

LAKES OIL N.L.

Wombat 1

Wildcat

Hunt #2

Hunt #2

Country: **Australia**

Field: Wildcat			
Location: Seaspray			
Well: Wombat 1			
Company: LAKES OIL N.L			
HALS-BHC-PEX			
Field Print			
1:500 Scale			
LOCATION			
Seaspray		Elev.:	K.B. 14.65 m
Northing 5754818			G.L. 11 m
Easting 513889			D.F.
Permanent Datum:	Ground Level	Elev.:	11 m
Log Measured From:	Kelly Bushing	3.6 m	above Perm. Datum
Drilling Measured From:	Kelly Bushing		
State: Victoria	Max. Well Deviation 2.5 deg	Longitude 147° 09' 32" E	Latitude 38° 21' 16" S

[illegible]

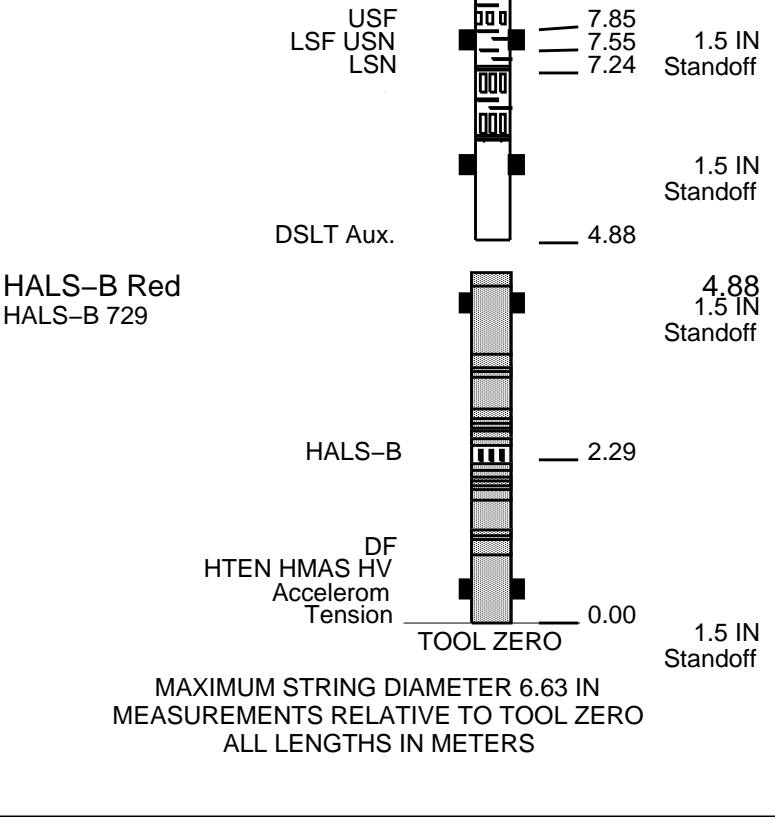
Logging Date	25-Dec-2003					
Run Number	1					
Depth Driller	1775 m					
Schlumberger Depth	1753.3 m					
Bottom Log Interval	1751 m					
Top Log Interval	1365.5 m					
Casing Driller Size @ Depth	9.625 in @ 1366 m					
Casing Schlumberger	1365.5 m					
Pit Size	8.500 in					
Type Fluid In Hole	KCL PHPA Polymer					
Density	1.222 g/cm3		49 s			
Fluid Loss	PH		9.5			
Source Of Sample	Pit					
IRM @ Measured Temperature	0.194 ohm.m @ 23 degC					
RMF @ Measured Temperature	0.156 ohm.m @ 23 degC					
RMC @ Measured Temperature	0.208 ohm.m @ 23 degC					
Source RMF	RMC		Press			
IRM @ MRT	RMF @ MRT		@		@	
Maximum Recorded Temperatures	64 degC		64			
Circulation Stopped	Time		18:30			
Logger On Bottom	Time		2:40			
Unit Number	Location		3134 QEA			
Recorded By	Neil Van Geest					
Witnessed By	David Horner					

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

RUN 1 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:			RUN 2 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION	
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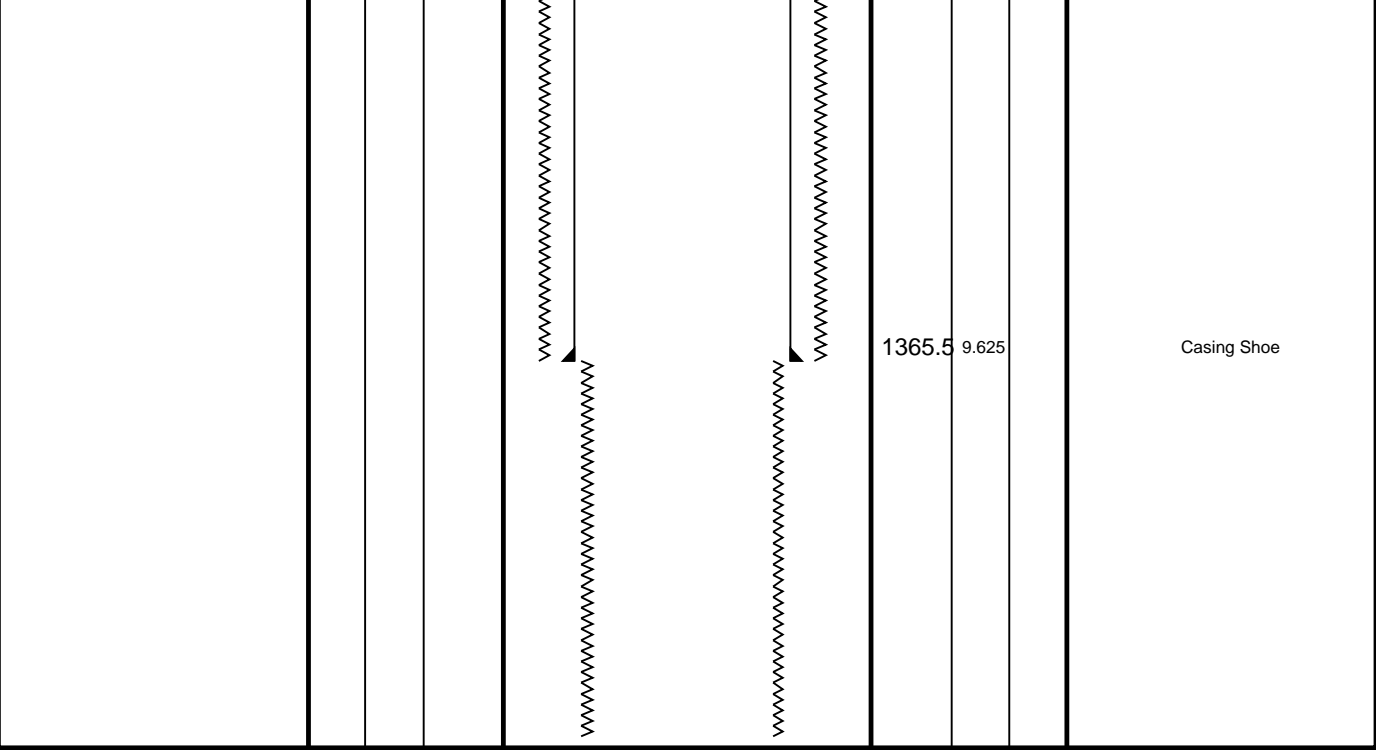
RUN 1		RUN 2	
SURFACE EQUIPMENT LCM-AA GSR-U/Y 2001 NCT-B 2033 CNB-AB			
DOWNHOLE EQUIPMENT			
BSP Red			43.37
BRT-S 11			
	SP SPARC		23.53
LEH-QT Red			18.99
LEH-QT 1183			
	CTEM		17.82
	HGNS HTEM		
DTC-H Red	HMCA		17.19
ECH-KC 9321	TelStatus		17.19
DTCH0-A 8244	ToolStatu		
HILTB-FTB Red	Gamma-Ray		16.96
HGNSD-B 890			17.19
HMCA 737			
HGNH 890			
NLS-KL			
NSR-F 5051	Neutron F		15.18
HACCZ 890	Neutron N		15.03
HCNT 890			
HGR 890	HGNS sens		14.32
HRCC-B 756			
HRMS-B 1730			
HRGD 755	HRCC cart		13.10
GLS-VJ 1893			
MCFL Device 755			
HILT Nucl. LS	MCFL		11.44
HILT Nucl. SS	HILT cali		11.30
HILT Nucl. BS	HRDD-LS		
BOW-SPR	HRDD-SS		
NPV-N 5051	HRDD-BS		11.18
DSLT-H Green			10.59
DSLH-H 8223			
ECH-KH 8273			
SLS-C 163			
			1.5 IN Standoff



