
Registro en Fondo	2-Apr-2005
Unidad Numero	8116 CAS
Registrado por	D.PEROTTI

### DATOS PVT

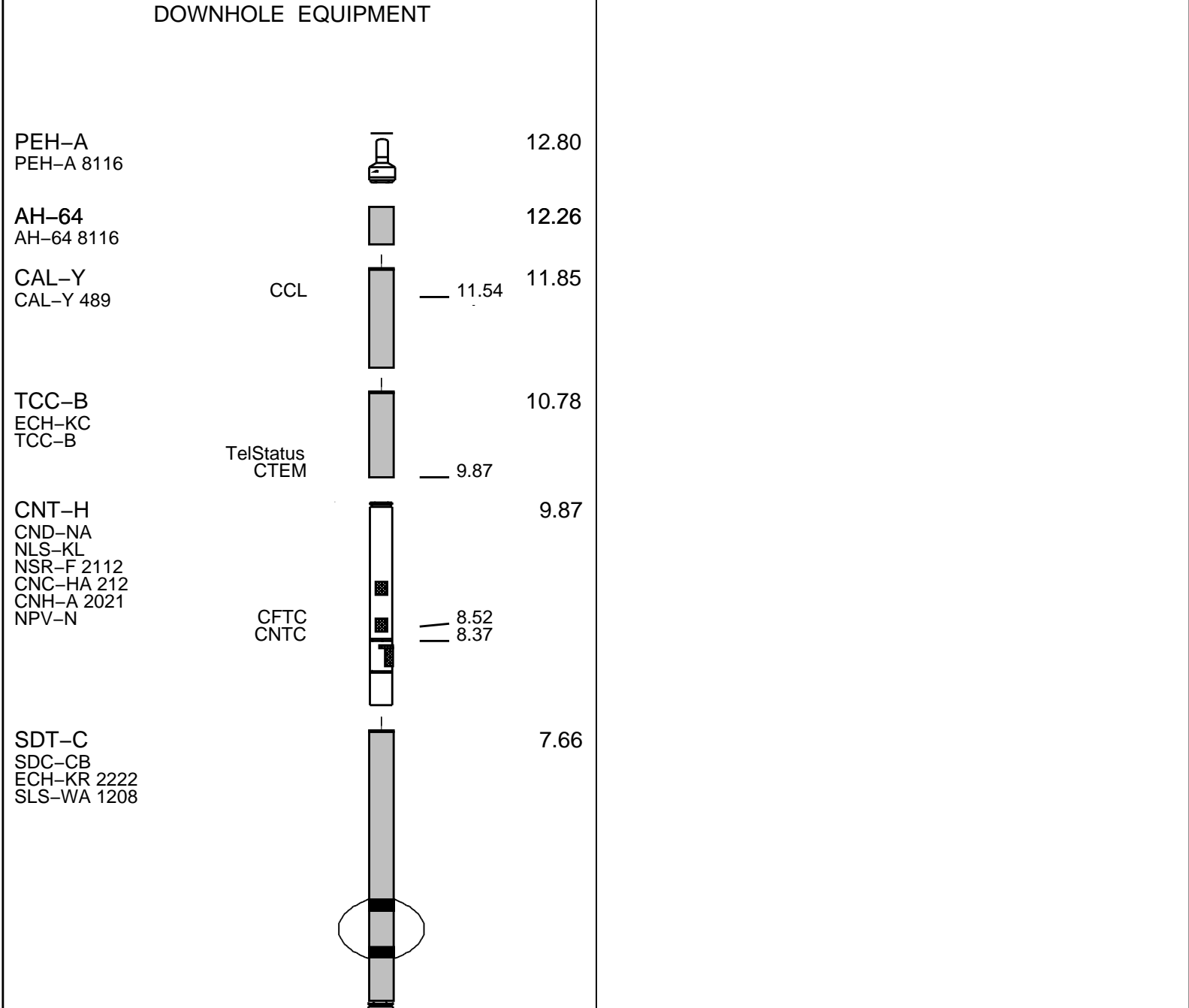
	Corrida 1	Corrida 2	Corrida 3
Densidad del Crudo			
Salinidad del Agua			
Gravedad del Gas			
Bo			
Bw			
1/Bq			
Presion del Punto de Burbuja			
Temperatura del Punto de Burbuja			
GOR en Solucion			
Desviacion Maxima			
DATOS DE CEMENTACION			
Primaria/Reparacion	Primary		
Sarta de la Caneria No.			
Tipo de Cemento Primario			
Volumen			
Densidad			
Perdida de Agua			
Aditivos			
Tipo de Cemento Cola			
Volumen			
Densidad			
Perdidad de Agua			
Aditivos			
Topo de Cemento Esperado			
Fecha de Registro			
Corrida Numero			
Prof. Perforador			
Prof. Schlumberger			
Primera Lectura			
Ultima Lectura			
Tipo de Fluido en la Caneria			
Salinidad			
Densidad			
Nivel del Fluido			
BROCA/CANERIA/TUBERIA			
Broca			
Desde			
Hasta			
Caneria / Tuberia			
Peso			
Grado			
Desde			
Hasta			
Temperaturas Maximadas			
Registro en Fondo			
Unidad Numero			
Registrado por			
Testigo			

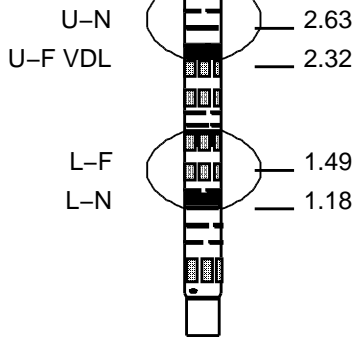



CORRIDA #1			CORRIDA #2		
ORDEN DE SERVICIO:			ORDEN DE SERVICIO:		
VERSION DEL PROGRAMA:			VERSION DEL PROGRAMA:		
NIVEL DEL FLUIDO:			NIVEL DEL FLUIDO:		
	11C0-305				
	0 m				
INTERVALO REGISTRADO	COMIENZO	FINAL	INTERVALO REGISTRADO	COMIENZO	FINAL

## DESCRIPCION DEL EQUIPO

CORRIDA #1	CORRIDA #2
SURFACE EQUIPMENT	
STM-C CNB-AB 3625 NCT-B NCS-VB	
WITM (CTS)-A	

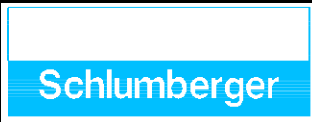




BNS-CCS Tension HV 0.00 0.14  
TOOL ZERO

MAXIMUM STRING DIAMETER 7.50 IN  
MEASUREMENTS RELATIVE TO TOOL ZERO  
ALL LENGTHS IN METERS

MAXIS EXPRESS ARGENTINA



TRAMO PRINCIPAL

Company: YPF S.A. Well: YPF.Ch.EA-670

Output DLIS Files

DEFAULT	SONIC_CNL_004LUP	FN:3	PRODUCER	02-Apr-2005 21:51	2094.3 M	732.4 M
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OP System Version: 11C0-305  
MCM

SDT-C	11C0-305	CNT-H	OP11-KP1
TCC-B	OP11-KP1	CAL-Y	11C0-305

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
BS	8.500 IN	8.500 IN	1567.9 22:42:00
BSAL	-50000.00 PPM	-50000.00 PPM	1563.8 22:42:24
CSIZ	5.500 IN	5.500 IN	1566.0 22:42:11
CWEI	15.50 LB/F	15.50 LB/F	1565.1 22:42:17
DFD	1.00 G/C3	1.00 G/C3	1564.2 22:42:22
TDD	2107.00 M	-50000.00 M	1574.1 22:41:25
TDL	2090.50 M	-50000.00 M	1571.8 22:41:38

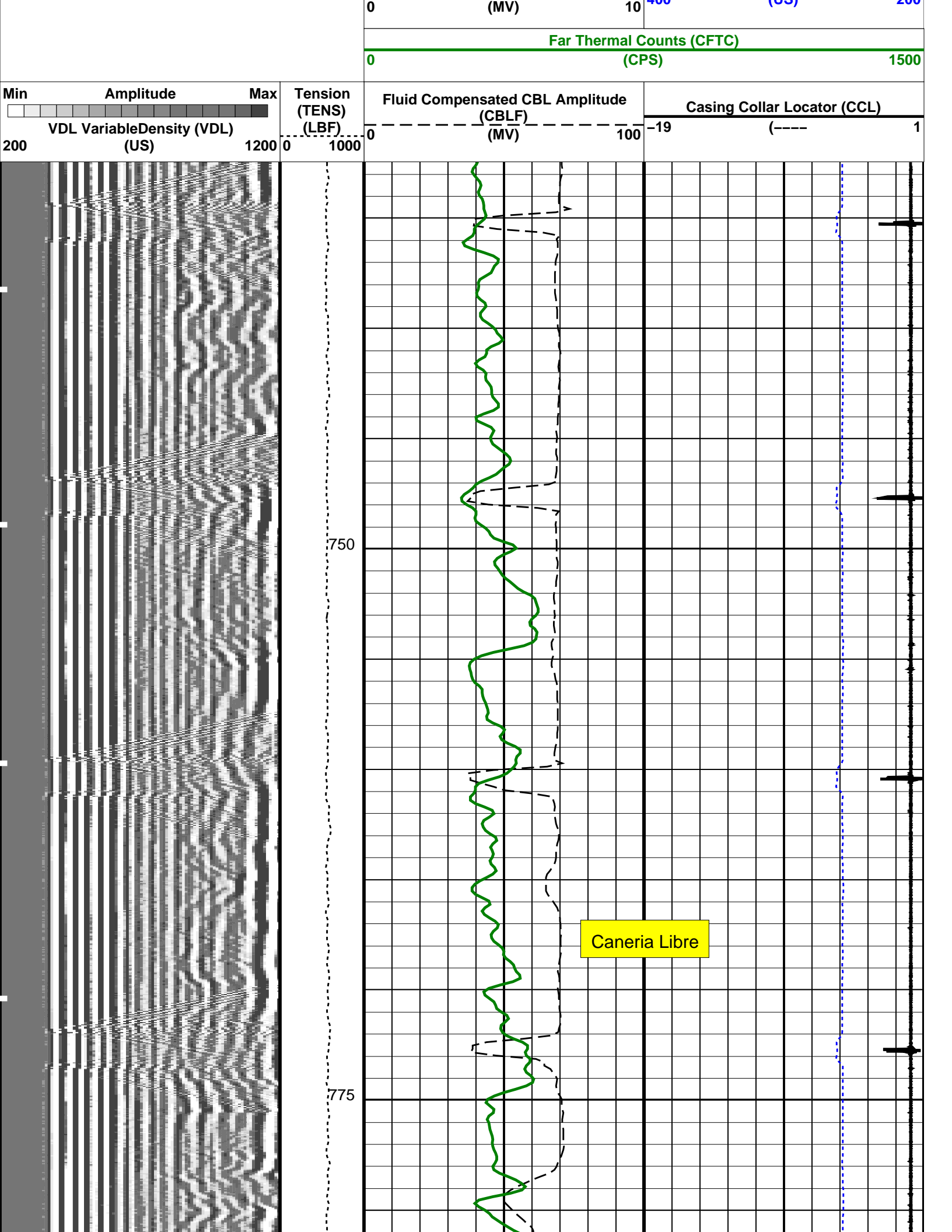
PIP SUMMARY

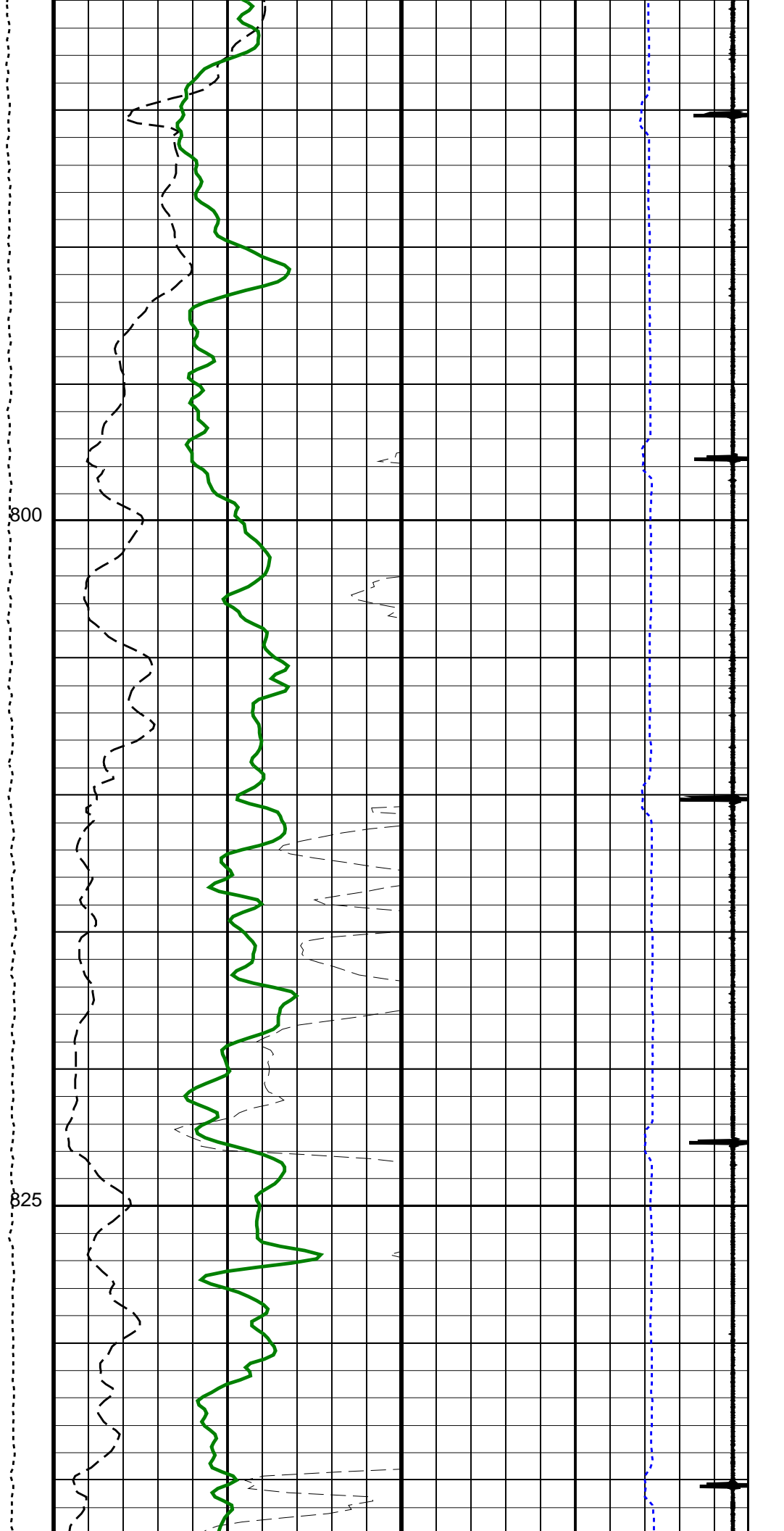
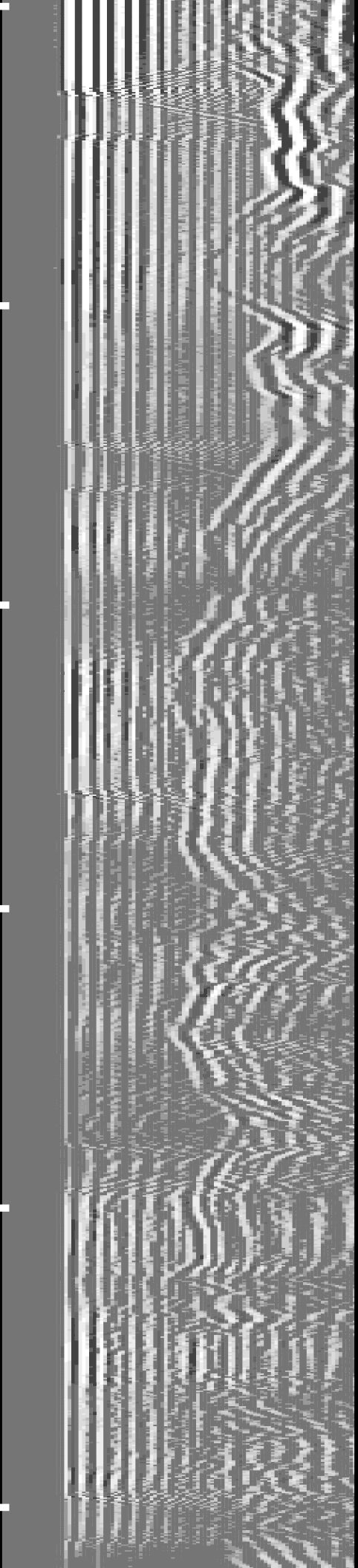
Time Mark Every 60 S

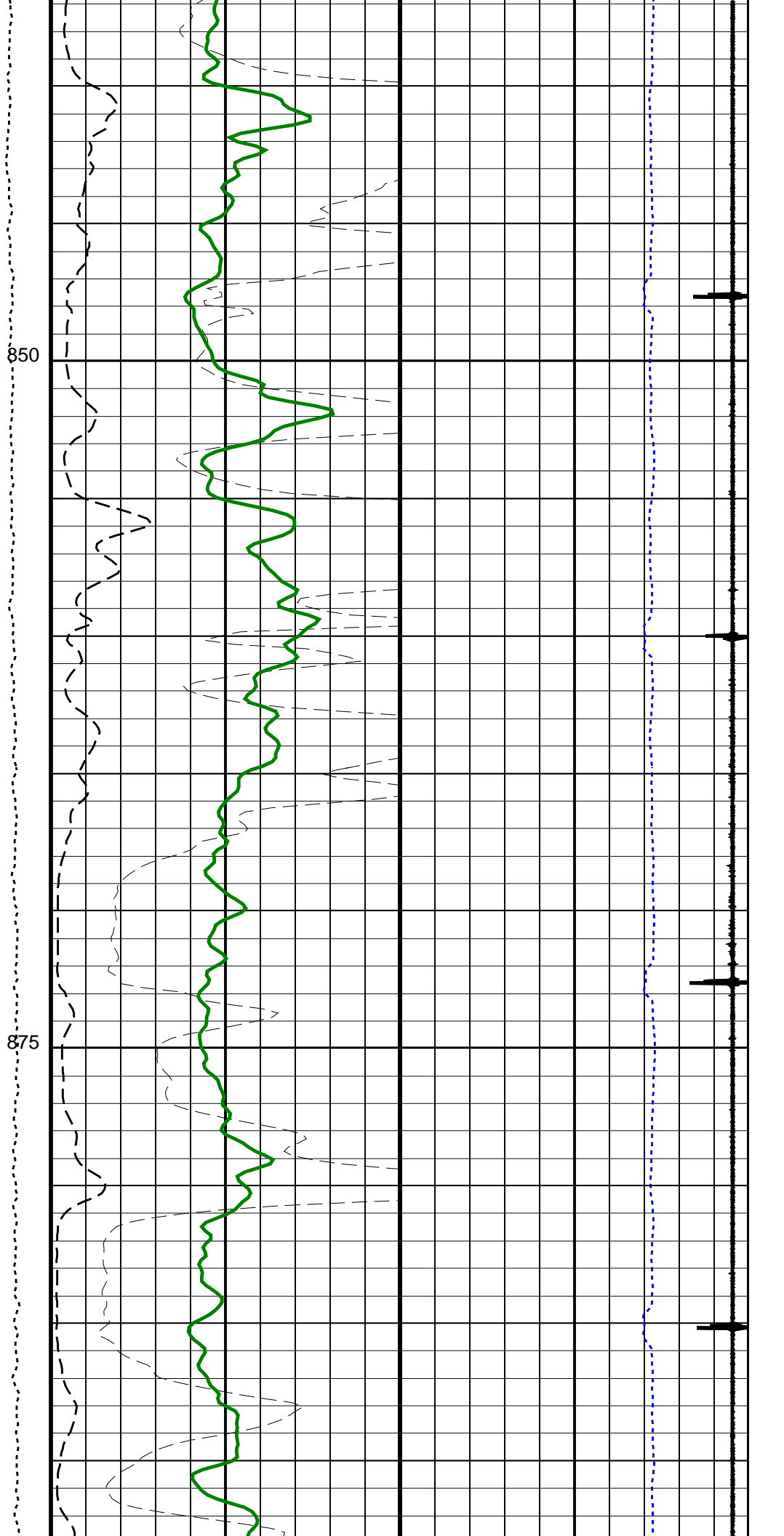
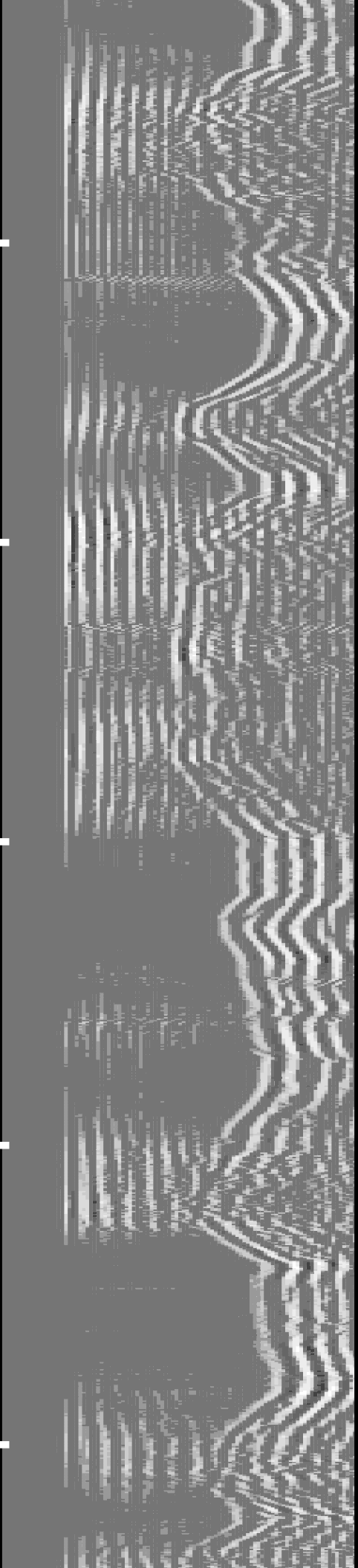
Fluid Compensated CBL Amplitude (CBLF)

