

NABORS 113

YOUR CREW TODAY WAS PASSMORE AND GROBER

THANK YOU FOR USING SCHLUMBERGER

RUN 1		
SERVICE ORDER #: 11745921		
PROGRAM VERSION: 15C0-309		
FLUID LEVEL: 0 ft		
LOGGED INTERVAL	START	STOP

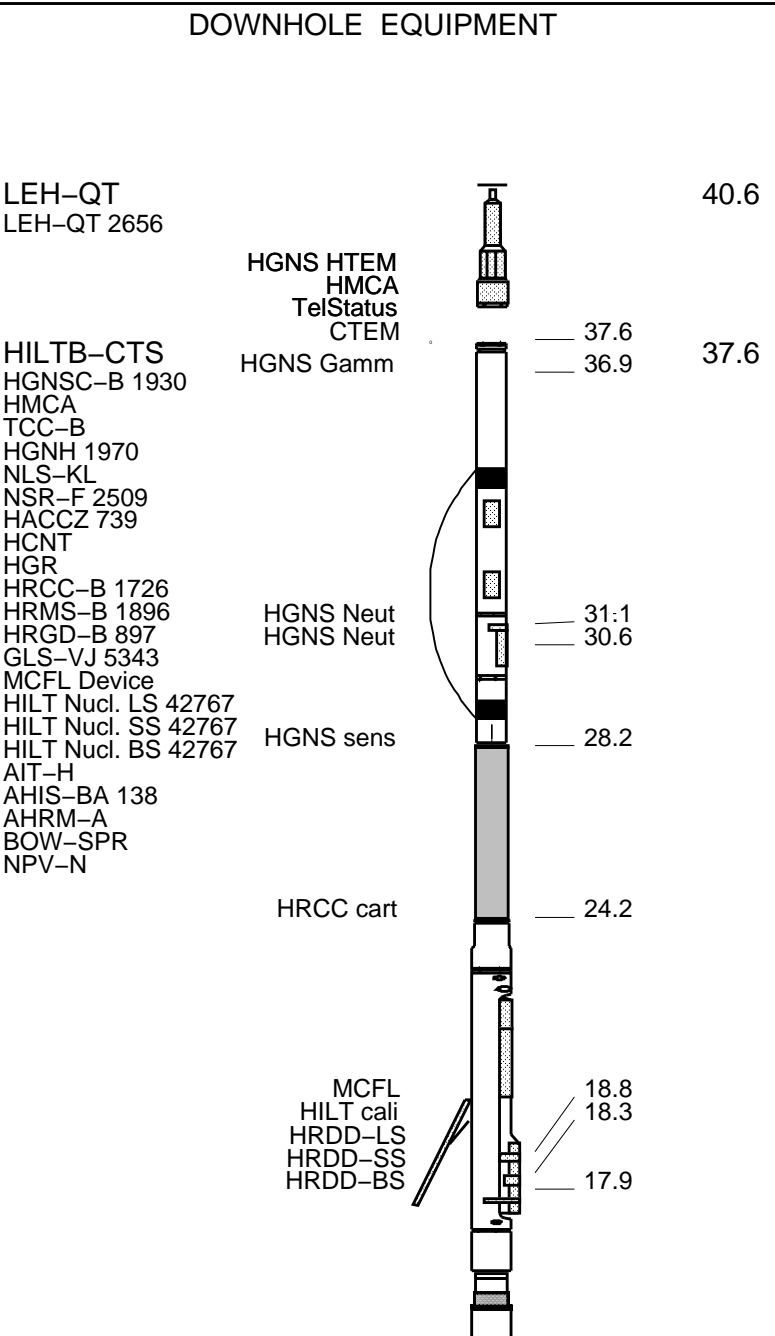
RUN 2		
SERVICE ORDER #:		
PROGRAM VERSION:		
FLUID LEVEL:		
LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

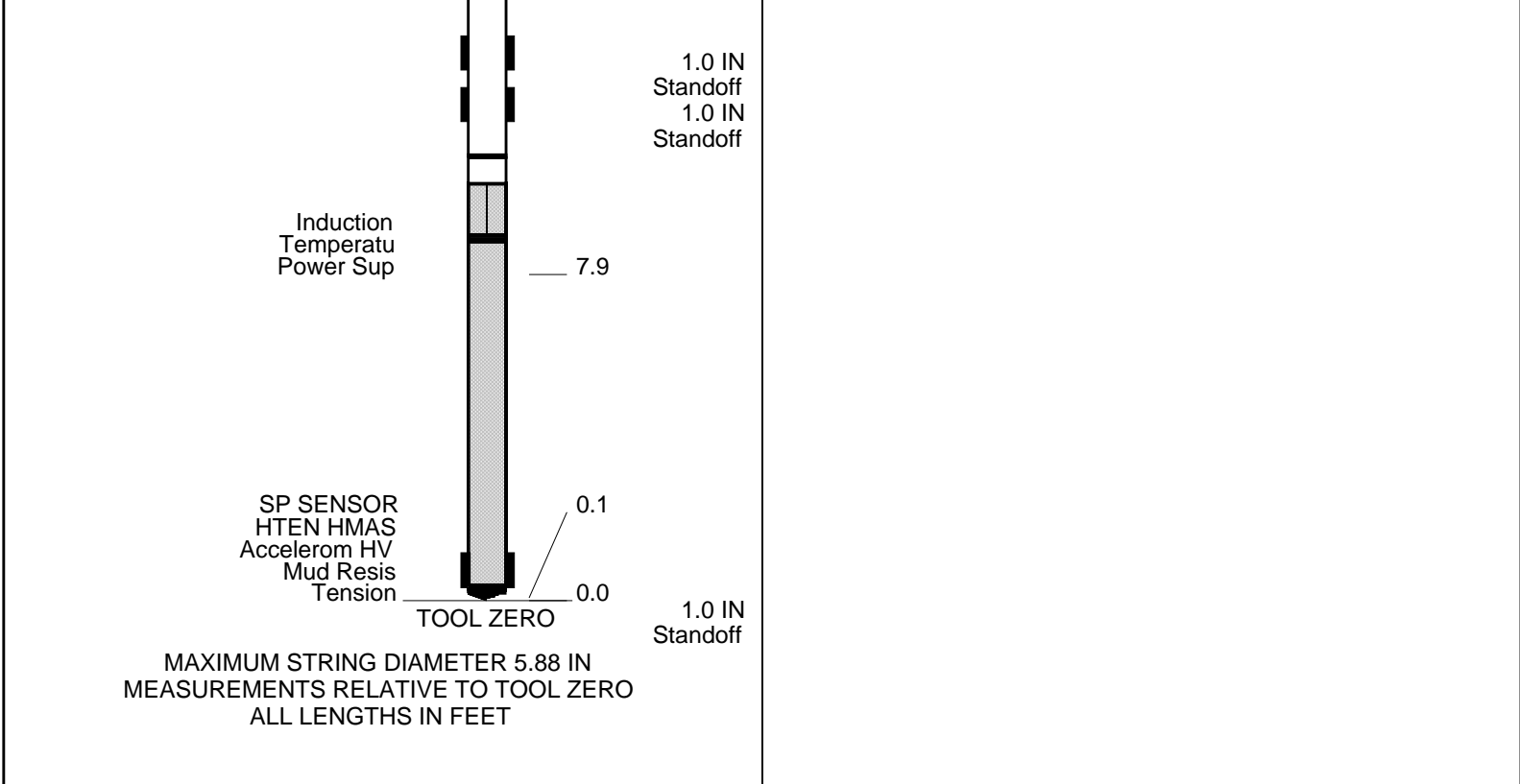
RUN 1

SURFACE EQUIPMENT

WITM (CTS)-A NCS-VB
GSR-U/Y 632504
NCT-B
CNB-AB



RUN 2



Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_006LUP FN:5 PRODUCER 07-Jul-2007 13:33 2400.0 FT 187.0 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 818.16 F3
Cement Volume = 735.75 F3 (assuming 2.88 IN casing O.D.)
Computed from 2388.0 FT to 561.0 FT using data channel(s) HCAL

OP System Version: 15C0-309

MCM

HILTB-CTS SRPC-3292-Q1_2007

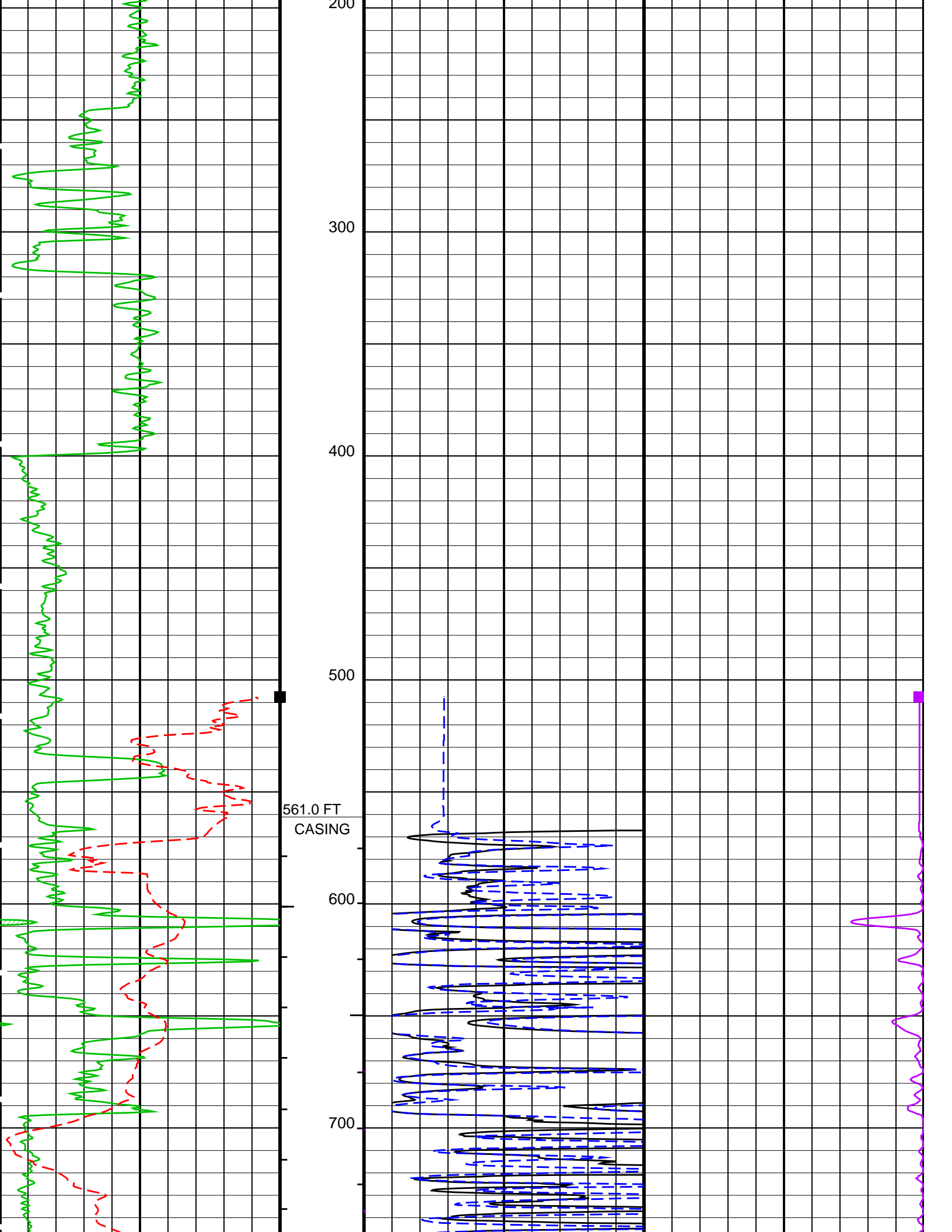
PIP SUMMARY

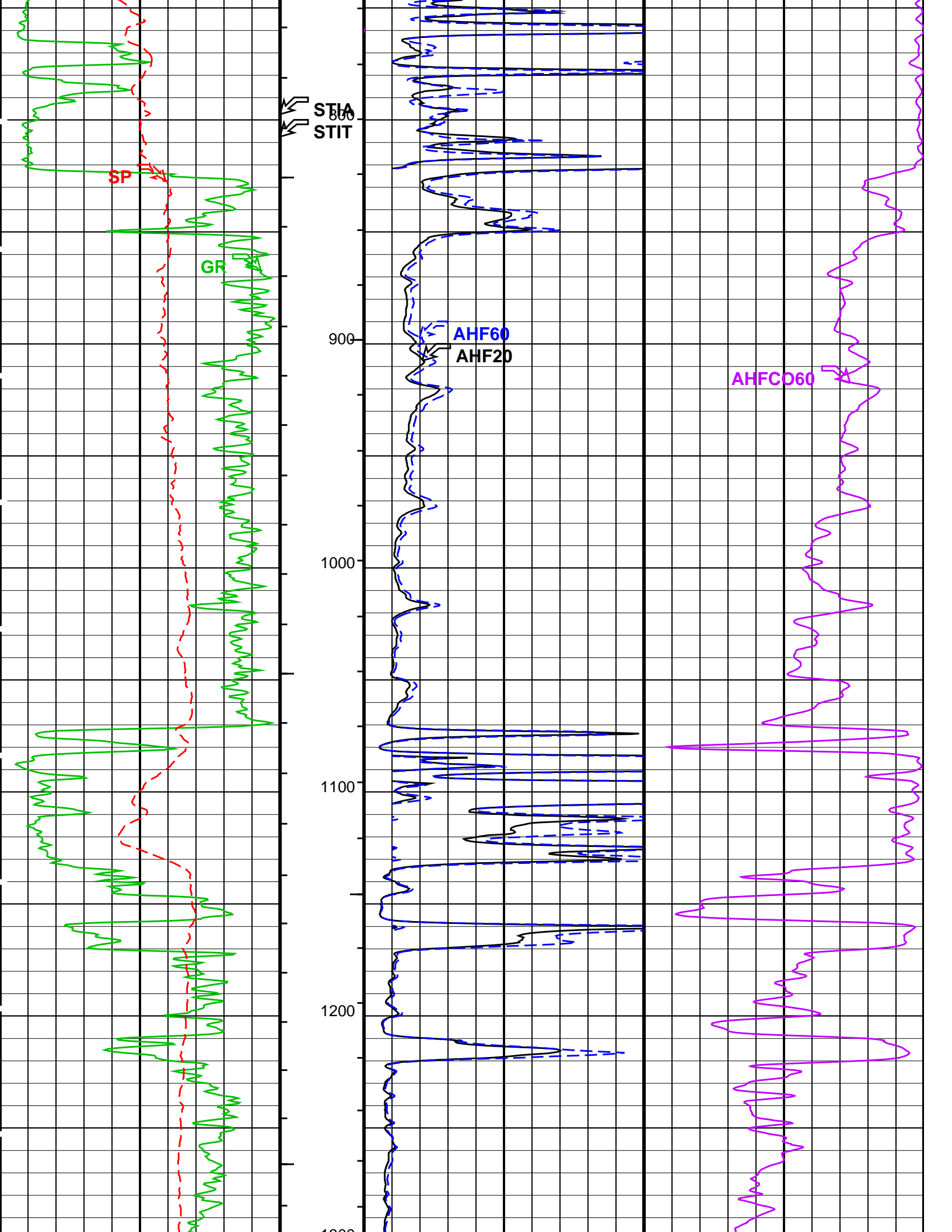
- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