Client: Lakes Oil N.L
Well: Wombat 1
Field: Wildcat
State: Victoria
Country: Australia

Rig Name: Hunt #2
Reference Datum: Kelly Bushing
Elevation: 14.7 m

Production String	(in)		(m)	Well Schematic			(m)	(in)		Casing String	
	OD	ID	MD				MD	OD	ID		
							0.0	9.625		Casing String Borehole Segment	
							0.0	12.250			



**Nuclear 1:500 Scale
High Resolution**

MAXIS Field Log

Company: LAKES OIL N.L. Well: Wombat 1

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_016LUP	FN:20	PRODUCER	25-Dec-2003 02:34	1753.7 M	1341.9 M
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Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_049PUP	FN:67	PRODUCER	25-Dec-2003 10:22	1754.4 M	1354.4 M
CUSTOMER	HALS_SONIC_TLD_MCFL_049PUC	FN:68	CUSTOMER	25-Dec-2003 10:22	1754.4 M	1354.4 M

Integrated Hole/Cement Volume Summary

Hole Volume = 25.13 M3
Cement Volume = 15.50 M3 (assuming 7.00 IN casing O.D.)
Computed from 1753.2 M to 1365.5 M using data channel(s) HCAL

HALS-B 11C0-305
HILTB-FTB 11C0-305
BSP 11C0-305

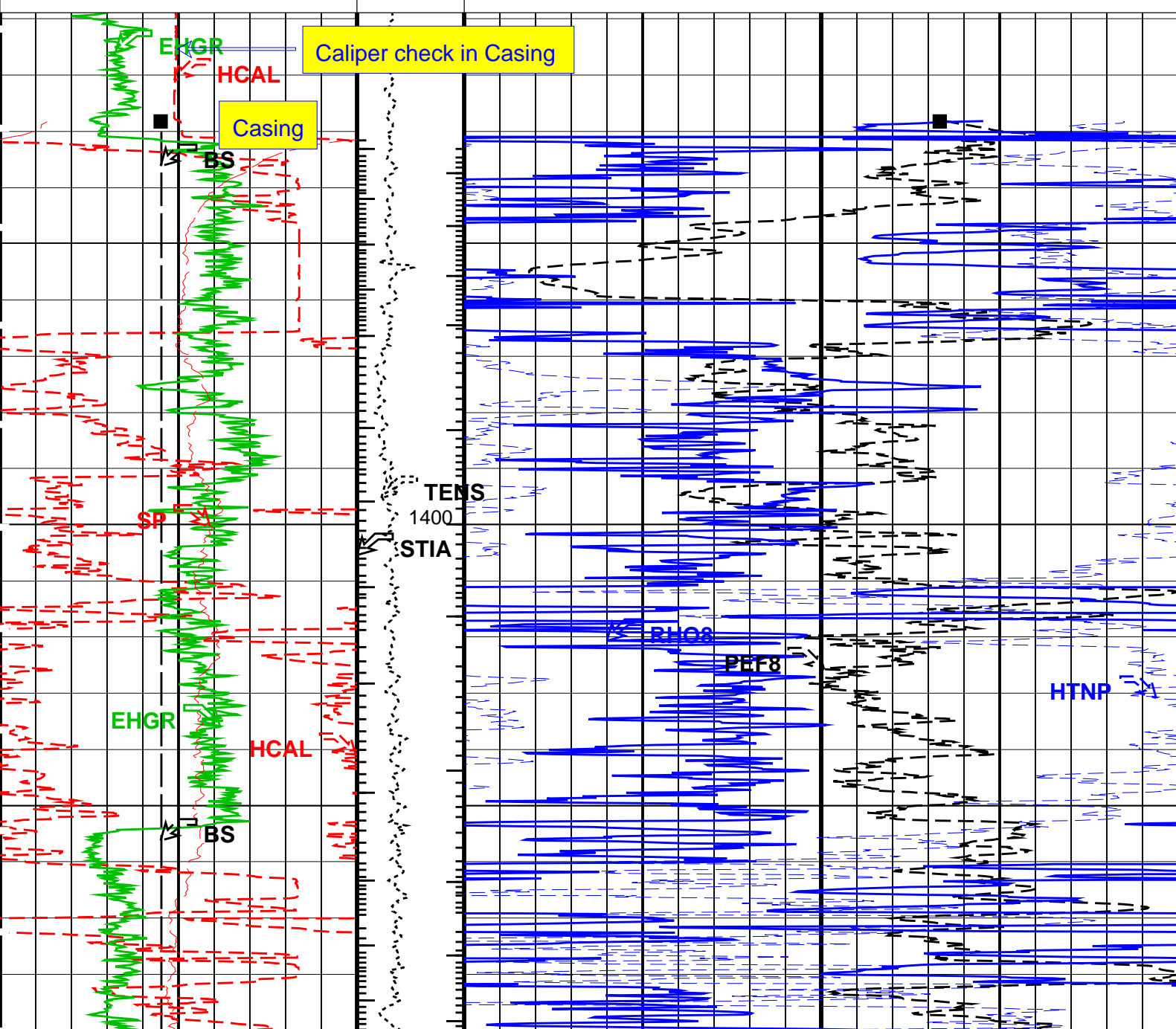
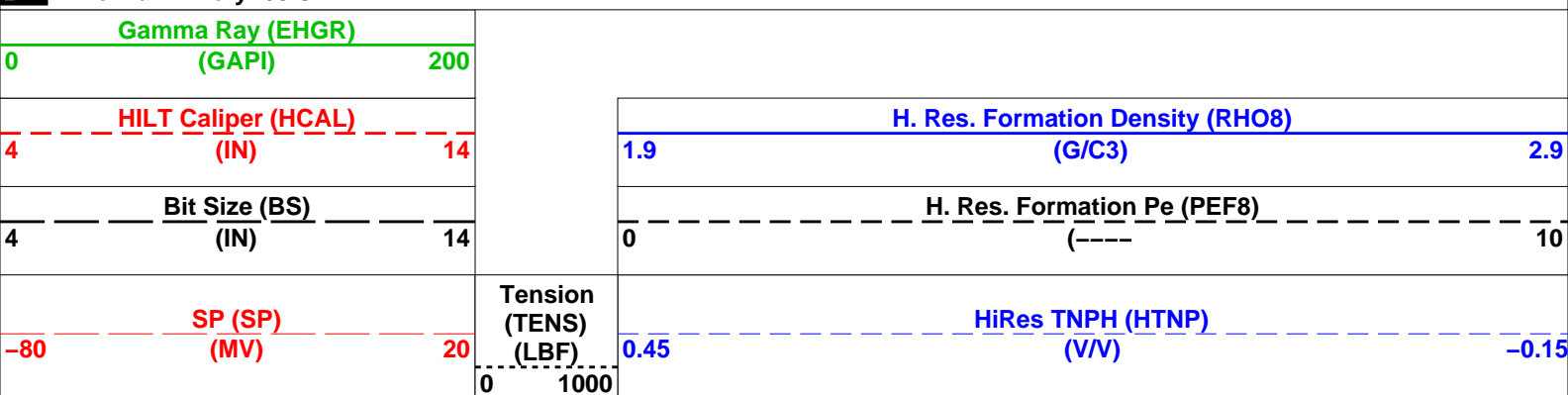
DSLT-H
DTC-H