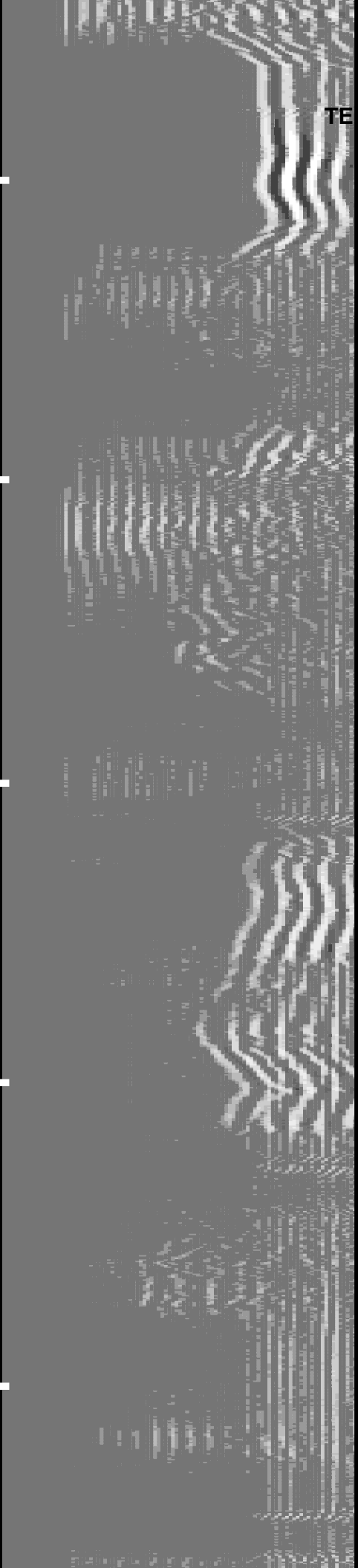
Transit Time (TT)

400 (US) 200









TENS

900

925

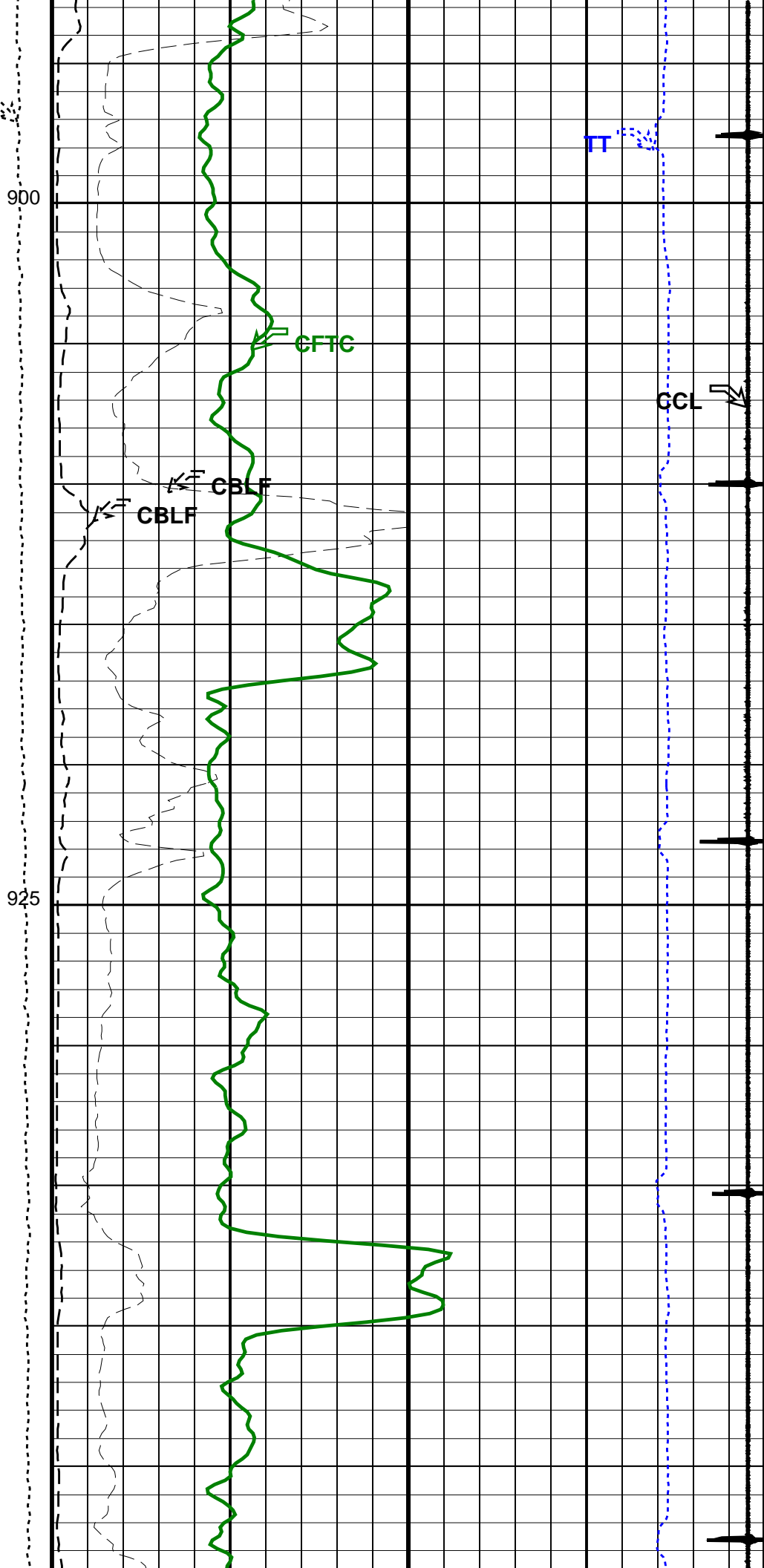
CBLF

CBLF

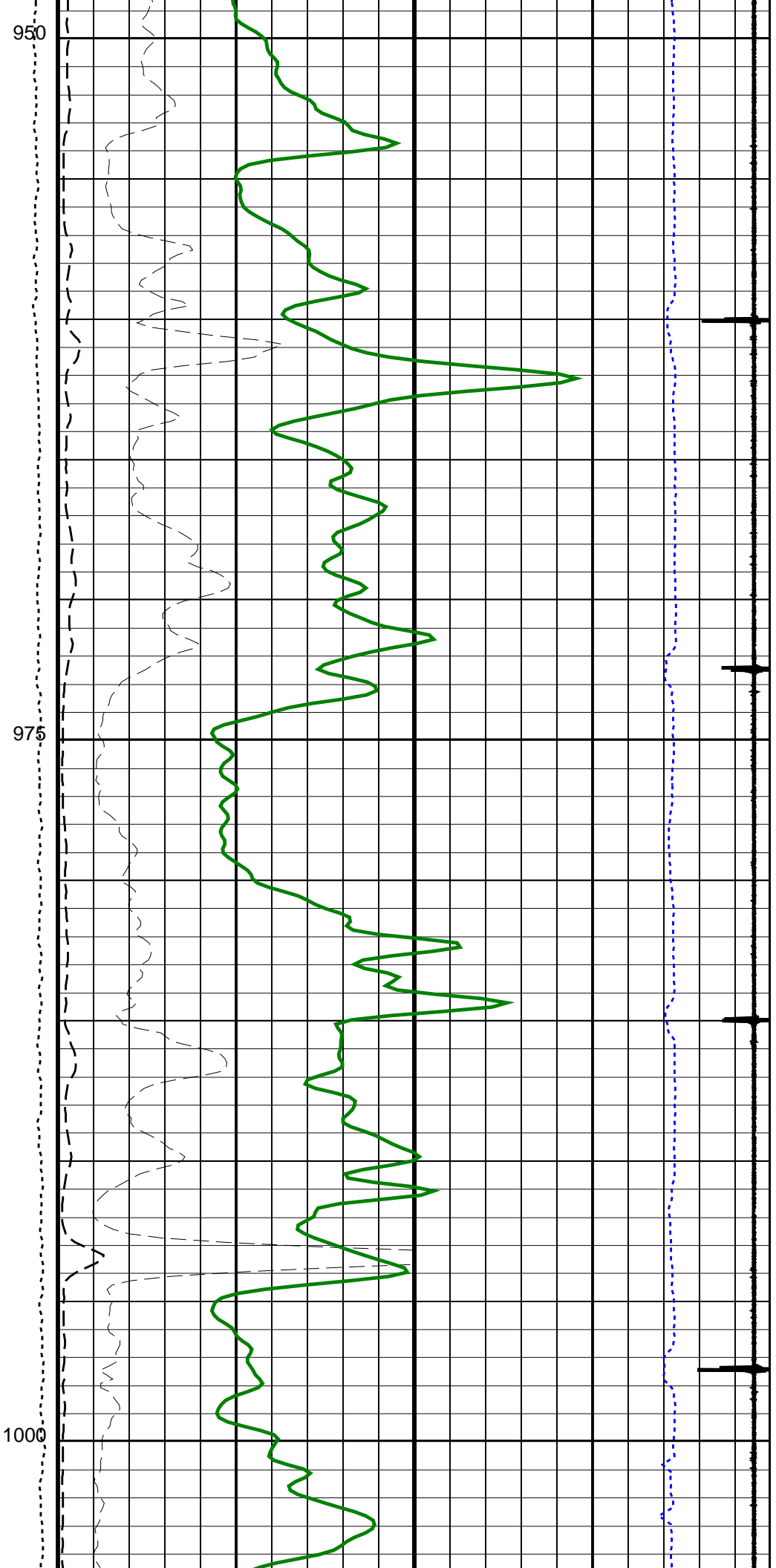
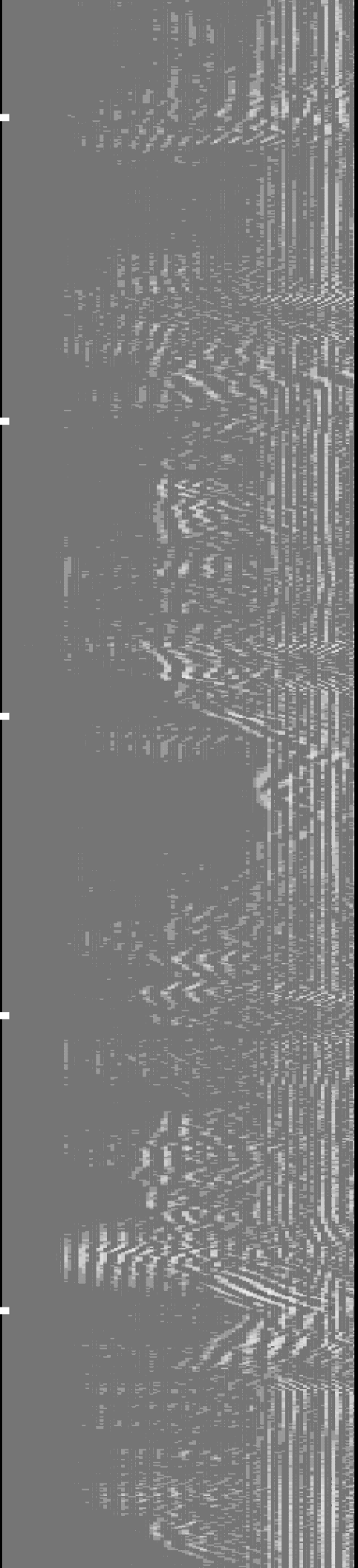
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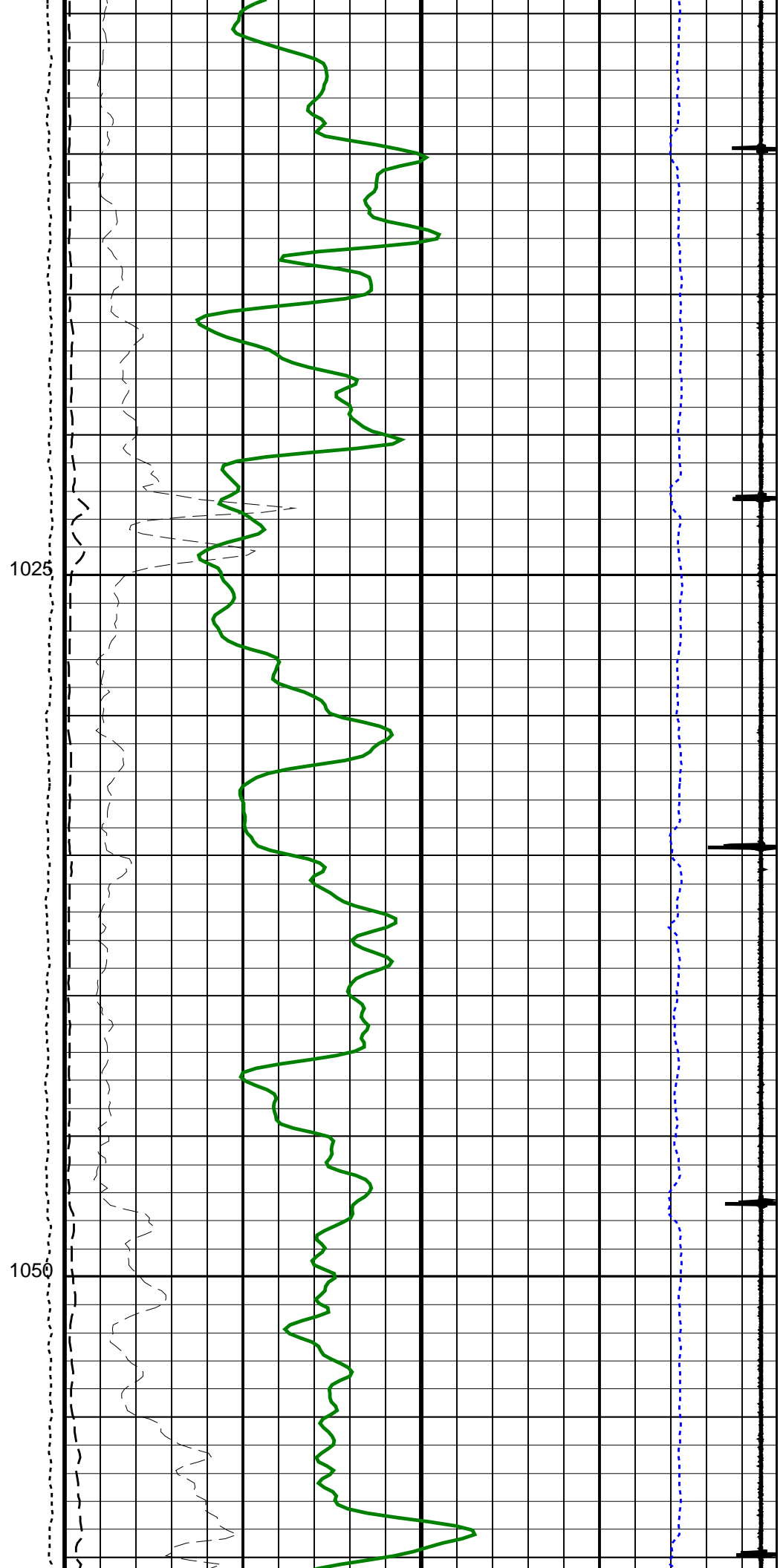
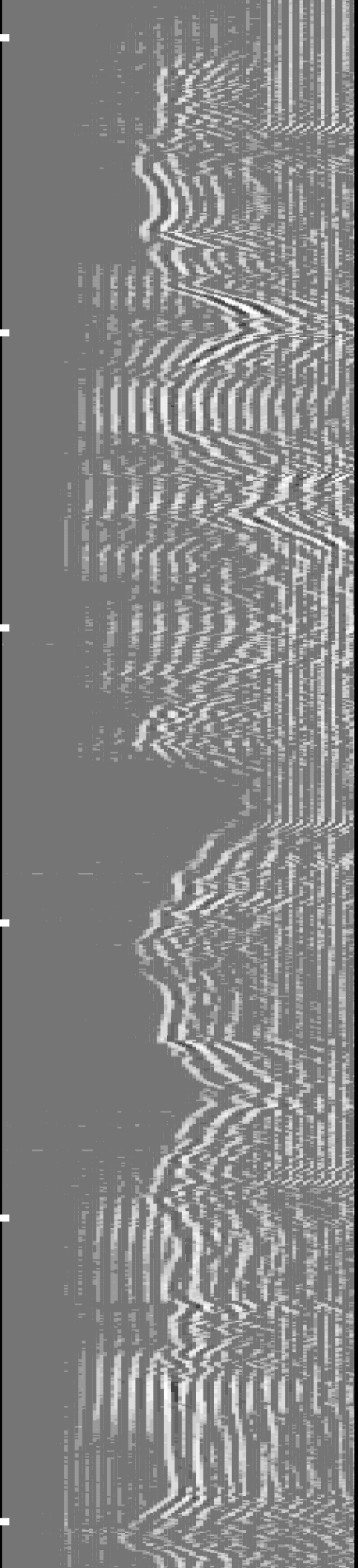
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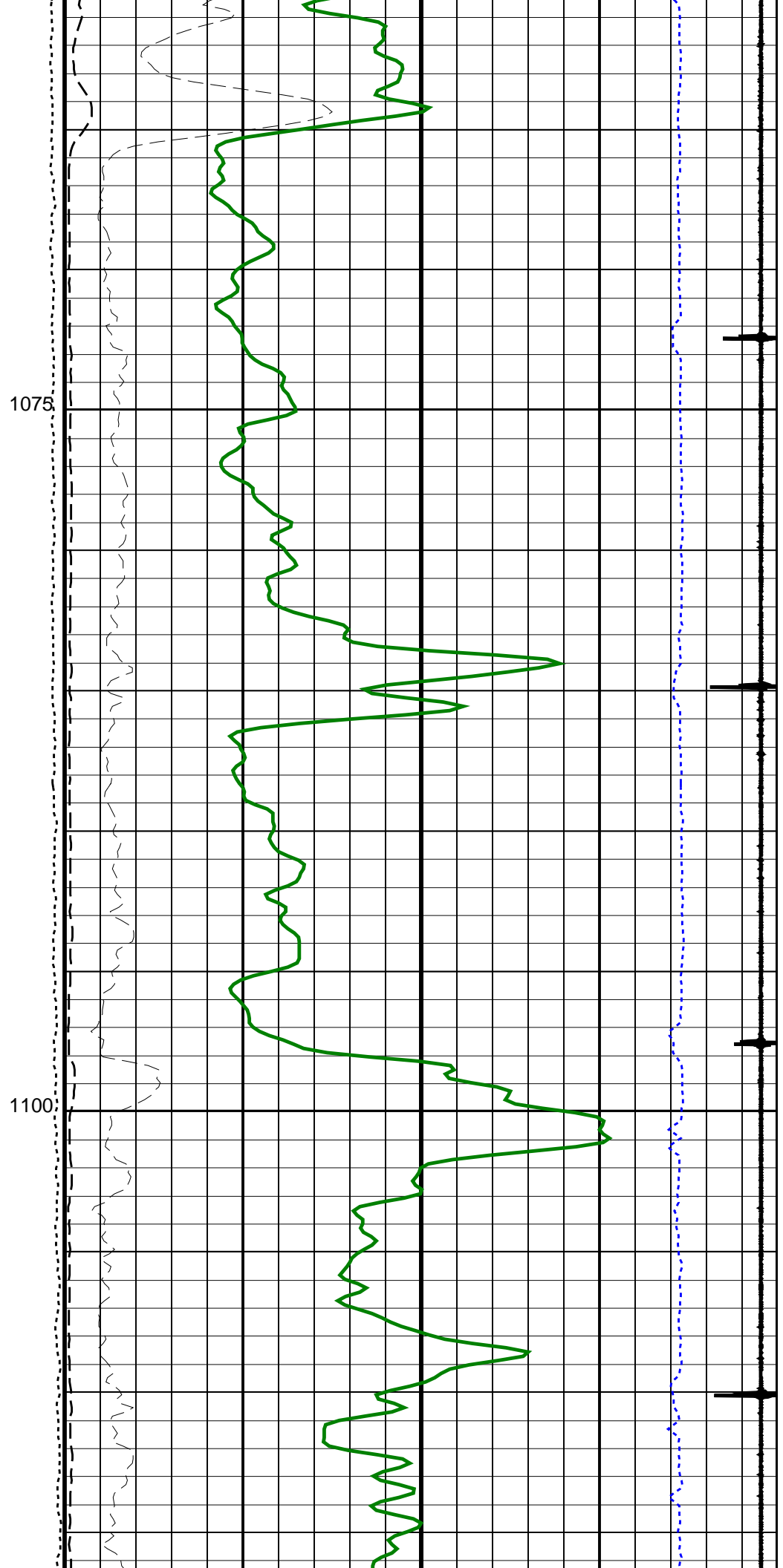
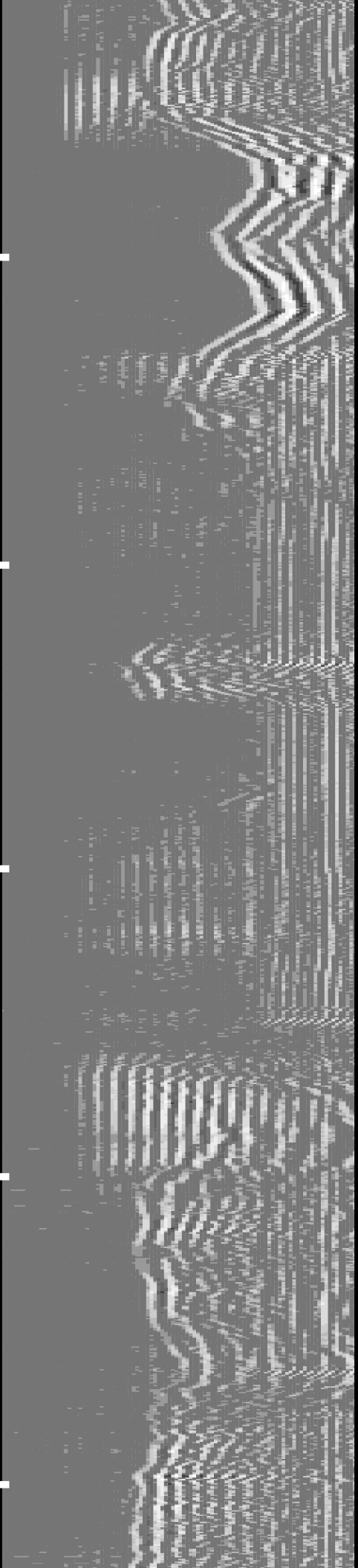
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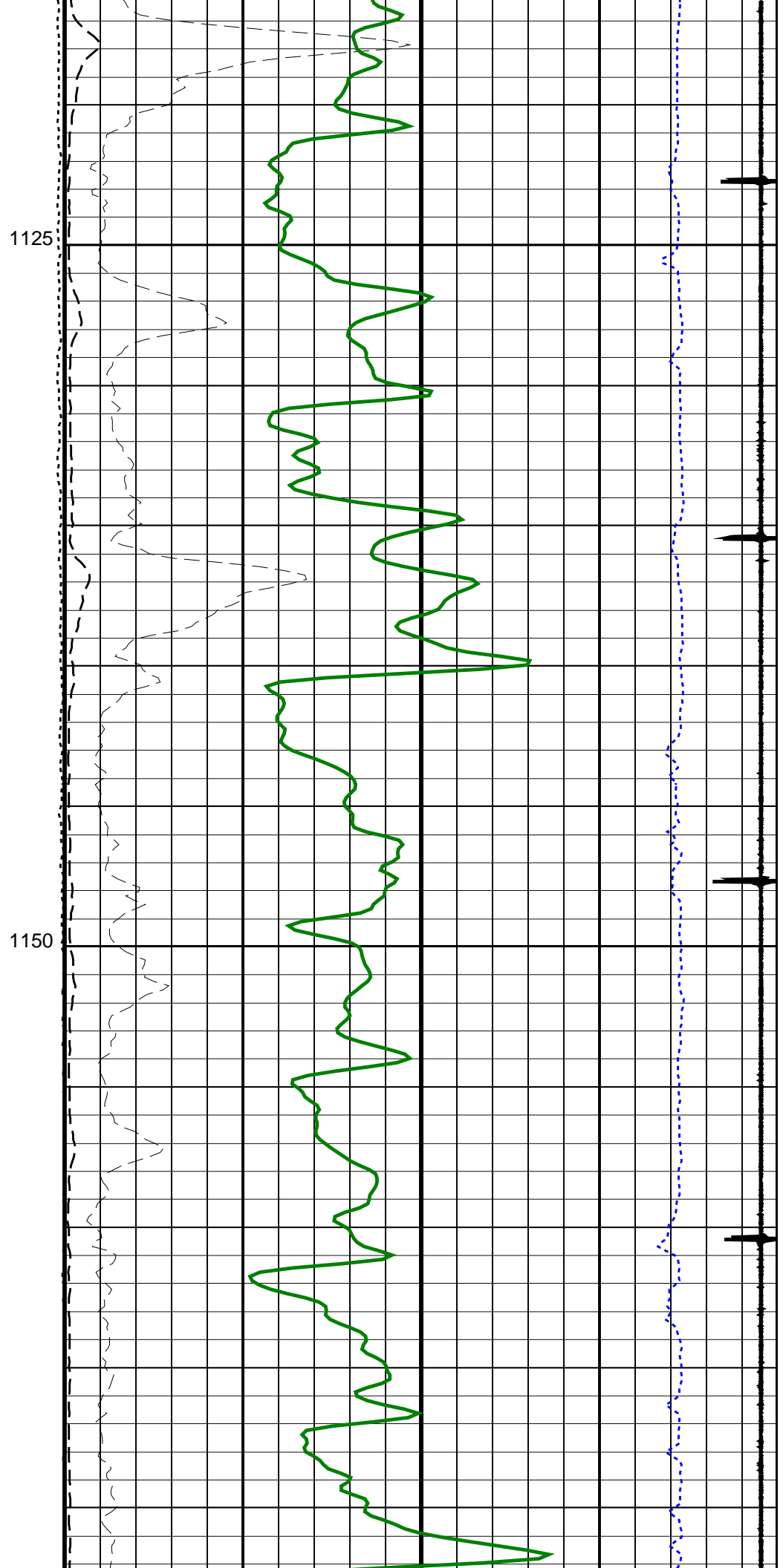
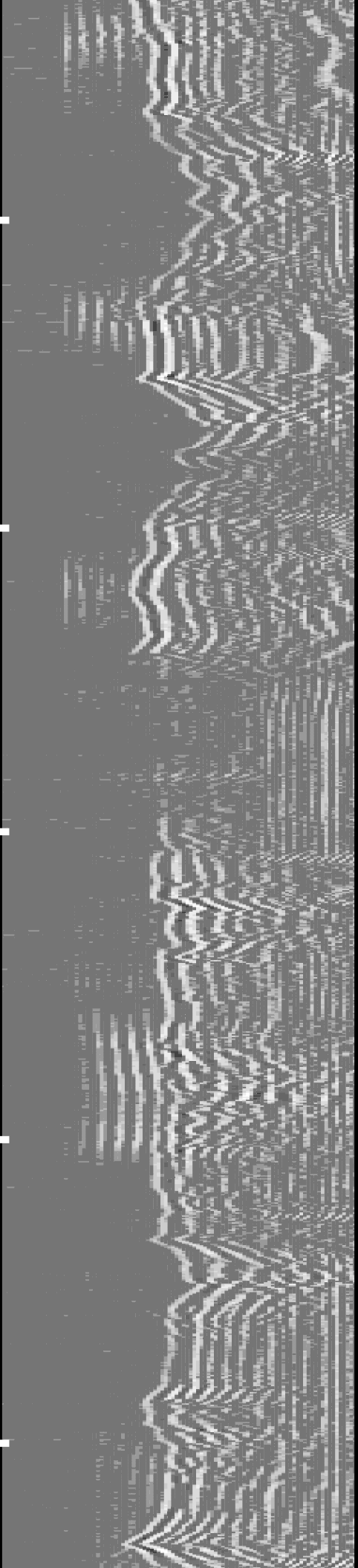


