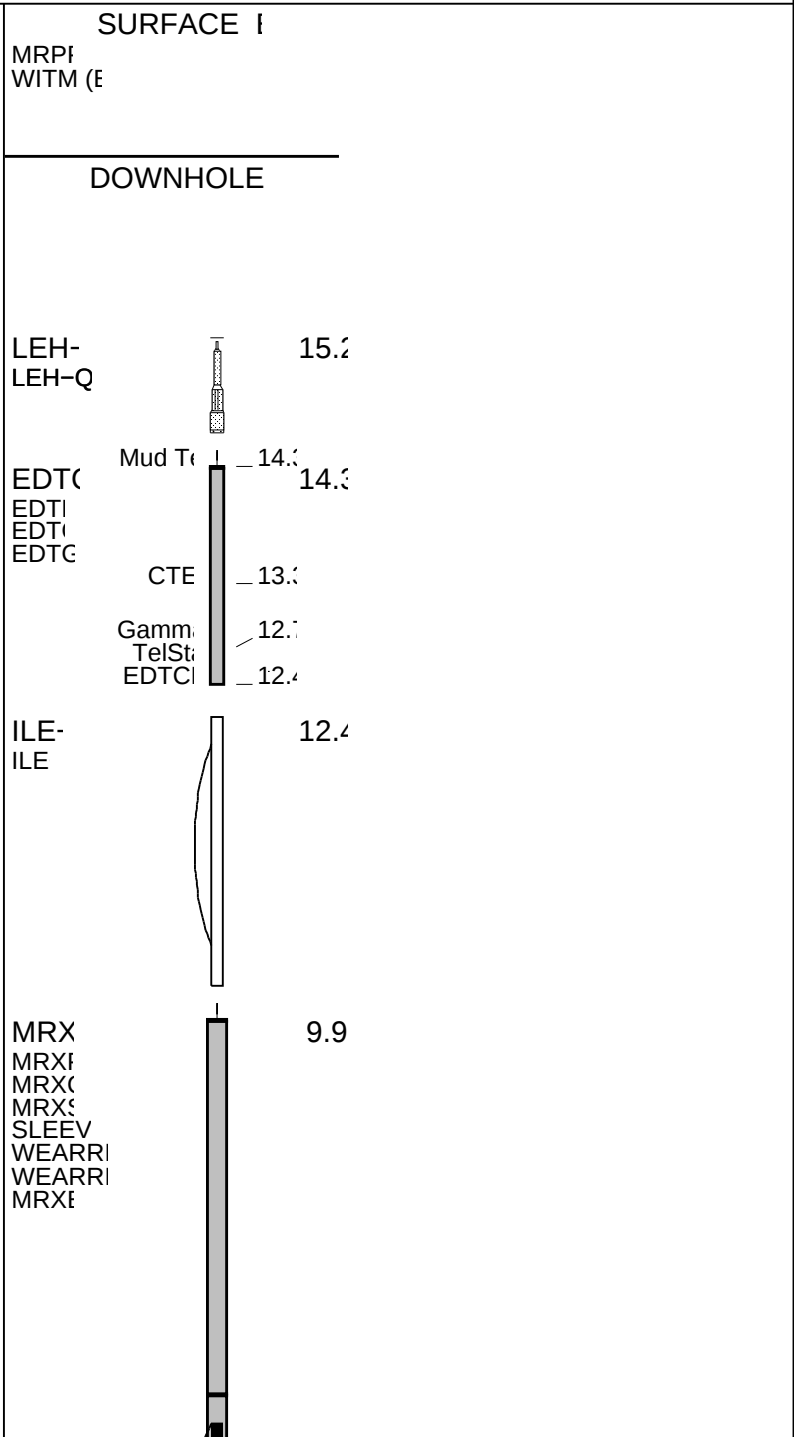
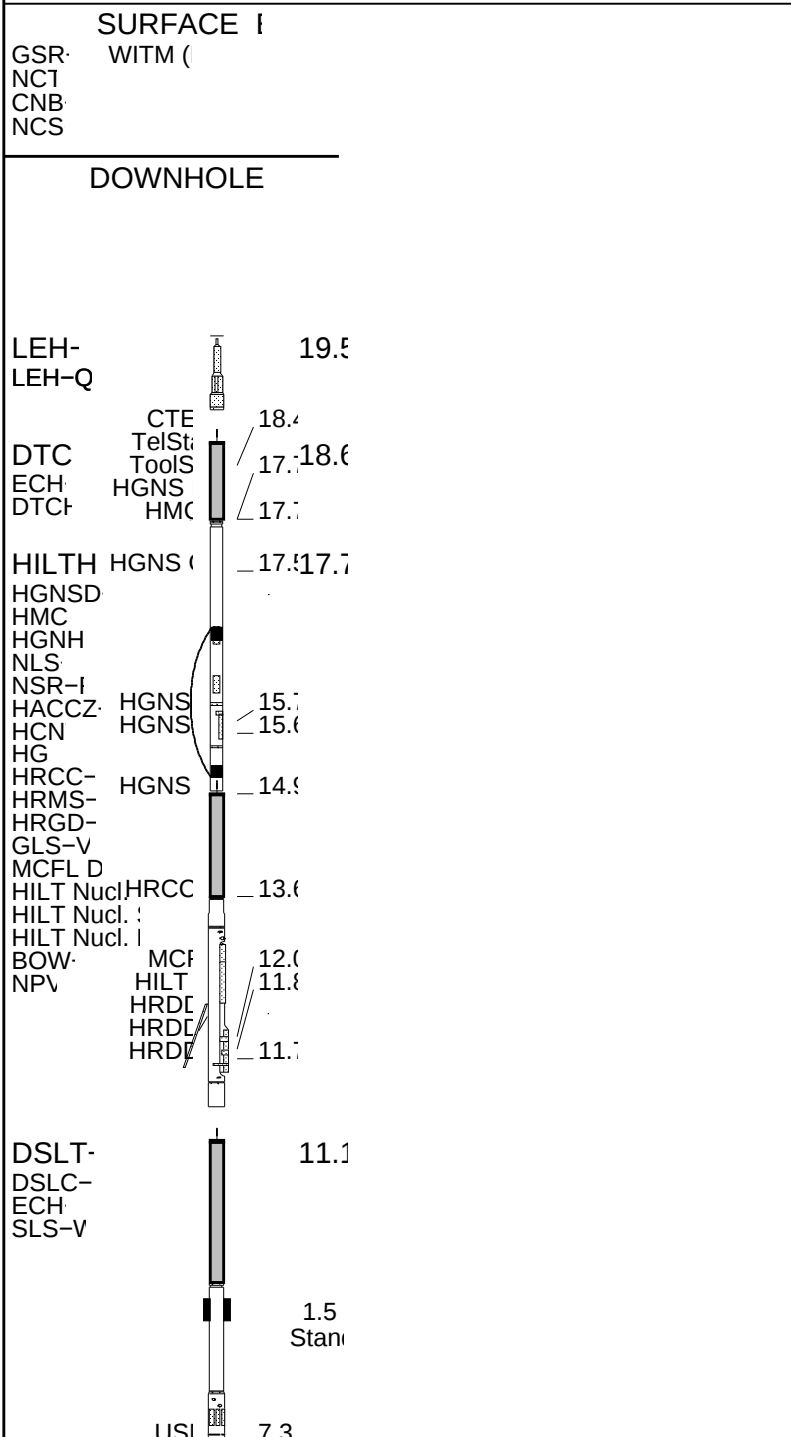


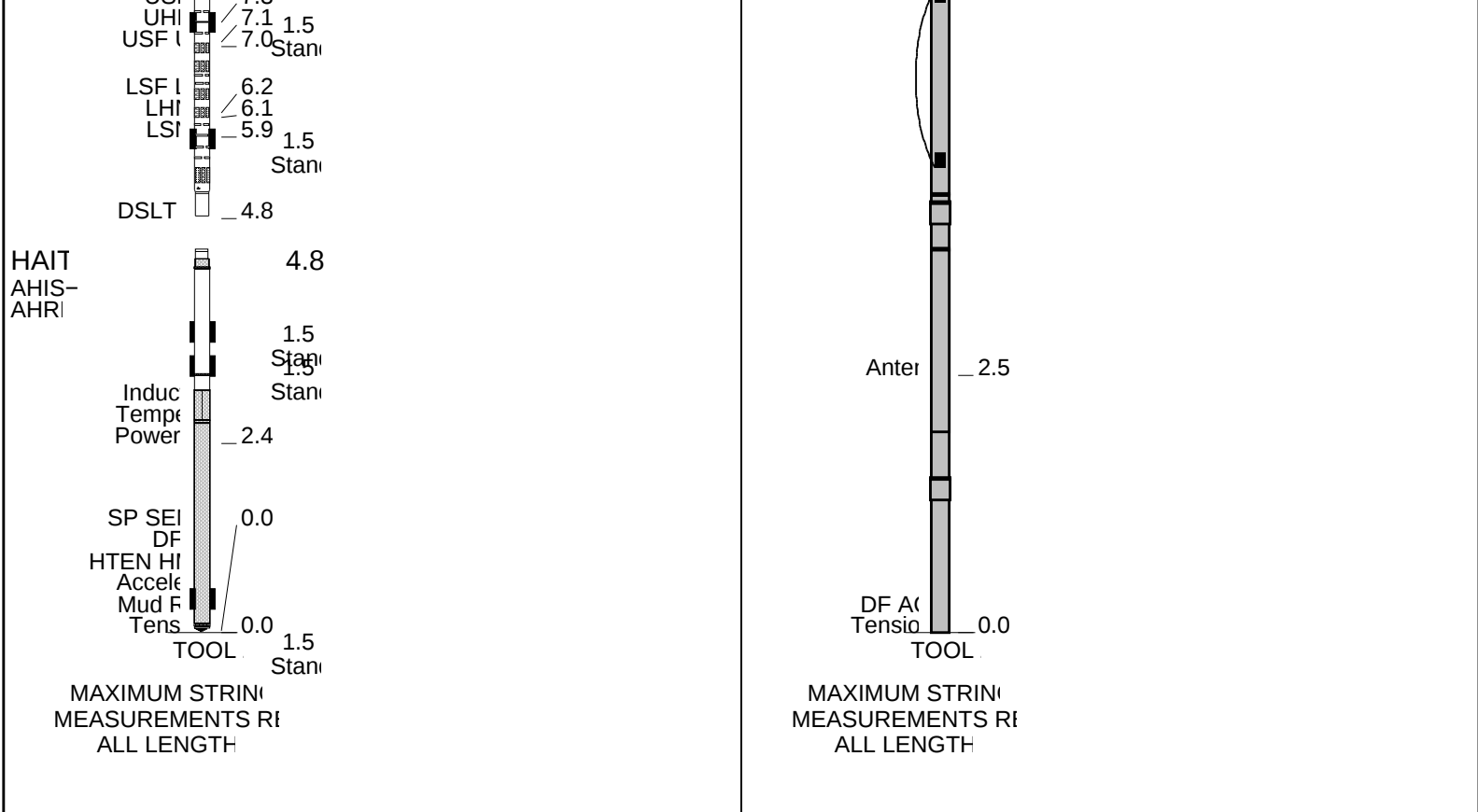
OTROS SERVICIOS # 1 OS1: AIT-BHC-NC-LDL-CAL OS2: MRX/XPT OS3: OS4: OS5: PI-389	OTROS SERVICIOS # 2 OS1: AIT-BHC-NC-LDL-CAL OS2: MRX/XPT OS3: OS4: OS5: PI-389
OBSERVACIONES: CORRIDA # 1	OBSERVACIONES: CORRIDA # 2
1. Primera carrera en el pozo y perfil de referencia de profundidad	1. Correlacionado al perfil Combinada realizado por Schlumberger el dia 1
2. Herramienta comida segun esquema	2. Herramienta comida segun esquema
3. Coordenadas definitivas	3. Coordenadas definitivas
4. Esquema del pozo segun datos perforador	4. Esquema del pozo segun datos perforador
5. Maxima temperature 52 degc al fondo con temoetro de punta	5. Maxima temperature 52 degc al fondo con temoetro de punta
6. Maxima desviacion 1.5deg segun datos del perforador	6. Maxima desviacion 1.5deg segun datos del perforador
7. EPHI=SPHI ENIUM=0.81 EFXP=2 utilizados para el calculo de Rwa	7. EPHI=SPHI ENIUM=0.81 EFXP=2 utilizados para el calculo de Rwa

8. Ultima circulacion termio el dia 15-Dec-2008 a la 1:00. Duracion: 1.75hrs	8. Ultima circulacion termio el dia 15-Dec-2008 a la 1:00. Duracion: 1.75hrs
9. Lecturas afectadas en zona del mal caliper	9. Lecturas afectadas en zona del mal caliper
10. Datos adicionales del lodo: Cl:900ppm, Ca:120ppm	10. Datos adicionales del lodo: Cl:900ppm, Ca:120ppm
	11. MRX: desde 1110m hasta 1010 y desde 960m hasta 845m.

CORRIDA #1			CORRIDA #2		
ORDEN DE SERVICIO:			ORDEN DE SERVICIO:		
VERSION DEL PROGRAMA:			VERSION DEL PROGRAMA:		
NIVEL DEL LODO:			NIVEL DEL LODO:		
16C0-147			16C0-147		
0 m			0 m		
INTERVALO REGISTRADO	COMIENZO	FINAL	INTERVALO REGISTRADO	COMIENZO	FINAL

DESCRIPCION DEL EQUIPO					
CORRIDA # 1			CORRIDA # 2		





Gbk-9



Altura Mesa

PI-38

Nivel Terr

Nivel Refere

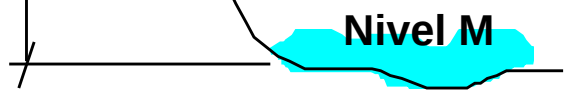
Casing 9 5
32.3 Lb/p

Zapato @ 35'

Cota: 643.14m

Trepano
8 3/4" @

Cota: 043.14m



Schlumberger

TRAMO PRINCIPAL

MAXIS Field Log

Input DLIS Files

DEFAULT	MRX_TLD_MCFL_CNL_039PUP	FN:58	PRODUCER	04-Dec-2008 19:30	1189.6 M	332.2 M
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Output DLIS Files

DEFAULT	MRX_TLD_MCFL_CNL_075PUP	FN:2	PRODUCER	04-Dec-2008 19:21	1189.6 M	332.8 M
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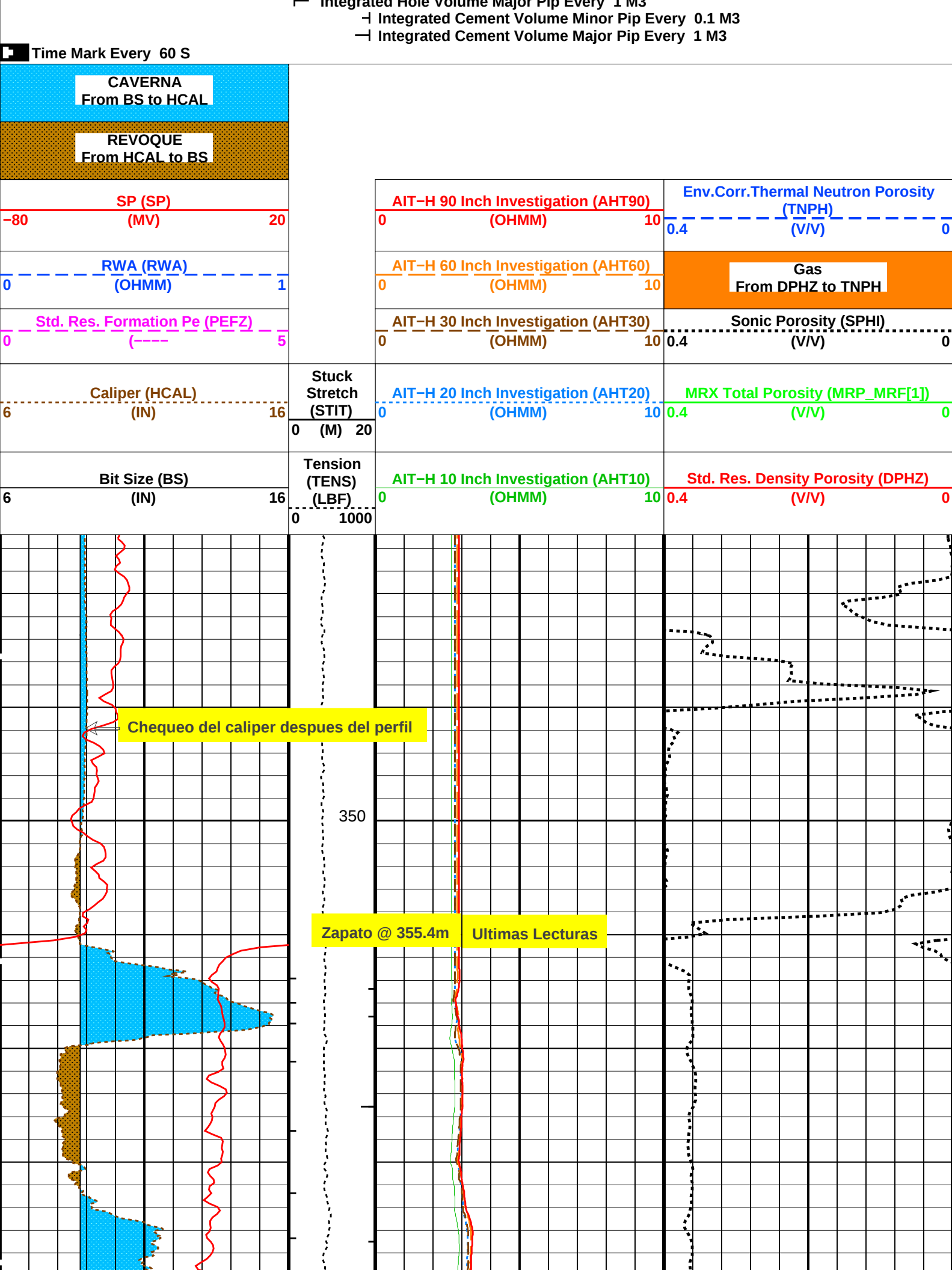
OP System Version: 16C0-147

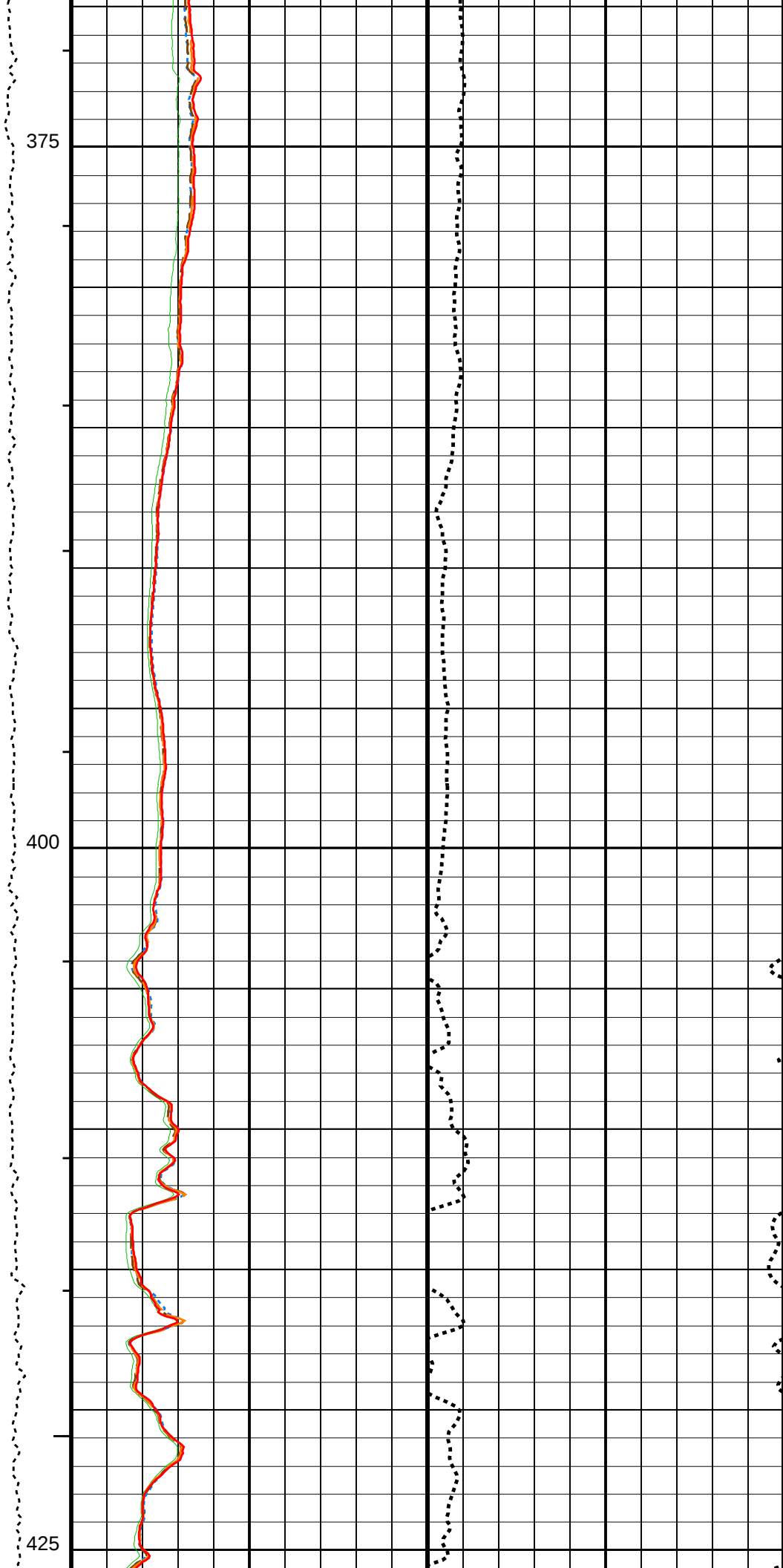
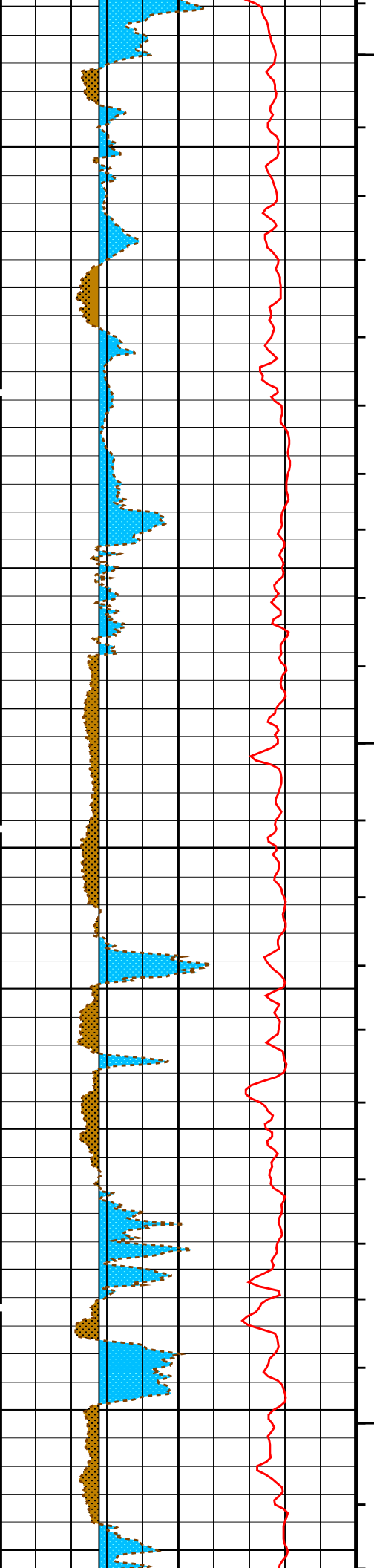
MCM

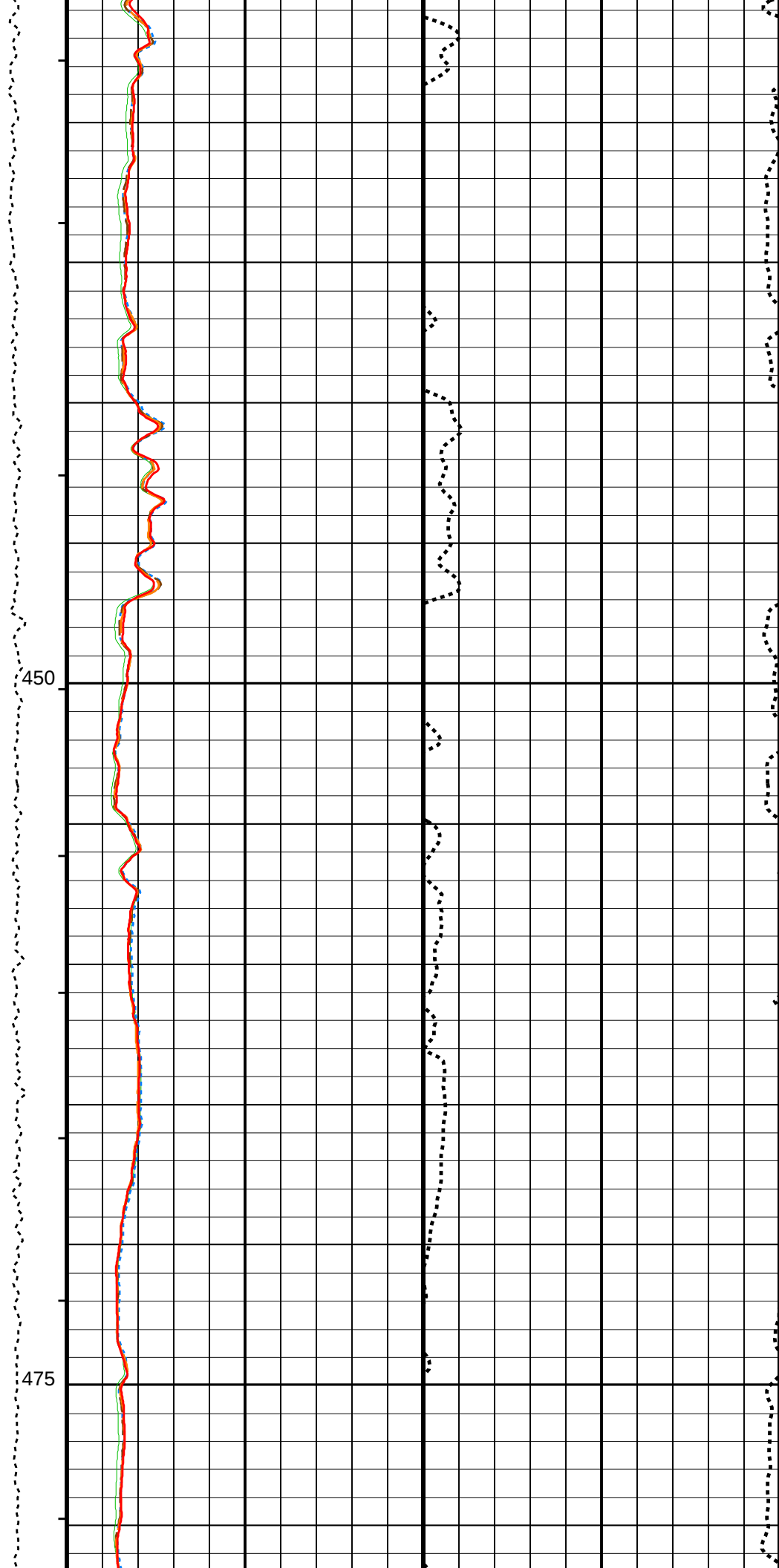
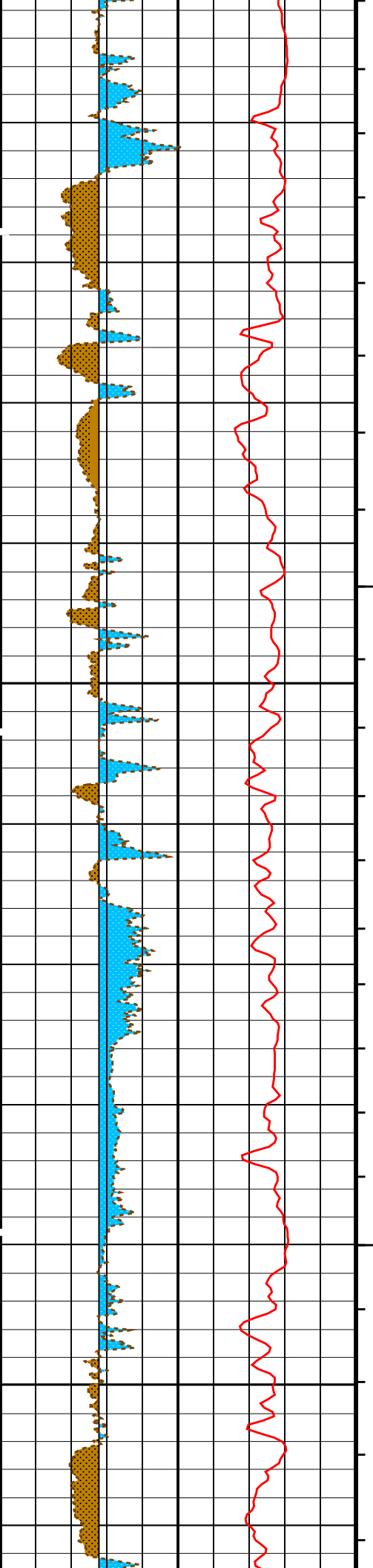
MRX-C	SPC-3649-MRXKit17	EDTC-B	SKK-3494-EDTCB
HILTH-FTB	SRPC-3624-Q2_2008_OP16	HAIT-H	SRPC-3624-Q2_2008_OP16
DSLTT-FTB	16C0-147		

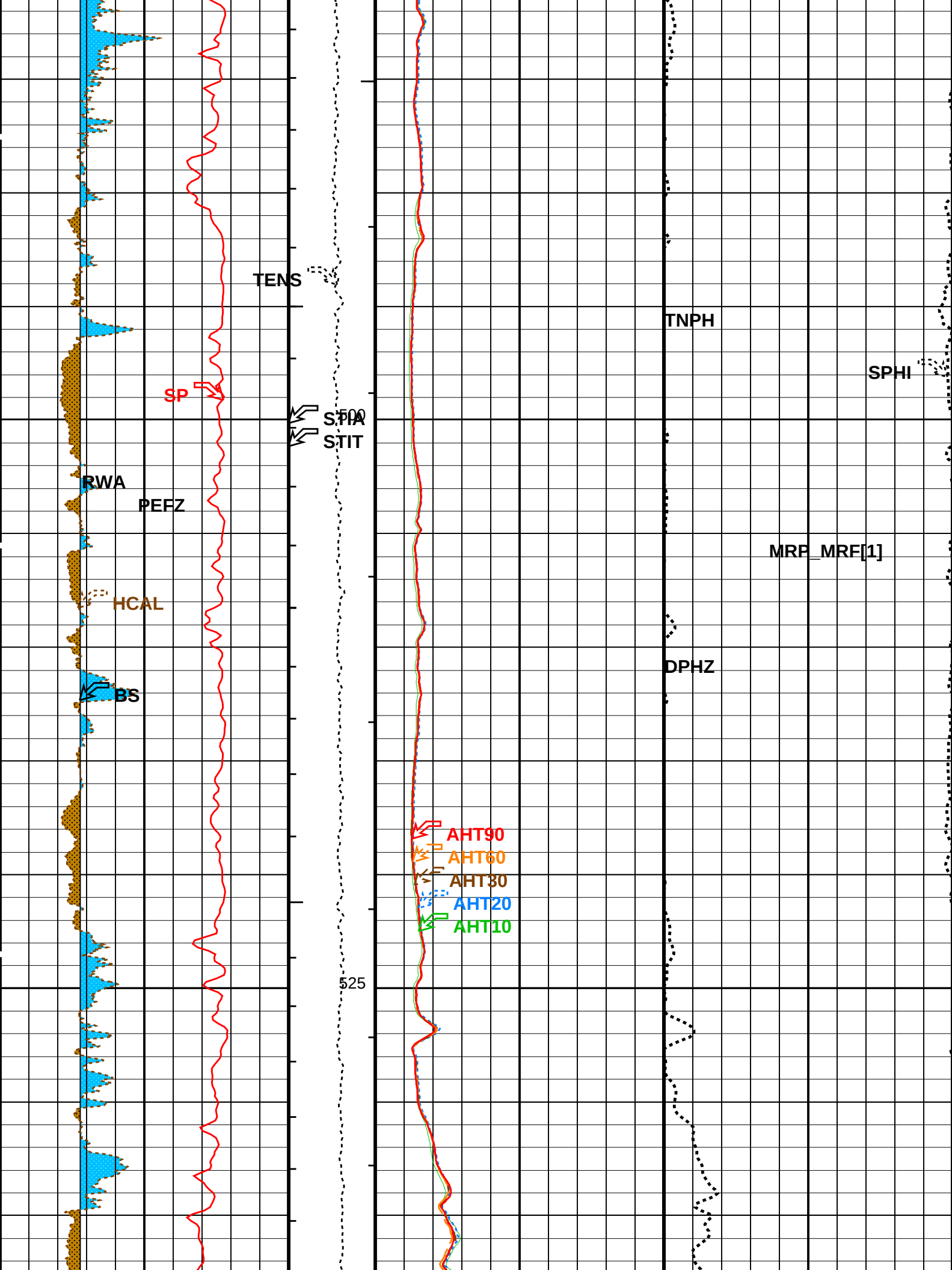
PIP SUMMARY

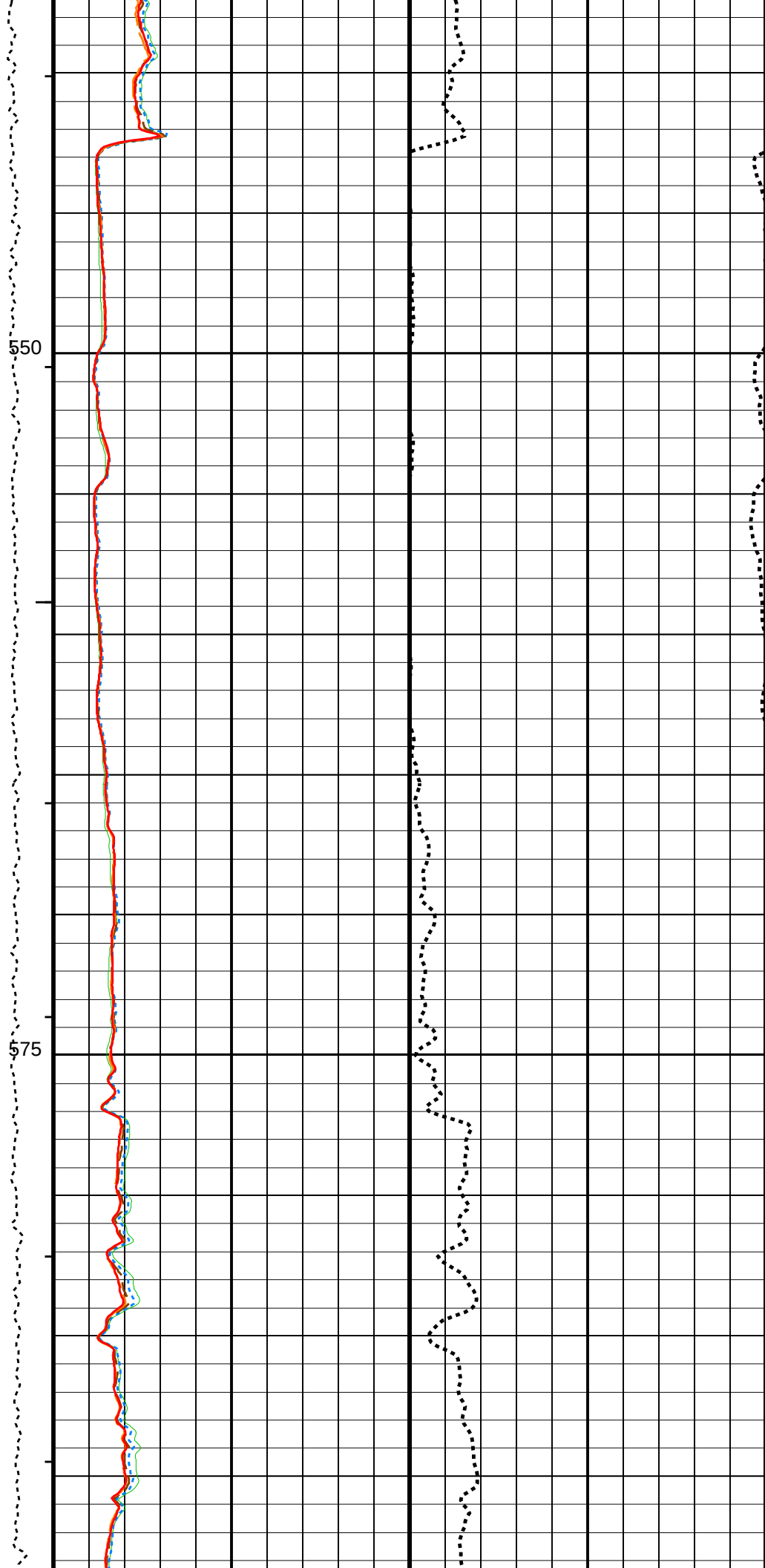
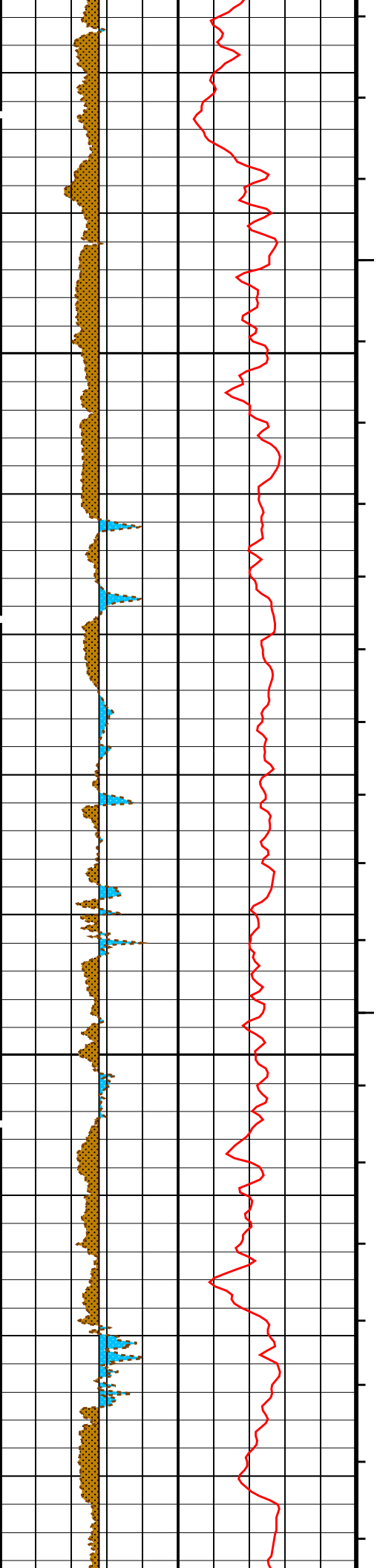
Integrated Hole Volume Minor Pip Every 0.1 M3
Integrated Hole Volume Major Pip Every 1 M3