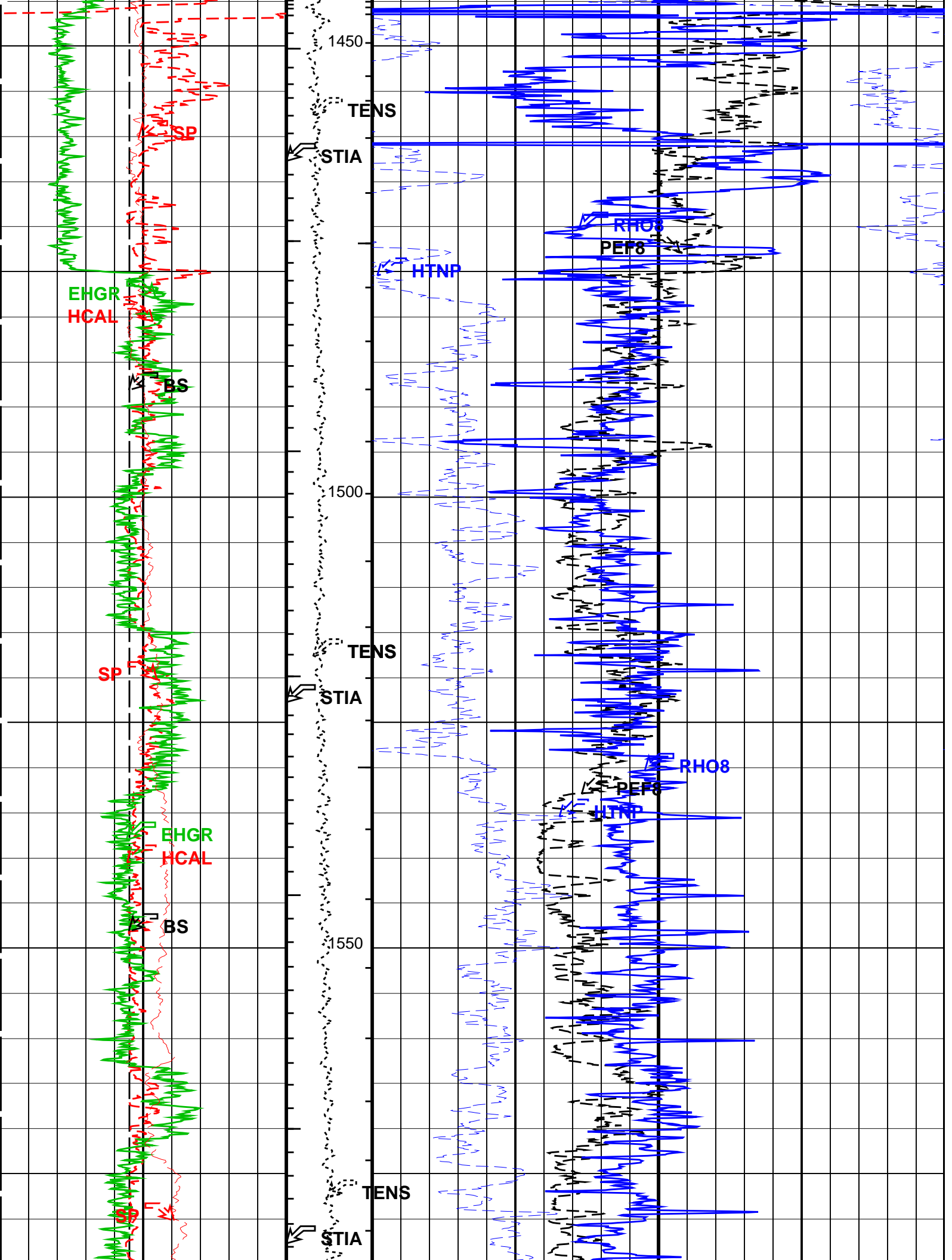
OP11-KP1
11C0-305

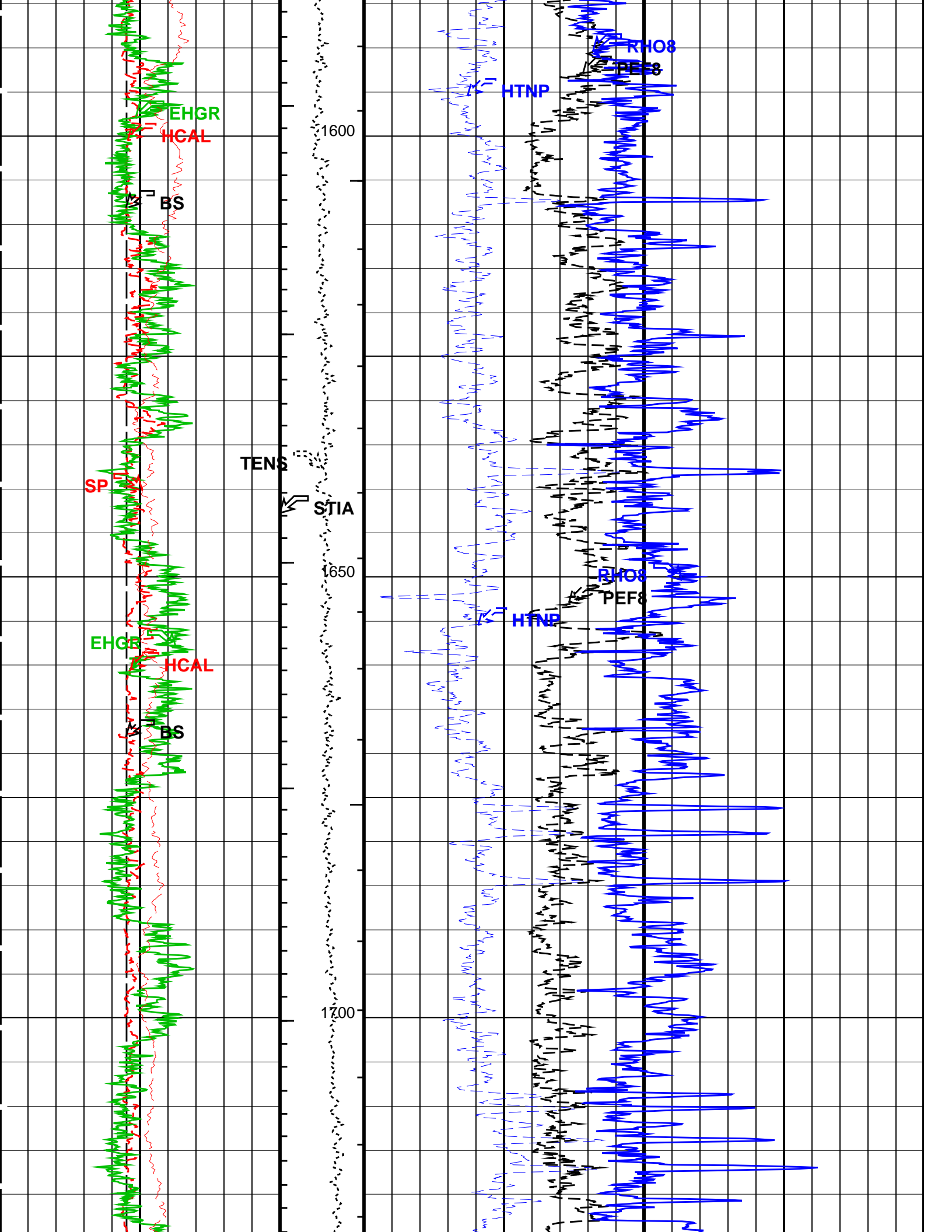
PIP SUMMARY

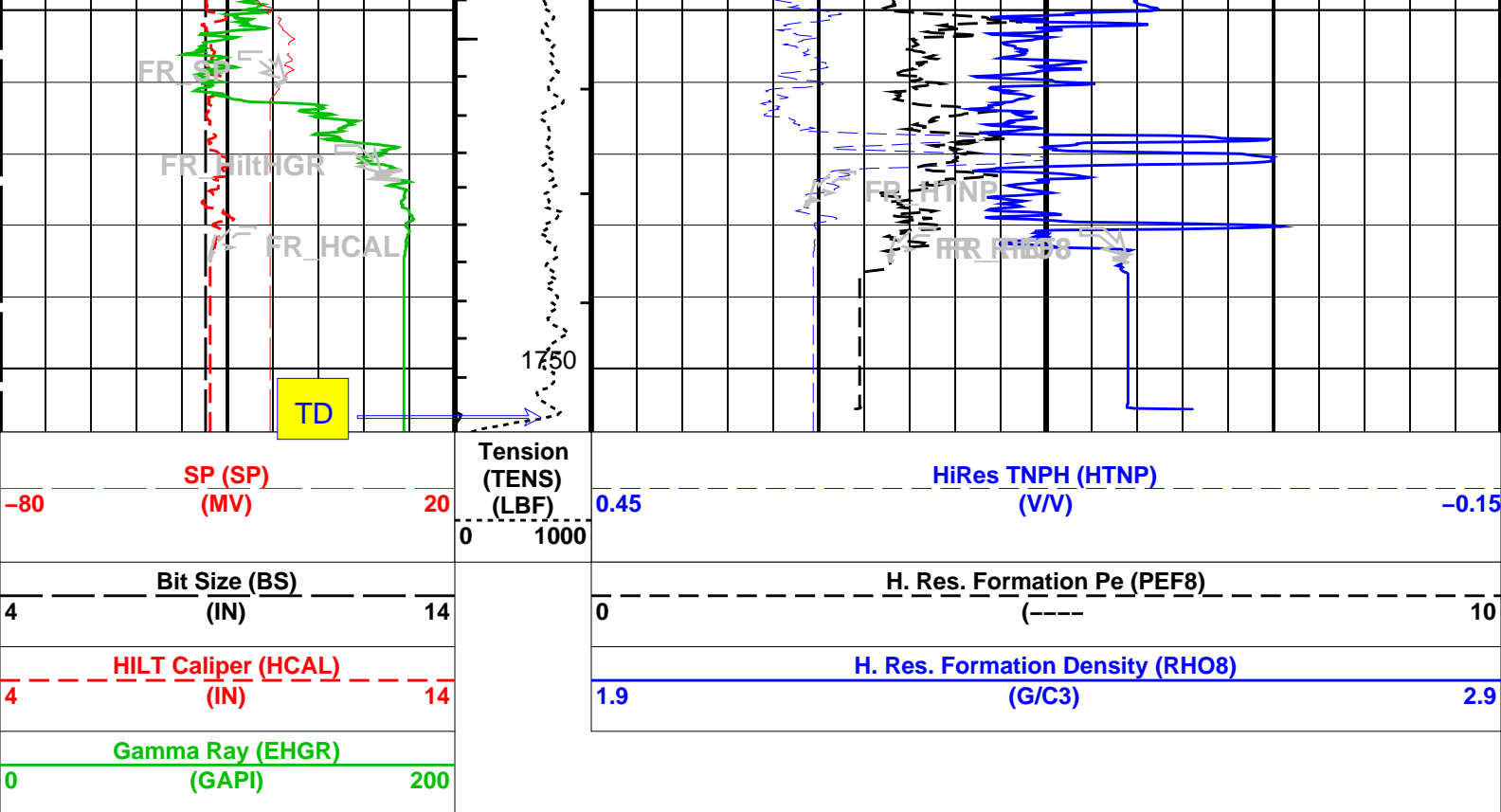
- └ Integrated Hole Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
 - └ Integrated Cement Volume Minor Pip Every 0.1 M3
 - └ Integrated Cement Volume Major Pip Every 1 M3

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
HALS-B: HILT Azimuthal Laterolog Sonde B		
A2EX	HALS Type of Image	Conductivities
AGOS	HALS-B A2 Extended (Groningen effect)	OFF
ARIP_LTS	HALS-GPIT OFFSET	-90 IN
ARIP_SHOULDER	HALS Long Tool String Correction	OFF
BHCC	HALS Shoulder Correction	OFF
BHS	HALS Borehole Correction	ON
BHT	Borehole Status	OPEN
DHOP	Bottom Hole Temperature (used in calculations)	64.4445 DEGC
	Diameter & Eccentering used in HALS Borehole Corrections	Caliper_Eccentered
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	0
GGRD	Geothermal Gradient	0.018227 DEG
GRCC	HALS Groningen Correction	OFF
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
HLAC	HALS-B Loop A Coefficient	LOW
HLMO	HALS Logging Mode	HIRES
HMSO	HALS Mechanical Standoff	1.5 IN
HRUN	HALS-B Record Uncalibrated Channels	NO
IMOS	HALS Image Orientation	OFF
LIMP	HALS Left Image Processing	DeepRaw
LOP1	HALS-B Mode 1 Loop Mode	OFF
LOP2	HALS-B Mode 2 Loop Mode	OFF
LOP3	HALS-B Mode 3 Loop Mode	OFF
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
RIMP	HALS Right Image Processing	ShallowRaw
RTCOMP	HALS Rt Computation	Hals_Highres
RTRE	HALS Resistivity Threshold	100000 OHMM
SHT	Surface Hole Temperature	49 DEGC
SPCO	HALS-B Special Power Connection	OFF
TCOR	HALS TLC Correction	OFF
UNSPK	HALS Despiking Filter Option	OFF
UNSPK_THOLD	HALS Despiking Filter Threshold (in %)	20 %
UNSPK_WINDOW	HALS Despiking Filter Window (inches)	6 IN

DSLCT-FTB High resolution Integrated Logging Tool-Logging Tool		DSLCT_FTB	
AGC	Telemetry Mode	SDDB	
AMSG	DSLCT Firing Mode	ON	
BILI	Automatic Gain Control Status	140	US
CBAF	Auxiliary Minimum Sliding Gate	0.8	
CBCF	Bond Index Level for Zone Isolation	1	
CBLG	CBL Adjustment Factor	1.6	
CDTS	CBL Correction Factor	45	US
CSTR	CBL Gate Width	100	US/F
DDEL	C-Delta-T Shale	0	KPAA
DETE	Compressive Strength of Cement	0	US
DFAD	Digitizing Delay	E2	
DIVL	Delta-T Detection	HOST	
DRCS	Digital First Arrival Detection Switch	20	
DSIN	DSLCT Depth Sampling Interval	180	
DTCM	DSLCT DLIS Recording Size	10	
DTF	Digitizing Sample Interval	FULL	
DTFS	Delta-T Computation Mode	189	US/F
DTM	Delta-T Fluid	396	
DWCO	DSLCT Telemetry Frame Size	56	US/F