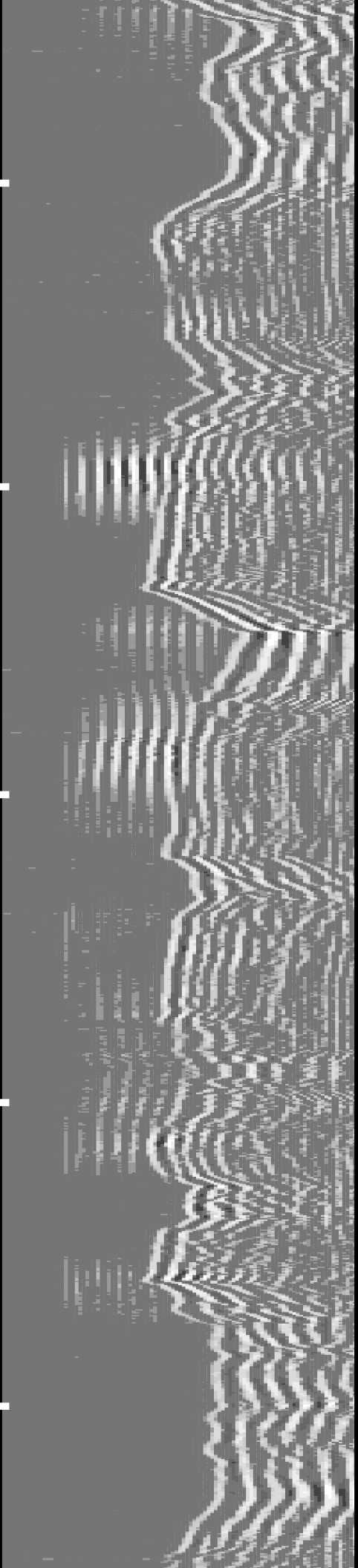








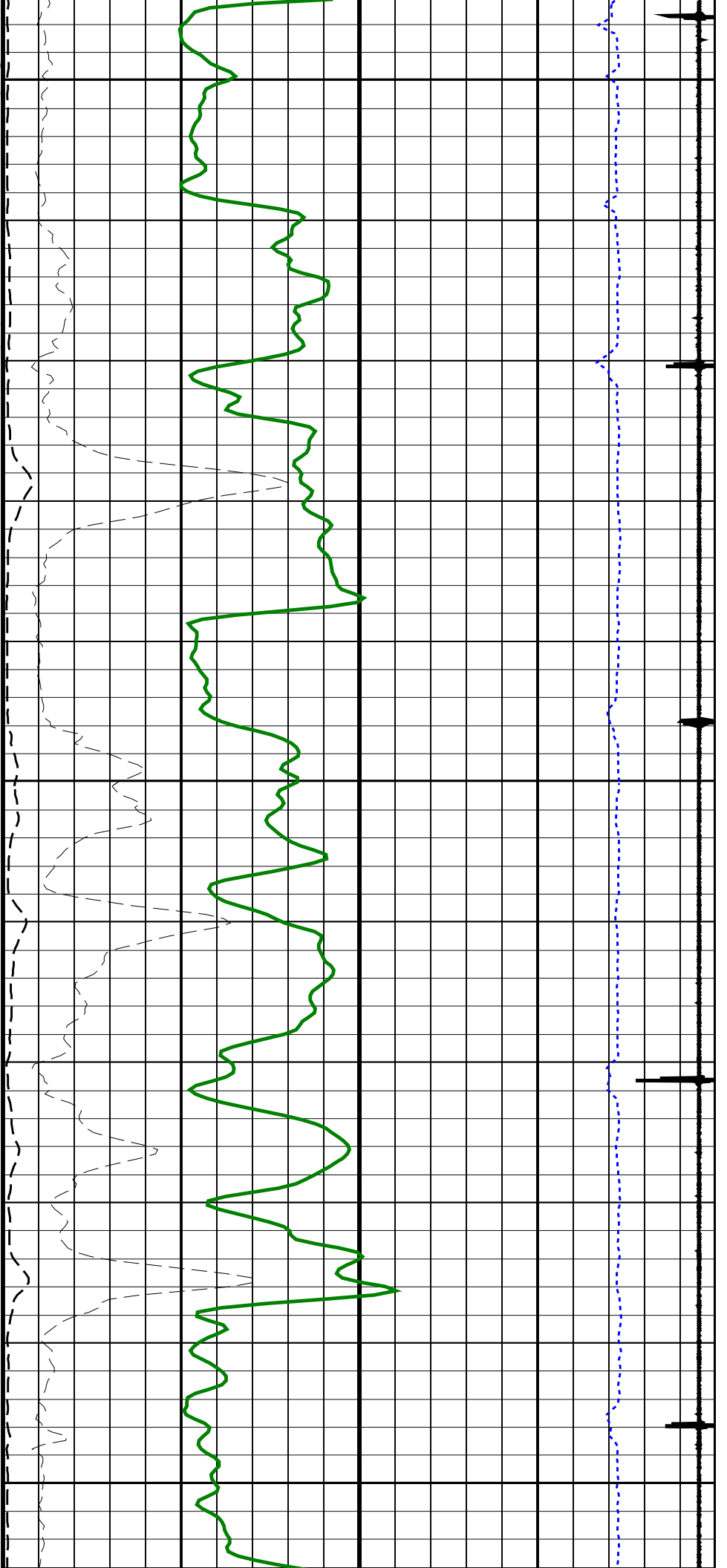


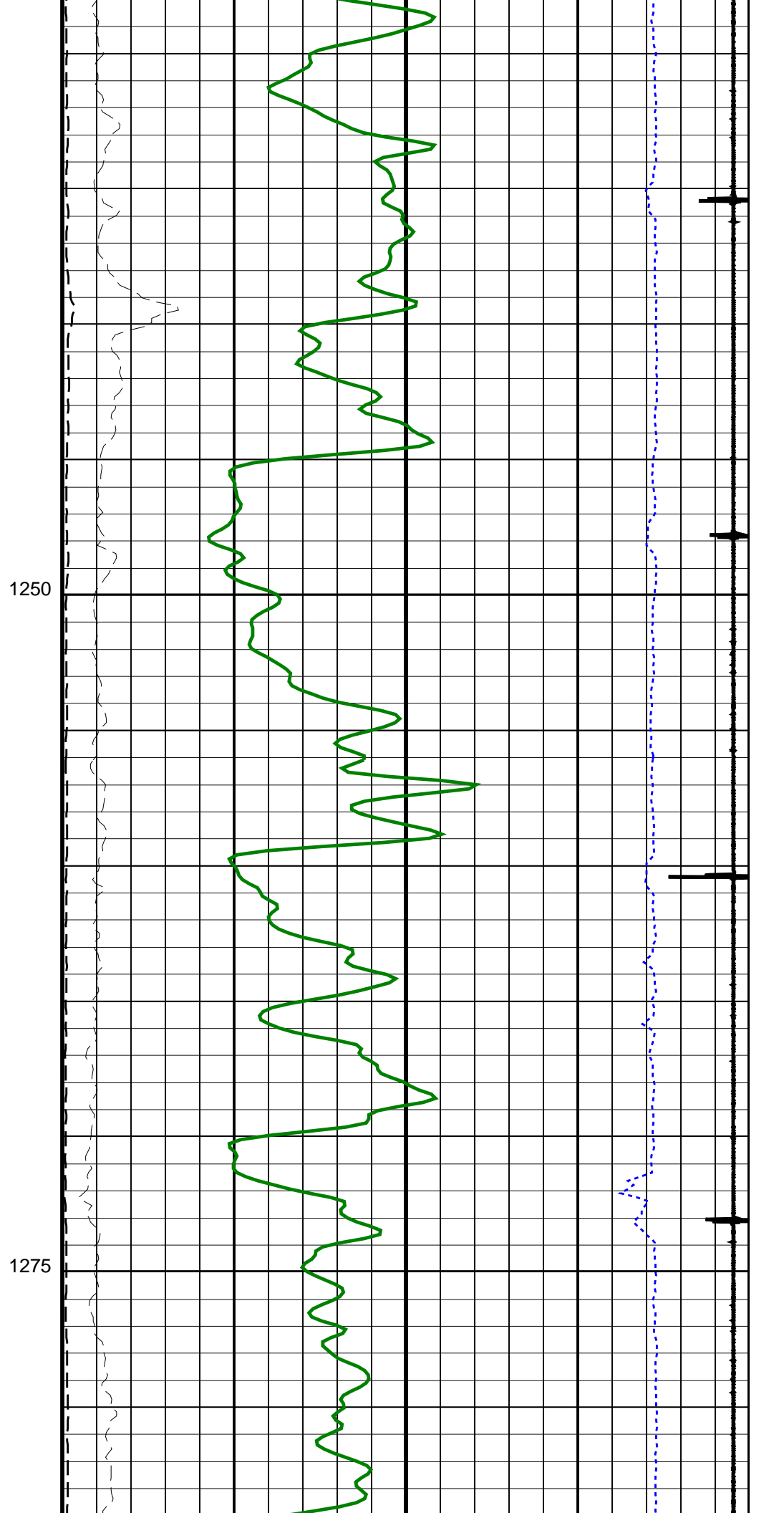
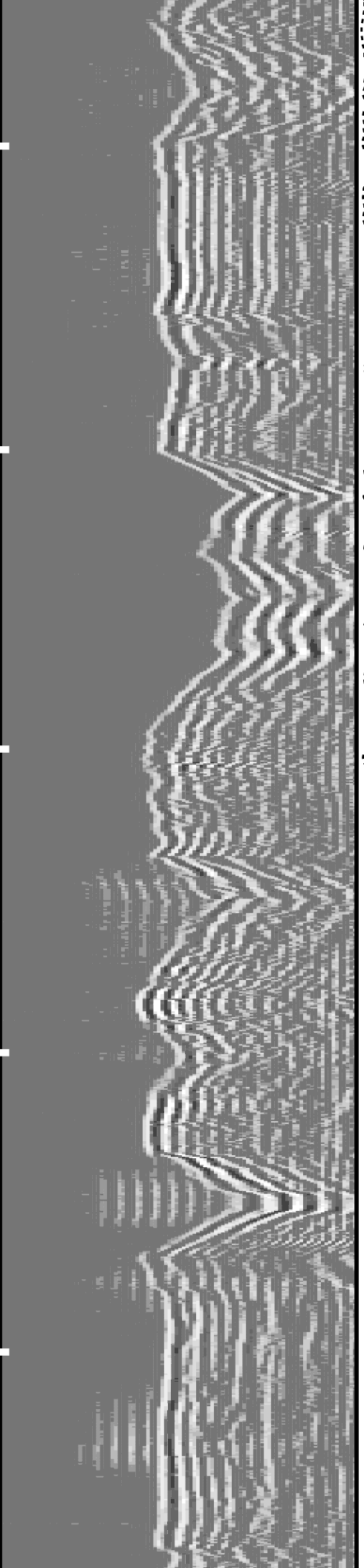