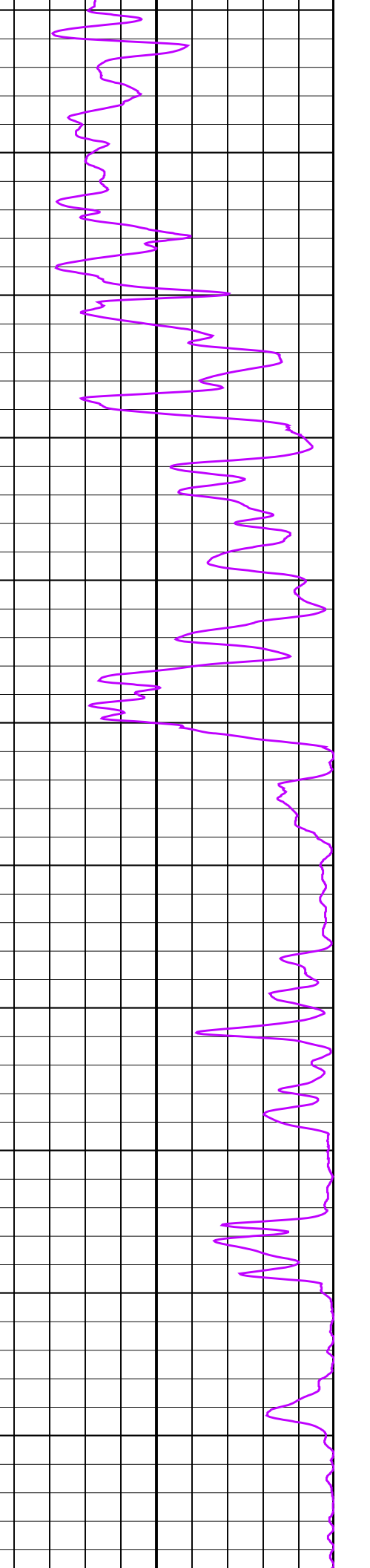
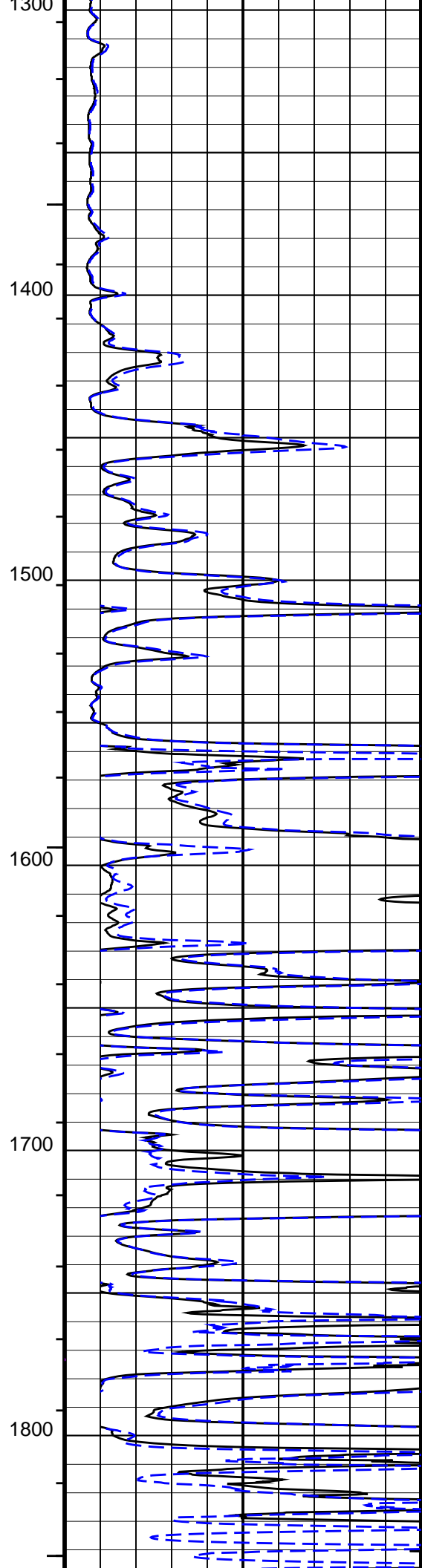
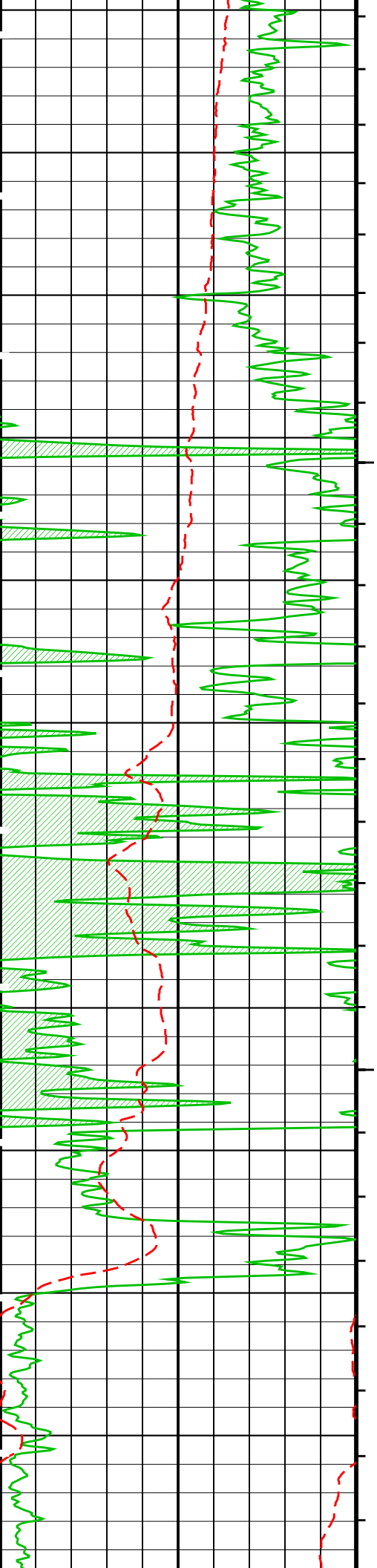
Time Mark Every 60 S

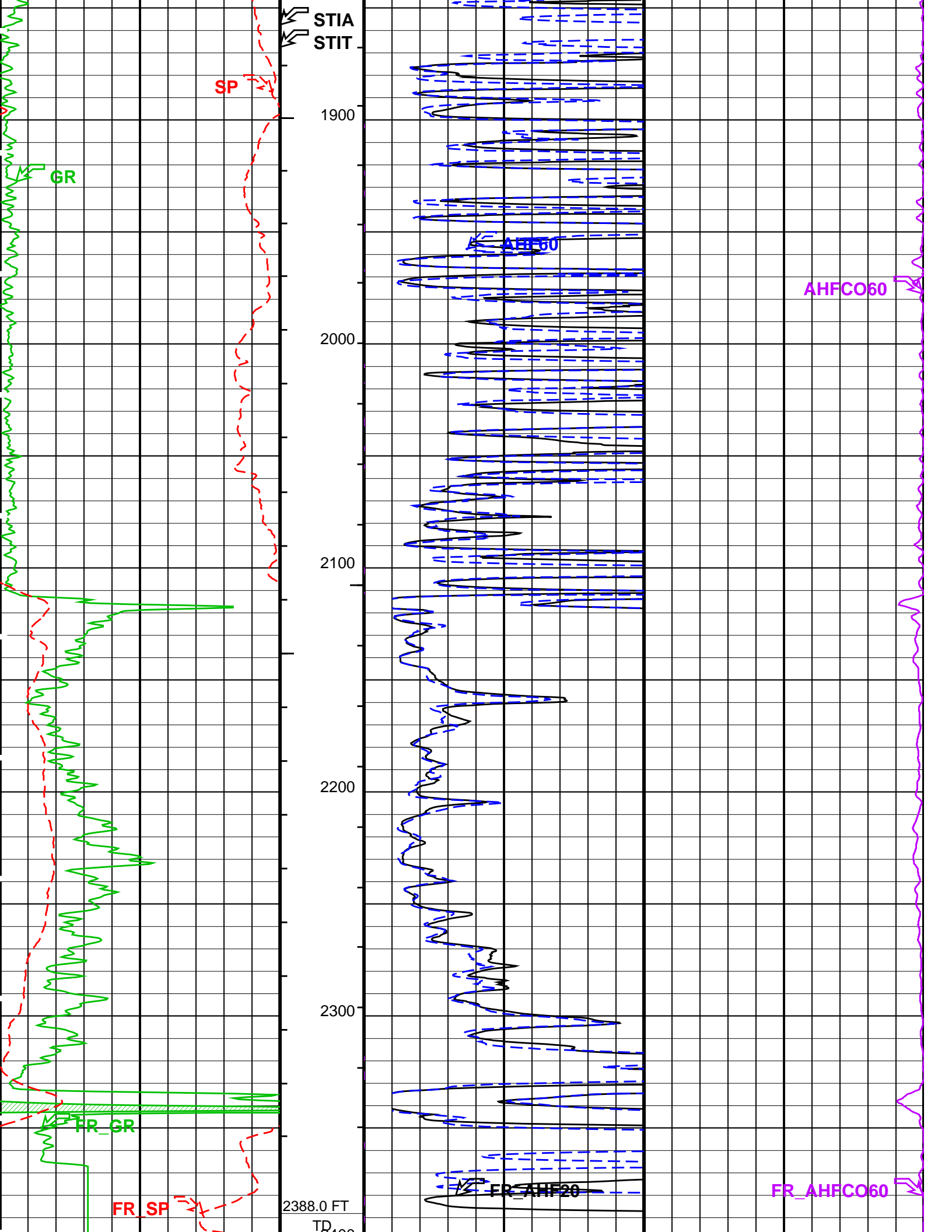
BACKUP GAMMA RAY From T1 to GR_1			
-160	SP (SP) (MV) 40	0	AIT-H 60 Inch Investigation (AHF60) (OHMM) 100
150	Gamma Ray (GR) (GAPI) 300	0	AIT-H 20 Inch Investigation (AHF20) (OHMM) 100
0	Gamma Ray (GR) (GAPI) 150	0	Stuck Stretch (STIT) (F) 50
		400	AIT-H 60 Inch Investigation Conductivity (AHFCO60) (MM/M) 0

CORRELATION 2"=100FT









CORRELATION 2"=100FT			
<div>Gamma Ray (GR)</div> <div>(GAPI)</div> <div>0150</div>	<div>Stuck Stretch (STIT)</div> <div>0 (F) 50</div>	<div>AIT-H 60 Inch Investigation Conductivity (AHFCO60)</div> <div>(MM/M)</div> <div>4000</div>	
<div>Gamma Ray (GR)</div> <div>(GAPI)</div> <div>150300</div>	<div>Cable Drag From STIA to STIT</div>	<div>AIT-H 20 Inch Investigation (AHF20)</div> <div>(OHMM)</div> <div>0100</div>	
<div>SP (SP)</div> <div>(MV)</div> <div>-16040</div>		<div>AIT-H 60 Inch Investigation (AHF60)</div> <div>(OHMM)</div> <div>0100</div>	
BACKUP GAMMA RAY From T1 to GR_1			

PIP SUMMARY			
<div> <div>└ Integrated Hole Volume Minor Pip Every 10 F3</div> <div>└ Integrated Hole Volume Major Pip Every 100 F3</div> <div>└ Integrated Cement Volume Minor Pip Every 10 F3</div> <div>└ Integrated Cement Volume Major Pip Every 100 F3</div> </div>			
<div> <div>Time Mark Every 60 S</div> </div>			

<div>AIT-H Answer Product Processing Summary. Data taken with Tool # 138 (AHTNO)</div> <div>...Acquired data from HILT/HAIT</div> <div>***** Borehole Correction *****</div> <div>Effective Tool Standoff computed. Borehole diameter and mud res. taken as input (see GCSE and GRSE parameters)</div> <div>Tool is run in ECCENTERED mode with a tool stand-off of 1.00 IN. Bit Size is 8.50 IN.</div> <div>***** Input Selections to AIT-H Answer Product Processing *****</div> <div>Caliper (GCSE): HCAL Mud Resistivity (GRSE): AHMF Temperature (GTSE): HTEM Porosity (FPHI): DPHZ</div> <div>***** Other Parameters used by AIT-H Answer Product Processing *****</div> <div>***** AIT-H Answer Product Processing Control Parameters *****</div> <div>(AHAPL): 2_BholeCorr_BasicLogs</div> <div>(AHBHM): 2_ComputeStandoff (AHBLM): 6_One_Two_and_Four</div>			
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Format: AIT_2	Vertical Scale: 2" per 100'	Graphics File Created: 07-Jul-2007 13:33
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<div>OP System Version: 15C0-309</div> <div>MCM</div>	
HILTB-CTS	SRPC-3292-Q1_2007

Output DLIS Files			
DEFAULT	AIT_TLD_MCFL_CNL_006LUP	FN:5	PRODUCER 07-Jul-2007 13:33

Company: STORM CAT ENERGY	Well: VAUGHAN 1-18H
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Output DLIS Files			
DEFAULT	AIT_TLD_MCFL_CNL_006LUP	FN:5	PRODUCER 07-Jul-2007 13:33

<div>OP System Version: 15C0-309</div> <div>MCM</div>	
HILTB-CTS	SRPC-3292-Q1_2007

Changed Parameter Summary			
DLIS Name	New Value	Previous Value	Depth & Time
SPDR	-0.03 MV/F	0 MV/F	1641.4 13:48:04

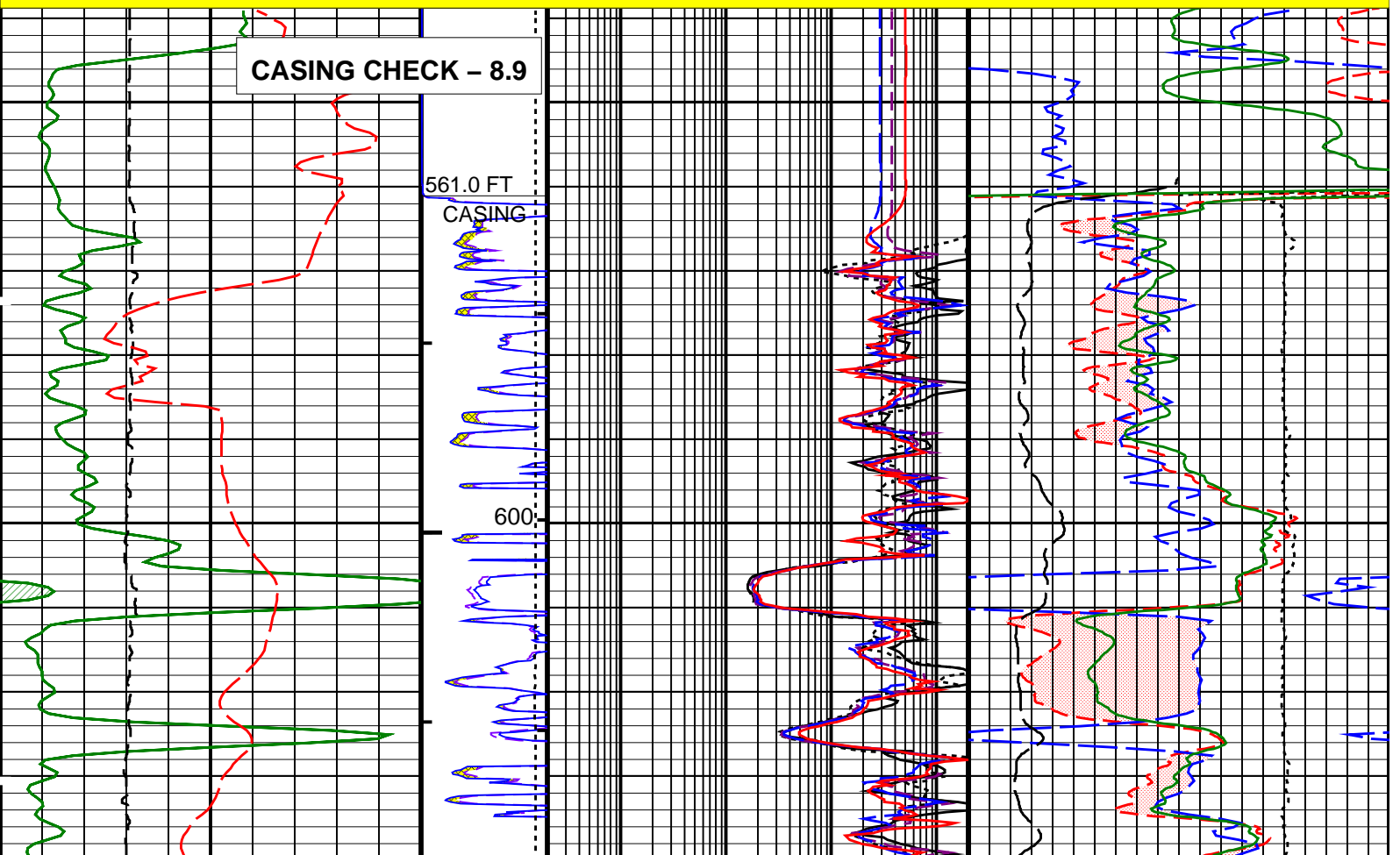
PIP SUMMARY

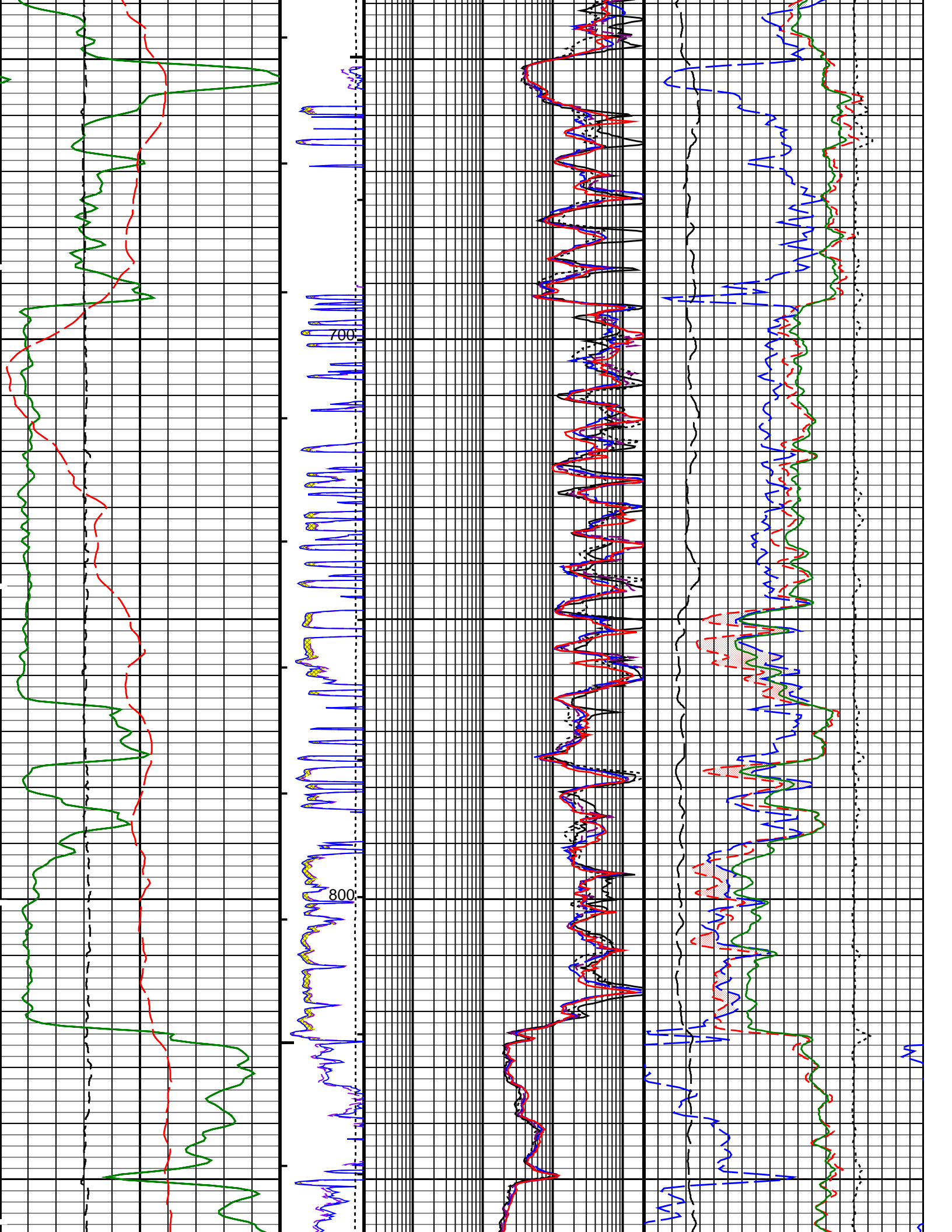
- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

