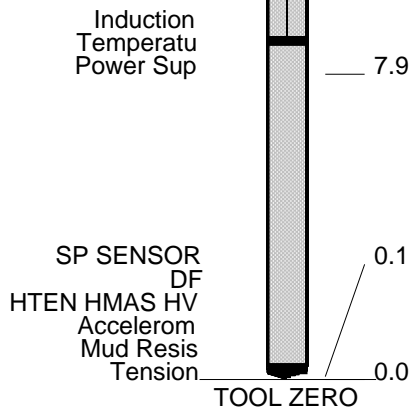


Data affected by extreme hole rugosity between the depths: 3430–3390 ft, 3150–3050 ft, 2550–2490 ft, 650–550 ft.					
Rig: Black Gold 69					
Crew: Jay Musgrave, Dave Marquez					
RUN 1			RUN 2		
SERVICE ORDER #:		BE0K-00001	SERVICE ORDER #:		
PROGRAM VERSION:		17C0-154	PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

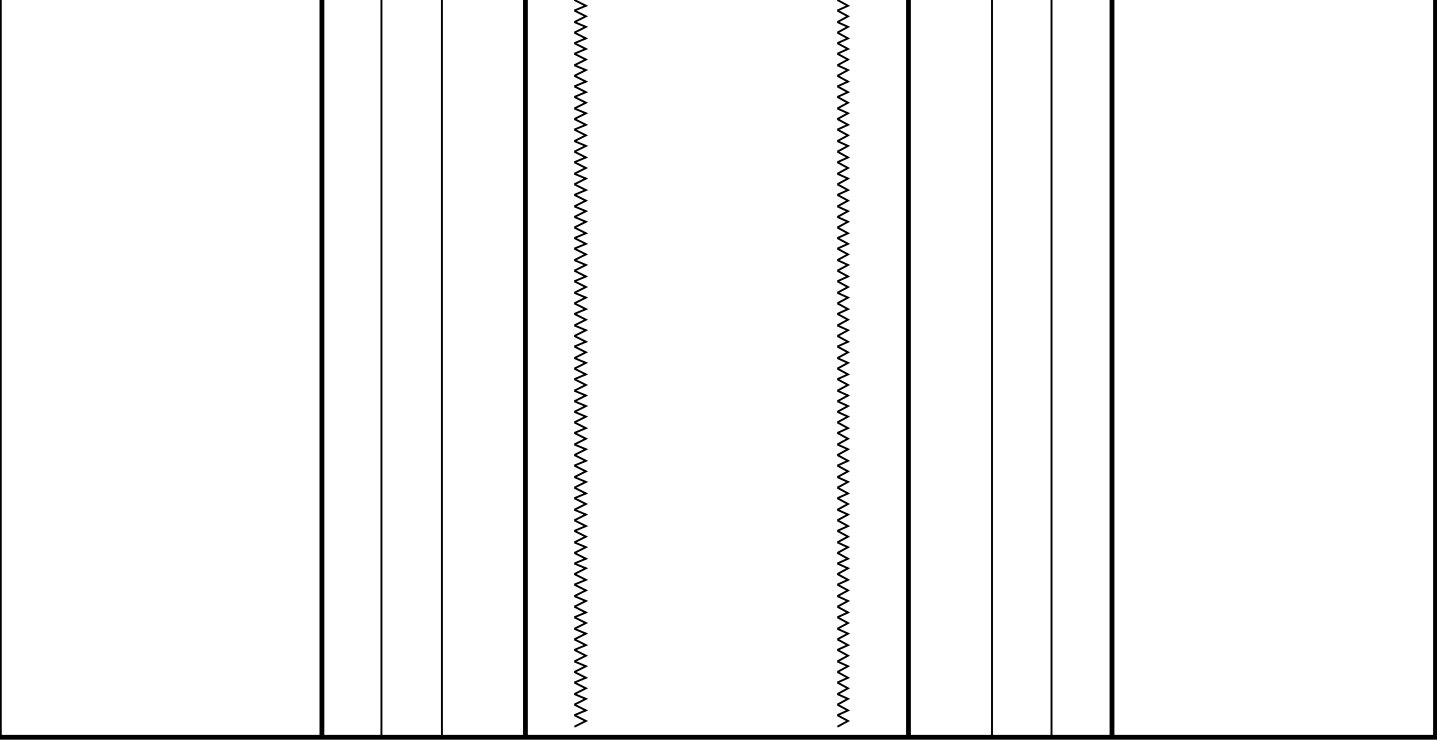
EQUIPMENT DESCRIPTION

RUN 1			RUN 2		
SURFACE EQUIPMENT WITM (DTS)–A					
GSR–U/Y NCT–B CNB–AB NCS–VB					
DOWNHOLE EQUIPMENT					
LEH–QT LEH–QT		43.6			
DTC–H ECH–KC DTCH0–A DTCH1–A	CTEM	39.7			
	TelStatus ToolStatus	37.6			
	HGNS HTEM HMCA	37.6			
HILTB–FTB HGNSD–B HMCA HGNH NLS–KL NSR–F 5068 HACCZ 452 HCNT HGR HRCC–B HRMS–B HRGD–B GLS–VJ 5416 MCFL Device HILT Nucl. LS 42767 HILT Nucl. SS 42767 HILT Nucl. BS 42767 NPV–N	HGNS Gamm	36.9			
		31.1			
	HGNS Neut HGNS Neut	30.6			
		28.2			
	HRCC cart	24.2			
	MCFL HILT cali HRDD–LS HRDD–SS HRDD–BS	18.8 18.3 17.9			
		12.9			



MAXIMUM STRING DIAMETER 4.63 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Production String	(in)		(ft)	Well Schematic	(ft)	(in)		Casing String
	OD	ID	MD		MD	OD	ID	
					0.0	8.625		Casing String
					451.0 451.0	8.625 7.875		Casing Shoe Borehole Segment



All depths are driller's depths



Main Pass

MAXIS Field Log

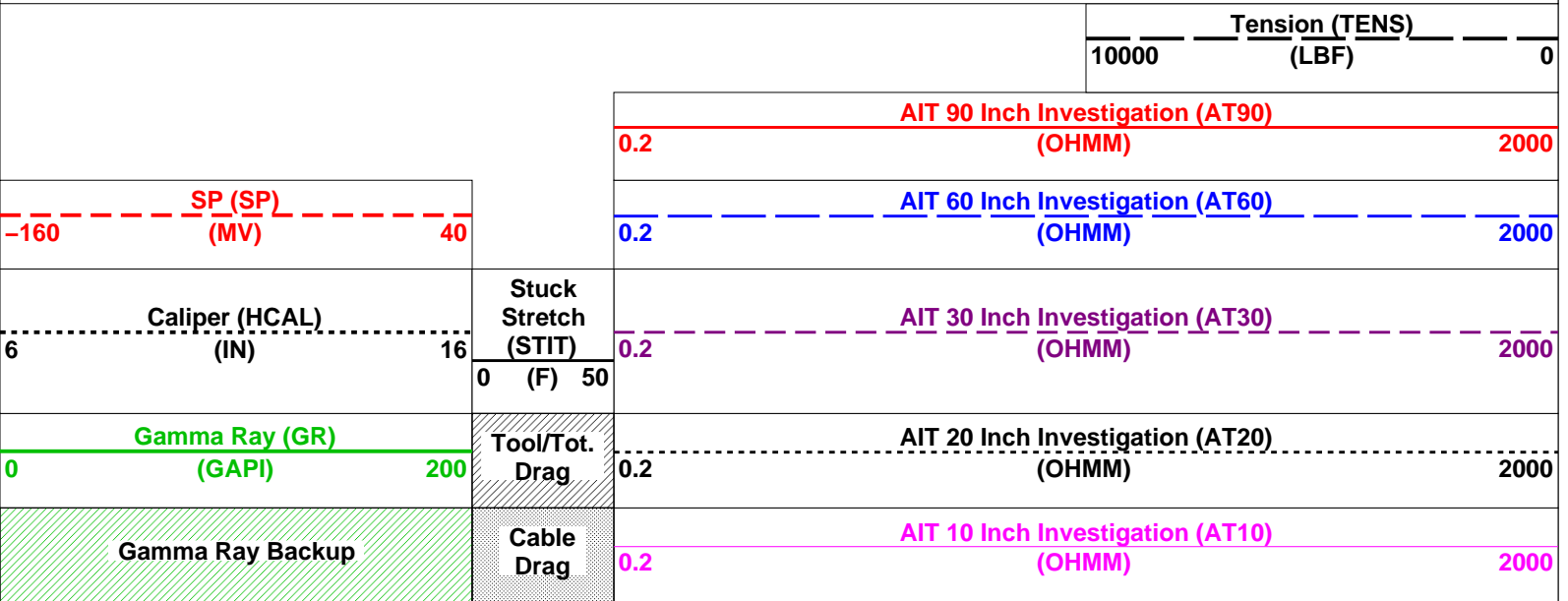
Input DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_008LUP	FN:7	PRODUCER	23-Mar-2010 13:43	5775.0 FT	401.5 FT
Output DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_017PUP	FN:16	PRODUCER	23-Mar-2010 15:04	5775.0 FT	401.5 FT
Integrated Hole/Cement Volume Summary						
Hole Volume = 2791.86 F3						
Cement Volume = 1915.71 F3 (assuming 5.50 IN casing O.D.)						
Computed from 5759.0 FT to 449.0 FT using data channel(s) HCAL						

OP System Version: 17C0-154

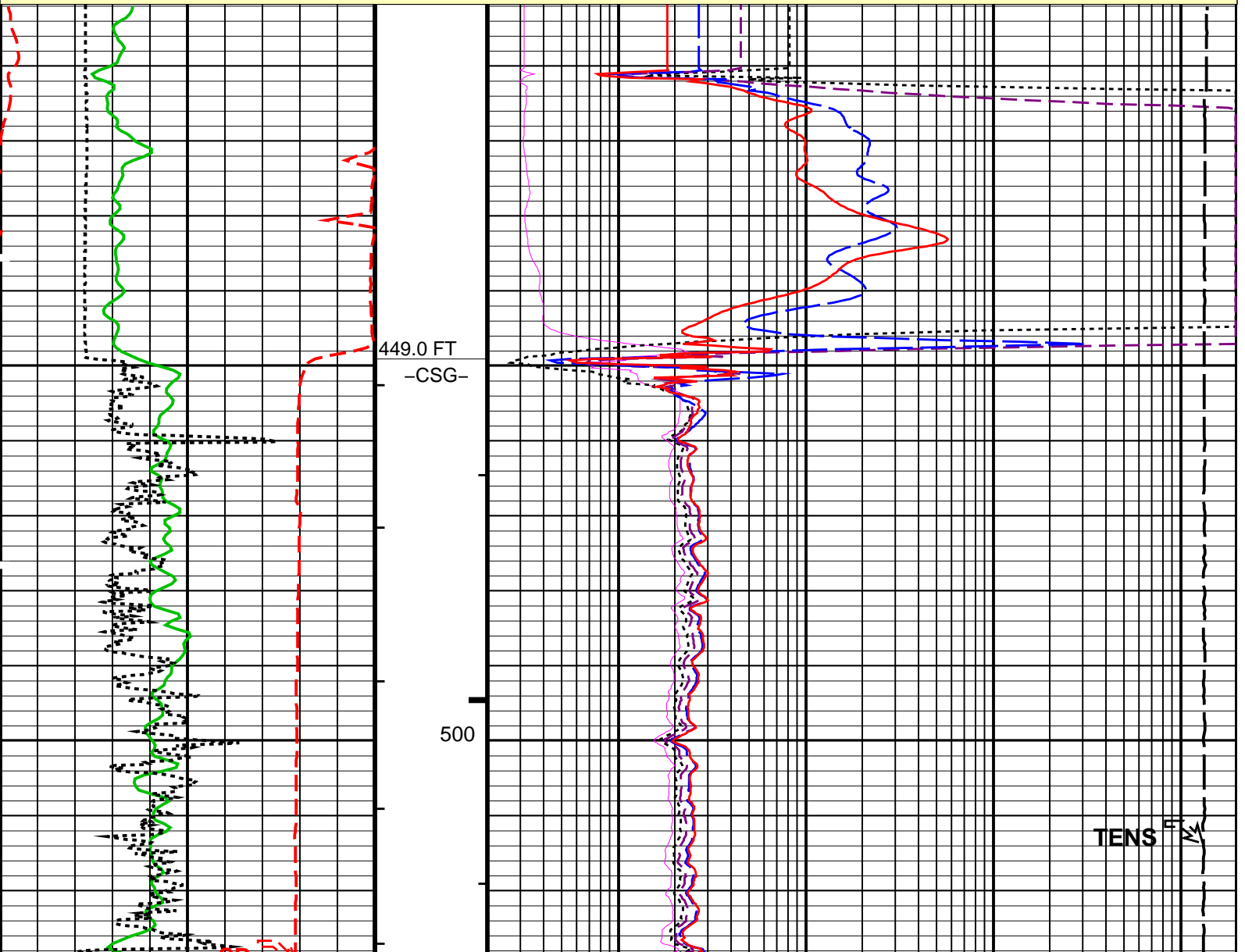
PIP SUMMARY

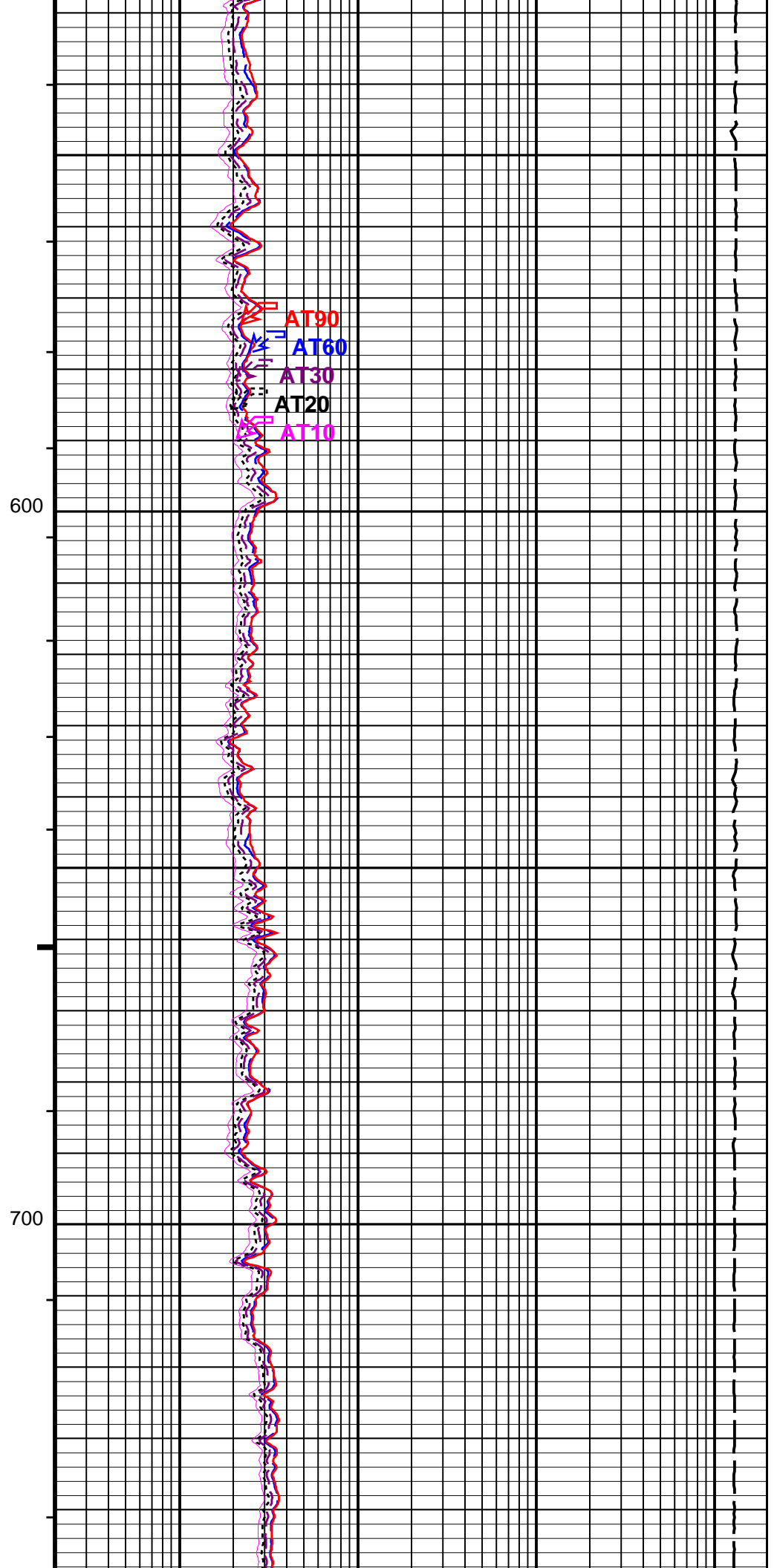
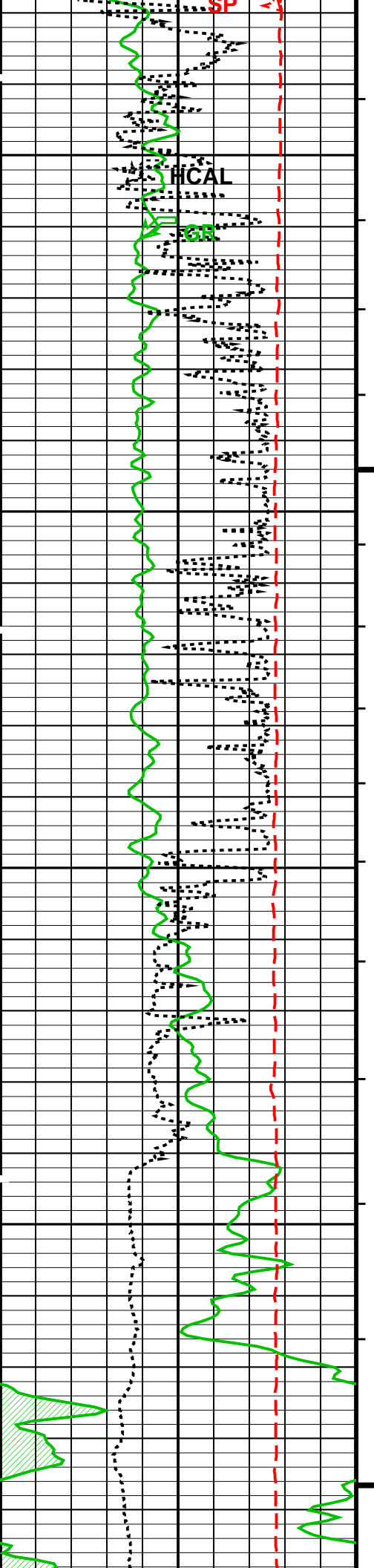
- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
- └ Integrated Cement Volume Minor Pip Every 10 F3
- └ Integrated Cement Volume Major Pip Every 100 F3

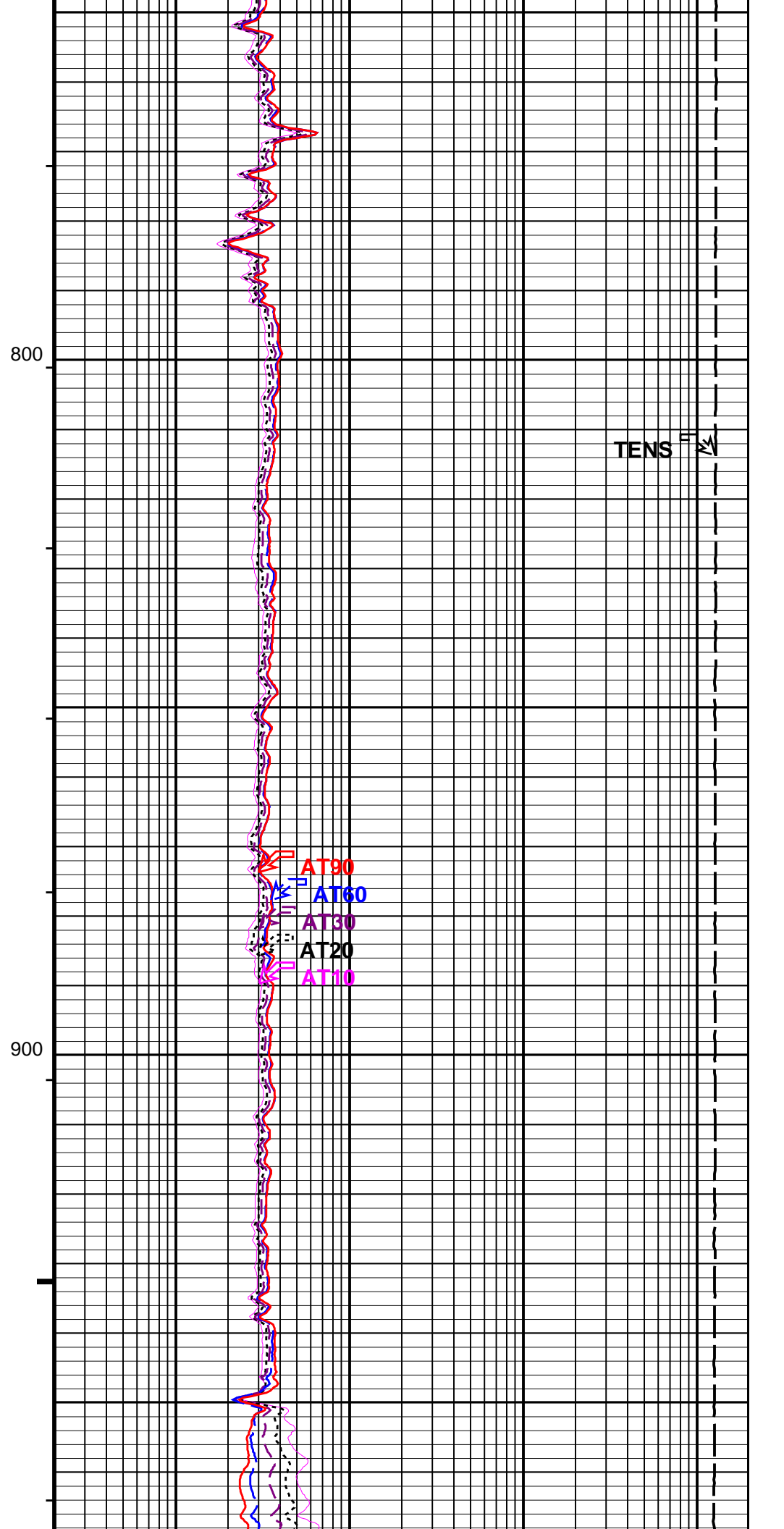
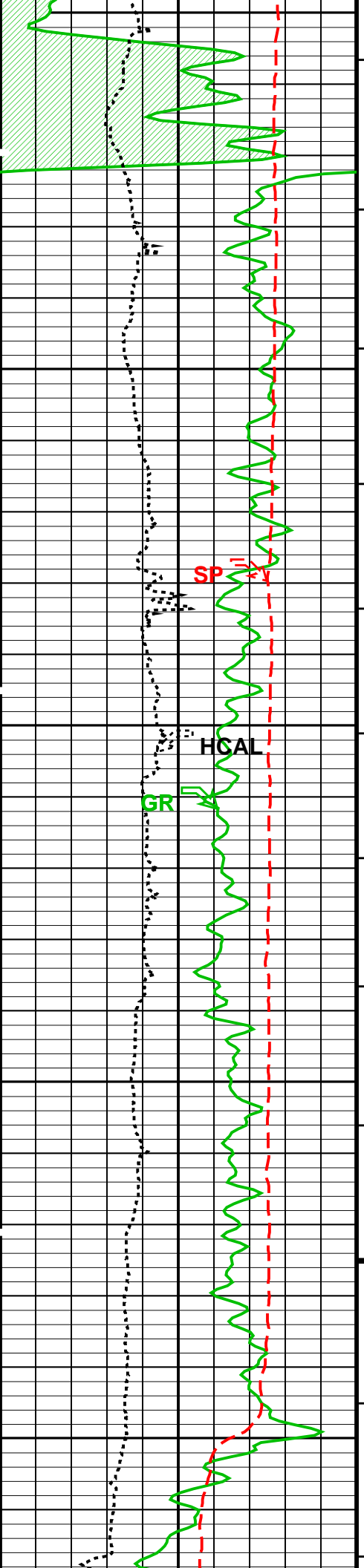
Time Mark Every 60 S