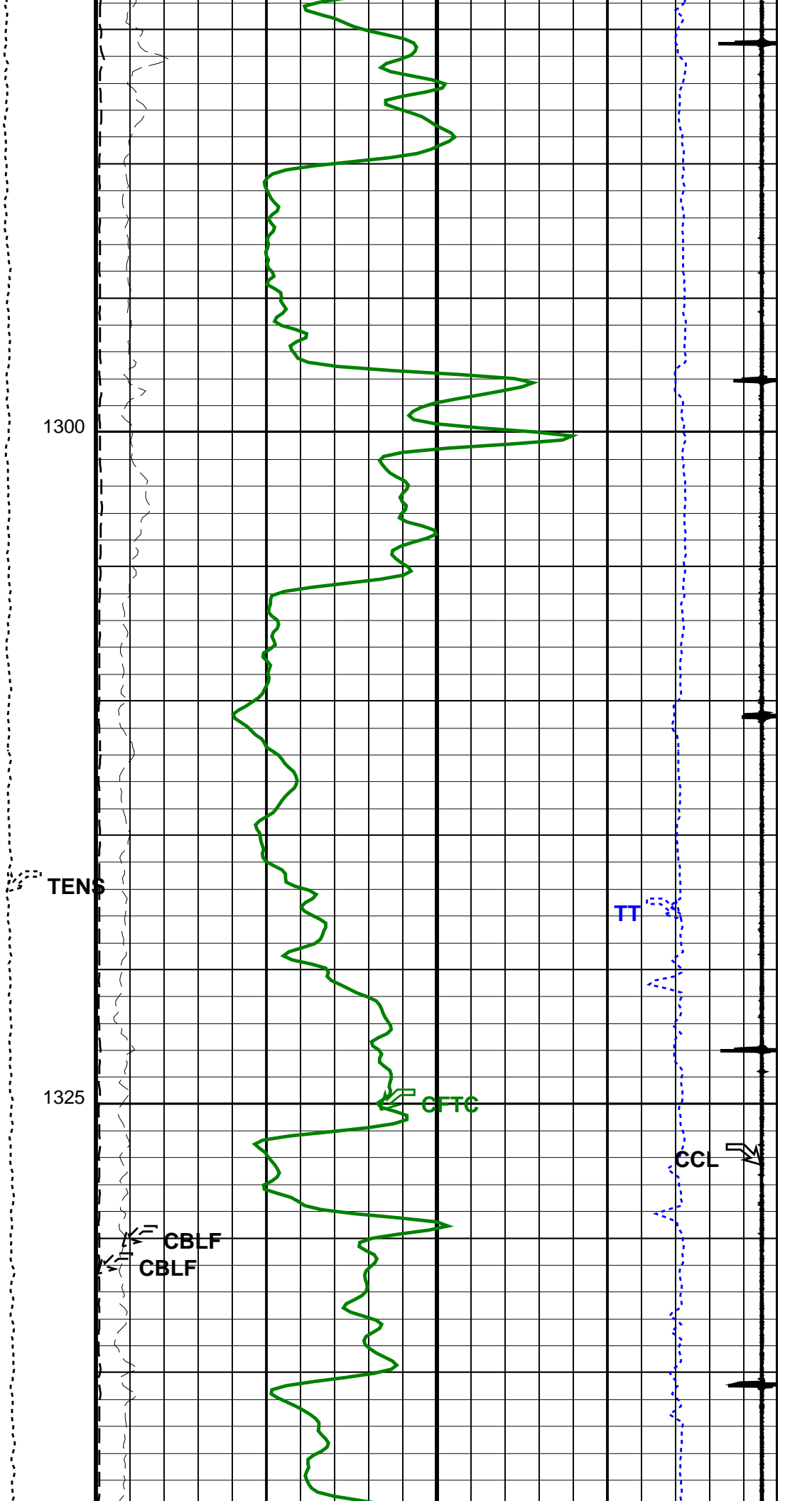
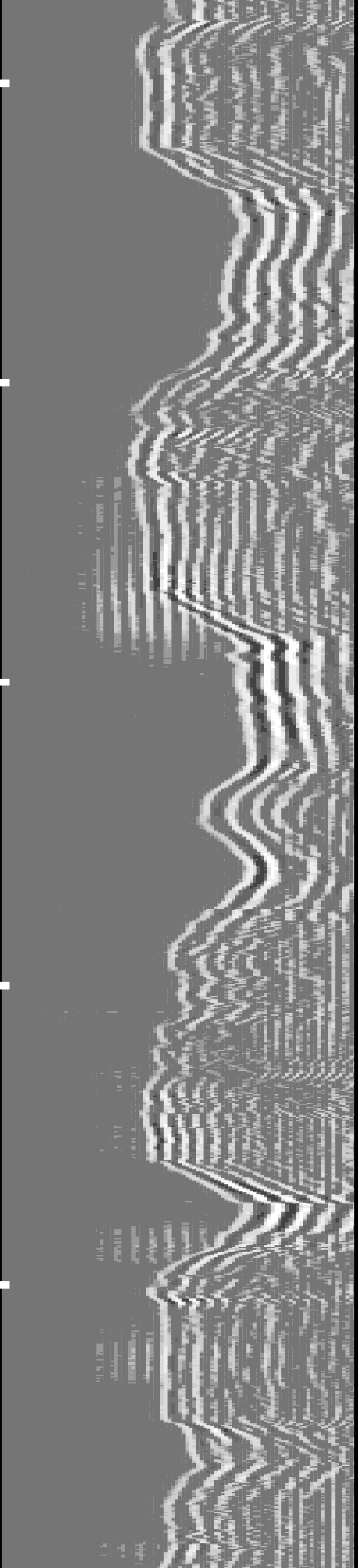
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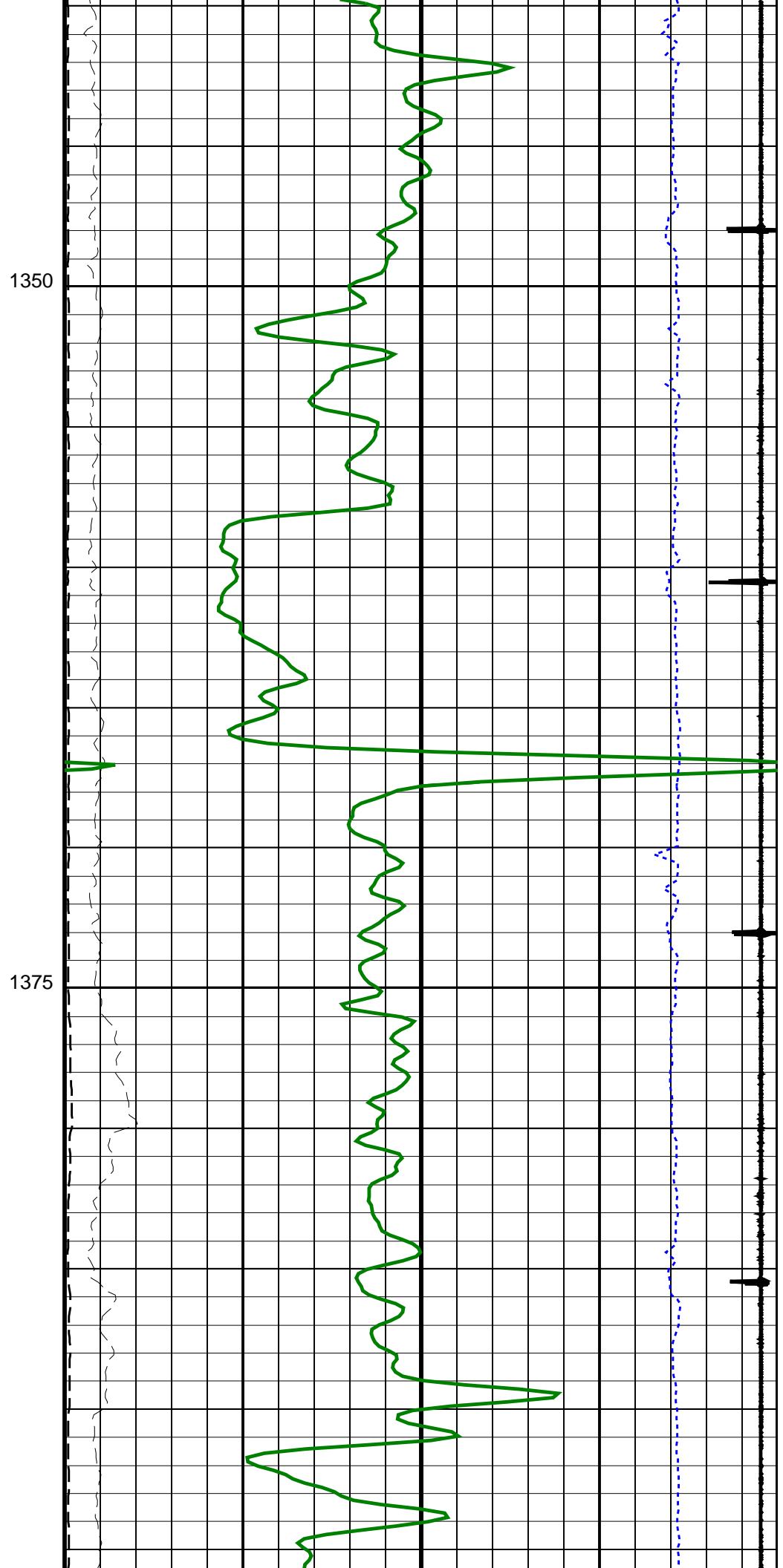
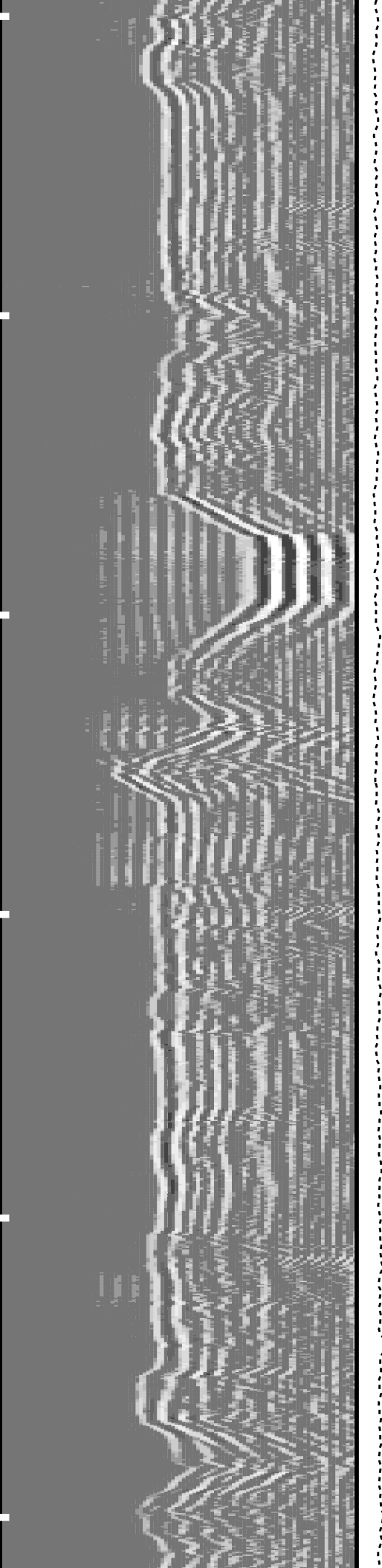
1200

1225

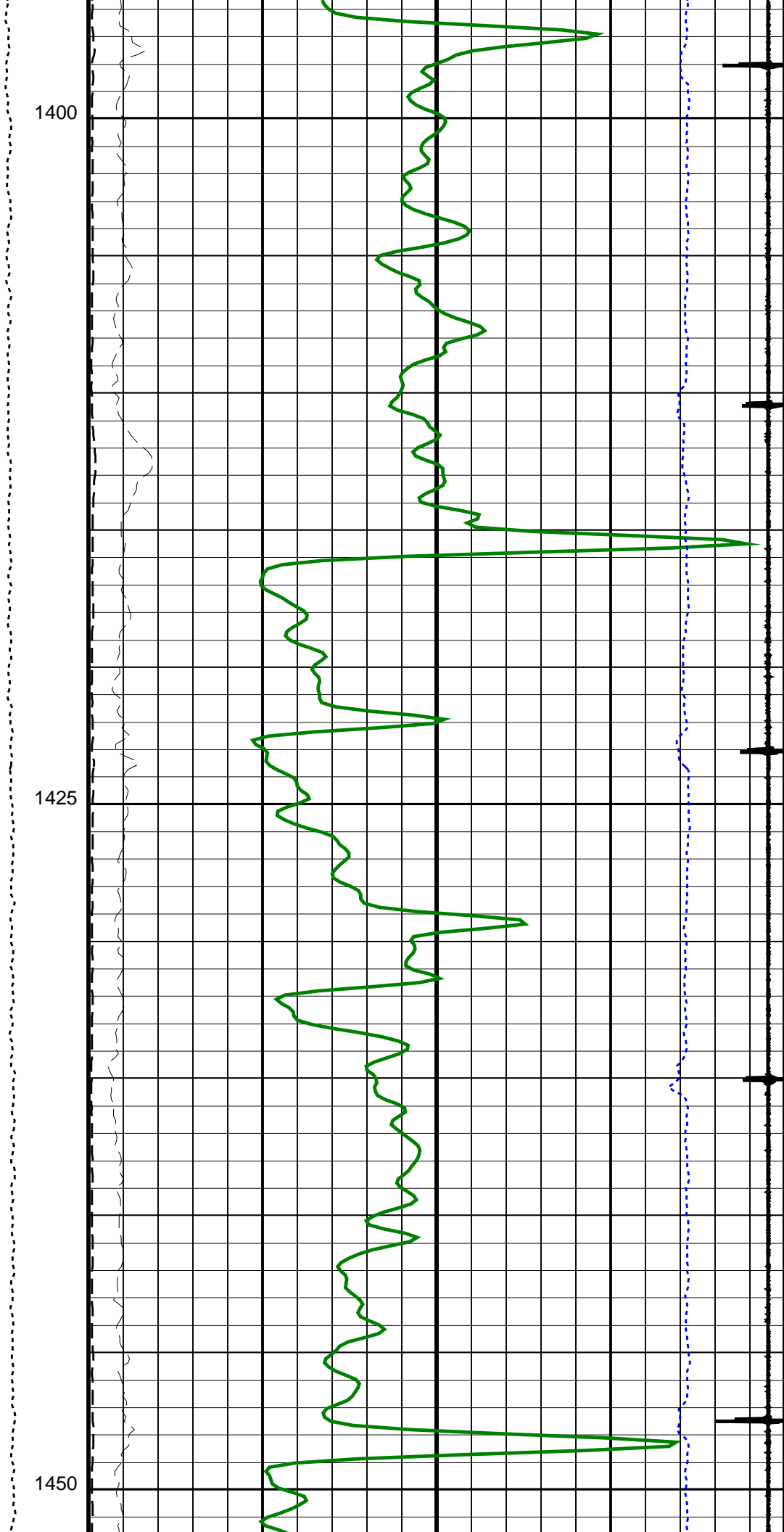
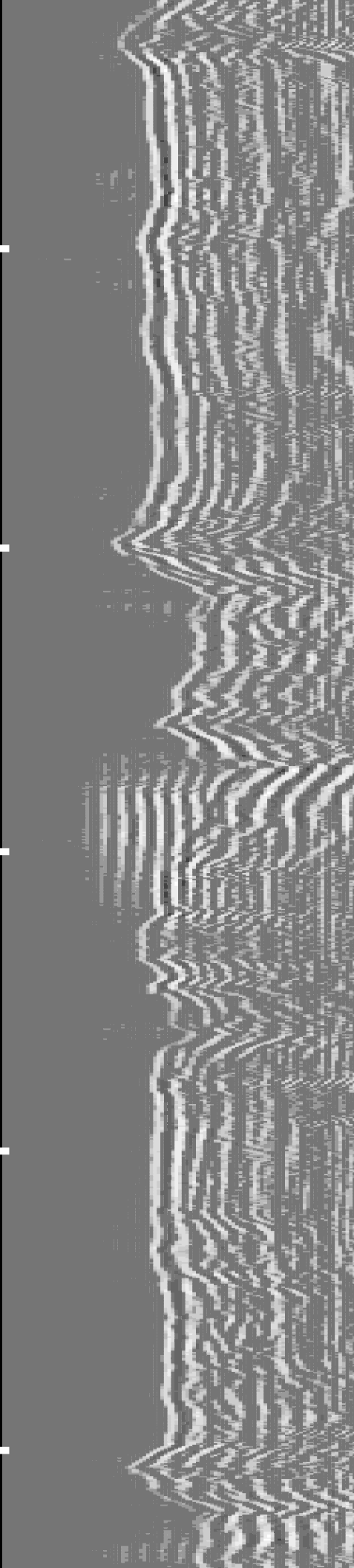