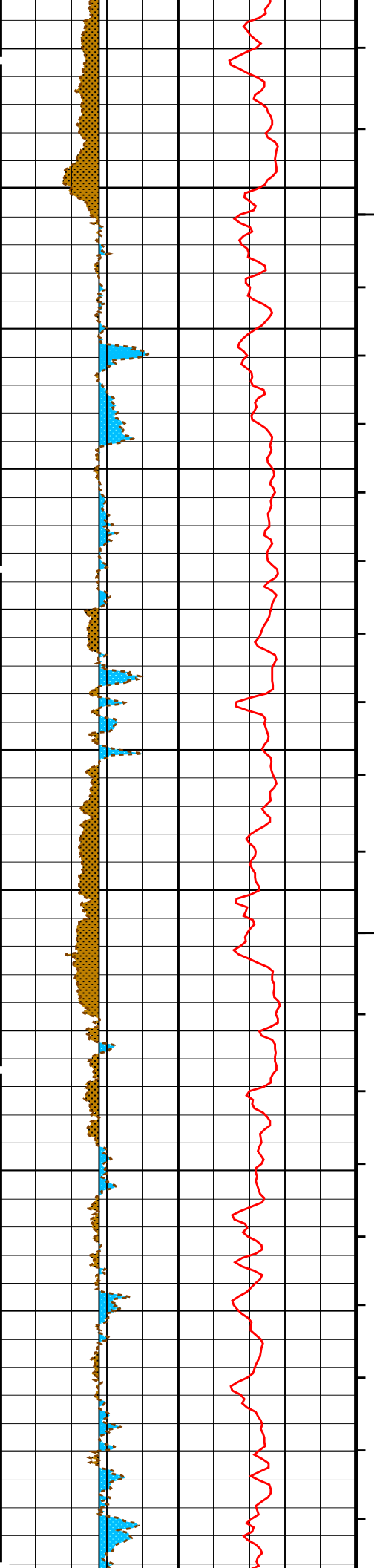


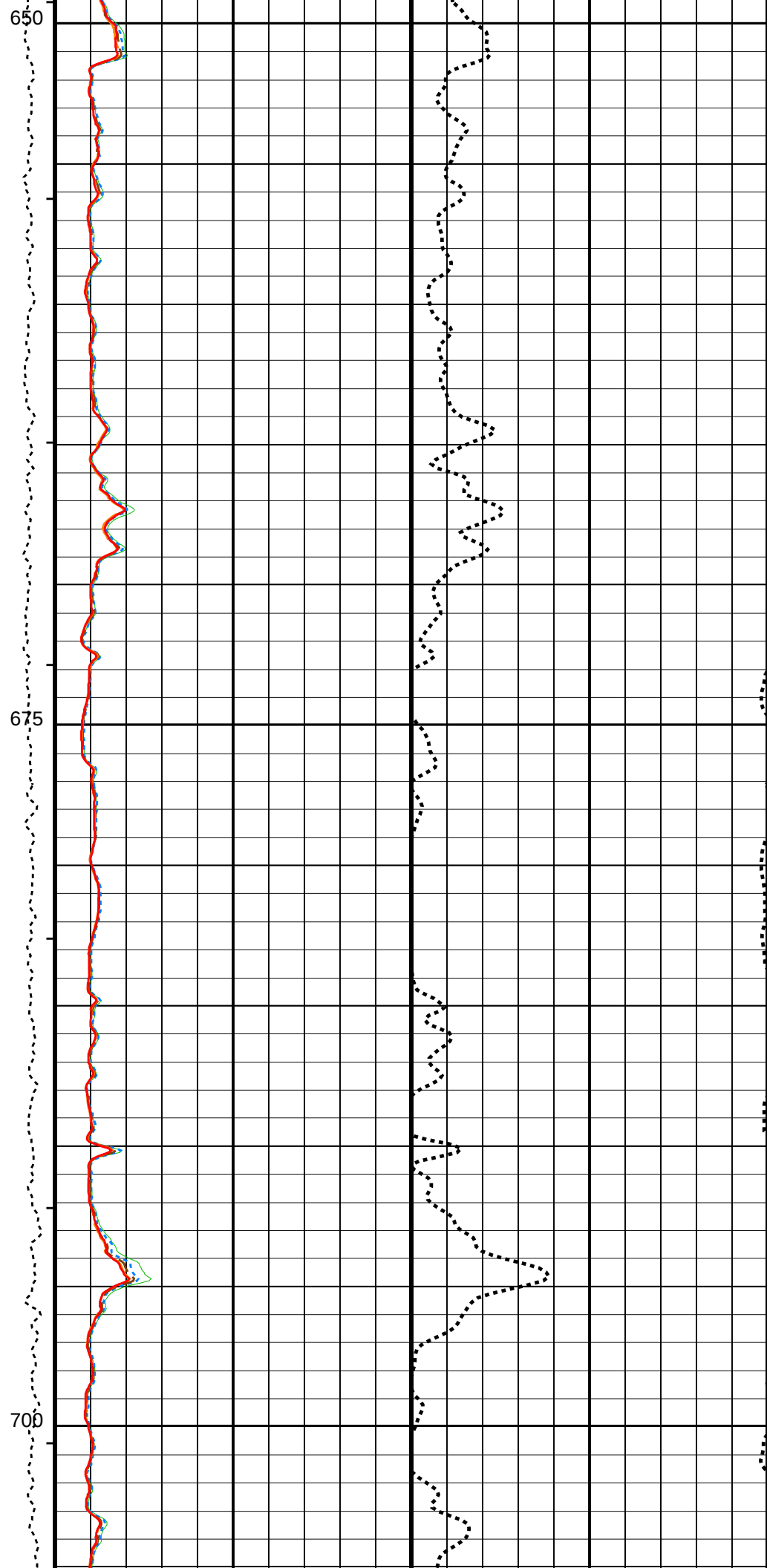
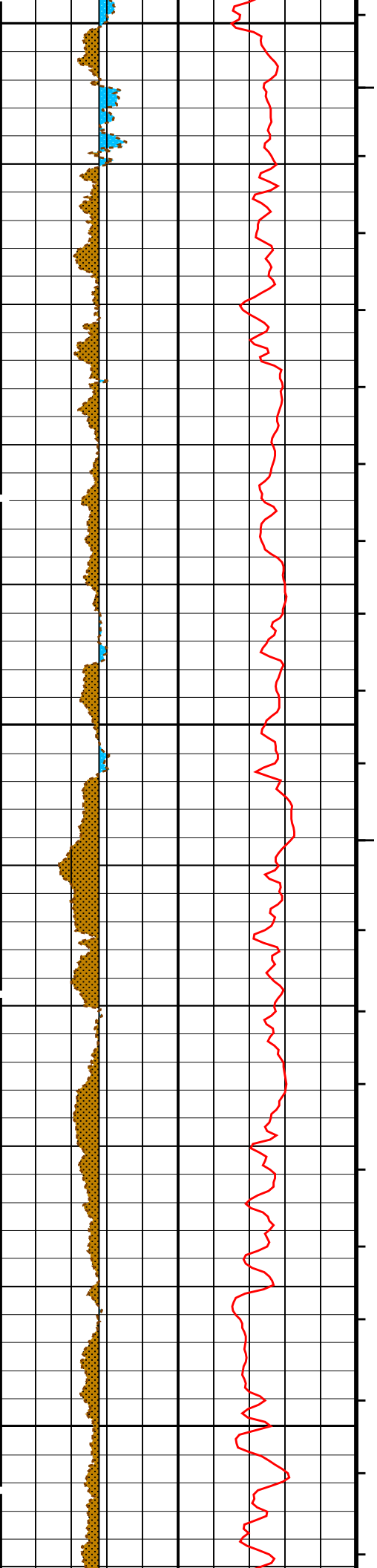


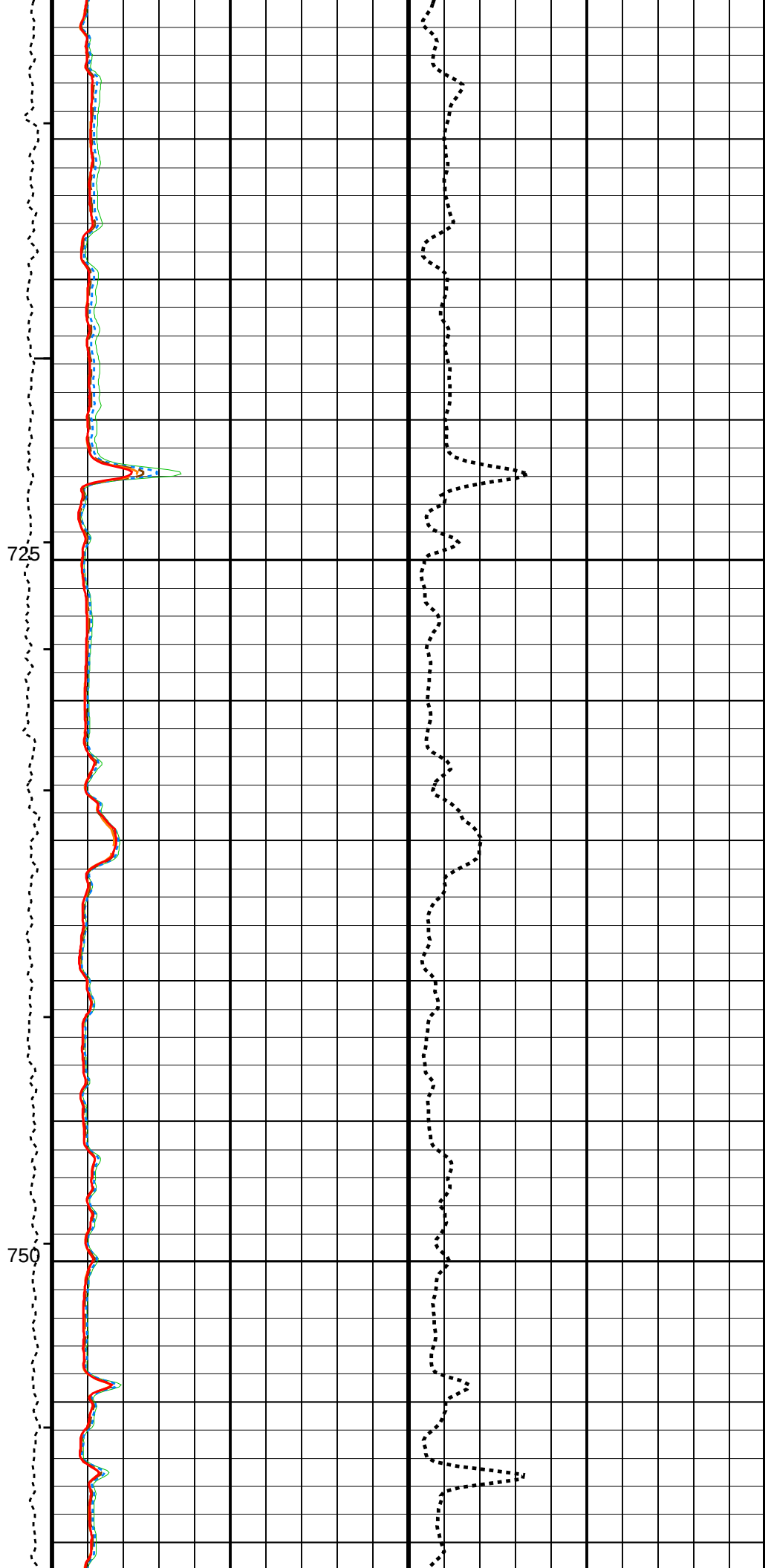
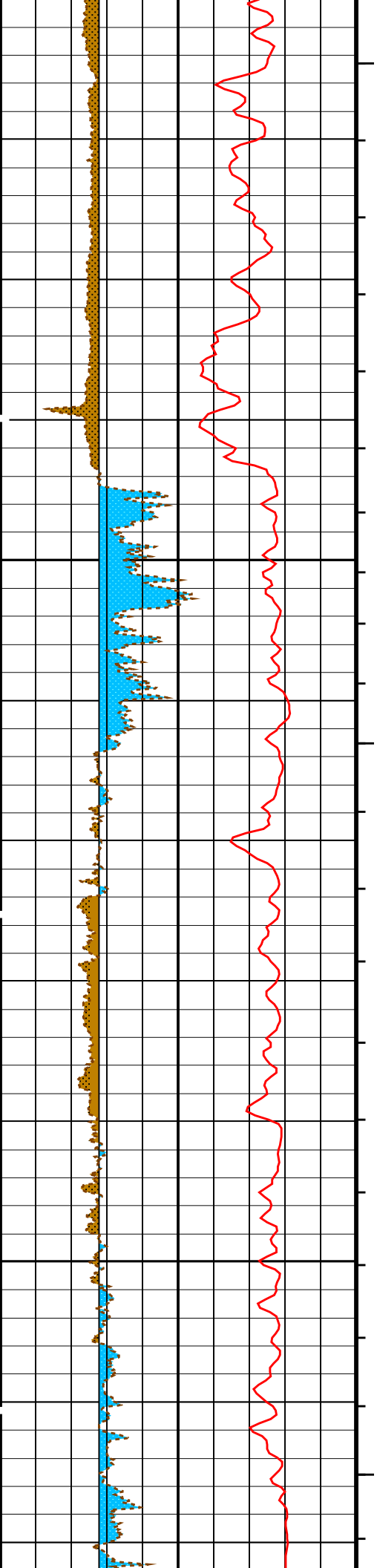


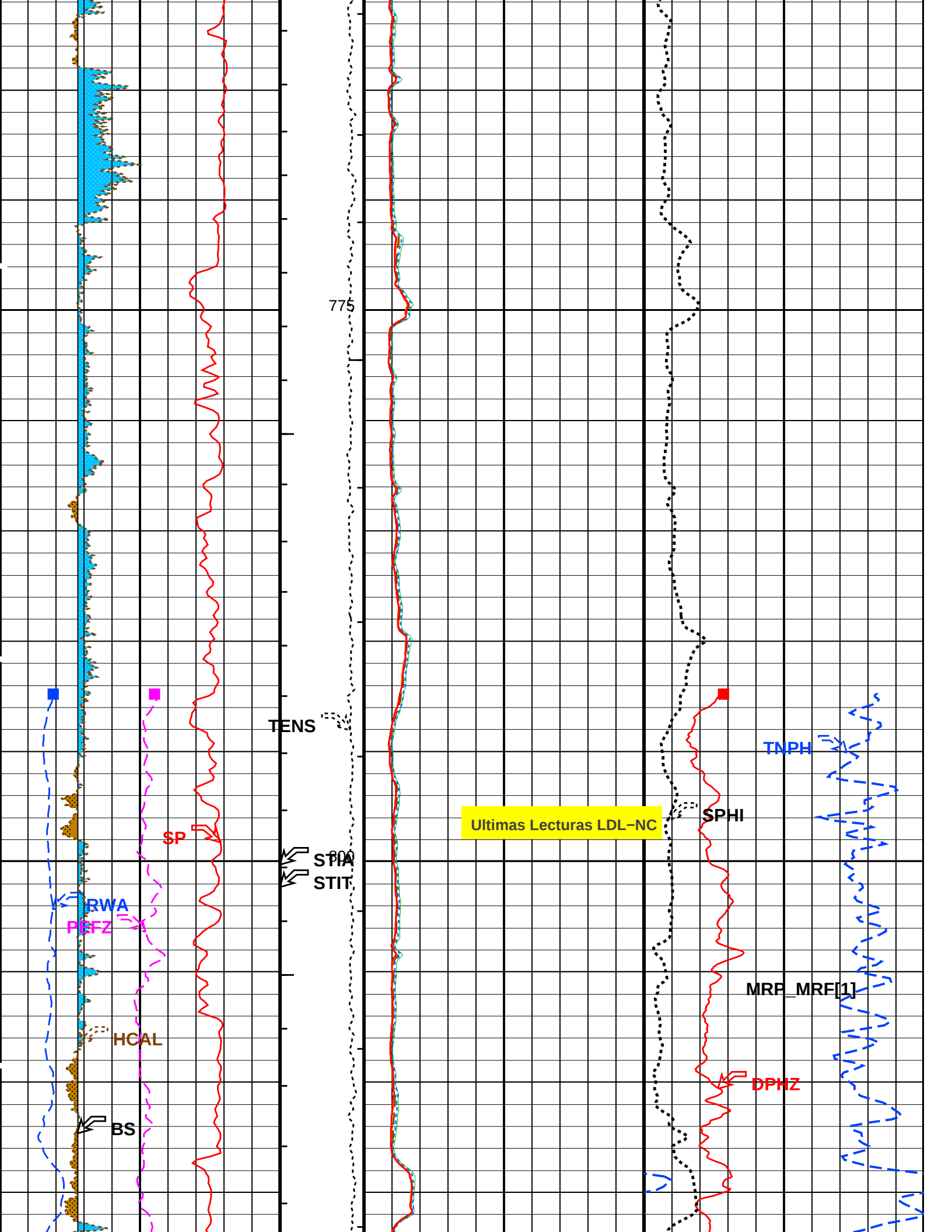


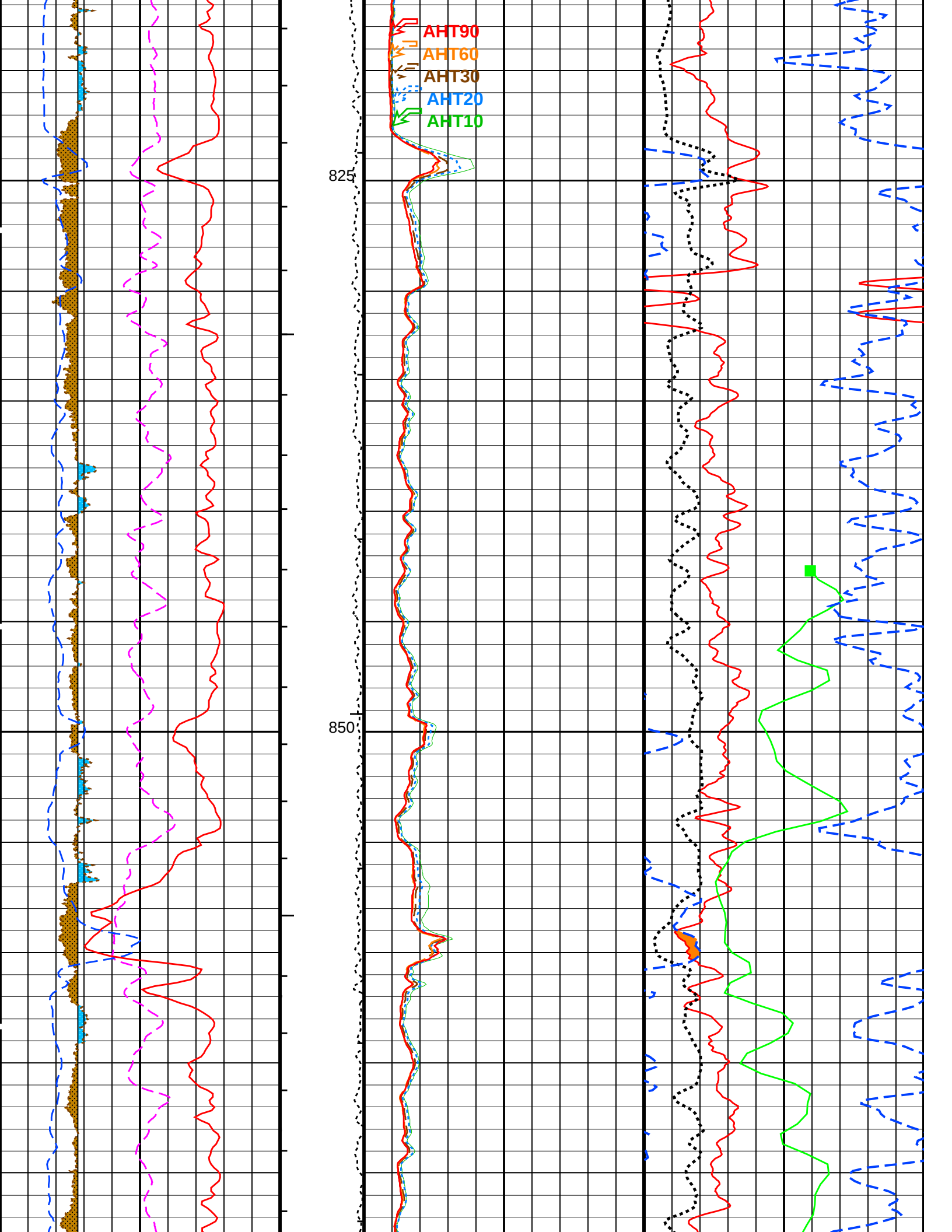


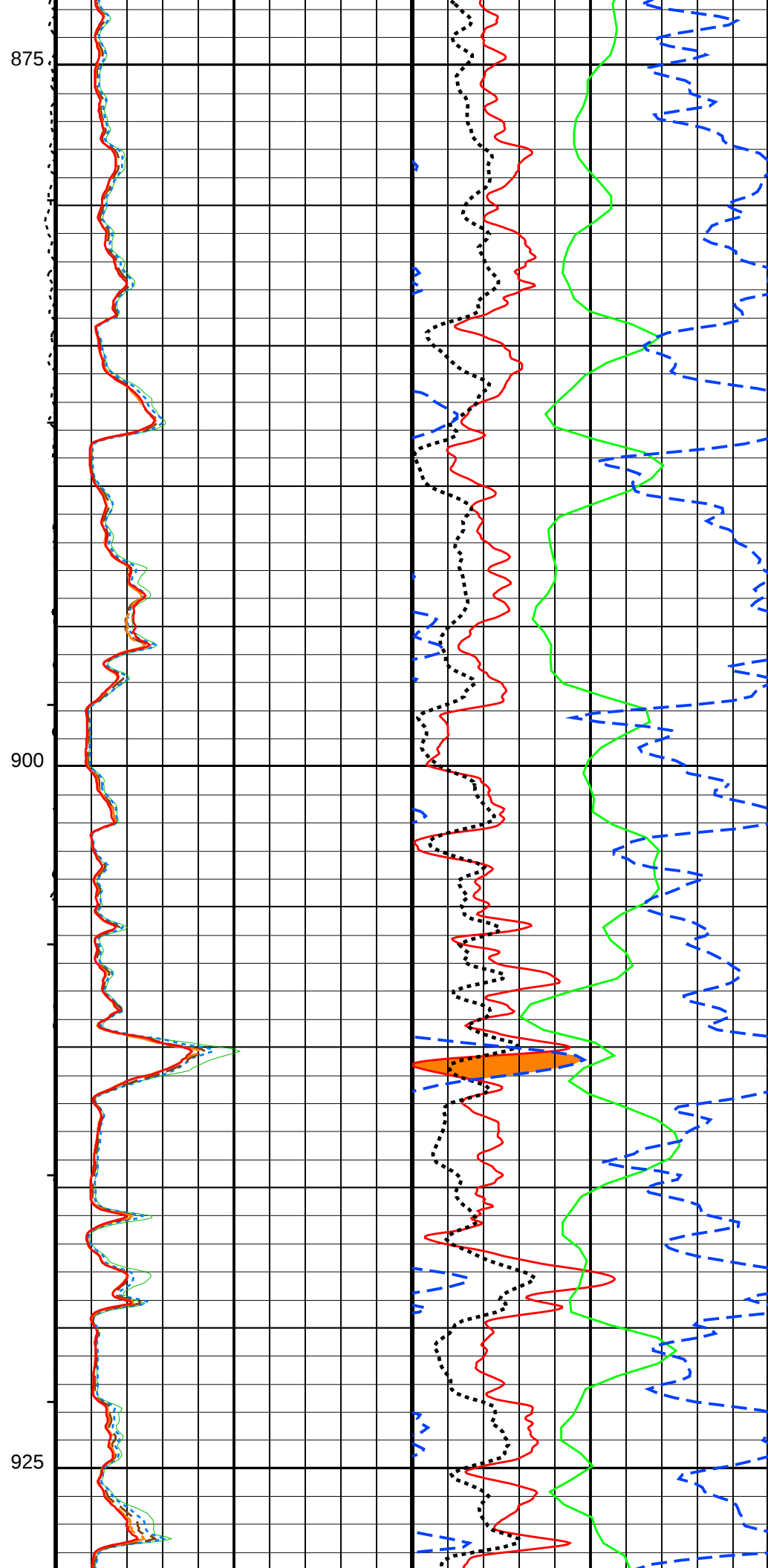
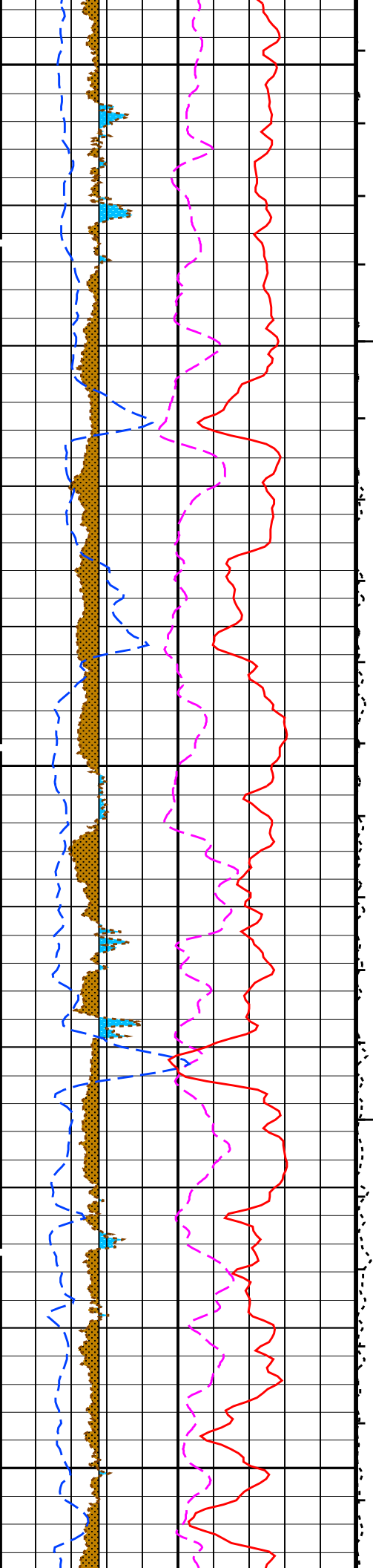


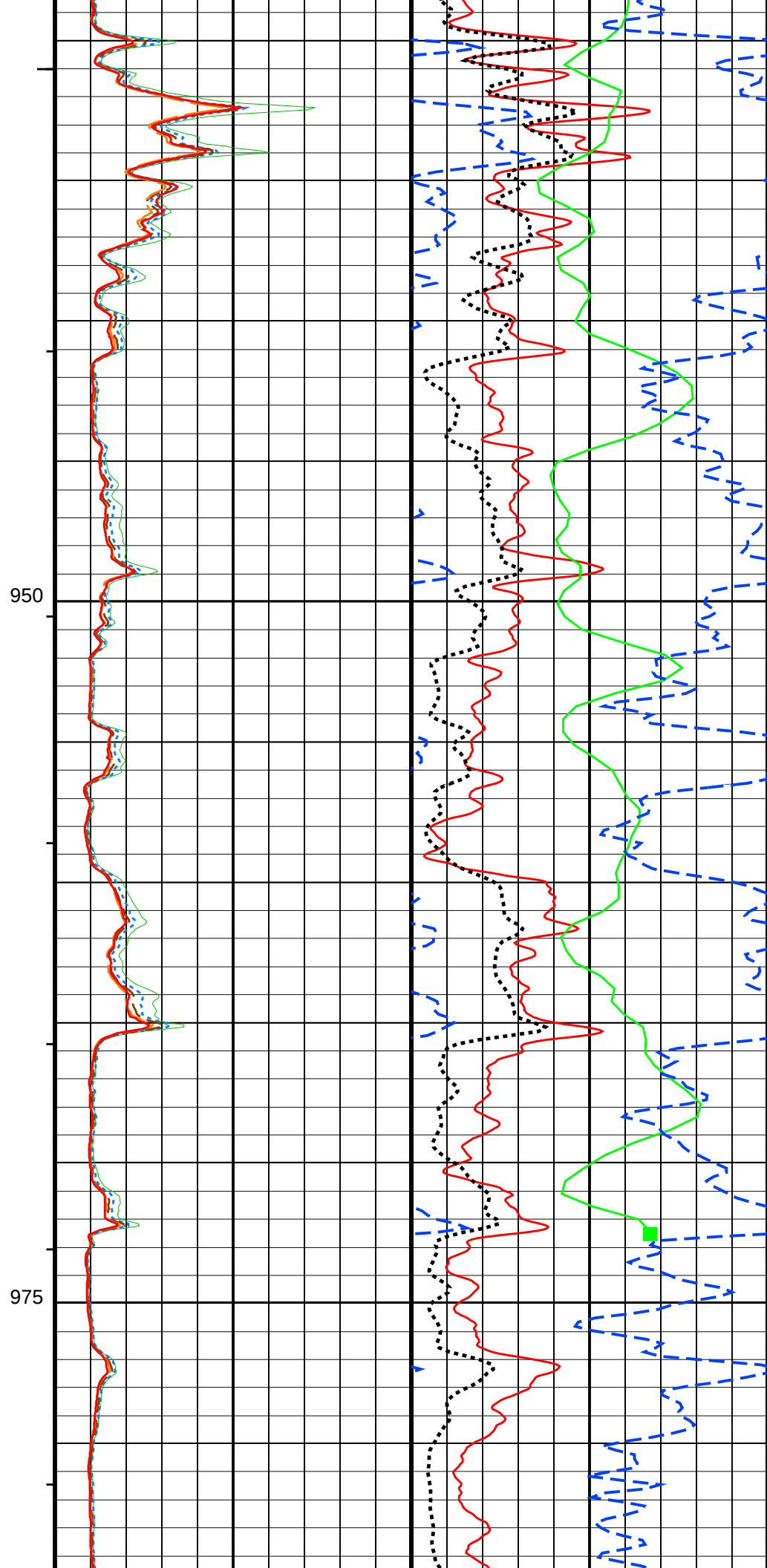
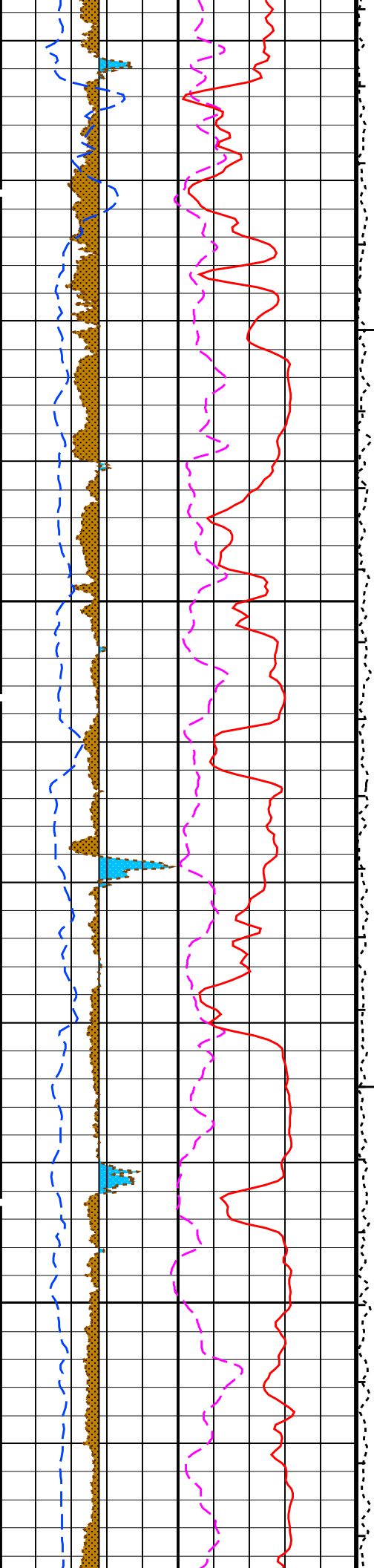


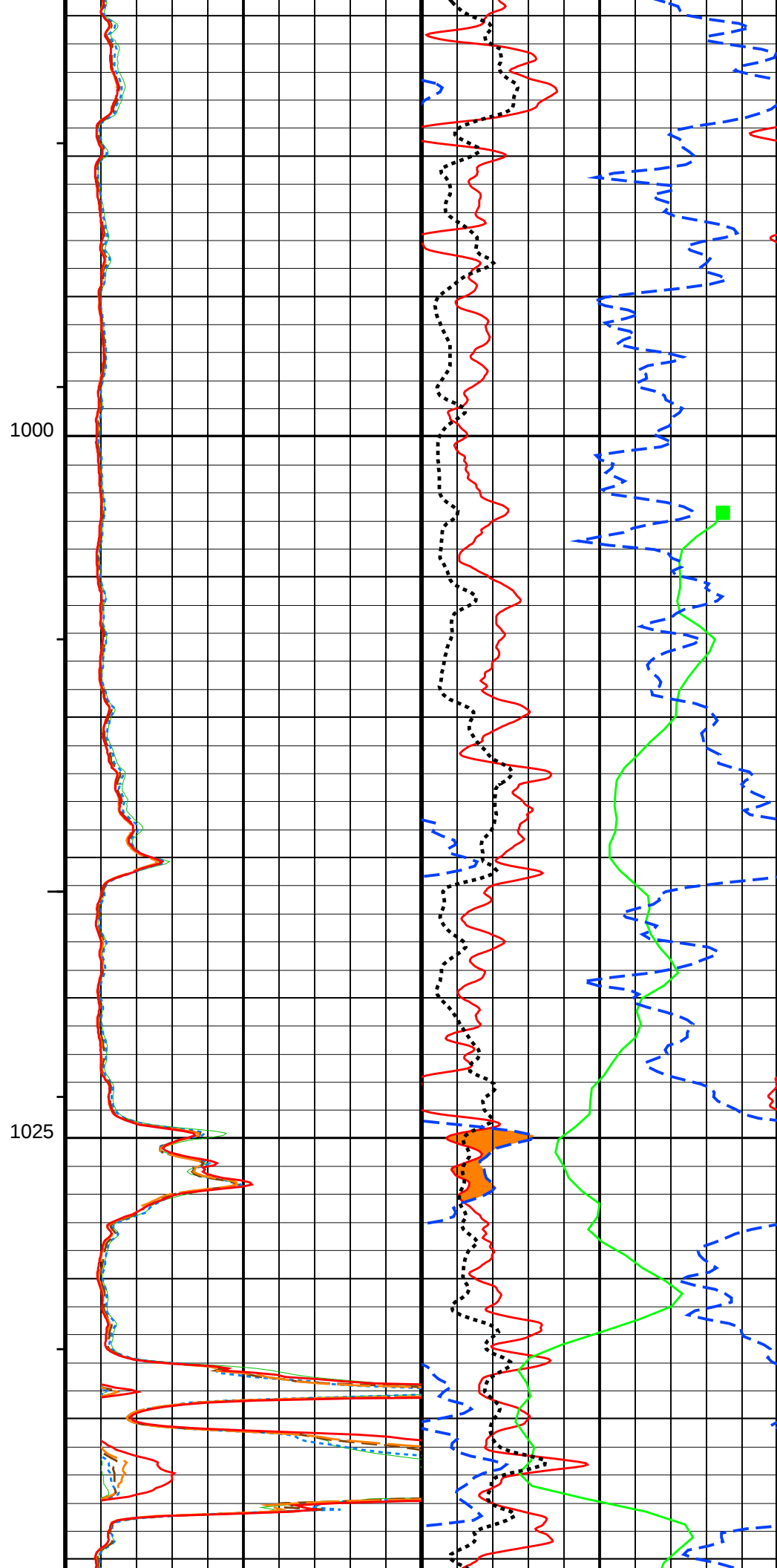
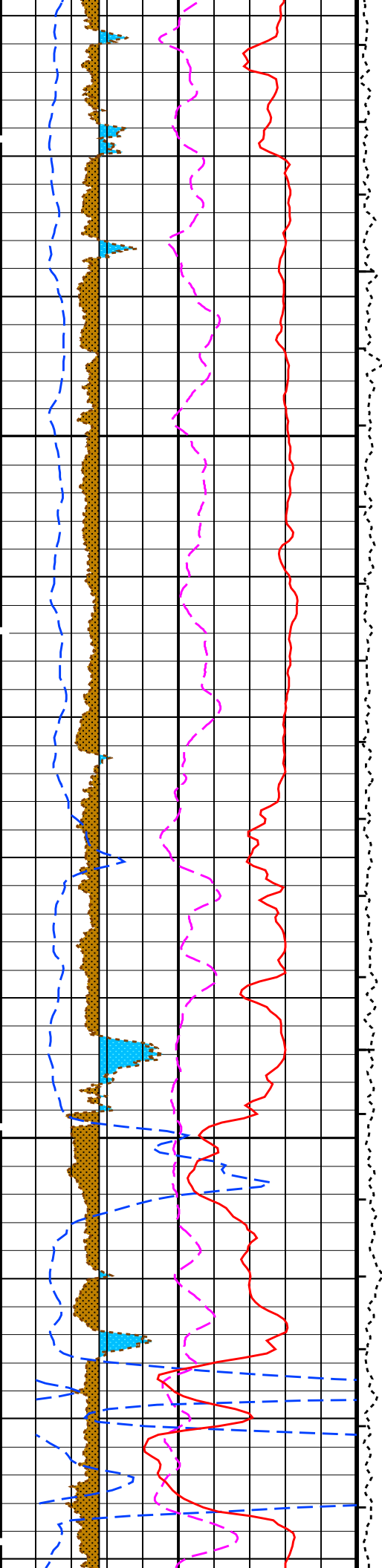


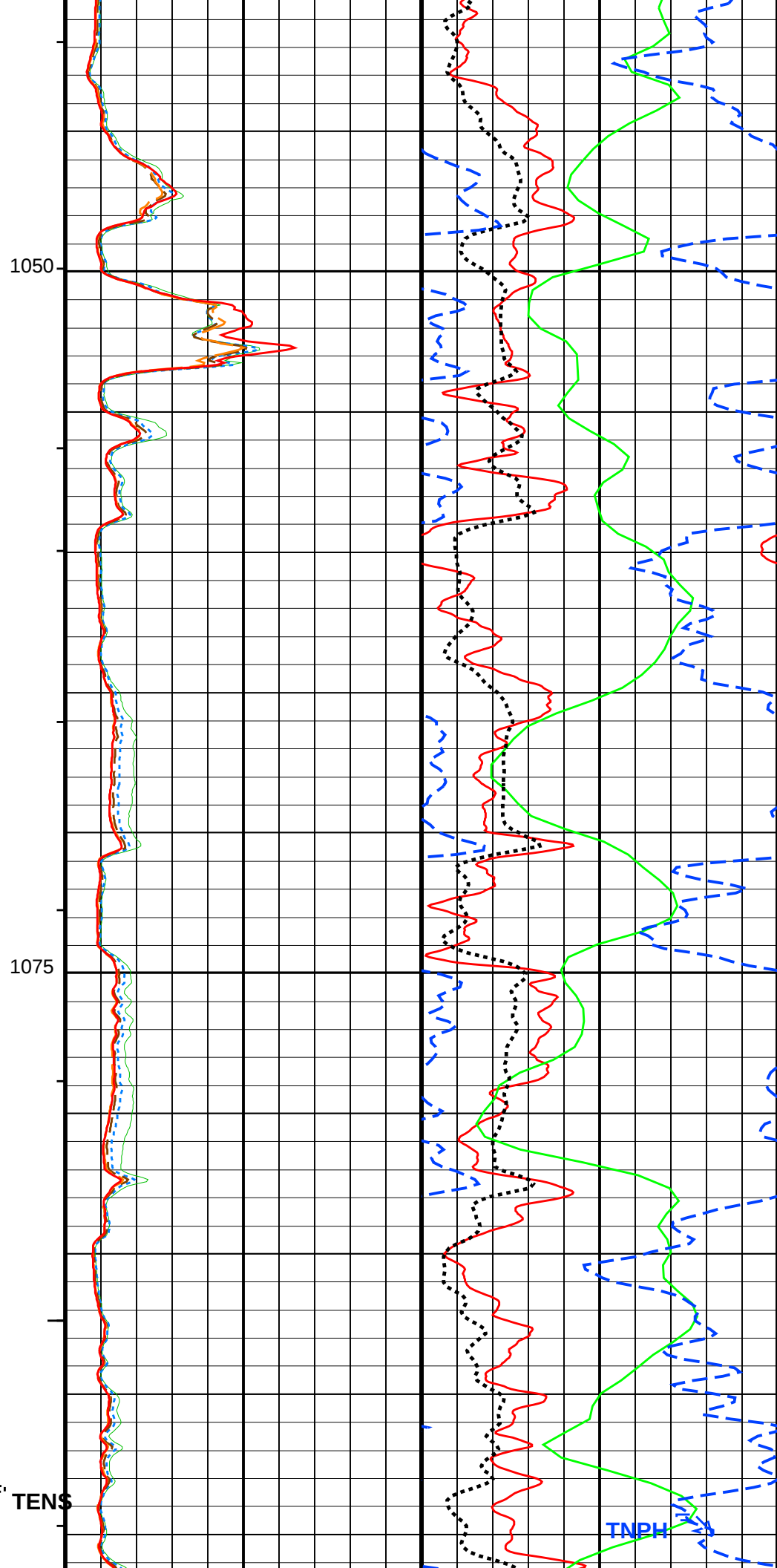
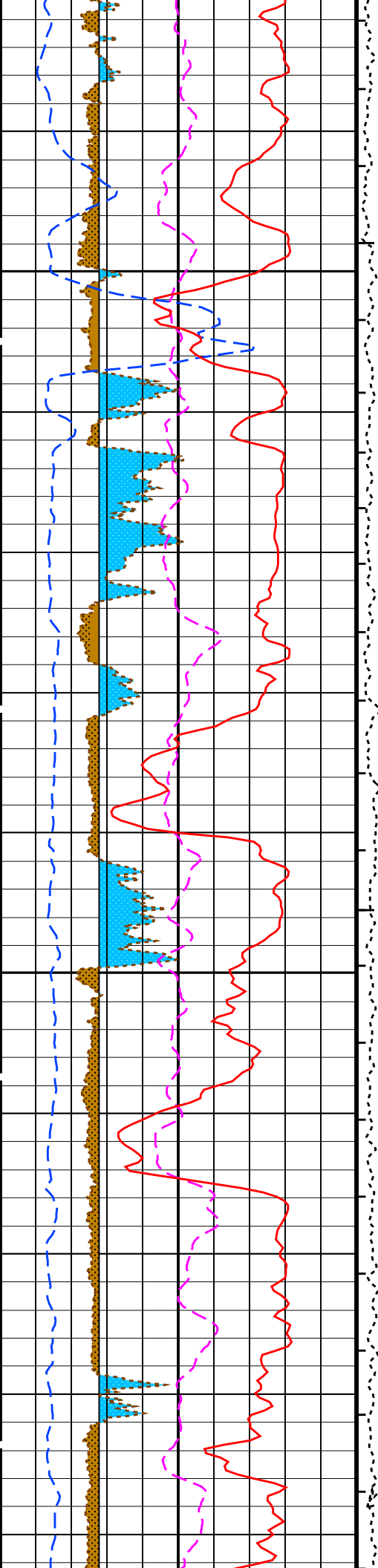