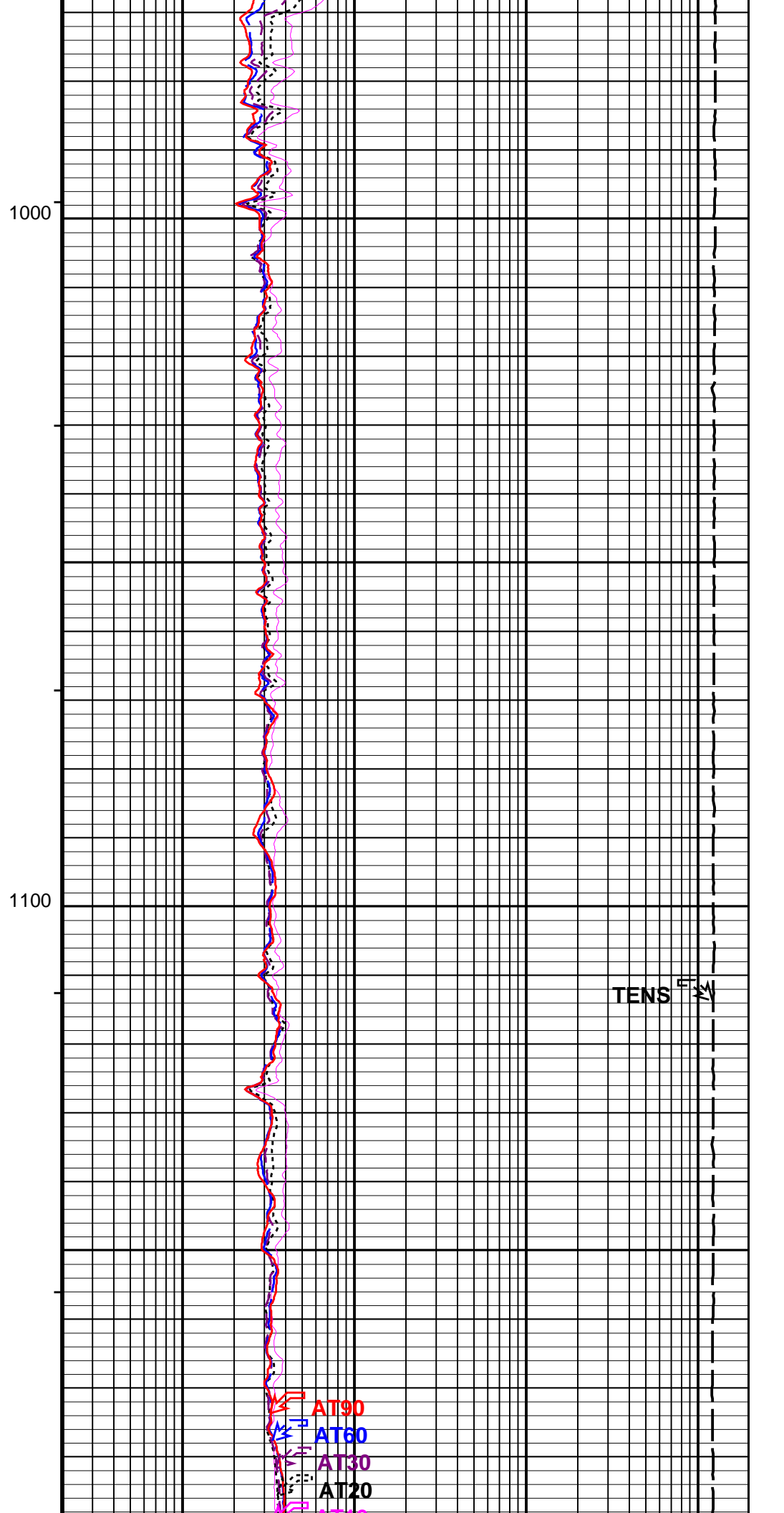
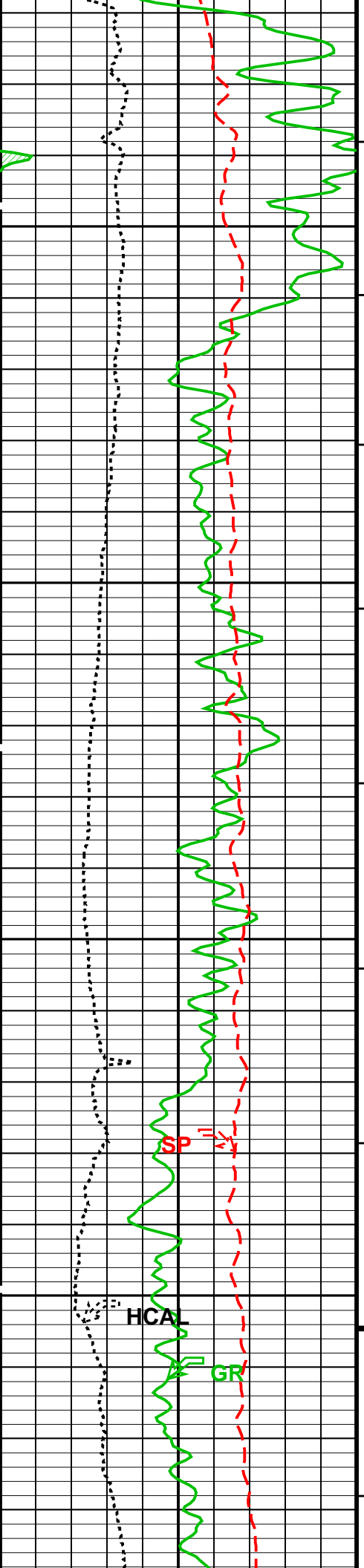


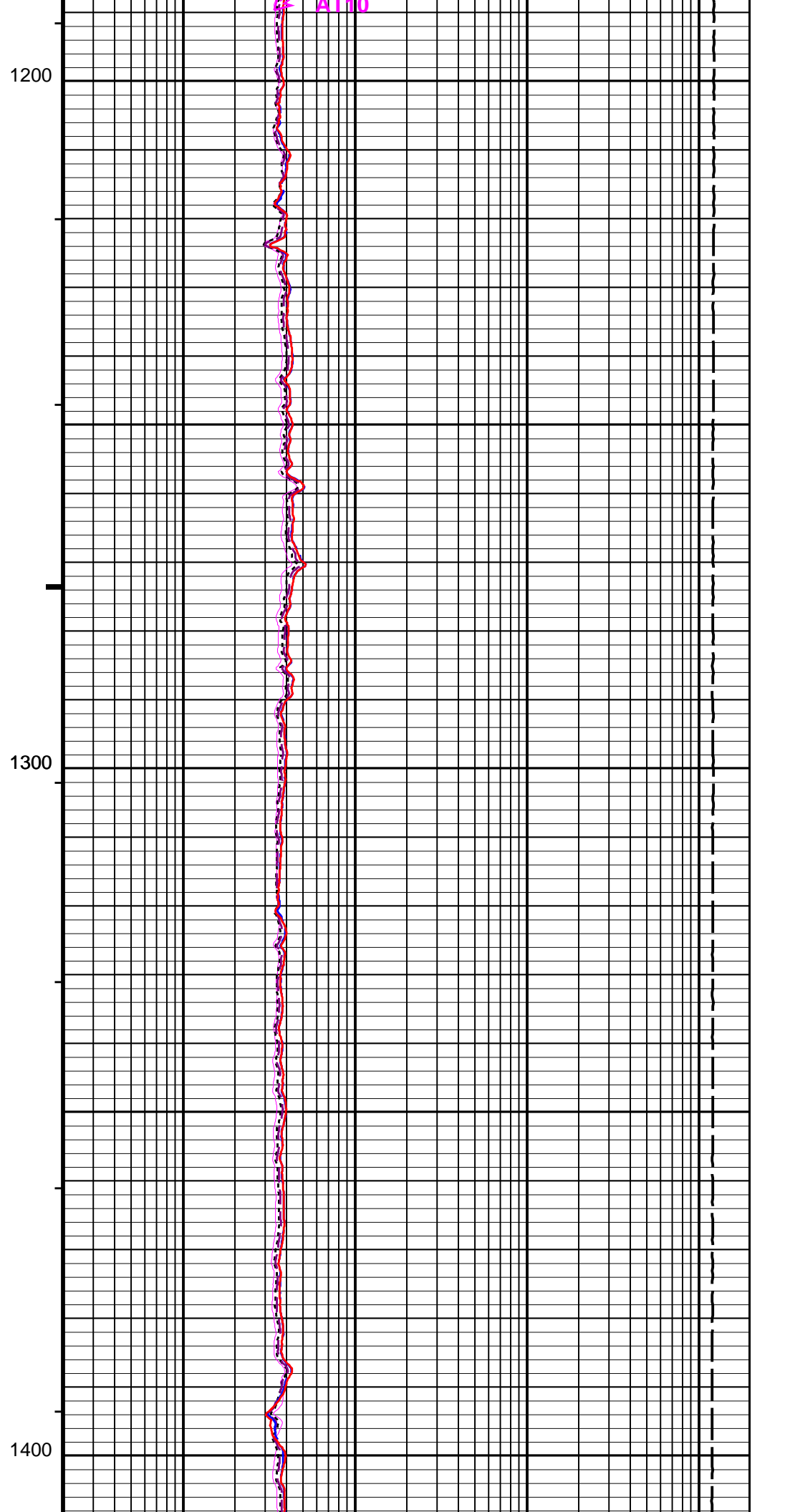
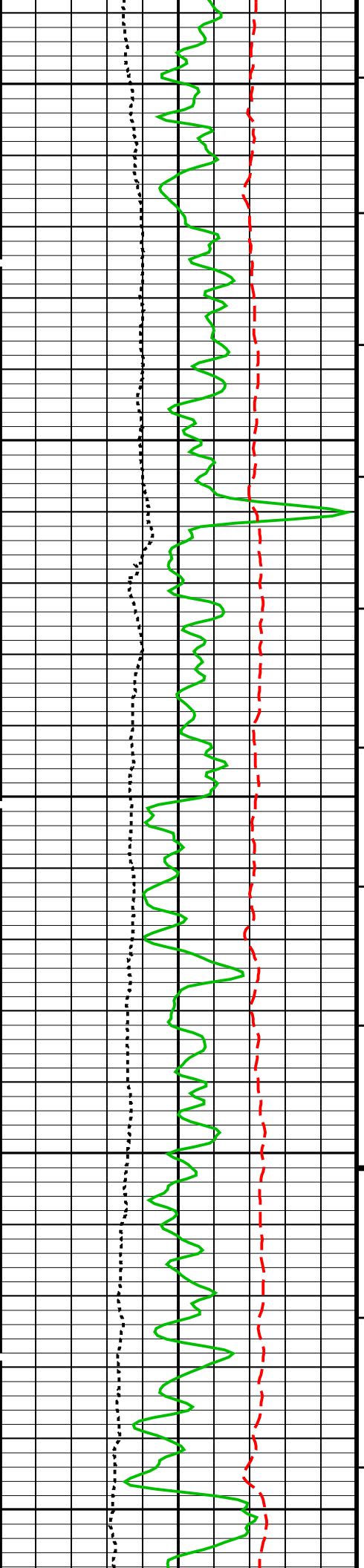
MAIN PASS: *** PLATFORM EXPRESS – ARRAY INDUCTION ***

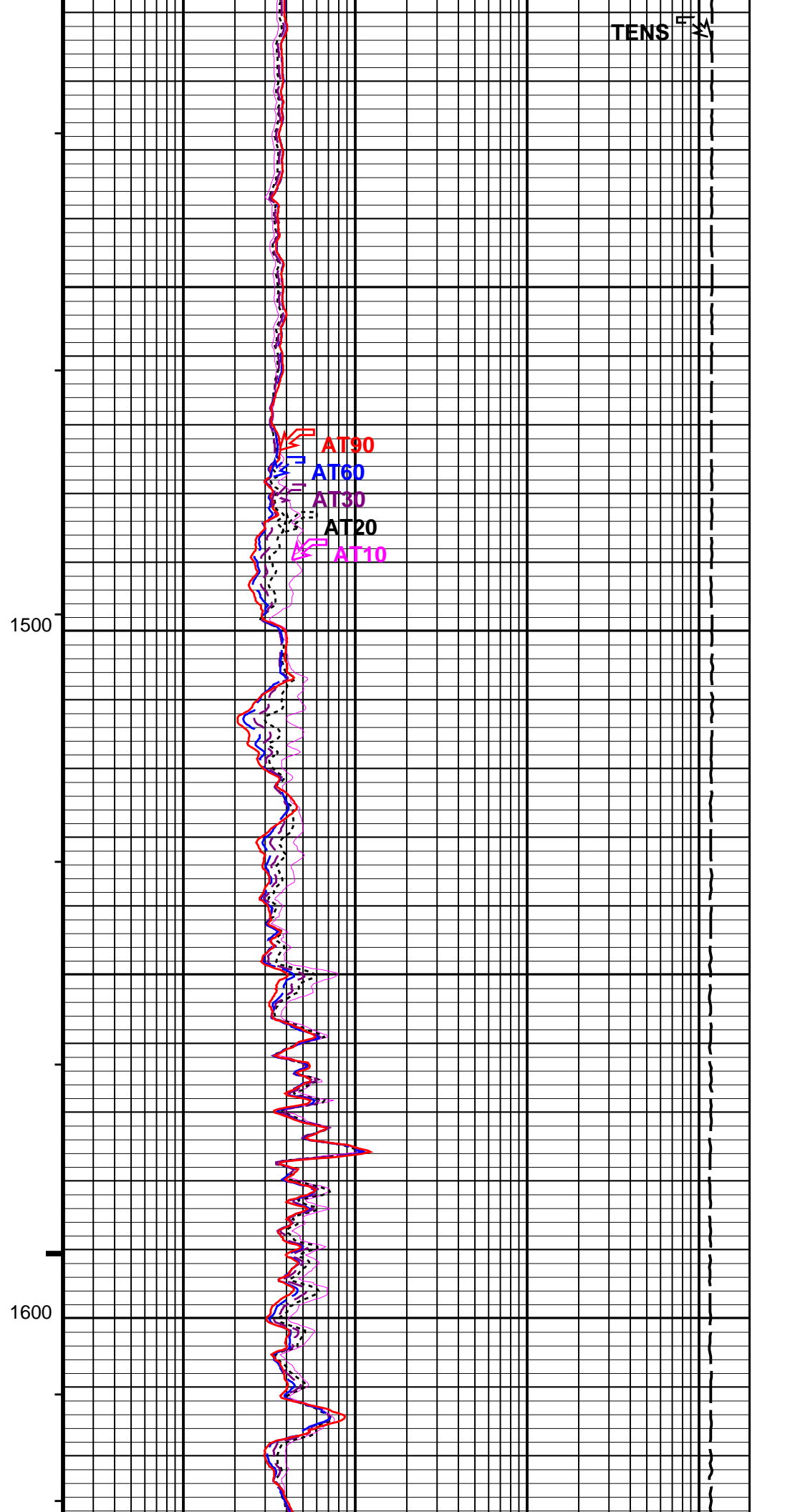
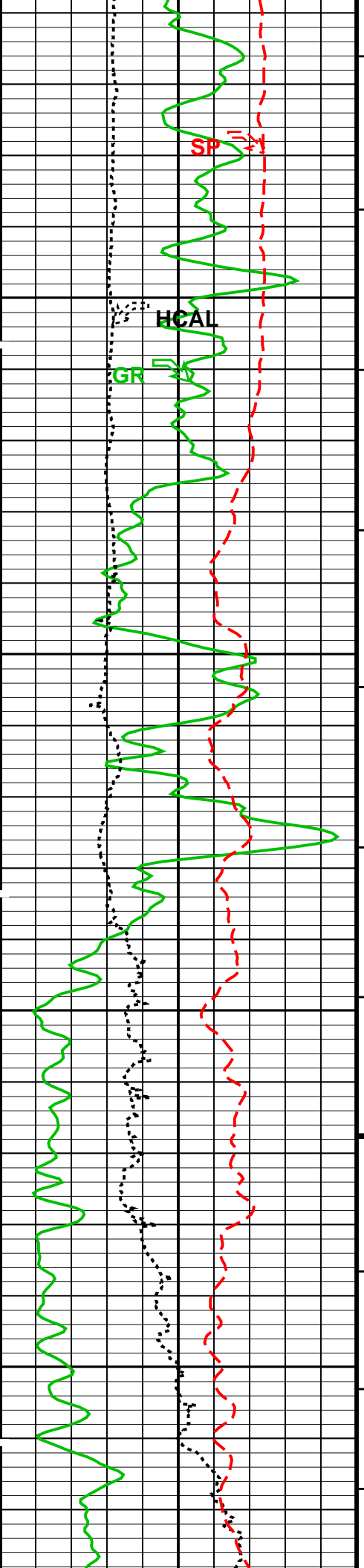


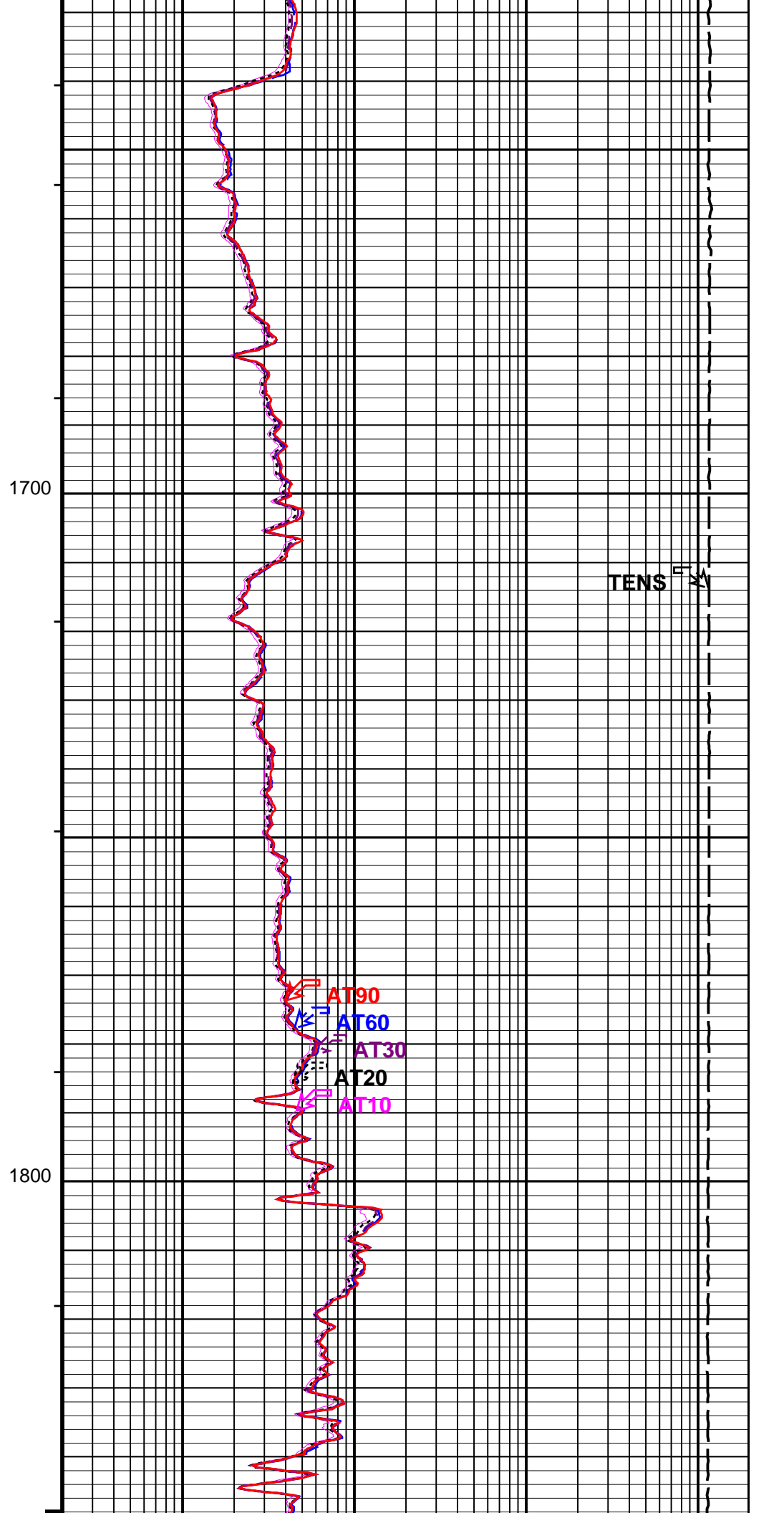
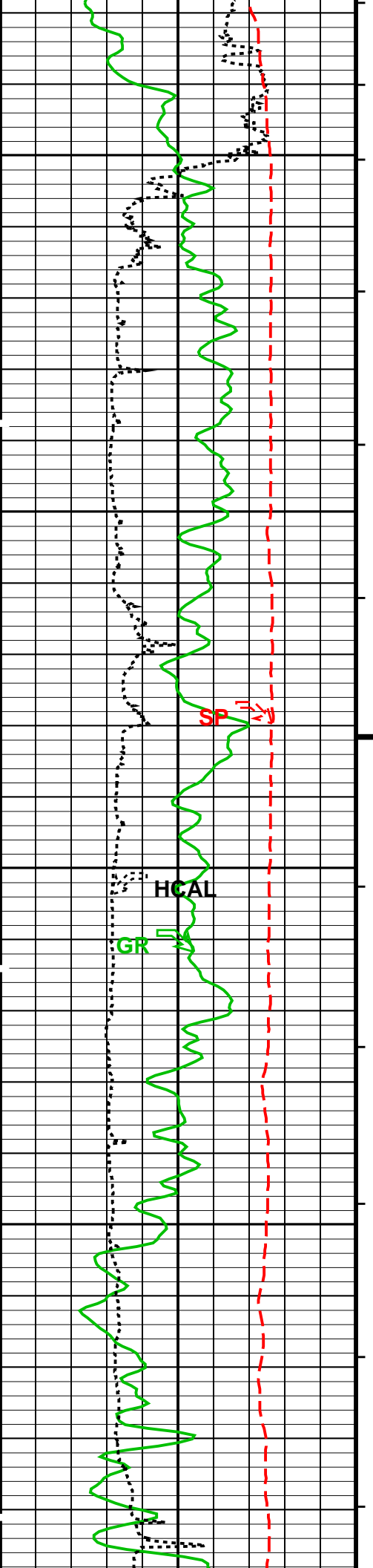


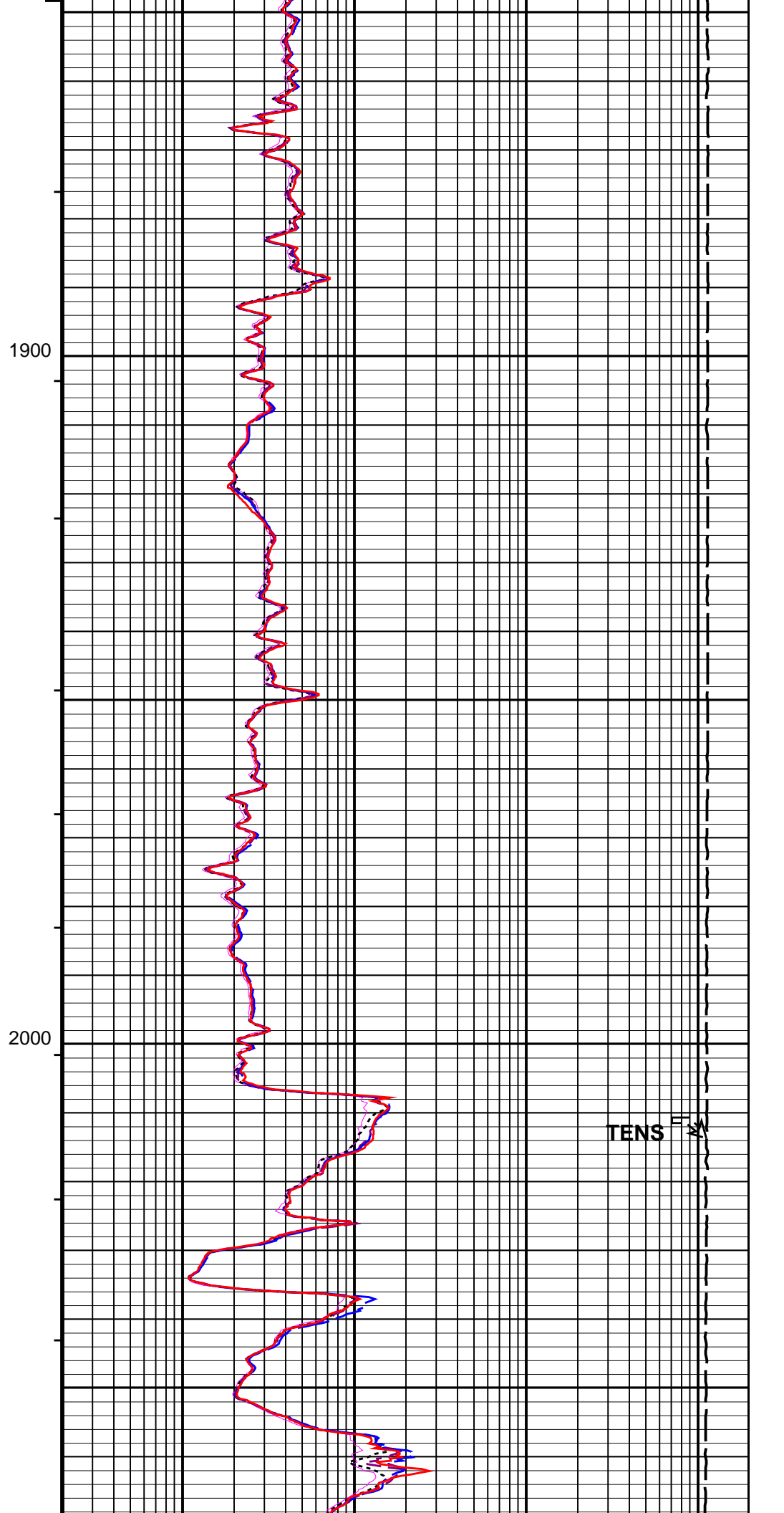
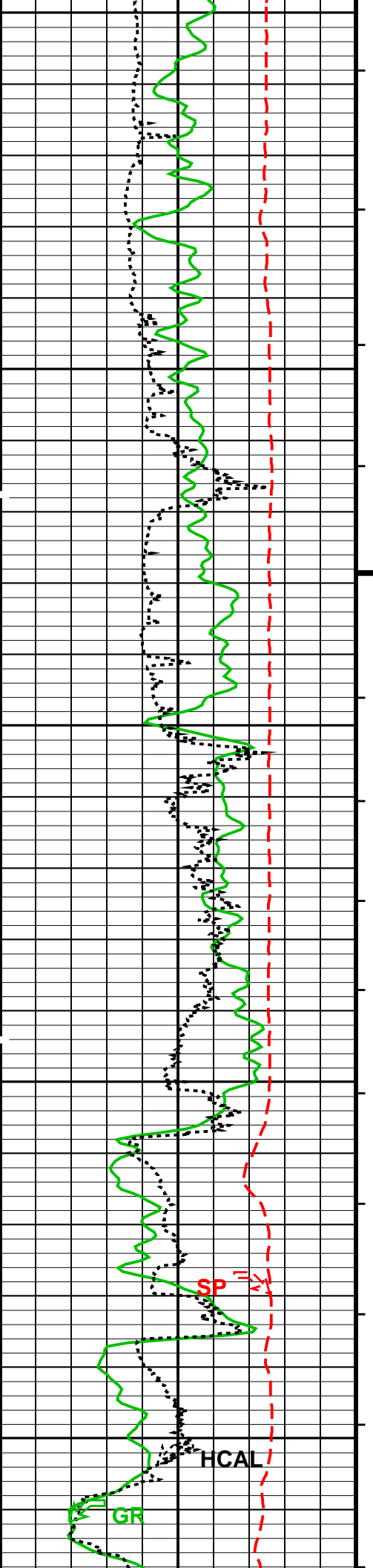