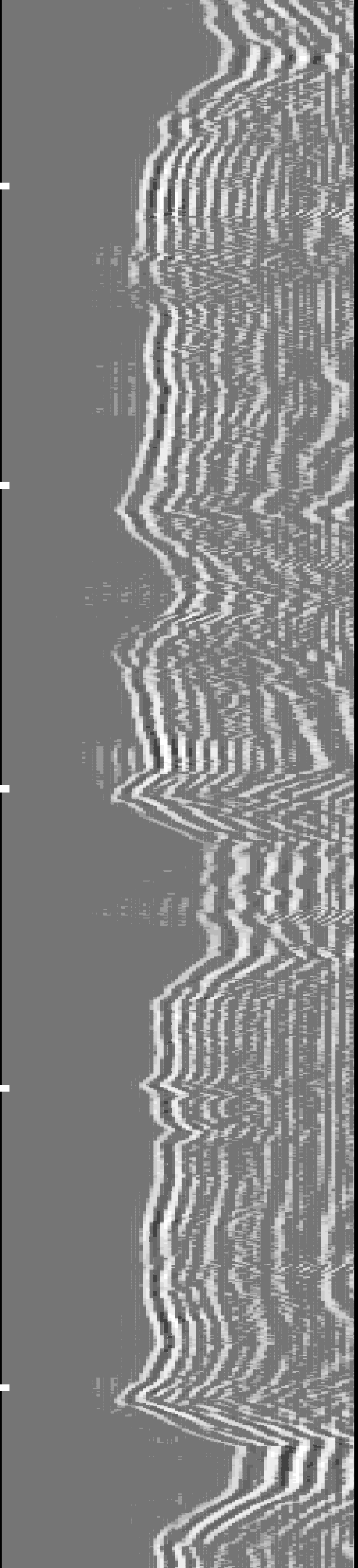






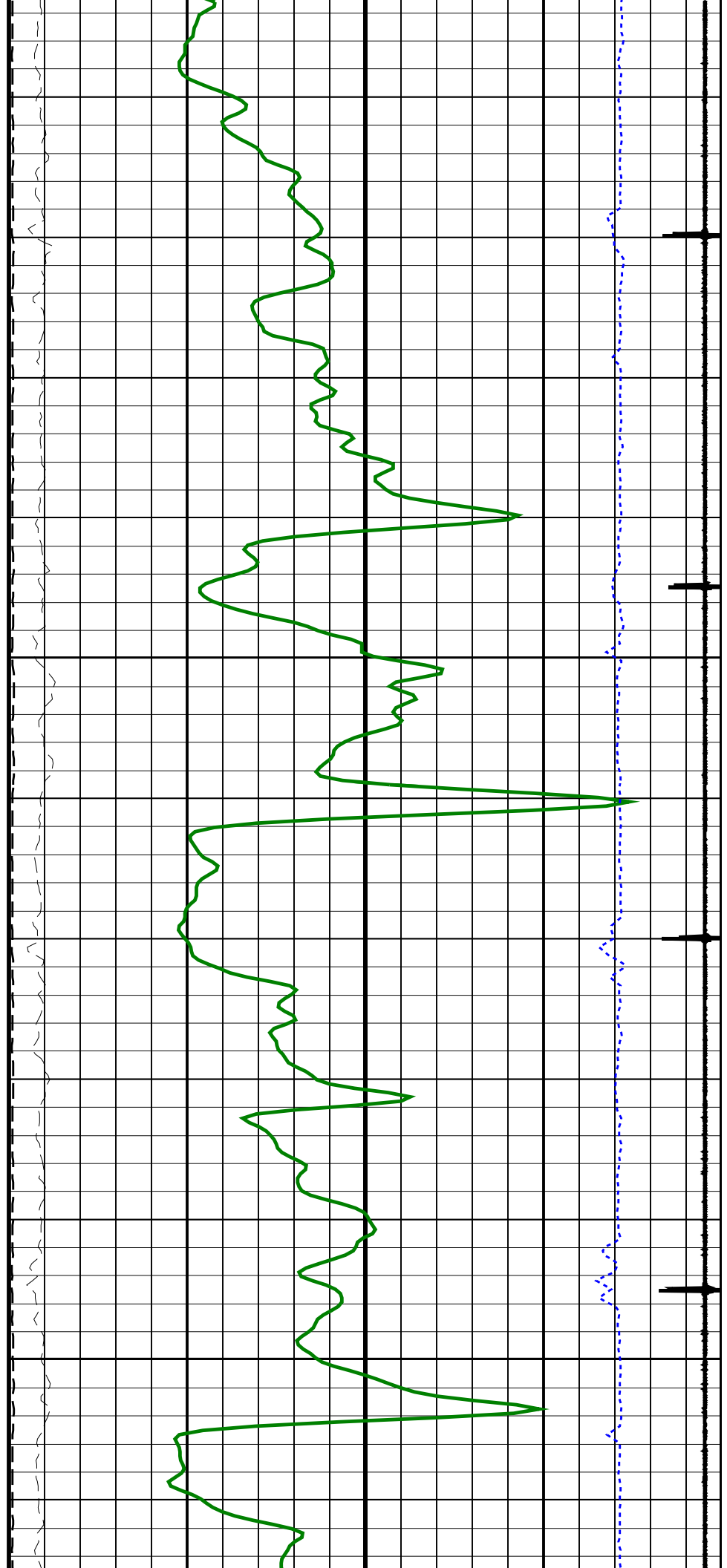


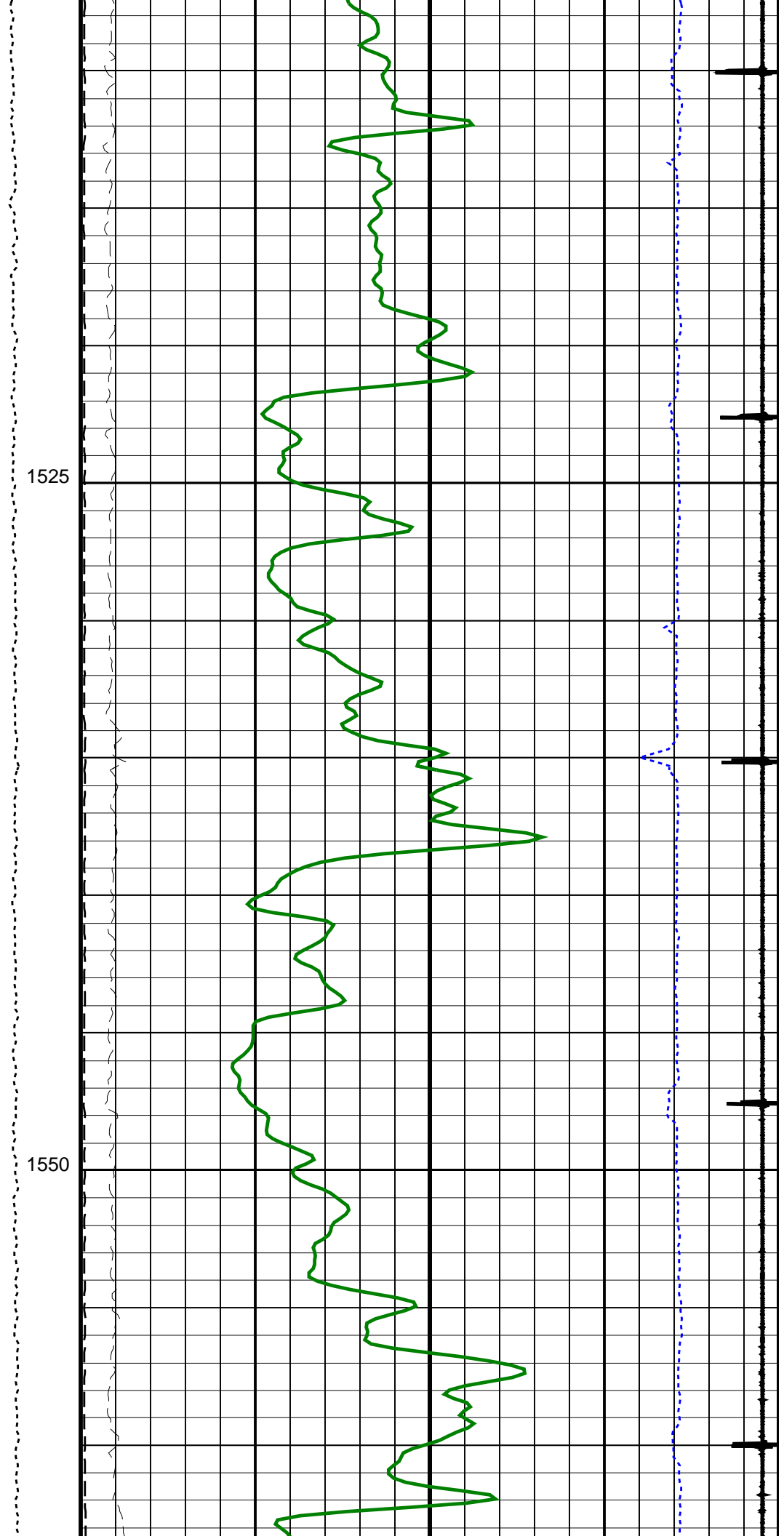
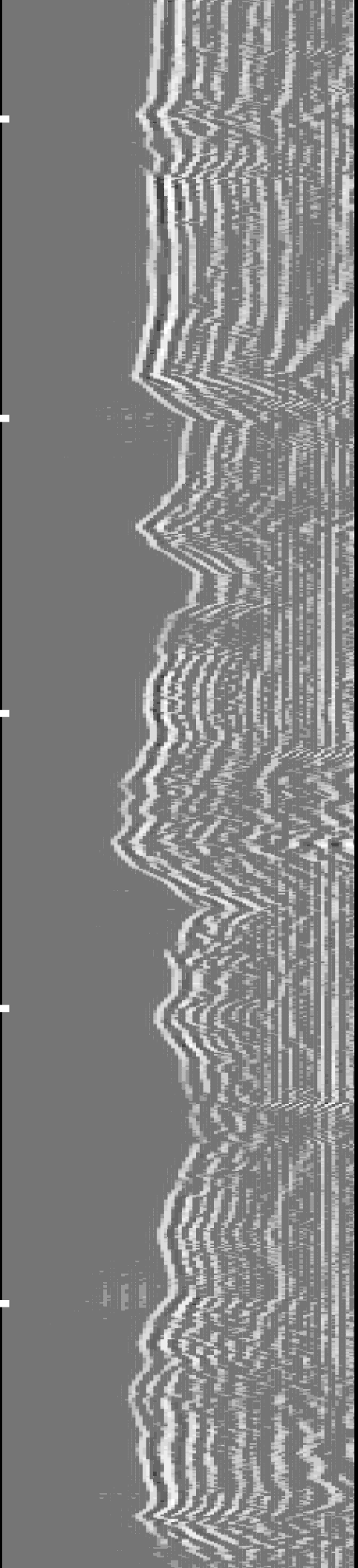


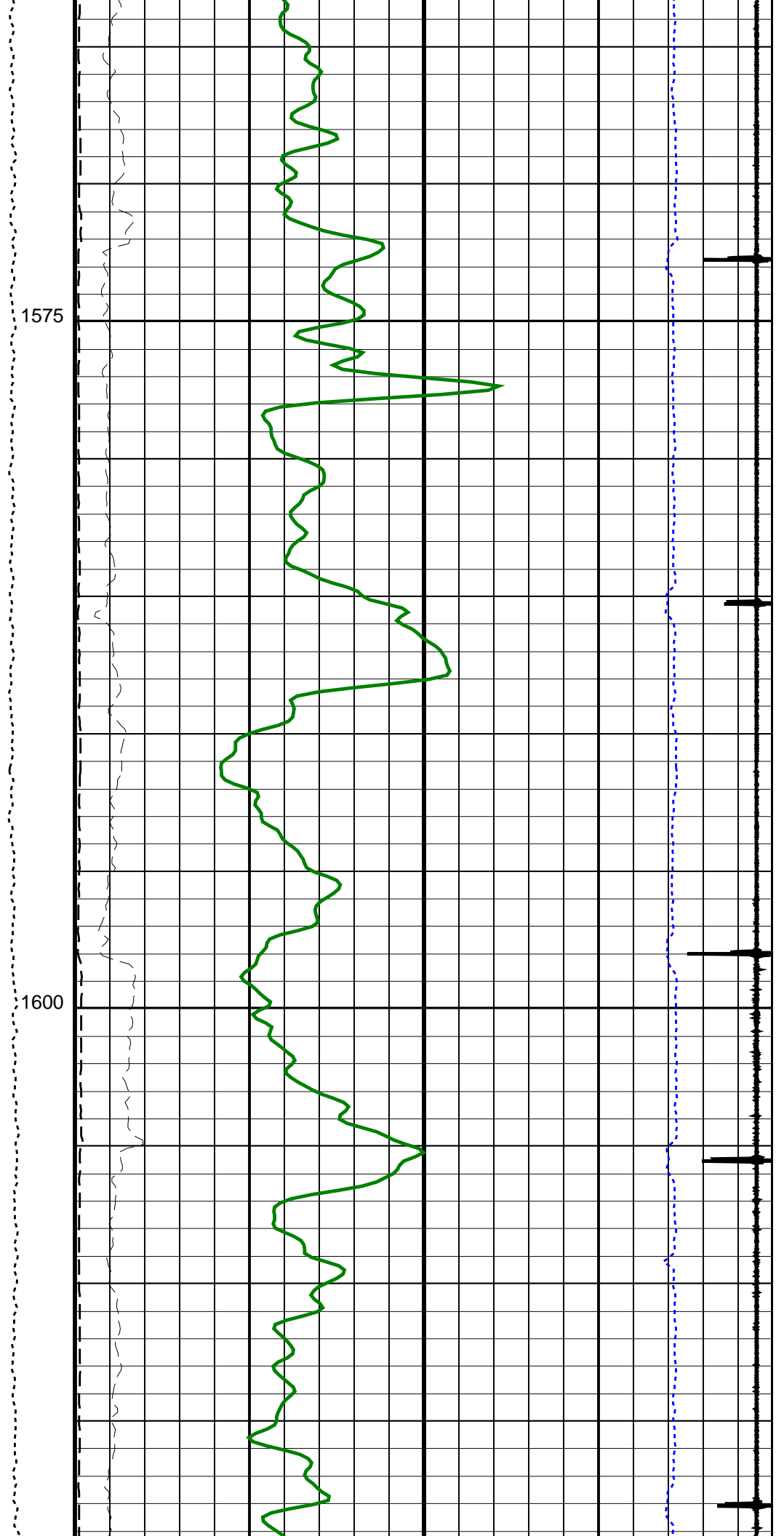
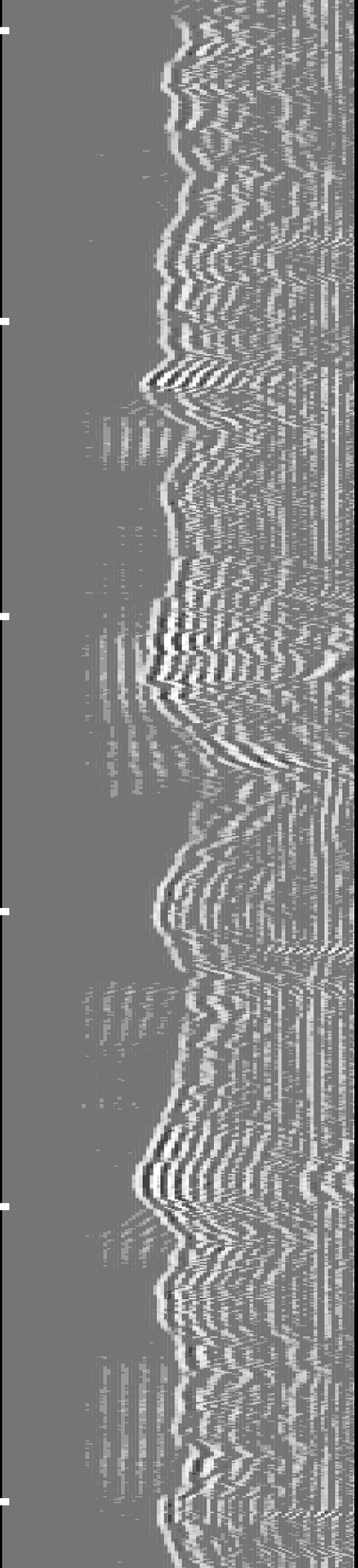


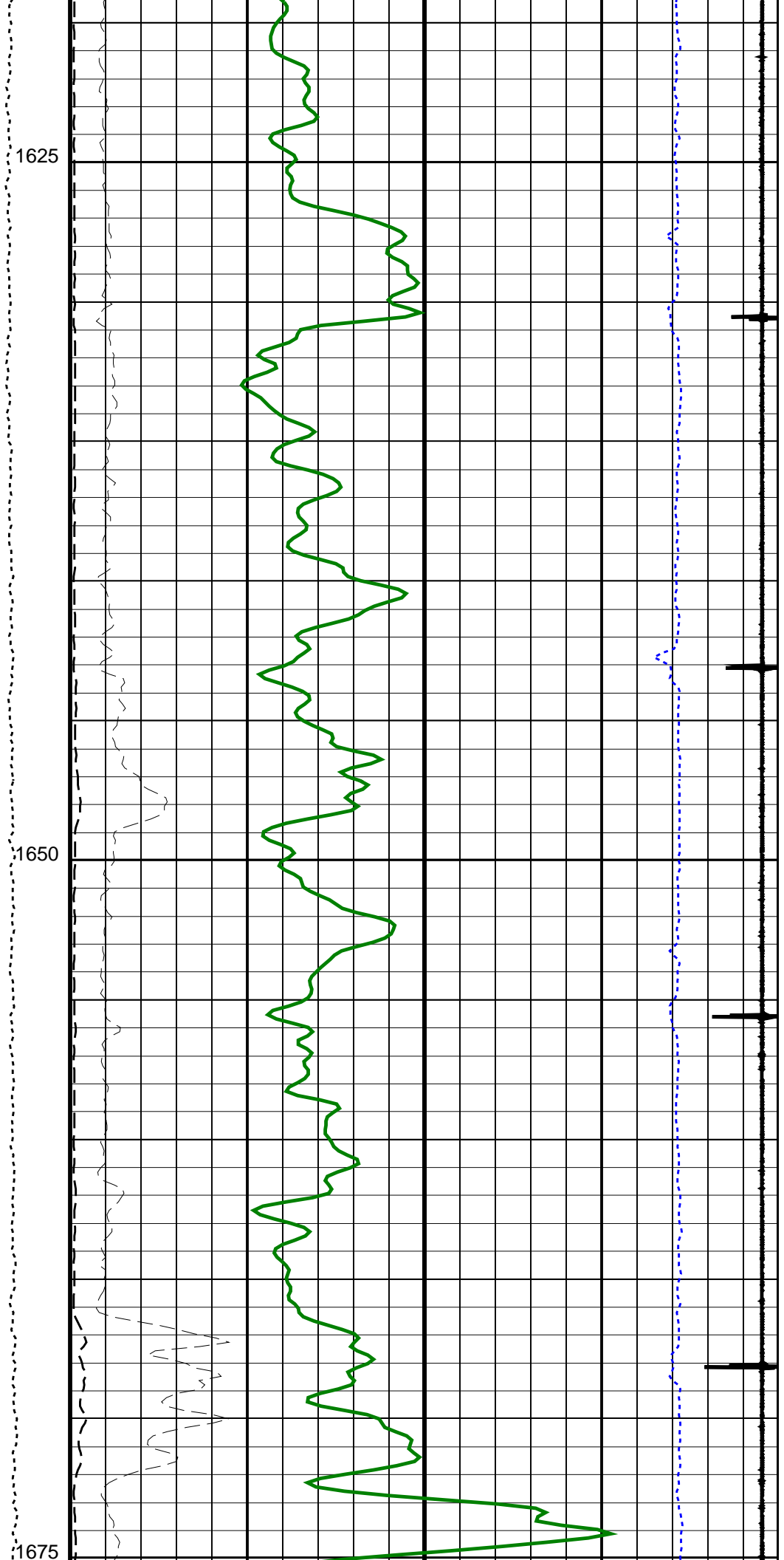
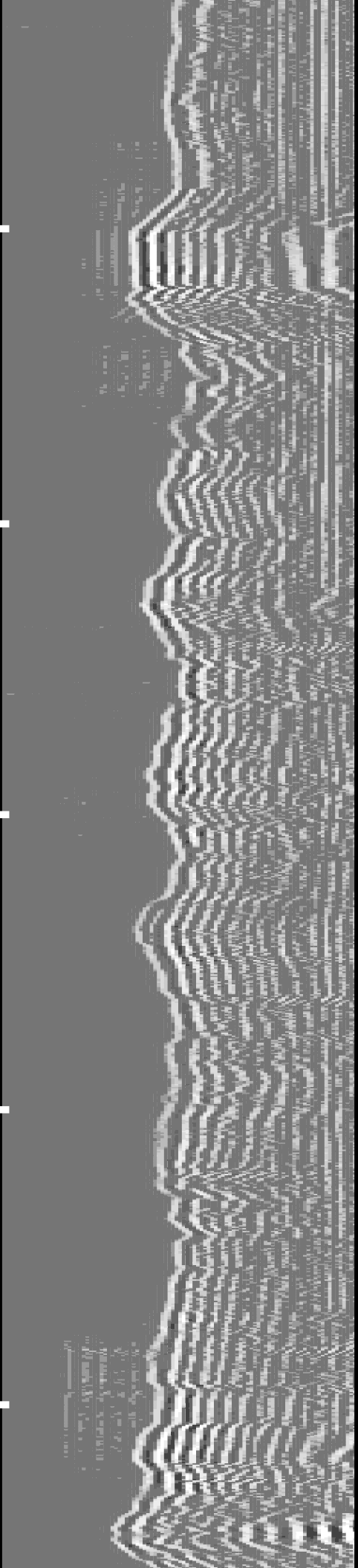
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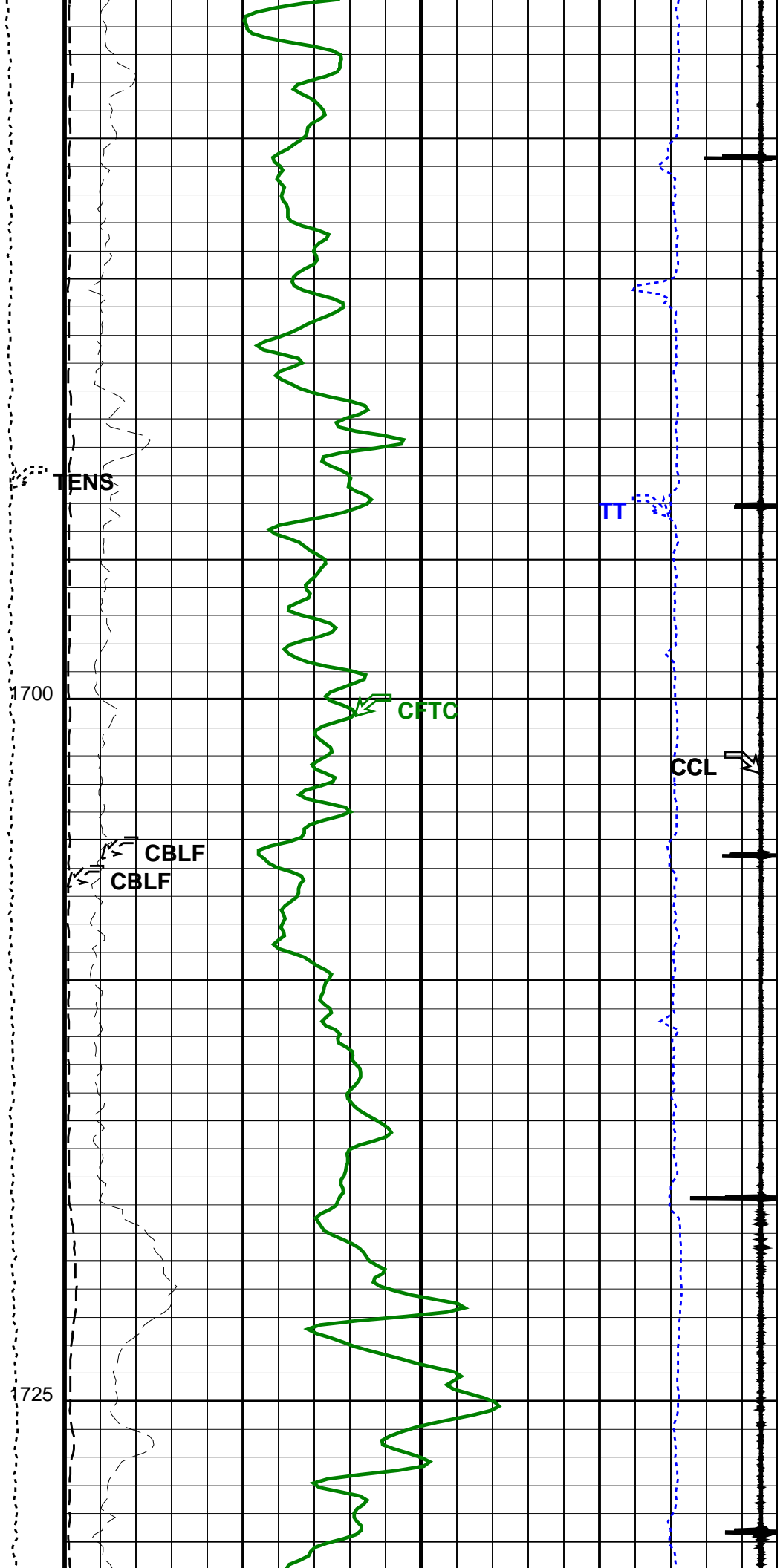
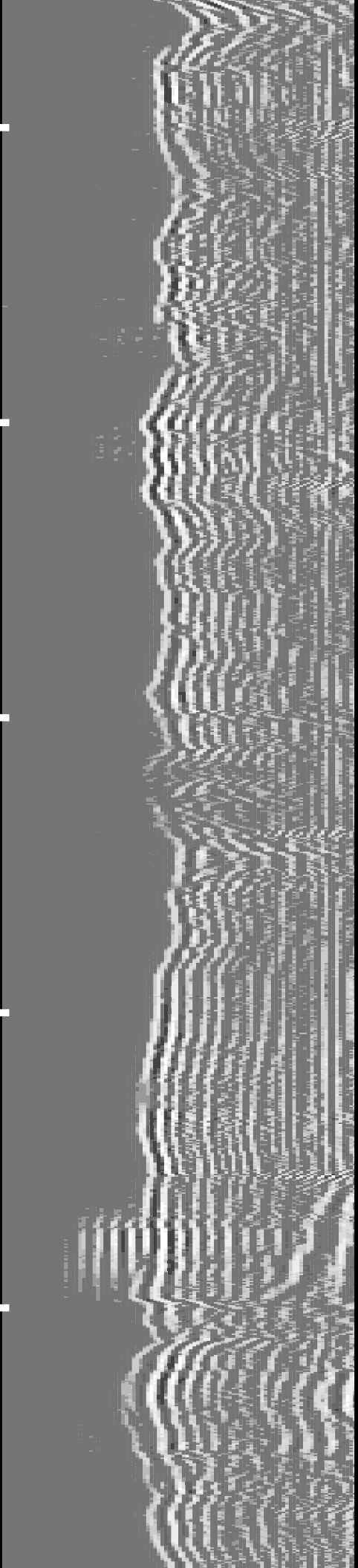
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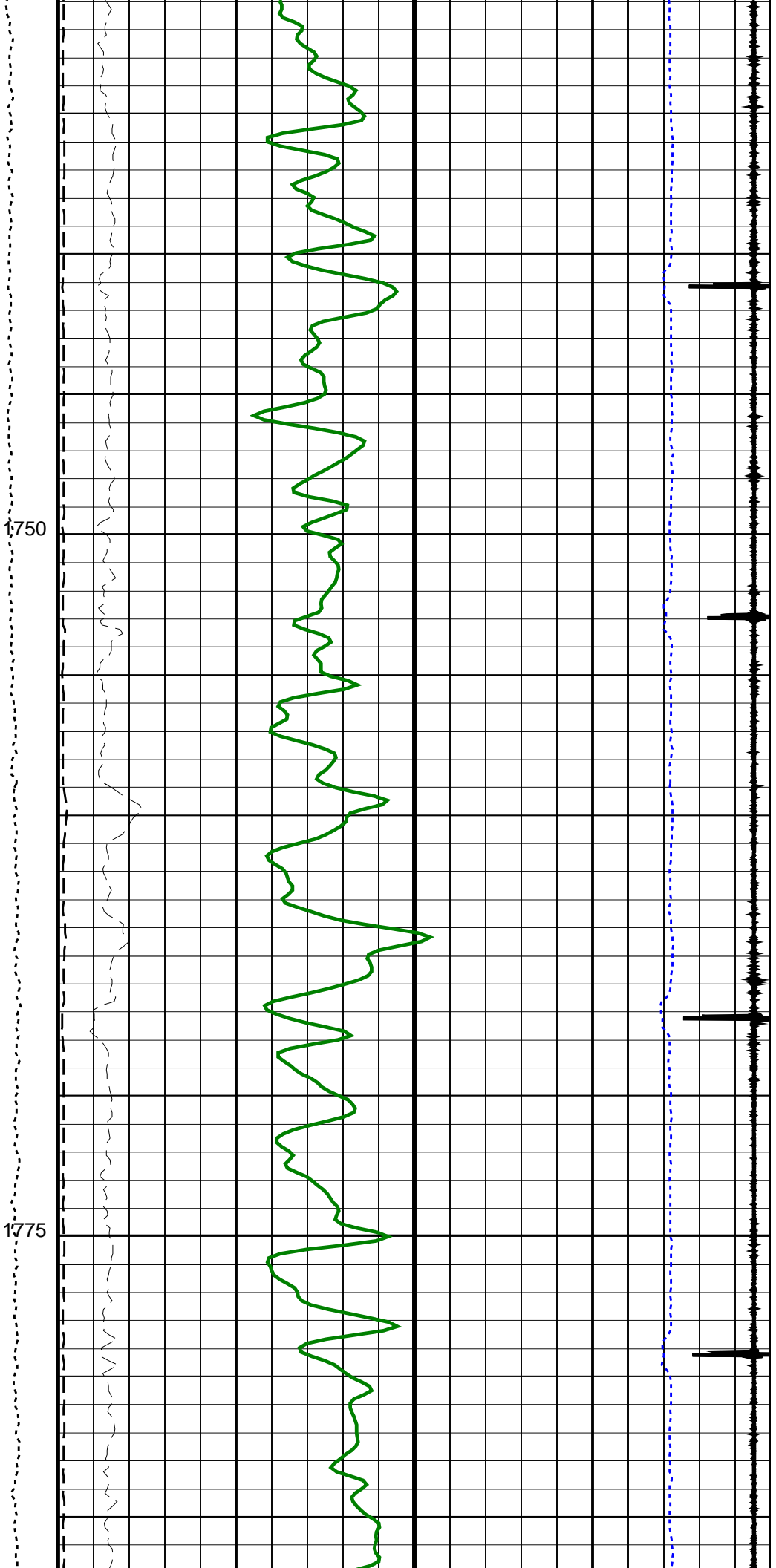
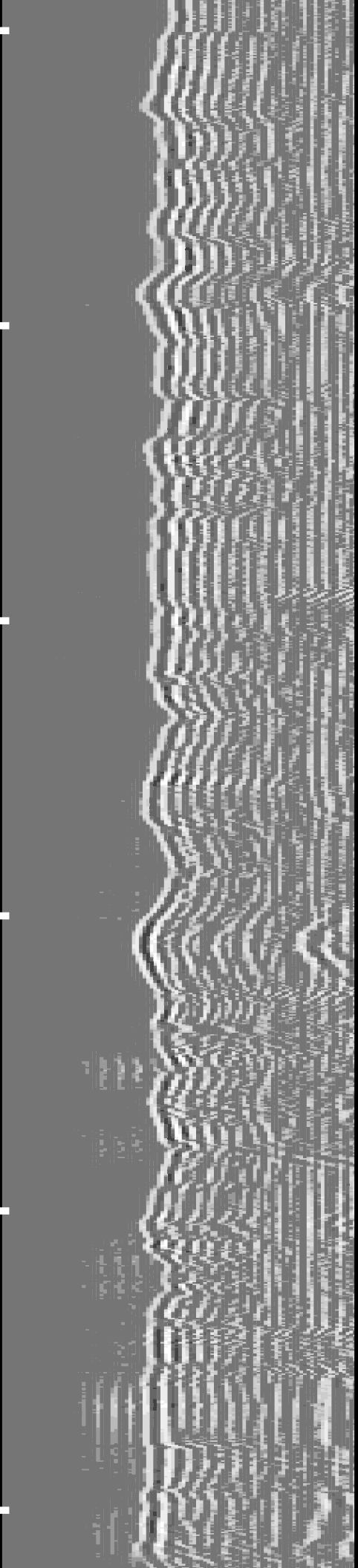