FCF	Delta-T Matrix	180	
GAI	Digitizing Word Count	1	
GOBO	CBL Fluid Compensation Factor	40	
ITTS	Manual Gain	2	MV
MAHTR	Good Bond	DT	
MCI	Integrated Transit Time Source	120	
MGAI	Manual High Threshold Reference	4.51523	M
MIGA	Minimum Cemented Interval for Isolation	60	
MNHTR	Maximum Gain	1	
MODE	Minimum Gain	100	
MSA	Minimum High Threshold Reference	SDDB	
NMSG	Sonic Firing Mode	13.5046	MV
NMXG	Minimum Sonic Amplitude	140	US
NUMP	Near Minimum Sliding Gate	970	US
RATE	Near Maximum Sliding Gate	2	
RDFA	Number of Detection Passes	R15	
SDTH	Firing Rate	OFF	
SFAF	Reset DFAD	20000	
SGAD	Switch Down Threshold	10	DB/M
SGAI	Sonic Formation Attenuation Factor	ON	
SGCL	Sliding Gate Status	AUTO	
SGCW	Selectable Acquisition Gain	140	US/F
SGDT	Sliding Gate Closing Delta-T	25	US
SGW	Sliding Gate Closing Width	40	US/F
SLEV	Sliding Gate Delta-T	110	US
SPFS	Sliding Gate Width	5000	
SPSO	Signal Level for AGC	RAYMER_HUNT	
SUTH	Sonic Porosity Formula	DT	
VDLG	Sonic Porosity Source	1000	
WAGC	Switch Up Threshold	40	
WGAJ	VDL Manual Gain	OFF	
WGDT	Waveform AGC Allow/Disallow	20	
WGIN	Waveform Manual Gain	240	US/F
WMOD	Waveform Gain Delta-T	2540	US
	Waveform Gain Interval	FULL	
	Waveform Firing Mode		
HILTB-FTB: High resolution Integrated Logging Tool-DTS			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Borehole Status	64.4445	DEGC
BSCO	Bottom Hole Temperature (used in calculations)	YES	
CCCO	Borehole Salinity Correction Option	NO	
DHC	Casing & Cement Thickness Correction Option	BS	
DPPM	Density Hole Correction	HIRS	
EXSICL	Density Porosity Processing Mode	20	
EXSISH	External Shale Indicator Clean Value	150	
FD	External Shale Indicator Shale Value	1	G/C3
FEXP	Fluid Density	2	
FNUM	Form Factor Exponent	1	
FPHI	Form Factor Numerator	DPHZ	
FSAL	Form Factor Porosity Source	-50000	PPM
FSCO	Formation Salinity	NO	
GCSE	Formation Salinity Correction Option	HCAL	
GDEV	Generalized Caliper Selection	0	DEG
GGRD	Average Angular Deviation of Borehole from Normal	0.018227	DC/M
GRSE	Geothermal Gradient	HALS_RESIST	
GTSE	Generalized Mud Resistivity Selection	LINEAR_ESTIMATE	
HACPP	Generalized Temperature Selection	PRESENT_FILE	
HART	Accelerometer PROM Presence	20	DEGC
HDCOD	Accelerometer Reference Temperature	2	G/C3
HDSAD	HILT Density Coal detection	2.1	G/C3
HILT_GAS_DENSITY	HILT Density Salt detection	0	G/C3
HILT_GAS_OPTION	HILT Gas Downhole Density	OFF	
HNCOD	HILT Gas Computation Option	45	PU
HNSAD	HILT Neutron Coal detection	5	PU
HRUECHT	HILT Neutron Salt detection	5	PU
	HILT Neutron Density Cutoff	5	PU