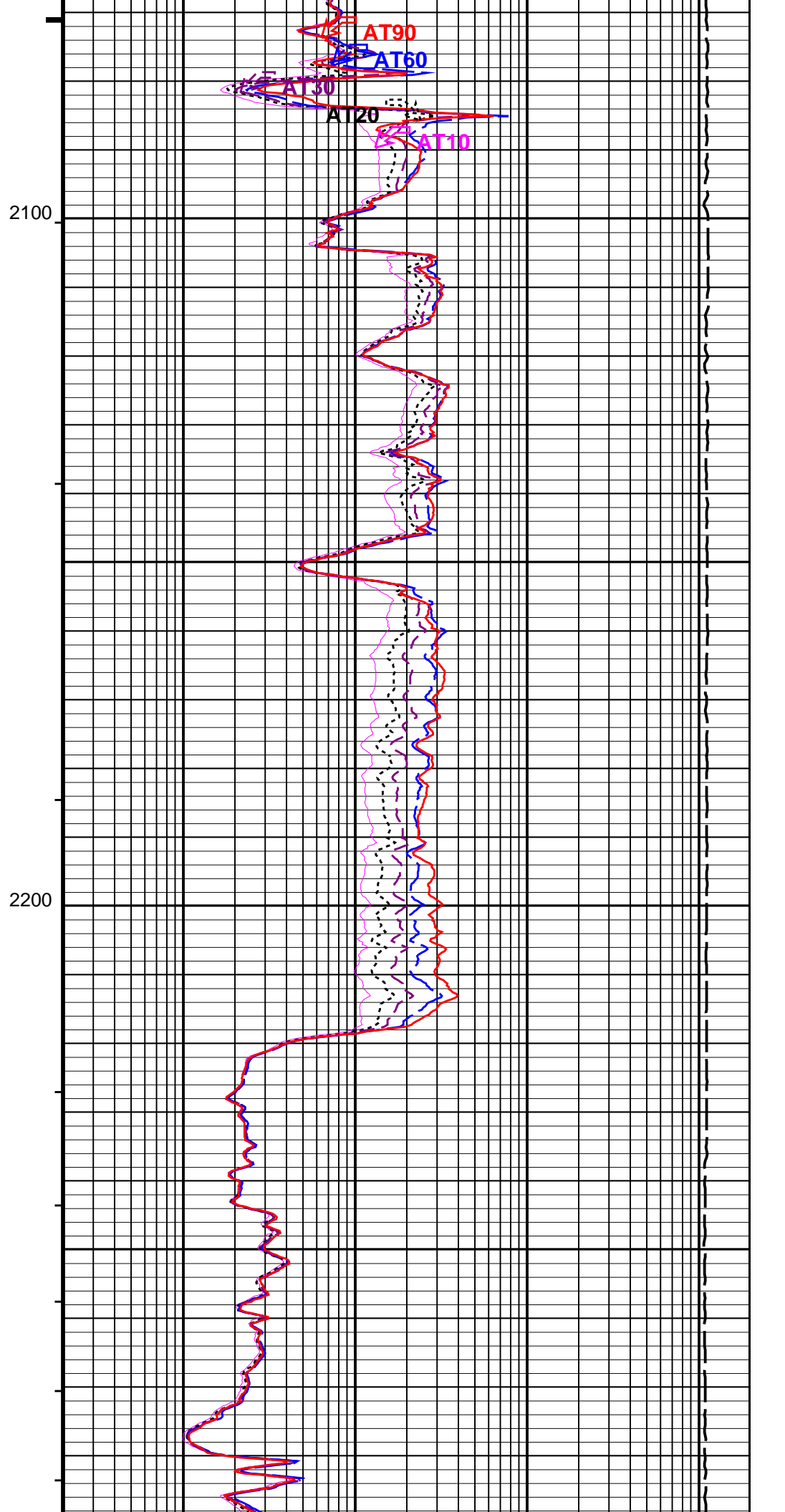
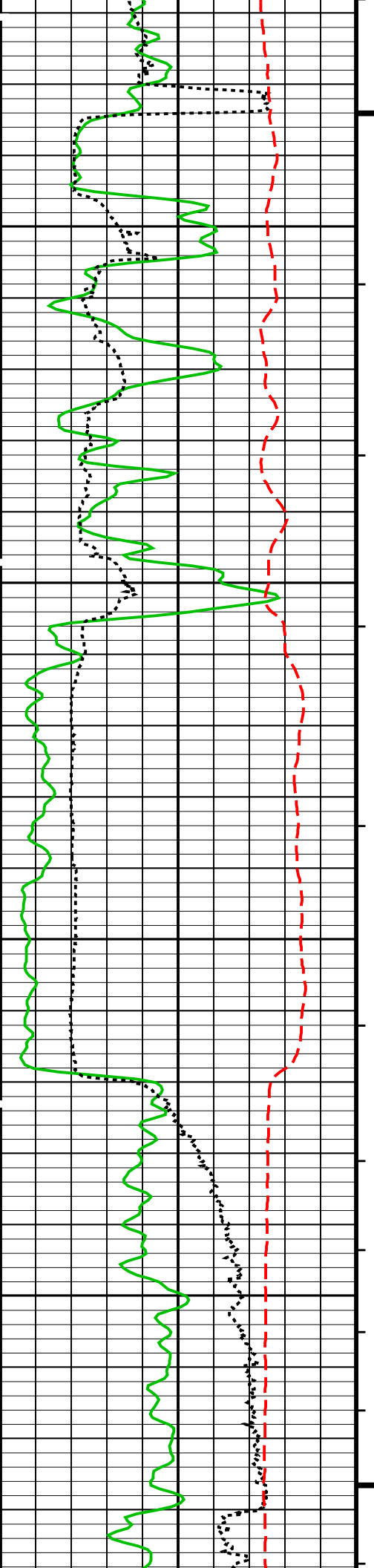


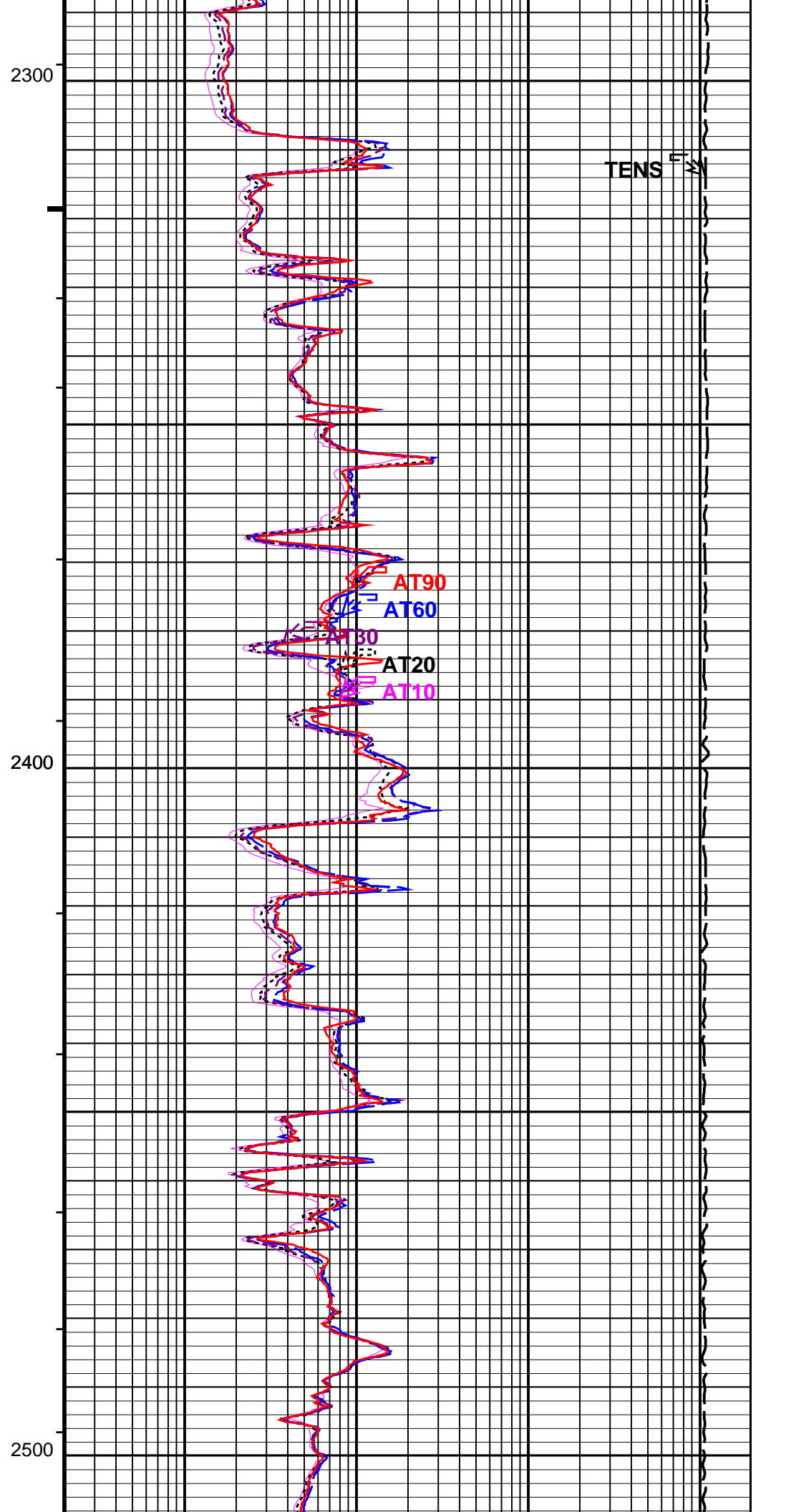
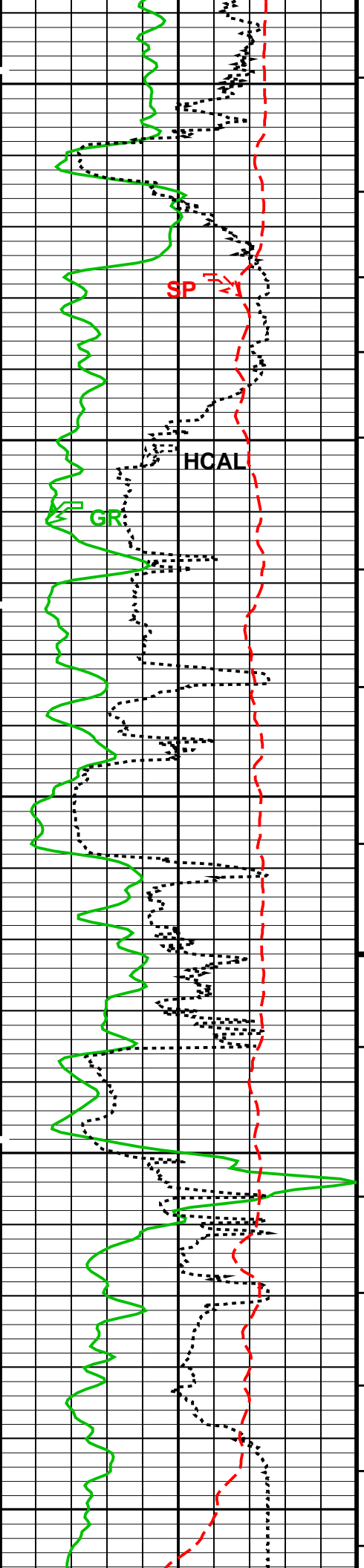


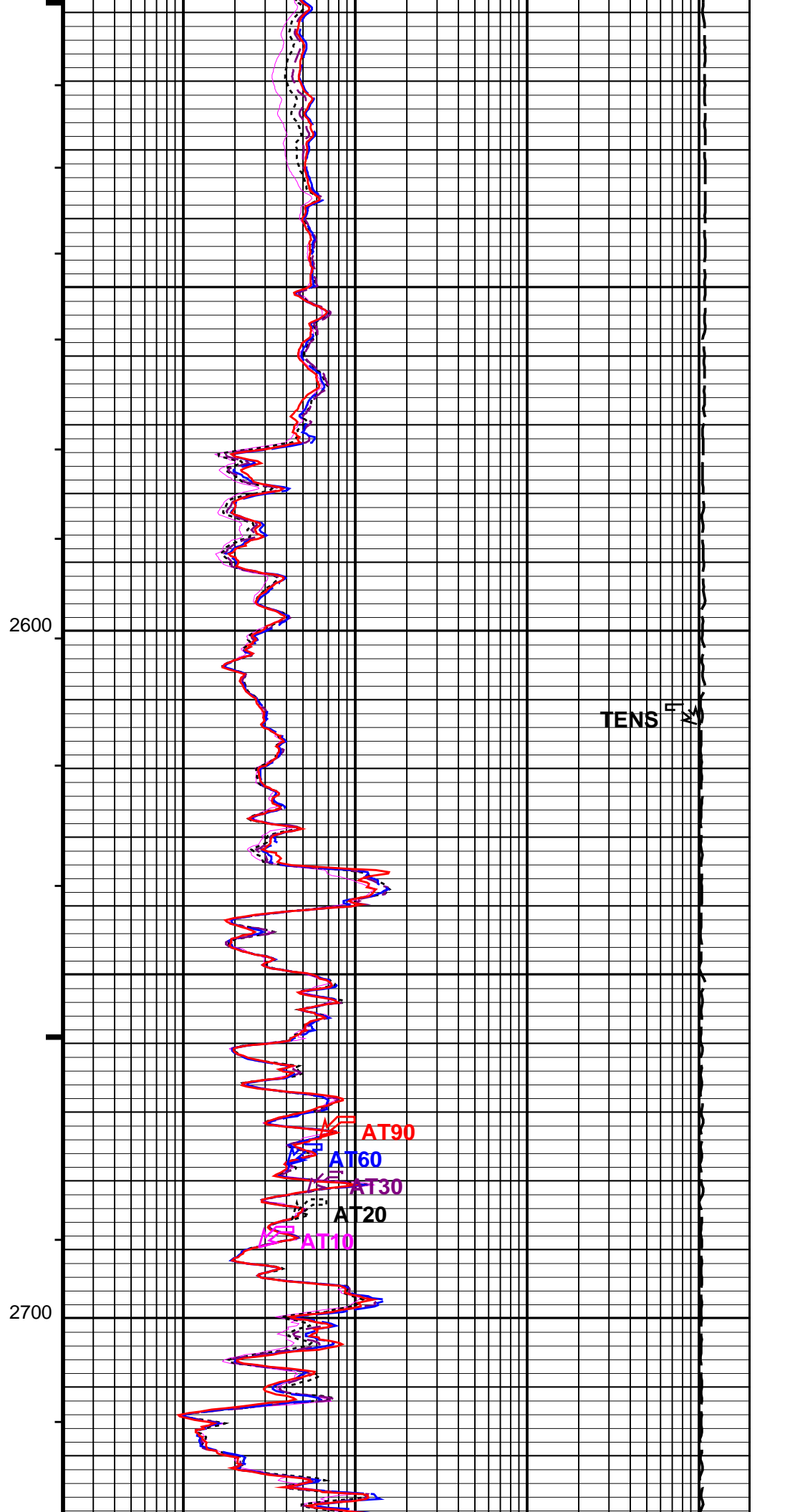
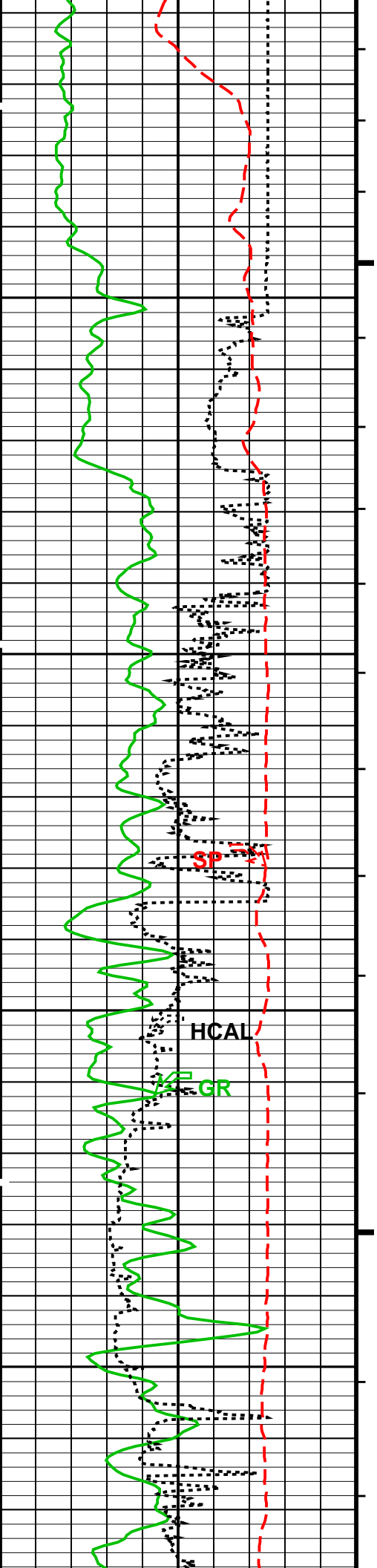


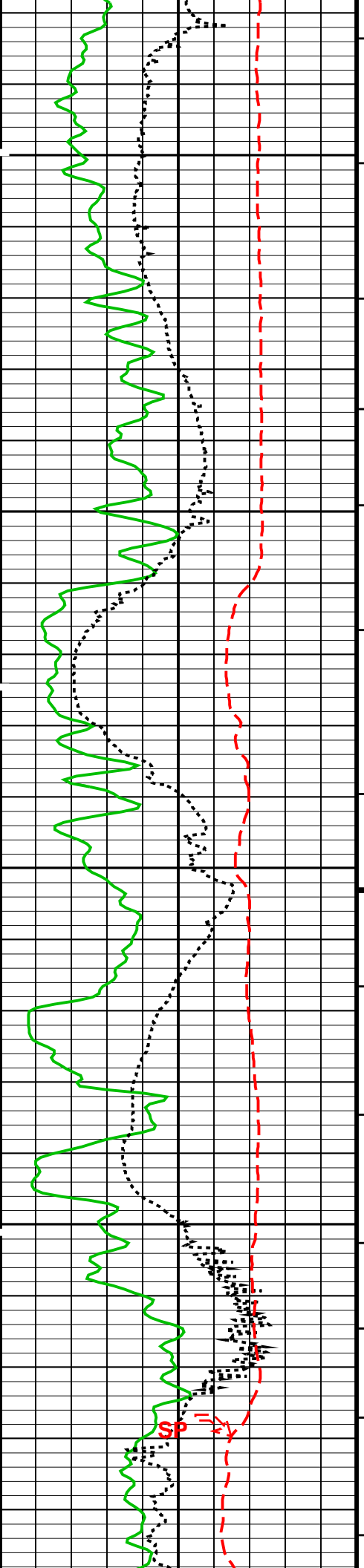






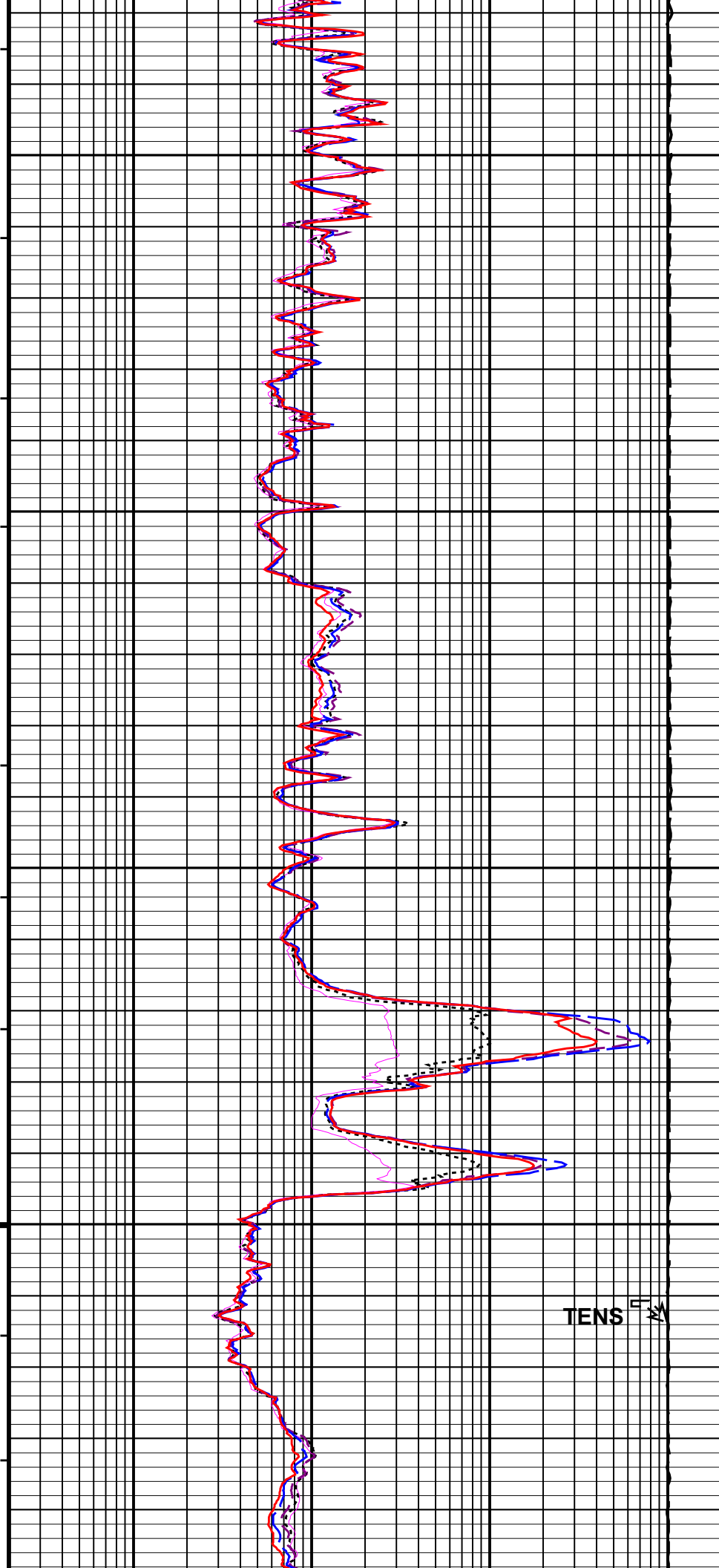


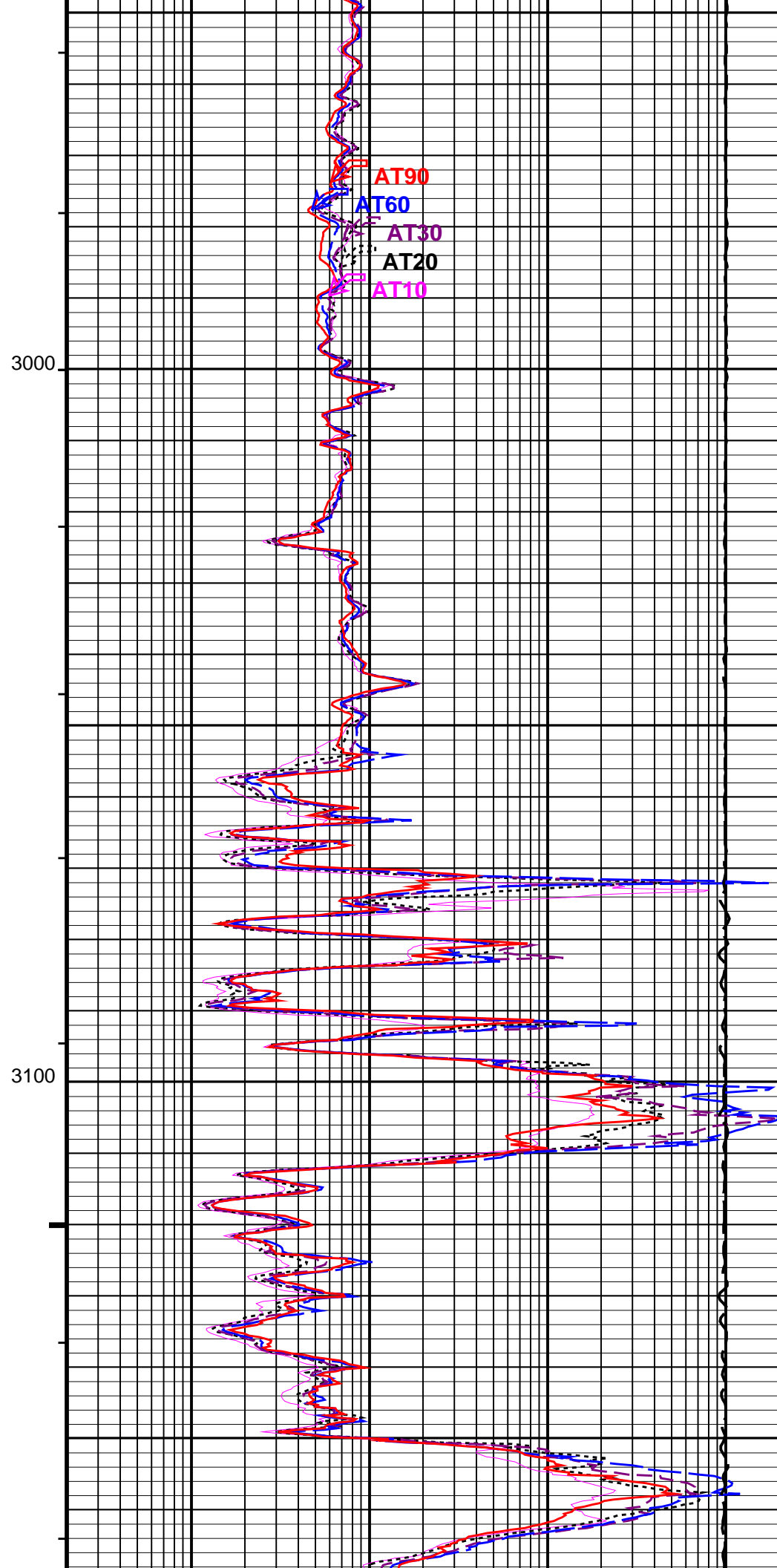
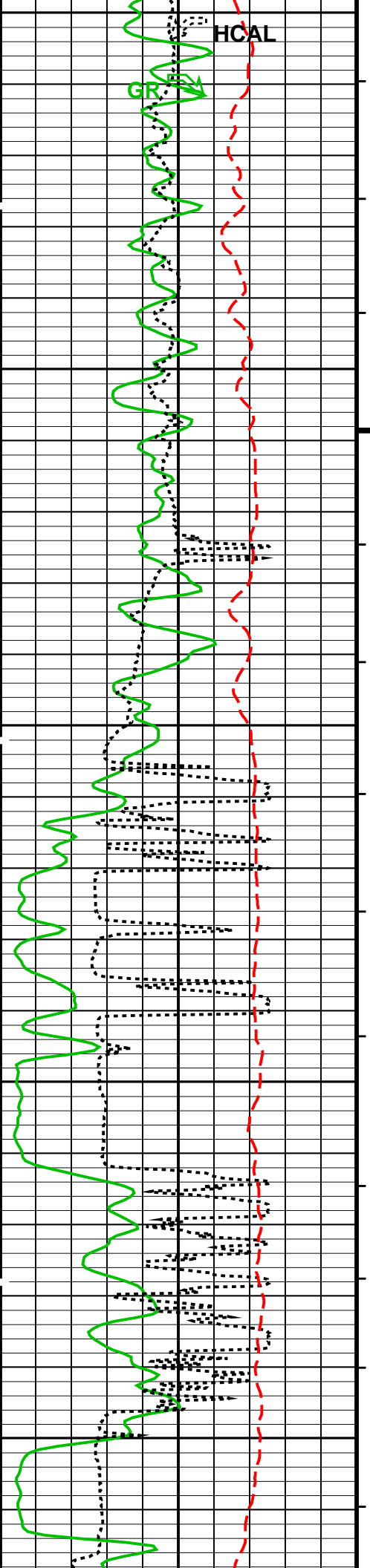