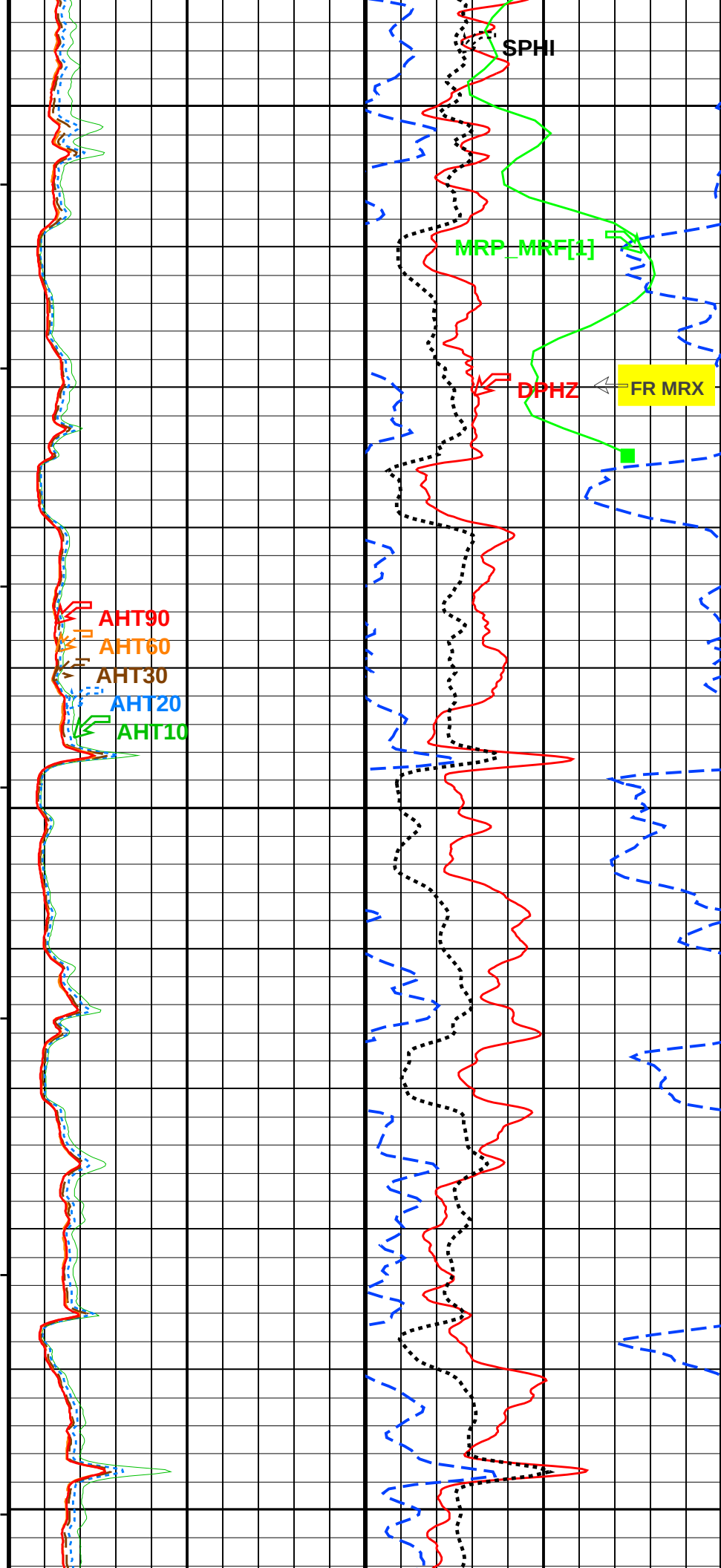
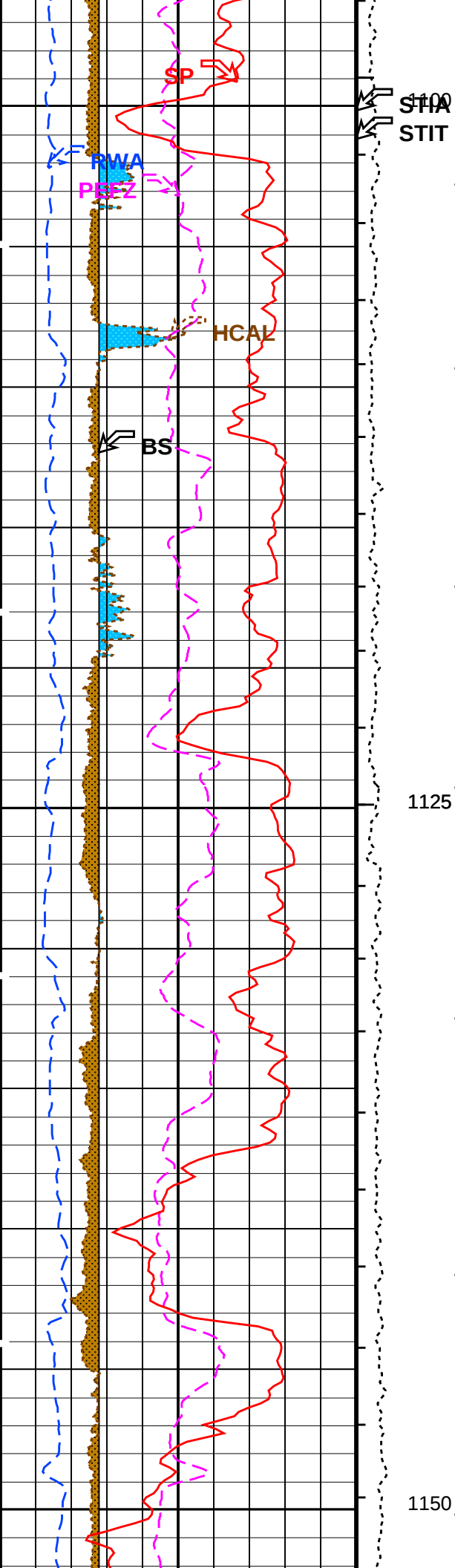


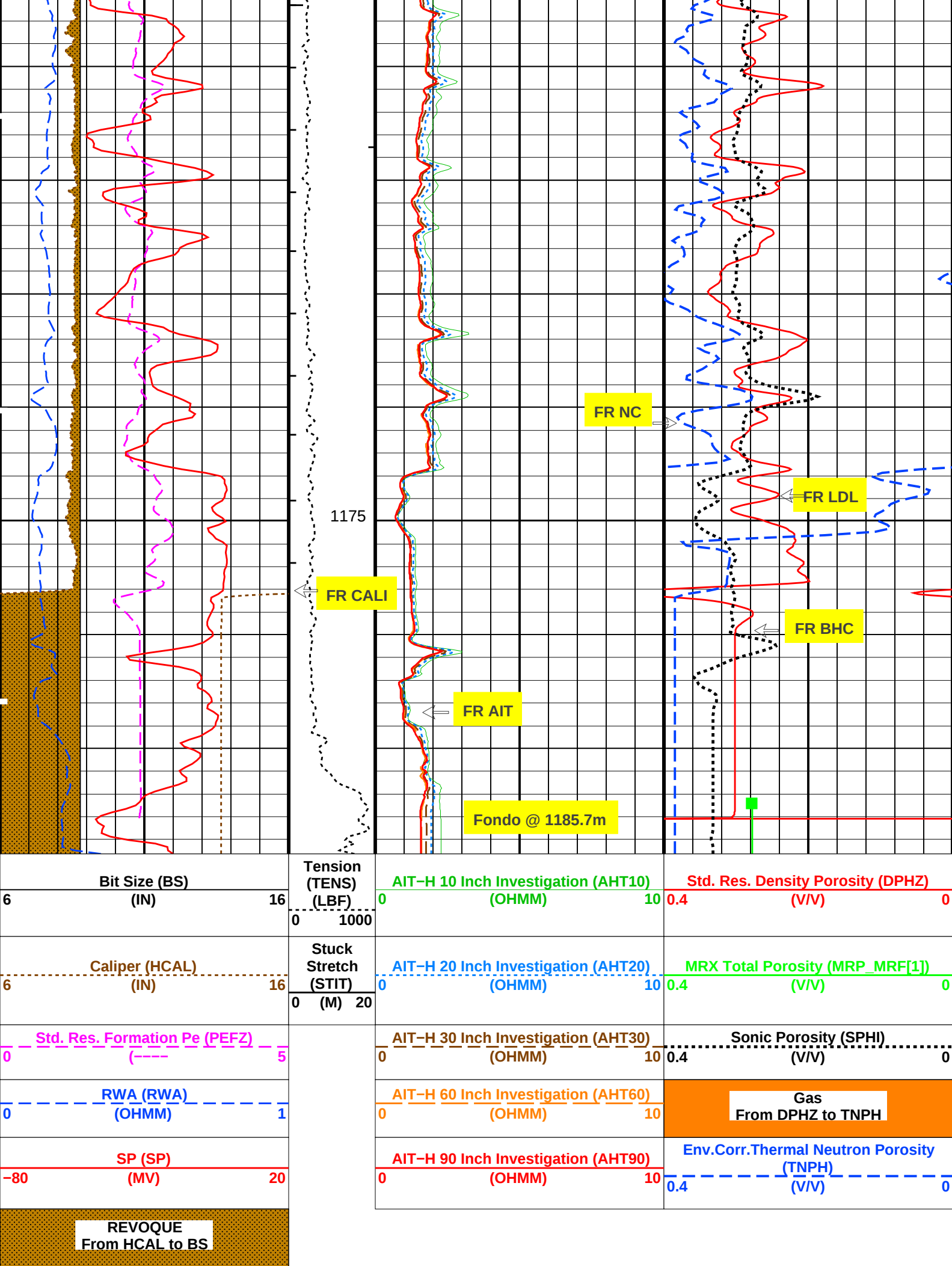












PIP SUMMARY

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

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
MRX-C: Magnetic Resonance eXpert Tool			
DESPIKE_OPT	Despiking Option	ON	
DLSR	Depth Log Sample Rate	18	IN
GAMMA_OPT	GAMMA Parameter Option	MANUAL	
GAMMA_REG	Gamma Regularization Parameter	** V **	
HI_H2O	Hydrogen Index of Water	1	
NCOMP	Number of Components (depth logging)	30	
NECH_SPHASE	Number of Echos to use in Signal Phase Computation	20	
NMR_FLUID_MODEL	Fluid Model for Magnetic Resonance Fluid Typing	WATER	
NSTACK	Number of Stacks down-hole	1	
SEQUENCE_FILE	Sequence File	BMR_S1S4_UP1800_V24_HIGH_AQF	
SPEED_CORR_OPT	Speed Correction Option	OFF	
START_ECHO_OPT	Starting Echo Option	SECOND	
T2CUT	T2 Cutoff between BFV and FFV	33	MS
T2_MAX	T2 Maximum	3000	MS
T2_MIN	T2 Minimum	0.5	MS
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	52	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GRGD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	YES	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	YES	
HILTH-FTB: High resolution Integrated Logging Tool-DTS			
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	52	DEGC
BSCO	Borehole Salinity Correction Option	YES	
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	0.81	
FPHI	Form Factor Porosity Source	SPHI	
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
GRGD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	YES	
MCOR	Mud Correction	NATU	
MDEN	Matrix Density	2.65	G/C3
MWCO	Mud Weight Correction Option	YES	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	StdRes	
NSAP	HRDD Depth Sampling Rate	1	IN

NSAK	Pressure/Temperature Correction Option	1	IN
PTCO	Standoff Data Source	SOCN	
SDAT	Surface Hole Temperature	20	DEGC
SHT	Standoff Distance	0.125	IN
SOCN	Standoff Correction Option	YES	
SOCO	HAIT-H: Array Induction Tool - H		
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	1.5	IN
AHTRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20	
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	52	DEGC
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	0.81	
FPHI	Form Factor Porosity Source	SPHI	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
RTCO	RTCO - Rt Invasion Correction	YES	
SHT	Surface Hole Temperature	20	DEGC
SPNV	SP Next Value	-19	MV
	DSLT-FTB: Digitizing Sonic Logging Tool		
CDTS	C-Delta-T Shale	100	US/F
DTF	Delta-T Fluid	189	US/F
DTM	Delta-T Matrix	56	US/F
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DT	
	RWA: Apparent Water Resistivity		
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	0.81	
FPHI	Form Factor Porosity Source	SPHI	
RTCO	RTCO - Rt Invasion Correction	YES	
	ALLRES: Basic Resistivity Transforms		
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
RTCO	RTCO - Rt Invasion Correction	YES	
	HOLEV: Integrated Hole/Cement Volume		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	52	DEGC
FCD	Future Casing (Outer) Diameter	7	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	20	DEGC
	STI: Stuck Tool Indicator		
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	1203.00	M
TDL	Total Depth - Logger	1185.60	M
	System and Miscellaneous		
BS	Bit Size	8.750	IN
BSAL	Borehole Salinity	1020.00	PPM
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	OFF	
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	1185.6	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: COMBINADA Vertical Scale: 1:200 Graphics File Created: 04-Dec-2008 19:21

OP System Version: 16C0-147

MCM

MRX-C	SPC-3649-MRXKit17	EDTC-B	SKK-3494-EDTCB
HILTH-FTB	SRPC-3624-Q2_2008_OP16	HAIT-H	SRPC-3624-Q2_2008_OP16
DSLT-FTB	16C0-147		

Input DLIS Files

DEFAULT MRX_TLD_MCFL_CNL_039PUP FN:58 PRODUCER 04-Dec-2008 19:30 1189.6 M 332.2 M

Output DLIS Files

DEFAULT MRX_TLD_MCFL_CNL_075PUP FN:2 PRODUCER 04-Dec-2008 19:21

Schlumberger

TRAMO REPETIDO

MAXIS Field Log

Input DLIS Files

DEFAULT AIT_SONIC_TLD_MCFL_010LUP FN:13 PRODUCER 15-Dec-2008 06:06 1190.5 M 1064.1 M

Output DLIS Files

DEFAULT AIT_SONIC_TLD_MCFL_011PUP FN:15 PRODUCER 15-Dec-2008 06:17 1191.5 M 1065.0 M
BACKUP AIT_SONIC_TLD_MCFL_011PUP FN:16 PRODUCER 15-Dec-2008 06:17 1191.5 M 1065.0 M

Integrated Hole/Cement Volume Summary

Hole Volume = 4.37 M3
Cement Volume = 1.23 M3 (assuming 7.00 IN casing O.D.)
Computed from 1191.5 M to 1065.1 M using data channel(s) HCAL

OP System Version: 16C0-147

MCM

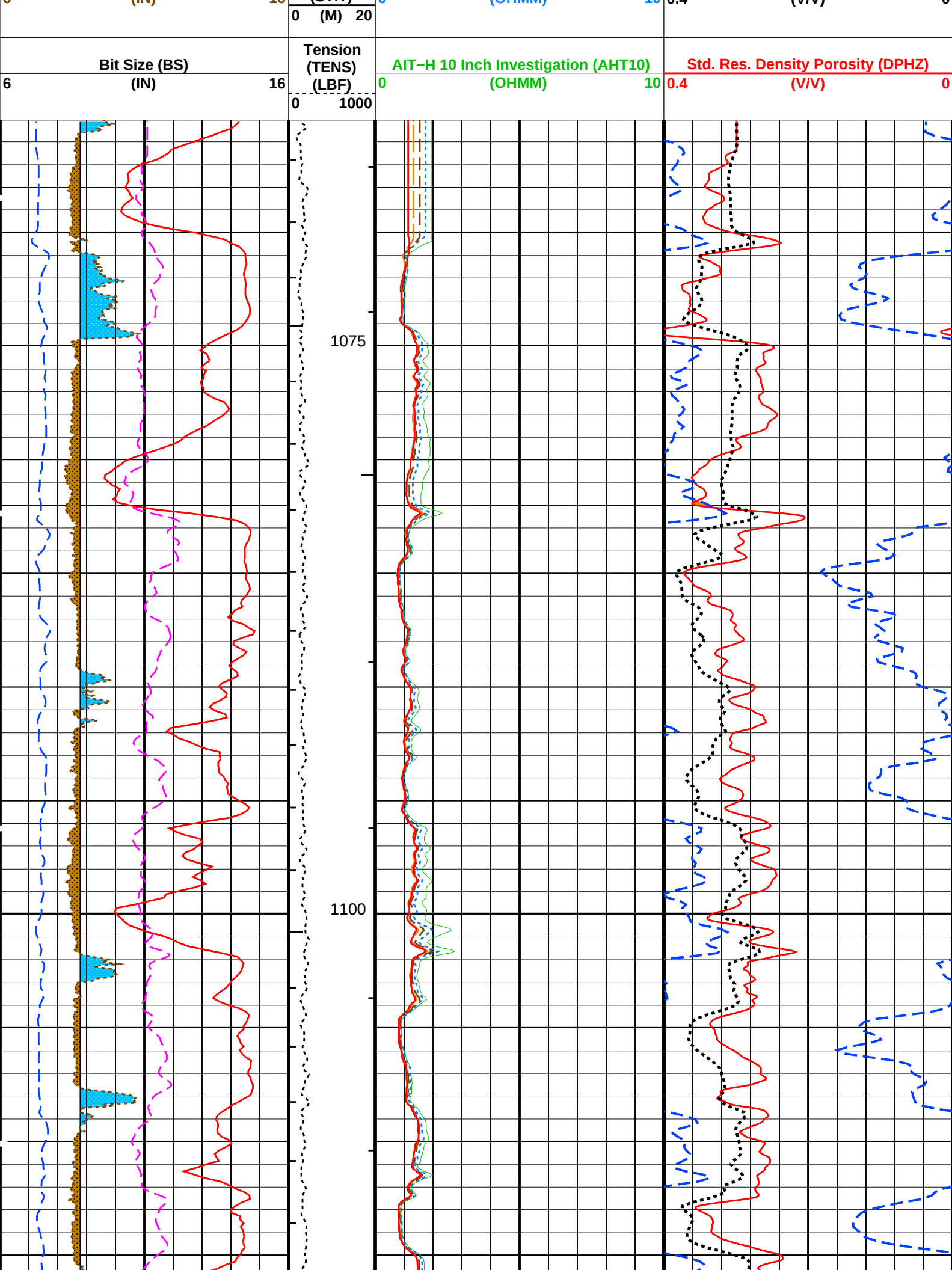
HAIT-H SRPC-3624-Q2_2008_OP16 DSLT-FTB 16C0-147
HILTH-FTB SRPC-3624-Q2_2008_OP16 DTC-H 16C0-147

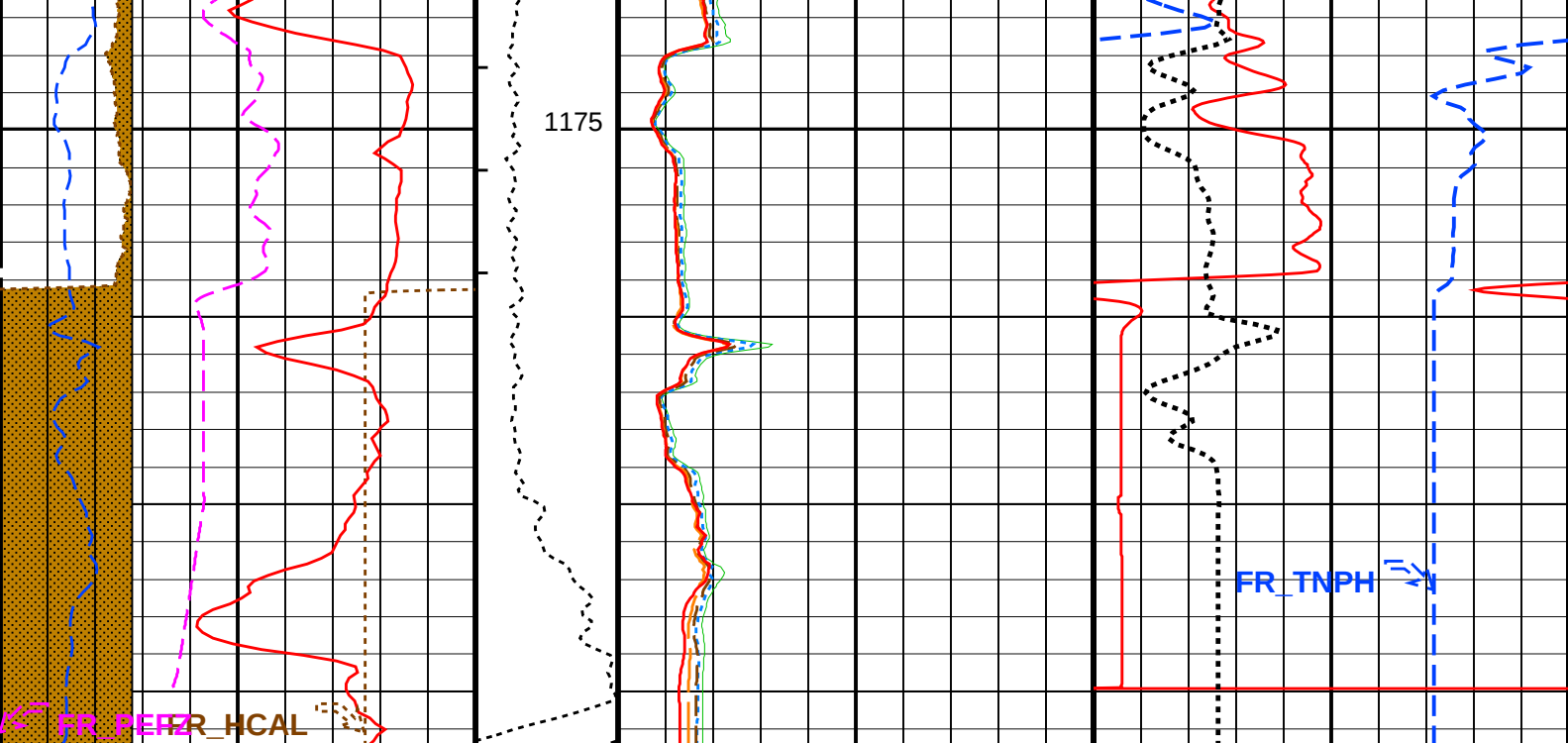
PIP SUMMARY

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

Time Mark Every 60 S

CAVERNA From BS to HCAL			
REVOQUE From HCAL to BS			
SP (SP) -80 (MV) 20		AIT-H 90 Inch Investigation (AHT90) 0 (OHMM) 10	
RWA (RWA) 0 (OHMM) 1		AIT-H 60 Inch Investigation (AHT60) 0 (OHMM) 10	
Std. Res. Formation Pe (PEFZ) 0 (----) 5		AIT-H 30 Inch Investigation (AHT30) 0 (OHMM) 10	
Caliper (HCAL) 6 (IN) 16		AIT-H 20 Inch Investigation (AHT20) 0 (OHMM) 10	
Stuck Stretch (STIT)		Sonic Porosity (SPHI) 0.4 (V/V) 0	
		Env.Corr.Thermal Neutron Porosity (TNPH) 0.4 (V/V) 0	
		Gas From DPHZ to TNPH	





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

PIP SUMMARY

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

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HAIT-H: Array Induction Tool - H		
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	1.5	IN
AHTRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20	
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63	DEGC
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	0.81	
FPHI	Form Factor Porosity Source	SPHI	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
RTCO	RTCO - Rt Invasion Correction	YES	
SHT	Surface Hole Temperature	20	DEGC
SPNV	SP Next Value	-3	MV
DSLT-FTB: Digitizing			
CDTS	Sonic Logging Tool		
DTF	C-Delta-T Shale	100	US/F
DTM	Delta-T Fluid	189	US/F
SPFS	Delta-T Matrix	56	US/F
SPSO	Sonic Porosity Formula	RAYMER_HUNT	
	Sonic Porosity Source	DT	
HILTH-FTB: High resolution Integrated Logging Tool-DTS			
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63	DEGC
BSCO	Borehole Salinity Correction Option	YES	
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	0.81	
FPHI	Form Factor Porosity Source	SPHI	
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	0.018227	DC/M
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	SANDSTONE	
MCCO	Mud Cake Correction Option	YES	
MCOR	Mud Correction	NATU	
MDEN	Matrix Density	2.65	G/C3
MWCO	Mud Weight Correction Option	YES	
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	YES	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	YES	
RWA: Apparent Water Resistivity			
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	0.81	
FPHI	Form Factor Porosity Source	SPHI	
RTCO	RTCO - Rt Invasion Correction	YES	
ALLRES: Basic Resistivity Transforms			
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
RTCO	RTCO - Rt Invasion Correction	YES	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63	DEGC
FCD	Future Casing (Outer) Diameter	7	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
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	SANDSTONE	
SHT	Surface Hole Temperature	20	DEGC
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	M
TPR	Total Depth Driller	1282.88	M

TDD	Total Depth - Driller	1203.00	M
TDL	Total Depth - Logger	1203.00	M
System and Miscellaneous			
BS	Bit Size	8.750	IN
BSAL	Borehole Salinity	1020.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	32.30	LB/F
DFD	Drilling Fluid Density	1.15	G/C3
DO	Depth Offset for Playback	0.9	M
FLEV	Fluid Level	0.00	M
MST	Mud Sample Temperature	17.40	DEGC
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	2.6300	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	1203	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: COMBINADA Vertical Scale: 1:200 Graphics File Created: 15-Dec-2008 06:17

OP System Version: 16C0-147

MCM

HAIT-H	SRPC-3624-Q2_2008_OP16	DSLT-FTB	16C0-147
HILTH-FTB	SRPC-3624-Q2_2008_OP16	DTC-H	16C0-147

Input DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_010LUP	FN:13	PRODUCER	15-Dec-2008 06:06	1190.5 M	1064.1 M
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Output DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_011PUP	FN:15	PRODUCER	15-Dec-2008 06:17		
BACKUP	AIT_SONIC_TLD_MCFL_011PUP	FN:16	PRODUCER	15-Dec-2008 06:17		

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ANALISIS DE REPETIBILIDAD

MAXIS Field Log

Input DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_012LUP	FN:17	PRODUCER	15-Dec-2008 06:22		
DEFAULT	AIT_SONIC_TLD_MCFL_011PUP	FN:15	PRODUCER	15-Dec-2008 06:17	1191.5 M	1065.0 M

Output DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_009PUP	FN:8	PRODUCER	15-Dec-2008 06:43	1175.0 M	1099.9 M
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Integrated Hole/Cement Volume Summary

Hole Volume = 2.80 M3
Cement Volume = 0.94 M3 (assuming 7.00 IN casing O.D.)
Computed from 1175.0 M to 1100.0 M using data channel(s) HCAL

OP System Version: 16C0-147

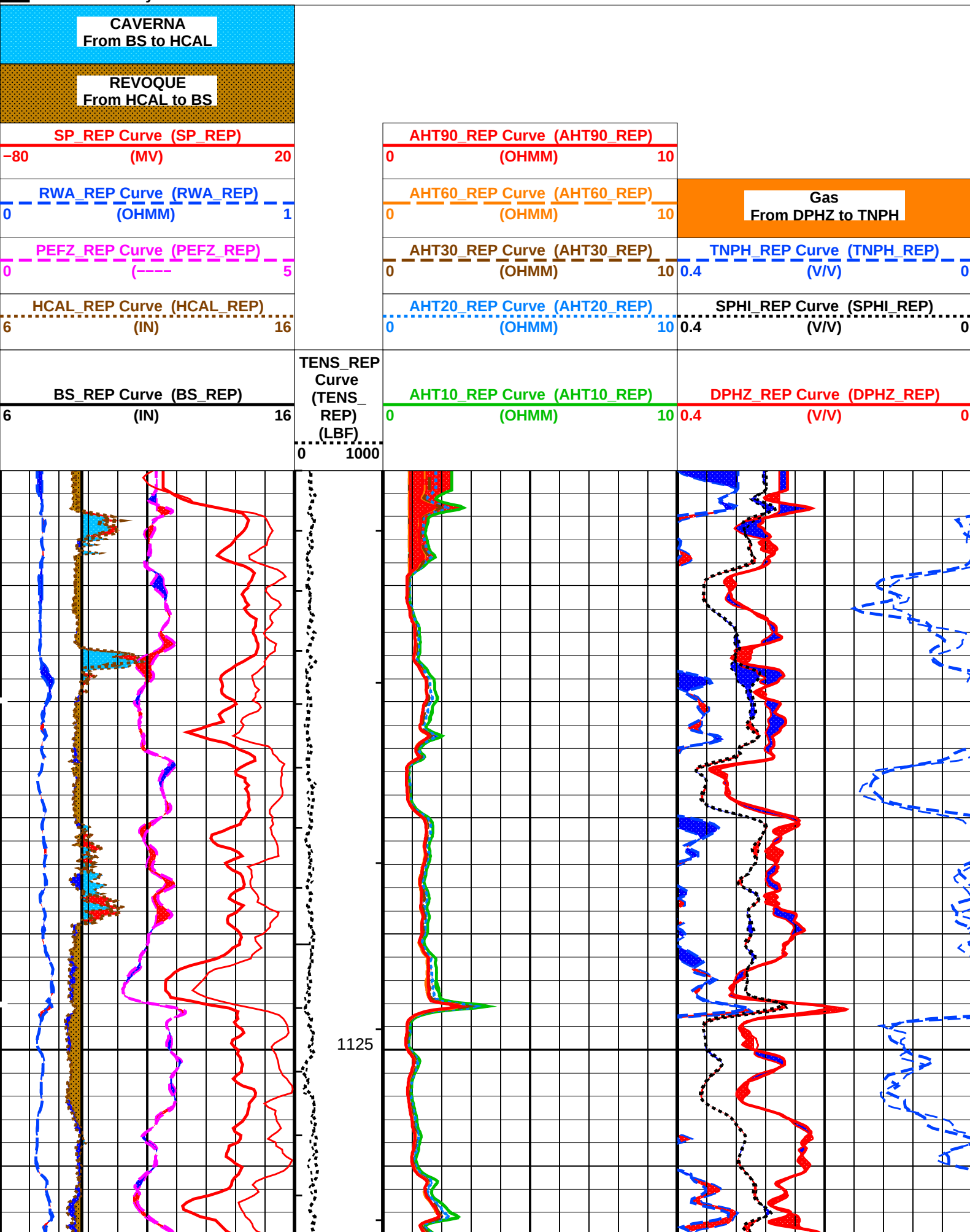
MCM

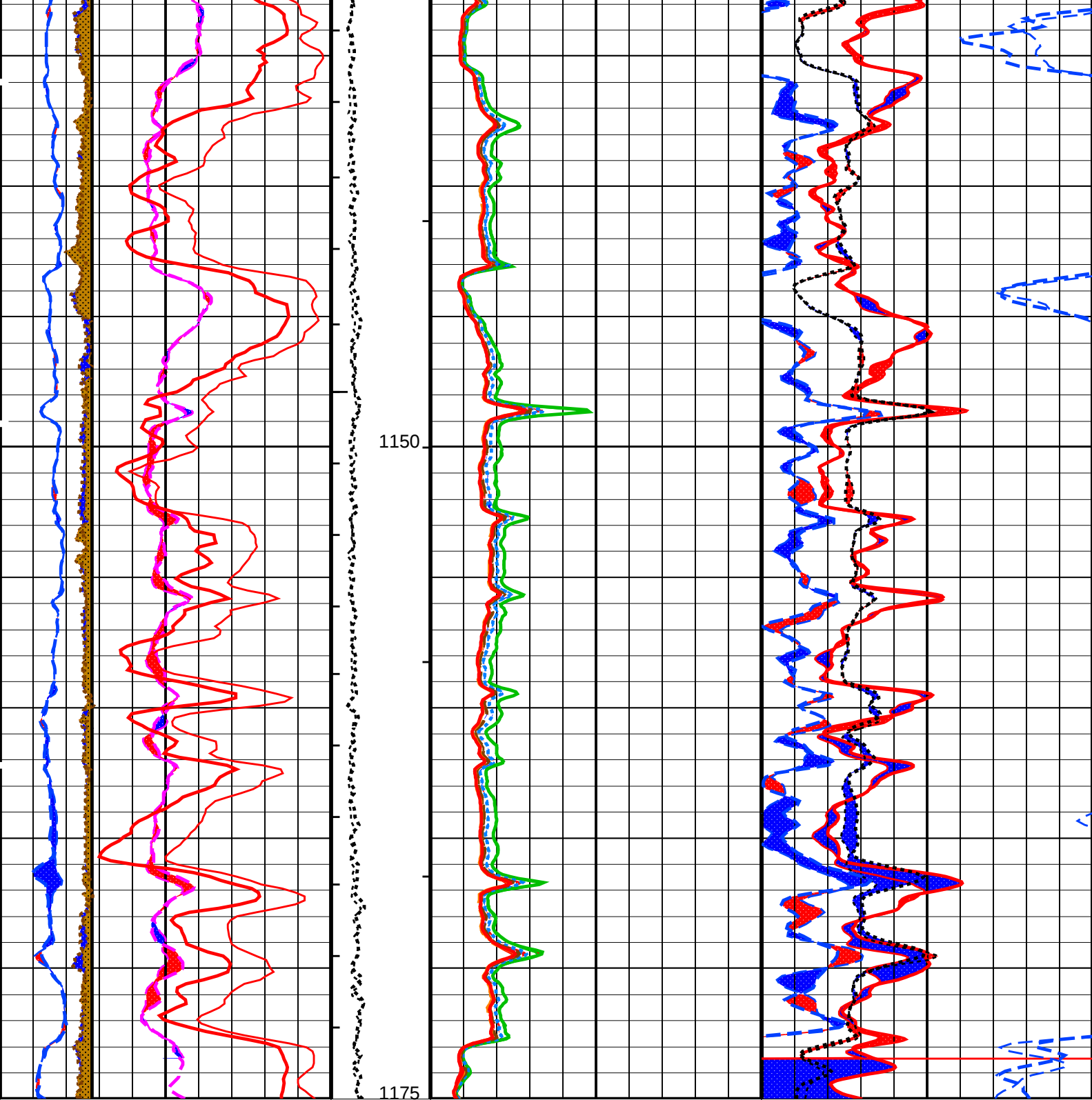
HAIT-H	SRPC-3624-Q2_2008_OP16	DSLT-FTB	16C0-147
HILTH-FTB	SRPC-3624-Q2_2008_OP16	DTC-H	16C0-147

PIP SUMMARY

└ Integrated Hole Volume Minor Pip Every 0.1 M3

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





BS_REP Curve (BS_REP) 6 (IN) 16	TENS_REP Curve (TENS_REP) (LBF) 0 1000	AHT10_REP Curve (AHT10_REP) (OHMM) 0 10	DPHZ_REP Curve (DPHZ_REP) (V/V) 0.4 0
HCAL_REP Curve (HCAL_REP) (IN) 6 16		AHT20_REP Curve (AHT20_REP) (OHMM) 0 10	SPHI_REP Curve (SPHI_REP) (V/V) 0.4 0
PEFZ_REP Curve (PEFZ_REP) (----) 0 5		AHT30_REP Curve (AHT30_REP) (OHMM) 0 10	TNPH_REP Curve (TNPH_REP) (V/V) 0.4 0
RWA_REP Curve (RWA_REP) (OHMM) 0 1		AHT60_REP Curve (AHT60_REP) (OHMM) 0 10	Gas From DPHZ to TNPH
SP_REP Curve (SP_REP)		AHT90_REP Curve (AHT90_REP)	

80

(MV)

20

0

(OHMM)

10

REVOQUE

From HCAL to BS

CAVERNA

From BS to HCAL

PIP SUMMARY

└ Integrated Hole Volume Minor Pip Every 0.1 M3

└ Integrated Hole Volume Major Pip Every 1 M3

└ Integrated Cement Volume Minor Pip Every 0.1 M3

└ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HAIT-H: Array Induction Tool – H		
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	1.5
AHTRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	63
FEXP	Form Factor Exponent	2
FNUM	Form Factor Numerator	0.81
FPHI	Form Factor Porosity Source	SPHI
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	0
GGRD	Geothermal Gradient	0.018227
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST
GTSE	Generalized Temperature Selection	HSTS_HTEM
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
RTCO	RTCO – Rt Invasion Correction	YES
SHT	Surface Hole Temperature	20
SPNV	SP Next Value	-3
DSLTT-FTB: Digitizing Sonic Logging Tool		
CDTS	C-Delta-T Shale	100
DTF	Delta-T Fluid	189
DTM	Delta-T Matrix	56
SPFS	Sonic Porosity Formula	RAYMER_HUNT
SPSO	Sonic Porosity Source	DT
HILTH-FTB: High resolution Integrated Logging Tool-DTS		
BHFL	Borehole Fluid Type	WATER
BHFL_TLD	HILT Nuclear Mud Base	WATER
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	63
BSCO	Borehole Salinity Correction Option	YES
CCCO	Casing & Cement Thickness Correction Option	NO
DHC	Density Hole Correction	BS
FD	Fluid Density	1
FEXP	Form Factor Exponent	2
FNUM	Form Factor Numerator	0.81
FPHI	Form Factor Porosity Source	SPHI
FSAL	Formation Salinity	-50000
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
GGRD	Geothermal Gradient	0.018227
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	SANDSTONE
MCCO	Mud Cake Correction Option	YES
MCOR	Mud Correction	NATU
MDEN	Matrix Density	2.65
MAWC	Mud Weight Correction Option	YES
NRDD	NRDD APS Activation Correction	OFF

NAAC	HRDD AI S 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	YES	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	YES	
RWA: Apparent Water Resistivity			
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	0.81	
FPHI	Form Factor Porosity Source	SPHI	
RTCO	RTCO - Rt Invasion Correction	YES	
ALLRES: Basic Resistivity Transforms			
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90	
RTCO	RTCO - Rt Invasion Correction	YES	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63	DEGC
FCD	Future Casing (Outer) Diameter	7	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
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	SANDSTONE	
SHT	Surface Hole Temperature	20	DEGC
STI: Stuck Tool Indicator			
TDL	Total Depth - Logger	1203.00	M
System and Miscellaneous			
BS	Bit Size	8.750	IN
BSAL	Borehole Salinity	1020.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	32.30	LB/F
DFD	Drilling Fluid Density	1.15	G/C3
DO	Depth Offset for Playback	1.0	M
DORL	Depth Offset for Repeat Analysis	0.0	M
FLEV	Fluid Level	0.00	M
MST	Mud Sample Temperature	17.40	DEGC
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	2.6300	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	1203	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: COMBINADA_REP Vertical Scale: 1:200 Graphics File Created: 15-Dec-2008 06:43

OP System Version: 16C0-147

MCM

HAIT-H	SRPC-3624-Q2_2008_OP16	DSLT-FTB	16C0-147
HILTH-FTB	SRPC-3624-Q2_2008_OP16	DTC-H	16C0-147

Input DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_012LUP	FN:17	PRODUCER	15-Dec-2008 06:22		
DEFAULT	AIT_SONIC_TLD_MCFL_011PUP	FN:15	PRODUCER	15-Dec-2008 06:17	1191.5 M	1065.0 M

Output DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_009PUP	FN:8	PRODUCER	15-Dec-2008 06:43
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CHEQUEO EN CAÑERIA

Input DLIS Files

DEFAULT AIT_SONIC_TLD_MCFL_008LUP FN:9 PRODUCER 15-Dec-2008 05:25 371.2 M 340.6 M

Output DLIS Files

DEFAULT AIT_SONIC_TLD_MCFL_002PUP FN:1 PRODUCER 15-Dec-2008 05:53 371.2 M 340.6 M

Integrated Hole/Cement Volume Summary

Hole Volume = 0.29 M3
Computed from 371.2 M to 355.4 M using data channel(s) HCAL