HPHIECUT	HILT effective Porosity Cutoff	5	PU
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSWCUT	HILT Water Saturation from AITH cutoff	50	%
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MDEN	Matrix Density	2.65	G/C3
MHC0	MCFL B0 Contrast Correction Coefficient	2.2e-005	OHMS
MHC1	MCFL B1 Contrast Correction Coefficient	3.2e-005	OHMS
MHCC	MCFL High Contrast Correction Switch	NO	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	YES	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	BARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PHIMAX	HILT max porosity	35	PU
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SEXP_HILT	HILT Saturation Exponent	2	
SHT	Surface Hole Temperature	49	DEGC
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	64.4445	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	HALS_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	49	DEGC
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	1775.00	M
TDL	Total Depth - Logger	1753.30	M
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	35000.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	36.00	LB/F
DFD	Drilling Fluid Density	1.22	G/C3
DO	Depth Offset for Playback	0.7	M
DORL	Depth Offset for Repeat Analysis	0.0	M
MST	Mud Sample Temperature	23.20	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.1558	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	1753.3	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: Nuclear_500 Vertical Scale: 1:500 Graphics File Created: 25-Dec-2003 10:22

OP System Version: 11C0-305

MCM

HALS-B	11C0-305	DSLT-H	OP11-KP1
HILTB-FTB	11C0-305	DTC-H	11C0-305
BSP	11C0-305		

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_016LUP	FN:20	PRODUCER	25-Dec-2003 02:34	1753.7 M	1341.9 M
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Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_049PUP	FN:67	PRODUCER	25-Dec-2003 10:22
CUSTOMER	HALS_SONIC_TLD_MCFL_049PUC	FN:68	CUSTOMER	25-Dec-2003 10:22

MAXIS Field Log

Company: LAKES OIL N.L

Well: Wombat 1

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_016LUP	FN:20	PRODUCER	25-Dec-2003 02:34	1753.7 M	1341.9 M
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Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_049PUP	FN:67	PRODUCER	25-Dec-2003 10:22	1754.4 M	1354.4 M
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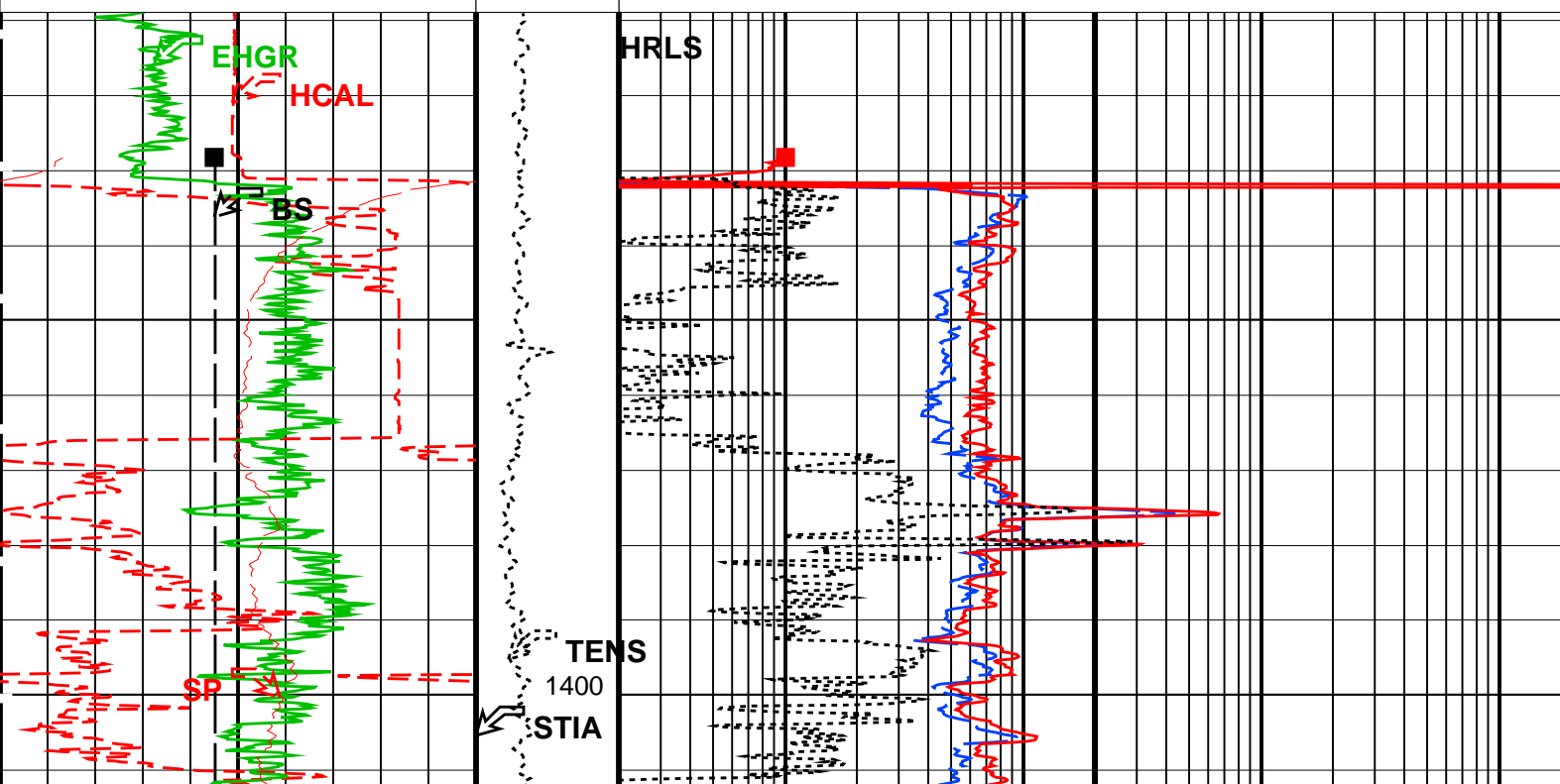
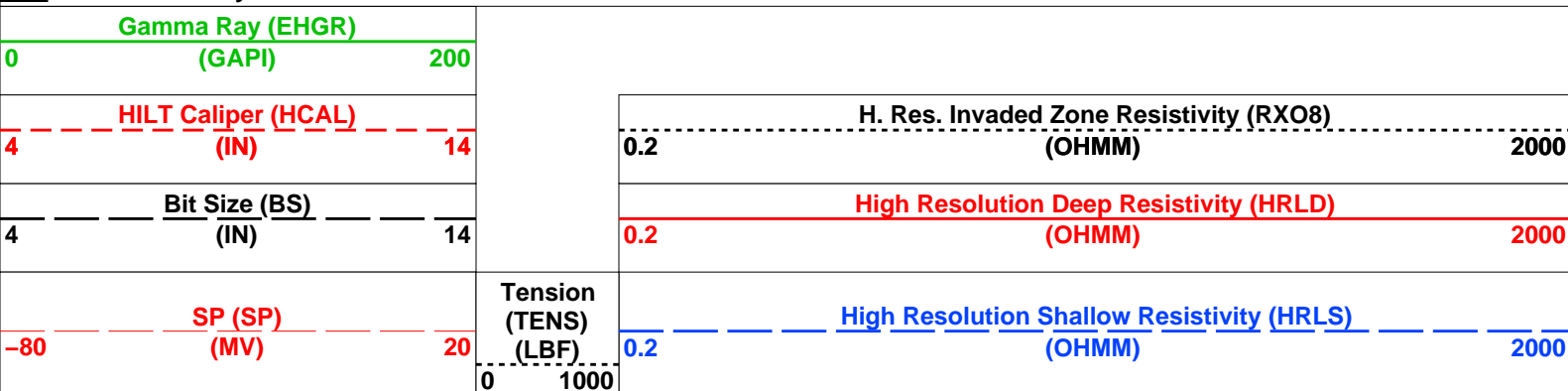
OP System Version: 11C0-305