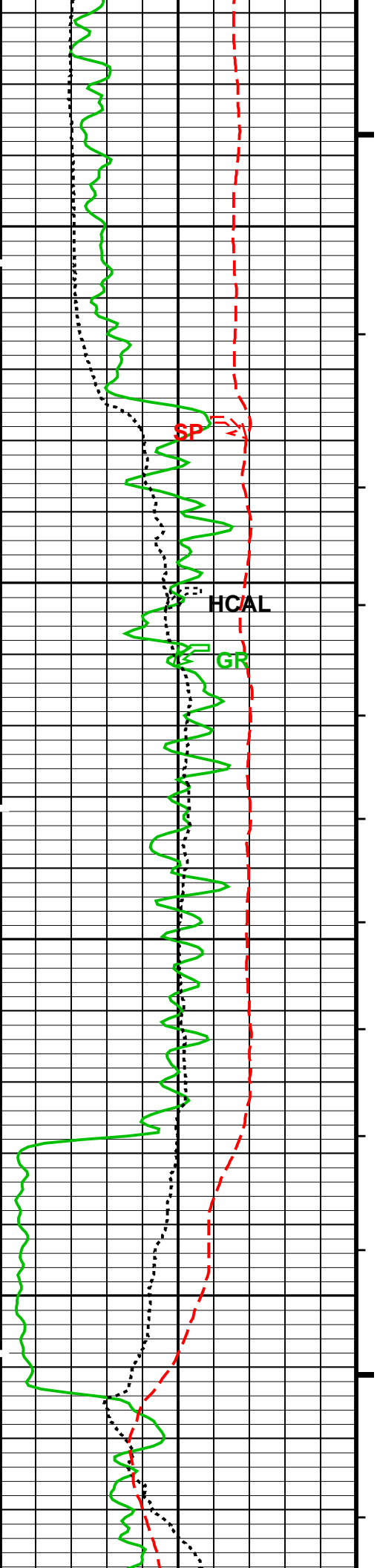


2800

2900







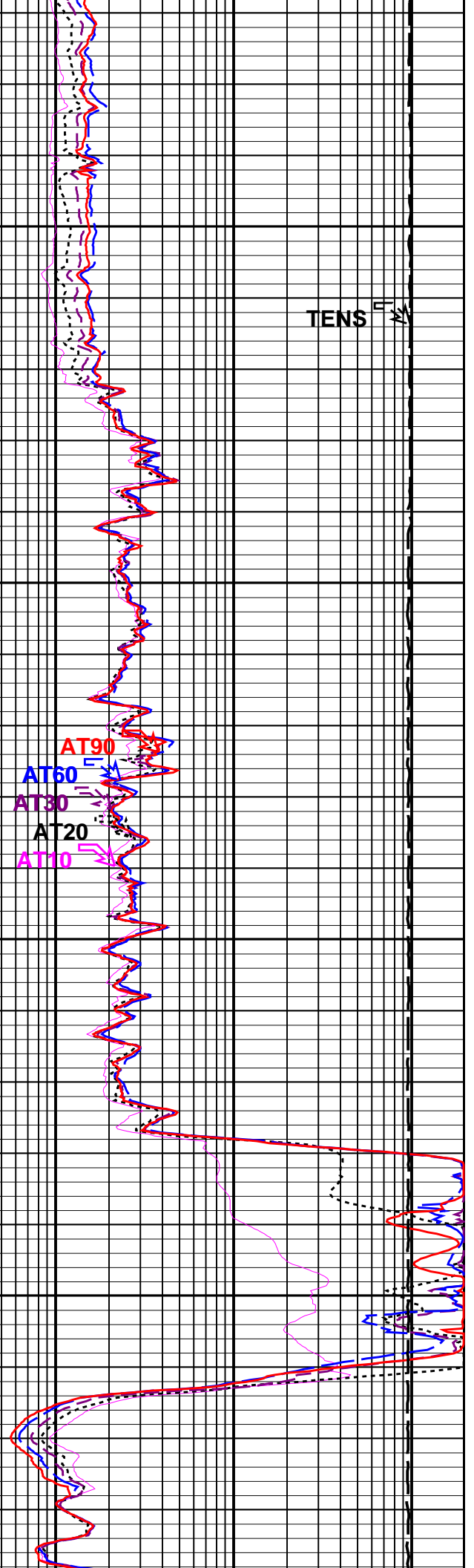
3200

SP

HCAL

GR

3300



TENS

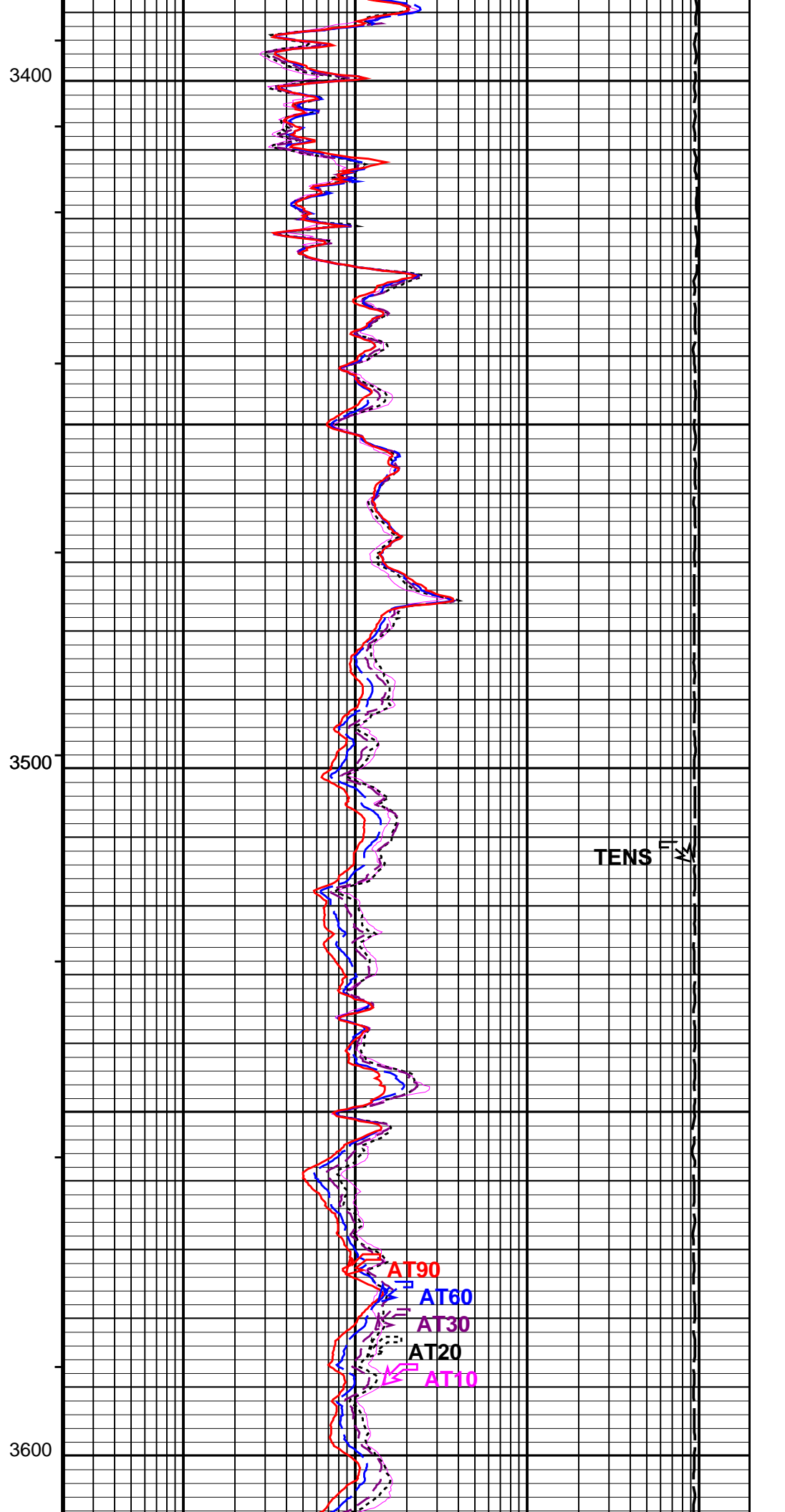
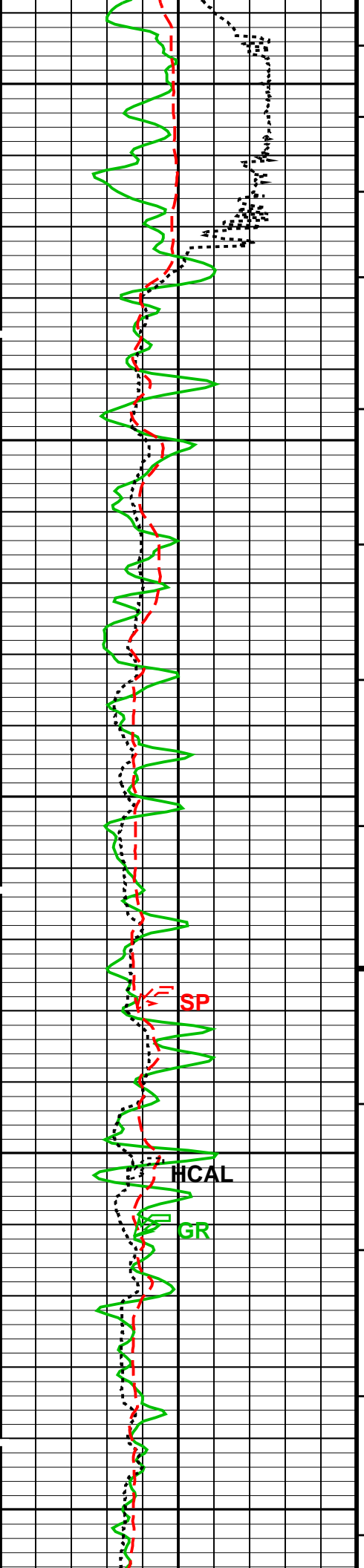
AT90

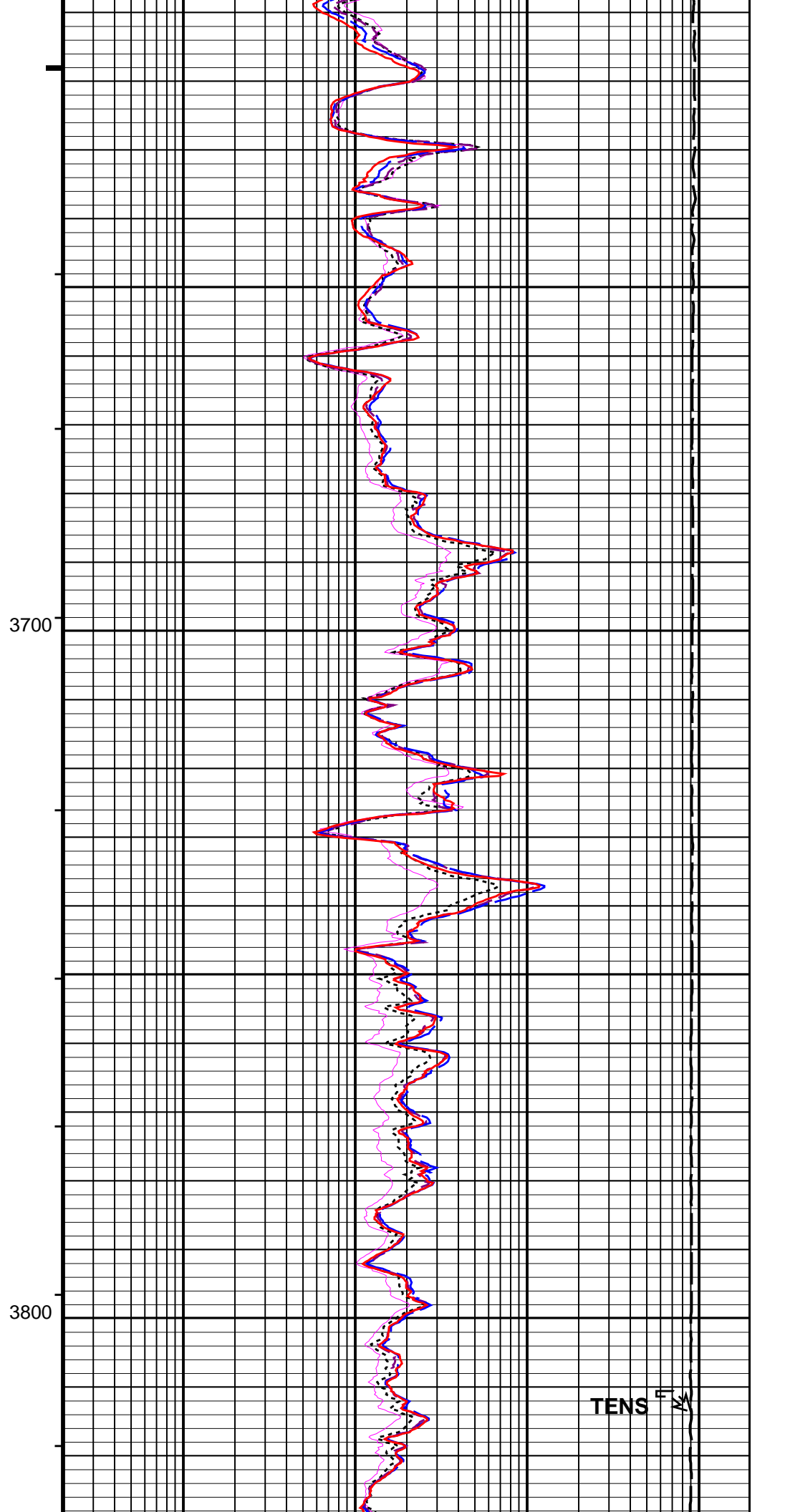
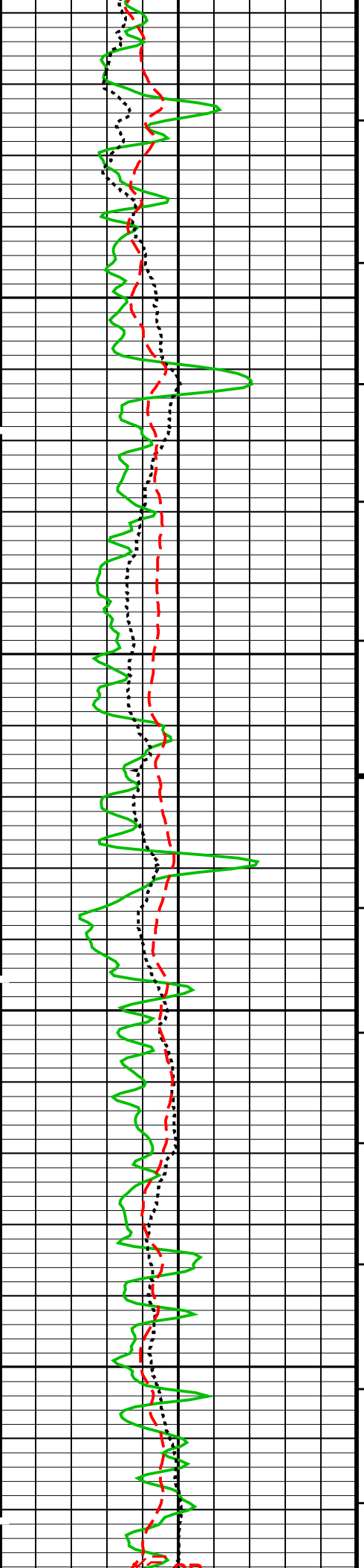
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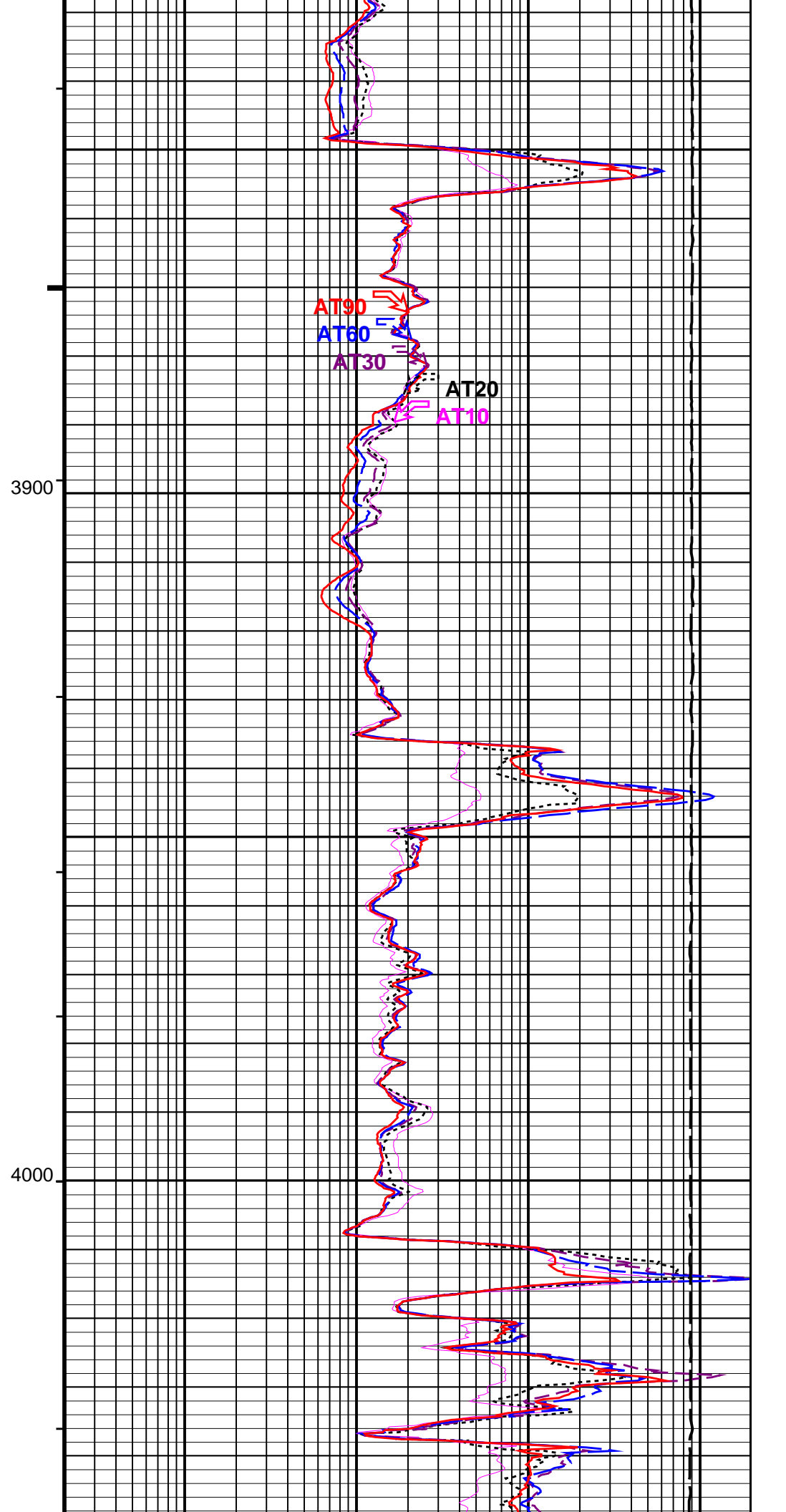
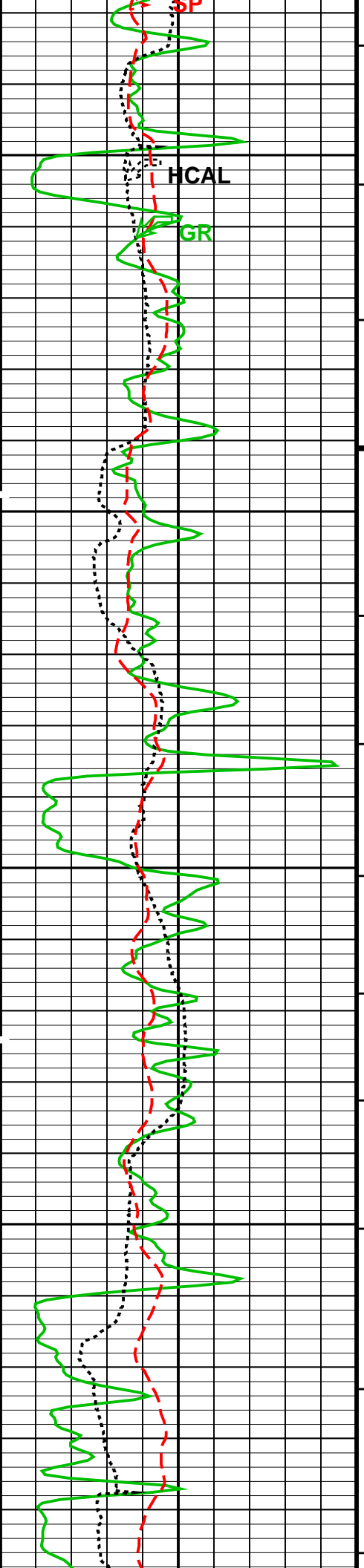
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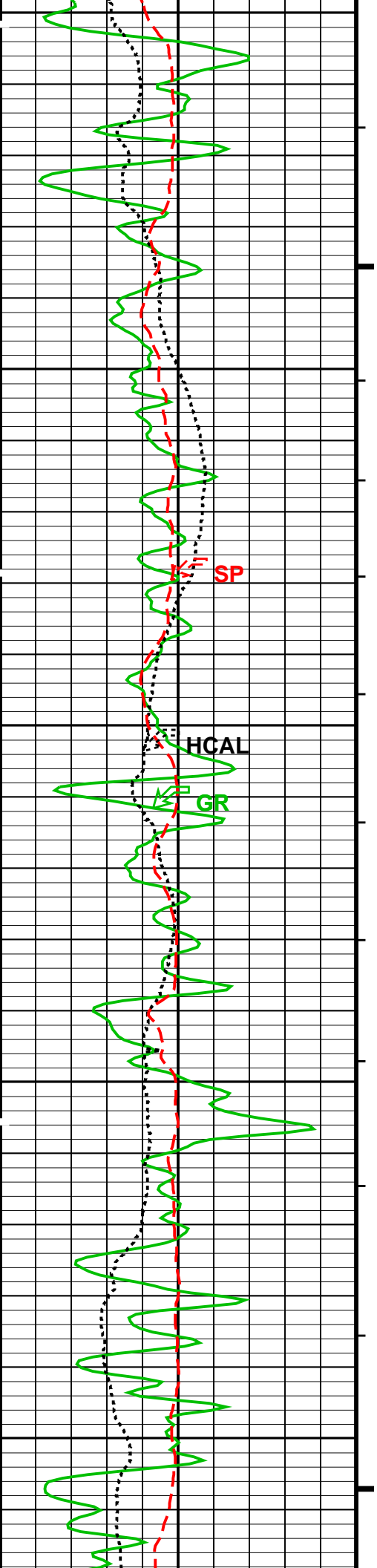
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AT10