OP System Version: 16C0-147

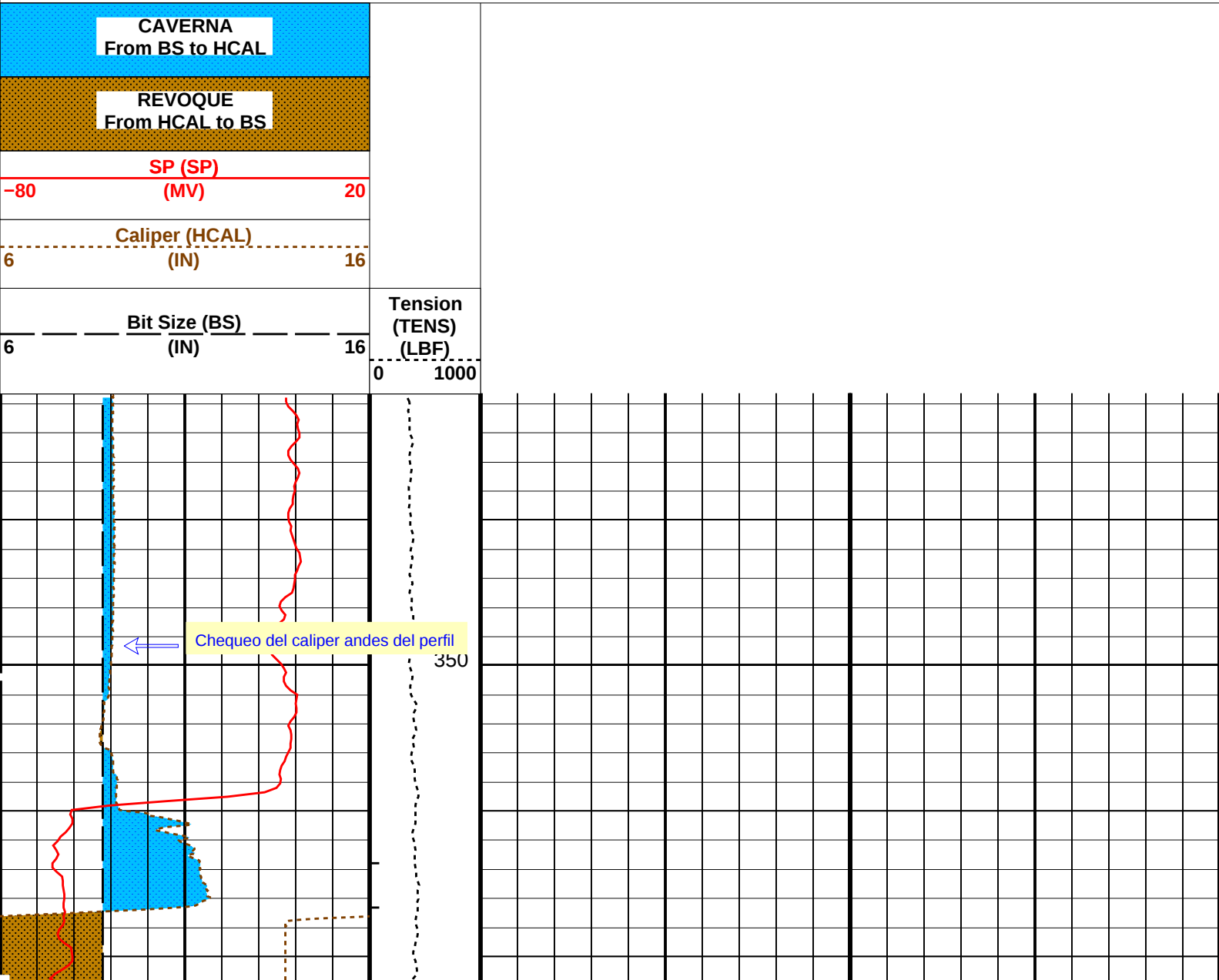
MCM

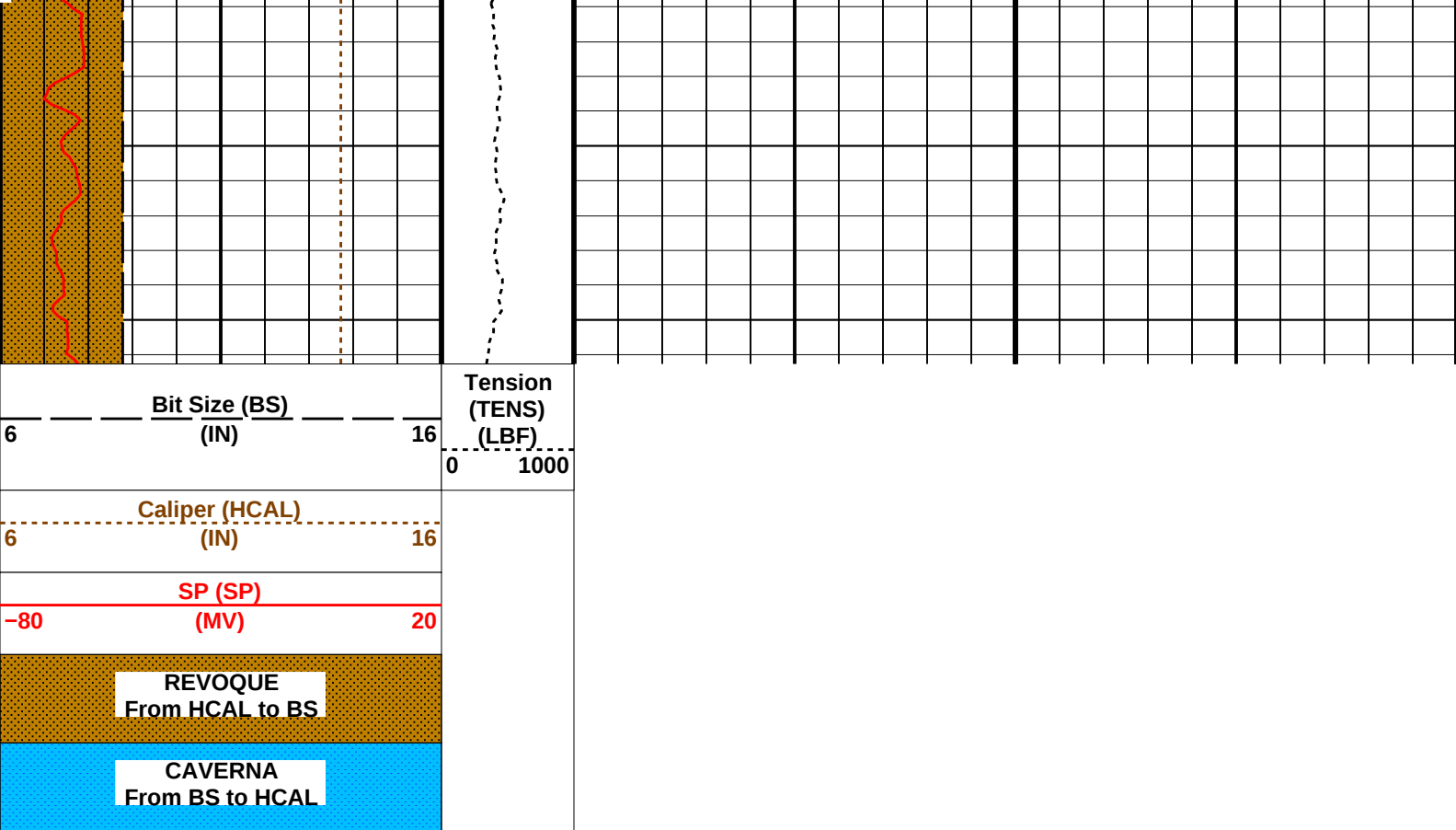
HAIT-H SRPC-3624-Q2_2008_OP16 DSLT-FTB 16C0-147
HILTH-FTB SRPC-3624-Q2_2008_OP16 DTC-H 16C0-147

PIP SUMMARY

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

Time Mark Every 60 S





PIP SUMMARY

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

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
SPNV	HAIT-H: Array Induction Tool - H SP Next Value	-3	MV
FCD	HOLEV: Integrated Hole/Cement Volume Future Casing (Outer) Diameter	7	IN
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
BS	System and Miscellaneous Bit Size	8.750	IN
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	1203	M

Format: CALIPER Vertical Scale: 1:200

Graphics File Created: 15-Dec-2008 05:53

OP System Version: 16C0-147

MCM

HAIT-H	SRPC-3624-Q2_2008_OP16	DSLT-FTB	16C0-147
HILTH-FTB	SRPC-3624-Q2_2008_OP16	DTC-H	16C0-147

Input DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_008LUP	FN:9	PRODUCER	15-Dec-2008 05:25	371.2 M	340.6 M
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Output DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_002PUP	FN:1	PRODUCER	15-Dec-2008 05:53		
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Input DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_002PUP	FN:1	PRODUCER	15-Dec-2008 05:53	371.2 M	340.6 M
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DEFAULT	AIT_SONIC_TLD_MCFL_002PUP	FN:1	PRODUCER	15-Dec-2008 09:53	371.2 M	340.6 M
DEFAULT	AIT_SONIC_TLD_MCFL_027PUP	FN:47	PRODUCER	15-Dec-2008 08:18	1189.6 M	332.2 M

Output DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_017PUP	FN:16	PRODUCER	15-Dec-2008 10:47	365.0 M	342.9 M
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Integrated Hole/Cement Volume Summary

Hole Volume = 14.61 M3
 Cement Volume = 4.79 M3 (assuming 7.00 IN casing O.D.)
 Computed from 1185.5 M to 790.0 M using data channel(s) HCAL

OP System Version: 16C0-147

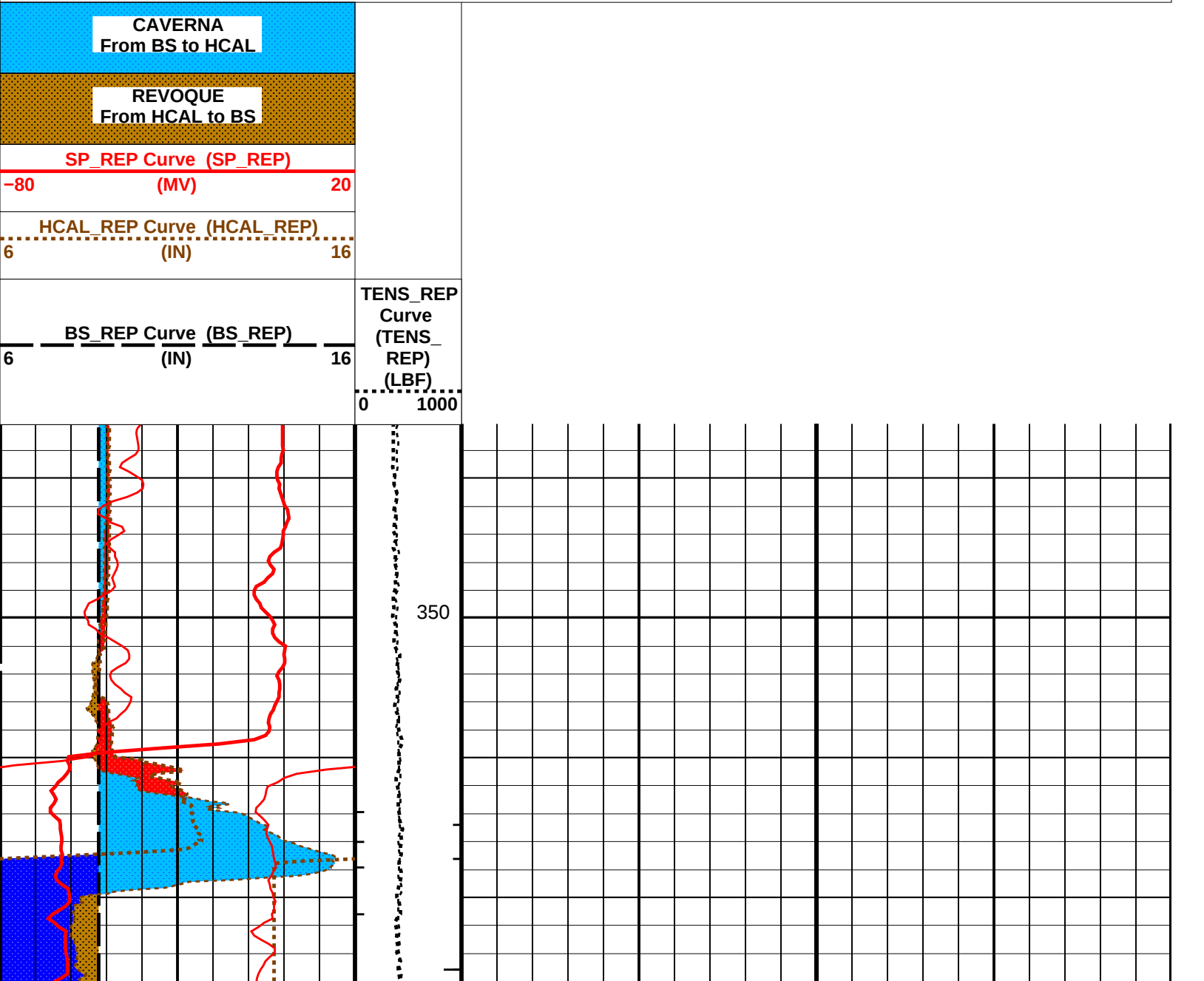
MCM

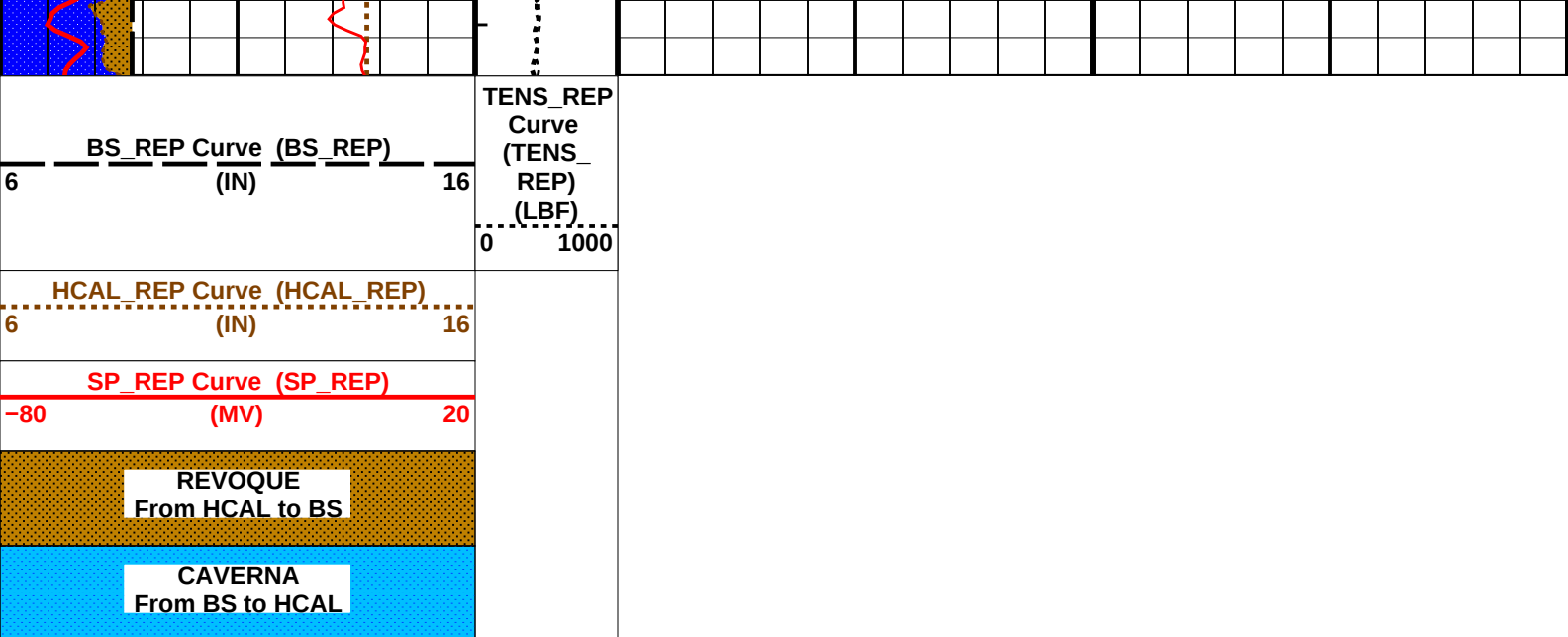
HAIT-H	SRPC-3624-Q2_2008_OP16	DSLT-FTB	16C0-147
HILTH-FTB	SRPC-3624-Q2_2008_OP16	DTC-H	16C0-147

PIP SUMMARY

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

Time Mark Every 60 S





PIP SUMMARY

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

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
SPNV	HAIT-H: Array Induction Tool - H SP Next Value	-19	MV
FCD	HOLEV: Integrated Hole/Cement Volume Future Casing (Outer) Diameter	7	IN
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
BS	System and Miscellaneous Bit Size	8.750	IN
DO	Depth Offset for Playback	0.0	M
DORL	Depth Offset for Repeat Analysis	0.0	M
PP	Playback Processing	OFF	
TD	Total Depth	1185.6	M

Format: CALIPER_REP Vertical Scale: 1:200

Graphics File Created: 15-Dec-2008 10:47

OP System Version: 16C0-147

MCM

HAIT-H	SRPC-3624-Q2_2008_OP16	DSLT-FTB	16C0-147
HILTH-FTB	SRPC-3624-Q2_2008_OP16	DTC-H	16C0-147

Input DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_002PUP	FN:1	PRODUCER	15-Dec-2008 05:53	371.2 M	340.6 M
DEFAULT	AIT_SONIC_TLD_MCFL_027PUP	FN:47	PRODUCER	15-Dec-2008 08:18	1189.6 M	332.2 M

Output DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_017PUP	FN:16	PRODUCER	15-Dec-2008 10:47		
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DEFAULT	AIT_SONIC_TLD_MCFL_003PDP	FN:2	PRODUCER	15-Dec-2008 05:56	215.0 M	223.1 M
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Output DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_006LDP	FN:5	PRODUCER	15-Dec-2008 04:58	58.5 M	303.2 M
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Input DLIS Files

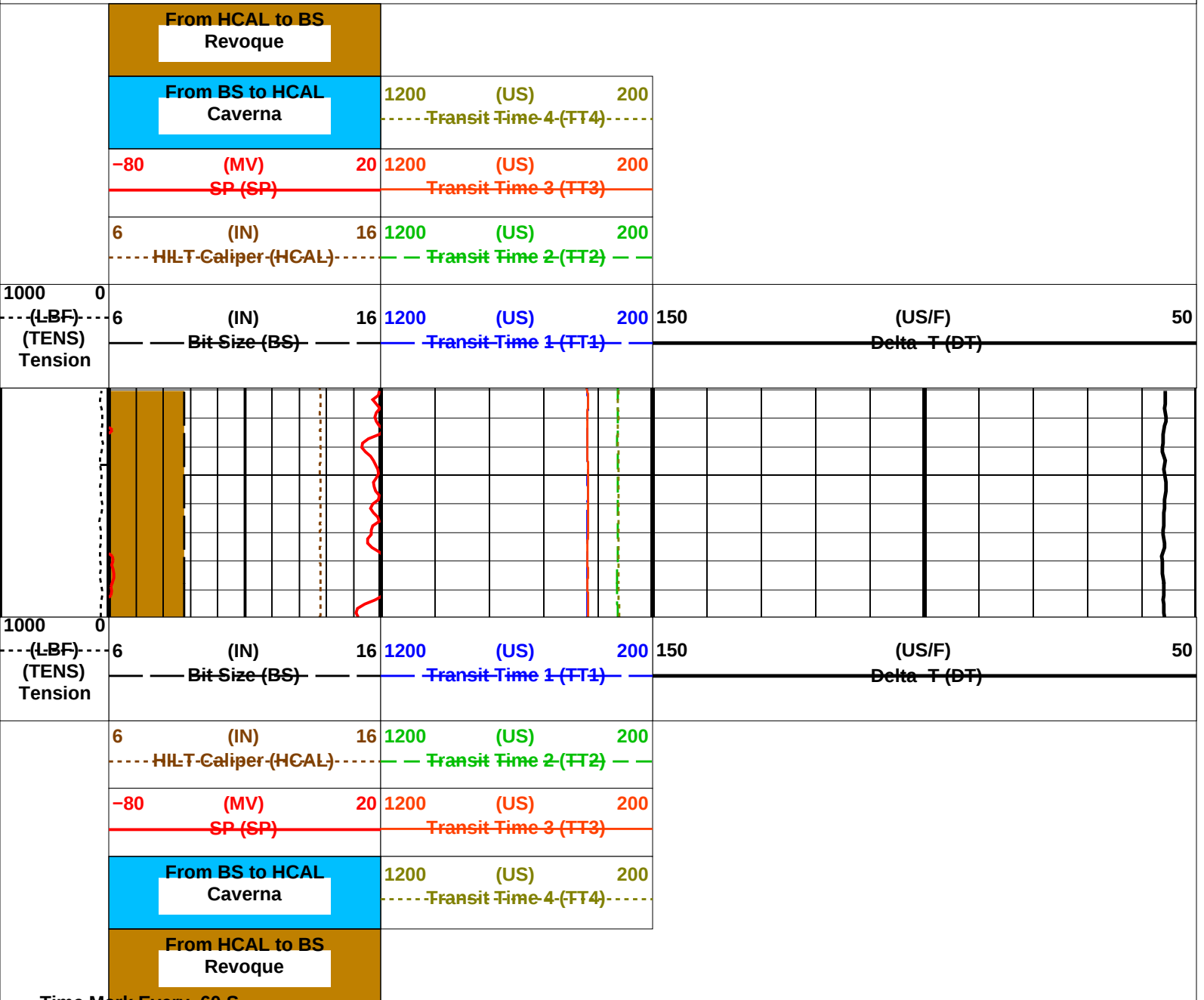
HILTH-FTB	SRPC-3624-Q2_2008_OP16	DTC-H	16C0-147
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MCM
OP System Version: 16C0-147

Time Mark Every 60 S

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

PIP SUMMARY



Time Mark Every 60 S

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

PIP SUMMARY

DO	Depth Offset for Playback	0.0	M
BS	Bit Size	8.750	IN
System and Miscellaneous			
WMOD	Waveform Firing Mode	FULL	
WAGC	Waveform AGC Allow/Disallow	OFF	
SLEV	Signal Level for AGC	5000	
SGW	Sliding Gate Width	80	US
SGDT	Sliding Gate Delta-T	65	US/F
SGCL	Sliding Gate Closing Delta-T	250	US/F
SFAF	Sonic Formation Attenuation Factor	0	DB/M
RATE	Firing Rate	R15	
NMXG	Near Maximum Sliding Gate	750	US
NMSG	Near Minimum Sliding Gate	260	US
MNHT	Minimum High Threshold Reference	120	
MCA	Maximum Gain	60	

MGAI	Maximum Gain	60	
MAHTR	Manual High Threshold Reference	140	
ITTS	Integrated Transit Time Source	DT	
GAI	Manual Gain	40	
DWCO	Digitizing Word Count	120	
DTFS	DSLCL Telemetry Frame Size	276	
DSIN	Digitizing Sample Interval	10	
DRCS	DSLTL DLIS Recording Size	120	
DIVL	DSLTL Depth Sampling Interval	20	
DDEL	Digitizing Delay	200	US
CBLG	CBL Gate Width	45	US
CBAF	CBL Adjustment Factor	1	
AMSG	Auxiliary Minimum Sliding Gate	140	US
	DSLTL Firing Mode	BHC	
	Telemetry Mode	DSLCL_FTB	
SPNV	DSLTL-FTB: Digitizing Sonic Logging Tool		
	SP Next Value	-3	MV
	HAIT-H: Array Induction Tool - H		

DLIS Name

Description

Value

Parameters

Format: SONIC

Vertical Scale: 1.200

Graphics File Created: 15-Dec-2008 05:56

HILTH-FTB	SRPC-3624-Q2_2008_OP16	DTC-H	16C0-147
HAIT-H	SRPC-3624-Q2_2008_OP16	DSLTL-FTB	16C0-147

MCM

OP System Version: 16C0-147

DEFAULT	AIT_SONIC_TLD_MCFL_003PDP	FN:2	PRODUCER	15-Dec-2008 05:56
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Output DLIS Files

DEFAULT	AIT_SONIC_TLD_MCFL_006LDP	FN:5	PRODUCER	15-Dec-2008 04:58	58.5 M	303.2 M
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Input DLIS Files



CALIBRACIONES

MAXIS Field Log

Calibration and Check Summary							
Measurement	Nominal	Master	Before	After	Change	Limit	Units
Array Induction Tool – H Wellsite Calibration – Electronics Calibration Check – Thru Cal Mag. & Phase							
Master: 26-Oct-2008 13:14 Before: 14-Dec-2008 13:59 After: 15-Dec-2008 7:53							
Thru Cal Magnitude – 0	0	0.6260	0.6252	0.6340	0.008789	N/A	V
Thru Cal Magnitude – 1	0	1.285	1.284	1.302	0.01814	N/A	V
Thru Cal Magnitude – 2	0	0.6370	0.6364	0.6454	0.008983	N/A	V
Thru Cal Magnitude – 3	0	0.7191	0.7179	0.7279	0.009978	N/A	V
Thru Cal Magnitude – 4	0	1.348	1.345	1.364	0.01829	N/A	V
Thru Cal Magnitude – 5	0	1.956	1.954	1.981	0.02730	N/A	V
Thru Cal Magnitude – 6	0	1.964	1.962	1.989	0.02739	N/A	V
Thru Cal Magnitude – 7	0	1.397	1.393	1.410	0.01774	N/A	V
Phase – 0	0	78.52	78.49	78.21	–0.2803	N/A	DEG
Phase – 1	0	77.43	77.40	77.11	–0.2862	N/A	DEG
Phase – 2	0	73.77	73.71	73.41	–0.2990	N/A	DEG
Phase – 3	0	73.00	72.95	72.65	–0.3000	N/A	DEG
Phase – 4	0	66.84	66.75	66.43	–0.3151	N/A	DEG
Phase – 5	0	65.81	65.72	65.42	–0.3222	N/A	DEG

Phase - 5	0	65.01	64.88	64.55	-0.3339	N/A	DEG
Phase - 6	0	64.96	64.83	64.50	-0.3341	N/A	DEG
Phase - 7	0	61.51	61.14	60.69	-0.4526	N/A	DEG

Array Induction Tool - H Wellsite Calibration - Electronics Calibration Check - Auxilliary

Master: 26-Oct-2008 13:14 Before: 14-Dec-2008 13:59 After: 15-Dec-2008 7:53

Array Induction SPA Plus	990.5	991.8	991.0	990.3	-0.7841	N/A	MV
Array Induction SPA Zero	0	0.1337	0.1615	0.1924	0.03086	N/A	MV
Array Induction Temperature PI	0.9150	0.9186	0.9179	0.9171	-0.0007895	N/A	V
Array Induction Temperature Ze	0	0.0001222	0.0001676	0.0001990	0.00003146	N/A	V

Array Induction Tool - H Wellsite Calibration - Test Loop Gain Correction

Master: 26-Oct-2008 13:14

Test Loop Gain Magnitude - 0	0	1.021	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 1	0	1.023	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 2	0	1.021	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 3	0	1.025	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 4	0	1.008	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 5	0	1.034	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 6	0	1.048	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 7	0	1.049	N/A	N/A	N/A	N/A	V
Phase - 0	0	0.4008	N/A	N/A	N/A	N/A	DEG
Phase - 1	0	0.4545	N/A	N/A	N/A	N/A	DEG
Phase - 2	0	-0.08431	N/A	N/A	N/A	N/A	DEG
Phase - 3	0	0.0003856	N/A	N/A	N/A	N/A	DEG
Phase - 4	0	-0.05983	N/A	N/A	N/A	N/A	DEG
Phase - 5	0	0.2903	N/A	N/A	N/A	N/A	DEG
Phase - 6	0	0.5738	N/A	N/A	N/A	N/A	DEG
Phase - 7	0	0.04760	N/A	N/A	N/A	N/A	DEG

Array Induction Tool - H Wellsite Calibration - Sonde Error Correction

Master: 26-Oct-2008 13:14

R Sonde Error Correction - 0	0	-13.18	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 1	0	149.0	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	61.10	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 4	0	24.38	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 5	0	12.45	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 6	0	9.747	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 7	0	-0.3416	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 0	0	303.8	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 1	0	168.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 2	0	-25.67	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 3	0	117.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 4	0	37.31	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 5	0	28.19	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 6	0	10.65	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 7	0	-1.176	N/A	N/A	N/A	N/A	MM/M

Array Induction Tool - H Wellsite Calibration - Mud Gain Correction

Master: 26-Oct-2008 13:14

Coarse - Mag, Real, Imag - 0	0	1.061	N/A	N/A	N/A	N/A
Coarse - Mag, Real, Imag - 1	0	1.061	N/A	N/A	N/A	N/A
Coarse - Mag, Real, Imag - 2	0	1.061	N/A	N/A	N/A	N/A
Fine - Mag, Real, Imag - 0	0	1.061	N/A	N/A	N/A	N/A
Fine - Mag, Real, Imag - 1	0	1.061	N/A	N/A	N/A	N/A
Fine - Mag, Real, Imag - 2	0	1.061	N/A	N/A	N/A	N/A

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

Before: 14-Dec-2008 14:08

BS Window Ratio	0.7366	N/A	0.7387	N/A	N/A	N/A
BS Window Sum	29350	N/A	29360	N/A	N/A	CPS
SS Window Ratio	0.4811	N/A	0.4830	N/A	N/A	N/A
SS Window Sum	13670	N/A	13660	N/A	N/A	CPS
LS Window Ratio	0.2967	N/A	0.2983	N/A	N/A	N/A
LS Window Sum	1453	N/A	1455	N/A	N/A	CPS

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

Before: 14-Dec-2008 14:08

BS PM High Voltage (Command)	1410	N/A	1410	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1653	N/A	1656	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1400	N/A	1385	N/A	N/A	N/A	V

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

Before: 14-Dec-2008 14:08

BS Crystal Resolution	10.99	N/A	10.86	N/A	N/A	N/A	%
SS Crystal Resolution	9.766	N/A	9.590	N/A	N/A	N/A	%
LS Crystal Resolution	8.528	N/A	8.680	N/A	N/A	N/A	%

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

Before: 14-Dec-2008 13:53

Raw B0 Resistivity	3875	N/A	3878	N/A	N/A	N/A	OHMM
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Raw B1 Resistivity	3830	N/A	3799	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3823	N/A	N/A	N/A	OHMM
High resolution Integrated Logging Tool-DTS Wellsite Calibration – HILT Caliper Calibration							
Before: 14-Dec-2008 13:47							
HILT Caliper Zero Measurement	8.000	N/A	7.910	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.08	N/A	N/A	N/A	IN
High resolution Integrated Logging Tool-DTS Wellsite Calibration – Detector Calibration							
Before: 15-Dec-2008 8:06 After: 15-Dec-2008 7:58							
Gamma Ray Background	30.00	N/A	23.70	23.19	-0.5069	N/A	GAPI
Gamma Ray (Jig – Bkg)	173.5	N/A	173.5	176.7	3.168	15.78	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	168.0	3.012	15.00	GAPI
High resolution Integrated Logging Tool-DTS Wellsite Calibration – Zero Measurement							
Master: 14-Dec-2008 16:00 Before: 14-Dec-2008 13:54 After: 15-Dec-2008 7:54							
CNTC Background	28.61	28.61	27.83	28.06	0.2239	4.292	CPS
CFTC Background	29.09	29.09	27.88	28.61	0.7364	4.364	CPS
High resolution Integrated Logging Tool-DTS Wellsite Calibration – Ratio Measurement							
Master: 14-Dec-2008 16:00							
Thermal Near Corr. (Tank)	5800	5641	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2373	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.377	N/A	N/A	N/A	N/A	
High resolution Integrated Logging Tool-DTS Wellsite Calibration – Accelerometer Calibration							
Before: 15-Dec-2008 4:35							
Z-Axis Acceleration	9.810	N/A	9.789	N/A	N/A	N/A	M/S2
High resolution Integrated Logging Tool-DTS Master Calibration – Inversion results							
Master: 25-Nov-2008 11:55							
Rho Aluminum	2.596	2.599	--	--	--	--	G/C3
Rho Magnesium	1.686	1.686	--	--	--	--	G/C3
Pe Aluminum	2.570	2.569	--	--	--	--	
Pe Magnesium	2.650	2.632	--	--	--	--	
High resolution Integrated Logging Tool-DTS Master Calibration – Deviation Summary							
Master: 25-Nov-2008 11:55							
BS Average Deviation	0	0.5680	--	--	--	--	%
BS Max Deviation	0	1.143	--	--	--	--	%
SS Average Deviation	0	0.2823	--	--	--	--	%
SS Max Deviation	0	1.287	--	--	--	--	%
LS Average Deviation	0	0.3932	--	--	--	--	%
LS Max Deviation	0	1.216	--	--	--	--	%

The GLS-VJ source activity is acceptable.

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

NCT-B Water Temperature 30.0 DEGC.
Thermal Housing Size 3.375 IN.
NSR-F serial number 2112

Array Induction Tool – H / Equipment Identification

Primary Equipment:
Rm/SP Bottom Nose
Array Induction Sonde

AHRM – A
AHIS – BA 25

Auxiliary Equipment:

Array Induction Tool – H Wellsite Calibration							
Electronics Calibration Check – Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Phase DEG	Nominal
0	Master	0.6260		0.6050	78.52		71.00
	Before	0.6252			78.49		
	After	0.6340			78.21		
	Master	1.285			77.43		

1	Before	1.284			1.270	77.40			70.00
	After	1.302				77.11			
2	Master	0.6370			0.6230	73.77			66.00
	Before	0.6364				73.71			
	After	0.6454				73.41			
3	Master	0.7191			0.7040	73.00			65.00
	Before	0.7179				72.95			
	After	0.7279				72.65			
4	Master	1.348			1.337	66.84			59.00
	Before	1.345				66.75			
	After	1.364				66.43			
5	Master	1.956			1.955	65.01			57.00
	Before	1.954				64.88			
	After	1.981				64.55			
6	Master	1.964			1.955	64.96			57.00
	Before	1.962				64.83			
	After	1.989				64.50			
7	Master	1.397			1.415	61.51			53.00
	Before	1.393				61.14			
	After	1.410				60.69			
		60.00 % (Minimum)		(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)		(Nominal)	Nom + 60.00 (Maximum)
Master: 26-Oct-2008 13:14					Before: 14-Dec-2008 13:59				
After: 15-Dec-2008 7:53									

Array Induction Tool – H Wellsite Calibration							
Electronics Calibration Check – Auxilliary							
Phase	Array Induction SPA Plus MV		Value	Phase	Array Induction SPA Zero MV		Value
Master			991.8	Master			0.1337
Before			991.0	Before			0.1615
After			990.3	After			0.1924
941.0 (Minimum)				-50.00 (Minimum)			
990.5 (Nominal)				0 (Nominal)			
1040 (Maximum)				50.00 (Maximum)			
Phase	Array Induction Temperature Plus V		Value	Phase	Array Induction Temperature Zero V		Value
Master			0.9186	Master			0.0001222
Before			0.9179	Before			0.0001676
After			0.9171	After			0.0001990
0.8700 (Minimum)				-0.05000 (Minimum)			
0.9150 (Nominal)				0 (Nominal)			
0.9600 (Maximum)				0.05000 (Maximum)			
Master: 26-Oct-2008 13:14				Before: 14-Dec-2008 13:59			
After: 15-Dec-2008 7:53							

Array Induction Tool – H Wellsite Calibration						
Test Loop Gain Correction						
Idx	Value	Test Loop Gain Magnitude V			Value	Phase DEG
0	1.021				0.4008	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
1	1.023				0.4545	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
2	1.021				-0.08431	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)

3	1.025		0.0003856			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
4	1.008		-0.05983			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
5	1.034		0.2903			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
6	1.048		0.5738			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
7	1.049		0.04760			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
Master: 26-Oct-2008 13:14						

Array Induction Tool – H Wellsite Calibration								
Sonde Error Correction								
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
0	-13.18				303.8			
		-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	149.0				168.2			
		114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal)	625.0 (Maximum)
2	109.1				-25.67			
		66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)
3	61.10				117.1			
		39.00 (Minimum)	64.00 (Nominal)	89.00 (Maximum)		-250.0 (Minimum)	0 (Nominal)	250.0 (Maximum)
4	24.38				37.31			
		15.00 (Minimum)	25.00 (Nominal)	35.00 (Maximum)		-63.00 (Minimum)	0 (Nominal)	63.00 (Maximum)
5	12.45				28.19			
		4.000 (Minimum)	14.00 (Nominal)	24.00 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
6	9.747				10.65			
		5.000 (Minimum)	10.00 (Nominal)	15.00 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
7	-0.3416				-1.176			
		-5.000 (Minimum)	0 (Nominal)	5.000 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
Master: 26-Oct-2008 13:14								

Array Induction Tool – H Wellsite Calibration								
Mud Gain Correction								
Idx	Value	Coarse – Mag, Real, Imag			Value	Fine – Mag, Real, Imag		
0	1.061				1.061			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
1	1.061				1.061			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
2	1.061				1.061			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
Master: 26-Oct-2008 13:14								

Array Induction Tool – H Master Calibration									
Electronics Calibration Check – Thru Cal Mag. & Phase									
Idx	Phase	Value	Thru Cal Magnitude V		Nominal	Value	Phase DEG		Nominal
0	Master	0.6260			0.6050	78.52			71.00
1	Master	1.285			1.270	77.43			70.00

2	Master	0.6370		0.6230	73.77		66.00
3	Master	0.7191		0.7040	73.00		65.00
4	Master	1.348		1.337	66.84		59.00
5	Master	1.956		1.955	65.01		57.00
6	Master	1.964		1.955	64.96		57.00
7	Master	1.397		1.415	61.51		53.00
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)
Master: 26-Oct-2008 13:14							

Array Induction Tool – H Master Calibration									
Electronics Calibration Check – Auxilliary									
Phase	Array Induction SPA Plus MV			Value	Phase	Array Induction SPA Zero MV			Value
Master				991.8	Master				0.1337
		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				0.9186	Master				0.0001222
		0.8700 (Minimum)	0.9150 (Nominal)	0.9600 (Maximum)			-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Master: 26-Oct-2008 13:14									

Array Induction Tool – H Master Calibration							
Test Loop Gain Correction							
Idx	Value	Test Loop Gain Magnitude V			Value	Phase DEG	
0	1.021				0.4008		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
1	1.023				0.4545		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
2	1.021				-0.08431		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
3	1.025				0.0003856		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
4	1.008				-0.05983		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
5	1.034				0.2903		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
6	1.048				0.5738		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
7	1.049				0.04760		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
Master: 26-Oct-2008 13:14							

Array Induction Tool – H Master Calibration								
Sonde Error Correction								
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
0	-13.18				303.8			
		-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	149.0				168.2			
		114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal)	625.0 (Maximum)
2	109.1				-25.67			
		66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)

Master: 26-Oct-2008 13:14

Master: 26-Oct-2008 13:14

HGNS Housing	HGNH -	4764
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Before: 14-Dec-2008 14:08

2010 (Minimum)	2010 (Nomin)
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Before: 14-Dec-2008 14:00

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			10.86	Before			9.590	Before			8.680
	9.988 (Minimum)	10.99 (Nominal)	11.99 (Maximum)		8.766 (Minimum)	9.766 (Nominal)	10.77 (Maximum)		7.528 (Minimum)	8.528 (Nominal)	9.528 (Maximum)
Before: 14-Dec-2008 14:08											

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				3878	Before				3799	Before				3823
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)			3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		
Before: 14-Dec-2008 13:53														

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			7.910	Before			12.08
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)		9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)
Before: 14-Dec-2008 13:47							

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			23.70	Before			173.5	Before			165.0					
After			23.19	After			176.7	After			168.0					
0 (Minimum)			30.00 (Nominal)	120.0 (Maximum)			157.8 (Minimum)			173.5 (Nominal)	189.3 (Maximum)	150.0 (Minimum)			165.0 (Nominal)	180.0 (Maximum)
Before: 15-Dec-2008 8:06								After: 15-Dec-2008 7:58								

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Zero Measurement							
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value
Master			28.61	Master			29.09
Before			27.83	Before			27.88
After			28.06	After			28.61
5.000 (Minimum)			28.61 (Nominal)	40.00 (Maximum)			
5.000 (Minimum)			29.09 (Nominal)	40.00 (Maximum)			
Master: 14-Dec-2008 16:00				Before: 14-Dec-2008 13:54			
After: 15-Dec-2008 7:54							

High resolution Integrated Logging Tool-DTS Wellsite Calibration														
Ratio Measurement														
Phase	Thermal Near Corr. (Tank) CPS			Value	Phase	Thermal Far Corr. (Tank) CPS			Value	Phase	CNTC/CFTC (Tank)			Value
Master				5641	Master				2373	Master				2.377
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)			1900 (Minimum)	2400 (Nominal)	2900 (Maximum)			2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)	
Master: 14-Dec-2008 16:00														