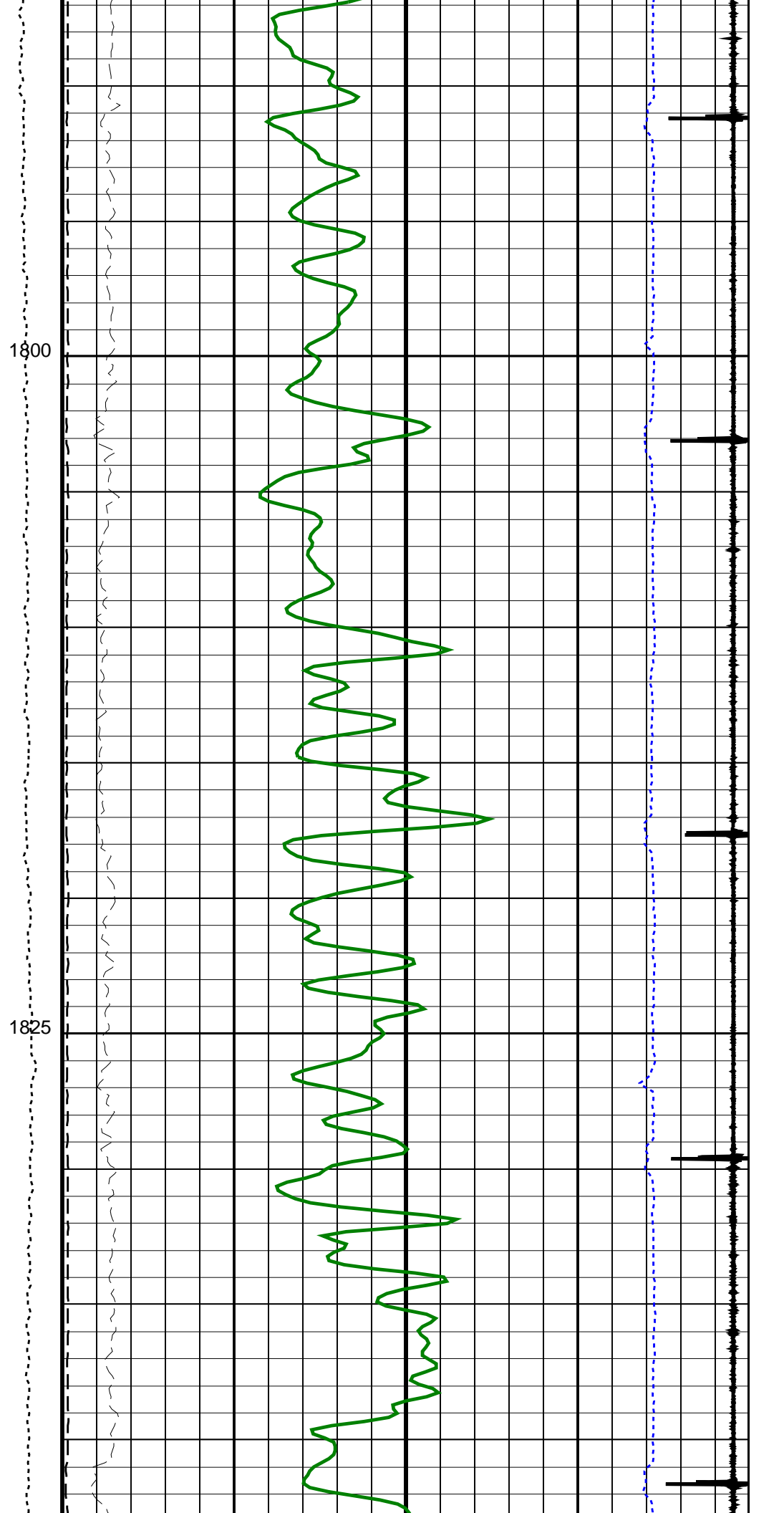
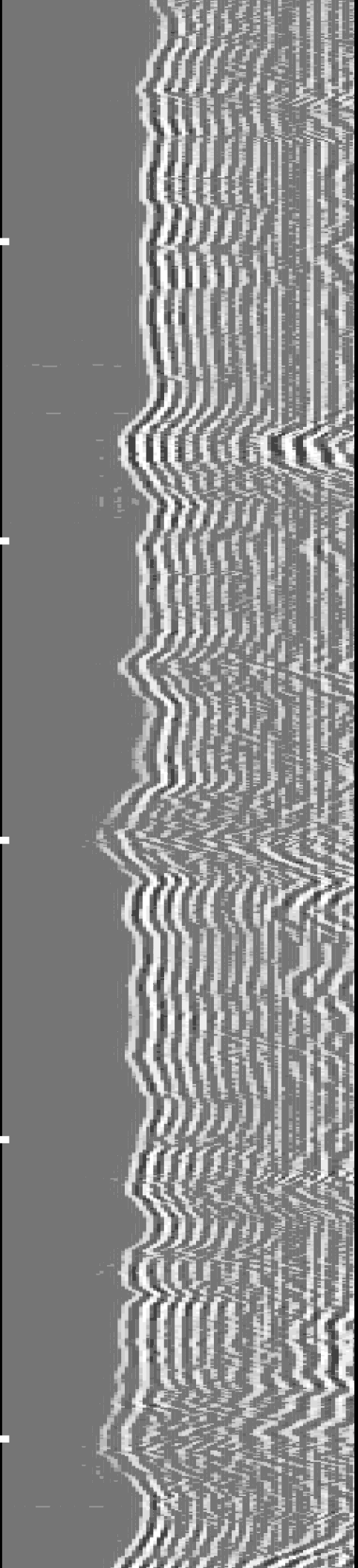




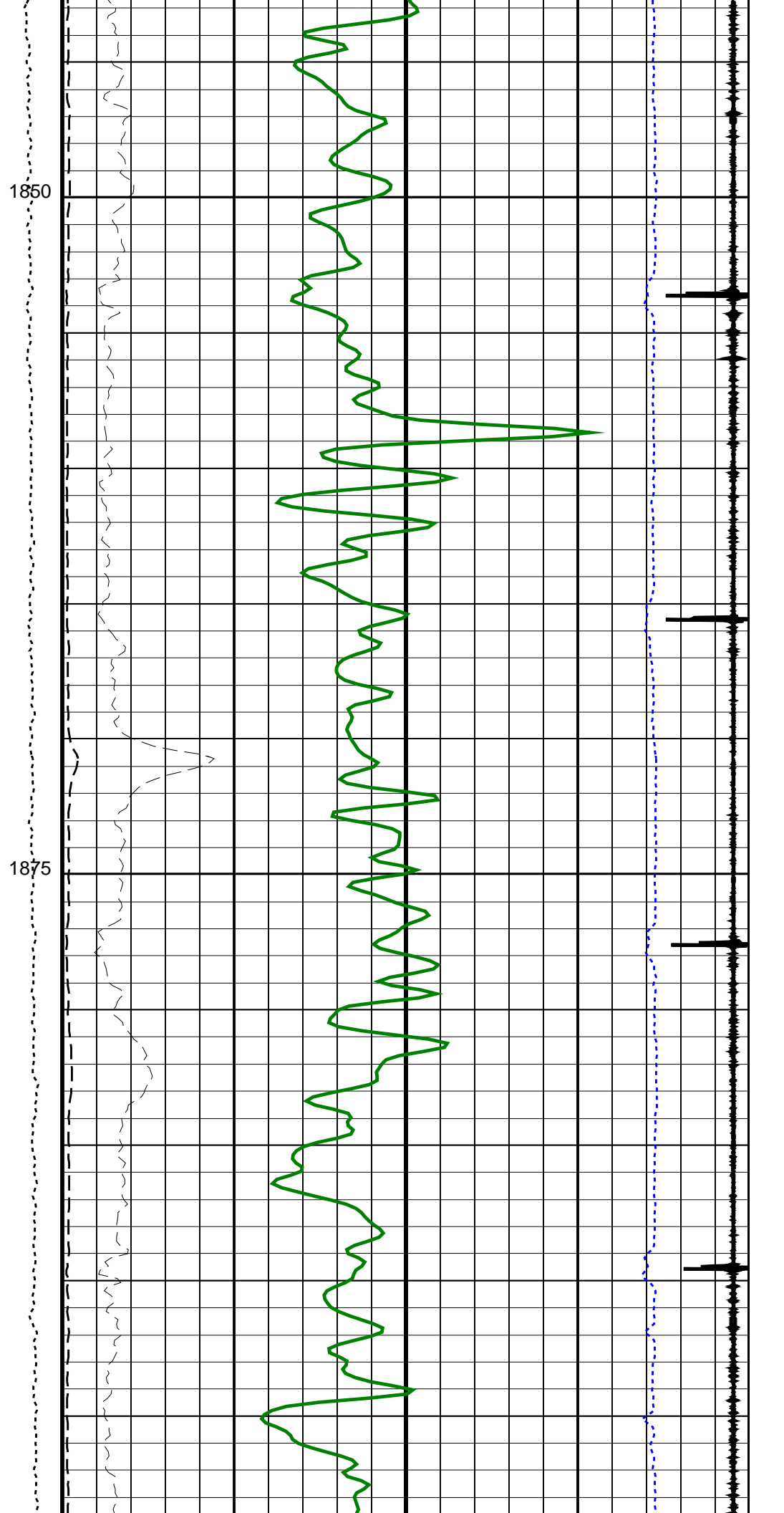
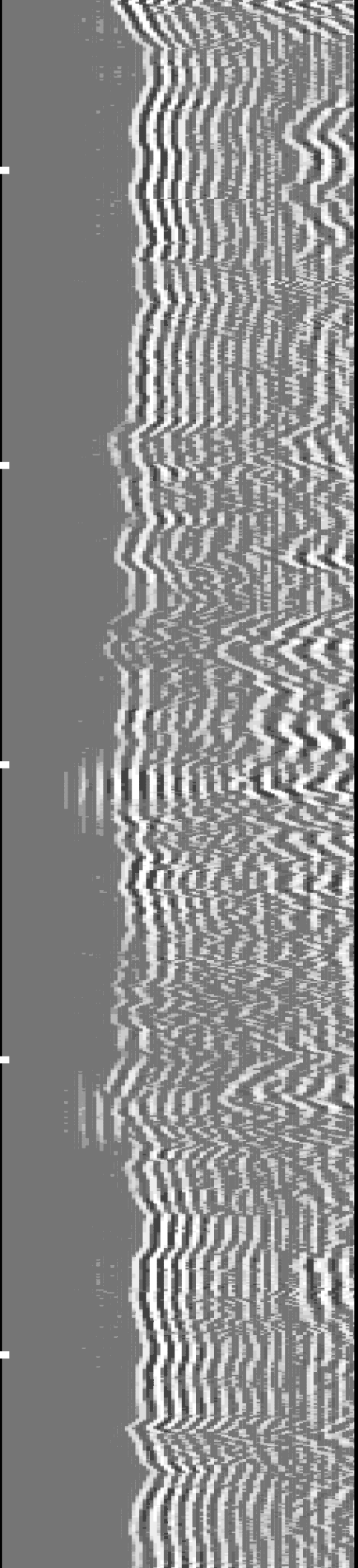


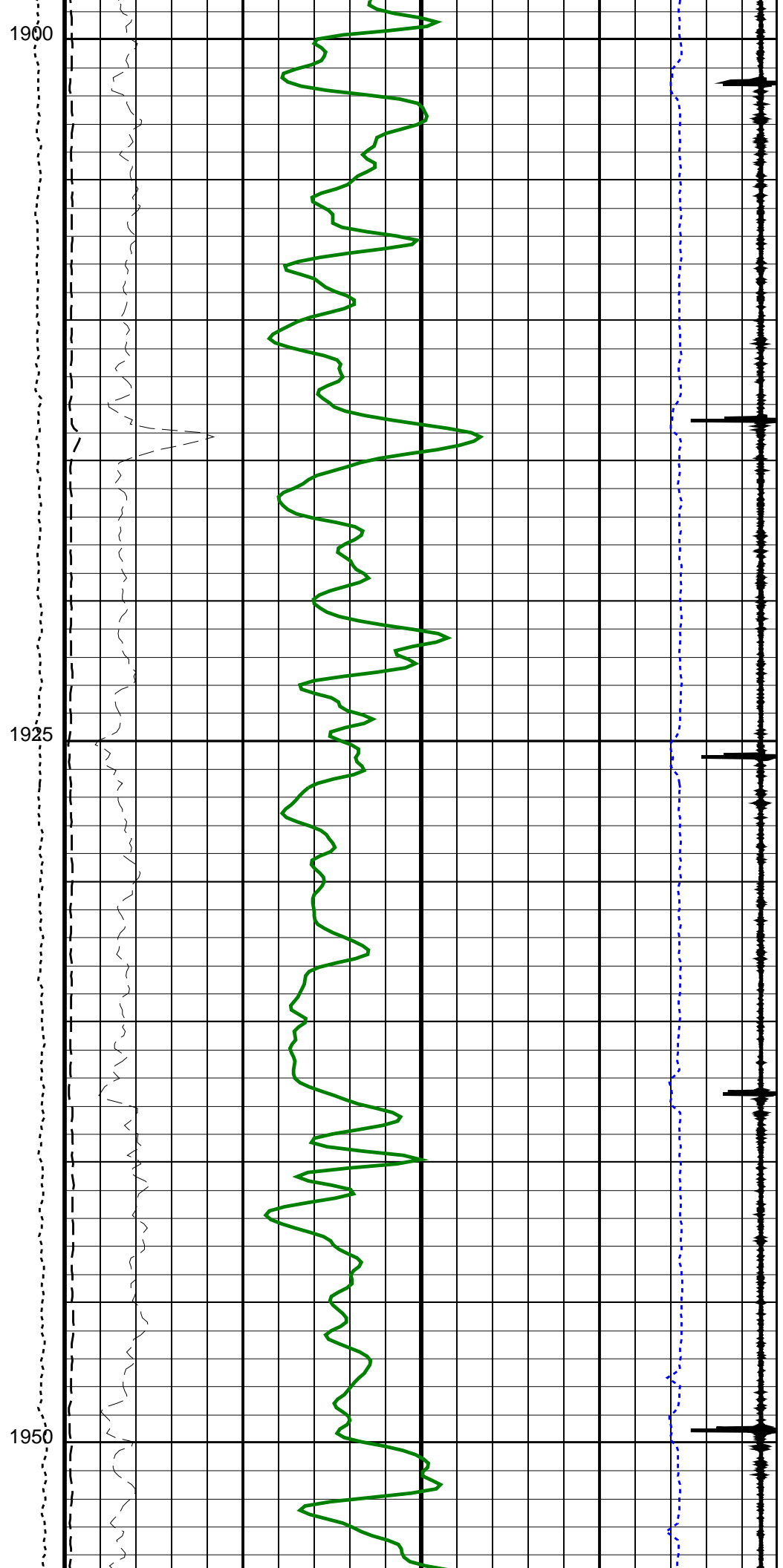
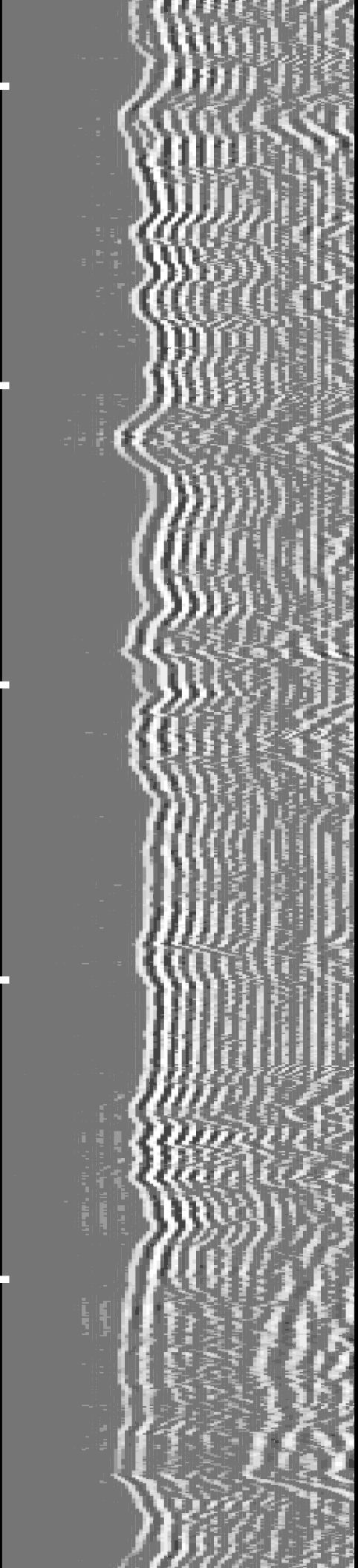