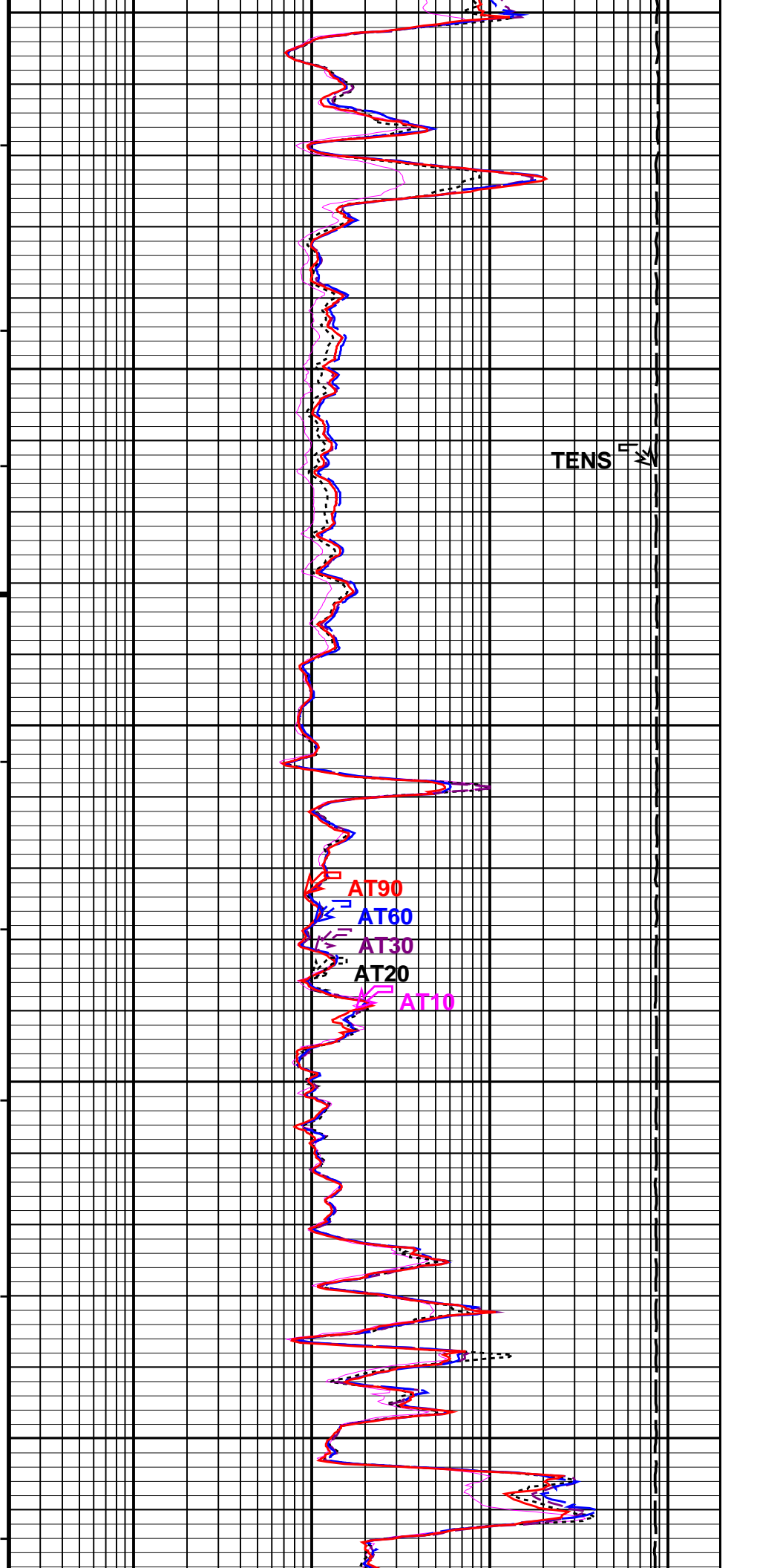






4100

4200



TENS

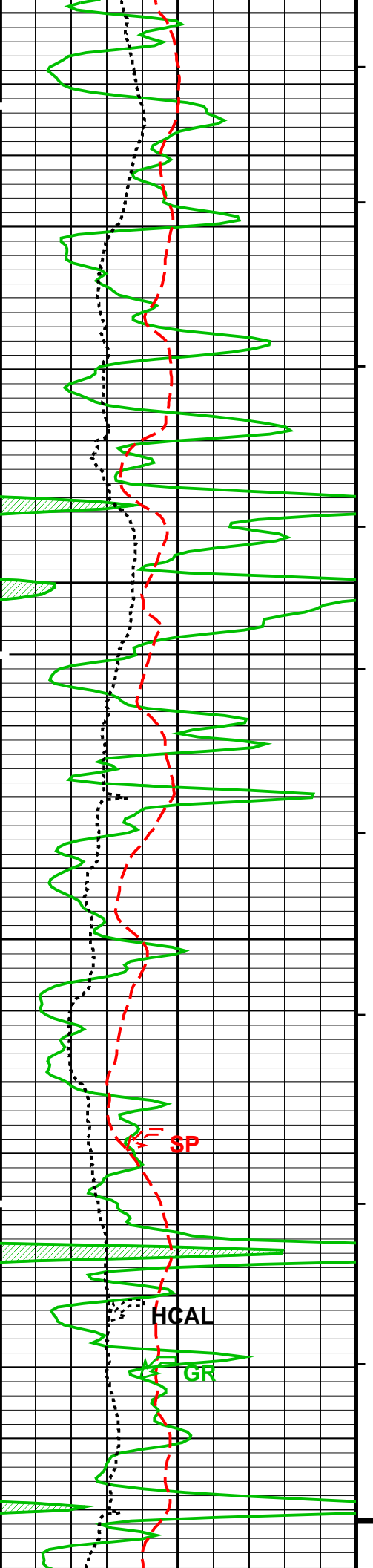
AT90

AT60

AT30

AT20

AT10



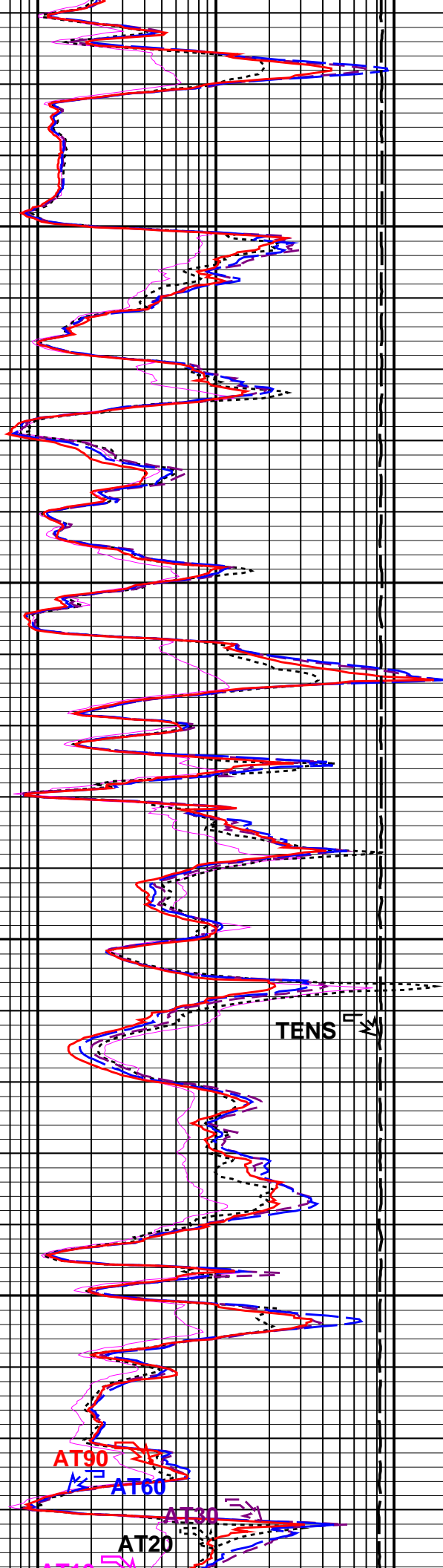
4300

4400

HCAL

GR

SP



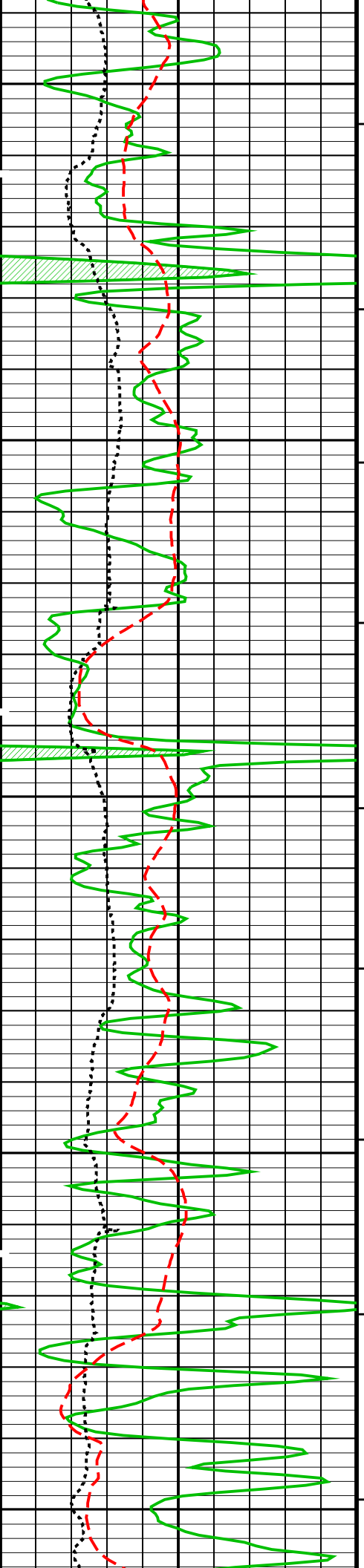
TENS

AT90

AT60

AT30

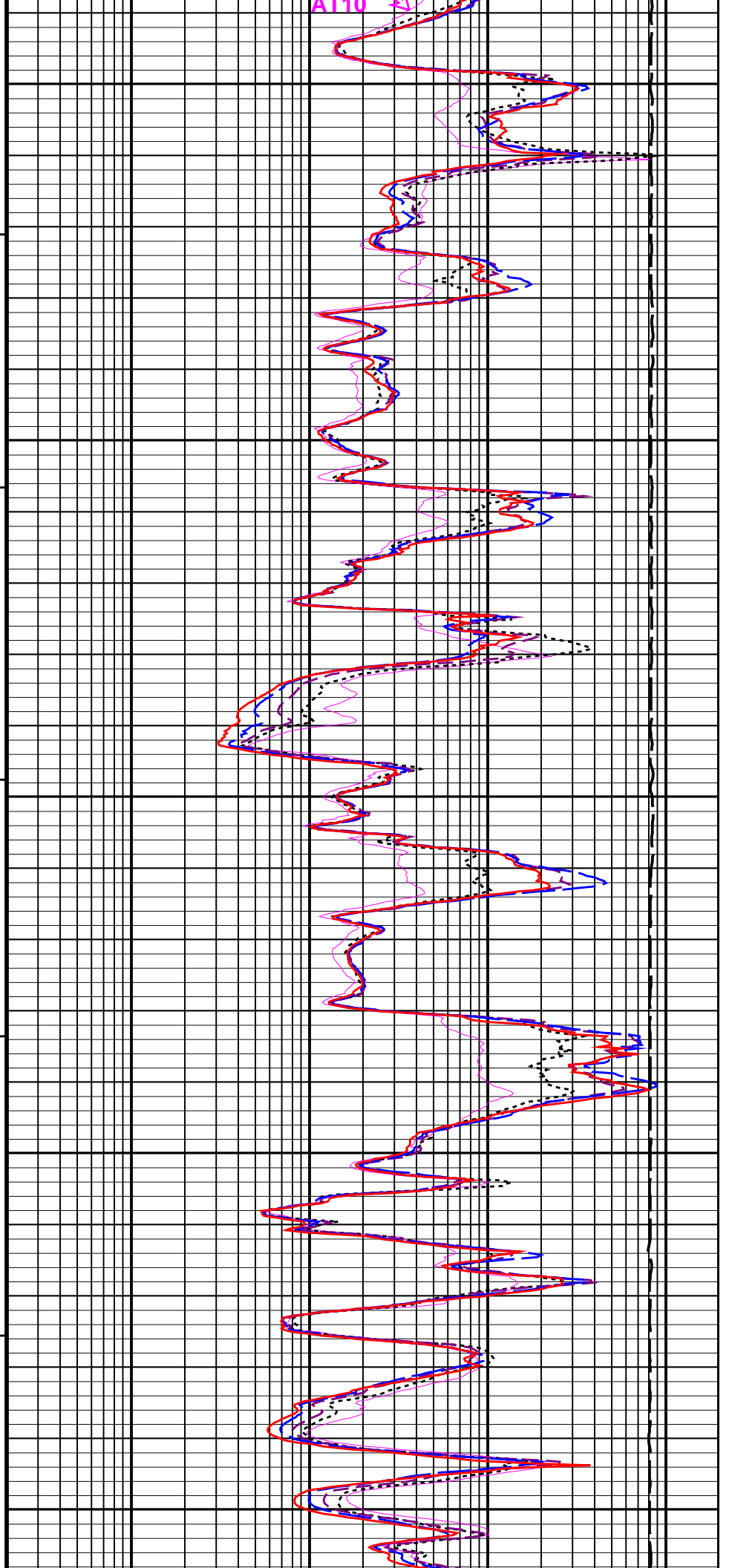
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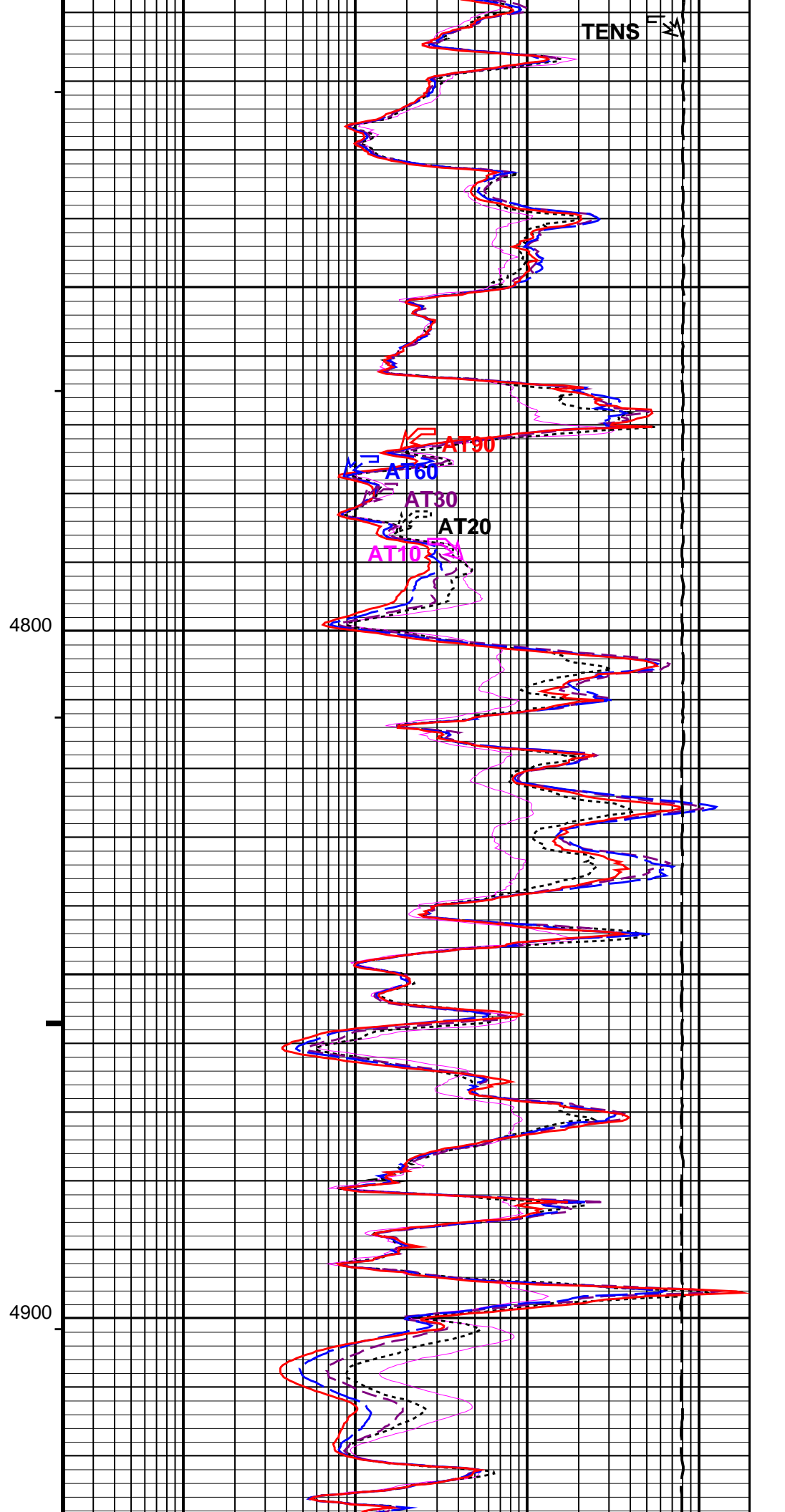
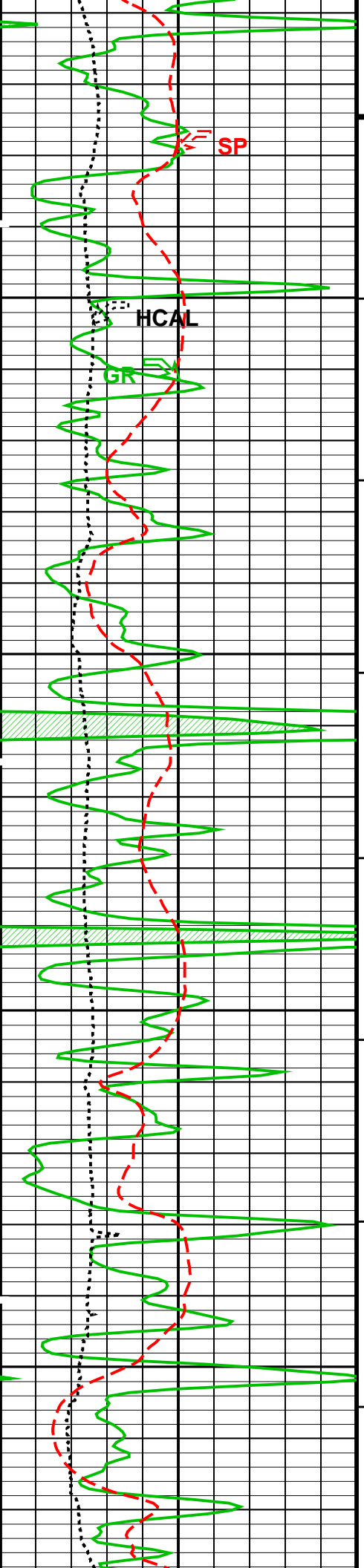
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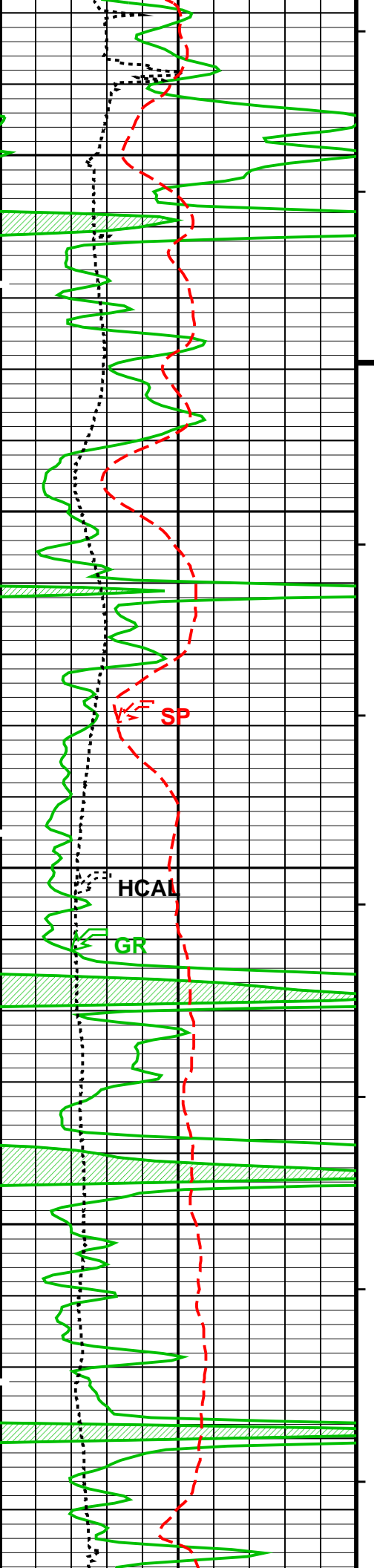
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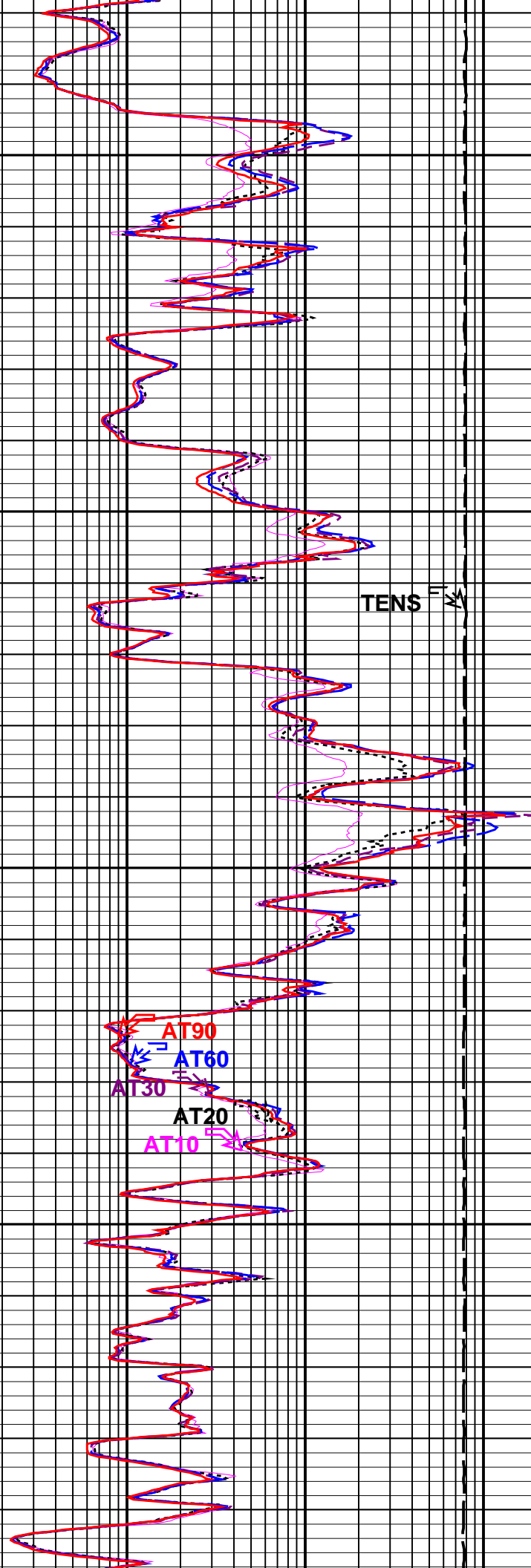
A110