High resolution Integrated Logging Tool-DTS Wellsite Calibration			
Accelerometer Calibration			
Phase	Z-Axis Acceleration M/S2	Value	
Before		9.789	
	9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)
Before: 15-Dec-2008 4:35			

High resolution Integrated Logging Tool-DTS Master Calibration	
Inversion results	

Inversion results							
Phase	Rho Aluminum G/C3		Value	Phase	Rho Magnesium G/C3		Value
Master			2.599	Master			1.686
	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			2.569	Master			2.632
	2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)		2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)
Master: 25-Nov-2008 11:55							

High resolution Integrated Logging Tool-DTS Master Calibration														
Deviation Summary														
Phase	BS Average Deviation %			Value	Phase	SS Average Deviation %			Value	Phase	LS Average Deviation %			Value
Master				0.5680	Master				0.2823	Master				0.3932
	-0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)			-1.000 (Minimum)	0 (Nominal)	1.000 (Maximum)			-1.500 (Minimum)	0 (Nominal)	1.500 (Maximum)	
Phase	BS Max Deviation %			Value	Phase	SS Max Deviation %			Value	Phase	LS Max Deviation %			Value
Master				1.143	Master				1.287	Master				1.216
	-1.600 (Minimum)	0 (Nominal)	1.600 (Maximum)			-2.500 (Minimum)	0 (Nominal)	2.500 (Maximum)			-3.500 (Minimum)	0 (Nominal)	3.500 (Maximum)	
Master: 25-Nov-2008 11:55														

High resolution Integrated Logging Tool-DTS Master Calibration									
Zero Measurement									
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value
Master				28.61	Master				29.09
	5.000 (Minimum)	28.61 (Nominal)	40.00 (Maximum)			5.000 (Minimum)	29.09 (Nominal)	40.00 (Maximum)	
Master: 14-Dec-2008 16:00									

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				5641	Master				2373	Master				2.377
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)		1900 (Minimum)	2400 (Nominal)	2900 (Maximum)		2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)			
Master: 14-Dec-2008 16:00														

DTS Telemetry Tool / Equipment Identification	
Primary Equipment:	
DTC-H Auxiliary Cartridge	DTCH - A
DTC-H Telemetry Cartridge	DTCH - A
Auxiliary Equipment:	
DTCH Telemetry Cartridge Housing	ECH - KC

COMPANIA: YPF S.A. POZO: YPF.Ch.Gbk-922 CAMPO: GRIMBEEK PROVINCIA: CHUBUT PAIS: ARGENTINA	PRIMERA LECTURA	1183.3 m
	PROFUNDIDAD PERFIL	1185.7 m
	PROF. PERFORADOR	1203 m
	BUJE DE VASTAGO	648.34 m
	MESA ROTATIVA	648.14 m
	NIVEL TERRENO	643.14 m

Schlumberger

COMBINADA

ESCALA 1/200



ANÁLISIS COMPLETO DE PETRÓLEO



Compañía:	YPF	Solicitante:	Pablo Aguilera	Fecha de extracción:	05/08/2010
Yacimiento:	MANANTIALES BEHR	N° Protocolo		Fecha de recepción:	05/08/2010
Lugar:	COLEC. GBK 922	Distrito:	CHUBUT	Fecha de análisis:	06/08/2010

CENTRIFUGACION: S/NORMA ASTM D-96

AL:	0,0	% (agua libre)	SOL:	0,0	% (sólidos)
EM:	0,2	% (emulsión)	AS:	S/D	% (agua separada)
AT:	0,2	% (agua total)	ESPUMA:	S/D	%
AGUA TOTAL (Separada + Centrifuga):		S/D	%		

DENSIDAD: S/NORMA ASTM D-1298

°API **20,8** 0,9292 gr/cm³ **pesado - medio - liviano**

PUNTO ESCURRIMIENTO: S/NORMA ASTM D-97

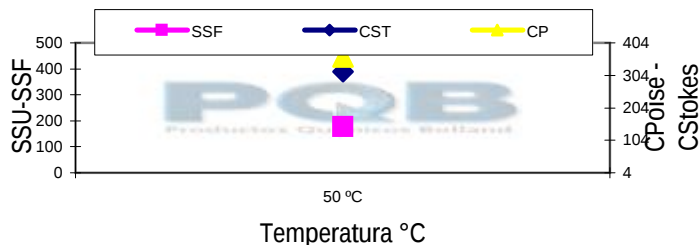
19 °F -7 °C

SALINIDAD: S/Método de MOHR

- gr/lts NaCl

VISCOSIDAD : S/Norma ASTM D-88

Temperatura	SSF	CST	CP	
50 °C	178	389	362	122 °F



Observaciones:

Realizó: **BERGALIO, MARINA**

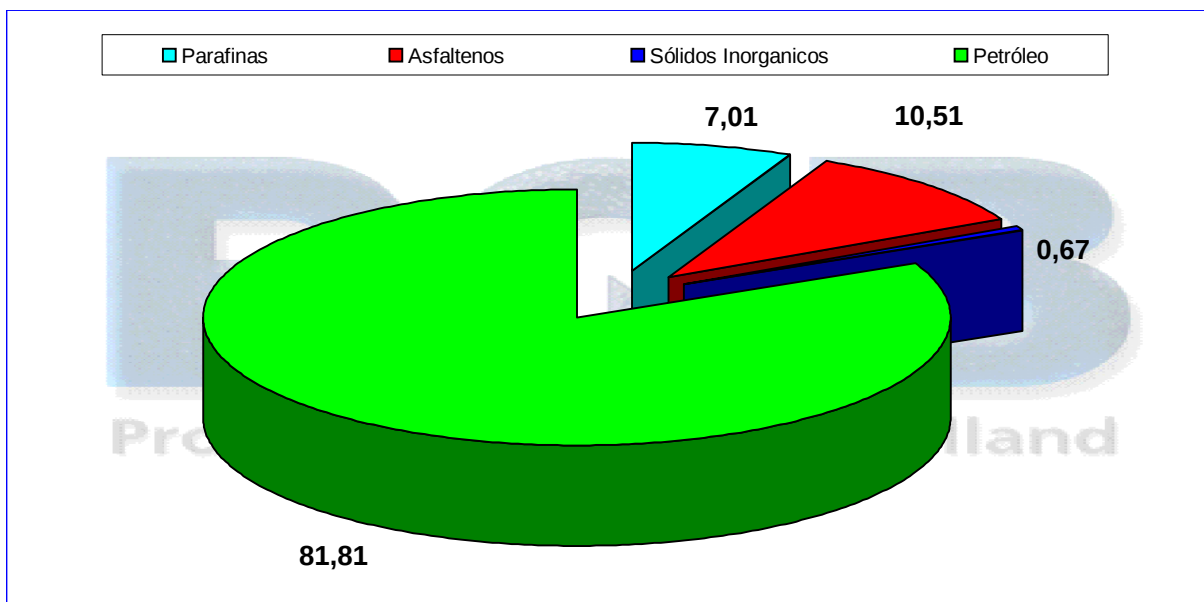
DETERMINACION DE PARAFINAS Y ASFALTENOS

Compañía: YPF
Yacimiento: MANATIALES BEHR
Lugar: COLEC. GBK 922

Solicitante:
N° Protocolo
Distrito: CHUBUT

Fecha de extracción: 05/08/2010
Fecha de recepción: 05/08/2010
Fecha de análisis: 06/08/2010

Parafinas	7,01 %
Asfaltenos	10,51 %
Sólidos Inorganicos	0,67 %
Petróleo	81,81 %



Realizó: BERGALIO, MARINA

YPF	PEDIDO DE OPERACIONES			1-ADM. C.R.	2-AREA M. Behr	3-ZONA Grimbeek	4-PEDIDO Nro.
5-OBJETO: PERFILAJE POZO ENTUBADO YPF.Ch.Gbk-922			6-FECHA DE EJECUCION REQUERIDA DIA Mes Año 19 12 2008		7-EJECUTANTE GEOLOG S.A.		
8-OPERACIÓN SOLICITADA							
NEUTRON de CORRELACIÓN (N) Registrar en los siguientes tramos: Desde: 1179 m. (Fondo) Hasta: 800 m.							
CEMENTACION-IMAGEN SEGMENTADA (CBL-VDL-IS) Registrar en los siguientes tramos: Desde: 1179 m. (Fondo) Hasta: 800 m.							
REGISTRAR TOPE de CEMENTO y CAÑERÍA LIBRE							
OBSERVACIONES: Cumple fragüe el viernes, 19 de diciembre de 2008 a las 21:30 HS.							
Operación a realizar con Mastil Propio							
NOTA: FONDO MÍNIMO: 0 m. DATOS del POZO PROFUNDIDAD FINAL: 1.203,00 m. Diámetro Casing: 5 1/2" de ----- lbs/pie (---/--- mm.) ZAPATO: 1.193,72 m. COLLAR: 1.179,46 m.							
FIRMAR y ADJUNTAR a la HOJA de TIEMPO y TICKET							
9- SOLICITANTE			10- RESPONSABLE DE EJECUCIÓN		11- CONTROL EJECUCIÓN		
17/12/2008 Nelso D. Lovera FIRMA			FECHA FIRMA EMPRESA SERVICIO		FECHA FIRMA		

Client: YPF S.A.
Field: GRIMBEEK
Well:
Run date: 15-Dec-2008

Tool: XPT-BA
Probe Type: Conventional probe
Gauge: CP_SAP
Gauge Resolution: 0.010 psi

Test Number	22	23	29	32	34
File Number	63	64	68	69	70
Test Type	Volumetric Limited d	Volumetric Limited d	Volumetric Limited d	Dry Test	Volumetric Limited d
Depth,M	1026.51	910.49	1051.47	1046.99	859.51
Vertical Depth,M	1026.51	910.49	1051.47	1046.99	859.51
Mud Pressure before,PSIA	1727.61	1534.23	1784.95	1760.64	1447.98
Mud Pressure after,PSIA	1727.08	1533.25	1772.66	1759.18	1447.43
Last read build-up Pressure,PSIA	708.44	450.78	679.32	229.70	414.55
Formation Pressure,PSIA	708.44	450.78	679.32	229.70	414.55
Pretest 1 duration, SEC	18.6	5.7	6.6		7.8
Pretest 1 volume, CC	2.9	2.7	3.0		3.0
Pretest 1 flow-rate, CC/SEC	0.16	0.48	0.46		0.39
Draw-down Mobility, MD/CP	1.611	387.941	62.393		23.468
Draw-down Permeability, MD					
Viscosity,CP					
Spherical Extrapolated Pressure,PSIA					
Spherical Mobility, MD/CP					
Porosity					
Total Compressibility, 1/PSI					
Depth of investigation,M					
Radial Extrapolated Pressure,PSIA					
Horizontal Mobility-Thickness, MD.M/CP					

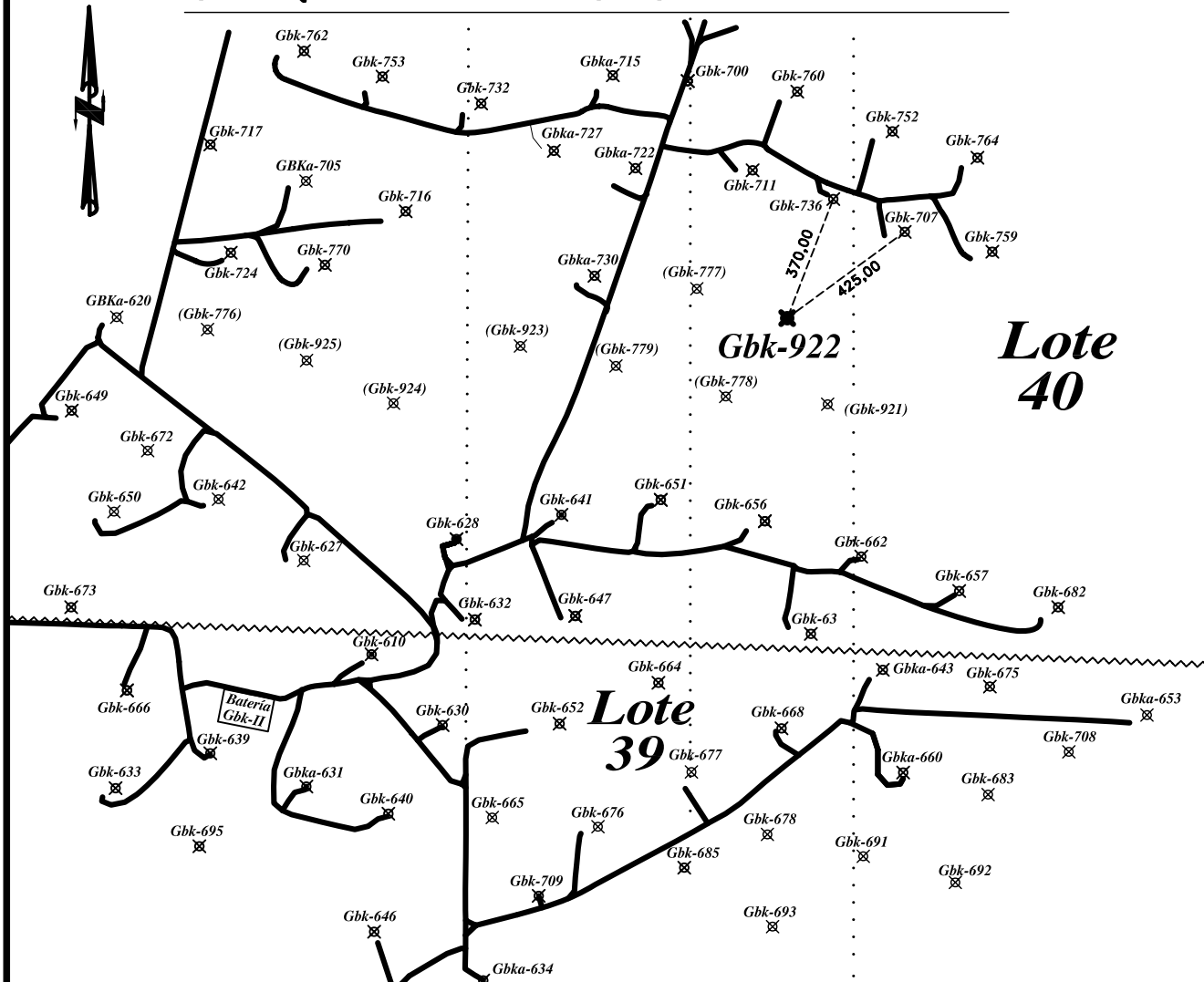
Client: YPF S.A.
Field: GRIMBEEK
Well:
Run date: 15-Dec-2008

Tool: XPT-BA
Probe Type: Conventional probe
Gauge: CP_SAP
Gauge Resolution: 0.010 psi

Test Number	6	8	16	18	20
File Number	51	53	60	61	62
Test Type	Volumetric Limited d	Volumetric Limited d	Volumetric Limited d	Volumetric Limited d	Volumetric Limited d
Depth,M	1080.96	1069.03	1037.49	1035.99	1034.00
Vertical Depth,M	1080.96	1069.03	1037.49	1035.99	1034.00
Mud Pressure before,PSIA	1819.17	1799.43	1746.25	1743.91	1740.01
Mud Pressure after,PSIA	1818.81	1799.09	1746.15	1743.41	1739.67
Last read build-up Pressure,PSIA	749.55	712.04	631.37	629.47	626.54
Formation Pressure,PSIA	749.55	712.04	631.37	629.47	626.54
Pretest 1 duration, SEC	12.0	6.9	6.6	6.6	6.6
Pretest 1 volume, CC	3.7	3.3	3.0	3.0	3.0
Pretest 1 flow-rate, CC/SEC	0.31	0.48	0.46	0.46	0.46
Draw-down Mobility, MD/CP	8.647	8.588	164.958	152.345	248.402
Draw-down Permeability, MD					
Viscosity,CP					
Spherical Extrapolated Pressure,PSIA					

Spherical Mobility, MD/CP					
Porosity					
Total Compressibility, 1/PSI					
Depth of investigation,M					
Radial Extrapolated Pressure,PSIA					
Horizontal Mobility–Thickness, MD.M/CP					

CROQUIS DE UBICACION: Gbk-922



UBICADO EN EL LOTE 40 , PROPIEDAD DE *Suc. Cecil Lari Sadleir*
UBICADO EN TERRENO CON PENDIENTE, CORTE APROX. 0,50 m.
LAS MEDIDAS LINEALES ESTAN EXPRESADAS EN METROS.-

HOJA: 1/2

Servicios profesionales
en topografía e hidrografía
Posicionamiento satelital
GPS - RTK



Guillermo Silvestre
AGRIMENSOR

0297 444 1220 / 155 924744
gdsilvestre@speedy.com.ar
9000 Comodoro Rivadavia
Chubut / Patagonia Argentina

PROVINCIA: CHUBUT

SIGLA: Gbk-922

YACIMIENTO: MANANTIALES BEHR

BATERIA: Gbk-II

FECHA: 9/10/08

ZONA: GRIMBEEK

COORDENADAS TEORICAS

DATUM: PAMPA DEL CASTILLO

COORDENADA "X": 4.951.360,72

COORDENADA "Y": 2.596.728,62

COTA (s/n/t): 643,00 +/- 3,00 m.

DATUM: WGS-84

LATITUD: 45°35'05,27965"S

LONGITUD: 67°45'47,74543"O

ALTURA (a/s/e): 657,00 m.



**COORDENADAS
y COTA
DEFINITIVAS**

Pozo: Gbk-922

Datum: PAMPA DEL CASTILLO

COORDENADA X: 4.951.357,23
COORDENADA Y: 2.596.718,86
COTA s/n/t: 643,14 m.

Datum: CAMPO INCHAUSPE

COORDENADA X: 4.951.482,00
COORDENADA Y: 2.594.594,90
COTA s/n/t: 641,14 m.

Datum: WGS-84

LATITUD: 45°35'05,4098"S
LONGITUD: 67°45'48,2217"O
ALTITUD a/s/e: 657,72 m.

Servicios profesionales
en topografía e hidrografía
Posicionamiento satelital
GPS - RTK



Guillermo Silvestre
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9000 Comodoro Rivadavia
Chubut / Patagonia Argentina

YACIMIENTO: MANANTIALES BEHR

ZONA: GRIMBEEK

PROVINCIA: CHUBUT

DISTRITO:

POZO: Gbk-922

BATERIA:

FECHA: 12/DICIEMBRE/2008

OPERADOR:

Guillermo D. Silvestre
AGRIMENSOR

Client: YPF S.A.

Field: GRIMBEEK

Well:

Run date: 15-Dec-2008

Tool: XPT-BA

Probe Type: Conventional probe

Gauge: CP_SAP

Gauge Resolution: 0.010 psi

Test	File	Depth	TVD	Drawdown Mobility MD/CP	Mud Pressure		Last read build-up Pres PSIA	Formation Pressure PSIA	Test Type
		M	M		Before PSIA	After PSIA			
6	51	1080.96	1080.96	8.65	1819.17	1818.81	749.55	749.55	Volumetric Limited draw-down
8	53	1069.03	1069.03	8.59	1799.43	1799.09	712.04	712.04	Volumetric Limited draw-down
16	60	1037.49	1037.49	164.96	1746.25	1746.15	631.37	631.37	Volumetric Limited draw-down
18	61	1035.99	1035.99	152.34	1743.91	1743.41	629.47	629.47	Volumetric Limited draw-down
20	62	1034.00	1034.00	248.40	1740.01	1739.67	626.54	626.54	Volumetric Limited draw-down
22	63	1026.51	1026.51	1.61	1727.61	1727.08	708.44	708.44	Volumetric Limited draw-down
23	64	910.49	910.49	387.94	1534.23	1533.25	450.78	450.78	Volumetric Limited draw-down
29	68	1051.47	1051.47	62.39	1784.95	1772.66	679.32	679.32	Volumetric Limited draw-down
32	69	1046.99	1046.99		1760.64	1759.18	229.70	229.70	Dry Test
34	70	859.51	859.51	23.47	1447.98	1447.43	414.55	414.55	Volumetric Limited draw-down



INFORME TECNICO

Colector GKB-922



FECHA 12-08-2010
INFORME N ° CRV-057-2010

Solicitado por José Luis Aguilera
Empresa YPF
Yacimiento MANANTIALES BEHR
Lugar COLEC. GBK 922
Muestra Petróleo
Tipo de análisis Selección/Recomendación de Producto Químico

Desarrollo y Resultados

Se realiza un comparativo entre productos según las propiedades del crudo, para observar cual producto obtiene resultados adecuados para lo cual se quiere tratar el colector.

%			
AL	AT	E	S
0	0.2	0.2	0

Los productos ensayados fueron los siguientes:

- RFB 694
- RFB 671
- RFB 700
- RFB 793
- IPB 60
- IPB 71
- IPB 650
- DPB 58
- DPB 350

Se distribuyó la muestra en las botellas y sobre ellas se dosificaron 2000 ppm. en total. (Recordemos que en laboratorio siempre se utilizan dosificaciones elevadas para obtener resultados inmediatos), dejando una como blanco para evaluar comparativamente. La temperatura de trabajo fue 20°C.

Se agitaron las botellas para permitir que el producto contamine el crudo y se observaron los siguientes parámetros:

Realizó: Marina Bergalio

Sucursal/Base de emisión: CRV

Página 1 de 3

- Ø Corte de agua
- Ø Fluidéz del crudo
- Ø Adherencia en las paredes

La eficiencia obtenida de los distintos productos fue:

Productos	Adherencia /paredes	Fluidéz	Corte de agua
BLANCO	SI	M	N/d
RFB 694	SI	M	N/d
RFB 700	SI	M	N/d
RFB 671	SI	M	N/d
RFB 650	SI	M	N/d
RFB 793	SI	M	N/d
IPB 60	SI	B	N/d
IPB 71	SI	M	N/d
IPB 650	SI	M	N/d
DPB 58	SI	M	N/d
DPB 350	SI	M	N/d

MB: *Velocidad:* Respuesta inmediata.

B: *Velocidad:* El P.Q. necesita mayor tiempo de contacto.

R: *Velocidad:* Demora en fluidizarse

M: *Velocidad:* No se obtiene una respuesta en corto tiempo.

CONCLUSIONES

El producto que mejor performance presento en el ensayo fue el **IPB 60** mejorando la fluidéz del crudo.



INFORME TECNICO

Colector GKB-922



Analizando los datos obtenidos de campo, resultados del completo de petróleo sumados al ensayo realizado se sugiere realizar una inyección continua de una combinación de Productos Químicos IPB-60 / ABC-33 en una relación 5:5, con el fin de minimizar los problemas de presión y gas entrampado existente en el sistema.

POZO:

Gbk-922

EQUIPO:

A Designar

Inicio:

Termino:

Casing

Capa N°

NEUTRÓN

INDUCCIÓN

Ø 5 1/2"

Ø 9 5/8": 355,4 mts

847 mbbp

Glauconítico

889 mbbp

Tope CI

1030 mbbp

Tope CII

A-10

1033,0 - 35,0

B

A-20

1035,5 - 38,0

A-40

1046,5 - 48,0

A

A-50

1050,5 - 53,0

Tope: 800 mbbp

Collar: Sobre Zto

Zap.: 1193

PF: 1202,30

Tapón Fijo

CSG Roto

OBJETO:

TERMINACION

PEP: RS1EC.8G01.53.P0003

Est.Actual :

PROXIMO POZO: A CONFIRMAR

PROYECTO:

COSTO OBJETIVO U\$S:

CABLE

Cta

FRAC

Acido

M.Fdo.

PRESUPUESTO \$:

FLUIDO:

PRESUPUESTO U\$S:

SALINIDAD:

g/l (en pilet)

A. Montar Equipo de RTP de acuerdo a procedimientos.

B-Si existe buena aislación, punzar con cañón 4", 6 TPP, 32 gr, 0-60° (EN BALANCE) los siguientes intervalos

Prof Inducción

Espesor

Carga

Capa

1033,0 - 35,0

2,0

32 gr-0-60°

C II

1035,5 - 38,0

2,5

32 gr-0-60°

C II

1046,5 - 48,0

1,5

32 gr-0-60°

C II

1050,5 - 53,0

2,5

32 gr-0-60°

C II

C.- Ensayar A; B hasta estabilizar porcentaje, nivel y salinidad, tal como lo indica el esquema.

D. Si resultara SE probar admisión y reensayar.

E. En caso de extraer hidrocarburo tomar muestras para análisis y enviar a Epsilon.

F. En caso de ser gas medir presiones y tomar muestra

G.- Prever una cementación.

H.- De acuerdo a los resultados consultar pasos a seguir.

NOTA: CAPAS CON PORCENTAJES DE AGUA MAYORES A 50%:

CONSULTAR ANTES DE DAR POR FINALIZADO ENSAYO

EN CAPAS QUE APORTEN UN CAUDAL IMPORTANTE

(Mayor de 500l/h) DE AGUA Y/O HIDROCARBUROS, TOMAR UNA MUESTRA Y ENVIARLA A EPSILON PARA EFECTUARLE UN ANALISIS COMPLETO Y RESISTIVIDAD.

EN CAPAS CON PETROLEO SACAR UNA MUESTRA ADICIONAL DE 2 Lts PARA REALIZAR ENSAYOS DE GEOQUIMICA. ENTREGAR A GEOLOGIA DE MANANTIALES BEHR

Prof (mbbp)

Lectura Psig

Lectura Kg/cm2

%

Movil md

Capa

859,51

414,6

29,1

105,6

23,47

Glauconítico

910,49

450,8

31,7

104,1

387,94

Complejo I

1026,51

708,4

49,8

107,8

1,61

A-8

1034

626,5

44,1

94,1

248,40

A-10

1035,99

629,5

44,3

94,2

152,34

A-20

1037,49

631,4

44,4

94,3

164,96

A-20

1046,99

229,7

16,1

33,8

A-40

1051,47

679,3

47,8

99,1

62,39

A-50

1069,03

712,0

50,1

100,9

8,59

A-70

1080,96

749,6

52,7

104,3

8,65

A-80

Preparó:Genini, L.

ESQUEMA DE POZO					
POZO: Gbk-922 Vertical		COORDENADAS Boca de Pozo (provisorias)		X:	2596729
				Y:	4951361
UWI:AR0100007717 PEP: RS1EC.8G01.53.P0019		COTA (msnmm)		Z:	643
		PROF.FINAL MD:1200 mbbp (-550 mbnm)			
		Cañería Guía 9 5/8": 340 mbbp		Registros a Cable	
T E R C I A R I O	FM PATAGONIA + SANTA CRUZ	Alternancia de arcillas y arenisca grano fino a medio.	Zona sin interés 750 mts		
	FM SARMIENTO	TOPE Sarm +/- : 315 (+335) Tobas finas poco consolidadas.			
	FM SALAMANCA + RIO CHICO	TOPE RCh +/- : 370 (+280) Arcilla consolidada y fragmentada, 810 mts: Horizonte Glauconítico Gasífero, de baja presión: 11 kg/cm2			
G R U P O	F M. E L T R E B O L	TOPE CI +/- : 835 (-185) Arcilitas y areniscas intercaladas	ZONA de interés petrolero	AIT-SONICO (fondo a guia) CAL,DENS-NEUTRON (Zona de Interés) CMR (tramos a determinar) RFT (Zona de Interés) Testigos laterales impacto (Opcionales)	
		TOPE CII +/- : 1036 (-392) Areniscas de grano medio a grueso, escaso cemento calcáreo, escasa mtz arcillosa + Arcilitas y limoarcilitas. Presión poral aprox.: 50 Kg/cm2.			
Ref: Gbk-730		Observación: Se entubará con casing de 5 1/2" PF: 1200 mbbp Base estimada Fm. Patagonia: 288 mbbp			

DATOS A LLENAR					
		POZO	Gbk-922		
		BATERIA	GRIMBEEK		
		EQUIPO	PI-222		
		FECHA	18/12/2008		
		RUBRO	TERMINACION		
		COSTO OBJETIVO			
		NOMBRE DEL PROYECTO	TERMINACIONES 2008		
		N°DE GRAFO			
		PEP:	RS1EC.8G01.53.P0003		
		ZONA	GRIMBEEK		
		FLUIDO DE TRABAJO	AGUA DE REC. SECUNDARIA		
		FINALIZO PERFORACION	16 de diciembre de 2008		
		ULTIMA INTERVENCION	ESPERA TERMINACIÓN		
COORDENADAS					
		X	4.951.360,72		
		Y	2.596.728,62		
		Z	643,00		
COMPANIAS DE SERVICIO					
		CABLE	GEOLOG		
		TORRE	SAN ANTONIO		
		CEMENTACION	BJ		
		ESTIMULACION	BJ		
		MOTOR DE FONDO	CRISTENSEN		
		COILED TUBING	-		
PARA PUNZAR					
		CAÑÓN Ø	Cañón Ø 4"	4" ó 5"	
		TIROS POR PIE	6 TxP 32 Grs	4	
CASING				Ejemplos	
		EN BOCA DE POZO Ø Y mts.	7"	7" a 23	
		DIAMETRO Y LIBRAJE	5 1/2" - 14 #	5-1/2" 15,5	
5 1/2"	12,50	0,0			
6 5/8"	18,54	0,0			
7"	20,60	24,8	1202		
9 5/8"	39,40	14,0	355		
Total de m³+5			NO TOCAR "PARA USO DEL BACTERICIDA"		131,34
		COLLAR DIFERENCIAL	1.179,00		
		ZAPATO	1.193,00		
		PROFUNDIDAD FINAL	1.202,00		
INSTALACION FINAL					
		DEL POZO	Sin instalación		
MATERIAL DE BOMBEO					
		DEL POZO	Sin instalación		
HERRAMIENTA A BAJAR					
		COLOCAR TIPO DE HTA.Y Ø			
		CALIBRAR HASTA			
		HERMETICIDAD DEL CSG DESDE			



ZONA CENTRAL

18/12/2008

DIVISION REGIONAL SUR

UNIDAD ECONOMICA CHUBUT - CAÑADON SECO

DISTRITO ZONA CENTRAL

PROGRAMA OPERATIVO del POZO :

Gbk-922SUBREGION : **CH**ZONA : **GRIMBEEK**BAT.**GRIMBEEK**

RUBRO:

PROYECTO: **TERMINACIONES 2008**COSTO OBJETIVO: **U\$S 100.000**COSTO ESTIMADO: **U\$S 84.123**DIAS ESTIMADOS: **8,04**

FLUIDO DE REPARACION:

AGUA DE REC. SECUNDARIAEQUIPO : **PI-222**CANTIDAD: **38,8 m³****PEP: RS1EC.8G01.53.P0003**

COMPAÑIAS ASIGNADAS:

CABLE:	GEOLOG
TORRE:	SAN ANTONIO
CEMENTACION:	BJ
ESTIMULACION:	BJ
MOTOR DE FONDO:	CRISTENSEN
COILED TUBING:	-

FINALIZO PERFORACION : **16 de diciembre de 2008**ULTIMA INTERVENCION: **ESPERA TERMINACIÓN**OBSERVACIONES:

COORDENADAS:

X: 4.951.360,72**Y: 2.596.728,62**COTA: **Z: 643,00****Altura mesa Rotary: 3,5 m****Elevación mesa Rotary: - m**



RESERVA N° 3192887

M. BEHR

18/12/2008

PEP:

RS1EC.8G01.53.P0003

UNIDAD ECONOMICA CHUBUT-CDON. SECO

X: 4.951.360,72

Z: 643,00

DISTRITO ZONA CENTRAL

Y: 2.596.728,62

PROGRAMA OPERATIVO :

TERMINACIONES 2008

POZO : Gbk-922

ZONA : GRIMBEEK

SUBREGION :

CH

BAT GRIMBEEK

FLUIDO DE REPARACION:

AGUA DE REC. SECUNDARIA

CANTIDAD: 38,8 m³

INSTALACION FINAL: Sin instalación

INSTALACION BBEO: Sin instalación

EQUIPO: PI-222

COMPAÑIA WIRE LINE:

GEOLOG

N°
CAPA5 1/2" - 14 #
7"

PROGRAMA OPERATIVO

Nota: TOC:800m . Cemento MB desde TOC hasta 1176 . Fondo registrado 1176 WL

9 5/8" a 355 m

Csg 7" Siderca 20.0 lbs/ft K-55. Di: 163 mm

- 1º) Montar equipo completo, de acuerdo a los procedimientos. Realizar Chek List.
- 2º) Correr perfil Neutrón, CBL, VDL. Bajar cañería A. M. C. y bajar nivel a 550 m.
- 3º) Punzar con buena aislación y en balance con cañón de 4", 6 TPP 32 gr. 0 - 60°

	Inducción	Neutrón	Espesor
A)	1050,5-1053,0		2,0 m
A)	1046,5-1048,0		2,5 m
B)	1035,5-1038,0		1,5 m
B)	1033,0-1035,0		2,5 m

- 4º) Bajar TPN + Pkr, ensayar por pistoneo según se indica con la letra: A) y B)
- 5º) De acuerdo a los resultados de los ensayos, se indicara programa a seguir.

En caso de extraer hidrocarburos, tomar muestra para análisis y enviar a Epsilon y tomar 2 lts para enviar a Geología de YPF SA
En caso de ser Gas, medir presiones y tomar muestra.

Capas c/alto porcentaje de agua, tomar muestras y enviar a Epsilon para un análisis completo de agua y resistividad.

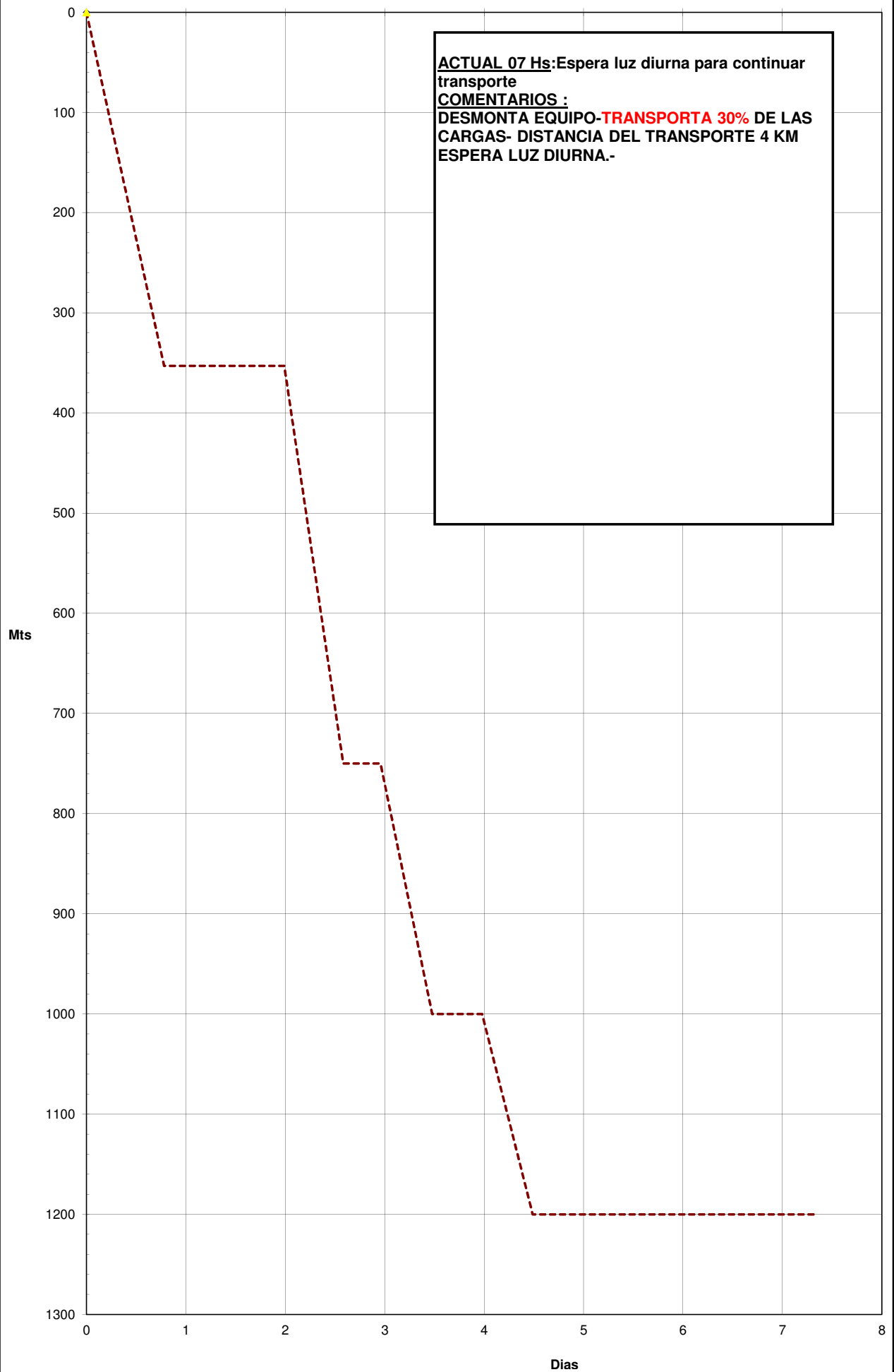
Collar: 1179,00
Zto: 1179,00
Fdo: 1202,00

PRESUPUESTO POZO			Gbk-922			
PEP: RS1EC.8G01.53.P0003						
CAN	ITEM	HS.	\$	U\$S	DESCRIPCION DE MANIOBRAS	
1	3	10,00	21817,34	2371,77	DTM Equipo completo, Colocar BOP.	
0	6	0,00	0,00	0,00		
10	1	10,00	5961,80	471,40	Trabajos de superficie	
12	1	12,00	7154,16	565,68	Bajar punta lisa AMC, bajar nivel y sacar	
18	1	18,00	10731,24	848,52	Viajes con TPN + PKR (2)	
18	1	18,00	10731,24	848,52	Ensayos convencionales (2)	
0	1	0,00	0,00	0,00	Ensayos con Equipo de LASA	
0	1	0,00	0,00	0,00	Cambios de zona	
5	1	5,00	2980,90	235,70	Reensayos de zonas sin entrada (1)	
24	1	24,00	14308,32	1131,36	Rotar cemento + hermeticidad	
0	1	0,00	0,00	0,00	Ensayo de fractura	
36	1	36,00	21462,48	1697,04	Bajo instalación final	
0	1	0,00	0,00	0,00		
0	1	0,00	0,00	0,00		
0	1	0,00	0,00	0,00		
0	1	0,00	0,00	0,00		
0	1	0,00	0,00	0,00		
0	1	0,00	0,00	0,00		
0	1	0,00	0,00	0,00		
0	1	0,00	0,00	0,00		
0	1	0,00	0,00	0,00		
0	1	0,00	0,00	0,00		
10	2A	10,00	5363,10	424,00	Stand By Wireline	
0	2A	0,00	0,00	0,00	Stand By opera cia Bolland para toma de muestras	
0	2A	0,00	0,00	0,00	Stand By por operaciones de LASA	
18	2A	18,00	9653,58	763,20	Stand By opera Cía de Cementación+frague	
12	2A	12,00	6435,72	508,80	Stand by por reuniones de seguridad, carga y descarga de mat.	
0	2A	0,00	0,00	0,00		
0	2B	0,00	0,00	0,00	Stand by sin personal.	
20	2C	20,00	6855,40	611,00	Equipo parado por inclemencias de tiempo.-	
Total Horas incl.DTM		193,00				
Total de Días		8,04				
			RESUMEN			
			ITEM	CANTIDAD	UNI COSTO	Tarifa Nueva RTP (\$ (U\$S))
			1 (Opert.Normal)	123,00	30.241,36	\$73.330,14 5798,22
			2A (SB c/Pers.)	40,00	8.846,73	\$21.452,40 1696,00
			2B (SB s/Pers.)	0,00	0,00	\$0,00 0,00
			2C (Factor Clima)	20,00	2.896,11	\$6.855,40 611,00
*Equipo	PI-222		3 (DTM)	1,00	9.644,14	\$21.817,34 2371,77
			3B (C.Sólidas)	0,27	3.127,28	\$9.381,94 0,00
			3C (Carg.y Desc.)	0,27	0,00	\$0,00 0,00
			4B (C.Líquidas)	0,27	3.502,56	\$9.381,94 375,28
			5 (Pileta Ecol.)	8,00	4.435,57	\$10.081,44 1075,12
			5A (Tpte.pil.ecol.)	1,00	8,23	\$0,00 8,23
			6 (Conj.DSK-Pieza)	0,00	0,00	\$0,00 0,00
			7 SUMEX+PEET+SINDICATO	0,27	3.660,71	\$10.982,24 0,00
			Subtotal	193,00	66.362,69	\$163.282,85 U\$S 11.935,62
			Wire	Perfil N Corr.+N F	5.000,00	\$3.479,00 U\$S 2550,00
			Punzado		6.000,00	\$4.174,80 U\$S 3060,00
			Line	Fijado de Tapón	0,00	\$0,00 U\$S 0,00
			Cementación		6.000,00	\$0,00 U\$S 6000,00
			Fractura Hidráulica		0,00	\$0,00 U\$S 0,00
			Htas. de fractura		0,00	\$0,00 U\$S 0,00
			Estimulación ácida		0,00	\$0,00 U\$S 0,00
			Bombeo - Prueba de admisión		0,00	\$0,00 U\$S 0,00
			Fresa		1.200,00	\$906,07 U\$S 576,00
			Operación de Swabbing LASA		0,00	\$0,00 U\$S 0,00
			Hot-Oil + Camión chupa		0,00	\$0,00 U\$S 0,00
			Camión limpieza de pileta		6.000,00	\$4.918,20 U\$S 1081,80
			Transporte Gasoil		0,00	\$0,00 U\$S 0,00
			Coiled Tubing		0,00	\$0,00 U\$S 0,00
			Motor de fondo		0,00	\$0,00 U\$S 0,00
			Gas-Oil(\$104xm3)		0,00	\$0,00 U\$S 0,00
			Alquiler de Radio		0,00	\$0,00 U\$S 0,00
			Limpieza de Locación		0,00	\$0,00 U\$S 0,00
			Subtotal	24.200,00	\$13.478,07	U\$S 13.267,80
			TOTAL	90.562,69	\$176.760,92	U\$S 25.203,42
			OBJETIVO (U\$S)	100.000	PRESUPUESTO	
			Capas punzadas	2	TOTAL EN U\$S	
			Profundidad	1.197,00	84123,13	
			Nº de Pruebas	0	Tipo de cambio:	
			Nº de Ensayos	2	0.33333	
*Seleccionar equipo desde Hoja1						
Tarifarios Actualizados al 30/05/08						

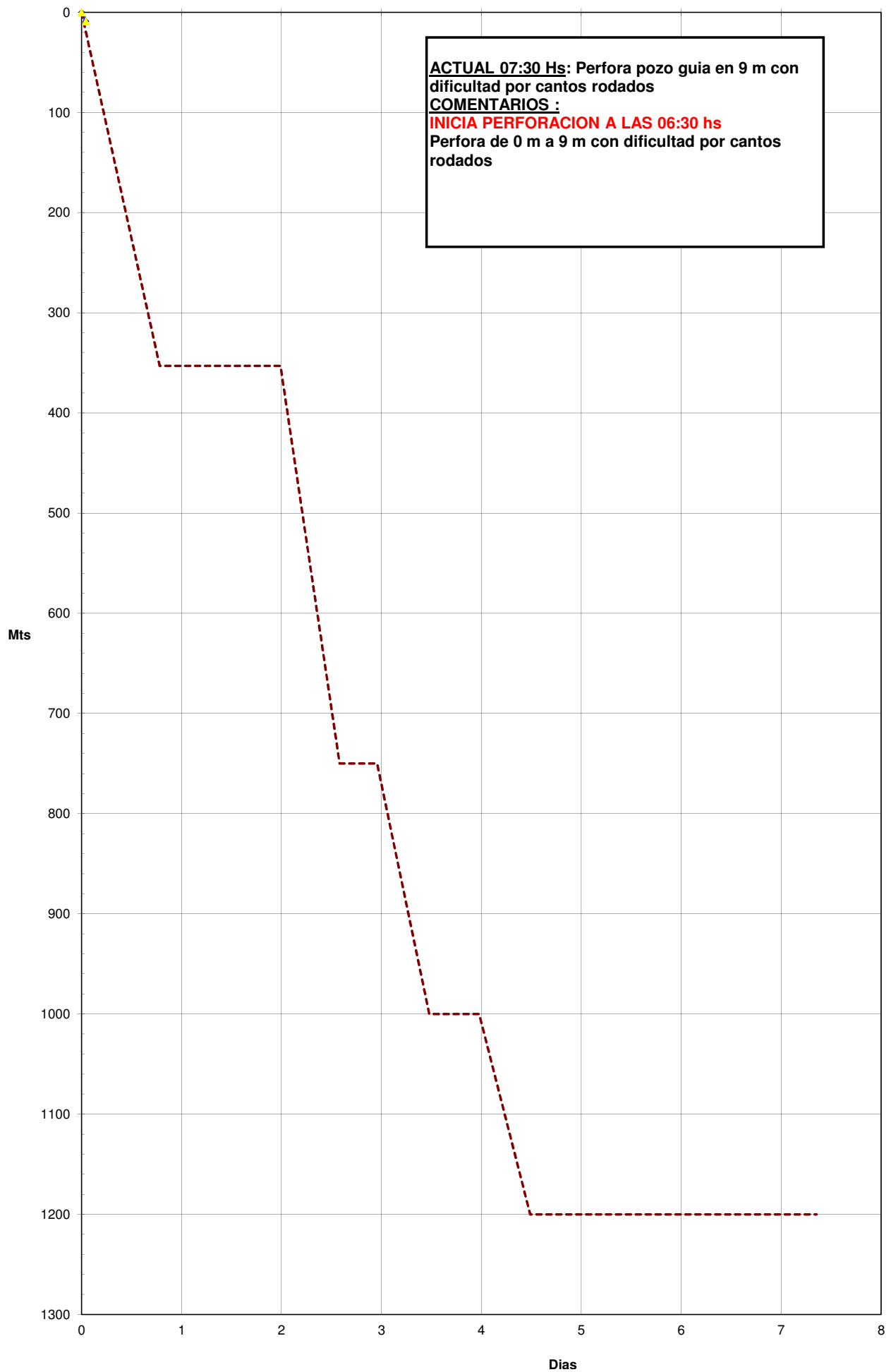
[illegible]

PROGRAMA OPERATIVO						
1º)	Montar equipo completo, de acuerdo a los procedimientos. Realizar Chek List.					
2º)	Correr perfil Neutrón, CBL, VDL. Bajar cañería A. M. C. y bajar nivel a 550 m.					
3º)	Punzar con buena aislación y en balance con cañón de 4", 6 TPP 32 gr. 0 - 60°					
			Inducción		Neutrón	Espesor
	A)	1050,5-1053,0				2,0 m
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4º)	Bajar TPN + Pkr, ensayar por pistoneo según se indica con la letra: A) y B)					
5º)	De acuerdo a los resultados de los ensayos, se indicara programa a seguir.					