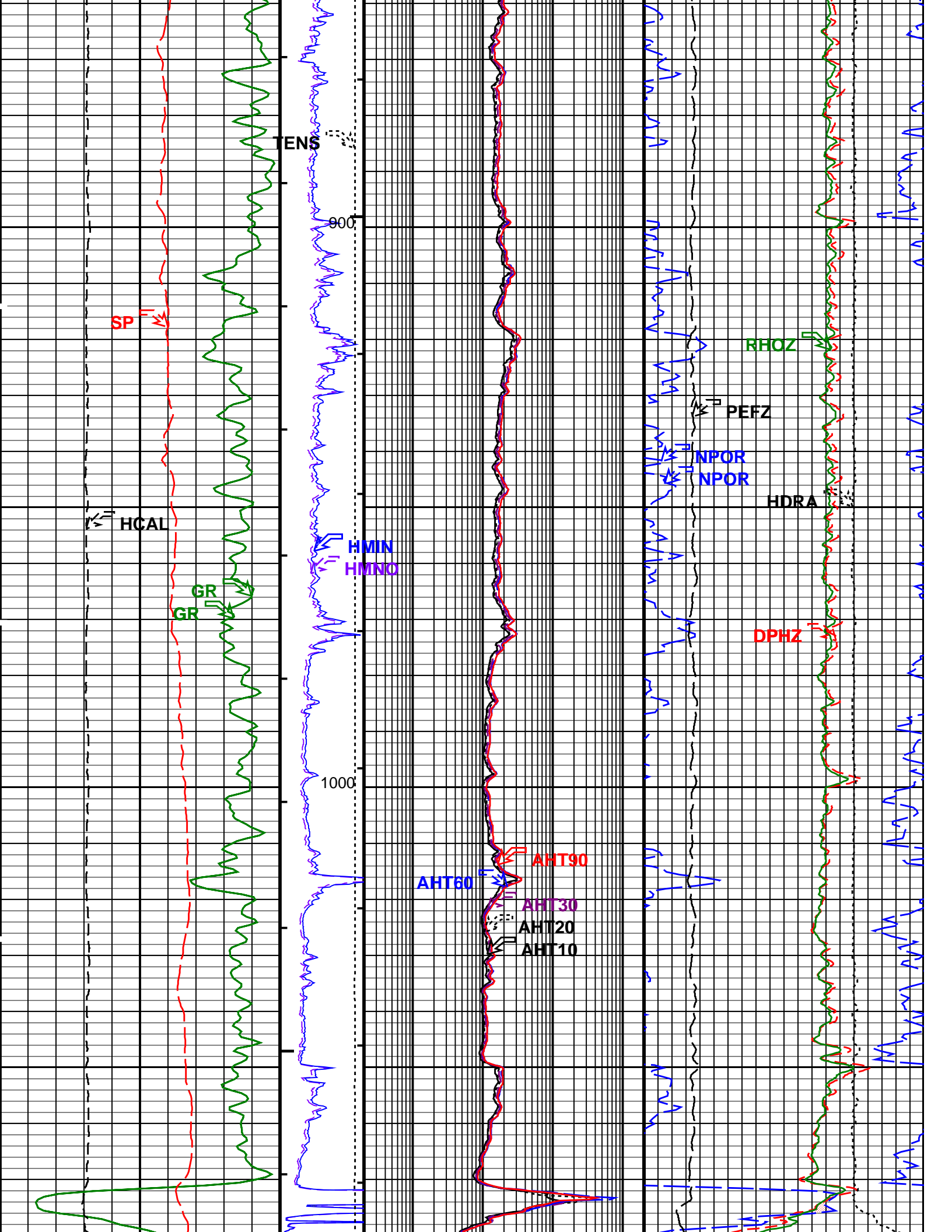
Time Mark Every 60 S

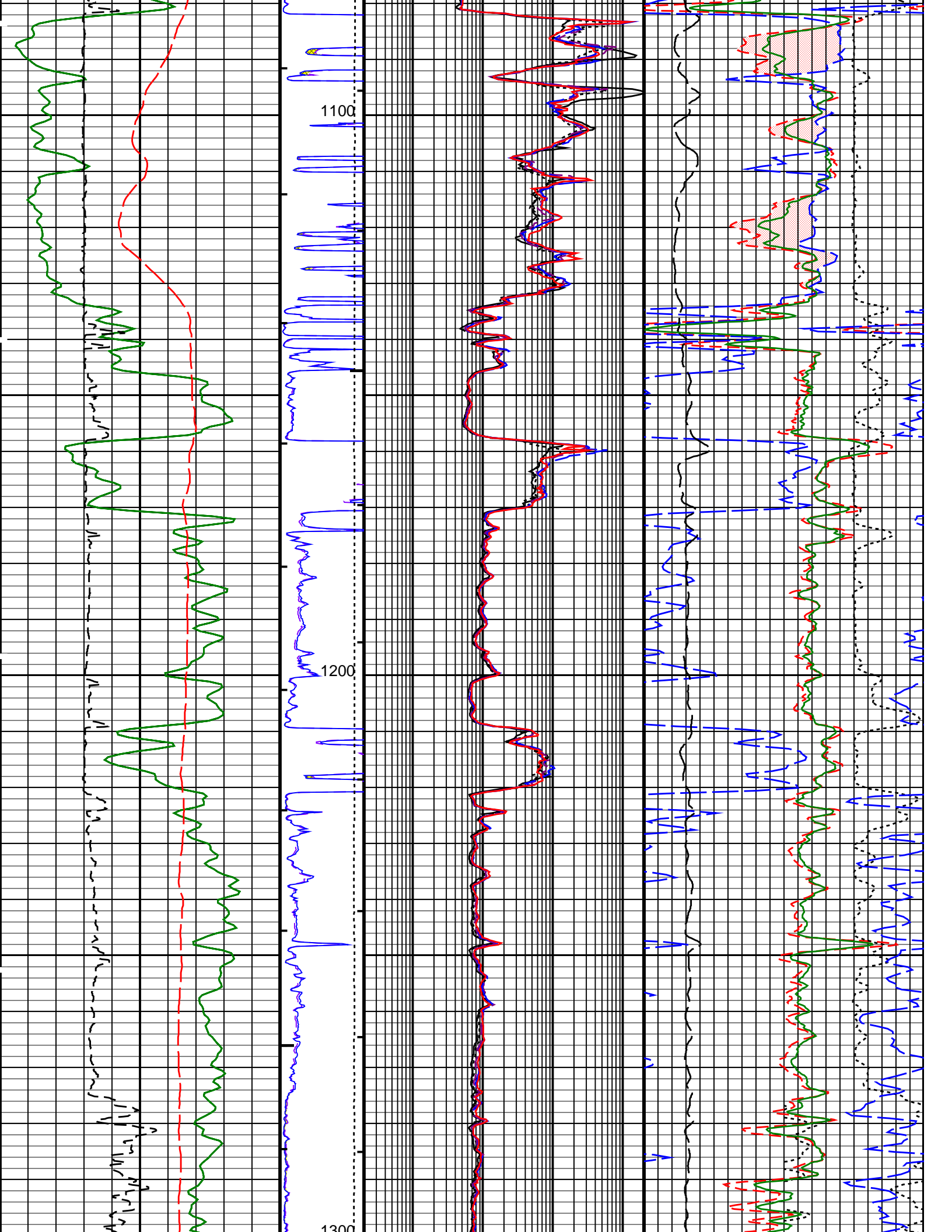
			CROSSOVER From DPHZ to NPOR	
GAMMA RAY BACKUP From LHT1 to GR_1		AIT-H 90 Inch Investigation (AHT90) 0.2 (OHMM) 2000	Std. Res. Formation Density (RHOZ) 2 (G/C3) 3	
SP (SP) (MV) -160 40	Computed Micro Inverse (HMIN) (OHMM) 0 40	AIT-H 60 Inch Investigation (AHT60) 0.2 (OHMM) 2000	Std. Res. Formation Pe (PEFZ) 0 (----) 10	Density Correction (HDRA) -0.25 (G/C3) 0.25
HILT Caliper (HCAL) (IN) 6 16	Computed Micro Normal (HMNO) (OHMM) 0 40	AIT-H 30 Inch Investigation (AHT30) 0.2 (OHMM) 2000	Alpha Processed Neutron Porosity (NPOR) 0.7 (V/V) 0.3	
Gamma Ray (GR) (GAPI) 150 300	MICROLO G From HMIN to HMNO	AIT-H 20 Inch Investigation (AHT20) 0.2 (OHMM) 2000	Alpha Processed Neutron Porosity (NPOR) 0.3 (V/V) -0.1	
Gamma Ray (GR) (GAPI) 0 150	Tension (TENS) (LBF) 10000 0	AIT-H 10 Inch Investigation (AHT10) 0.2 (OHMM) 2000	Std. Res. Density Porosity (DPHZ) 0.3 (V/V) -0.1	