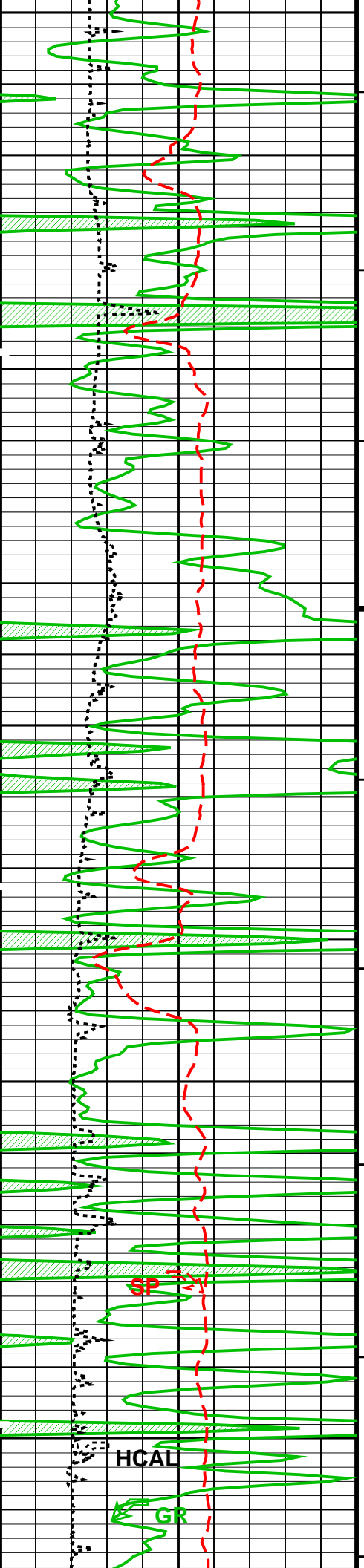




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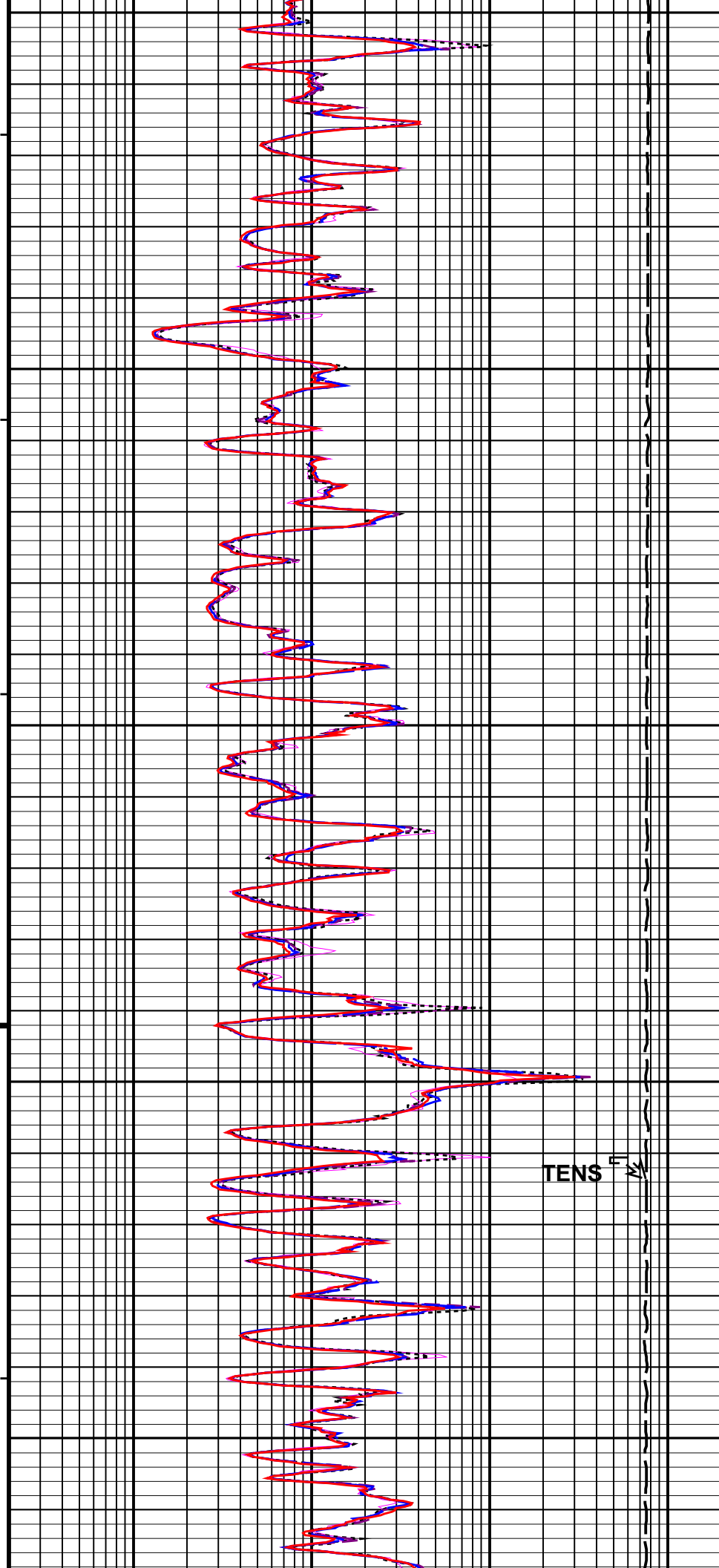
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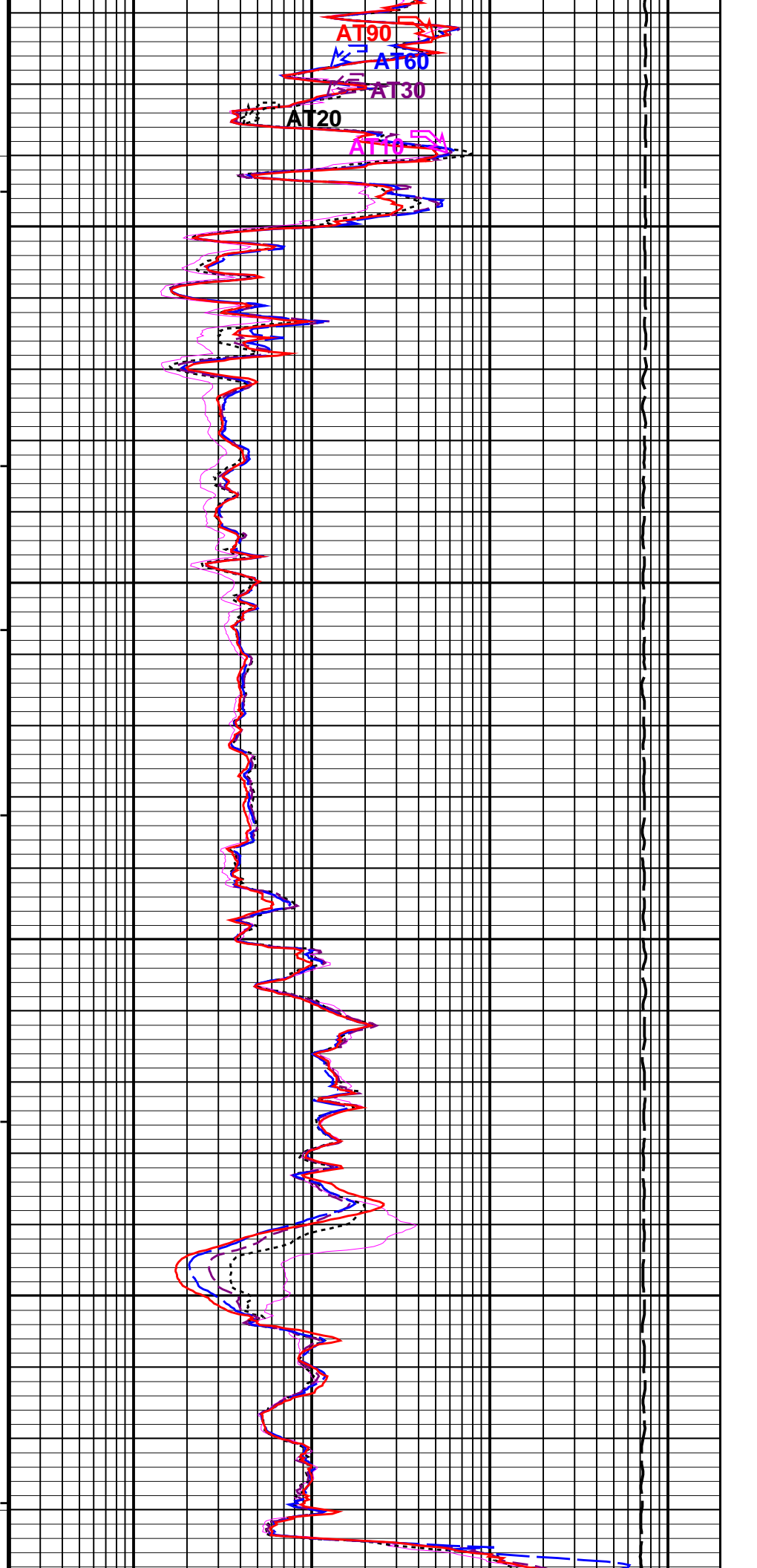
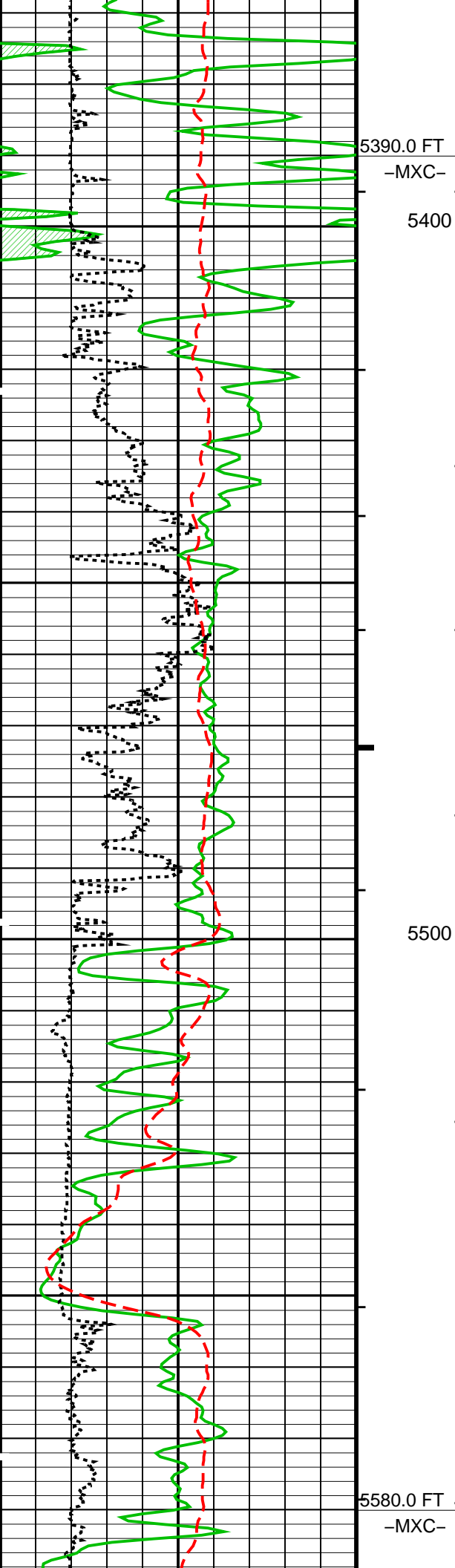


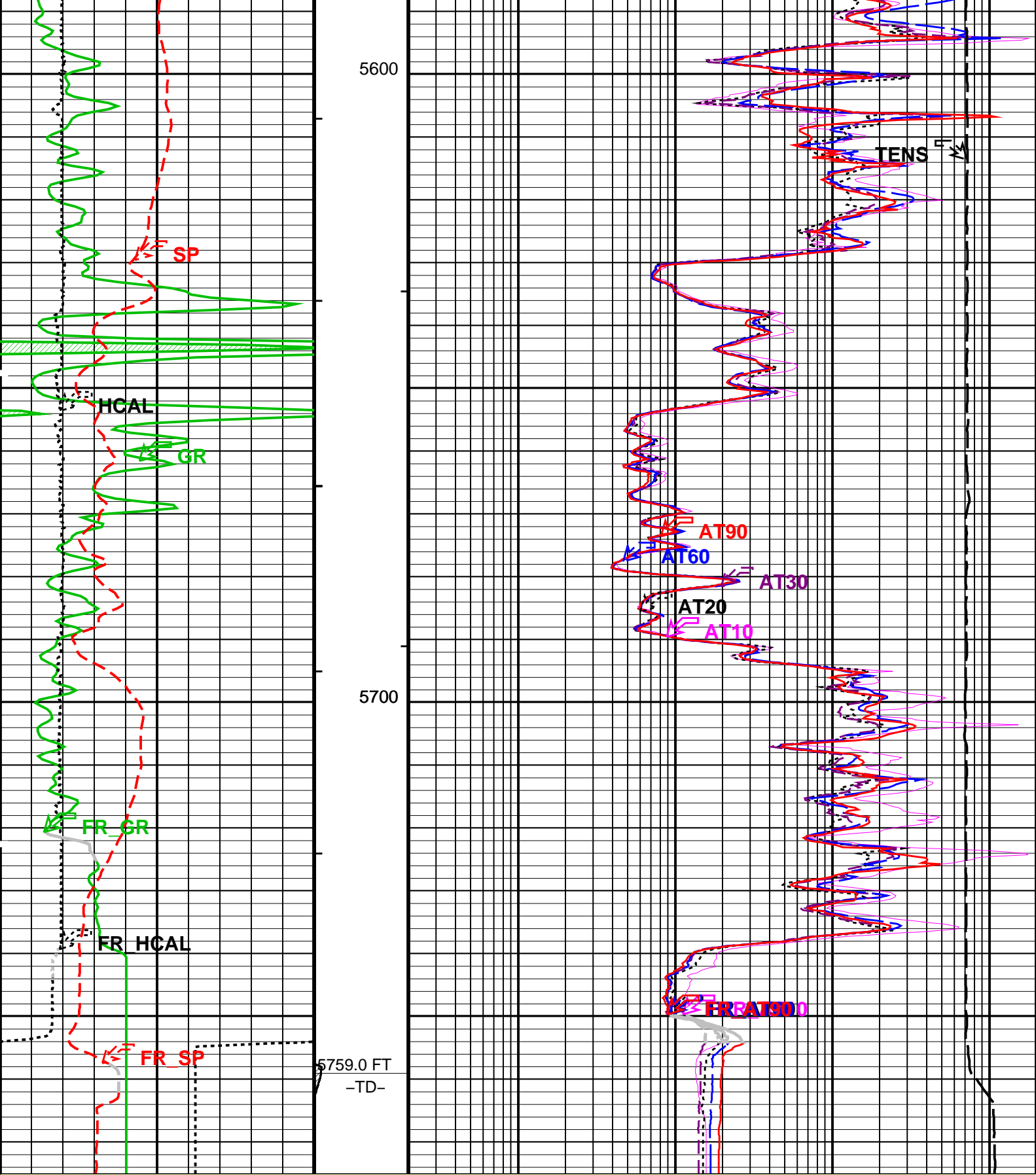
5200

5300



TENS \vec{r}





MAIN PASS: *** PLATFORM EXPRESS – ARRAY INDUCTION ***

Gamma Ray Backup	Cable Drag	0.2	AIT 10 Inch Investigation (AT10) (OHMM)	2000
Gamma Ray (GR) (GAPI)	Tool/Tot. Drag	0.2	AIT 20 Inch Investigation (AT20) (OHMM)	2000
Caliper (HCAL)	Stuck Stretch		AIT 30 Inch Investigation (AT30)	

6	(IN)	16	(STIT)	0.2	(OHMM)	2000
		0	(F)	50		
-160	SP (SP) (MV)	40		0.2	AIT 60 Inch Investigation (AT60) (OHMM)	2000
				0.2	AIT 90 Inch Investigation (AT90) (OHMM)	2000
					Tension (TENS) (LBF)	10000 0

PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AIT-M: Array Induction Tool - M			
ABHM	Array Induction Borehole Correction Mode	2_ComputeStandoff	
ABHV	Array Induction Borehole Correction Code Version Number	900	
ABLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
ABLV	Array Induction Basic Logs Code Version Number	223	
ACDE	Array Induction Casing Detection Enable	No	
ACEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered	
ACSED	Array Induction Casing Shoe Estimated Depth	-50000	FT
AETP	Array Induction Enable Sonde Error Temp&Pres Corr	Yes	
AFRSV	Array Induction Response Set Version for Four ft Resolution	41.70.24.20	
AIGS	Array Induction Select Akima Interpolation Gating	On	
AMRF	Array Induction Mud Resistivity Factor	1	
AORSV	Array Induction Response Set Version for One ft Resolution	41.70.24.20	
ARFV	Array Induction Radial Profiling Code Version Number	701	
ARPV	Array Induction Radial Parametrization Code Version Number	232	
ASTA	Array Induction Tool Standoff	0.125	IN
ATRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20	
ATSE	Array Induction Temperature Selection(Sonde Error Correction)	Internal	
AULV	Array Induction User Level Control	Normal	
AZRSV	Array Induction Response Set Version for Z Resolution	00.10.25.00	
BHT	Bottom Hole Temperature (used in calculations)	134	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
SPNV	SP Next Value	0	MV
HILTB-FTB: High resolution Integrated Logging Tool-DTS			
BHT	Bottom Hole Temperature (used in calculations)	134	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
PERT: Preliminary Evaluation - Real Time			
BHT	Bottom Hole Temperature (used in calculations)	134	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	STI	
STKT	STI Stuck Threshold	2.5	FT
TDD	Total Depth - Driller	5760.00	FT
TDL	Total Depth - Logger	5759.00	FT
HOLEV: Integrated Hole/Cement Volume			
BHT	Bottom Hole Temperature (used in calculations)	134	DEGF

FCD	Future Casing (Outer) Diameter	5.5	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
SHT	Surface Hole Temperature	68	DEGF
FEQL: Formation Evaluation Quick Look			
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
System and Miscellaneous			
BS	Bit Size	7.875	IN
DFD	Drilling Fluid Density	9.10	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
FLEV	Fluid Level	-50000.00	FT
MST	Mud Sample Temperature	61.10	DEGF
PP	Playback Processing	NORMAL	
TD	Total Depth	5759	FT


Format: GRES

Vertical Scale: 5" per 100'

Graphics File Created: 23-Mar-2010 15:04

OP System Version: 17C0-154			
AIT-M	17C0-154	HILTB-FTB	17C0-154
DTC-H	17C0-154		

Input DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_008LUP	FN:7	PRODUCER	23-Mar-2010 13:43	5775.0 FT	401.5 FT
Output DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_017PUP	FN:16	PRODUCER	23-Mar-2010 15:04		



Repeat Analysis

MAXIS Field Log

Input DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_008LUP	FN:7	PRODUCER	23-Mar-2010 13:43	5775.0 FT	401.5 FT
DEFAULT	AIT_TLD_MCFL_CNL_016PUP	FN:15	PRODUCER	23-Mar-2010 15:02	5772.0 FT	4565.5 FT
Output DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_017PUP	FN:16	PRODUCER	23-Mar-2010 15:04		

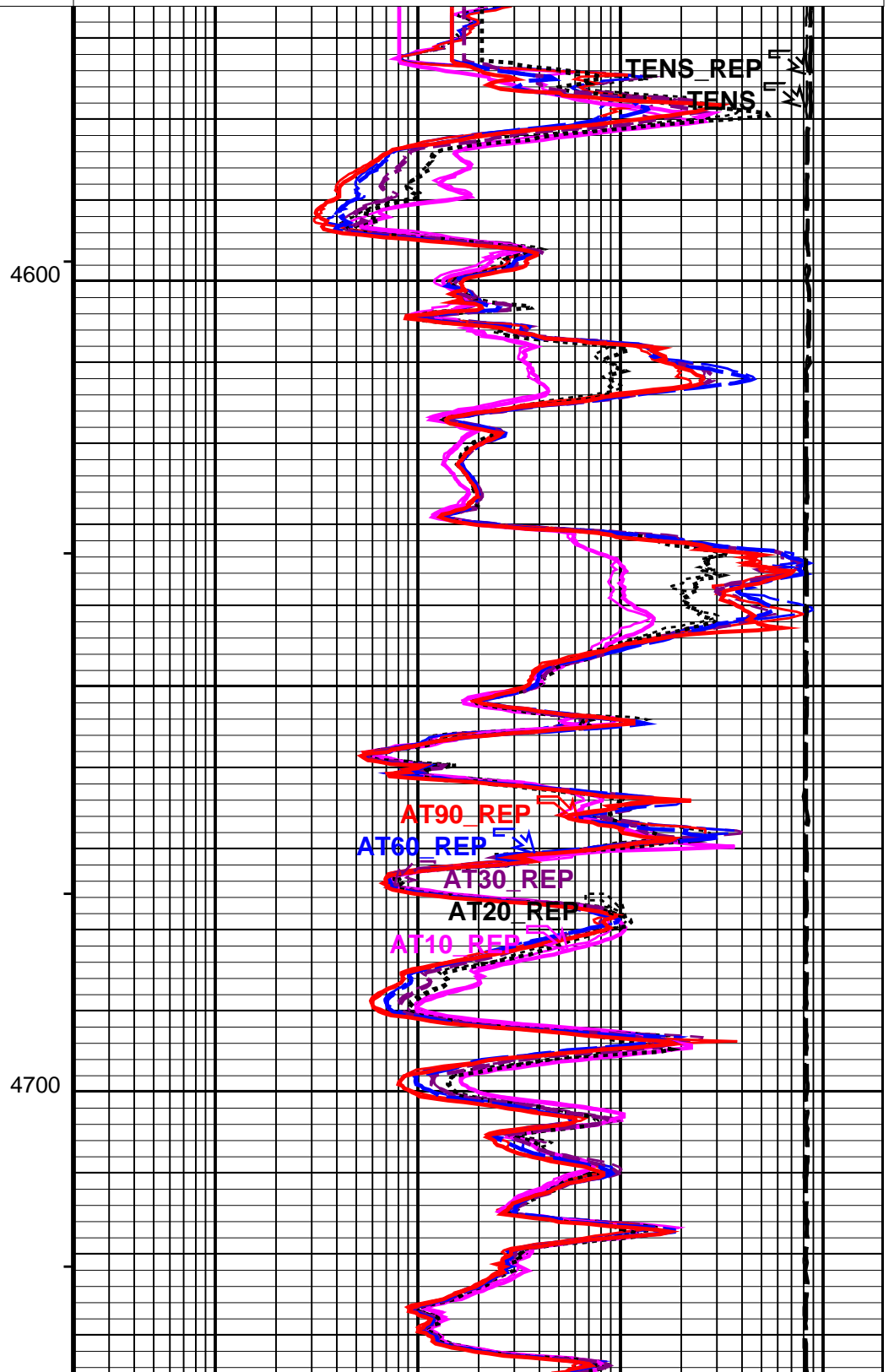
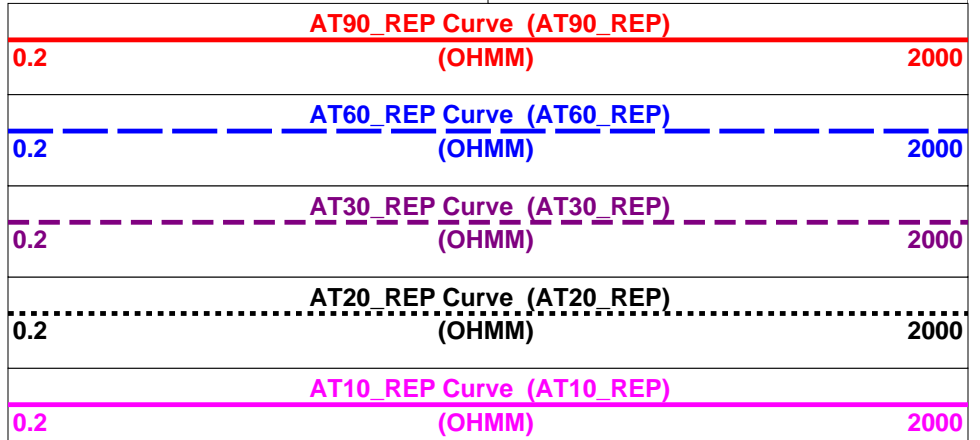
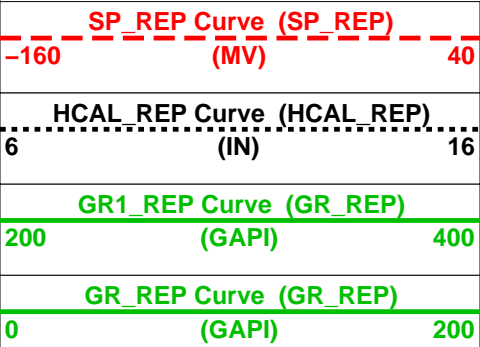
OP System Version: 17C0-154			
AIT-M	17C0-154	HILTB-FTB	17C0-154
DTC-H	17C0-154		

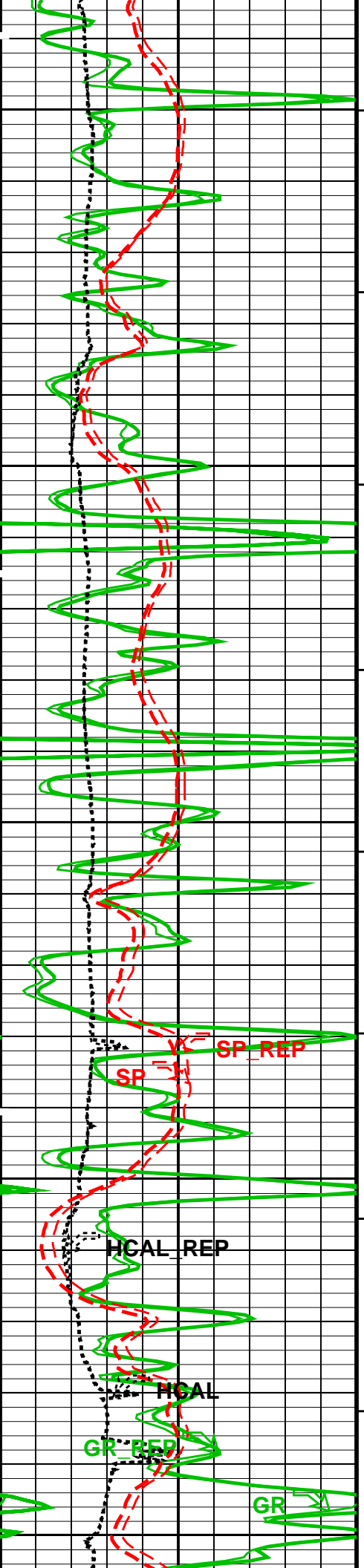
PIP SUMMARY	
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<input checked="" type="checkbox"/>	Integrated Hole Volume Major Pip Every 100 F3
<input type="checkbox"/>	Integrated Cement Volume Minor Pip Every 10 F3
<input checked="" type="checkbox"/>	Integrated Cement Volume Major Pip Every 100 F3
<input checked="" type="checkbox"/>	Time Mark Every 60 S

TENS_REP Curve (TENS_REP)

10000 (LBE)