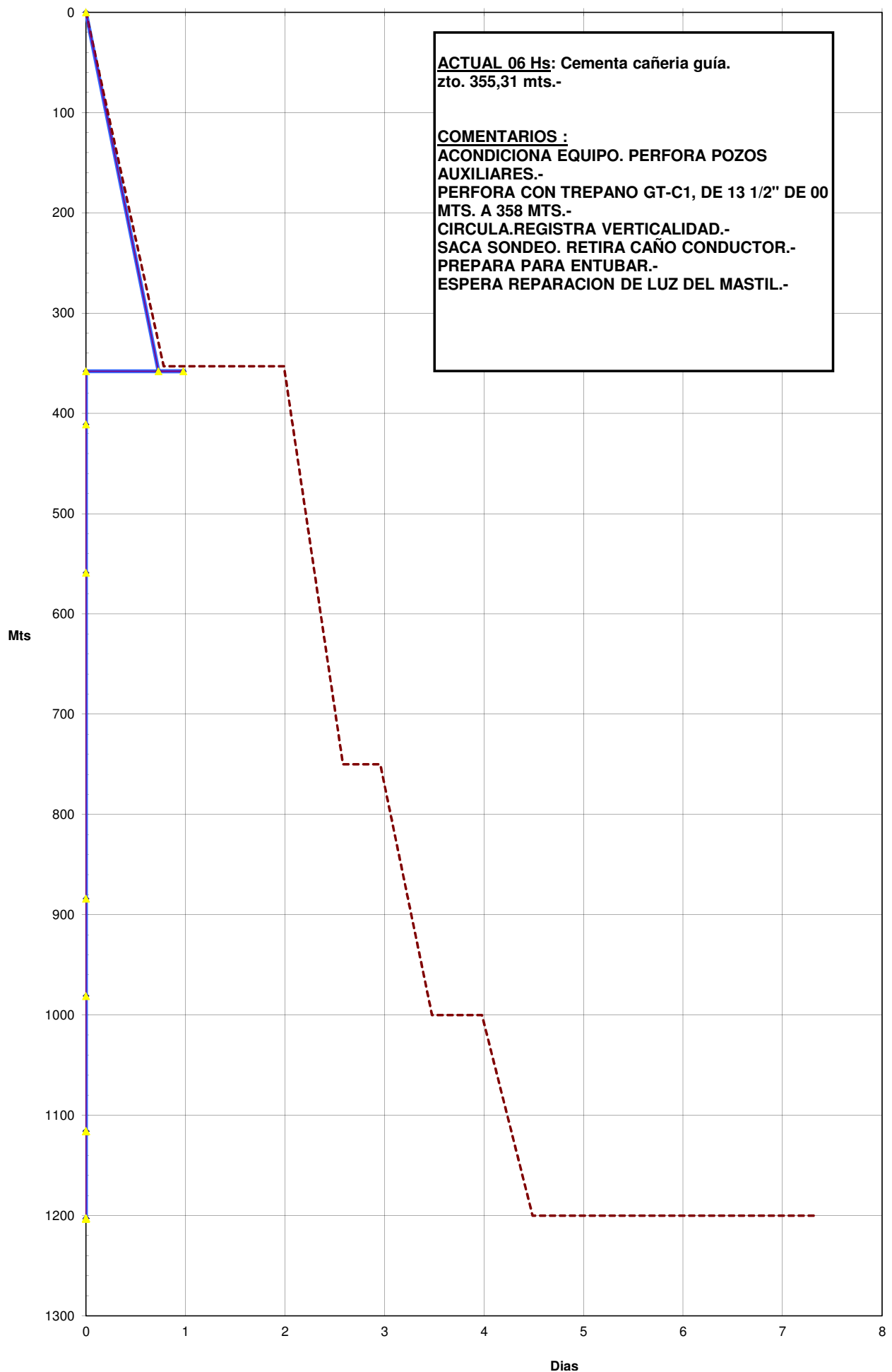
Tiempo vs Profundidad



Tiempo vs Profundidad



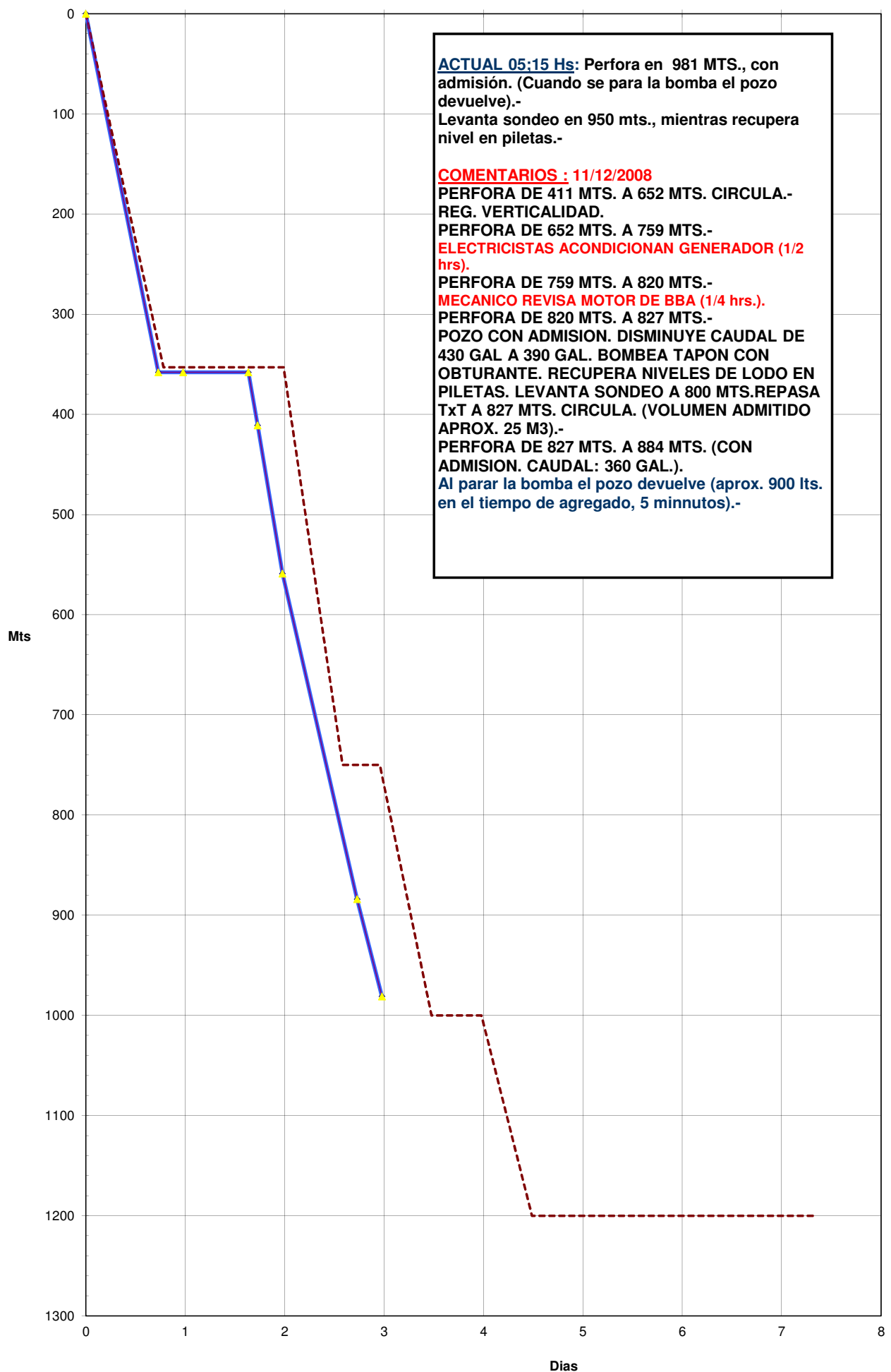
Tiempo vs Profundidad



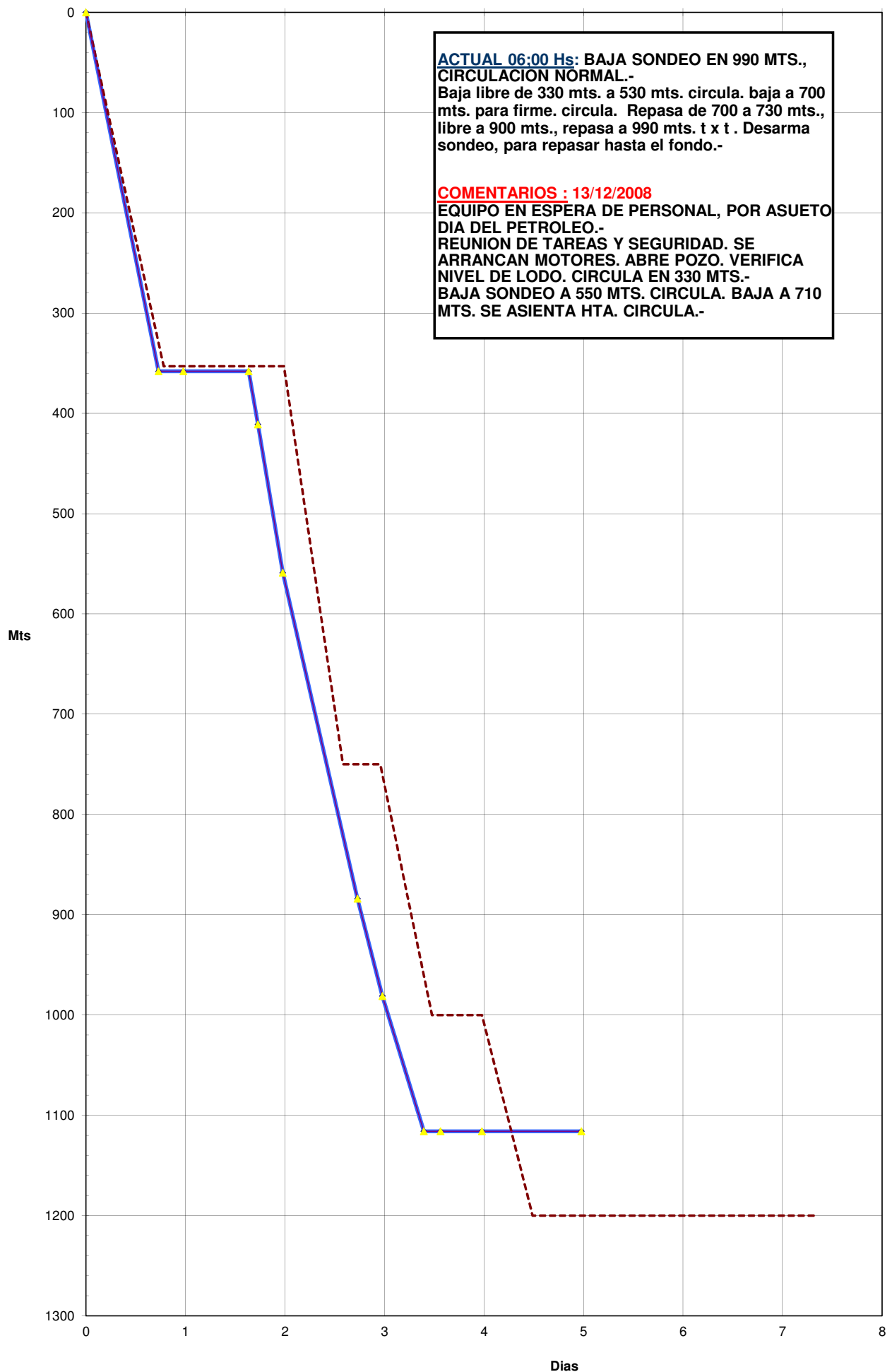
ACTUAL 06 Hs: Cementa cañería guía.
zto. 355,31 mts.-

COMENTARIOS :
ACONDICIONA EQUIPO. PERFORA POZOS
AUXILIARES.-
PERFORA CON TREPANO GT-C1, DE 13 1/2" DE 00
MTS. A 358 MTS.-
CIRCULA.REGISTRA VERTICALIDAD.-
SACA SONDEO. RETIRA CAÑO CONDUCTOR.-
PREPARA PARA ENTUBAR.-
ESPERA REPARACION DE LUZ DEL MASTIL.-

Tiempo vs Profundidad



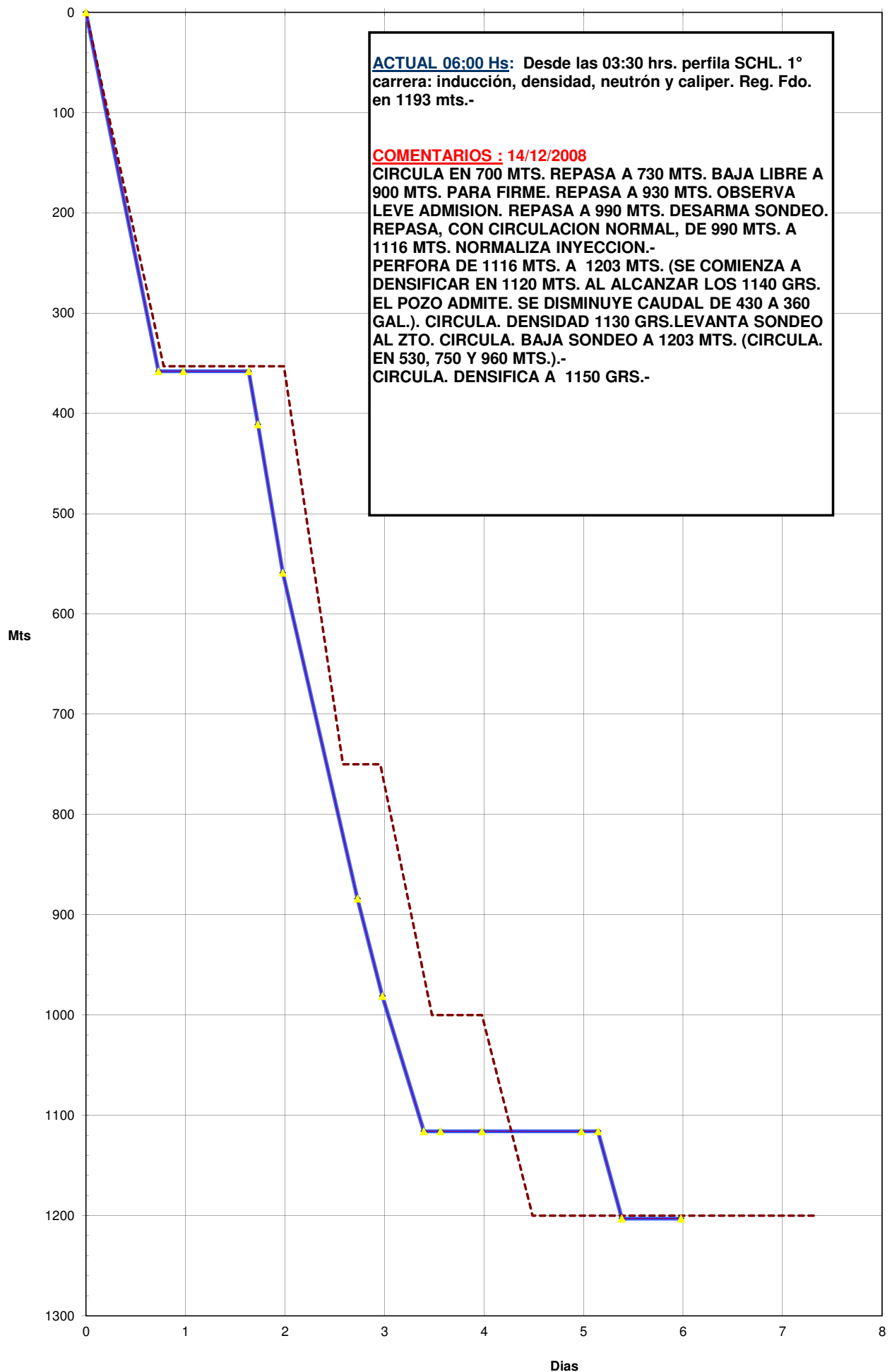
Tiempo vs Profundidad



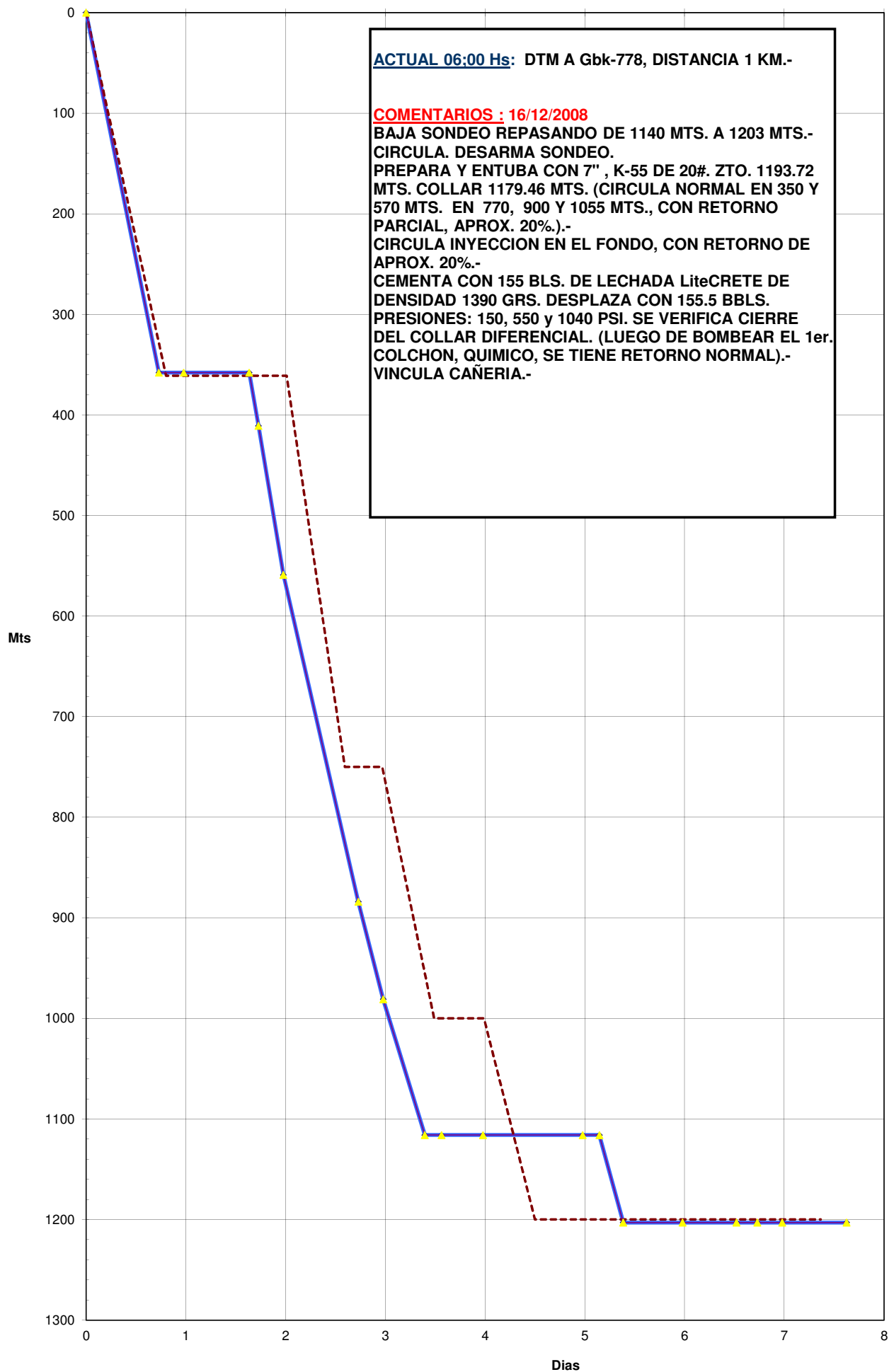
ACTUAL 06:00 Hs: BAJA SONDEO EN 990 MTS., CIRCULACION NORMAL.-
Baja libre de 330 mts. a 530 mts. circula. baja a 700 mts. para firme. circula. Repasa de 700 a 730 mts., libre a 900 mts., repasa a 990 mts. t x t . Desarma sondeo, para repasar hasta el fondo.-

COMENTARIOS : 13/12/2008
EQUIPO EN ESPERA DE PERSONAL, POR ASUETO DIA DEL PETROLEO.-
REUNION DE TAREAS Y SEGURIDAD. SE ARRANCAN MOTORES. ABRE POZO. VERIFICA NIVEL DE LODO. CIRCULA EN 330 MTS.-
BAJA SONDEO A 550 MTS. CIRCULA. BAJA A 710 MTS. SE ASIENTA HTA. CIRCULA.-

Tiempo vs Profundidad



Tiempo vs Profundidad





PERFIL DE CEMENTACION
CBL 3' - VDL 5'
NEUTRON DE CORRELACION

Compañía YPF S.A. Pozo YPF.Ch.Gbk-924 Yacimiento GRIMBEEK País ARGENTINA Provincia CHUBUT		Ubicación X: 4.951.112,50 Y: 2.595.585,73		Otros Servicios PUNZADO Elevación	
Dato Permanente: NIVEL DEL TERRENO Elevación 648.63 m. Perfil medido desde: NIVEL DEL TERRENO Perforación medida desde: NIVEL DEL TERRENO		M.R. 654.03 m. P.T. 654.33 m. N.T. 648.63 m.			
Fecha	29 - DICIEMBRE - 2008				
Carrera No.	UNO				
Primera Lectura	1183.5 m.				
Última Lectura	800.0 m.				
Profundidad Alcanzada	1185.0 m.				
Fondo Perforador	1201.0 m.				
Intervalo Medido	383.5 m.				
Tiempo de Operación	04:00 Hs.				
Camión N°	20				
Tipo de Fluido	AGUA				
Temperatura Max	74.0 °C				
Tipo de Detector	He				
Constante de Tiempo	2				
Nivel	LEÑO				
Densidad	-				
Medida hecha por	BALCARCE, LUCIO				
Testigo	DESURCO, DAMIAN				
Datos del Pozo		Tubing			
Carrera No.	Tiépano	Desde	Hasta	Diámetro	Peso
UNO	8.75"	SUP.	1201.0 m.		
Casing	Diámetro	Peso	Grado	Tipo de unión	Superior
Cañera guía	9 5/8"	92.3 lb/ft.			SUP.
Casing	5 1/2"	S/D			SUP.
Liner					

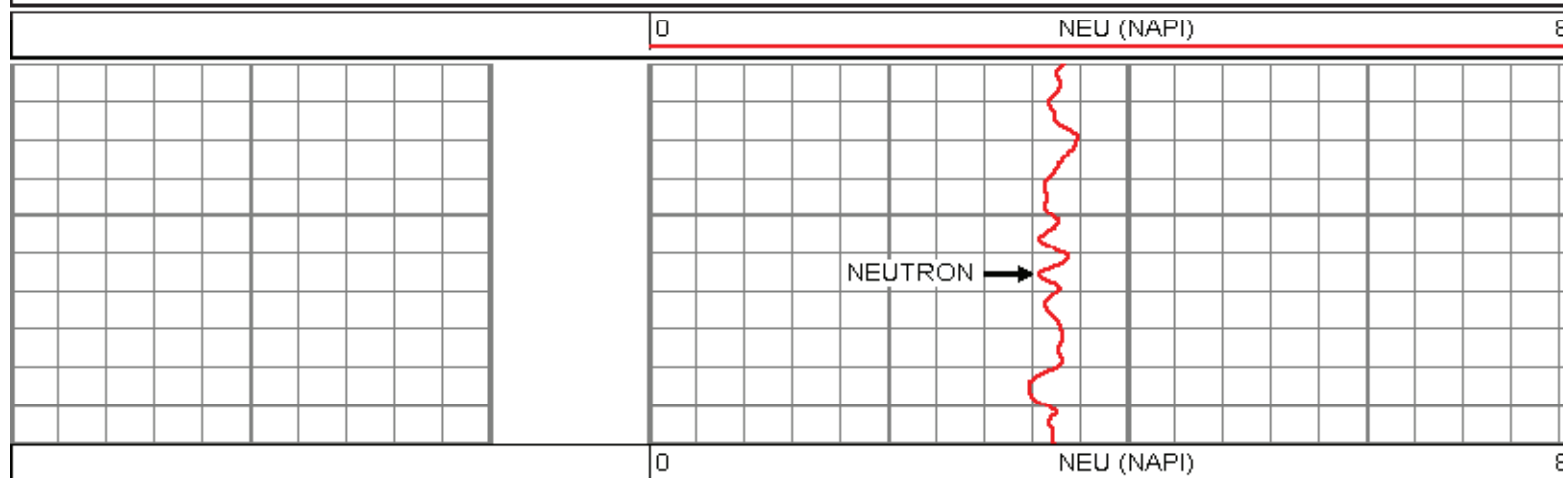
NEUTRON 02
TRANSMISOR 03
RECEPTOR 03

PERFIL DE REFERENCIA
CIA. SCHLUMBERGER DEL 24 - DICIEMBRE - 2008



VARIACION ESTADISTICA

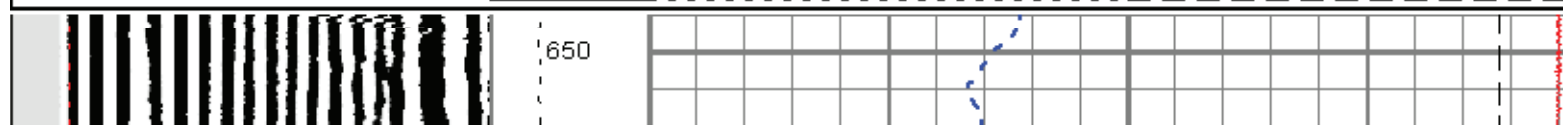
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Dataset Pathname: grimbeek/gbk924/291208/E
Presentation Format: ESTAD
Dataset Creation: Tue Dec 30 00:44:57 2008 by Log 6.2_B4
Charted by: Depth in Meters scaled 1:200

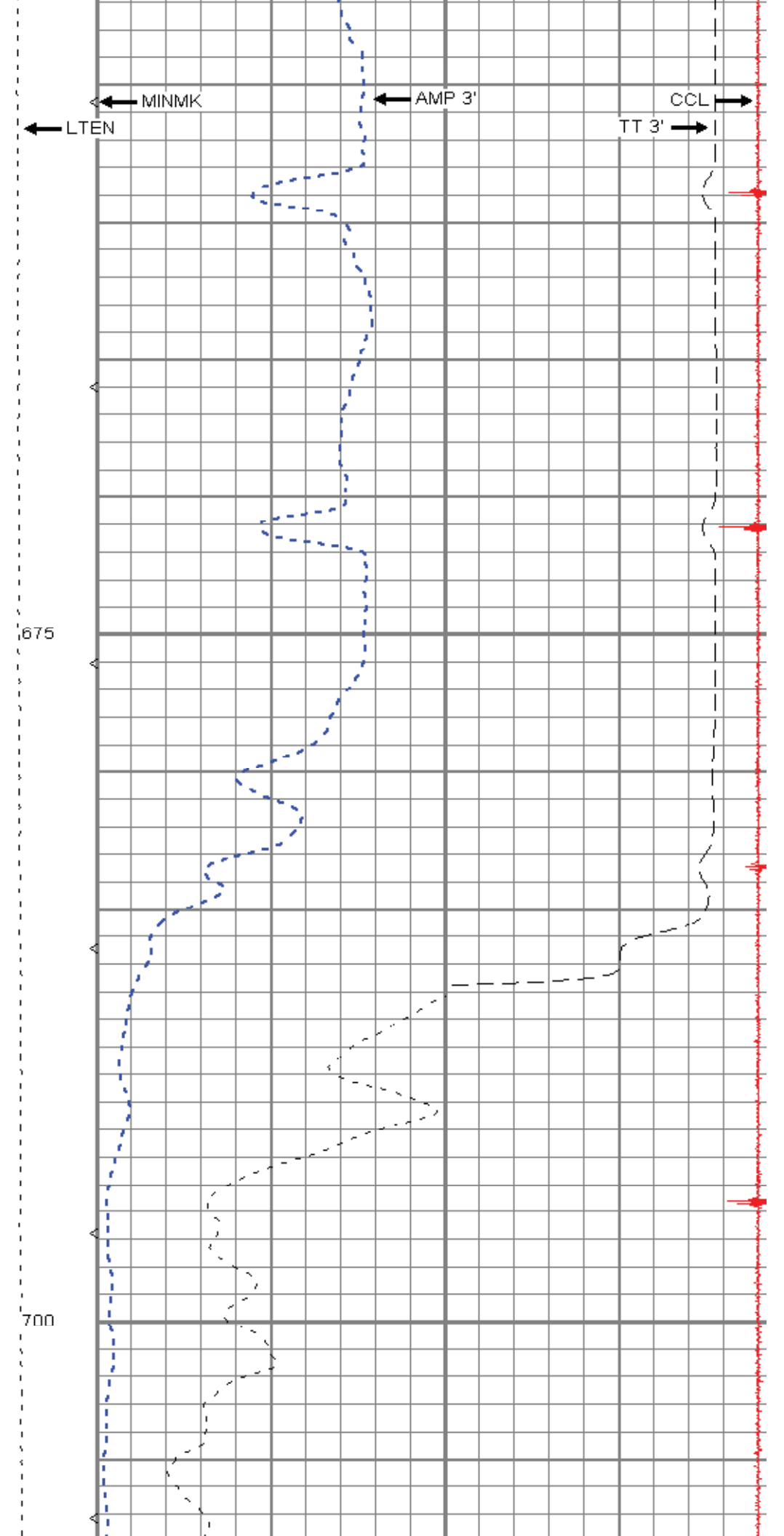
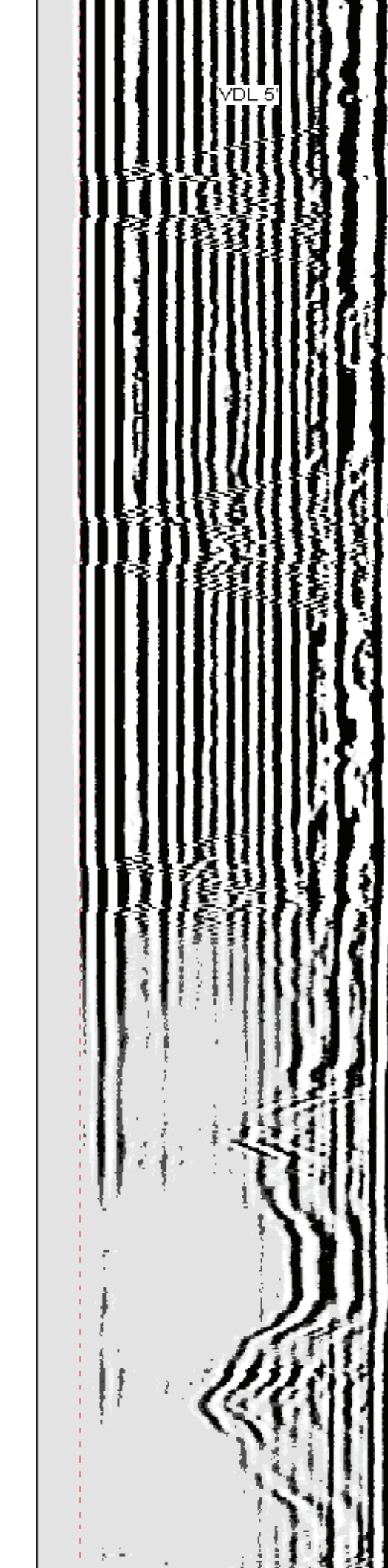


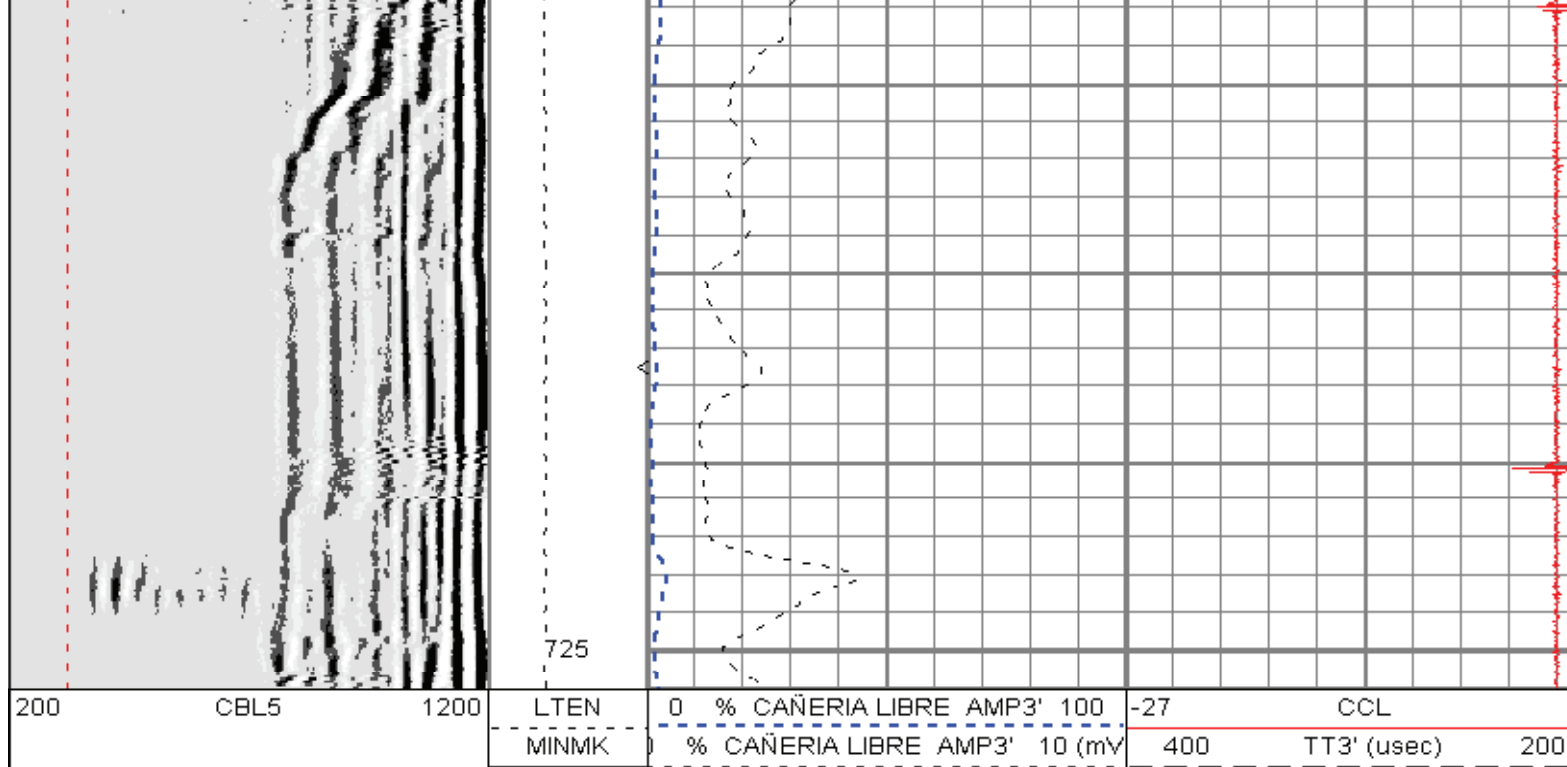
TOPE DE CEMENTO Y CAÑERIA LIBRE

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Presentation Format: CRL YPF1
Dataset Creation: Tue Dec 30 00:20:20 2008 by Log 6.2_B4
Charted by: Depth in Meters scaled 1:200