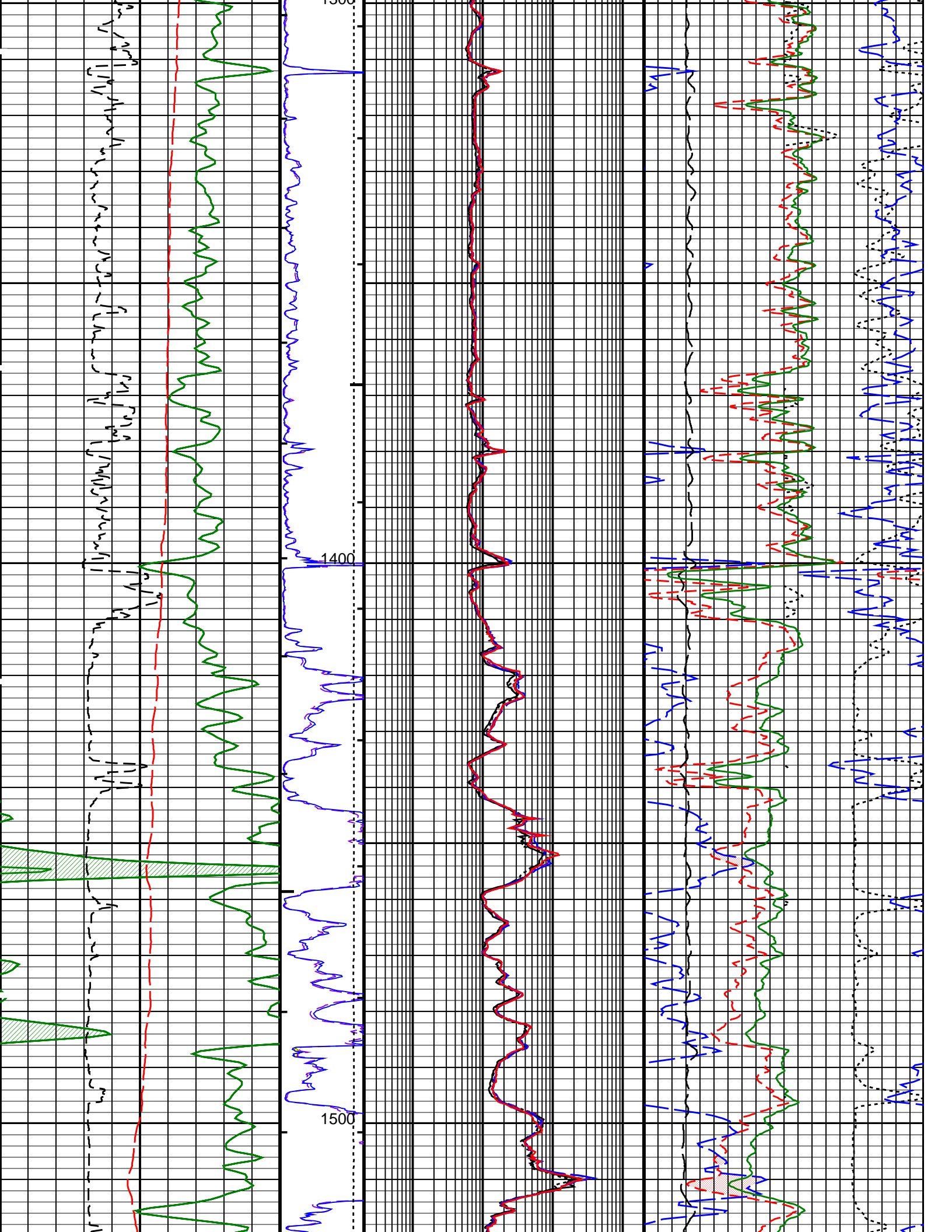
PLATFORM EXPRESS - TRIPLE COMBO MAIN PASS / 5 IN = 100 FT

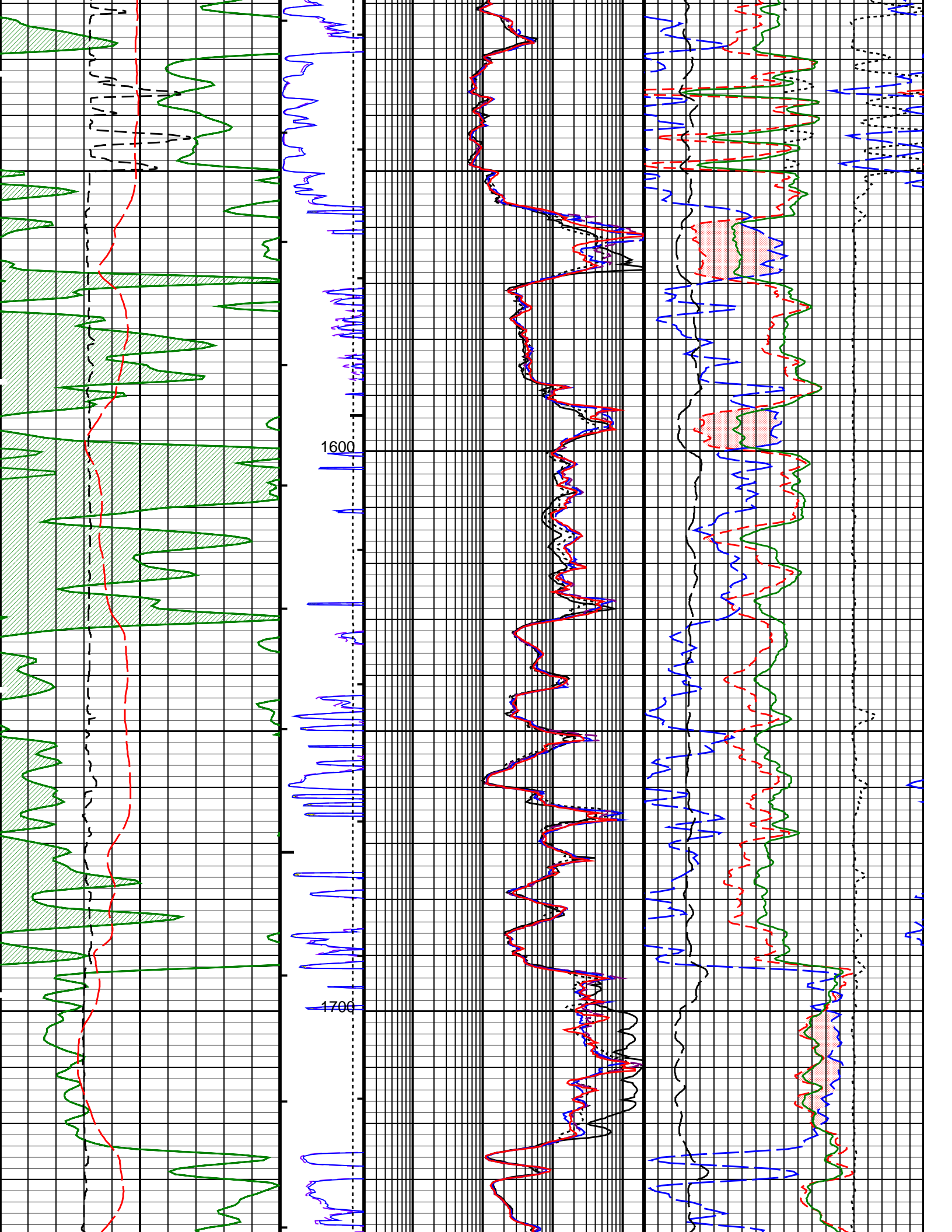


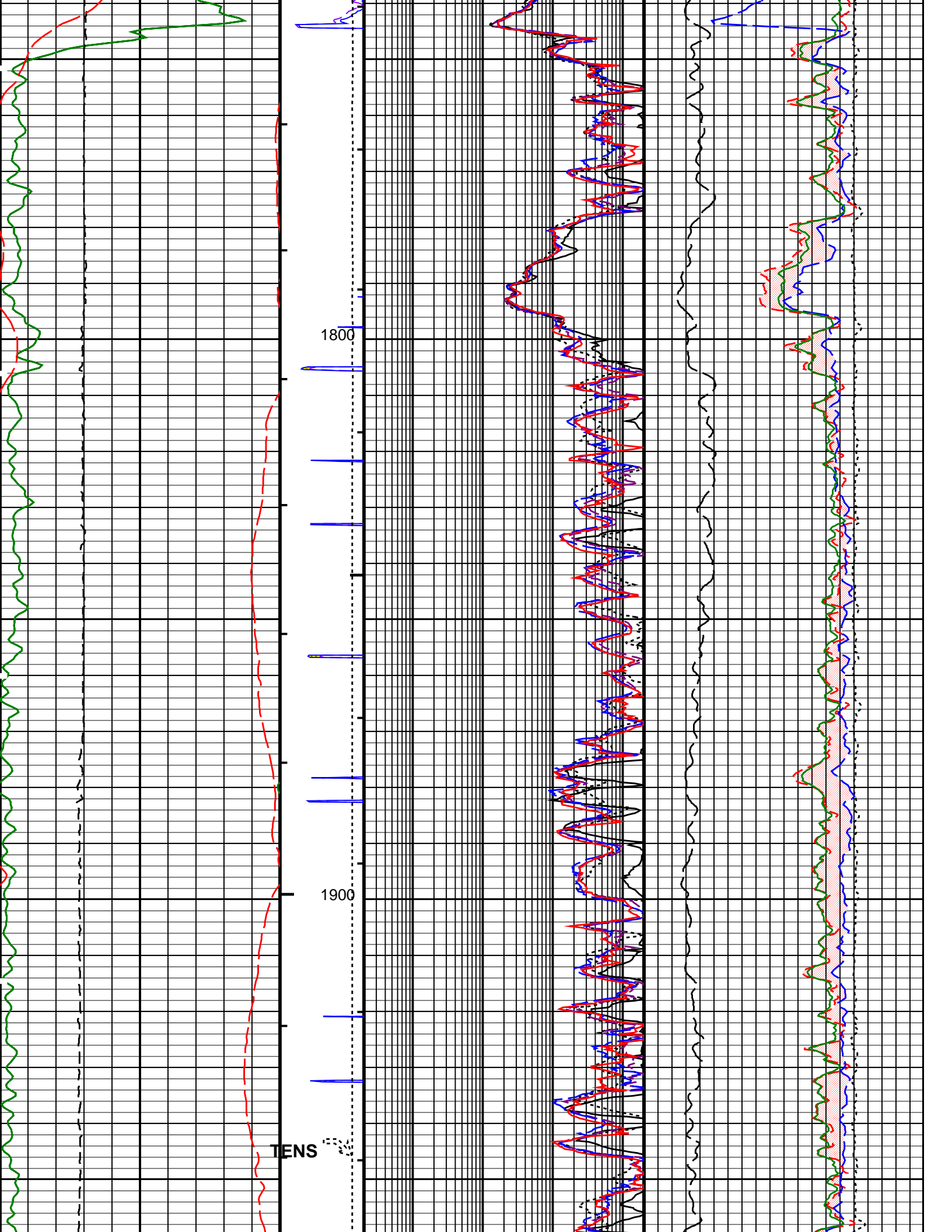


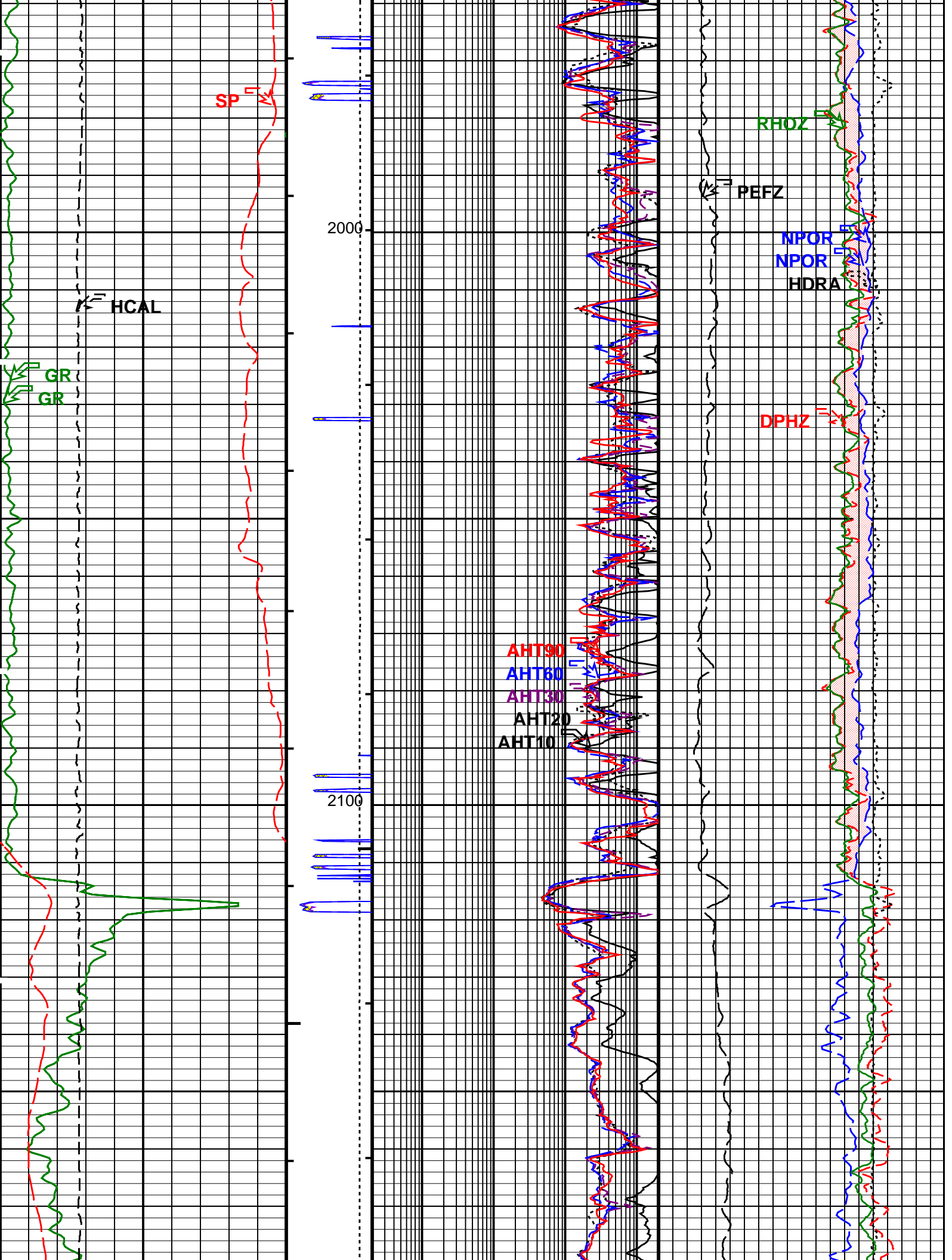


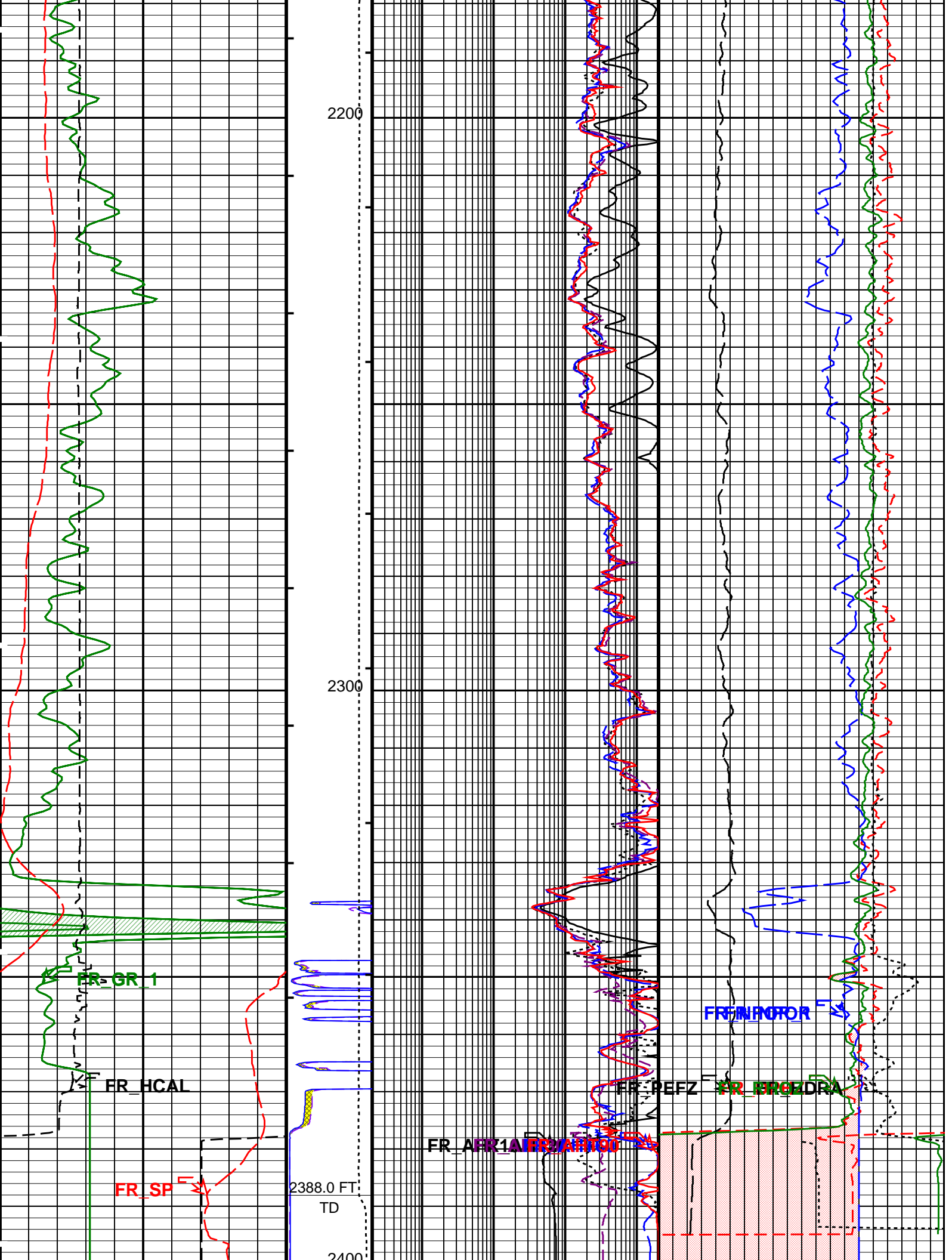












Gamma Ray (GR) (GAPI)		150	Tension (TENS) (LBF) 10000 0	AIT-H 10 Inch Investigation (AHT10) 0.2 (OHMM) 2000		Std. Res. Density Porosity (DPHZ) 0.3 (V/V) -0.1	
Gamma Ray (GR) (GAPI)		300		AIT-H 20 Inch Investigation (AHT20) 0.2 (OHMM) 2000		Alpha Processed Neutron Porosity (NPOR) 0.3 (V/V) -0.1	
HILT Caliper (HCAL) (IN)		16	Computed Micro Normal (HMNO) (OHMM) 0 40	AIT-H 30 Inch Investigation (AHT30) 0.2 (OHMM) 2000		Alpha Processed Neutron Porosity (NPOR) 0.7 (V/V) 0.3	
SP (SP) (MV)		40		AIT-H 60 Inch Investigation (AHT60) 0.2 (OHMM) 2000		Std. Res. Formation Pe (PEFZ) 0 (----) 10	Density Correction (HDRA) -0.25 (G/C3) 0.25
GAMMA RAY BACKUP From LHT1 to GR_1				AIT-H 90 Inch Investigation (AHT90) 0.2 (OHMM) 2000		Std. Res. Formation Density (RHOZ) (G/C3) 2 3	
						CROSSOVER From DPHZ to NPOR	

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

AIT-H Answer Product Processing Summary. Data taken with Tool # 138 (AHTNO)

...Acquired data from HILT/HAIT

***** Borehole Correction *****

Effective Tool Standoff computed. Borehole diameter and mud res. taken as input (see GCSE and GRSE parameters)
Tool is run in ECCENTERED mode with a tool stand-off of 1.00 IN. Bit Size is 8.50 IN.

***** Input Selections to AIT-H Answer Product Processing *****

Caliper (GCSE): HCAL Mud Resistivity (GRSE): AHMF Temperature (GTSE): HTEM Porosity (FPHI): DPHZ

***** Other Parameters used by AIT-H Answer Product Processing *****

***** AIT-H Answer Product Processing Control Parameters *****

(AHAPL): 2_BholeCorr_BasicLogs

(AHBHM): 2_ComputeStandoff (AHBLM): 6_One_Two_and_Four

Parameters

DLIS Name	Description	Value
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HILTB-CTS: High resolution Integrated Logging Tool-CTS

AHBHM	Array Induction Borehole Correction Mode	2_ComputeStandoff
AHBHV	Array Induction Borehole Correction Code Version Number	900
AHBLM	Array Induction Basic Logs Mode	6_One_Two_and_Four
AHBLV	Array Induction Basic Logs Code Version Number	223
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	41.70.24.20
AHMRF	Array Induction Mud Resistivity Factor	1
AHORSV	Array Induction Response Set Version for One ft Resolution	41.70.24.20
AHRFV	Array Induction Radial Profiling Code Version Number	701
AHRPV	Array Induction Radial Parametrization Code Version Number	232

AHSTA	Array Induction Tool Standoff	41.70.24.20	1	IN
AHTRSV	Borehole Fluid Type	WATER		
BHFL	HILT Nuclear Mud Base	WATER		
BHFL_TLD	Borehole Status	OPEN		
BHS	Bottom Hole Temperature (used in calculations)	87		DEGF
BHT	Borehole Salinity Correction Option	NO		
BSCO	Casing & Cement Thickness Correction Option	NO		
CCCO	Density Hole Correction	BS		
DHC	Fluid Density	1		G/C3
FD	Form Factor Exponent	2		
FEXP	Form Factor Numerator	1		
FNUM	Formation Salinity	-50000		PPM
FSAL	Formation Salinity Correction Option	NO		
FSCO	Germany Coal-like Formation Option	NO		
GCLF	Generalized Caliper Selection	HCAL		
GCSE	Average Angular Deviation of Borehole from Normal	0		DEG
GDEV	Geothermal Gradient	0.01		DF/F
GGRD	Generalized Mud Resistivity Selection	AITH_RESIST		
GRSE	Generalized Temperature Selection	HSTS_HTEM		
GTSE	Hole Size Correction Option	YES		
HSCO	Rock Matrix for Neutron Porosity Corrections	LIMESTONE		
MATR	Mud Cake Correction Option	NO		
MCCO	Mud Correction	NATU		
MCOR	Matrix Density	2.71		G/C3
MDEN	MCFL Processing Operation Mode	ON		
MPOF	Mud Weight Correction Option	NO		
MWCO	HRDD APS Activation Correction	OFF		
NAAC	HILT Nuclear Mud Type	NOBARITE		
NMT	HRDD Processing Mode	StdRes		
NPRM	HRDD Depth Sampling Rate	1		IN
NSAR	Pressure/Temperature Correction Option	NO		
PTCO	Standoff Data Source	SOCN		
SDAT	Surface Hole Temperature	68		DEGF
SHT	Standoff Distance	0.125		IN
SOCN	Standoff Correction Option	NO		
SOCO	SP Drift	0		MV/F
SPDR	SP Next Value	0		MV
SPNV	HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN		
BHT	Bottom Hole Temperature (used in calculations)	87		DEGF
FCD	Future Casing (Outer) Diameter	2.875		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	AITH_RESIST		
GTSE	Generalized Temperature Selection	HSTS_HTEM		
HVCS	Integrated Hole Volume Caliper Selection	HCAL		
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE		
SHT	Surface Hole Temperature	68		DEGF
	STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL		
TDD	Total Depth - Driller	2392.00		FT
TDL	Total Depth - Logger	2388.00		FT
	System and Miscellaneous			
BS	Bit Size	8.500		IN
BSAL	Borehole Salinity	-50000.00		PPM
CSIZ	Current Casing Size	9.625		IN
CWEI	Casing Weight	36.00		LB/F
DFD	Drilling Fluid Density	8.50		LB/G
DORL	Depth Offset for Repeat Analysis	0.0		FT
FLEV	Fluid Level	0.00		FT
MST	Mud Sample Temperature	89.00		DEGF
RMFS	Resistivity of Mud Filtrate Sample	0.8330		OHMM
TD	Total Depth	2388		FT