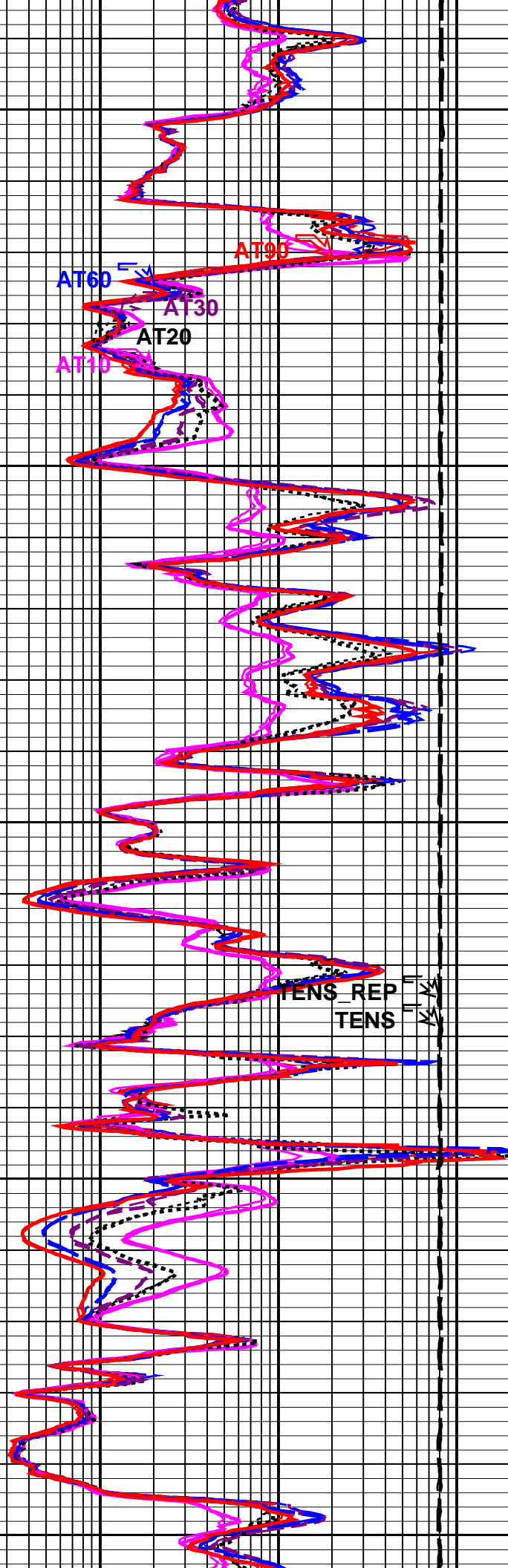
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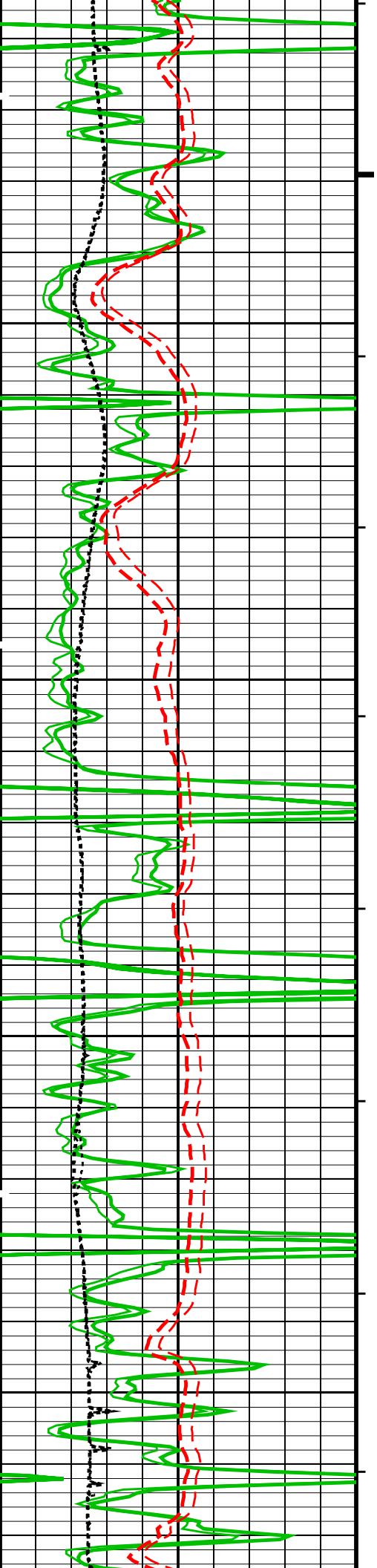




4800

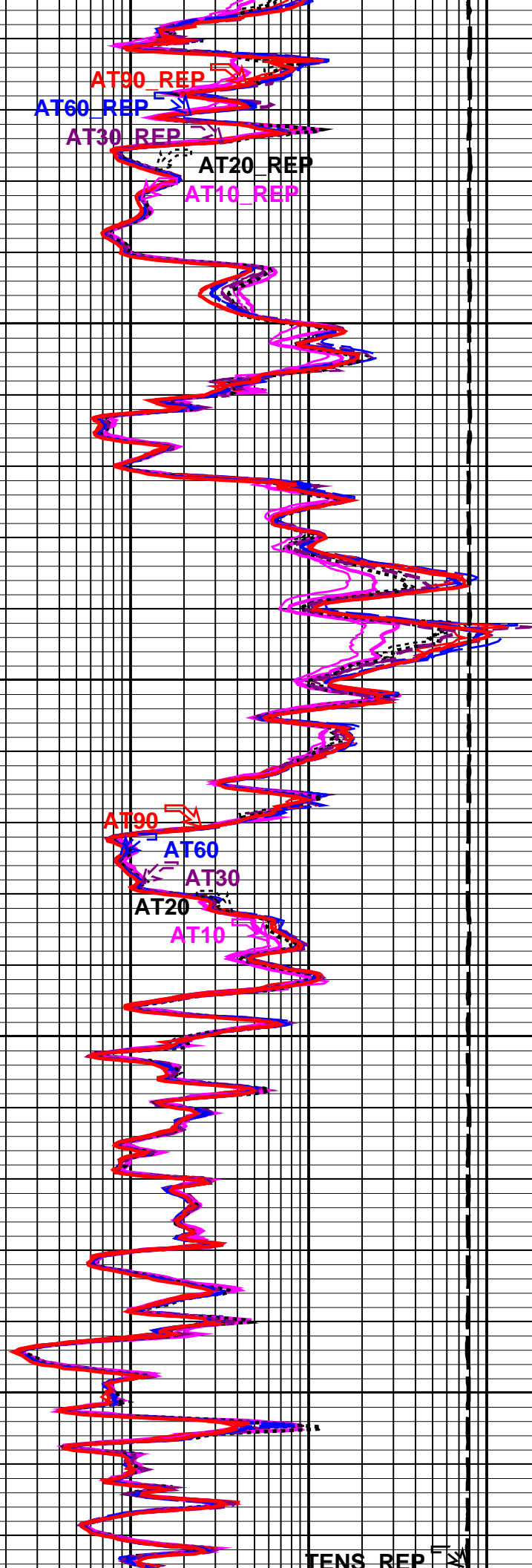
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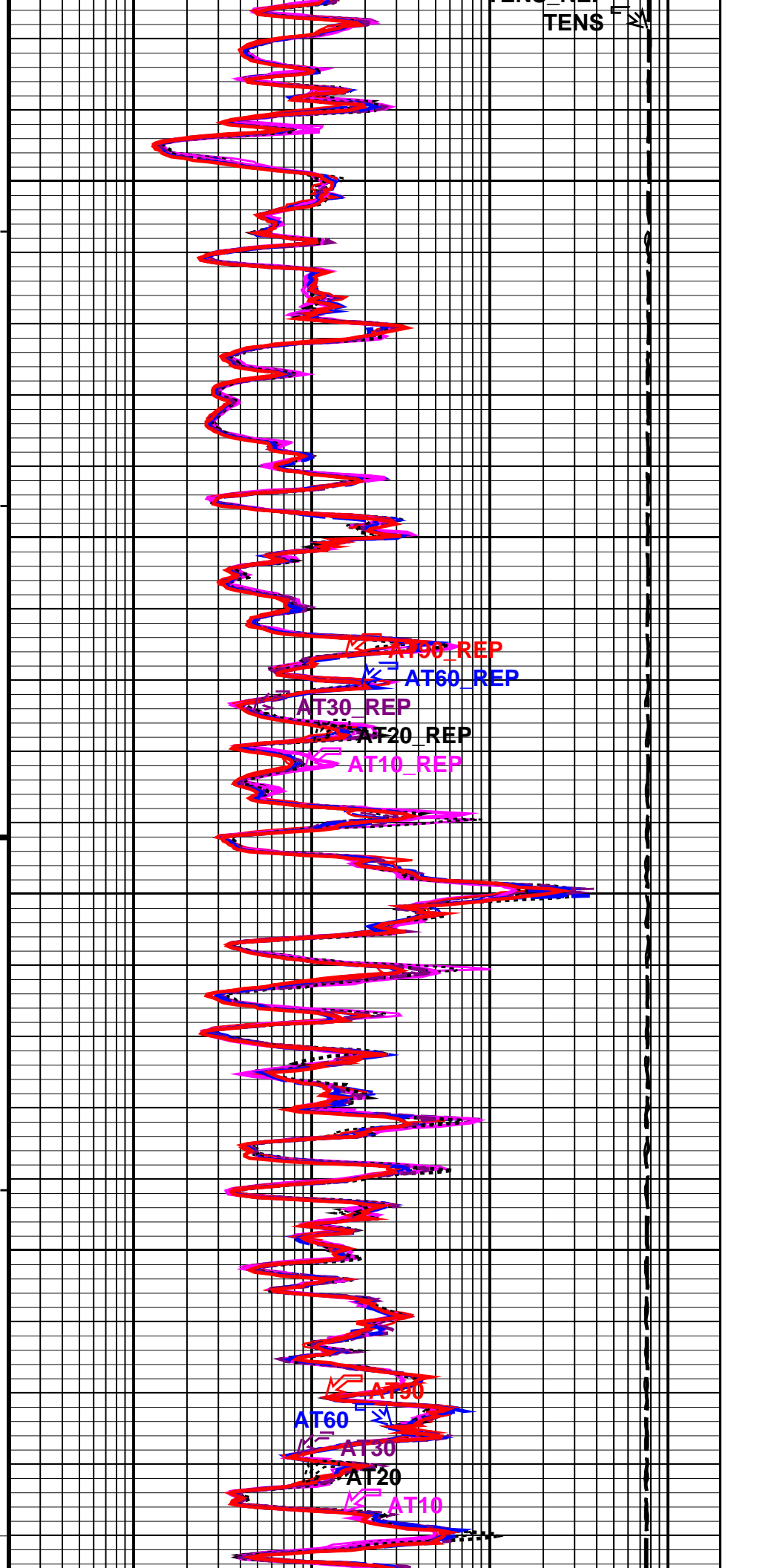
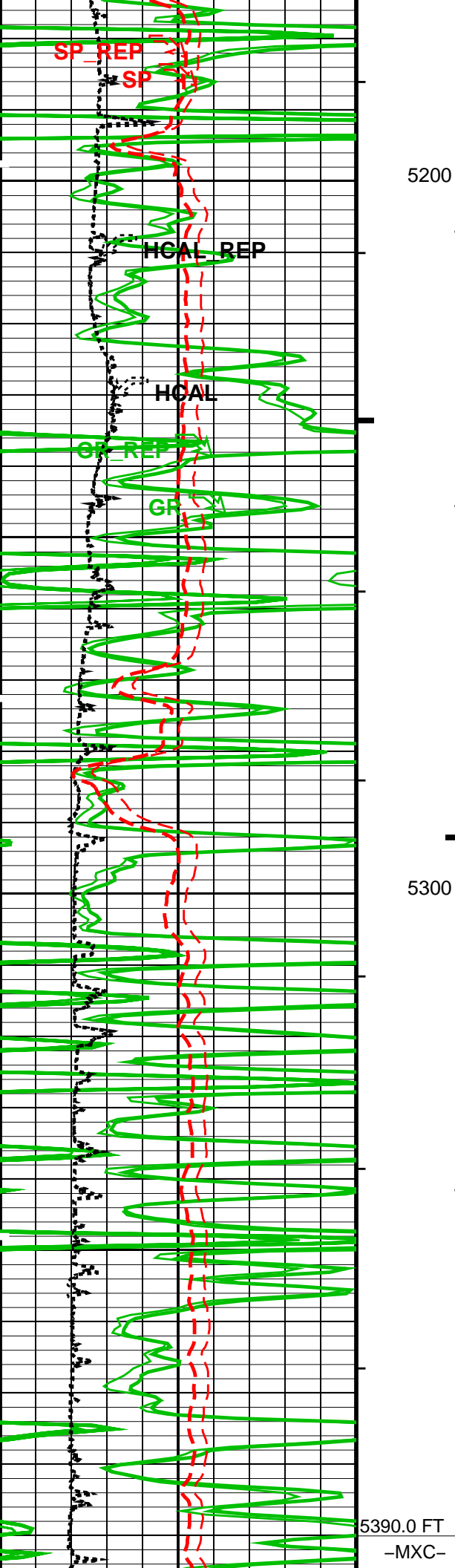


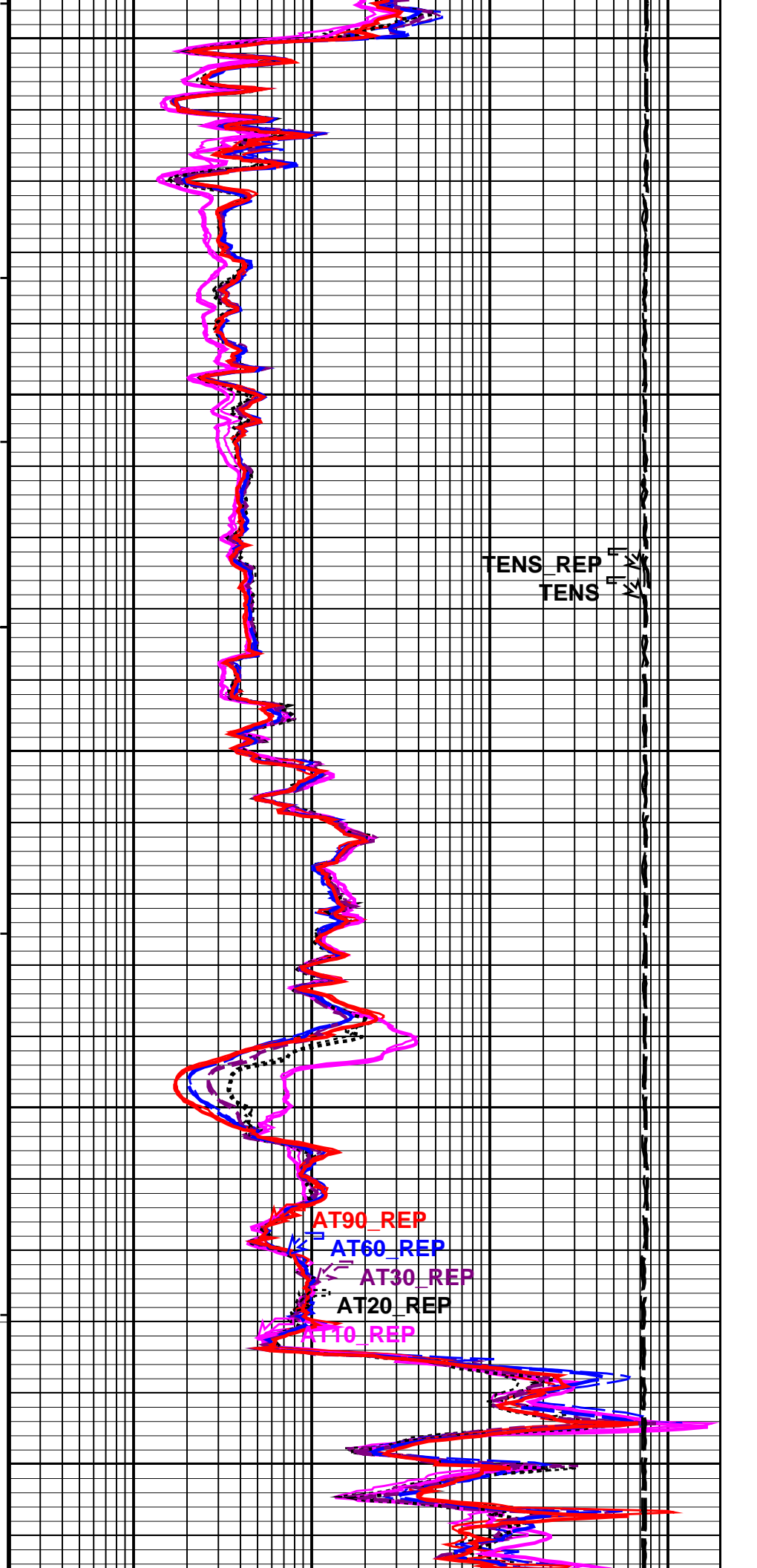
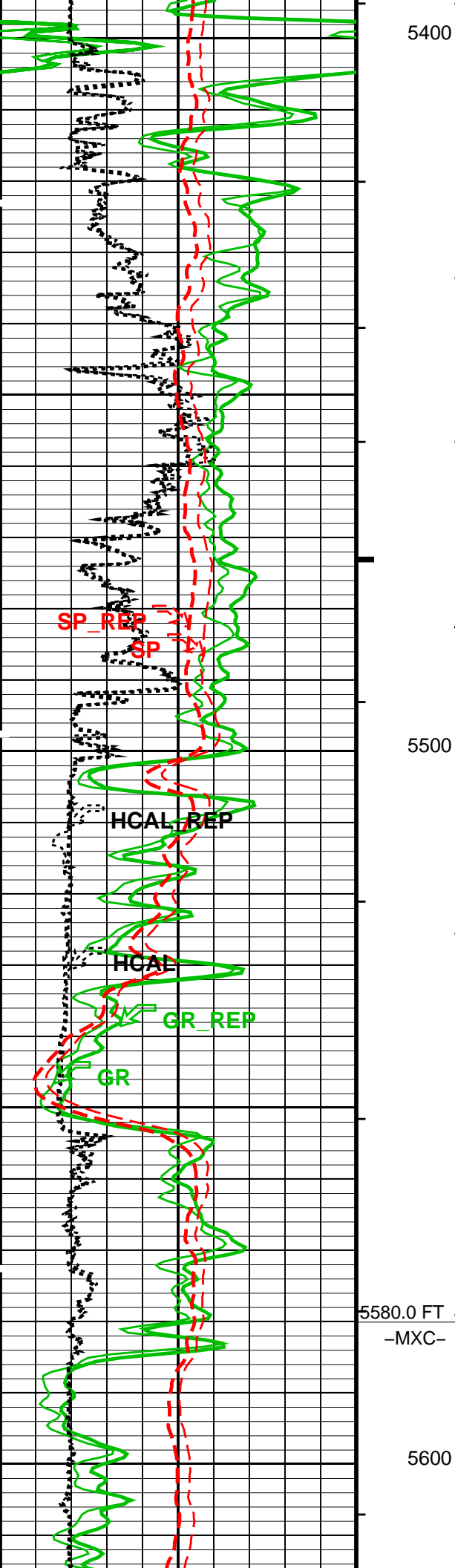


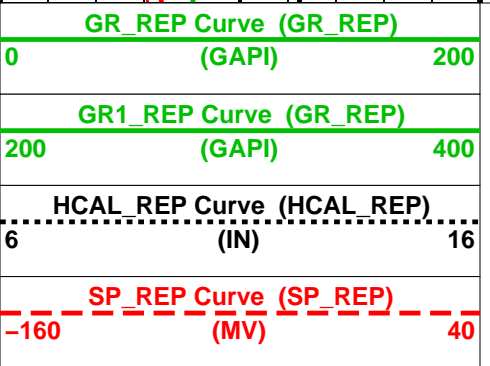
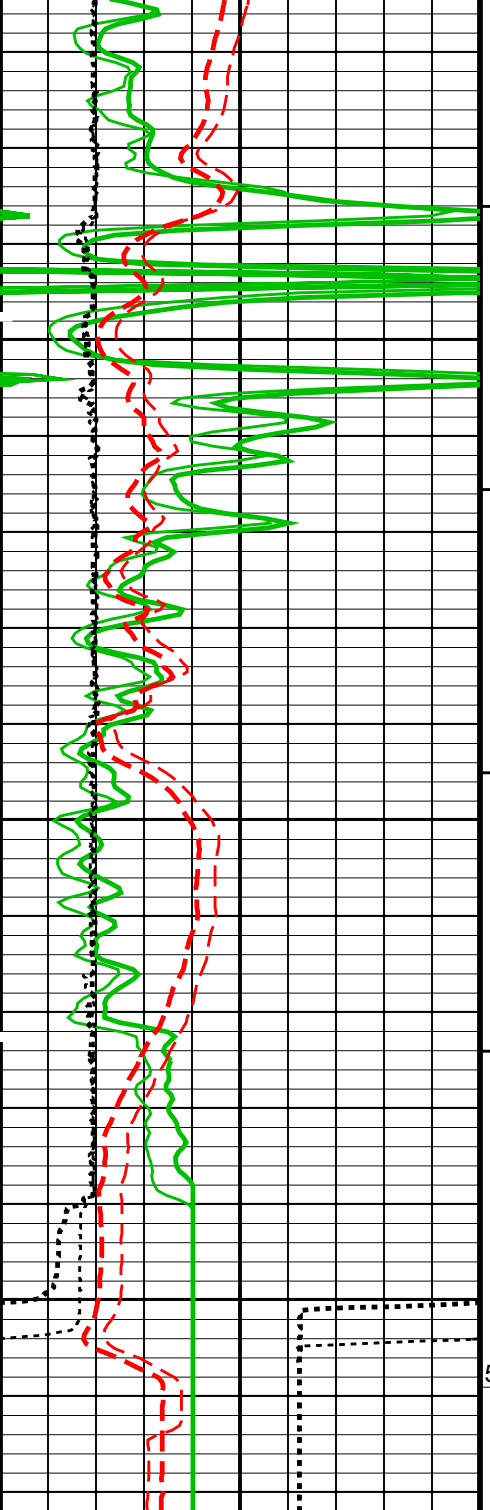
5000

5100



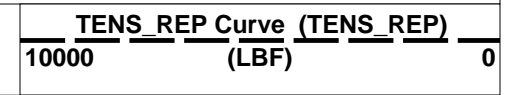
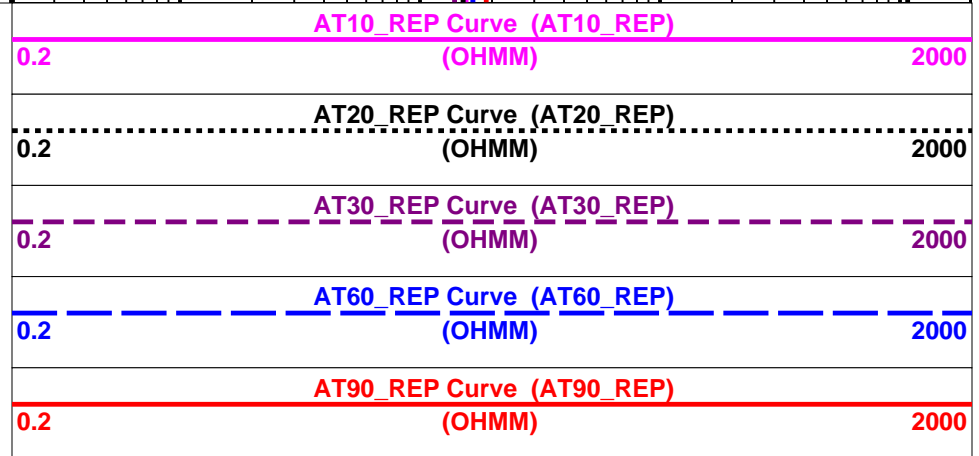
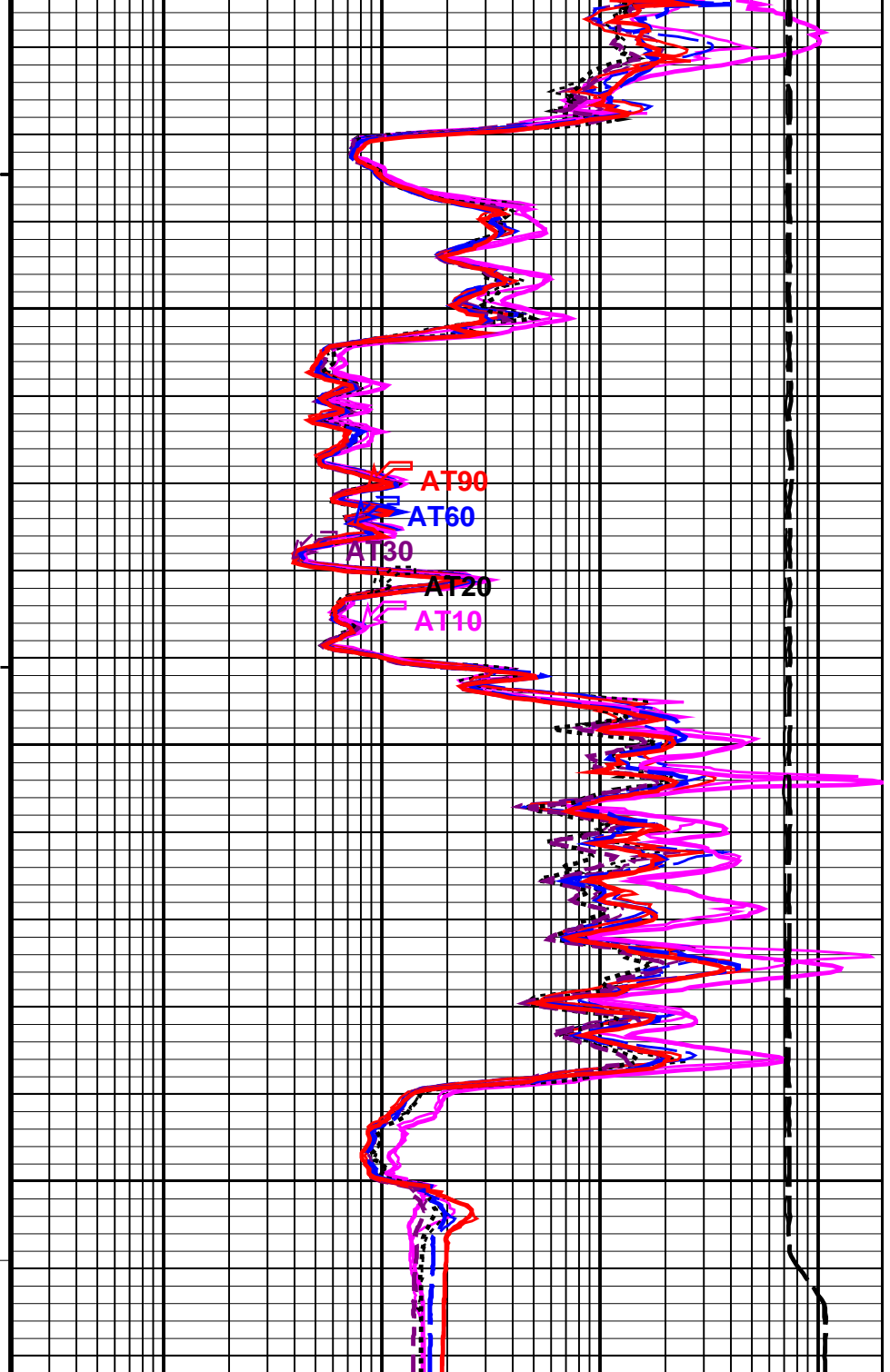