200	CBL5	1200	LTEN	0	% CAÑERIA LIBRE AMP3' 100	-27	CCL	
			MINMK		% CAÑERIA LIBRE AMP3' 10 (mV)	400	TT3' (usec)	200



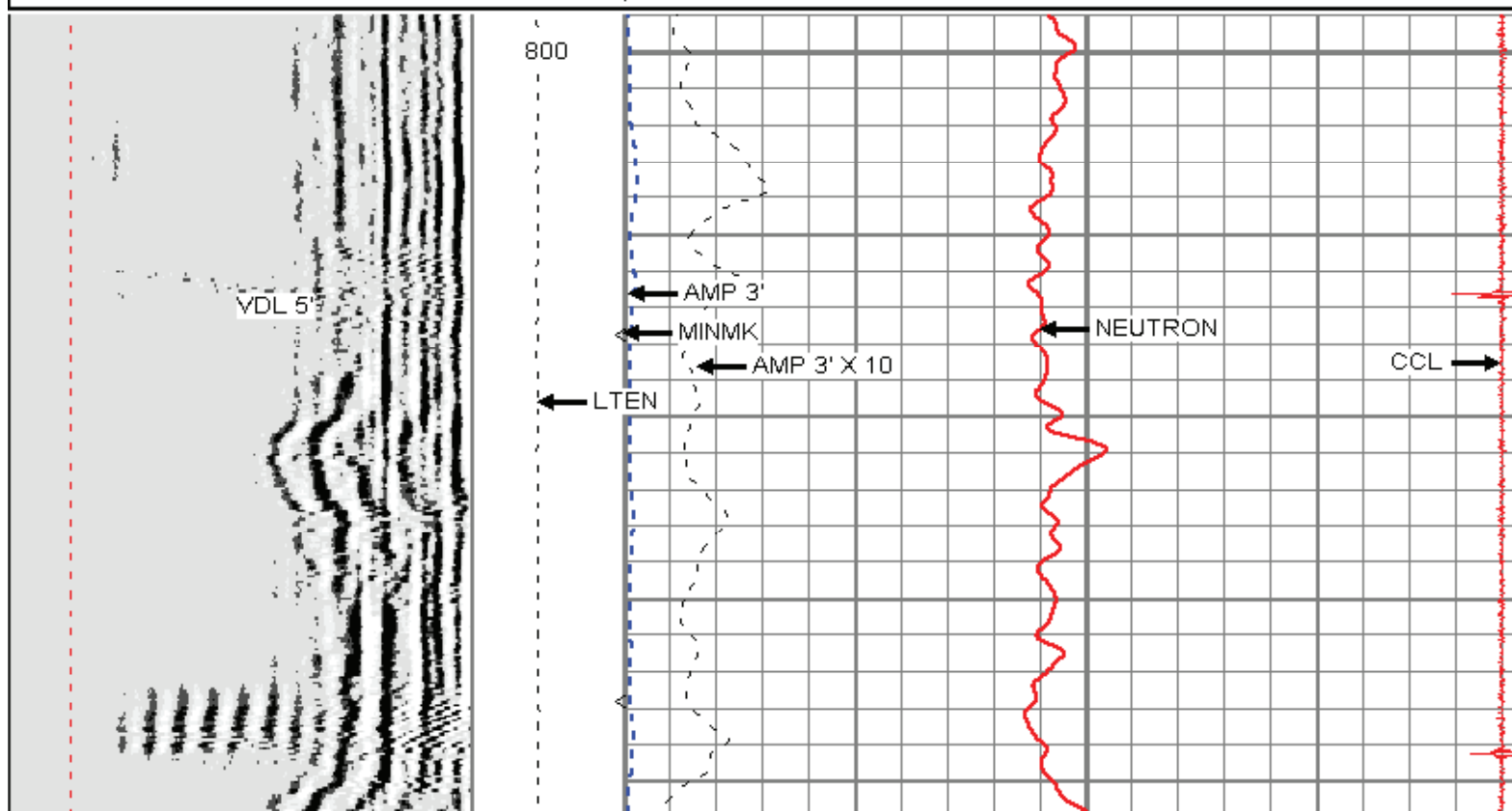




TRAMO PRINCIPAL

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 Presentation Format: CBLYPF
 Dataset Creation: Mon Dec 29 23:40:01 2008 by Log 6.2_B4
 Charted by: Depth in Meters scaled 1:200

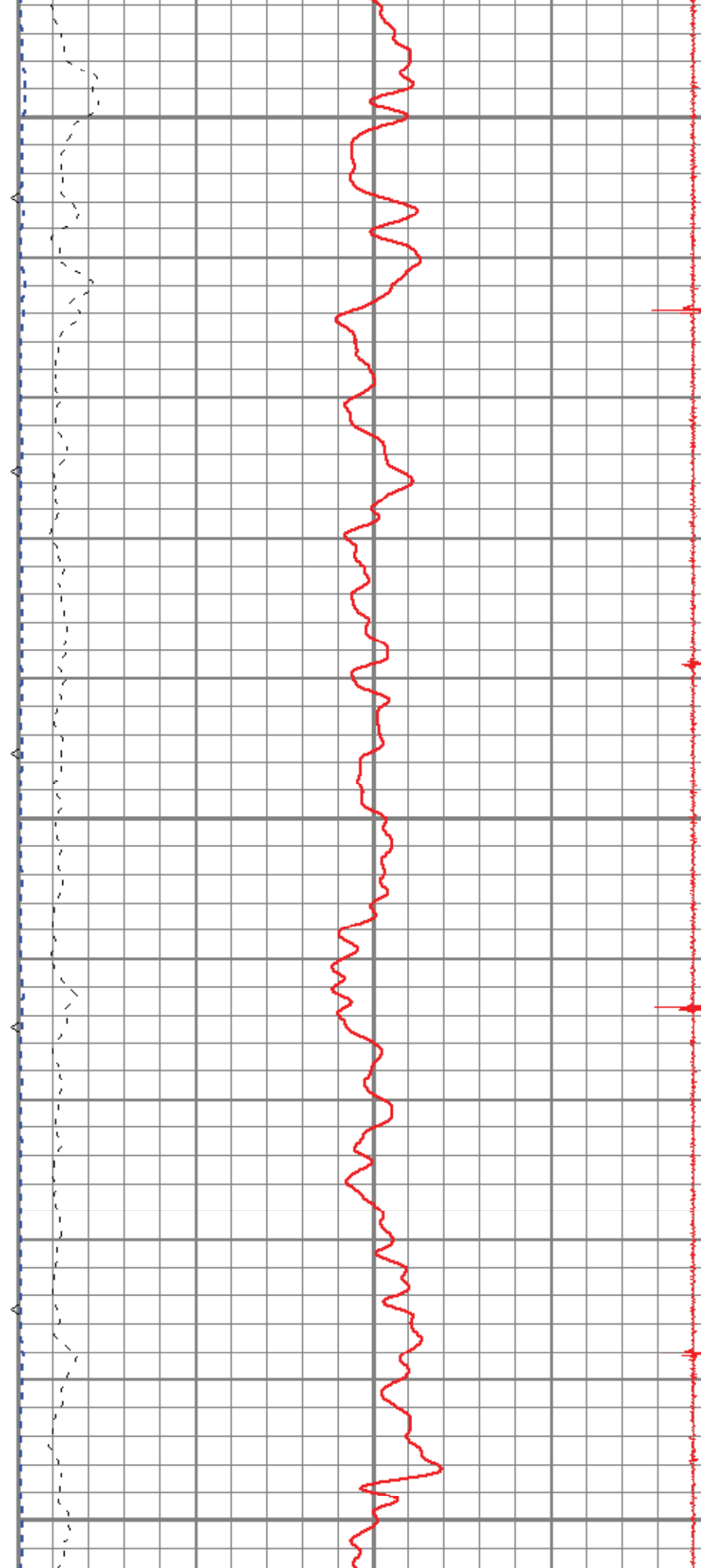
200	CBL5	1200	LTEN	0 % CAÑERIA LIBRE AMP3' 100	-27	CCL
			MINMK	% CAÑERIA LIBRE AMP3' 10 (mV)	400	TT3' (usec) 200
				0	NEU (NAPI)	
						8



825

850

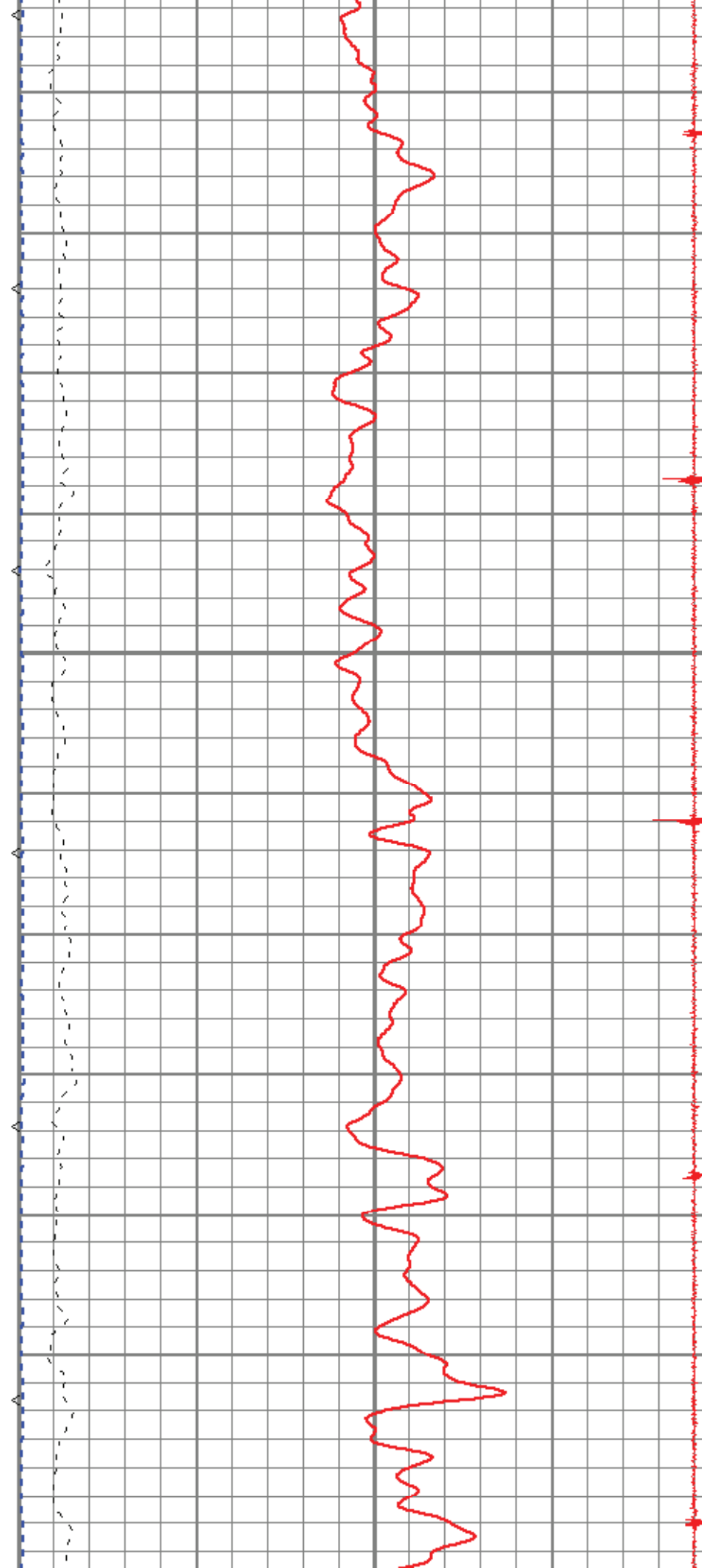
875

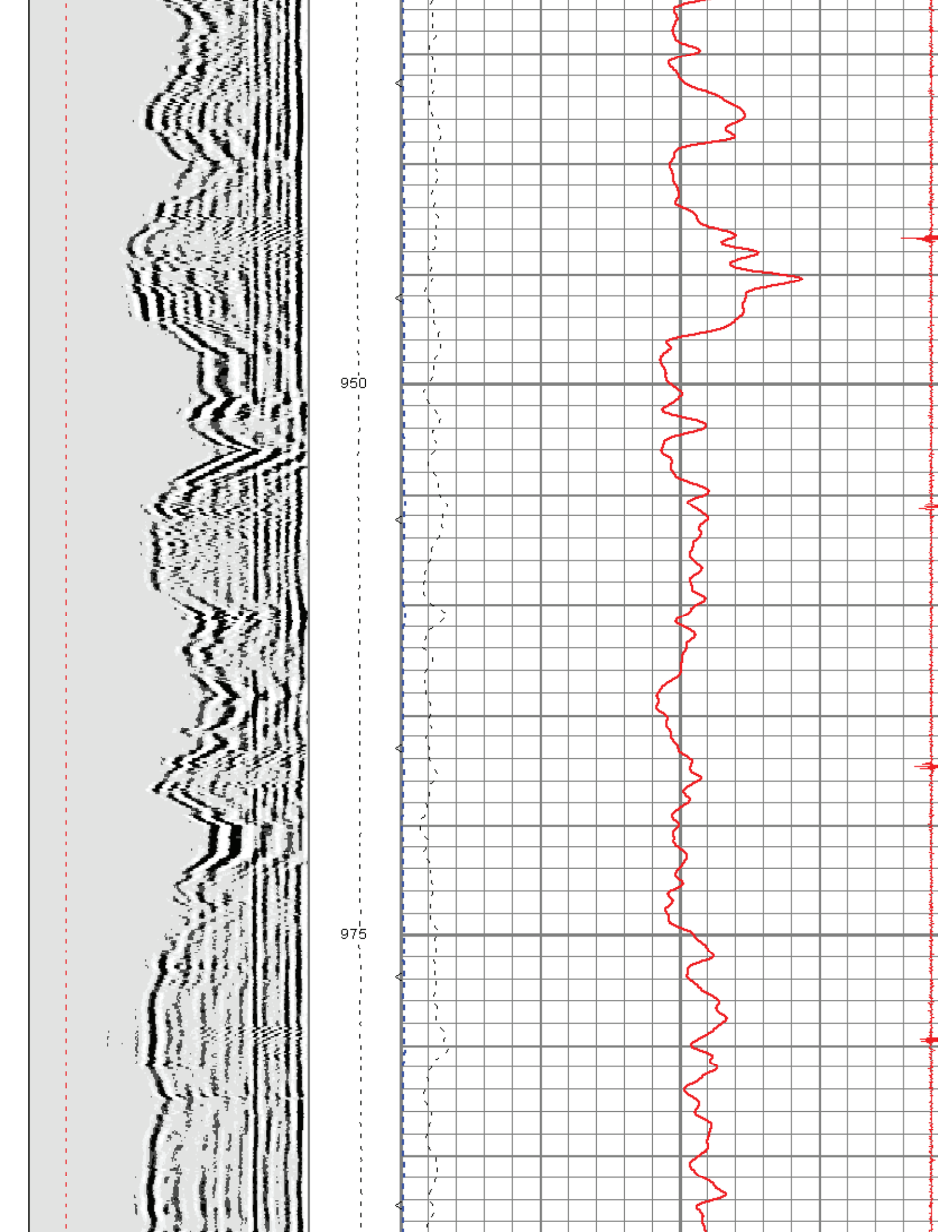


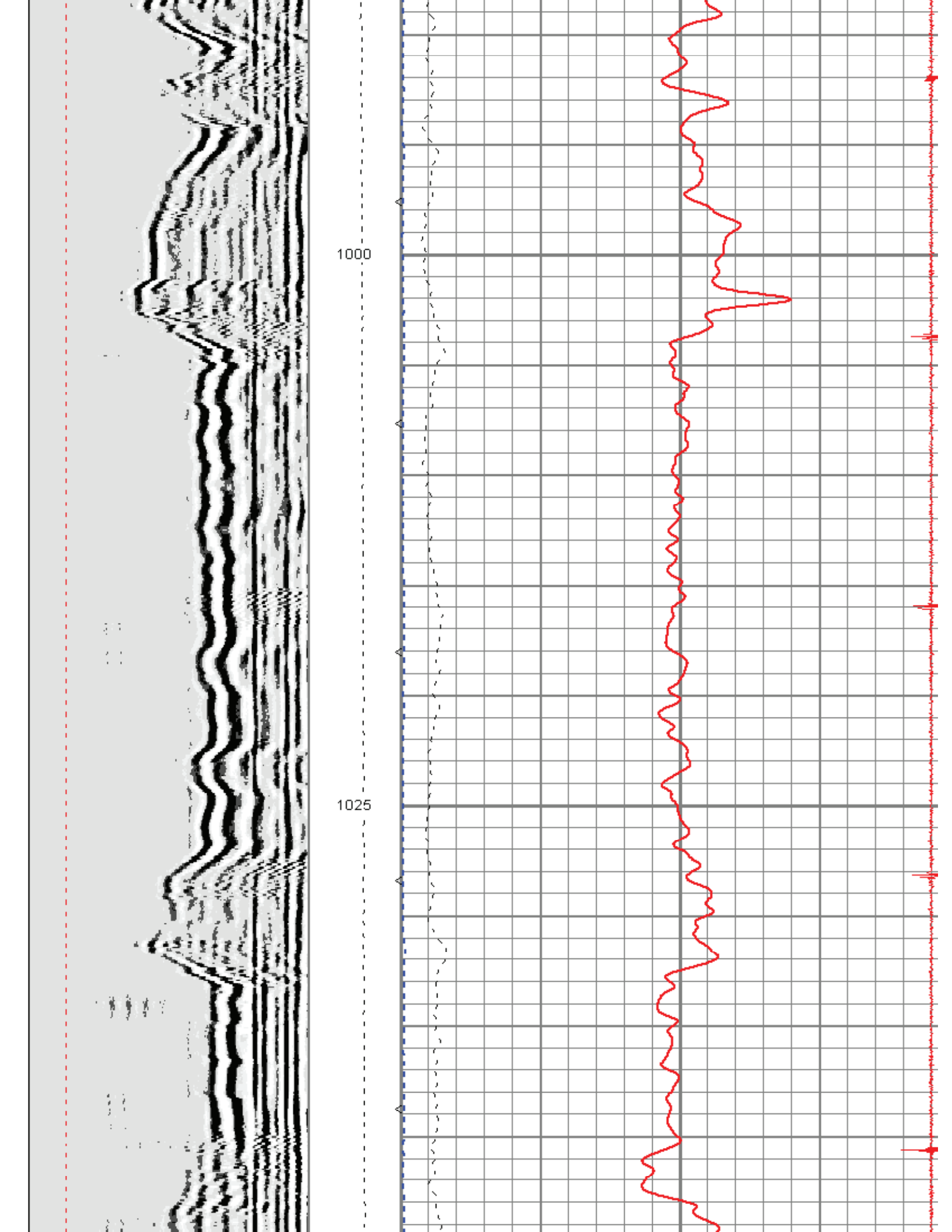


900

925



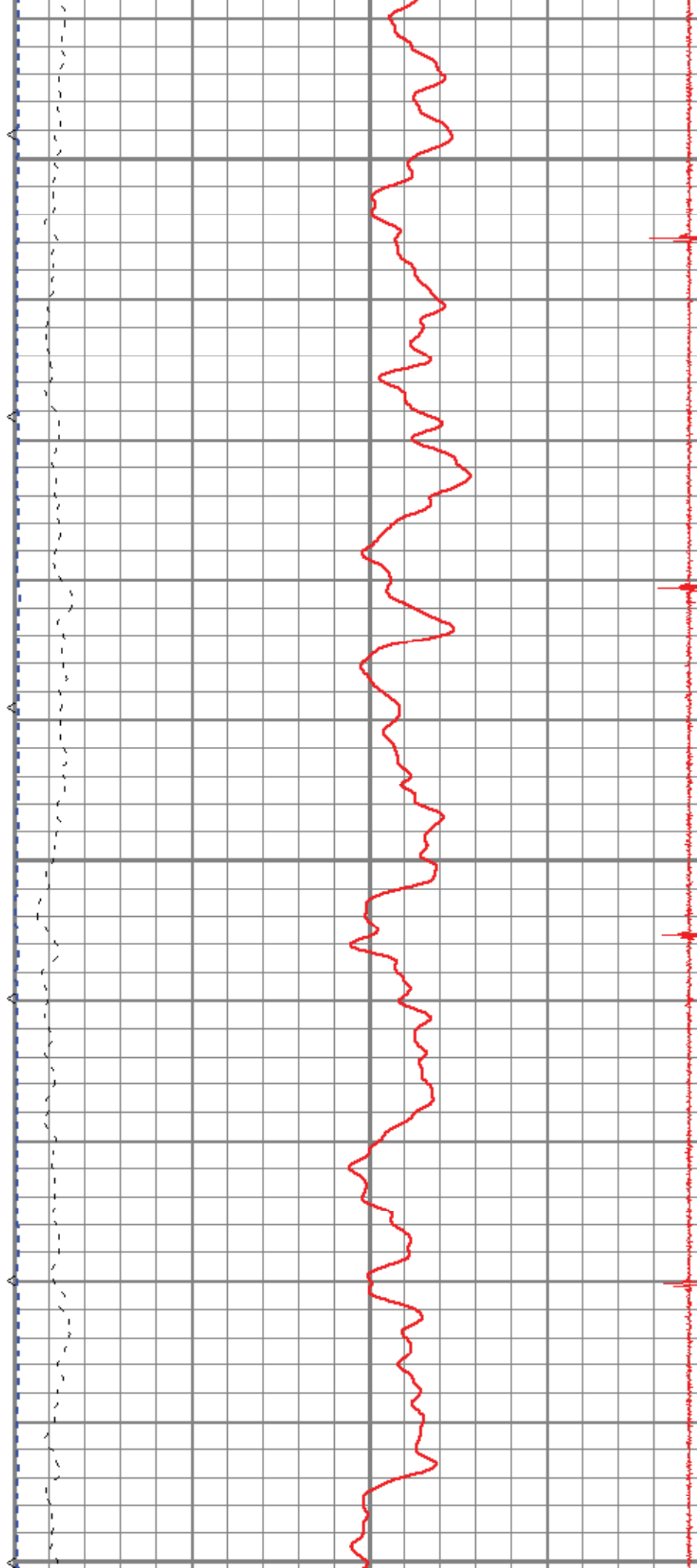
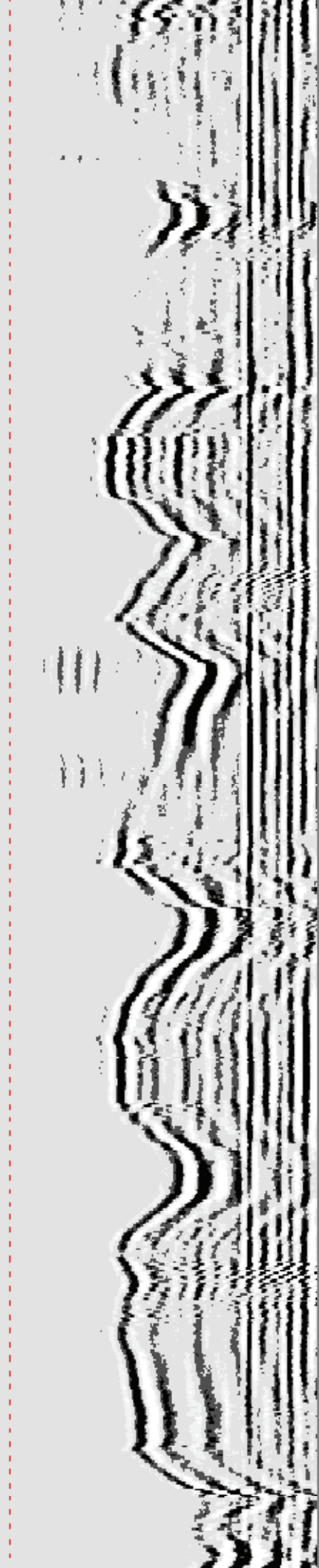


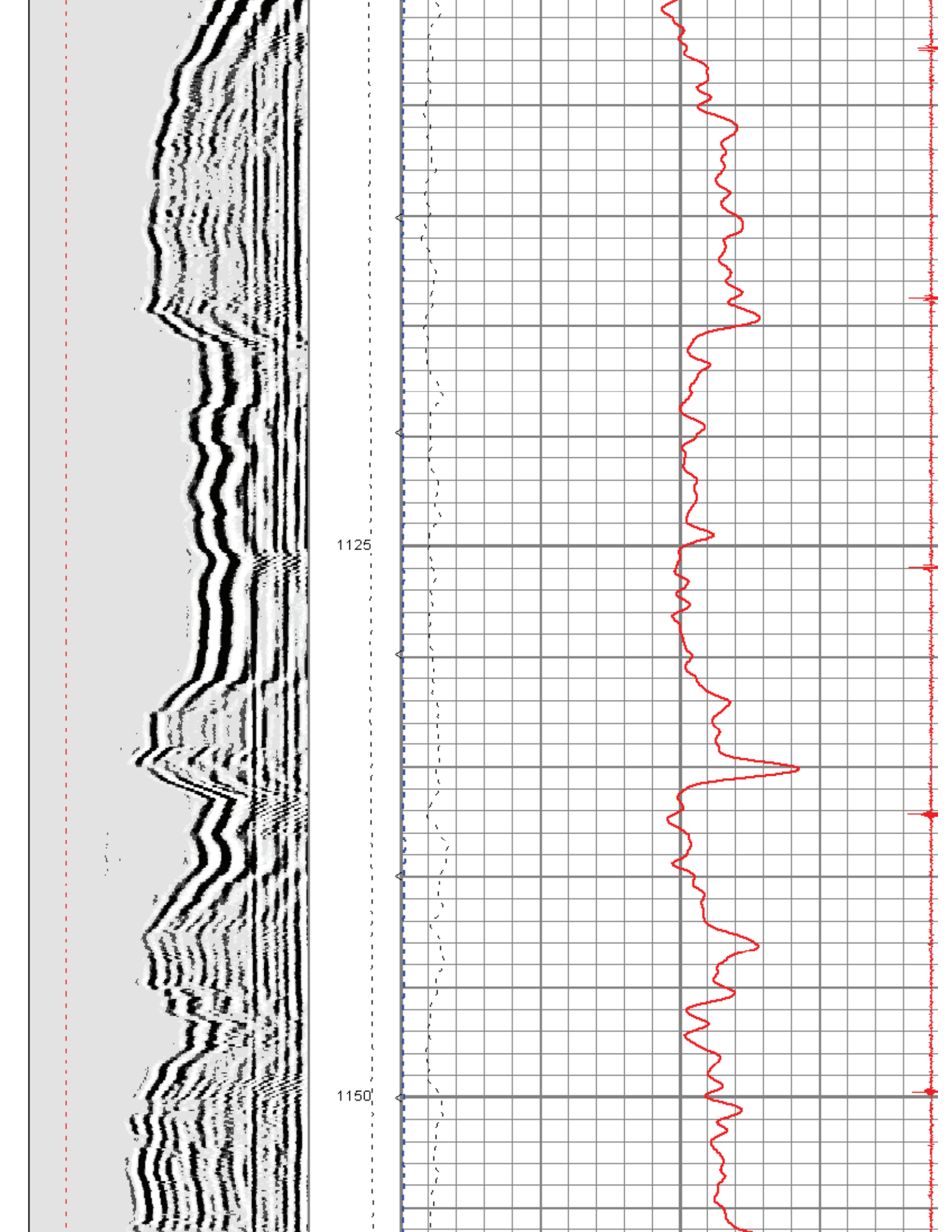


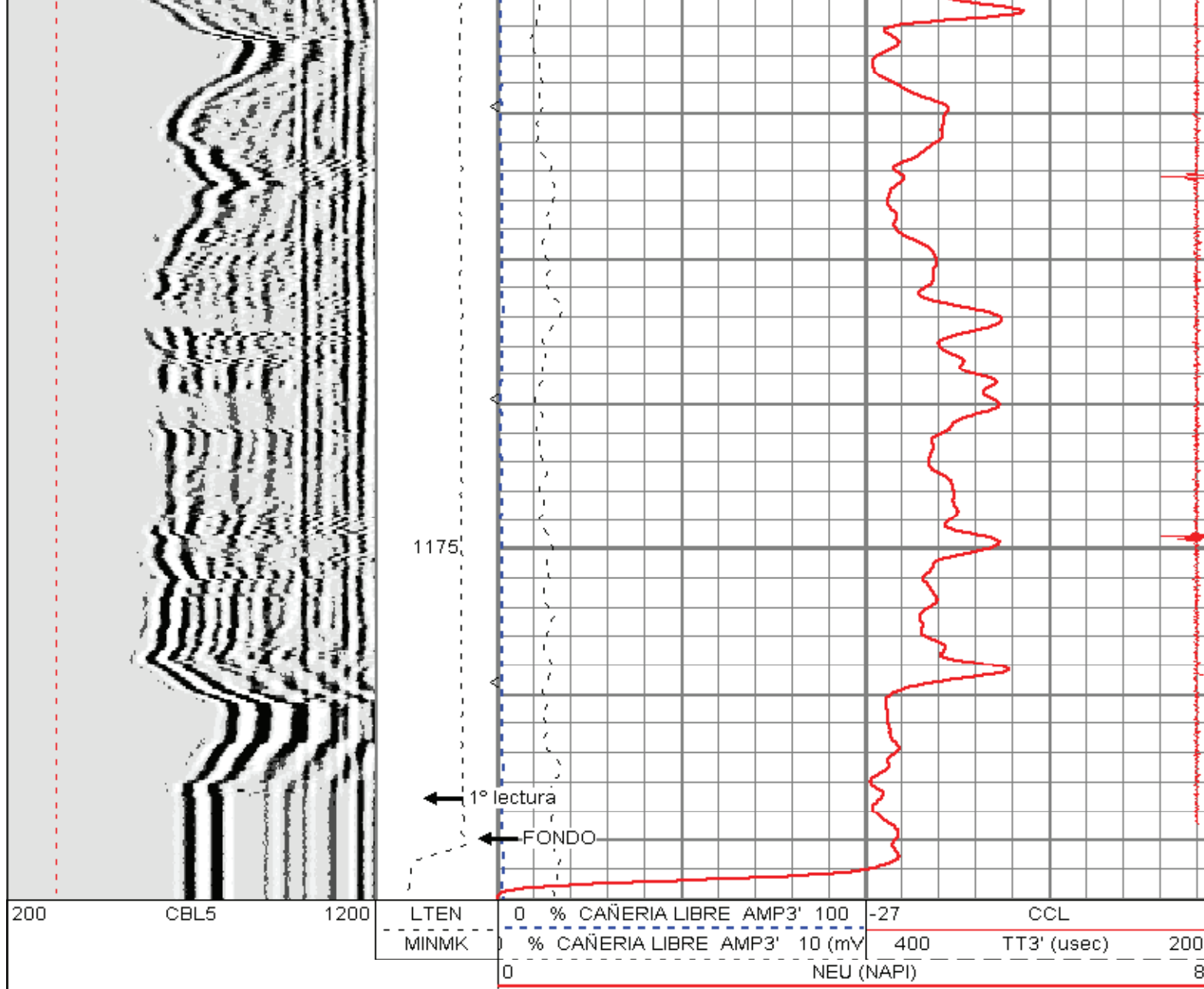
1050

1075

1100



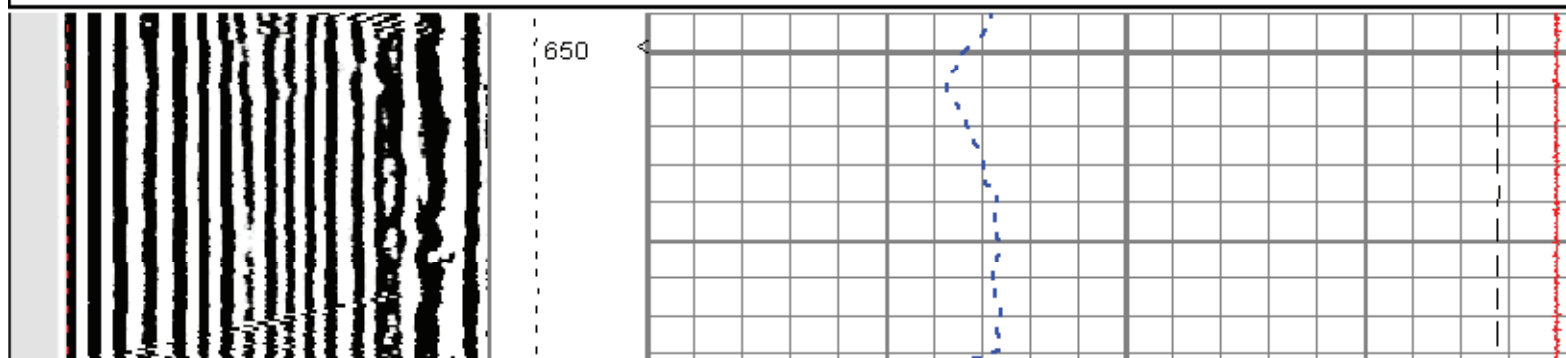


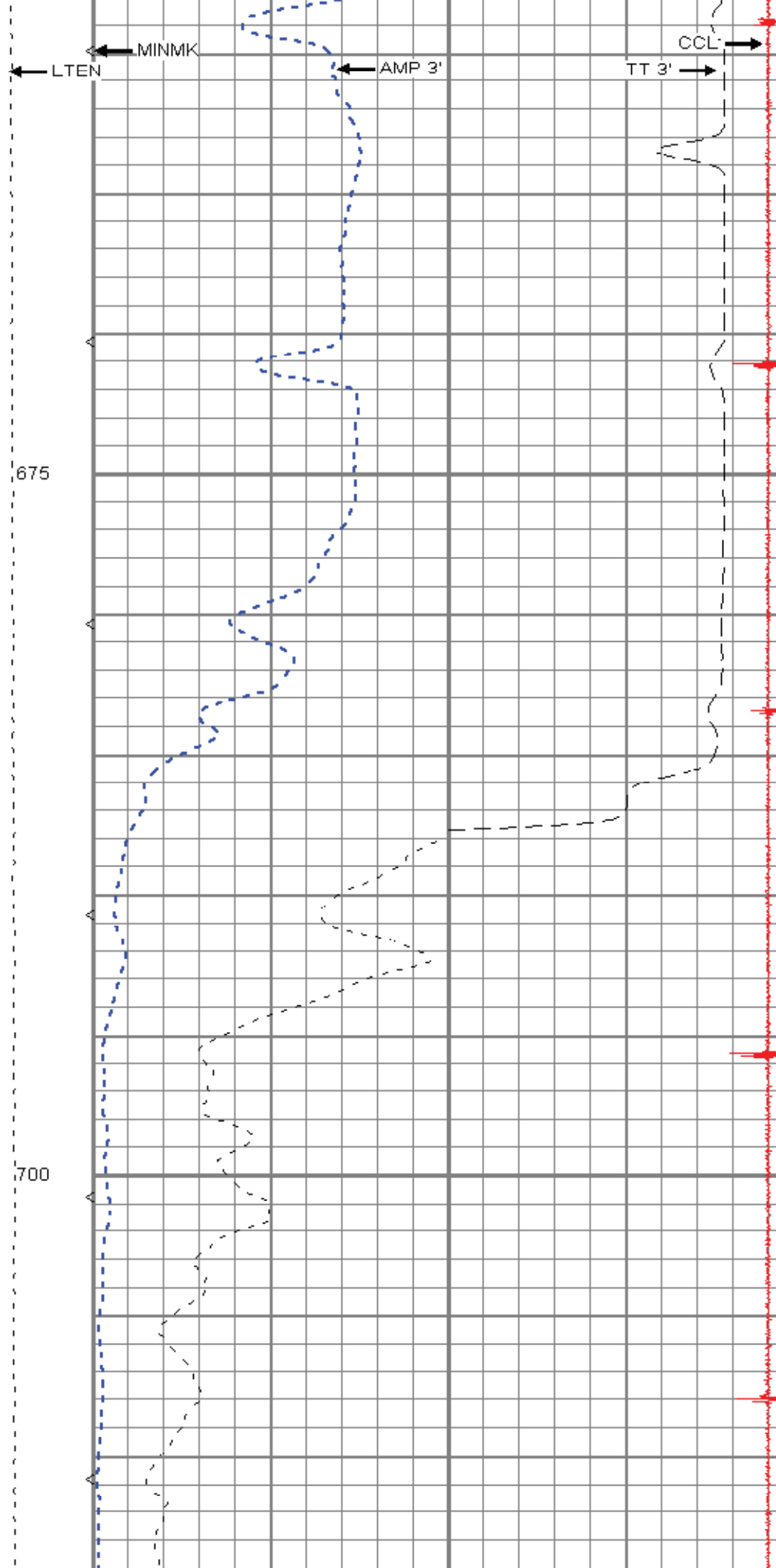
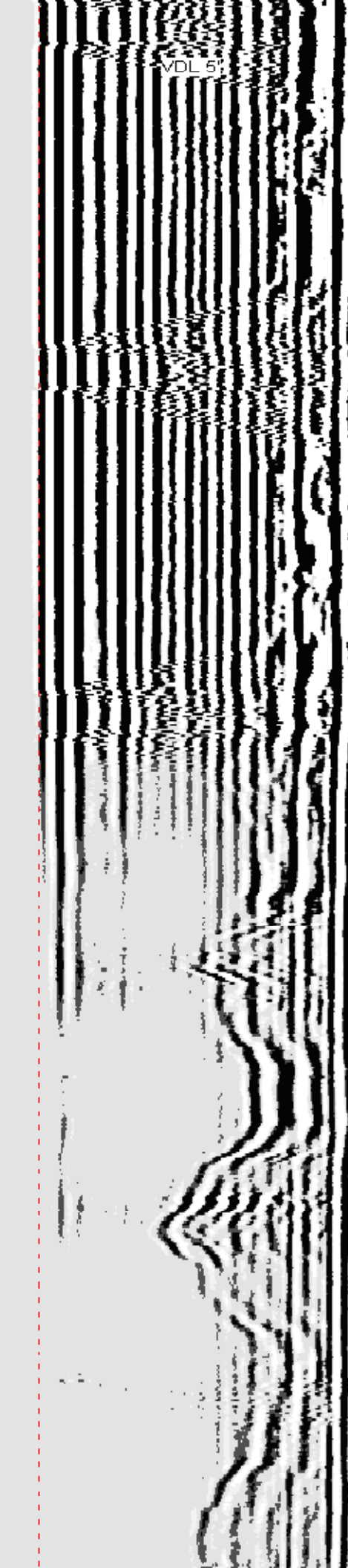


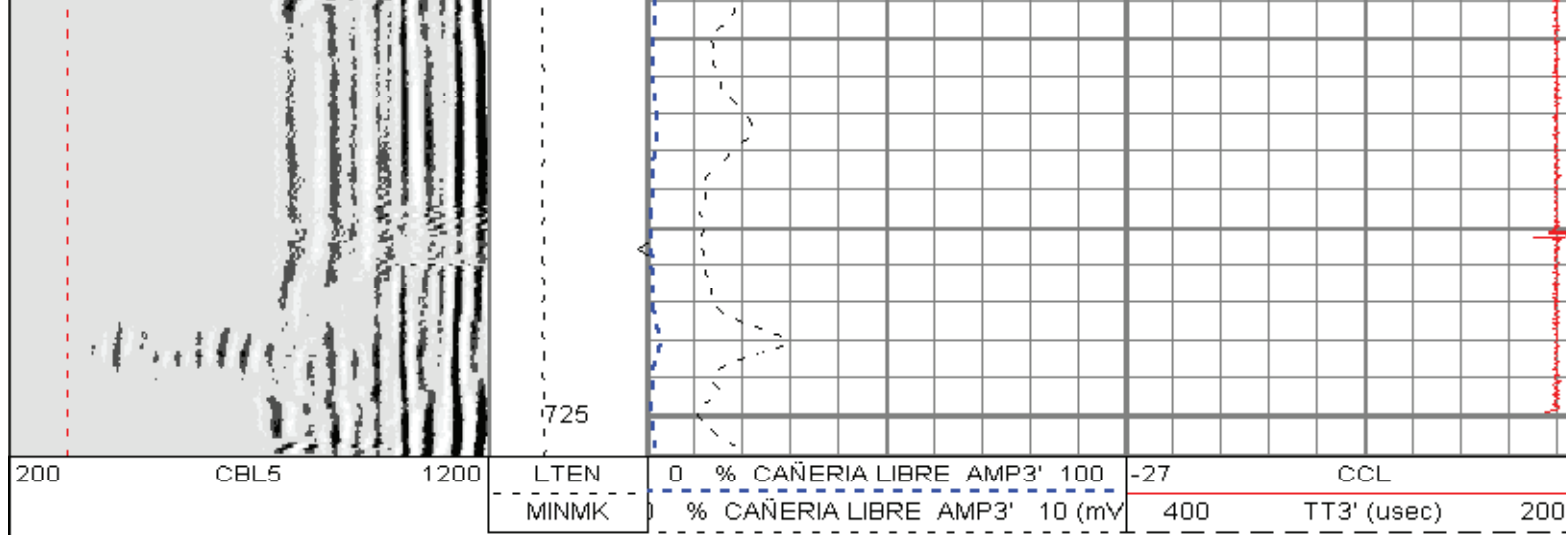
TRAMO REPETIDO CBL

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 Presentation Format: CBLYPF1
 Dataset Creation: Tue Dec 30 00:32:34 2008 by Log 6.2_B4
 Charted by: Depth in Meters scaled 1:200