Format: MUD_TCOM_MAIN Vertical Scale: 5" per 100' Graphics File Created: 07-Jul-2007 13:33

OP System Version: 15C0-309

MCM

HILTB-CTS SRPC-3292-Q1_2007

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_006LUP FN:5 PRODUCER 07-Jul-2007 13:33

Company: STORM CAT ENERGY Well: VAUGHAN 1-18H

Input DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_006LUP FN:4 PRODUCER 07-Jul-2007 13:31 2400.0 FT 2004.0 FT

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_006LUP FN:5 PRODUCER 07-Jul-2007 13:33

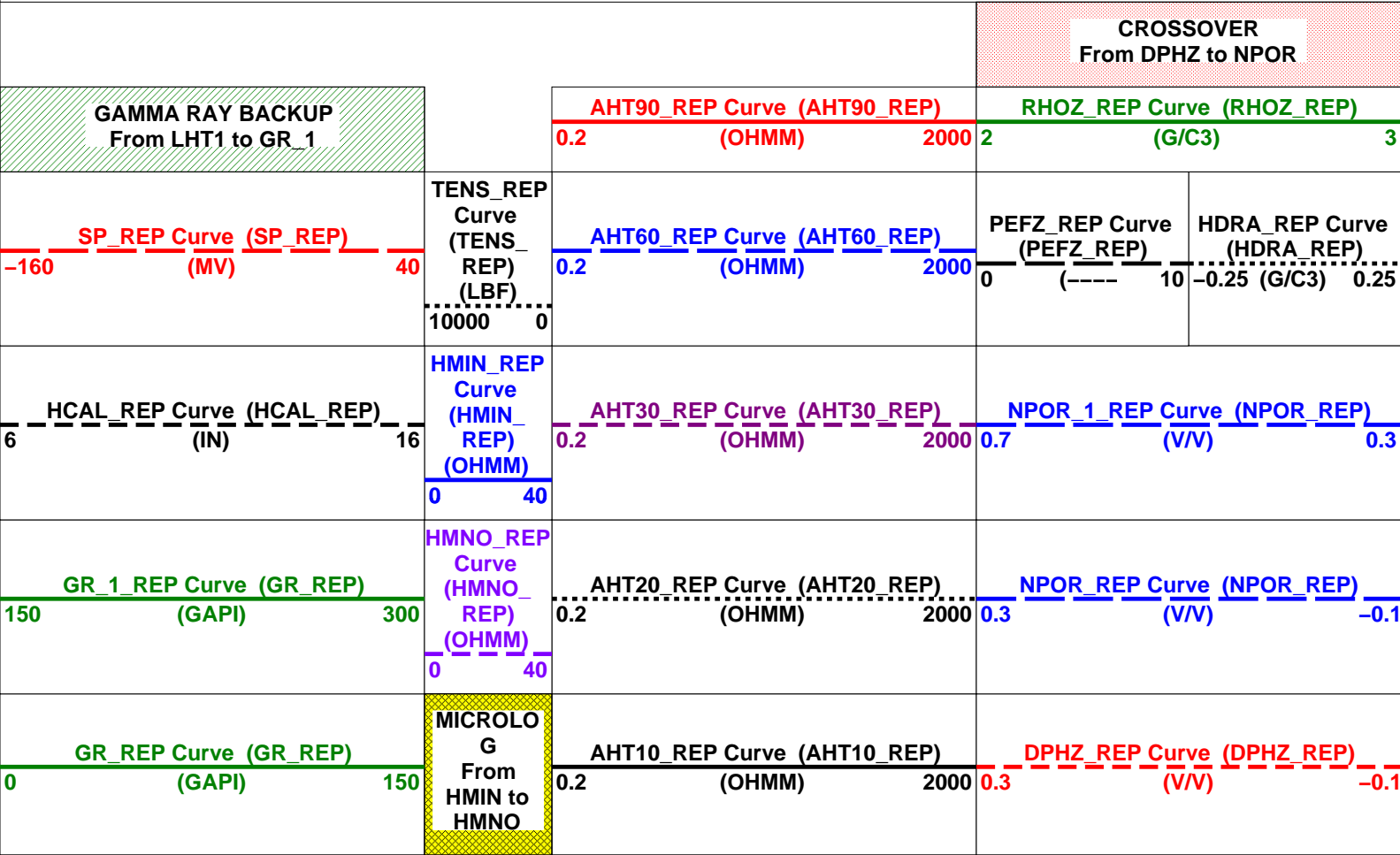
OP System Version: 15C0-309 MCM

HILTB-CTS SRPC-3292-Q1_2007

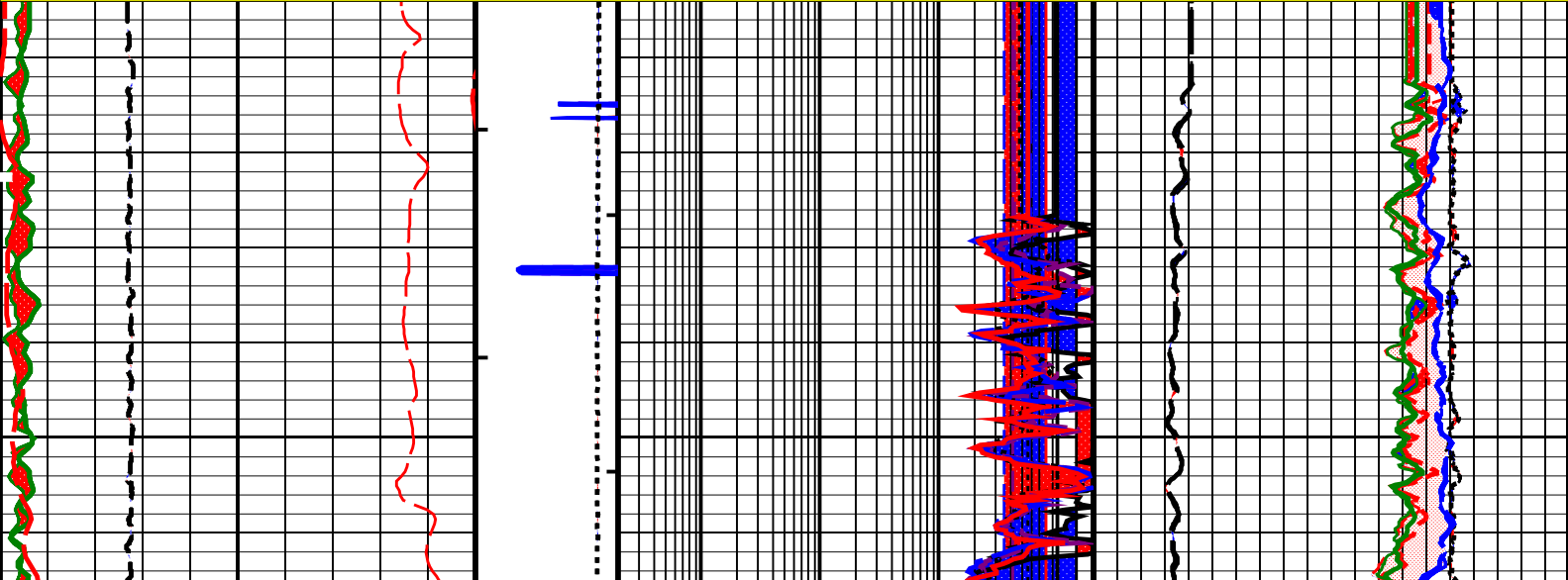
PIP SUMMARY

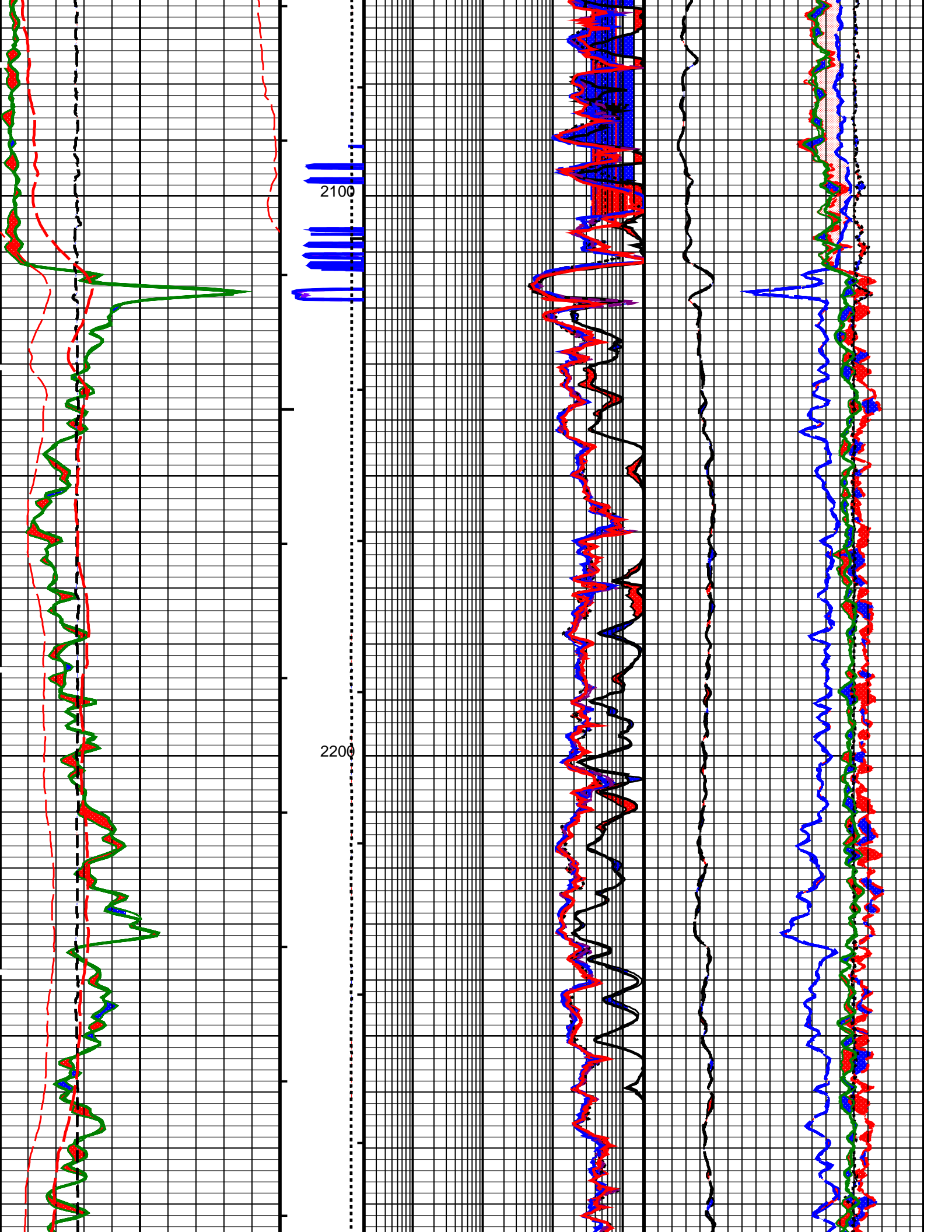
- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