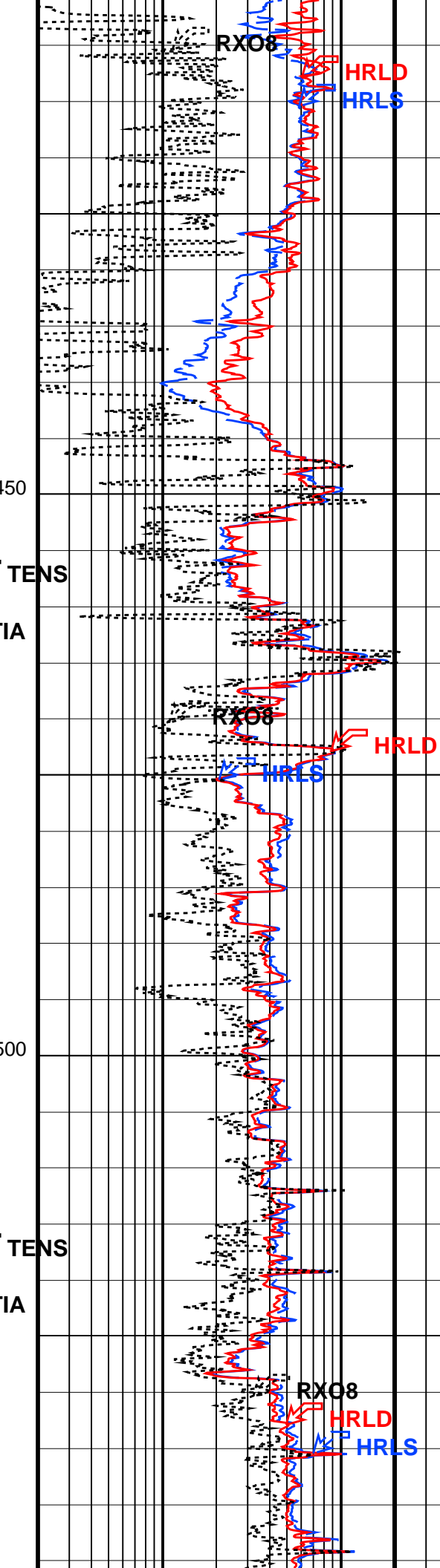
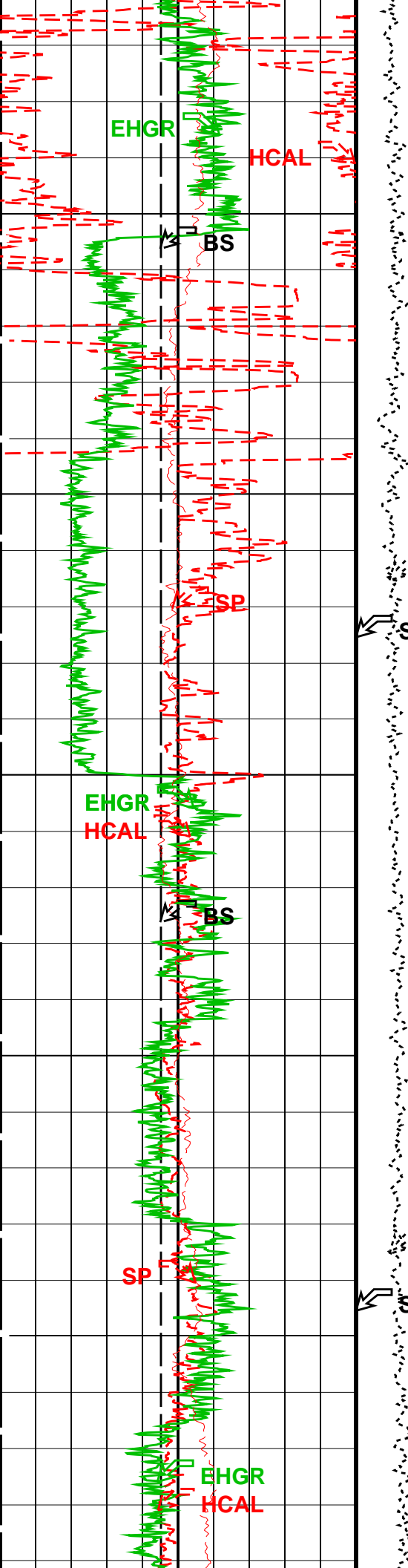
MCM

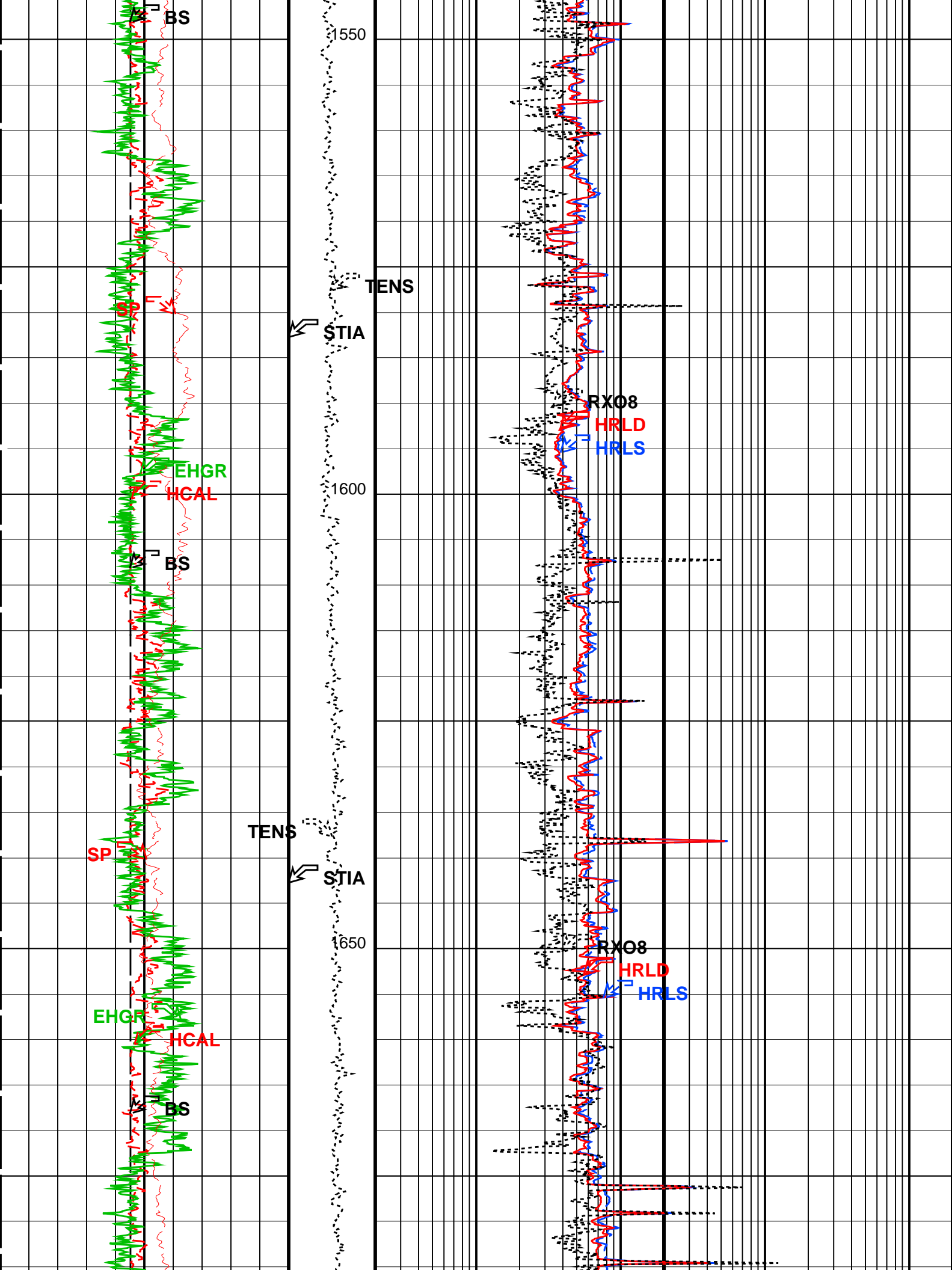
HALS-B	11C0-305	DSLT-H	OP11-KP1
HILTB-FTB	11C0-305	DTC-H	11C0-305
BSP	11C0-305		