200	CBL5	1200	LTEN	0	% CAÑERIA LIBRE AMP3'	100	-27	CCL
			MINMK	0	% CAÑERIA LIBRE AMP3'	10 (mV)	400	TT3' (usec)
								200

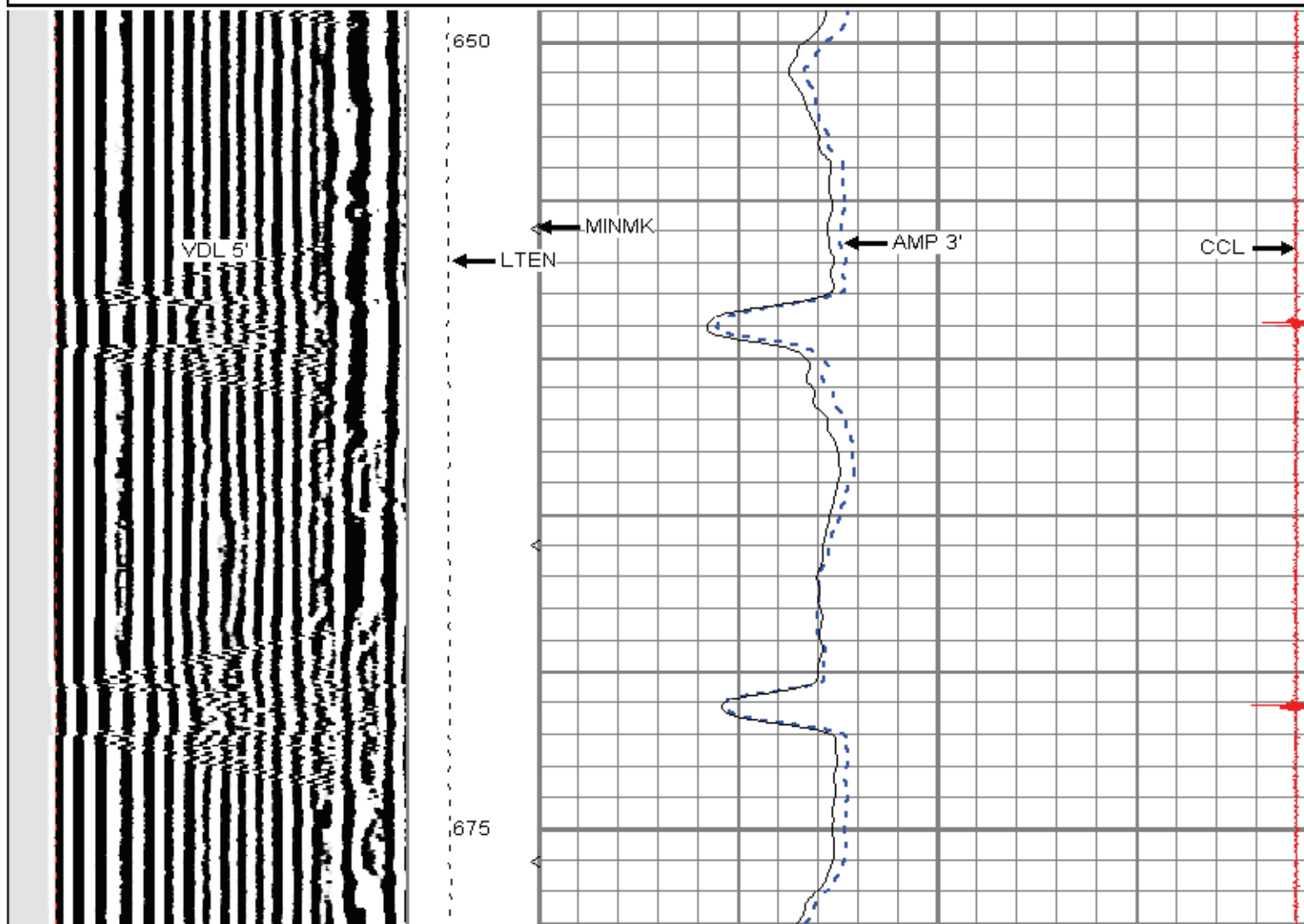


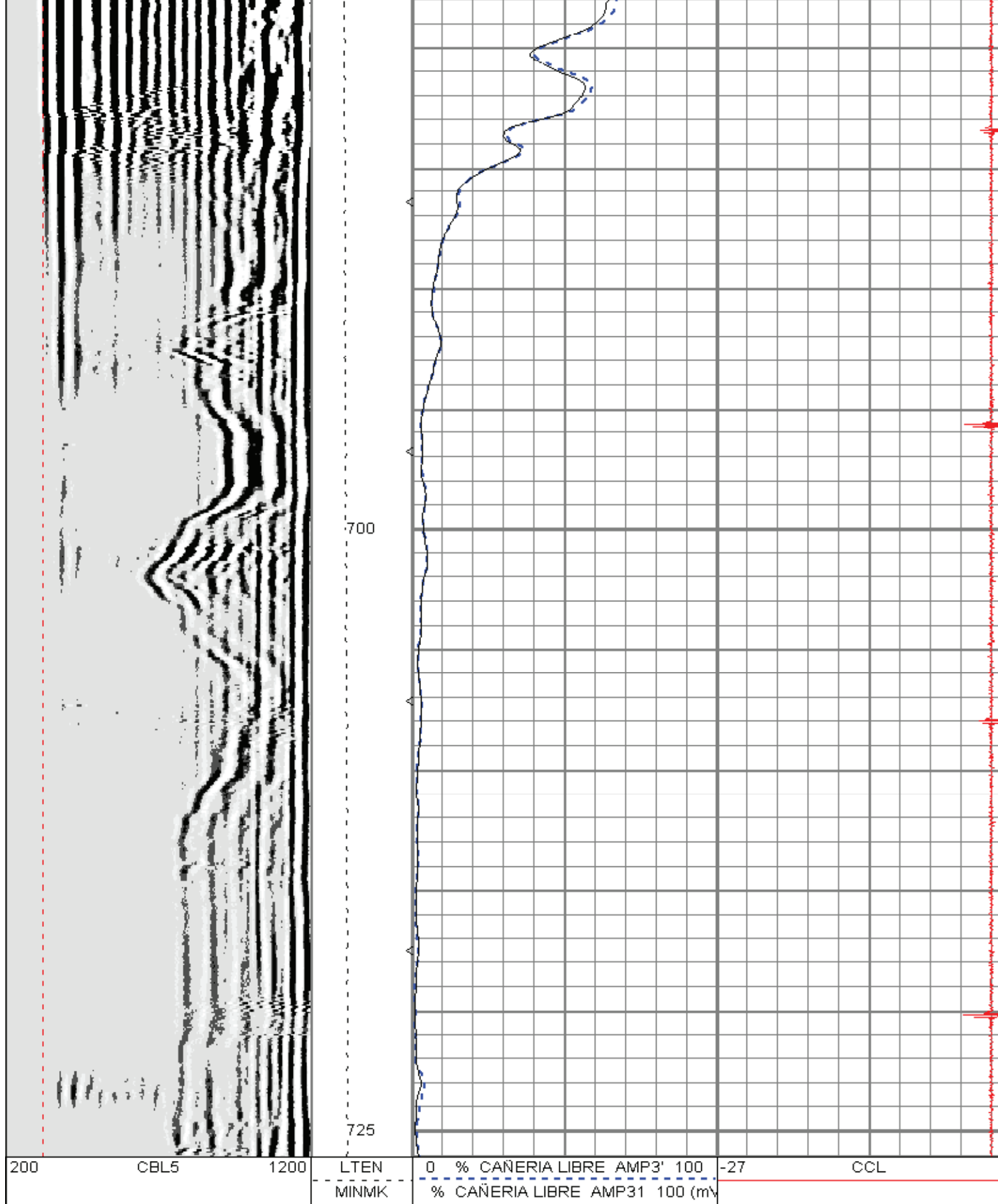




VERIFICACION TRAMO REPETIDO CBL

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 Charted by: Depth in Meters scaled 1:200

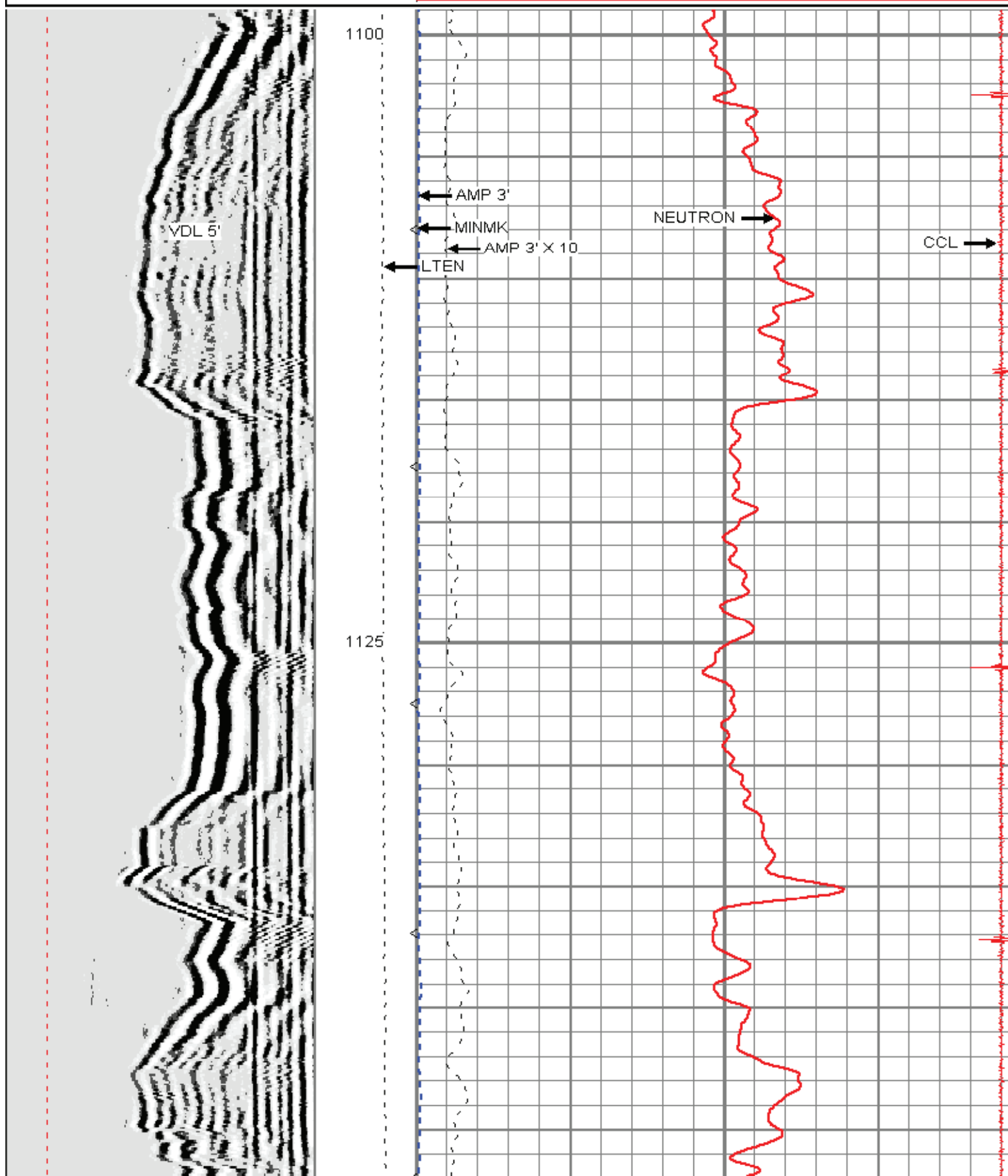


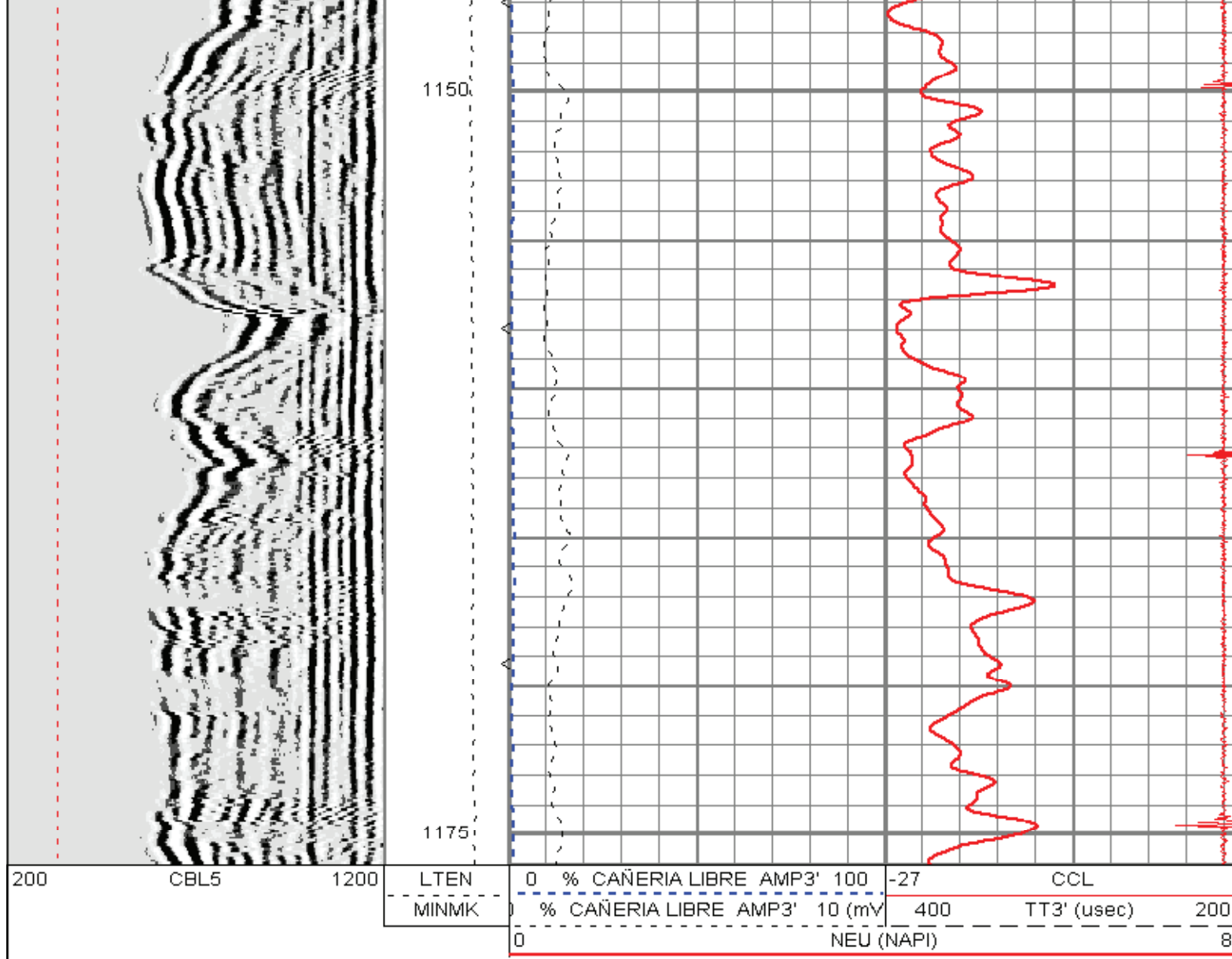


TRAMO REPETIDO NEUTRON

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Dataset Pathname: grimbeek/gbk924/291208/RN
Presentation Format: CBLYPF
Dataset Creation: Mon Dec 29 23:19:14 2008 by Log 6.2_B4
Charted by: Depth in Meters scaled 1:200

200	CBL5	1200	LTEN	0	% CAÑERIA LIBRE AMP3' 100	-27	CCL	
			MINMK	0	% CAÑERIA LIBRE AMP3' 10 (mV)	400	TT3' (usec)	200
				0	NEU (NAPI)			8

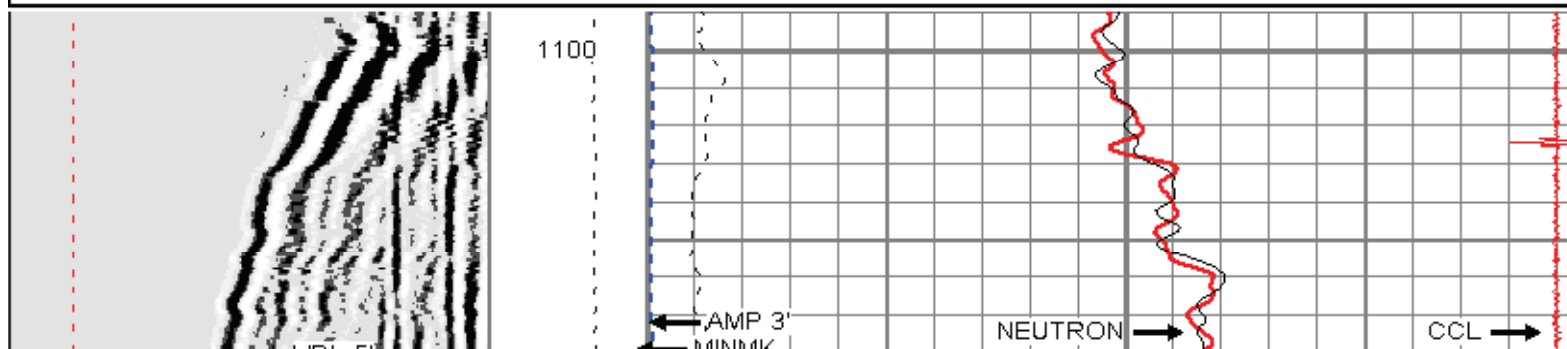




VERIFICACION TRAMO REPETIDO NEUTRON

Database File: gbk924.db
 Dataset Pathname: grimbeek/gbk924/291208/VRN
 Presentation Format: VCBLYPF
 Dataset Creation: Tue Dec 30 00:50:44 2008 by Calc 6.2_B4
 Charted by: Depth in Meters scaled 1:200

200	CBL5	1200	LTEN	0	% CAÑERIA LIBRE	AMP3'	100	-27	CCL
			MINMK	0	% CAÑERIA LIBRE	AMP3'	10 (mV)	400	TT3' (usec)
				0	NEU (NAPI)			200	8
				0	NEU1 (NAPI)			200	8



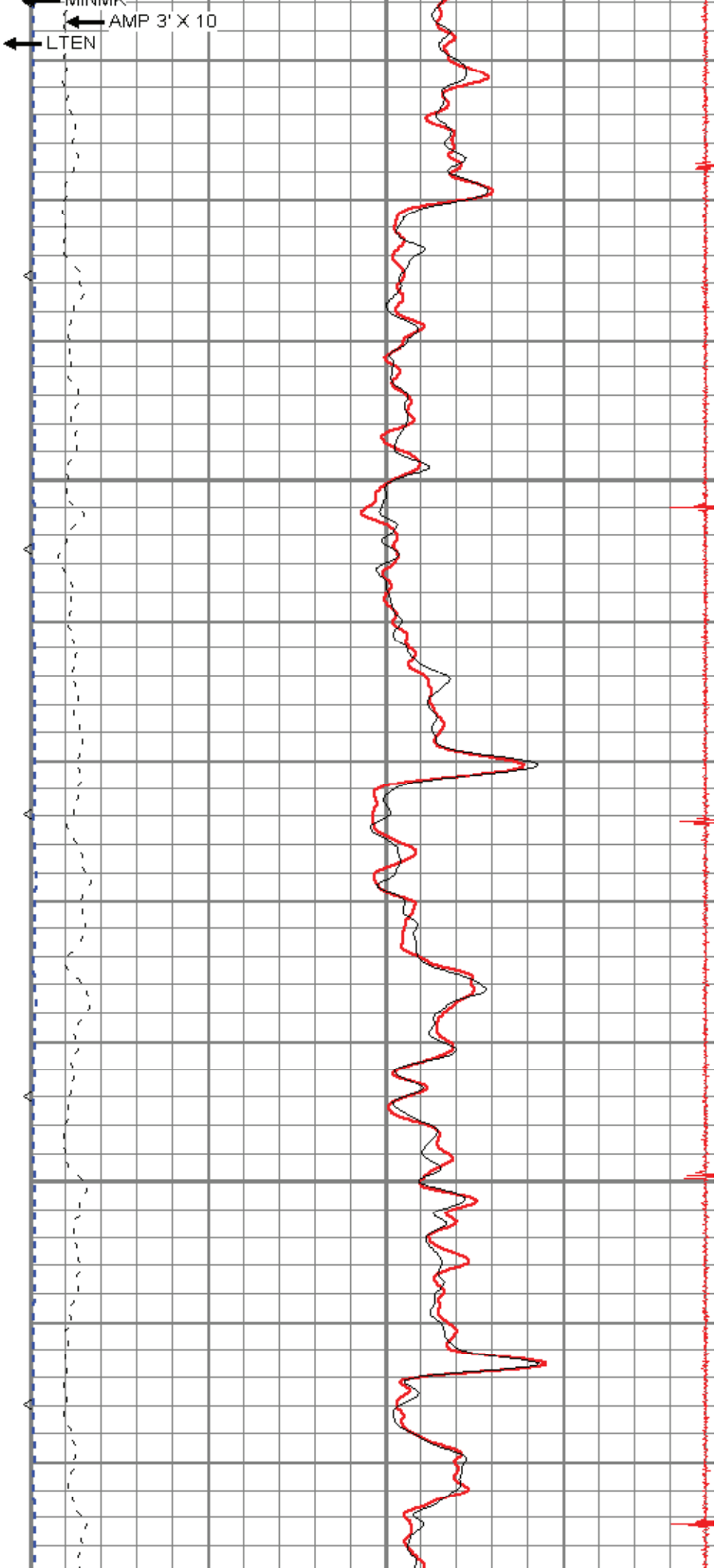
VDL 5'

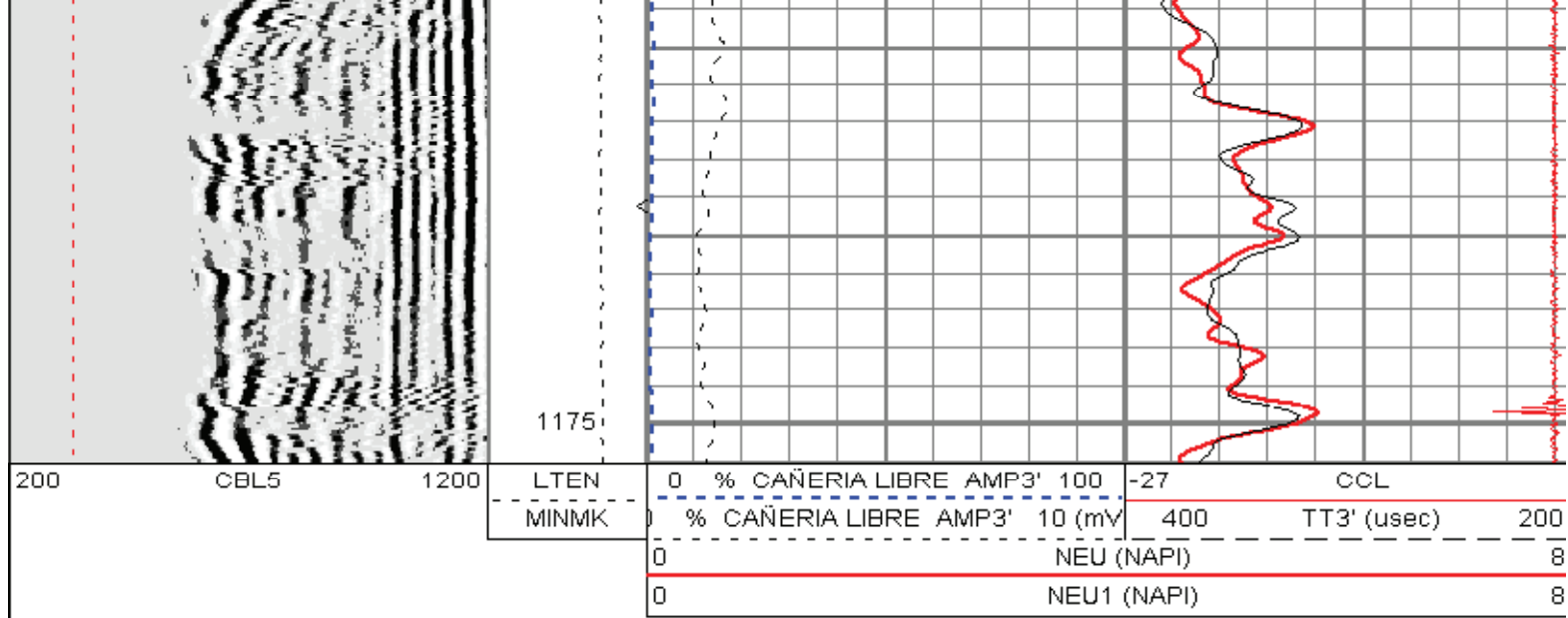
AMP 3' X 10

LTEN

1125

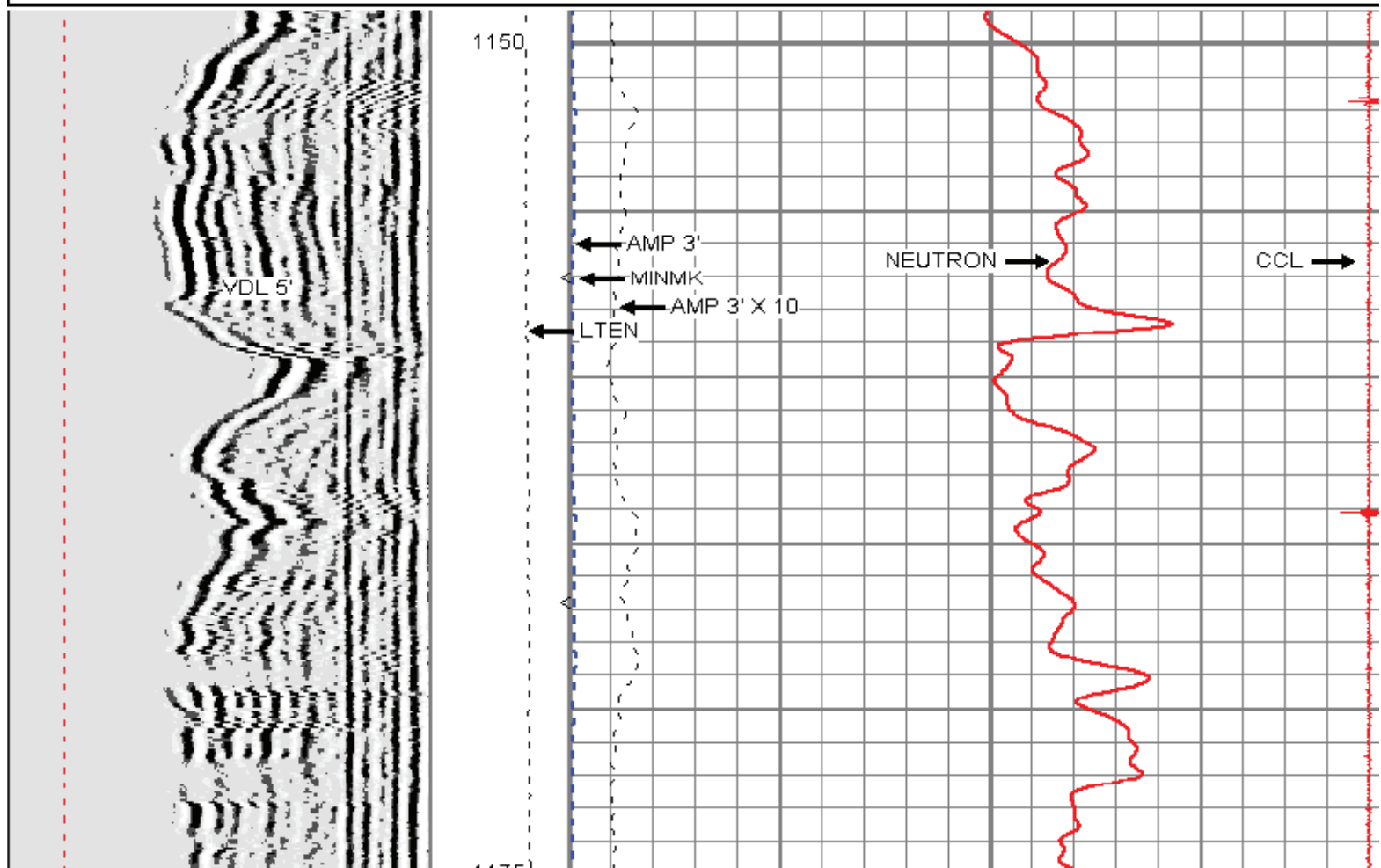
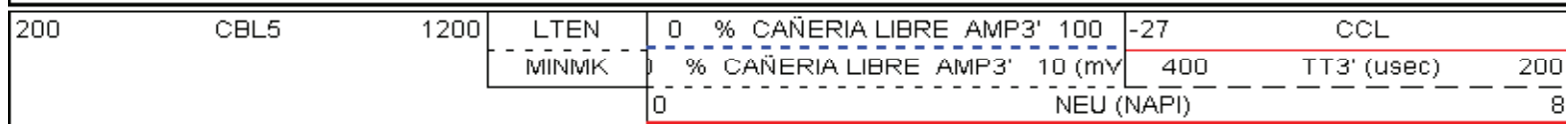
1150

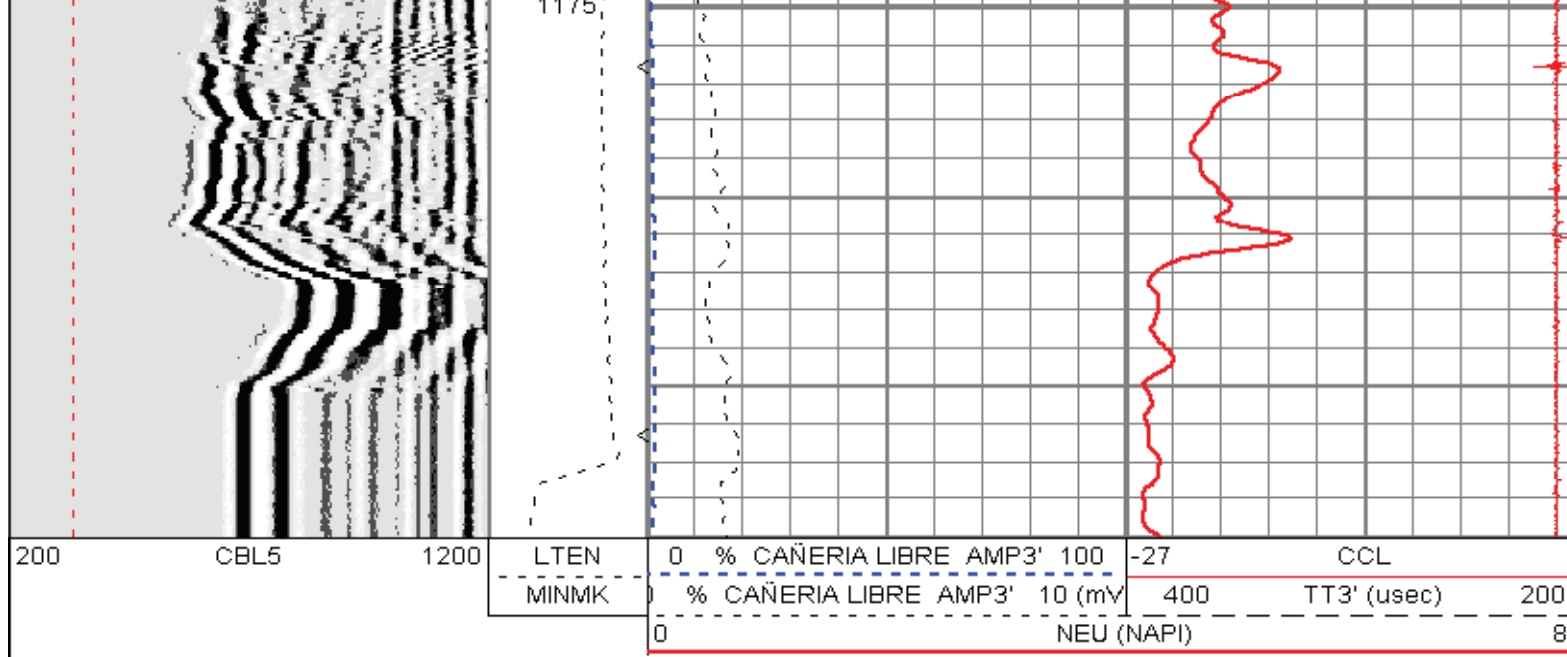




TRAMO SIN CORRELACIONAR

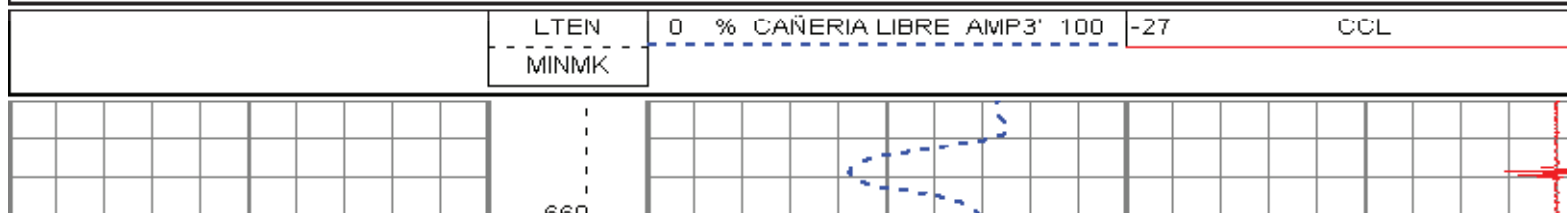
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 Dataset Creation: Mon Dec 29 23:09:51 2008 by Log 6.2_B4
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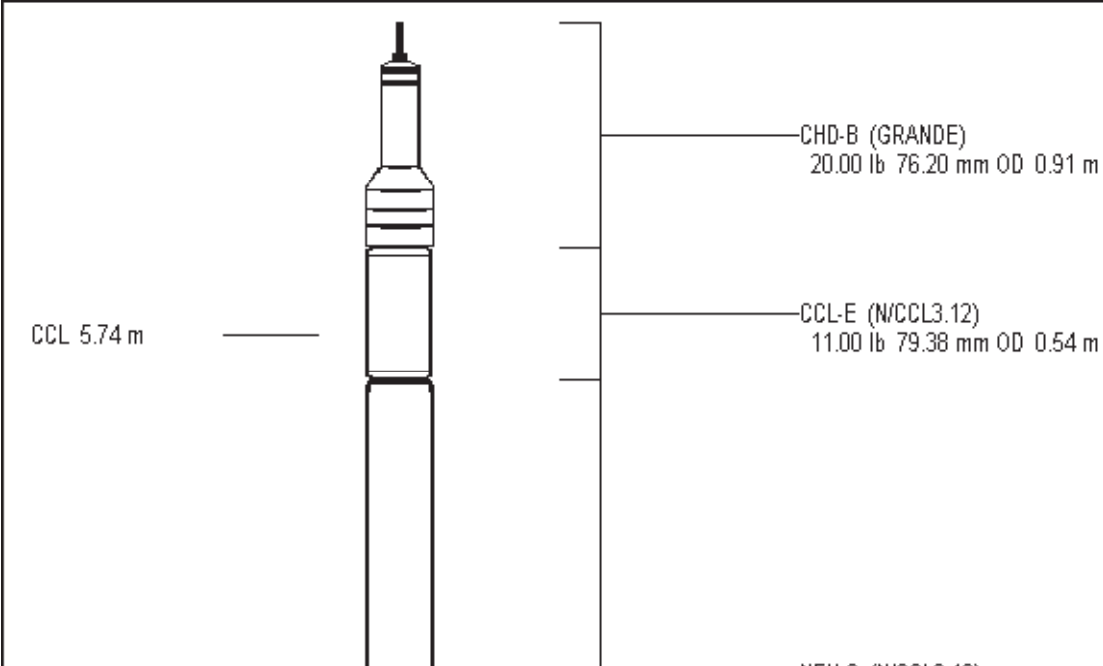
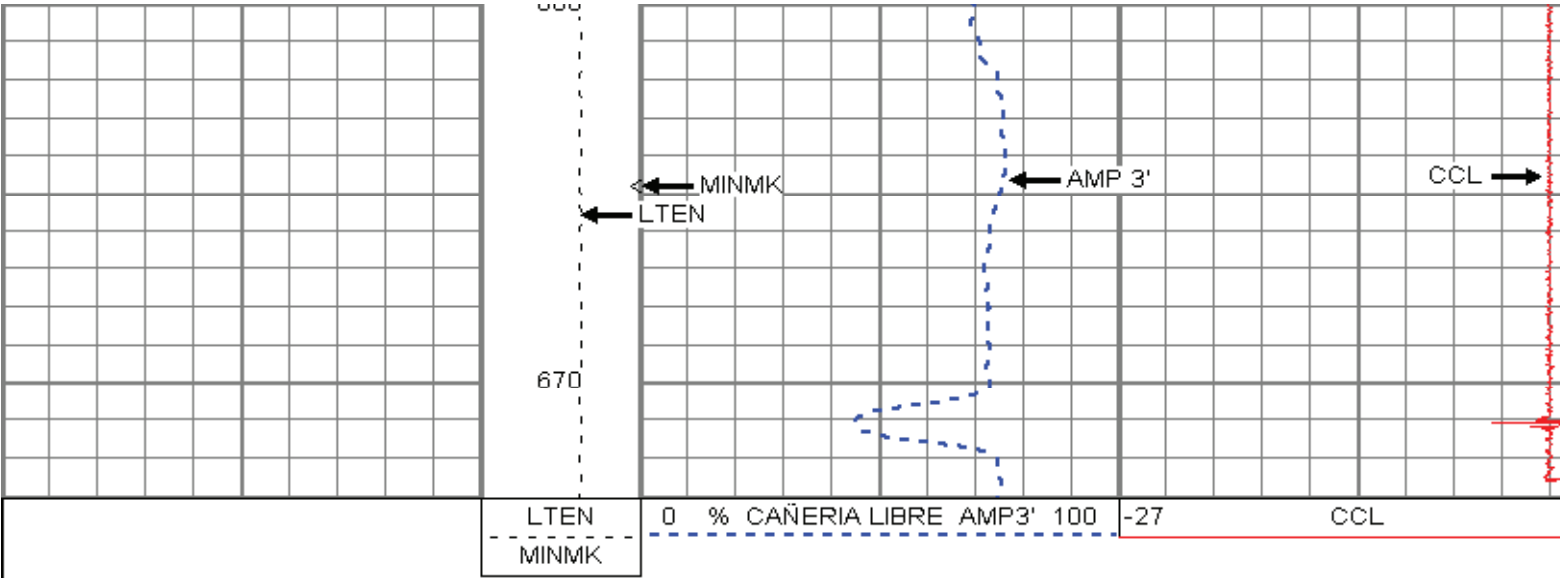




CALIBRACION

Database File: gbk924.db
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 Presentation Format: CAL
 Dataset Creation: Mon Dec 29 22:52:16 2008 by Log 6.2_B4
 Charted by: Depth in Meters scaled 1:200





20.00 lb 79.38 mm OD 2.38 m

NEU 3.74 m

TT3 1.99 m

WVF3 1.99 m

TT5 1.69 m

WVF5 1.69 m

MINMK 0.00 m

99.21 lb 79.38 mm OD 3.17 m

O.D. 79.38 mm