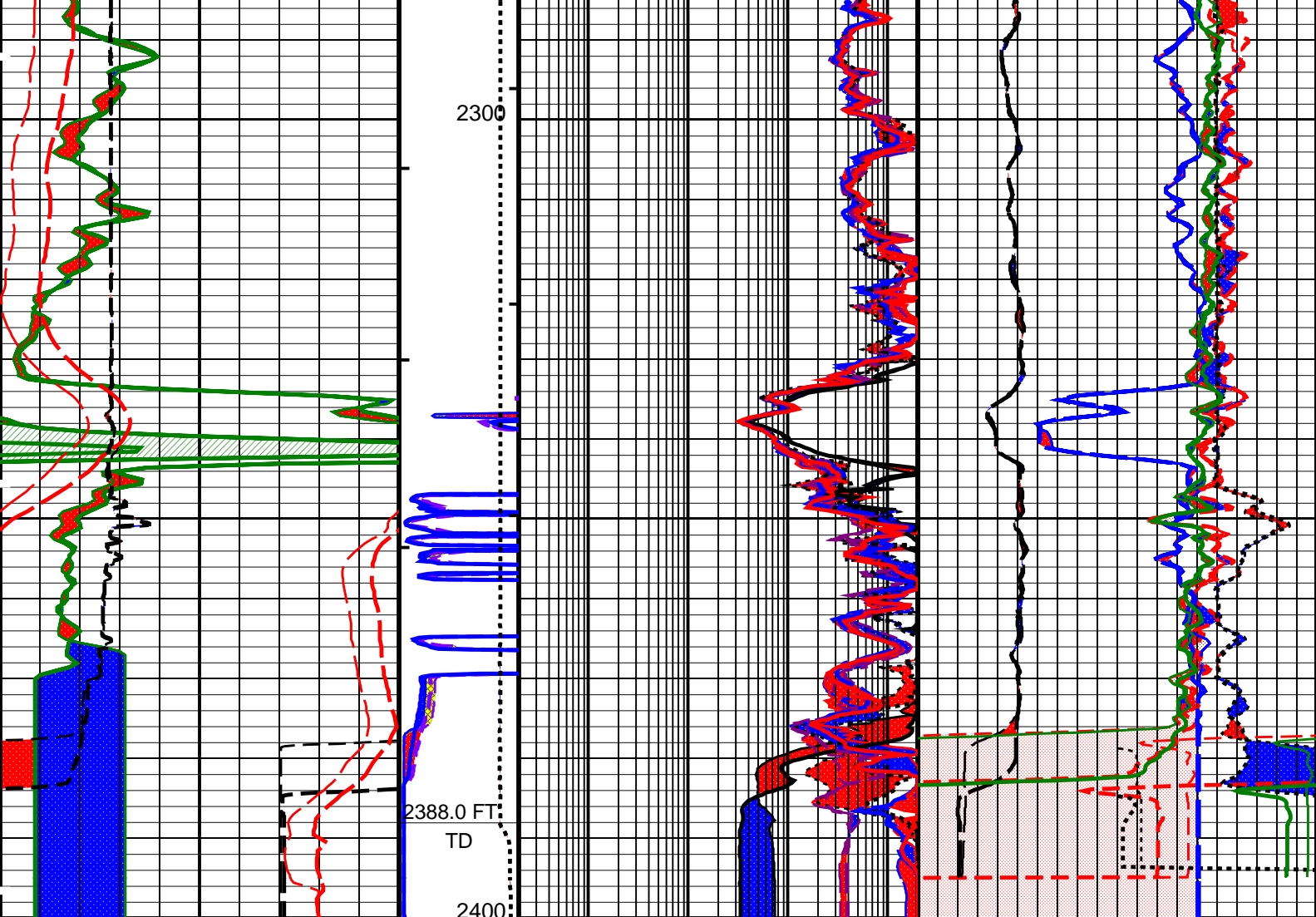
Time Mark Every 60 S



PLATFORM EXPRESS - TRIPLE COMBO REPEAT ANALYSIS / 5 IN = 100 FT







PLATFORM EXPRESS – TRIPLE COMBO REPEAT ANALYSIS / 5 IN = 100 FT

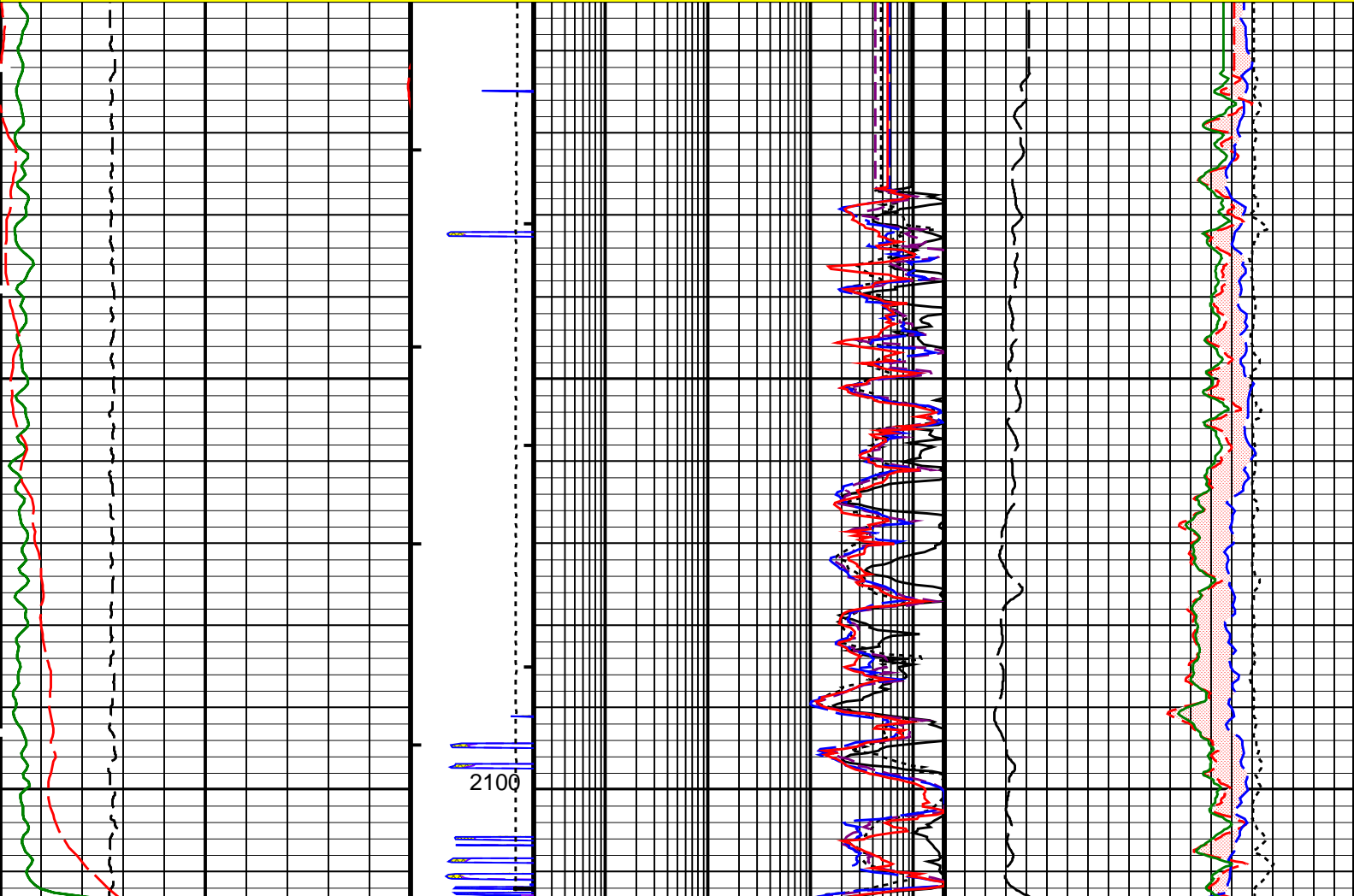
GR_REP Curve (GR_REP) (GAPI)	0 150	MICROLO G From HMIN to HMNO	AHT10_REP Curve (AHT10_REP) (OHMM)	0.2 2000	DPHZ_REP Curve (DPHZ_REP) (V/V)	0.3 -0.1
GR_1_REP Curve (GR_REP) (GAPI)	150 300	HMNO_REP Curve (HMNO_ REP) (OHMM)	AHT20_REP Curve (AHT20_REP) (OHMM)	0.2 2000	NPOR_REP Curve (NPOR_REP) (V/V)	0.3 -0.1
HCAL_REP Curve (HCAL_REP) (IN)	6 16	HMIN_REP Curve (HMIN_ REP) (OHMM)	AHT30_REP Curve (AHT30_REP) (OHMM)	0.2 2000	NPOR_1_REP Curve (NPOR_REP) (V/V)	0.7 0.3
SP_REP Curve (SP_REP) (MV)	-160 40	TENS_REP Curve (TENS_ REP) (LBF)	AHT60_REP Curve (AHT60_REP) (OHMM)	0.2 2000	PEFZ_REP Curve (PEFZ_REP)	HDRA_REP Curve (HDRA_REP)
GAMMA RAY BACKUP From LHT1 to GR_1			AHT90_REP Curve (AHT90_REP) (OHMM)	0.2 2000	RHOZ_REP Curve (RHOZ_REP) (G/C3)	

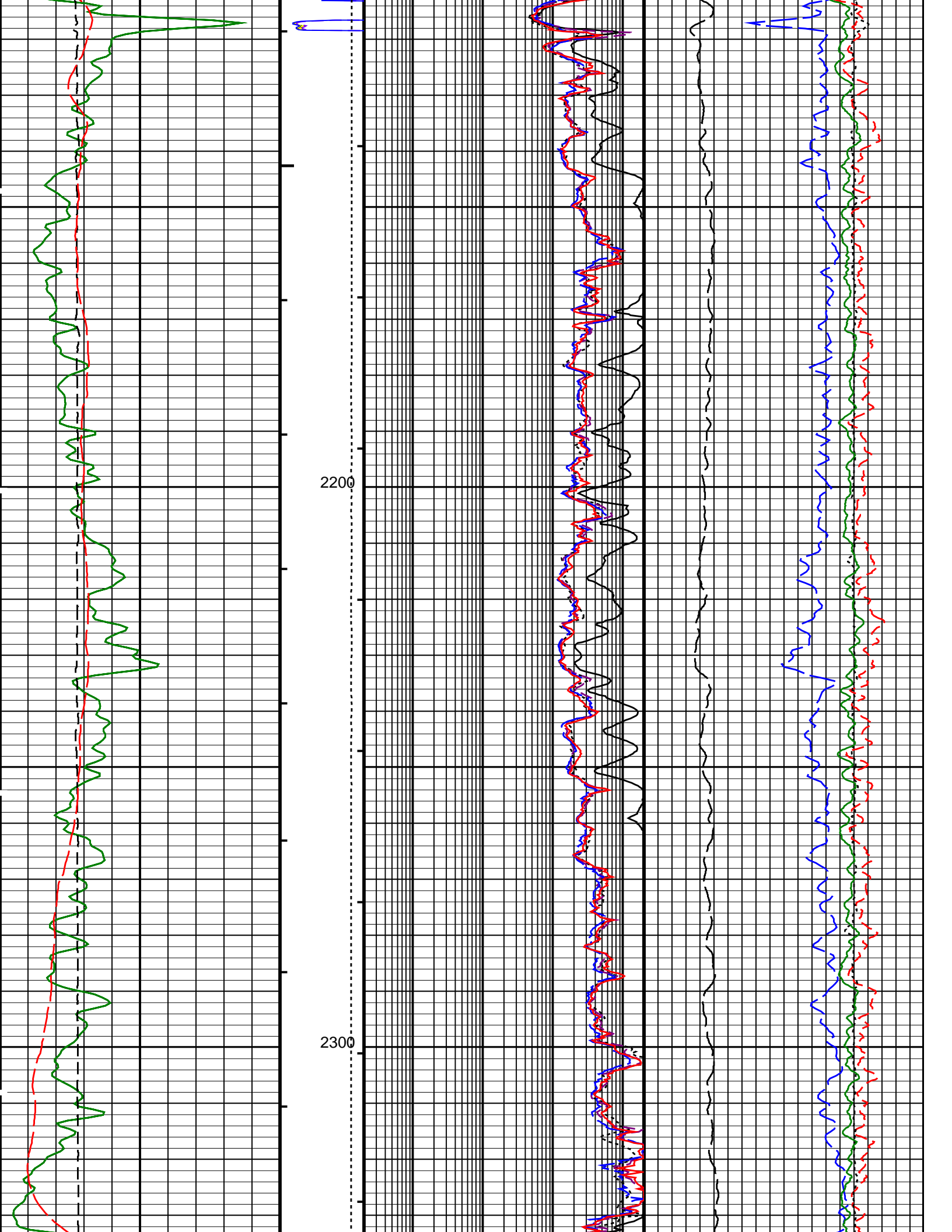
CROSSOVER
From DPHZ to NPOR

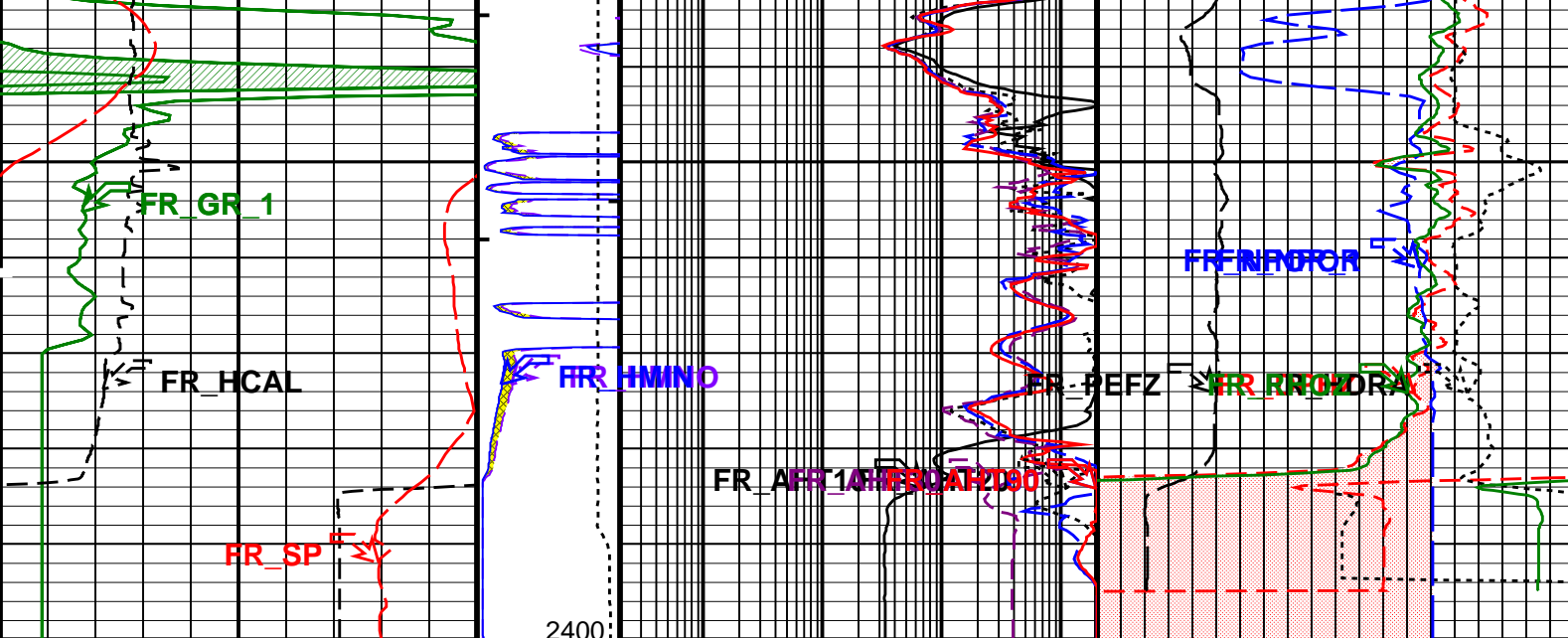
PIP SUMMARY					
└ Integrated Hole Volume Minor Pip Every 10 F3					
└ Integrated Hole Volume Major Pip Every 100 F3					
└ Integrated Cement Volume Minor Pip Every 10 F3					
└ Integrated Cement Volume Major Pip Every 100 F3					
Time Mark Every 60 S					
AIT-H Answer Product Processing Summary. Data taken with Tool # 138 (AHTNO)					
...Acquired data from HILT/HAIT					
***** Borehole Correction *****					
Effective Tool Standoff computed. Borehole diameter and mud res. taken as input (see GCSE and GRSE parameters)					
Tool is run in ECCENTERED mode with a tool stand-off of 1.00 IN. Bit Size is 8.50 IN.					
***** Input Selections to AIT-H Answer Product Processing *****					
Caliper (GCSE): HCAL Mud Resistivity (GRSE): AHMF Temperature (GTSE): HTEM Porosity (FPHI): DPHZ					
***** Other Parameters used by AIT-H Answer Product Processing *****					
Form Factor Exponent (FEXP) 2.000 Form Factor Numerator (FNUM) 1.000					
Mud Filtrate Sample Resistivity (RMFS) 0.833 OHMM Mud Filtrate Sample Temperature (MFST) 89.000 DEGF					
Resitivity Connate Water (RW) 1.000 OHMM					
***** AIT-H Answer Product Processing Control Parameters *****					
Playback Mode: NORMAL					
Format: MUD_TCOM_MAIN_REP		Vertical Scale: 5" per 100'		Graphics File Created: 07-Jul-2007 13:33	
OP System Version: 15C0-309					
MCM					
HILTB-CTS		SRPC-3292-Q1_2007			
Input DLIS Files					
DEFAULT	AIT_TLD_MCFL_CNL_005LUP	FN:4	PRODUCER	07-Jul-2007 13:21	2400.0 FT 2004.0 FT
Output DLIS Files					
DEFAULT	AIT_TLD_MCFL_CNL_006LUP	FN:5	PRODUCER	07-Jul-2007 13:33	
Company: STORM CAT ENERGY					
Well: VAUGHAN 1-18H					
Output DLIS Files					
DEFAULT	AIT_TLD_MCFL_CNL_005LUP	FN:4	PRODUCER	07-Jul-2007 13:21	2400.0 FT 2004.0 FT
Integrated Hole/Cement Volume Summary					
Hole Volume = 157.45 F3					
Cement Volume = 139.93 F3 (assuming 2.88 IN casing O.D.)					
Computed from 2392.0 FT to 2004.0 FT using data channel(s) HCAL					
OP System Version: 15C0-309					
MCM					
HILTB-CTS		SRPC-3292-Q1_2007			
Changed Parameter Summary					
DLIS Name		New Value		Previous Value Depth & Time	
BHT	87 DEGF	150 DEGF		2021.3 13:28:37	
TD	2388 FT	2392 FT		2024.9 13:28:27	
TDL	2388.00 FT	2392.00 FT		2024.1 13:28:29	
PIP SUMMARY					
└ Integrated Hole Volume Minor Pip Every 10 F3					
└ Integrated Hole Volume Major Pip Every 100 F3					

Time Mark Every 60 S		Integrated Hole Volume Major Pip Every 100 F3 Integrated Cement Volume Minor Pip Every 10 F3 Integrated Cement Volume Major Pip Every 100 F3		CROSSOVER From DPHZ to NPOR	
GAMMA RAY BACKUP From LHT1 to GR_1		AIT-H 90 Inch Investigation (AHT90) 0.2 (OHMM) 2000		Std. Res. Formation Density (RHOZ) 2 (G/C3) 3	
-160 SP (SP) (MV) 40	Computed Micro Inverse (HMIN) (OHMM) 0 40	AIT-H 60 Inch Investigation (AHT60) 0.2 (OHMM) 2000	Std. Res. Formation Pe (PEFZ) 0 (----) 10		Density Correction (HDRA) -0.25 (G/C3) 0.25
6 HILT Caliper (HCAL) (IN) 16	Computed Micro Normal (HMNO) (OHMM) 0 40	AIT-H 30 Inch Investigation (AHT30) 0.2 (OHMM) 2000	Alpha Processed Neutron Porosity (NPOR) 0.7 (V/V) 0.3		
150 Gamma Ray (GR) (GAPI) 300	MICROLOG From HMIN to HMNO	AIT-H 20 Inch Investigation (AHT20) 0.2 (OHMM) 2000	Alpha Processed Neutron Porosity (NPOR) 0.3 (V/V) -0.1		
0 Gamma Ray (GR) (GAPI) 150	Tension (TENS) (LBF) 10000 0	AIT-H 10 Inch Investigation (AHT10) 0.2 (OHMM) 2000	Std. Res. Density Porosity (DPHZ) 0.3 (V/V) -0.1		

PLATFORM EXPRESS – TRIPLE COMBO REPEAT SECTION / 5 IN = 100 FT







PLATFORM EXPRESS - TRIPLE COMBO REPEAT SECTION / 5 IN = 100 FT

Gamma Ray (GR) (GAPI)	0 150	Tension (TENS) (LBF)	10000 0	AIT-H 10 Inch Investigation (AHT10) (OHMM)	0.2 2000	Std. Res. Density Porosity (DPHZ) (V/V)	0.3 -0.1
Gamma Ray (GR) (GAPI)	150 300	MICROLOG From HMIN to HMNO		AIT-H 20 Inch Investigation (AHT20) (OHMM)	0.2 2000	Alpha Processed Neutron Porosity (NPOR) (V/V)	0.3 -0.1
HILT Caliper (HCAL) (IN)	6 16	Computed Micro Normal (HMNO) (OHMM)	0 40	AIT-H 30 Inch Investigation (AHT30) (OHMM)	0.2 2000	Alpha Processed Neutron Porosity (NPOR) (V/V)	0.7 0.3
SP (SP) (MV)	-160 40	Computed Micro Inverse (HMIN) (OHMM)	0 40	AIT-H 60 Inch Investigation (AHT60) (OHMM)	0.2 2000	Std. Res. Formation Pe (PEFZ)	Density Correction (HDRA) (G/C3)
GAMMA RAY BACKUP From LHT1 to GR_1				AIT-H 90 Inch Investigation (AHT90) (OHMM)	0.2 2000	Std. Res. Formation Density (RHOZ) (G/C3)	2 3
CROSSOVER From DPHZ to NPOR							

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

AIT-H Answer Product Processing Summary. Data taken with Tool # 138 (AHTNO)

...Acquired data from HILT/HAIT

***** Borehole Correction *****

Effective Tool Standoff computed. Borehole diameter and mud res. taken as input (see GCSE and GRSE parameters)
Tool is run in ECCENTERED mode with a tool stand-off of 1.00 IN. Bit Size is 8.50 IN.