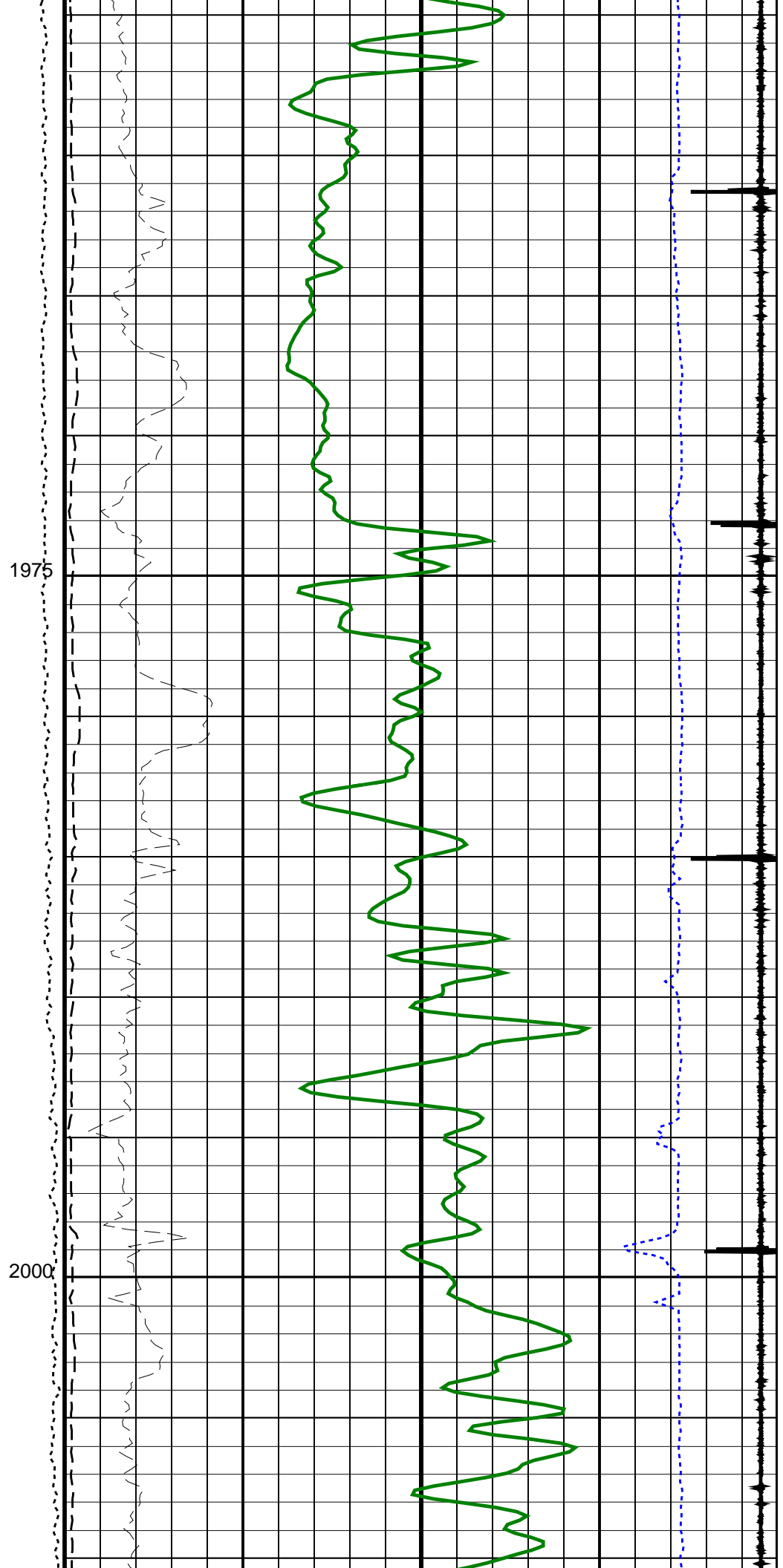
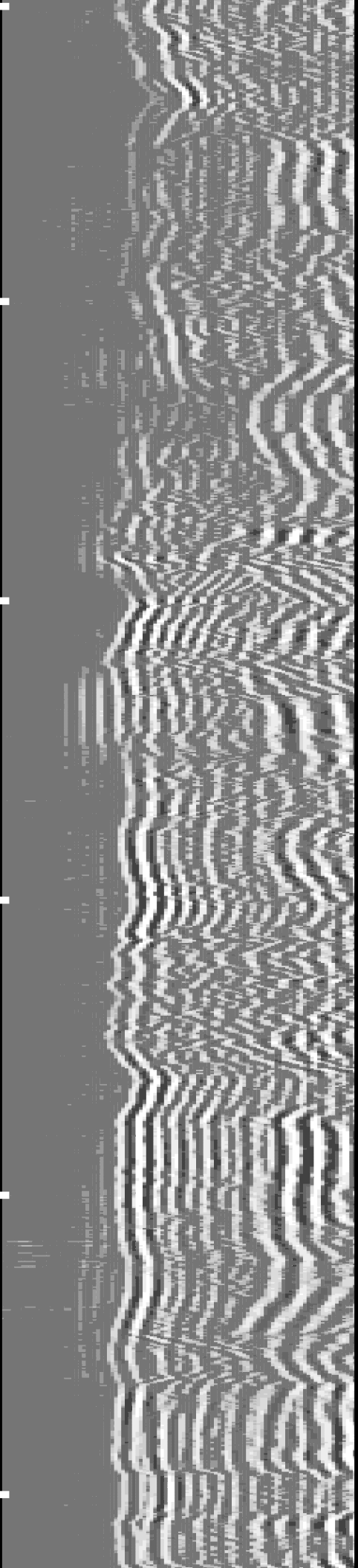


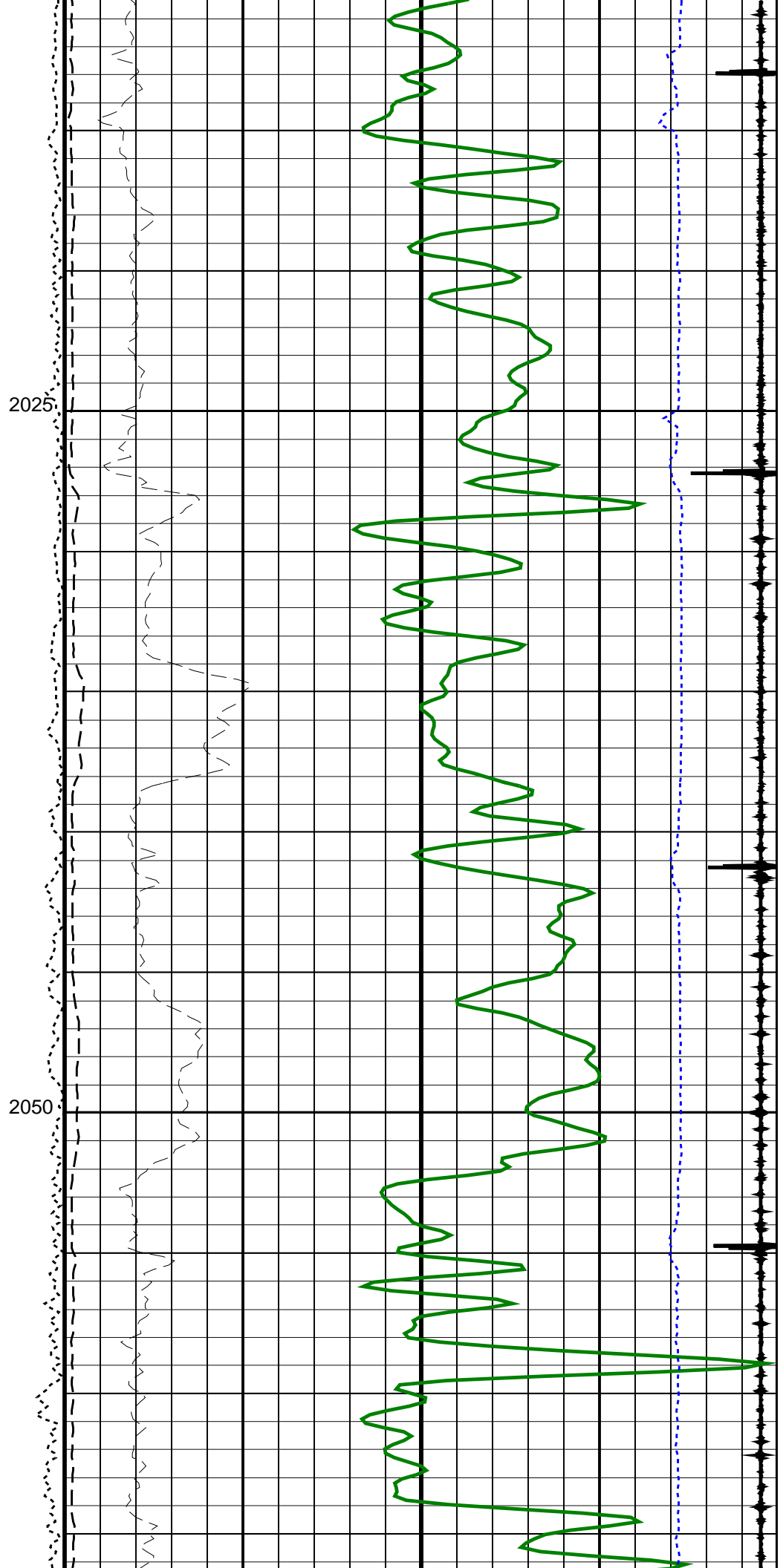
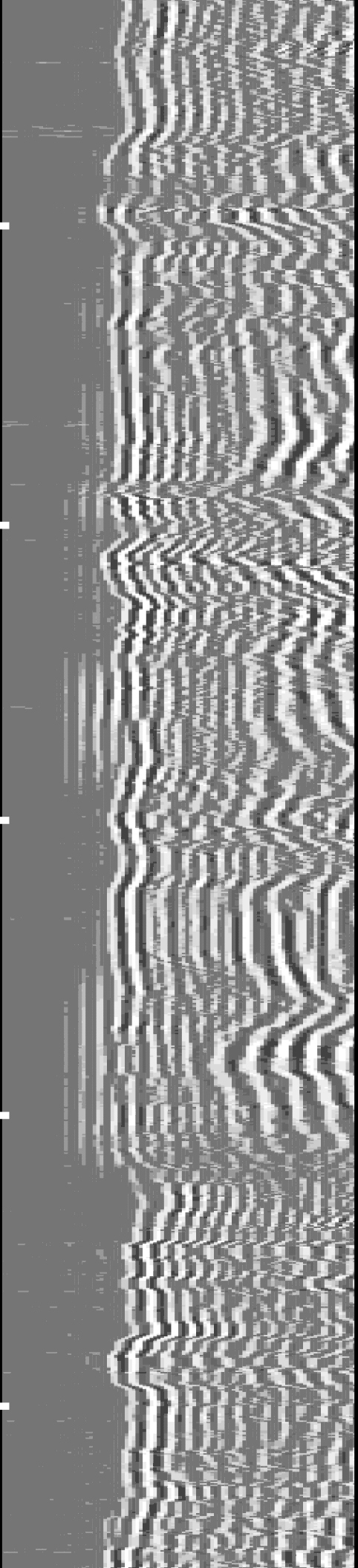


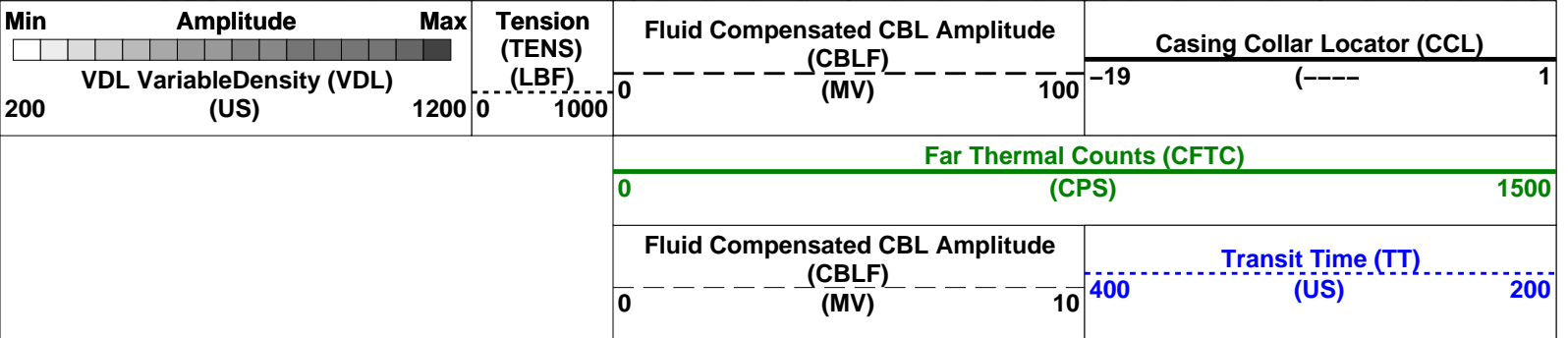
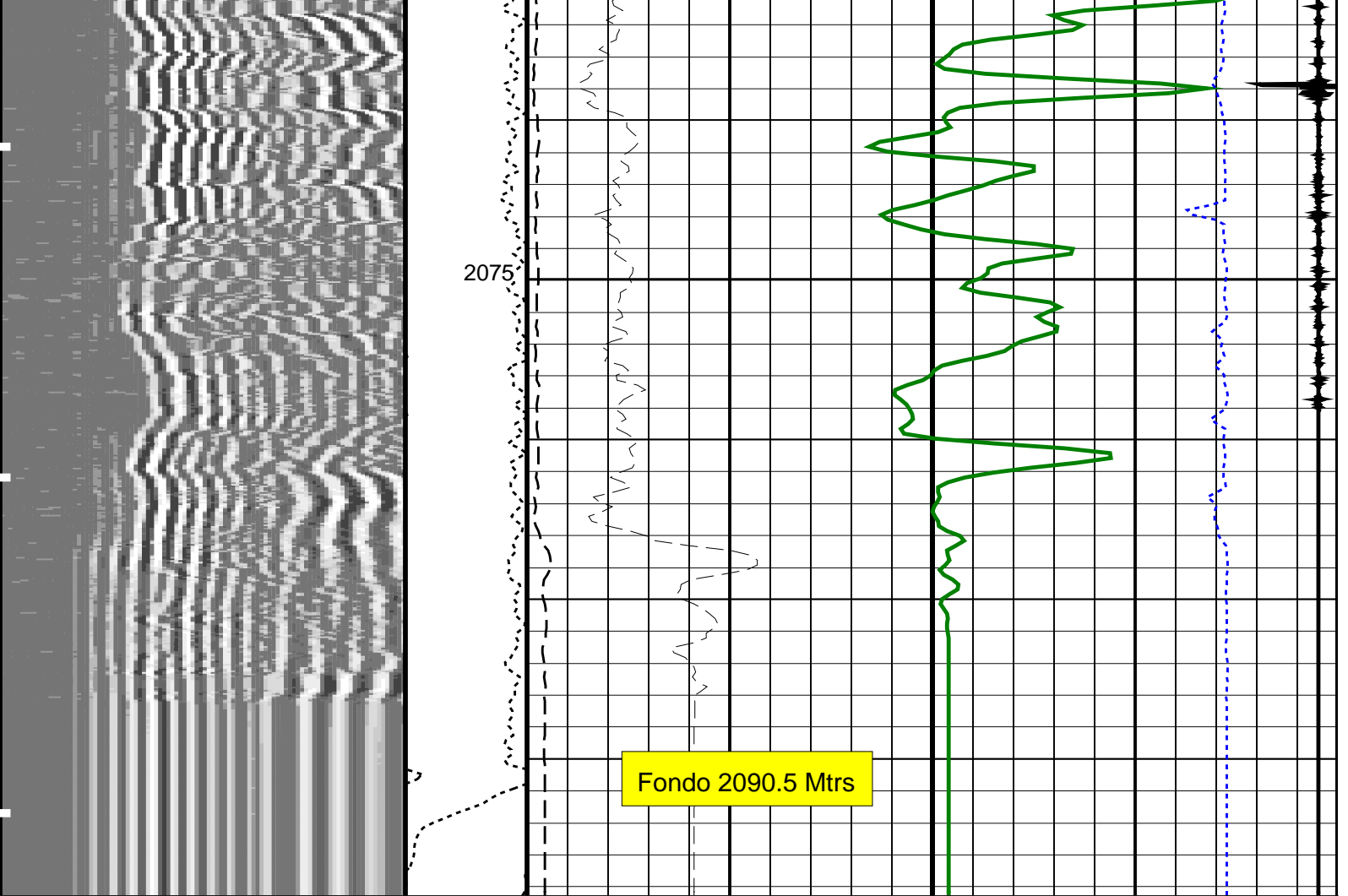












**PIP SUMMARY**

Time Mark Every 60 S

**Parameters**

DLIS Name	Description	Value
SDT-C: Sonic Digital - C		
AGC	Automatic Gain Control	ON
AMSG	Auxilliary Minimum Sliding Gate	140 US
ASGL	Auxilliary Minimum Sliding Gate Width	100 US
BILI	Bond Index Level for Zone Isolation	0.8
CBLG	CBL Gate Width	40 US
CDDEL	Digitizing Delay (Acq Monitor Checked)	200 US
CDSIN	Digitizer Sample Interval (Acq Monitor Checked)	DS10
CDTS	C-Delta-T Shale	100 US/F
CDWCO	Digitizer Word Count (Acq Monitor Checked)	500
CRMOD	Receiver Mode (Acq Monitor Checked)	B
CSTR	Compressive Strength of Cement	13789.5 KPAA
CVDLM	VDL Firing Mode (Acq Monitor Checked)	UTFR
CWMOD	Waveform Firing Mode (Acq Monitor Checked)	NONE
DDE0	Digitizing Delay 0	200 US
DDEL	Digitizing Delay	200 US
DDMG	Downhole Differential Multi-Gain	10
DETE	Detection	E1
DSI0	Digitizer Sample Interval 0	10 US
DSIN	Digitizer Sample Interval	DS10

DSIN	Digitizer Sample Interval	FULL	
DTCM	Delta-T Computation Mode	189	US/F
DTF	Delta-T Fluid	56	US/F
DTM	Delta-T Matrix	500	
DWCO	Digitizer Word Count 0	500	
DWCO	Digitizer Word Count	0.47	
FCF	CBL Fluid Compensation Factor	40	
GAI	Manual Gain	2	MV
GOBO	Good Bond	DT	
ITTS	Integrated Transit Time Source	1.4478	M
MCI	Minimum Cemented Interval for Isolation	3500	
MGAI	Maximum Gain	CBL	
MODE	Firing Mode	1.05764	MV
MSA	Minimum Sonic Amplitude	248	US
NMSG	Near Minimum Sliding Gate	R15	
RATE	Firing Rate	B	
RMOD	Receiver Mode	0	DB/M
SFAF	Sonic Formation Attenuation Factor	ON	
SGAD	Sliding Gate	50	US/F
SGDT	Sliding Gate Delta-T	80	US
SGW	Sliding Gate Width	5000	MV
SLEV	Signal Level for AGC	RAYMER_HUNT	
SPFS	Sonic Porosity Formula	DT	
SPSO	Sonic Porosity Source	13	MS
SWW	Sonic Window Width	ON	
T0CA	T0 Correction	OFF	
TSIG	Test Signal	5	
VDLG	VDL Manual Gain	UTFR	
VDLM	VDL Firing Mode	ON	
WAGC	Waveform AGC	20	
WGAI	Waveform Manual Gain WGAI	240	US/F
WGDT	Waveform Gain Delta-T	4800	US
WGIN	Waveform Gain Interval	NONE	
WMOD	Waveform Firing Mode		
<b>CNT-H: Compensated Neutron - H</b>			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	CASED	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	YES	
DPPM	Density Porosity Processing Mode	STAN	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	15	DEGC
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
<b>CAL-Y: Casing Anomaly Locator - Y</b>			
CCLD	CCL reset delay	12	IN
CCLT	CCL Detection Level	0.3	V
<b>System and Miscellaneous</b>			
ALTDCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	15.50	LB/F
DFD	Drilling Fluid Density	1.00	G/C3
DORL	Depth Offset for Repeat Analysis	0.0	M
MST	Mud Sample Temperature	-50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	-50000	M
TDD	Total Depth - Driller	-50000.00	M
TDL	Total Depth - Logger	-50000.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: CBL\_Fluid\_Compensated Vertical Scale: 1:200 Graphics File Created: 02-Apr-2005 21:51

## OP System Version: 11C0-305

MCM

SDT-C 11C0-305 CNT-H OP11-KP1  
TCC-B OP11-KP1 CAL-Y 11C0-305

# Output DLIS Files

DEFAULT

SONIC\_CNL\_004LUP

FN:3

PRODUCER

02-Apr-2005 21:51

MAXIS EXPRESS

## TRAMO REPETIDO

Company: YPF S.A.