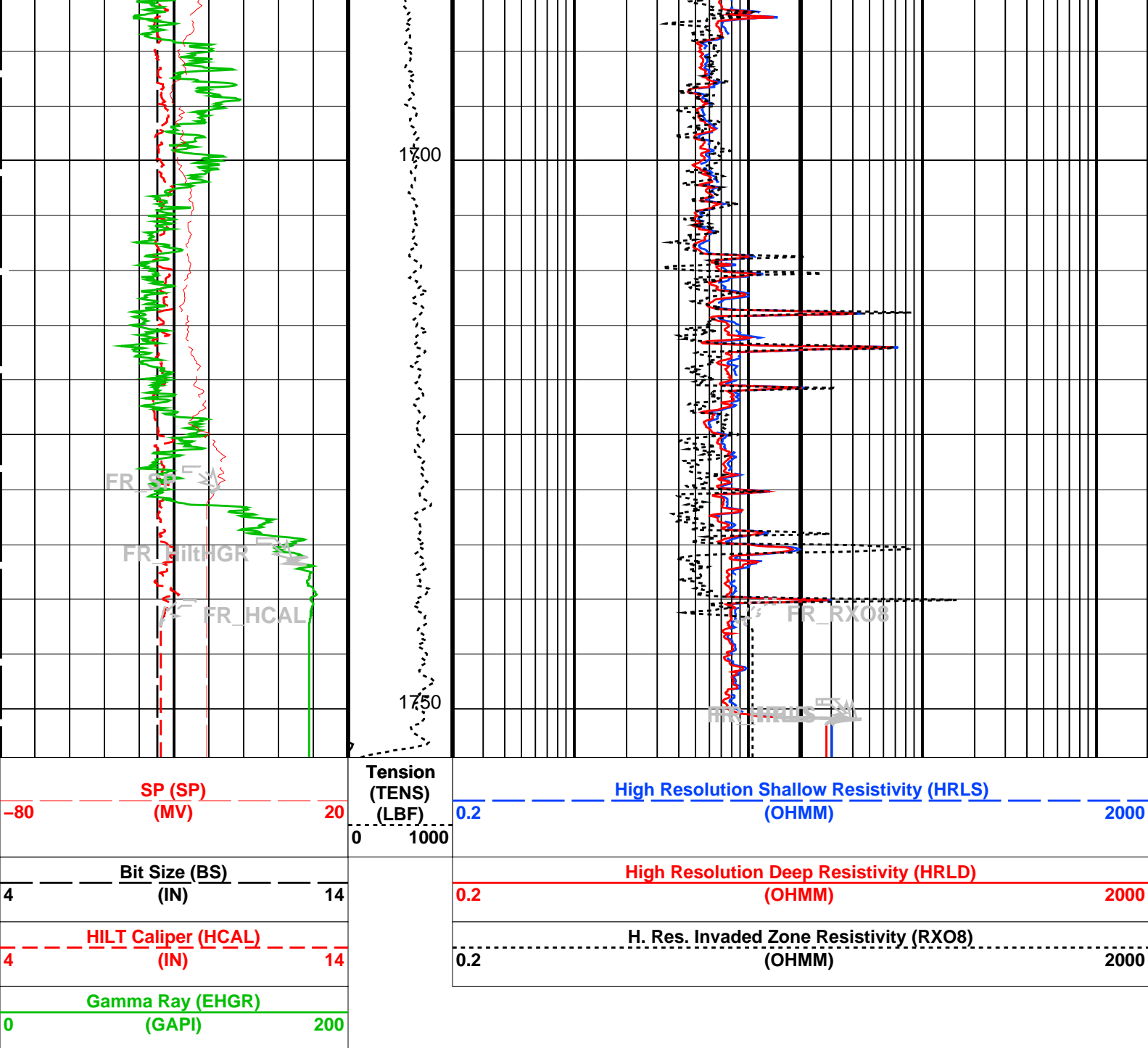
PIP SUMMARY

Time Mark Every 60 S









PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HALS-B: HILT Azimuthal Laterolog Sonde B			
ARIP_LTS	HALS Long Tool String Correction	OFF	
ARIP_SHOULDER	HALS Shoulder Correction	OFF	
BHCC	HALS Borehole Correction	ON	
BHT	Bottom Hole Temperature (used in calculations)	64.4445	DEGC
DHOP	Diameter & Eccentering used in HALS Borehole Corrections	Caliper_Eccentered	
GCSE	Generalized Caliper Selection	HCAL	
GRCC	HALS Groningen Correction	OFF	
HMSO	HALS Mechanical Standoff	1.5	IN
TCOR	HALS TLC Correction	OFF	
UNSPK	HALS Despiking Filter Option	OFF	
UNSPK_THOLD	HALS Despiking Filter Threshold (in %)	20	%
UNSPK_WINDOW	HALS Despiking Filter Window (inches)	6	IN
HILTB-FTB: High resolution Integrated Logging Tool-DTS			
BHT	Bottom Hole Temperature (used in calculations)	64.4445	DEGC
GCSE	Generalized Caliper Selection	HCAL	
MPOF	MCFL Processing Operation Mode	ON	

NMT	HILT Nuclear Mud Type	BARITE	
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
HOLEV: Integrated Hole/Cement Volume			
BHT	Bottom Hole Temperature (used in calculations)	64.4445	DEGC
GCSE	Generalized Caliper Selection	HCAL	
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth – Driller	1775.00	M
TDL	Total Depth – Logger	1753.30	M
System and Miscellaneous			
BS	Bit Size	8.500	IN
DFD	Drilling Fluid Density	1.22	G/C3
DO	Depth Offset for Playback	0.7	M
DORL	Depth Offset for Repeat Analysis	0.0	M
MST	Mud Sample Temperature	23.20	DEGC
PP	Playback Processing	RECOMPUTE	
Format: Resistivity_500 Vertical Scale: 1:500 Graphics File Created: 25-Dec-2003 10:22			

OP System Version: 11C0-305

MCM

HALS-B	11C0-305	DSLT-H	OP11-KP1
HILTB-FTB	11C0-305	DTC-H	11C0-305
BSP	11C0-305		

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_016LUP FN:20	PRODUCER	25-Dec-2003 02:34	1753.7 M	1341.9 M
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Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_049PUP FN:67	PRODUCER	25-Dec-2003 10:22		
CUSTOMER	HALS_SONIC_TLD_MCFL_049PUC FN:68	CUSTOMER	25-Dec-2003 10:22		