***** Input Selections to AIT-H Answer Product Processing *****

Caliper (GCSE): HCAL Mud Resistivity (GRSE): AHMF Temperature (GTSE): HTEM Porosity (FPHI): DPHZ

***** Other Parameters used by AIT-H Answer Product Processing *****

(AHAPL): 2_BholeCorr_BasicLogs

(AHBHM): 2_ComputeStandoff (AHBLM): 6_One_Two_and_Four

Parameters

DLIS Name	Description	Value	
HILTB-CTS: High resolution Integrated Logging Tool-CTS			
AHBHM	Array Induction Borehole Correction Mode	2_ComputeStandoff	
AHBHV	Array Induction Borehole Correction Code Version Number	900	
AHBLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
AHBLV	Array Induction Basic Logs Code Version Number	223	
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	41.70.24.20	
AHMRF	Array Induction Mud Resistivity Factor	1	
AHORSV	Array Induction Response Set Version for One ft Resolution	41.70.24.20	
AHRFV	Array Induction Radial Profiling Code Version Number	701	
AHRPV	Array Induction Radial Parametrization Code Version Number	232	
AHSTA	Array Induction Tool Standoff	1	IN
AHTRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20	
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	150	DEGF
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
FD	Fluid Density	1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCLF	Germany Coal-like Formation Option	NO	
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	AITH_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MDEN	Matrix Density	2.71	G/C3
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	StdRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	68	DEGF
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
SPDR	SP Drift	0	MV/F
SPNV	SP Next Value	0	MV
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	150	DEGF
FCD	Future Casing (Outer) Diameter	2.875	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	AITH_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	68	DEGF
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
TDD	Total Depth - Driller	2392.00	FT
TDL	Total Depth - Logger	2392.00	FT
System and Miscellaneous			
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	36.00	LB/F
SPDR	Drilling Fluid Density	8.50	LB/G

DFD	Drilling Fluid Density	8.50	LB/G
FLEV	Fluid Level	0.00	FT
MST	Mud Sample Temperature	89.00	DEGF
RMFS	Resistivity of Mud Filtrate Sample	0.8330	OHMM
TD	Total Depth	2392	FT

Format: MUD_TCOM_REPEAT_SECTION Vertical Scale: 5" per 100' Graphics File Created: 07-Jul-2007 13:21

OP System Version: 15C0-309

MCM

HILTB-CTS SRPC-3292-Q1_2007

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_005LUP FN:4 PRODUCER 07-Jul-2007 13:21

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
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High resolution Integrated Logging Tool-CTS Wellsite Calibration – Electronics Calibration Check – Thru Cal Mag. & Phase

Master: 17-May-2007 15:20 Before: 6-Jul-2007 15:04

Thru Cal Magnitude – 0	0	0.6146	0.6192	N/A	N/A	N/A	V
Thru Cal Magnitude – 1	0	1.263	1.272	N/A	N/A	N/A	V
Thru Cal Magnitude – 2	0	0.6267	0.6313	N/A	N/A	N/A	V
Thru Cal Magnitude – 3	0	0.7078	0.7131	N/A	N/A	N/A	V
Thru Cal Magnitude – 4	0	1.323	1.333	N/A	N/A	N/A	V
Thru Cal Magnitude – 5	0	1.924	1.939	N/A	N/A	N/A	V
Thru Cal Magnitude – 6	0	1.916	1.931	N/A	N/A	N/A	V
Thru Cal Magnitude – 7	0	1.372	1.383	N/A	N/A	N/A	V
Phase – 0	0	51.16	52.12	N/A	N/A	N/A	DEG
Phase – 1	0	50.00	50.96	N/A	N/A	N/A	DEG
Phase – 2	0	46.09	47.07	N/A	N/A	N/A	DEG
Phase – 3	0	45.27	46.25	N/A	N/A	N/A	DEG
Phase – 4	0	38.73	39.72	N/A	N/A	N/A	DEG
Phase – 5	0	36.65	37.65	N/A	N/A	N/A	DEG
Phase – 6	0	36.70	37.70	N/A	N/A	N/A	DEG
Phase – 7	0	32.24	33.33	N/A	N/A	N/A	DEG

High resolution Integrated Logging Tool-CTS Wellsite Calibration – Electronics Calibration Check – Auxilliary

Master: 17-May-2007 15:20 Before: 6-Jul-2007 15:04

Array Induction SPA Plus	990.5	989.8	990.5	N/A	N/A	N/A	MV
Array Induction SPA Zero	0	-0.09559	-0.08894	N/A	N/A	N/A	MV
Array Induction Temperature PI	0.9150	0.9168	0.9175	N/A	N/A	N/A	V
Array Induction Temperature Ze	0	-0.00009741	-0.00009075	N/A	N/A	N/A	V

High resolution Integrated Logging Tool-CTS Wellsite Calibration – Test Loop Gain Correction

Master: 17-May-2007 15:20

Test Loop Gain Magnitude – 0	0	1.017	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 1	0	1.016	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 2	0	1.018	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	0.9959	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 5	0	0.9883	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 6	0	0.9997	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 7	0	1.003	N/A	N/A	N/A	N/A	V
Phase – 0	0	0.3532	N/A	N/A	N/A	N/A	DEG
Phase – 1	0	0.4588	N/A	N/A	N/A	N/A	DEG
Phase – 2	0	-0.1135	N/A	N/A	N/A	N/A	DEG
Phase – 3	0	-0.004030	N/A	N/A	N/A	N/A	DEG
Phase – 4	0	-0.05780	N/A	N/A	N/A	N/A	DEG
Phase – 5	0	-0.3652	N/A	N/A	N/A	N/A	DEG
Phase – 6	0	0.1440	N/A	N/A	N/A	N/A	DEG
Phase – 7	0	-0.2511	N/A	N/A	N/A	N/A	DEG

High resolution Integrated Logging Tool-CTS Wellsite Calibration – Sonde Error Correction

Master: 17-May-2007 15:20

R Sonde Error Correction – 0	0	-89.44	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 1	0	155.1	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 2	0	109.1	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 3	0	59.43	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 4	0	26.53	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 5	0	14.19	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 6	0	9.916	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 7	0	-1.362	N/A	N/A	N/A	N/A	MM/M

X Sonde Error Correction – 0	0	–212.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 1	0	33.45	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 2	0	–77.21	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 3	0	63.76	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 4	0	–30.48	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 5	0	12.35	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 6	0	0.02018	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 7	0	–8.992	N/A	N/A	N/A	N/A	MM/M

High resolution Integrated Logging Tool–CTS Wellsite Calibration – Mud Gain Correction

Master: 17–May–2007 15:20

Coarse – Mag, Real, Imag – 0	0	0.9810	N/A	N/A	N/A	N/A	
Coarse – Mag, Real, Imag – 1	0	0.9810	N/A	N/A	N/A	N/A	
Coarse – Mag, Real, Imag – 2	0	0.9810	N/A	N/A	N/A	N/A	
Fine – Mag, Real, Imag – 0	0	0.9810	N/A	N/A	N/A	N/A	
Fine – Mag, Real, Imag – 1	0	0.9810	N/A	N/A	N/A	N/A	
Fine – Mag, Real, Imag – 2	0	0.9810	N/A	N/A	N/A	N/A	

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

Before: 6–Jul–2007 15:25

BS Window Ratio	0.7238	N/A	0.7206	N/A	N/A	N/A	
BS Window Sum	9171	N/A	9170	N/A	N/A	N/A	CPS
SS Window Ratio	0.4669	N/A	0.4637	N/A	N/A	N/A	
SS Window Sum	9396	N/A	9263	N/A	N/A	N/A	CPS
LS Window Ratio	0.2940	N/A	0.2903	N/A	N/A	N/A	
LS Window Sum	1229	N/A	1223	N/A	N/A	N/A	CPS

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

Before: 6–Jul–2007 15:25

BS PM High Voltage (Command)	1460	N/A	1446	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1719	N/A	1697	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1971	N/A	1954	N/A	N/A	N/A	V

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

Before: 6–Jul–2007 15:25

BS Crystal Resolution	10.80	N/A	10.88	N/A	N/A	N/A	%
SS Crystal Resolution	11.20	N/A	10.84	N/A	N/A	N/A	%
LS Crystal Resolution	10.59	N/A	10.60	N/A	N/A	N/A	%

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

Before: 6–Jul–2007 15:05

Raw B0 Resistivity	3875	N/A	3856	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3812	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3813	N/A	N/A	N/A	OHMM

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

Before: 6–Jul–2007 15:06

HILT Caliper Zero Measurement	8.000	N/A	8.803	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	16.00	N/A	17.49	N/A	N/A	N/A	IN

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

Before: 6–Jul–2007 15:01

Gamma Ray Background	30.00	N/A	32.65	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	158.8	N/A	158.8	N/A	N/A	14.44	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

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

Master: 6–Jul–2007 13:50 Before: 6–Jul–2007 15:02

CNTC Background	26.50	26.50	26.14	N/A	N/A	3.975	CPS
CFTC Background	26.52	26.52	26.73	N/A	N/A	3.978	CPS

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

Master: 6–Jul–2007 13:50

Thermal Near Corr. (Tank)	5800	5768	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2392	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.411	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool–CTS Wellsite Calibration – Accelerometer Calibration

Before: 7–Jul–2007 14:14

Z–Axis Acceleration	32.19	N/A	32.07	N/A	N/A	N/A	F/S2
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High resolution Integrated Logging Tool–CTS Master Calibration – Inversion results

Master: 3–Jul–2007 3:28

Rho Aluminum	2.596	2.601	---	---	---	---	G/C3
Rho Magnesium	1.686	1.688	---	---	---	---	G/C3
Pe Aluminum	2.570	2.605	---	---	---	---	
Pe Magnesium	2.650	2.609	---	---	---	---	

High resolution Integrated Logging Tool–CTS Master Calibration – Deviation Summary

Master: 3–Jul–2007 3:28

BS Average Deviation	0	0.2167	---	---	---	---	%
BS Max Deviation	0	0.6480	---	---	---	---	%

SS Max Deviation	0	0.8488	---	---	---	---	%
SS Average Deviation	0	0.2979	---	---	---	---	%
SS Max Deviation	0	0.7766	---	---	---	---	%
LS Average Deviation	0	1.100	---	---	---	---	%
LS Max Deviation	0	3.064	---	---	---	---	%

The GLS-VJ source activity is acceptable.

The HGNS Neutron Master Calibration was done with the following parameters :

NCT-B Water Temperature 82.0 DEGF.
Thermal Housing Size 3.369 IN.
NSR-F serial number 2509

High resolution Integrated Logging Tool-CTS / Equipment Identification

















Primary Equipment:

Array Induction Tool – H	AIT – H	
Rm/SP Bottom Nose	AHRM – A	
Array Induction Sonde	AHIS – BA	138
HILT high-Resolution Mechanical Sonde	HRMS – B	1896
HILT Rxo Gamma-ray Device	HRGD – B	897
HILT Micro Cylindrically Focused Log Dev	MCFL –	
GR Logging Source	GLS – VJ	5343
HILT High Res. Control Cartridge	HRCC – B	1726







Auxiliary Equipment:







High resolution Integrated Logging Tool-CTS Wellsite Calibration							
Electronics Calibration Check – Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Phase DEG	Nominal
0	Master	0.6146		0.6050	51.16		71.00
	Before	0.6192			52.12		
1	Master	1.263		1.270	50.00		70.00
	Before	1.272			50.96		
2	Master	0.6267		0.6230	46.09		66.00
	Before	0.6313			47.07		
3	Master	0.7078		0.7040	45.27		65.00
	Before	0.7131			46.25		
4	Master	1.323		1.337	38.73		59.00
	Before	1.333			39.72		
5	Master	1.924		1.955	36.65		57.00
	Before	1.939			37.65		
6	Master	1.916		1.955	36.70		57.00
	Before	1.931			37.70		
7	Master	1.372		1.415	32.24		53.00
	Before	1.383			33.33		
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)
Master: 17-May-2007 15:20				Before: 6-Jul-2007 15:04			





High resolution Integrated Logging Tool-CTS Wellsite Calibration					
Electronics Calibration Check – Auxilliary					
Phase	Array Induction SPA Plus MV	Value	Phase	Array Induction SPA Zero MV	Value
Master		989.8	Master		-0.09559
Before		990.5	Before		-0.08894





High resolution Integrated Logging Tool—CTS Wellsite Calibration						
Test Loop Gain Correction						
Idx	Value	Test Loop Gain Magnitude V			Value	Phase DEG
0	1.017				0.3532	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
1	1.016				0.4588	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
2	1.018				-0.1135	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
3	1.013				-0.004030	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
4	0.9959				-0.05780	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
5	0.9883				-0.3652	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
6	0.9997				0.1440	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
7	1.003				-0.2511	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
Master: 17-May-2007 15:20						





Master: 17-May-2007 15:20



High resolution Integrated Logging Tool–CTS Wellsite Calibration							
Mud Gain Correction							
Idx	Value	Coarse – Mag, Real, Imag			Value	Fine – Mag, Real, Imag	
0	0.9810				0.9810		
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
1	0.9810				0.9810		
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
2	0.9810				0.9810		
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
Master: 17–May–2007 15:20							





High resolution Integrated Logging Tool–CTS Wellsite Calibration									
Stab Measurement Summary									
Phase	BS Window Ratio			Value	Phase	SS Window Ratio			Value
Before				0.7206	Before				0.4637
	0.6876 (Minimum)	0.7238 (Nominal)	0.7600 (Maximum)			0.4436 (Minimum)	0.4669 (Nominal)	0.4902 (Maximum)	
Phase	BS Window Sum CPS			Value	Phase	SS Window Sum CPS			Value
Before				9170	Before				9263
	8712 (Minimum)	9171 (Nominal)	9630 (Maximum)			8926 (Minimum)	9396 (Nominal)	9866 (Maximum)	
Phase	LS Window Ratio			Value	Phase	LS Window Sum CPS			Value
Before				0.2903	Before				1223
	0.2793 (Minimum)	0.2940 (Nominal)	0.3087 (Maximum)			1168 (Minimum)	1229 (Nominal)	1291 (Maximum)	
Before: 6–Jul–2007 15:25									





High resolution Integrated Logging Tool–CTS Wellsite Calibration									
Photo–multiplier High Voltages Calibrations									
Phase	BS PM High Voltage (Command) V			Value	Phase	SS PM High Voltage (Command) V			Value
Before				1446	Before				1697
	1360 (Minimum)	1460 (Nominal)	1560 (Maximum)			1619 (Minimum)	1719 (Nominal)	1819 (Maximum)	
Phase	LS PM High Voltage (Command) V			Value	Phase	LS PM High Voltage (Command) V			Value
Before				1954	Before				1954
	1871 (Minimum)	1971 (Nominal)	2071 (Maximum)			1871 (Minimum)	1971 (Nominal)	2071 (Maximum)	
Before: 6–Jul–2007 15:25									



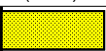
High resolution Integrated Logging Tool–CTS Wellsite Calibration									
Crystal Quality Resolutions Calibration									
Phase	BS Crystal Resolution %			Value	Phase	SS Crystal Resolution %			Value
Before				10.88	Before				10.84
	9.802 (Minimum)	10.80 (Nominal)	11.80 (Maximum)			10.20 (Minimum)	11.20 (Nominal)	12.20 (Maximum)	
Phase	LS Crystal Resolution %			Value	Phase	LS Crystal Resolution %			Value
Before				10.60	Before				10.60
	9.592 (Minimum)	10.59 (Nominal)	11.59 (Maximum)			9.592 (Minimum)	10.59 (Nominal)	11.59 (Maximum)	
Before: 6–Jul–2007 15:25									


High resolution Integrated Logging Tool–CTS Wellsite Calibration									
MCFL Calibration									
Phase	Raw B0 Resistivity OHMM			Value	Phase	Raw B1 Resistivity OHMM			Value
Before				3856	Before				3812
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)			3524 (Minimum)	3830 (Nominal)	4136 (Maximum)	
Phase	Raw B2 Resistivity OHMM			Value	Phase	Raw B2 Resistivity OHMM			Value
Before				3813	Before				3813
	3524 (Minimum)	3830 (Nominal)	4136 (Maximum)			3524 (Minimum)	3830 (Nominal)	4136 (Maximum)	
Before: 6–Jul–2007 15:05									

















High resolution Integrated Logging Tool–CTS Wellsite Calibration							
HILT Caliper Calibration							
Phase	HILT Caliper Zero Measurement IN		Value	Phase	HILT Caliper Plus Measurement IN		Value
Before			8.803	Before			17.49
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)		12.00 (Minimum)	16.00 (Nominal)	20.00 (Maximum)
Before: 6–Jul–2007 15:06							





High resolution Integrated Logging Tool–CTS Wellsite Calibration									
Detector Calibration									
Phase	Gamma Ray Background GAPI			Value	Phase	Gamma Ray (Jig – Bkg) GAPI			Value
Before				32.65	Before				158.8
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)			144.4 (Minimum)	158.8 (Nominal)	173.3 (Maximum)	
Phase	Gamma Ray (Calibrated) GAPI			Value	Phase	Gamma Ray (Calibrated) GAPI			Value
Before				165.0	Before				165.0
	150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)			150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)	