Well: YPF.Ch.EA-670

# Output DLIS Files

DEFAULT

SONIC\_CNL\_006LUP

FN:5

PRODUCER

03-Apr-2005 00:02

853.1 M

731.1 M

## OP System Version: 11C0-305

MCM

SDT-C  
TCC-B

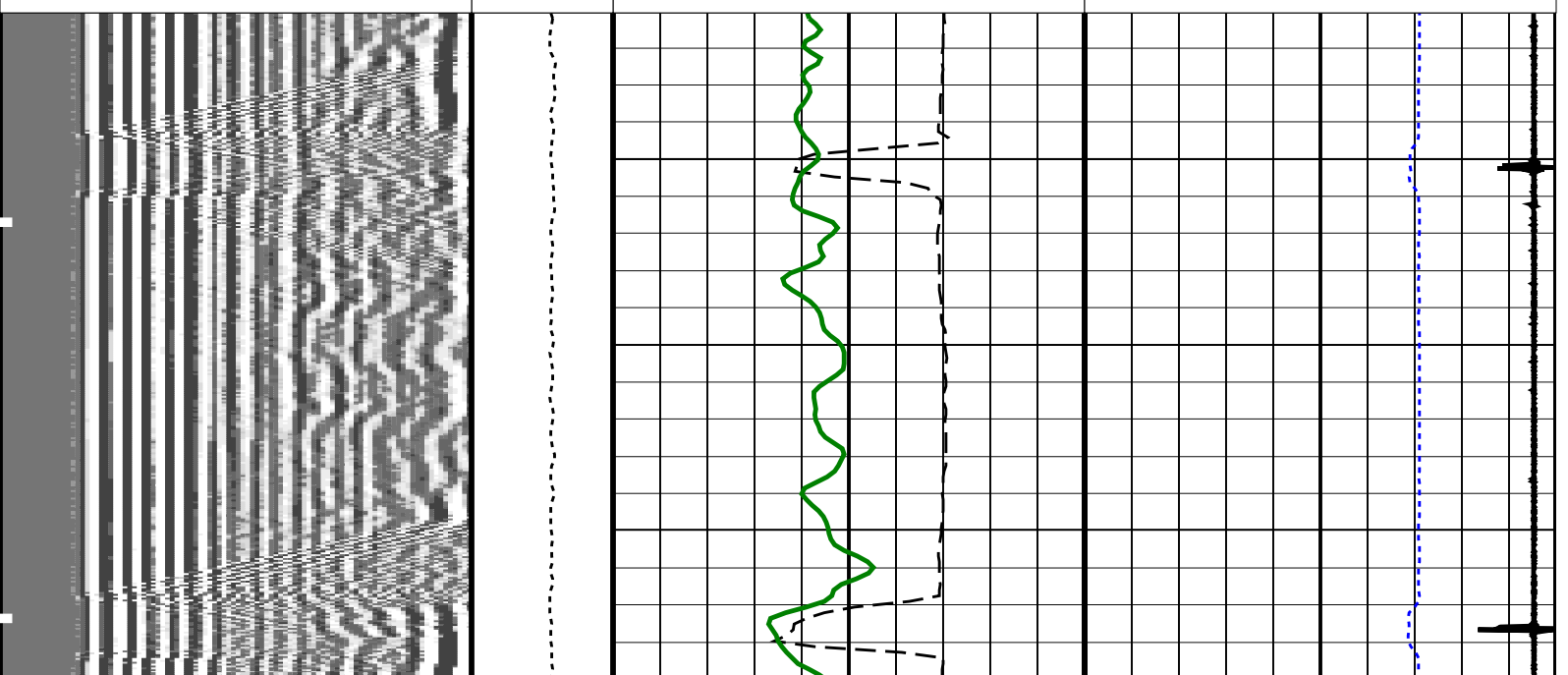
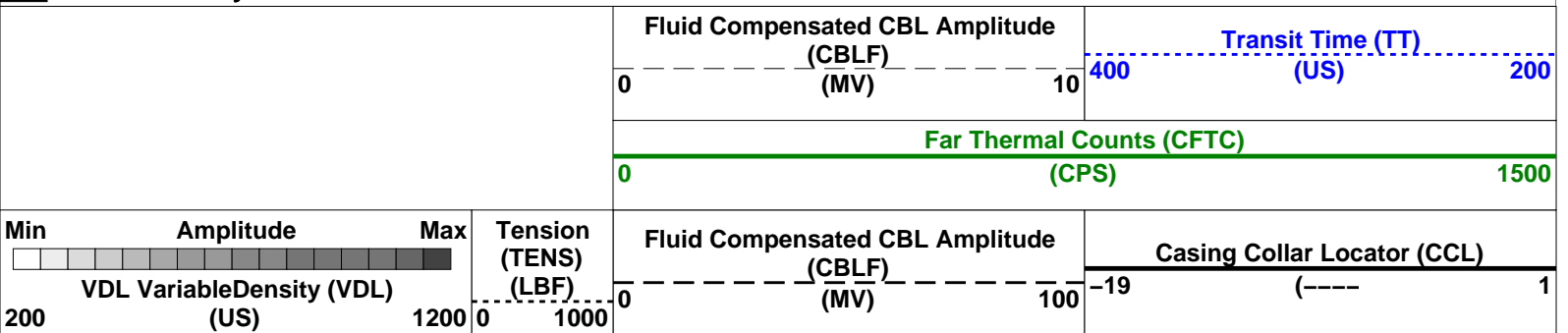
11C0-305  
OP11-KP1

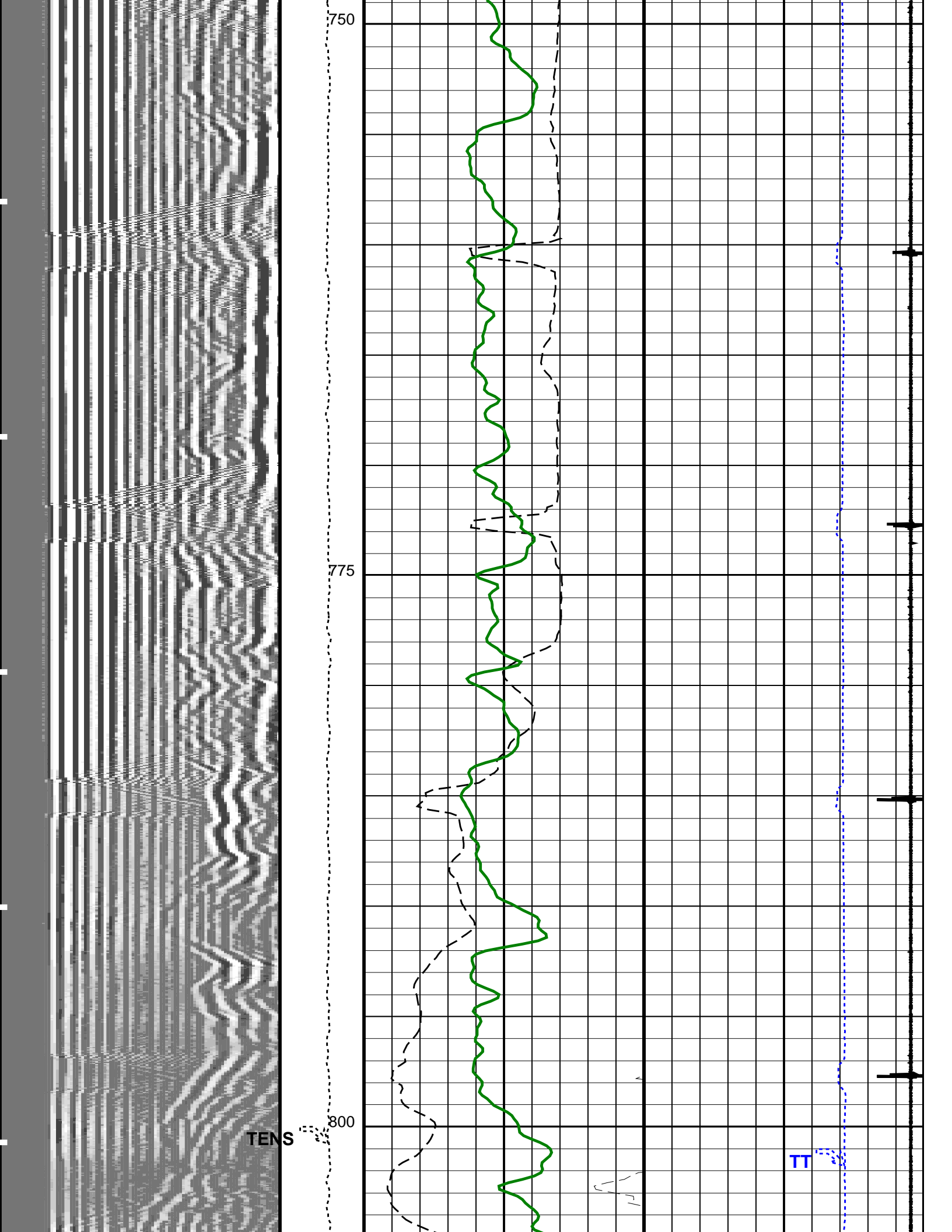
CNT-H  
CAL-Y

OP11-KP1  
11C0-305

### PIP SUMMARY

Time Mark Every 60 S





750

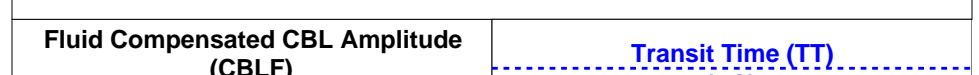
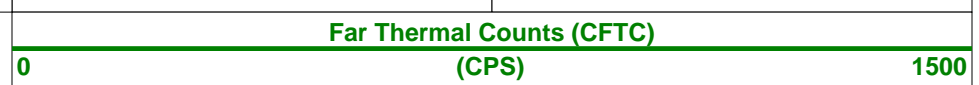
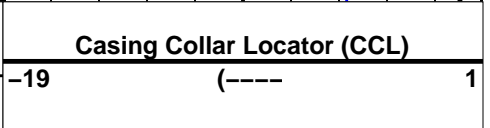
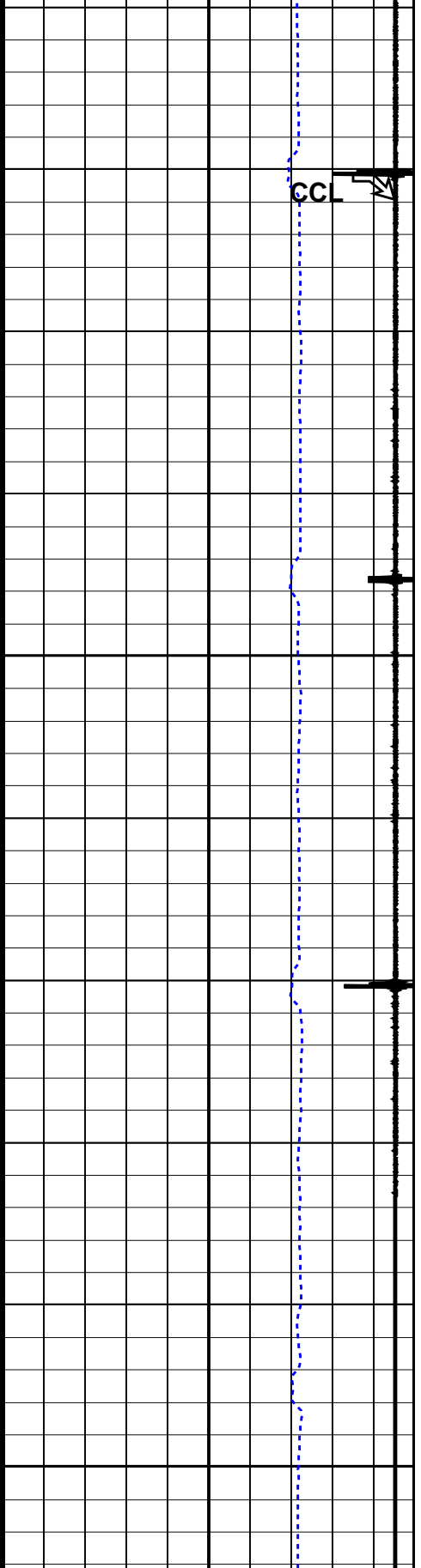
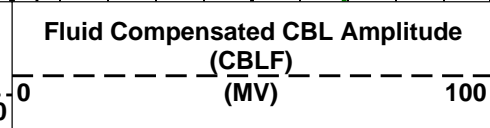
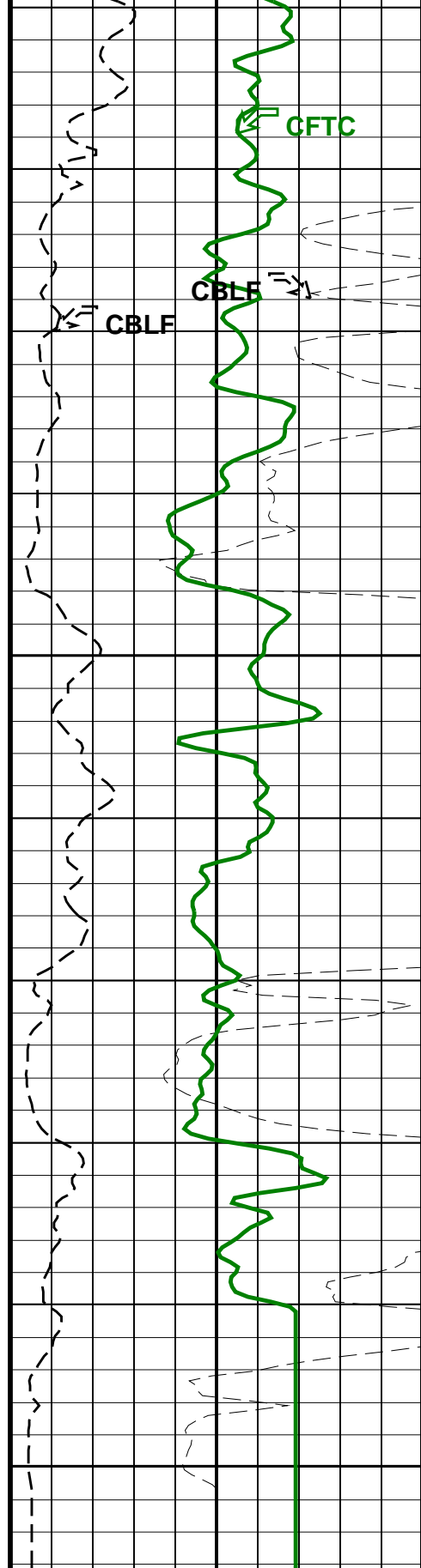
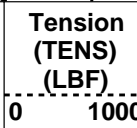
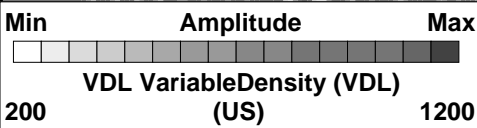
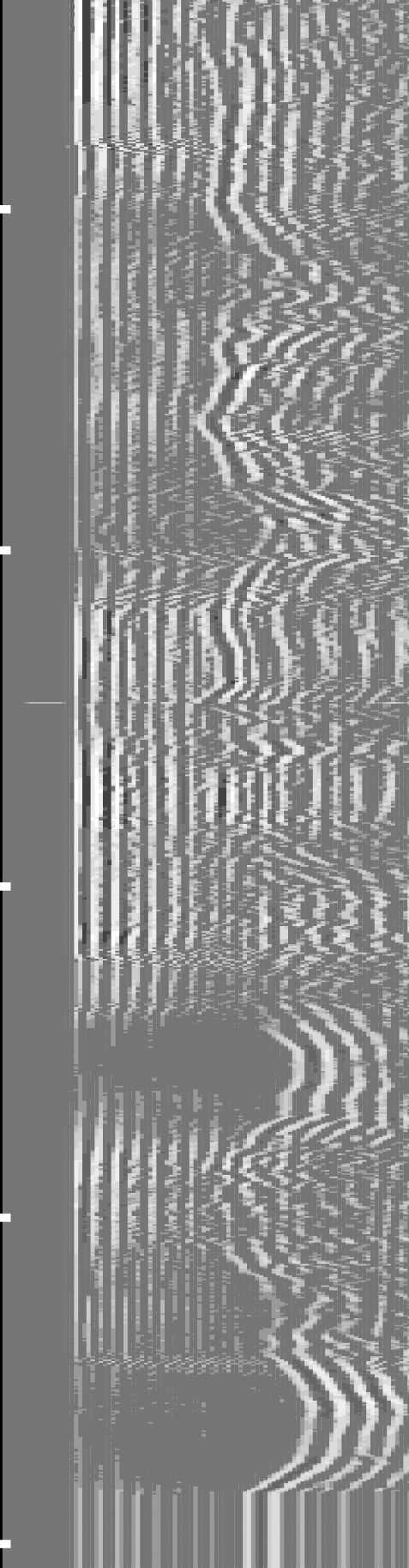
775

800

TENS

TT





PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
SDT-C: Sonic Digital - C			
AGC	Automatic Gain Control	ON	
AMSG	Auxilliary Minimum Sliding Gate	140	US
ASGL	Auxilliary Minimum Sliding Gate Width	100	US
BILI	Bond Index Level for Zone Isolation	0.8	
CBLG	CBL Gate Width	40	US
CDDEL	Digitizing Delay (Acq Monitor Checked)	200	US
CDSIN	Digitizer Sample Interval (Acq Monitor Checked)	DS10	
CDTS	C-Delta-T Shale	100	US/F
CDWCO	Digitizer Word Count (Acq Monitor Checked)	500	
CRMOD	Receiver Mode (Acq Monitor Checked)	B	
CSTR	Compressive Strength of Cement	13789.5	KPAA
CVDLM	VDL Firing Mode (Acq Monitor Checked)	UTFR	
CWMOD	Waveform Firing Mode (Acq Monitor Checked)	NONE	
DDE0	Digitizing Delay 0	200	US
DDEL	Digitizing Delay	200	US
DDMG	Downhole Differential Multi-Gain	10	
DETE	Detection	E1	
DSI0	Digitizer Sample Interval 0	10	US
DSIN	Digitizer Sample Interval	DS10	
DTCM	Delta-T Computation Mode	FULL	
DTF	Delta-T Fluid	189	US/F
DTM	Delta-T Matrix	56	US/F
DWCO	Digitizer Word Count 0	500	
DWCO	Digitizer Word Count	500	
FCF	CBL Fluid Compensation Factor	0.47	
GAI	Manual Gain	40	
GOBO	Good Bond	2	MV
ITTS	Integrated Transit Time Source	DT	
MCI	Minimum Cemented Interval for Isolation	1.4478	M
MGAI	Maximum Gain	3500	
MODE	Firing Mode	CBL	
MSA	Minimum Sonic Amplitude	1.05764	MV
NMSG	Near Minimum Sliding Gate	248	US
RATE	Firing Rate	R15	
RMOD	Receiver Mode	B	
SFAF	Sonic Formation Attenuation Factor	0	DB/M
SGAD	Sliding Gate	ON	
SGDT	Sliding Gate Delta-T	50	US/F
SGW	Sliding Gate Width	80	US
SLEV	Signal Level for AGC	5000	MV
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DT	
SWW	Sonic Window Width	13	MS
T0CA	T0 Correction	ON	
TSIG	Test Signal	OFF	
VDLG	VDL Manual Gain	5	
VDLM	VDL Firing Mode	UTFR	
WAGC	Waveform AGC	ON	
WGAI	Waveform Manual Gain WGAI	20	
WGDT	Waveform Gain Delta-T	240	US/F
WGIN	Waveform Gain Interval	4800	US
WMOD	Waveform Firing Mode	NONE	
CNT-H: Compensated Neutron - H			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	CASED	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	YES	
DPPM	Density Porosity Processing Mode	STAN	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GRGD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SPAT	Standoff Data Source	SOON	

SDAI	Standoff Data Source	SOCCN	15	DEGC
SHT	Surface Hole Temperature			
SOCN	Standoff Distance		0.5	IN
SOCO	Standoff Correction Option		NO	
CAL-Y: Casing Anomaly Locator - Y				
CCLD	CCL reset delay		12	IN
CCLT	CCL Detection Level		0.3	V
System and Miscellaneous				
ALDTPCHAN	Name of alternate depth channel	SpeedCorrectedDepth		
BS	Bit Size		8.500	IN
BSAL	Borehole Salinity		-50000.00	PPM
CSIZ	Current Casing Size		5.500	IN
CWEI	Casing Weight		15.50	LB/F
DFD	Drilling Fluid Density		1.00	G/C3
DORL	Depth Offset for Repeat Analysis		0.0	M
MST	Mud Sample Temperature		-50000.00	DEGC
PBVSADP	Use alternate depth channel for playback		NO	
RMFS	Resistivity of Mud Filtrate Sample		-50000.0000	OHMM
RW	Resistivity of Connate Water		1.0000	OHMM
TD	Total Depth		-50000	M
TDD	Total Depth - Driller		2107.00	M
TDL	Total Depth - Logger		2090.50	M
TWS	Temperature of Connate Water Sample		37.78	DEGC

Format: CBL\_Fluid\_Compensated    Vertical Scale: 1:200    Graphics File Created: 03-Apr-2005 00:02

### OP System Version: 11C0-305

MCM

SDT-C	11C0-305	CNT-H	OP11-KP1
TCC-B	OP11-KP1	CAL-Y	11C0-305

### Output DLIS Files

DEFAULT	SONIC_CNL_006LUP	FN:5	PRODUCER	03-Apr-2005 00:02
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MAXIS EXPRESS



## ANALISIS DE REPETIBILIDAD

Company: YPF S.A.    Well: YPF.Ch.EA-670

### Input DLIS Files

DEFAULT	SONIC_CNL_004LUP	FN:3	PRODUCER	02-Apr-2005 21:51	2094.3 M	732.4 M
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### Output DLIS Files

DEFAULT	SONIC_CNL_006LUP	FN:5	PRODUCER	03-Apr-2005 00:02
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### OP System Version: 11C0-305

MCM

SDT-C	11C0-305	CNT-H	OP11-KP1
TCC-B	OP11-KP1	CAL-Y	11C0-305

### PIP SUMMARY

Time Mark Every 60 S

CFTC_REP Curve (CFTC_REP)	
0	1500
(CPS)	
CBLF2_REP Curve (CBLF_REP)	TT_REP Curve (TT_REP)