5700

5759.0 FT
-TD-



PIP SUMMARY

F Integrated Hole Volume Minor Pip Every 10 F3
 Integrated Hole Volume Major Pip Every 100 F3
 Integrated Cement Volume Minor Pip Every 10 F3
 Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AIT-M: Array Induction Tool - M			
ABHM	Array Induction Borehole Correction Mode	2_ComputeStandoff	
ABHV	Array Induction Borehole Correction Code Version Number	900	
ABLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
ABLV	Array Induction Basic Logs Code Version Number	223	
ACDE	Array Induction Casing Detection Enable	No	
ACEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered	
ACSED	Array Induction Casing Shoe Estimated Depth	-50000	FT
AETP	Array Induction Enable Sonde Error Temp&Pres Corr	Yes	
AFRSV	Array Induction Response Set Version for Four ft Resolution	41.70.24.20	
AIGS	Array Induction Select Akima Interpolation Gating	On	
AMRF	Array Induction Mud Resistivity Factor	1	
AORSV	Array Induction Response Set Version for One ft Resolution	41.70.24.20	
ARFV	Array Induction Radial Profiling Code Version Number	701	
ARPV	Array Induction Radial Parametrization Code Version Number	232	
ASTA	Array Induction Tool Standoff	0.125	IN
ATRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20	
ATSE	Array Induction Temperature Selection(Sonde Error Correction)	Internal	
AULV	Array Induction User Level Control	Normal	
AZRSV	Array Induction Response Set Version for Z Resolution	00.10.25.00	
BHT	Bottom Hole Temperature (used in calculations)	134	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
SPNV	SP Next Value	0	MV
HILTB-FTB: High resolution Integrated Logging Tool-DTS			
BHT	Bottom Hole Temperature (used in calculations)	134	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
PERT: Preliminary Evaluation - Real Time			
BHT	Bottom Hole Temperature (used in calculations)	134	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
HOLEV: Integrated Hole/Cement Volume			
BHT	Bottom Hole Temperature (used in calculations)	134	DEGF
FCD	Future Casing (Outer) Diameter	5.5	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
SHT	Surface Hole Temperature	68	DEGF
FEQL: Formation Evaluation Quick Look			
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
System and Miscellaneous			
BS	Bit Size	7.875	IN
DFD	Drilling Fluid Density	9.10	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
FLEV	Fluid Level	-50000.00	FT
MST	Mud Sample Temperature	61.10	DEGF
PP	Playback Processing	NORMAL	
TD	Total Depth	5759	FT

OP System Version: 17C0-154

AIT-M 17C0-154 HILTB-FTB 17C0-154
DTC-H 17C0-154

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_008LUP	FN:7	PRODUCER	23-Mar-2010 13:43	5775.0 FT	401.5 FT
DEFAULT	AIT_TLD_MCFL_CNL_016PUP	FN:15	PRODUCER	23-Mar-2010 15:02	5772.0 FT	4565.5 FT

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_017PUP	FN:16	PRODUCER	23-Mar-2010 15:04
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Schlumberger

BEFORE CALIBRATIONS

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Array Induction Tool – M Wellsite Calibration – Electronics Calibration Check – Thru Cal Mag. & Phase							
Master: 17-Mar-2010 8:50 Before: 22-Mar-2010 22:03							
Thru Cal Magnitude – 0	0	0.6194	0.6193	N/A	N/A	N/A	V
Thru Cal Magnitude – 1	0	1.269	1.269	N/A	N/A	N/A	V
Thru Cal Magnitude – 2	0	0.6307	0.6306	N/A	N/A	N/A	V
Thru Cal Magnitude – 3	0	0.7118	0.7117	N/A	N/A	N/A	V
Thru Cal Magnitude – 4	0	1.332	1.332	N/A	N/A	N/A	V
Thru Cal Magnitude – 5	0	1.950	1.950	N/A	N/A	N/A	V
Thru Cal Magnitude – 6	0	1.946	1.946	N/A	N/A	N/A	V
Thru Cal Magnitude – 7	0	1.418	1.417	N/A	N/A	N/A	V
Thru Cal Phase – 0	0	180.0	179.9	N/A	N/A	N/A	DEG
Thru Cal Phase – 1	0	178.9	178.8	N/A	N/A	N/A	DEG
Thru Cal Phase – 2	0	175.3	175.3	N/A	N/A	N/A	DEG
Thru Cal Phase – 3	0	174.6	174.5	N/A	N/A	N/A	DEG
Thru Cal Phase – 4	0	168.4	168.4	N/A	N/A	N/A	DEG
Thru Cal Phase – 5	0	166.7	166.7	N/A	N/A	N/A	DEG
Thru Cal Phase – 6	0	166.8	166.7	N/A	N/A	N/A	DEG
Thru Cal Phase – 7	0	165.9	165.9	N/A	N/A	N/A	DEG
Array Induction Tool – M Wellsite Calibration – Electronics Calibration Check – Auxiliary							
Master: 17-Mar-2010 8:50 Before: 22-Mar-2010 22:03							
Array Induction SPA Plus	991.0	983.6	983.5	N/A	N/A	N/A	MV
Array Induction SPA Zero	0	-0.2001	-0.1835	N/A	N/A	N/A	MV
Array Induction Temperature PI	0.9170	0.9114	0.9115	N/A	N/A	N/A	V
Array Induction Temperature Ze	0	-0.0002014	-0.0001035	N/A	N/A	N/A	V
Array Induction Tool – M Wellsite Calibration – Test Loop Gain Correction							
Master: 17-Mar-2010 8:50							
Test Loop Gain Correctio – 0	0	1.015	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 1	0	1.012	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 2	0	1.016	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 3	0	1.012	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 4	0	0.9937	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 5	0	0.9890	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 6	0	0.9937	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 7	0	1.006	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 0	0	0.3332	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 1	0	0.6161	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 2	0	0.1287	N/A	N/A	N/A	N/A	DEG

Test Loop Gain Correctio – 3	0	0.1700	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 4	0	0.1124	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 5	0	-0.06042	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 6	0	0.2973	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 7	0	-0.06541	N/A	N/A	N/A	N/A	DEG

Array Induction Tool – M Wellsite Calibration – Sonde Error Correction

Master: 17-Mar-2010 8:50

R Sonde Error Correction – 0	0	-65.75	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 1	0	176.6	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 2	0	119.4	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 3	0	66.51	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 4	0	27.71	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 5	0	12.62	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 6	0	9.430	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 7	0	-1.425	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 0	0	-316.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 1	0	108.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 2	0	44.39	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 3	0	-31.03	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 4	0	20.82	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 5	0	-16.06	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 6	0	-4.953	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 7	0	-11.76	N/A	N/A	N/A	N/A	MM/M

Array Induction Tool – M Wellsite Calibration – Mud Gain Correction

Master: 17-Mar-2010 8:50

Coarse – Mag, Real, Imag – 0	0	0.8486	N/A	N/A	N/A	N/A
Coarse – Mag, Real, Imag – 1	0	0.8487	N/A	N/A	N/A	N/A
Coarse – Mag, Real, Imag – 2	0	0.8487	N/A	N/A	N/A	N/A
Fine – Mag, Real, Imag – 0	0	0.8511	N/A	N/A	N/A	N/A
Fine – Mag, Real, Imag – 1	0	0.8512	N/A	N/A	N/A	N/A
Fine – Mag, Real, Imag – 2	0	0.8512	N/A	N/A	N/A	N/A

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Stab Measurement Summary

Before: 22-Mar-2010 22:07

BS Window Ratio	0.7392	N/A	0.7378	N/A	N/A	N/A	
BS Window Sum	10690	N/A	10700	N/A	N/A	N/A	CPS
SS Window Ratio	0.4732	N/A	0.4735	N/A	N/A	N/A	
SS Window Sum	10190	N/A	10190	N/A	N/A	N/A	CPS
LS Window Ratio	0.2975	N/A	0.2981	N/A	N/A	N/A	
LS Window Sum	1166	N/A	1163	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo-multiplier High Voltages Calibrations

Before: 22-Mar-2010 22:07

BS PM High Voltage (Command)	1509	N/A	1533	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1777	N/A	1786	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1896	N/A	1904	N/A	N/A	N/A	V

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration

Before: 22-Mar-2010 22:07

BS Crystal Resolution	11.23	N/A	11.26	N/A	N/A	N/A	%
SS Crystal Resolution	11.03	N/A	11.11	N/A	N/A	N/A	%
LS Crystal Resolution	9.873	N/A	9.632	N/A	N/A	N/A	%

High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration

Before: 22-Mar-2010 22:08

Raw B0 Resistivity	3875	N/A	3858	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3808	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3821	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration

Before: 22-Mar-2010 22:03

HILT Caliper Zero Measurement	8.000	N/A	9.711	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	13.84	N/A	N/A	N/A	IN

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration

Before: 22-Mar-2010 21:59

Gamma Ray Background	30.00	N/A	77.67	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	177.2	N/A	177.2	N/A	N/A	16.11	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement

Master: 20-Mar-2010 17:38 Before: 22-Mar-2010 22:05

CNTC Background	28.30	28.30	26.87	N/A	N/A	4.245	CPS
CFTC Background	26.92	26.92	28.29	N/A	N/A	4.038	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Ratio Measurement

Master: 20-Mar-2010 17:38

Thermal Near Corr. (Tank)	5800	5716	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2390	N/A	N/A	N/A	N/A	CPS

CNTC/CFTC (Tank)		2.159	2.392	N/A	N/A	N/A	N/A	
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration								
Before: 23–Mar–2010 12:28								
Z–Axis Acceleration		32.19	N/A	31.78	N/A	N/A	N/A	F/S2
High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results								
Master: 22–Mar–2010 21:20								
Rho Aluminum		2.596	2.602	--	--	--	--	G/C3
Rho Magnesium		1.686	1.688	--	--	--	--	G/C3
Pe Aluminum		2.570	2.565	--	--	--	--	
Pe Magnesium		2.650	2.609	--	--	--	--	
High resolution Integrated Logging Tool–DTS Master Calibration – Deviation Summary								
Master: 22–Mar–2010 21:20								
BS Average Deviation		0	0.3292	--	--	--	--	%
BS Max Deviation		0	0.6568	--	--	--	--	%
SS Average Deviation		0	0.4057	--	--	--	--	%
SS Max Deviation		0	1.954	--	--	--	--	%
LS Average Deviation		0	0.8119	--	--	--	--	%
LS Max Deviation		0	1.606	--	--	--	--	%
The GLS–VJ source activity is acceptable.								
The HGNS Neutron Master Calibration was done with the following parameters :								
NCT–B Water Temperature	61.6	DEGF.						
Thermal Housing Size	3.380	IN.						
NSR–F serial number	5068							

Array Induction Tool – M / Equipment Identification			
Primary Equipment:			
Rm/SP Bottom Nose			
Array Induction Sonde	AMRM – A	AMIS – A	1372
Auxiliary Equipment:			

Array Induction Tool – M Wellsite Calibration							
Electronics Calibration Check – Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Thru Cal Phase DEG	Nominal
0	Master	0.6194		0.6100	180.0		197.0
	Before	0.6193			179.9		
1	Master	1.269		1.270	178.9		196.0
	Before	1.269			178.8		
2	Master	0.6307		0.6200	175.3		192.0
	Before	0.6306			175.3		
3	Master	0.7118		0.7000	174.6		191.0
	Before	0.7117			174.5		
4	Master	1.332		1.340	168.4		185.0
	Before	1.332			168.4		
5	Master	1.950		1.960	166.7		182.0
	Before	1.950			166.7		
6	Master	1.946		1.960	166.8		181.0
	Before	1.946			166.7		
7	Master	1.418		1.410	165.9		175.0
	Before	1.417			165.9		
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom –60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)

Array Induction Tool – M Wellsite Calibration							
Electronics Calibration Check – Auxiliary							
Phase	Array Induction SPA Plus MV		Value	Phase	Array Induction SPA Zero MV		Value
Master			983.6	Master			-0.2001
Before			983.5	Before			-0.1835
	941.0 (Minimum)	991.0 (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			0.9114	Master			-0.0002014
Before			0.9115	Before			-0.0001035
	0.8710 (Minimum)	0.9170 (Nominal)	0.9630 (Maximum)		-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Master: 17–Mar–2010 8:50			Before: 22–Mar–2010 22:03				

Array Induction Tool – M Wellsite Calibration								
Test Loop Gain Correction								
Idx	Value	Test Loop Gain Correction Magnitude V			Value	Test Loop Gain Correction Phase DEG		
0	1.015				0.3332			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
1	1.012				0.6161			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
2	1.016				0.1287			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
3	1.012				0.1700			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
4	0.9937				0.1124			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
5	0.9890				-0.06042			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
6	0.9937				0.2973			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
7	1.006				-0.06541			
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
Master: 17-Mar-2010 8:50								

Array Induction Tool – M Wellsite Calibration								
Sonde Error Correction								
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
0	-65.75	<div><div></div><div></div><div></div></div>			-316.9	<div><div></div><div></div><div></div></div>		
		-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	176.6	<div><div></div><div></div><div></div></div>			108.6	<div><div></div><div></div><div></div></div>		
		114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal)	625.0 (Maximum)
2	119.4	<div><div></div><div></div><div></div></div>			44.39	<div><div></div><div></div><div></div></div>		
		66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)
3	66.51	<div><div></div><div></div><div></div></div>			-31.03	<div><div></div><div></div><div></div></div>		
		39.00 (Minimum)	64.00 (Nominal)	89.30 (Maximum)		-250.0 (Minimum)	0 (Nominal)	250.0 (Maximum)
4	27.71	<div><div></div><div></div><div></div></div>			20.82	<div><div></div><div></div><div></div></div>		
		15.00 (Minimum)	25.00 (Nominal)	35.00 (Maximum)		-63.00 (Minimum)	0 (Nominal)	63.00 (Maximum)
5	12.62	<div><div></div><div></div><div></div></div>			-16.06	<div><div></div><div></div><div></div></div>		

		4.000 (Minimum)	14.00 (Nominal)	24.00 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
6	9.430					-4.953		
		5.000 (Minimum)	10.00 (Nominal)	15.00 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
7	-1.425					-11.76		
		-5.000 (Minimum)	0 (Nominal)	5.000 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)

Master: 17-Mar-2010 8:50

Array Induction Tool – M Wellsite Calibration								
Mud Gain Correction								
Idx	Value	Coarse – Mag. Real, Imag			Value	Fine – Mag. Real, Imag		
0	0.8486				0.8511			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
1	0.8487				0.8512			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
2	0.8487				0.8512			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)

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Array Induction Tool – M Master Calibration							
Electronics Calibration Check – Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Thru Cal Phase DEG	Nominal
0	Master	0.6194		0.6100	180.0		197.0
1	Master	1.269		1.270	178.9		196.0
2	Master	0.6307		0.6200	175.3		192.0
3	Master	0.7118		0.7000	174.6		191.0
4	Master	1.332		1.340	168.4		185.0
5	Master	1.950		1.960	166.7		182.0
6	Master	1.946		1.960	166.8		181.0
7	Master	1.418		1.410	165.9		175.0
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)		Nom -60.00 (Minimum)	Nom + 60.00 (Maximum)

















Master: 17-Mar-2010 8:50







Array Induction Tool – M Master Calibration						
Electronics Calibration Check – Auxiliary						
Phase	Array Induction SPA Plus MV			Value	Phase	Array Induction SPA Zero MV
Master				983.6	Master	
	941.0 (Minimum)	991.0 (Nominal)	1040 (Maximum)			-50.00 (Minimum)
						0 (Nominal)
						50.00 (Maximum)
Phase	Array Induction Temperature Plus V			Value	Phase	Array Induction Temperature Zero V
Master				0.9114	Master	
	0.8710 (Minimum)	0.9170 (Nominal)	0.9630 (Maximum)			-0.05000 (Minimum)
						0 (Nominal)
						0.05000 (Maximum)

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Array Induction Tool – M Master Calibration						
Test Loop Gain Correction						
Idx	Value	Test Loop Gain Correction Magnitude V			Value	Test Loop Gain Correction Phase DEG
0	1.015				0.3332	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)
						0 (Nominal)
						3.000 (Maximum)
1	1.012				0.6161	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)
						0 (Nominal)
						3.000 (Maximum)
2	1.016				0.1287	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)
						0 (Nominal)
						3.000 (Maximum)

	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
3	1.012			0.1700			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)	
4	0.9937			0.1124			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)	
5	0.9890			-0.06042			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)	
6	0.9937			0.2973			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)	
7	1.006			-0.06541			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)	
Master: 17-Mar-2010 8:50							

Array Induction Tool – M Master Calibration								
Sonde Error Correction								
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
0	-65.75				-316.9			
		-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	176.6				108.6			
		114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal)	625.0 (Maximum)
2	119.4				44.39			
		66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)
3	66.51				-31.03			
		39.00 (Minimum)	64.00 (Nominal)	89.30 (Maximum)		-250.0 (Minimum)	0 (Nominal)	250.0 (Maximum)
4	27.71				20.82			
		15.00 (Minimum)	25.00 (Nominal)	35.00 (Maximum)		-63.00 (Minimum)	0 (Nominal)	63.00 (Maximum)
5	12.62				-16.06			
		4.000 (Minimum)	14.00 (Nominal)	24.00 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
6	9.430				-4.953			
		5.000 (Minimum)	10.00 (Nominal)	15.00 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
7	-1.425				-11.76			
		-5.000 (Minimum)	0 (Nominal)	5.000 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
Master: 17-Mar-2010 8:50								

Array Induction Tool – M Master Calibration								
Mud Gain Correction								
Idx	Value	Coarse – Mag, Real, Imag			Value	Fine – Mag, Real, Imag		
0	0.8486				0.8511			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
1	0.8487				0.8512			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
2	0.8487				0.8512			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
Master: 17–Mar–2010 8:50								

High resolution Integrated Logging Tool–DTS / Equipment Identification

Primary Equipment:

HILT high-Resolution Mechanical Sonde

HRMS – B







HRMS – B




HILT Rxo Gamma-ray Device
HILT Micro Cylindrically Focused Log Dev
GR Logging Source
HILT High Res. Control Cartridge
HILT Gamma-Ray Neutron Sonde-DTS
HGNS Gamma-Ray Device
HGNS Neutron Detector with Alpha Source




HRGD - B
MCFL -
GLS - VJ 5416
HRCC - B
HGNS - B
HGR -
HCNT -




Auxiliary Equipment:
Neutron Calibration Tank
Gamma Source Radioactive
HGNS Housing



NCT - B
GSR - U/Y
HGNH -




High resolution Integrated Logging Tool-DTS Wellsite Calibration														
Stab Measurement Summary														
Phase	BS Window Ratio			Value	Phase	SS Window Ratio			Value	Phase	LS Window Ratio			Value
Before				0.7378	Before				0.4735	Before				0.2981
	0.7022 (Minimum)	0.7392 (Nominal)	0.7762 (Maximum)			0.4496 (Minimum)	0.4732 (Nominal)	0.4969 (Maximum)			0.2827 (Minimum)	0.2975 (Nominal)	0.3124 (Maximum)	
Phase	BS Window Sum CPS			Value	Phase	SS Window Sum CPS			Value	Phase	LS Window Sum CPS			Value
Before				10700	Before				10190	Before				1163
	10160 (Minimum)	10690 (Nominal)	11230 (Maximum)			9680 (Minimum)	10190 (Nominal)	10700 (Maximum)			1108 (Minimum)	1166 (Nominal)	1224 (Maximum)	
Before: 22-Mar-2010 22:07														

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Photo-multiplier High Voltages Calibrations											
Phase	BS PM High Voltage (Command) V		Value	Phase	SS PM High Voltage (Command) V		Value	Phase	LS PM High Voltage (Command) V		Value
Before			1533	Before			1786	Before			1904
	1409 (Minimum)	1509 (Nominal)	1609 (Maximum)		1677 (Minimum)	1777 (Nominal)	1877 (Maximum)		1796 (Minimum)	1896 (Nominal)	1996 (Maximum)
Before: 22-Mar-2010 22:07											

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Crystal Quality Resolutions Calibration											
Phase	BS Crystal Resolution %		Value	Phase	SS Crystal Resolution %		Value	Phase	LS Crystal Resolution %		Value
Before			11.26	Before			11.11	Before			9.632
	10.23 (Minimum)	11.23 (Nominal)	12.23 (Maximum)		10.03 (Minimum)	11.03 (Nominal)	12.03 (Maximum)		8.873 (Minimum)	9.873 (Nominal)	10.87 (Maximum)
Before: 22-Mar-2010 22:07											




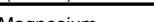
High resolution Integrated Logging Tool-DTS Wellsite Calibration														
MCFL Calibration														
Phase	Raw B0 Resistivity OHMM			Value	Phase	Raw B1 Resistivity OHMM			Value	Phase	Raw B2 Resistivity OHMM			Value
Before				3858	Before				3808	Before				3821
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)			
Before: 22-Mar-2010 22:08														



High resolution Integrated Logging Tool-DTS Wellsite Calibration									
HILT Caliper Calibration									
Phase	HILT Caliper Zero Measurement IN			Value	Phase	HILT Caliper Plus Measurement IN			Value
Before				9.711	Before				13.84
6.000 (Minimum)		8.000 (Nominal)		10.00 (Maximum)	9.000 (Minimum)		12.00 (Nominal)		15.00 (Maximum)
Before: 22-Mar-2010 22:03									



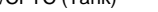
High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Detector Calibration											
Phase	Gamma Ray Background GAPI		Value	Phase	Gamma Ray (Jig – Bkg) GAPI		Value	Phase	Gamma Ray (Calibrated) GAPI		Value
Before			77.67	Before			177.2	Before			165.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		161.1 (Minimum)	177.2 (Nominal)	193.3 (Maximum)		150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)
Before: 22-Mar-2010 21:59											

High resolution Integrated Logging Tool-DTS Wellsite Calibration					
Zero Measurement					

High resolution Integrated Logging Tool-DTS Wellsite Calibration									
Ratio Measurement									
Phase	Thermal Near Corr. (Tank) CPS			Value	Phase	Thermal Far Corr. (Tank) CPS			Value
Master				5716	Master				2390
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)			1900 (Minimum)	2400 (Nominal)	2900 (Maximum)	
									2.392
						2.120 (Minimum)	2.540 (Maximum)		

High resolution Integrated Logging Tool-DTS Master Calibration									
Inversion results									
Phase	Rho Aluminum G/C3			Value	Phase	Rho Magnesium G/C3			Value
Master				2.602	Master				1.688
	2.586 (Minimum)	2.596 (Nominal)	2.606 (Maximum)			1.676 (Minimum)	1.686 (Nominal)	1.696 (Maximum)	
Phase	Pe Aluminum			Value	Phase	Pe Magnesium			Value
Master				2.565	Master				2.609
	2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)			2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)	
Master: 22-Mar-2010 21:20									

High resolution Integrated Logging Tool—DTS Master Calibration									
Zero Measurement									
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value
Master				28.30	Master				26.92
	5.000 (Minimum)	28.30 (Nominal)	40.00 (Maximum)			5.000 (Minimum)	26.92 (Nominal)	40.00 (Maximum)	
Master: 20-Mar-2010 17:38									

High resolution Integrated Logging Tool-DTS Master Calibration														
Tank Measurement														
Phase	Thermal Near Corr. (Tank) CPS			Value	Phase	Thermal Far Corr. (Tank) CPS			Value	Phase	CNTC/CFTC (Tank)			Value
Master				5716	Master				2390	Master				2.392
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)		1900 (Minimum)	2400 (Nominal)	2900 (Maximum)			2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)		
Master: 20-Mar-2010 17:38														

DTS Telemetry Tool / Equipment Identification

Primary Equipment:

DTC-H Auxiliary Cartridge
DTC-H Telemetry Cartridge

DTCH – A
DTCH – A

Auxiliary Equipment:

DTCH Telemetry Cartridge Housing

ECH – KC

Company: Vecta Oil & Gas, LTD.

Schlumberger

Well: Red Cloud 44-5
Field: Eureka Creek
County: Cheyenne
State: Colorado

Platform Express
Array Induction
with Linear Correlation