High resolution Integrated Logging Tool-CTS Wellsite Calibration								
Zero Measurement								
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value	
Master			26.50	Master			26.52	
Before			26.14	Before			26.73	
5.000 (Minimum)			26.50 (Nominal)	5.000 (Minimum)			26.52 (Nominal)	40.00 (Maximum)
Master: 6-Jul-2007 13:50				Before: 6-Jul-2007 15:02				

High resolution Integrated Logging Tool—CTS Wellsite Calibration																	
Ratio Measurement																	
Phase	Thermal Near Corr. (Tank) CPS			Value	Phase	Thermal Far Corr. (Tank) CPS			Value	Phase	CNTC/CFTC (Tank)			Value			
Master				5768	Master				2392	Master				2.411			
4700 (Minimum)				5800 (Nominal)	6900 (Maximum)	1900 (Minimum)				2400 (Nominal)	2900 (Maximum)	2.120 (Minimum)				2.159 (Nominal)	2.540 (Maximum)
Master: 6-Jul-2007 13:50																	

High resolution Integrated Logging Tool-CTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration F/S2	Value
Before		32.07
31.53 (Minimum) 32.19 (Nominal) 32.84 (Maximum)		
Before: 7-Jul-2007 14:14		

High resolution Integrated Logging Tool–CTS Master Calibration							
Electronics Calibration Check – Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Phase DEG	Nominal
0	Master	0.6146		0.6050	51.16		71.00
1	Master	1.263		1.270	50.00		70.00
2	Master	0.6267		0.6230	46.09		66.00
3	Master	0.7078		0.7040	45.27		65.00
4	Master	1.323		1.337	38.73		59.00
5	Master	1.924		1.955	36.65		57.00
6	Master	1.916		1.955	36.70		57.00
7	Master	1.372		1.415	32.24		53.00
		60.00 % (Minimum)	140.0 % (Maximum)	Nom –60.00 (Minimum)		Nom + 60.00 (Maximum)	
Master: 17–May–2007 15:20							

















High resolution Integrated Logging Tool-CTS Master Calibration							
Electronics Calibration Check – Auxilliary							
Phase	Array Induction SPA Plus MV		Value	Phase	Array Induction SPA Zero MV		Value
Master			989.8	Master			-0.09559
	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			0.9168	Master			-9.741E-00
	0.8700 (Minimum)	0.9150 (Nominal)	0.9600 (Maximum)		-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Master: 17-May-2007 15:20							

High resolution Integrated Logging Tool-CTS Master Calibration				
Test Loop Gain Correction				
Idx	Value	Test Loop Gain Magnitude V	Value	Phase DEG
0	1.017		0.3532	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		







1	1.016		0.4588			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
2	1.018		-0.1135			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
3	1.013		-0.004030			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
4	0.9959		-0.05780			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
5	0.9883		-0.3652			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
6	0.9997		0.1440			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
7	1.003		-0.2511			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)

Master: 17-May-2007 15:20

Master: 17-May-2007 15:20

High resolution Integrated Logging Tool-CTS Master Calibration							
Sonde Error Correction							
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M	
0	-89.44				-212.3		
	-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	155.1				33.45		
	114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal)	625.0 (Maximum)
2	109.1				-77.21		
	66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)
3	59.43				63.76		
	39.00 (Minimum)	64.00 (Nominal)	89.00 (Maximum)		-250.0 (Minimum)	0 (Nominal)	250.0 (Maximum)
4	26.53				-30.48		
	15.00 (Minimum)	25.00 (Nominal)	35.00 (Maximum)		-63.00 (Minimum)	0 (Nominal)	63.00 (Maximum)
5	14.19				12.35		
	4.000 (Minimum)	14.00 (Nominal)	24.00 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
6	9.916				0.02018		
	5.000 (Minimum)	10.00 (Nominal)	15.00 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
7	-1.362				-8.992		
	-5.000 (Minimum)	0 (Nominal)	5.000 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
Master: 17-May-2007 15:20							

Master: 17-May-2007 15:20

High resolution Integrated Logging Tool-CTS Master Calibration							
Mud Gain Correction							
Idx	Value	Coarse – Mag, Real, Imag			Value	Fine – Mag, Real, Imag	
0	0.9810				0.9810		
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
1	0.9810				0.9810		
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
2	0.9810				0.9810		
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
Master: 17-May-2007 15:20							

Master: 17-May-2007 15:20

High resolution Integrated Logging Tool-CTS Master Calibration

Inversion results

Inversion results							
Phase	Rho Aluminum G/C3		Value	Phase	Rho Magnesium G/C3		Value
Master			2.601	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			2.605	Master			2.609
2.470 (Minimum)			2.570 (Nominal)	2.670 (Maximum)			
2.550 (Minimum)			2.650 (Nominal)	2.750 (Maximum)			
Master: 3-Jul-2007 3:28							

High resolution Integrated Logging Tool-CTS Master Calibration

Deviation Summary

Phase	BS Average Deviation %		Value	Phase	SS Average Deviation %		Value	Phase	LS Average Deviation %		Value	
Master			0.2167	Master			0.2979	Master			1.100	
-0.6000 (Minimum)			0 (Nominal)	-1.000 (Minimum)			0 (Nominal)	-1.500 (Minimum)			0 (Nominal)	1.500 (Maximum)
Phase	BS Max Deviation %		Value	Phase	SS Max Deviation %		Value	Phase	LS Max Deviation %		Value	
Master			0.6480	Master			0.7766	Master			3.064	
-1.600 (Minimum)			0 (Nominal)	-2.500 (Minimum)			0 (Nominal)	-3.500 (Minimum)			0 (Nominal)	3.500 (Maximum)
Master: 3-Jul-2007 3:28												




High resolution Integrated Logging Tool-CTS Master Calibration

Zero Measurement

Zero Measurement									
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value
Master				26.50	Master				26.52
5.000		26.50	40.00		5.000		26.52	40.00	
(Minimum)		(Nominal)	(Maximum)		(Minimum)		(Nominal)	(Maximum)	
Master: 6-Jul-2007 13:50									

High resolution Integrated Logging Tool-CTS Master Calibration

Tank Measurement

Tank Measurement																										
Phase	Thermal Near Corr. (Tank) CPS			Value	Phase	Thermal Far Corr. (Tank) CPS			Value	Phase	CNTC/CFTC (Tank)			Value												
Master				5768	Master				2392	Master				2.411												
4700 (Minimum)				5800 (Nominal)	6900 (Maximum)				1900 (Minimum)				2400 (Nominal)	2900 (Maximum)				2.120 (Minimum)				2.159 (Nominal)	2.540 (Maximum)			
Master: 6-Jul-2007 13:50																										

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_006LUP FN:5 PRODUCER 07-Jul-2007 13:33 2400.0 FT 187.0 FT

OP System Version: 15C0-309
MCM

HILTB-CTS SRPC-3292-Q1_2007

PIP SUMMARY

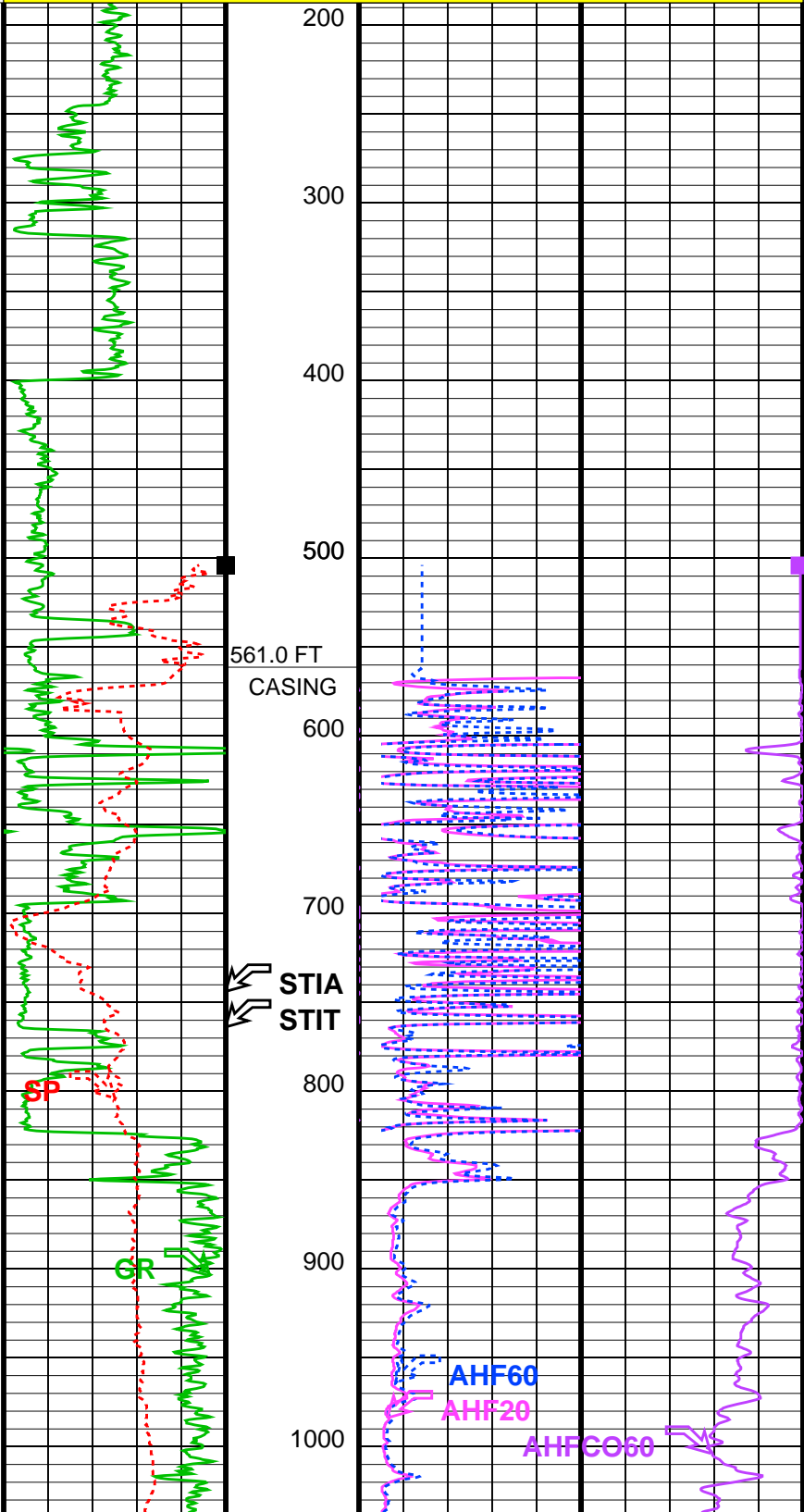
Time Mark Every 60 S

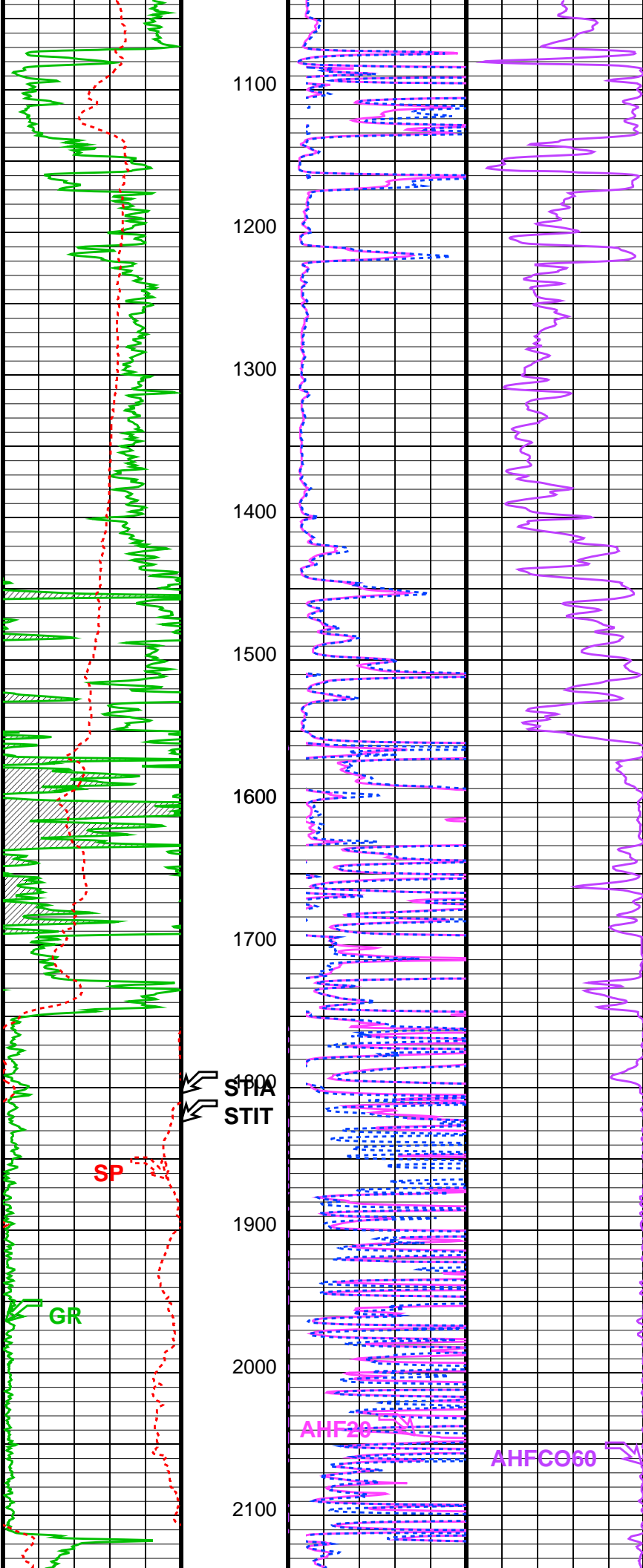
Gamma Ray
Backup
From RHT1 to
GR_1

AIT-H 60 Inch

<div>SP (SP)</div> <div>-160 (MV) 40</div>		<div>Investigation</div> <div>(AHF60)</div> <div>0 (OHMM) 100</div>
<div>Gamma Ray (GR)</div> <div>150 (GAPI) 300</div>	<div>Cable Drag</div> <div>From STIA to STIT</div>	<div>AIT-H 20 Inch Investigation</div> <div>(AHF20)</div> <div>0 (OHMM) 100</div>
<div>Gamma Ray (GR)</div> <div>0 (GAPI) 150</div>	<div>Stuck Stretch</div> <div>(STIT)</div> <div>0 (F) 50</div>	<div>AIT-H 60 Inch Investigation Conductivity</div> <div>(AHFCO60)</div> <div>400 (MM/M) 0</div>

CORRELATION 1"=100FT





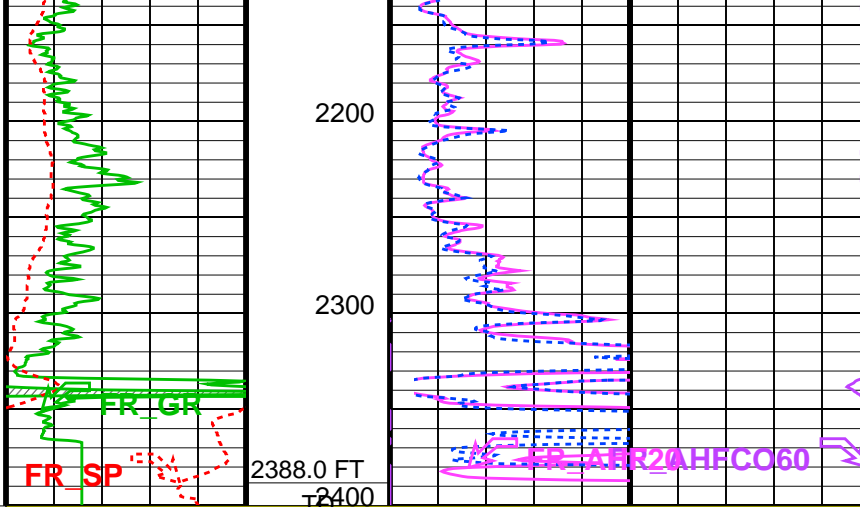
SP
STIT

SP

GR

AHF20

AHFCO60



CORRELATION 1"=100FT

Gamma Ray (GR) 0 (GAPI) 150	Stuck Stretch (STIT) 0 (F) 50	AIT-H 60 Inch Investigation Conductivity (AHFCO60) 400 (MM/M) 0	
Gamma Ray (GR) 150 (GAPI) 300	Cable Drag From STIA to STIT	AIT-H 20 Inch Investigation (AHF20) 0 (OHMM) 100	
SP (SP) -160 (MV) 40		AIT-H 60 Inch Investigation (AHF60) 0 (OHMM) 100	
Gamma Ray Backup From RHT1 to GR_1			

PIP SUMMARY

Time Mark Every 60 S

Format: RILEY Vertical Scale: 1" per 100'

Graphics File Created: 07-Jul-2007 13:33

OP System Version: 15C0-309
MCM

HILTB-CTS SRPC-3292-Q1_2007

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_006LUP FN:5 PRODUCER 07-Jul-2007 13:33

Company: **STORM CAT ENERGY (USA) OPERATING CORP**

Schlumberger

Well: **VAUGHAN 1-18H**

Field: **B-43**

County: **VAN BUREN**

State: **ARKANSAS**

****PLATFORM EXPRESS****

ARRAY INDUCTION / GAMMA RAY

LITHO-DENSITY / COMPENSATED NEUTRON