Schlumberger

Sonic 1:500 Scale

MAXIS Field Log

Company: LAKES OIL N.L. Well: Wombat 1

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_016LUP FN:20	PRODUCER	25-Dec-2003 02:34	1753.7 M	1341.9 M
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Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_049PUP FN:67	PRODUCER	25-Dec-2003 10:22	1754.4 M	1354.4 M
CUSTOMER	HALS_SONIC_TLD_MCFL_049PUC FN:68	CUSTOMER	25-Dec-2003 10:22	1754.4 M	1354.4 M

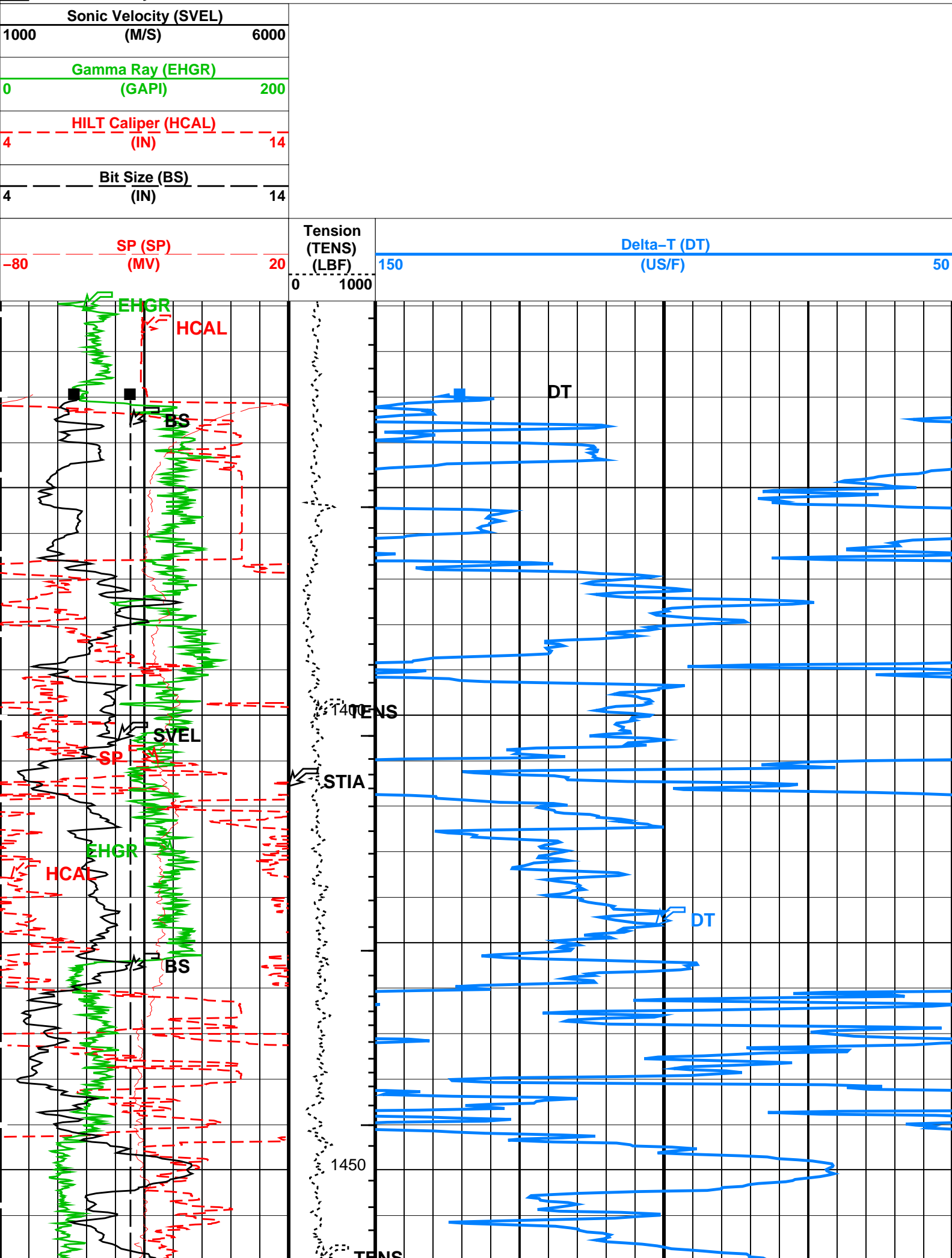
OP System Version: 11C0-305

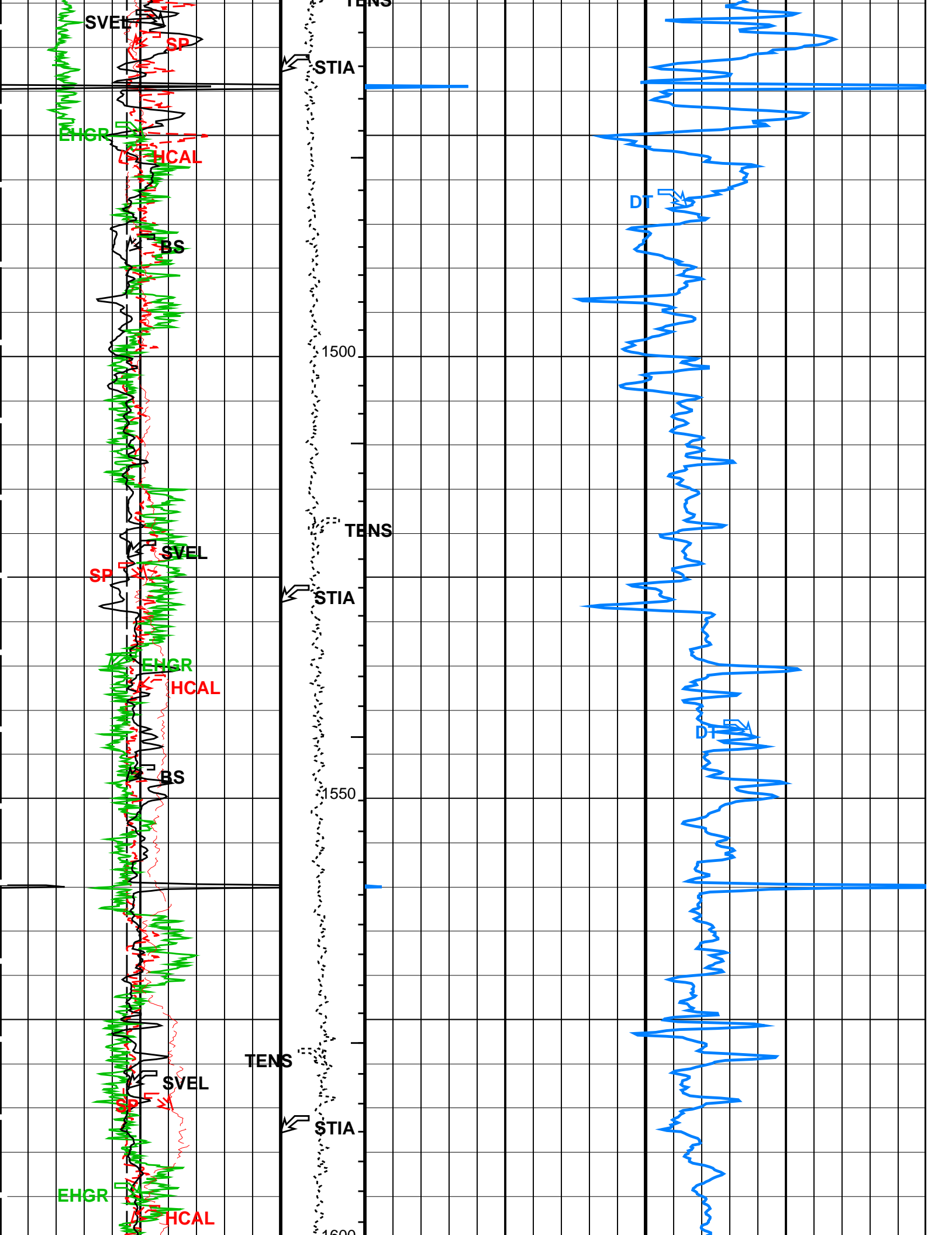
MCM

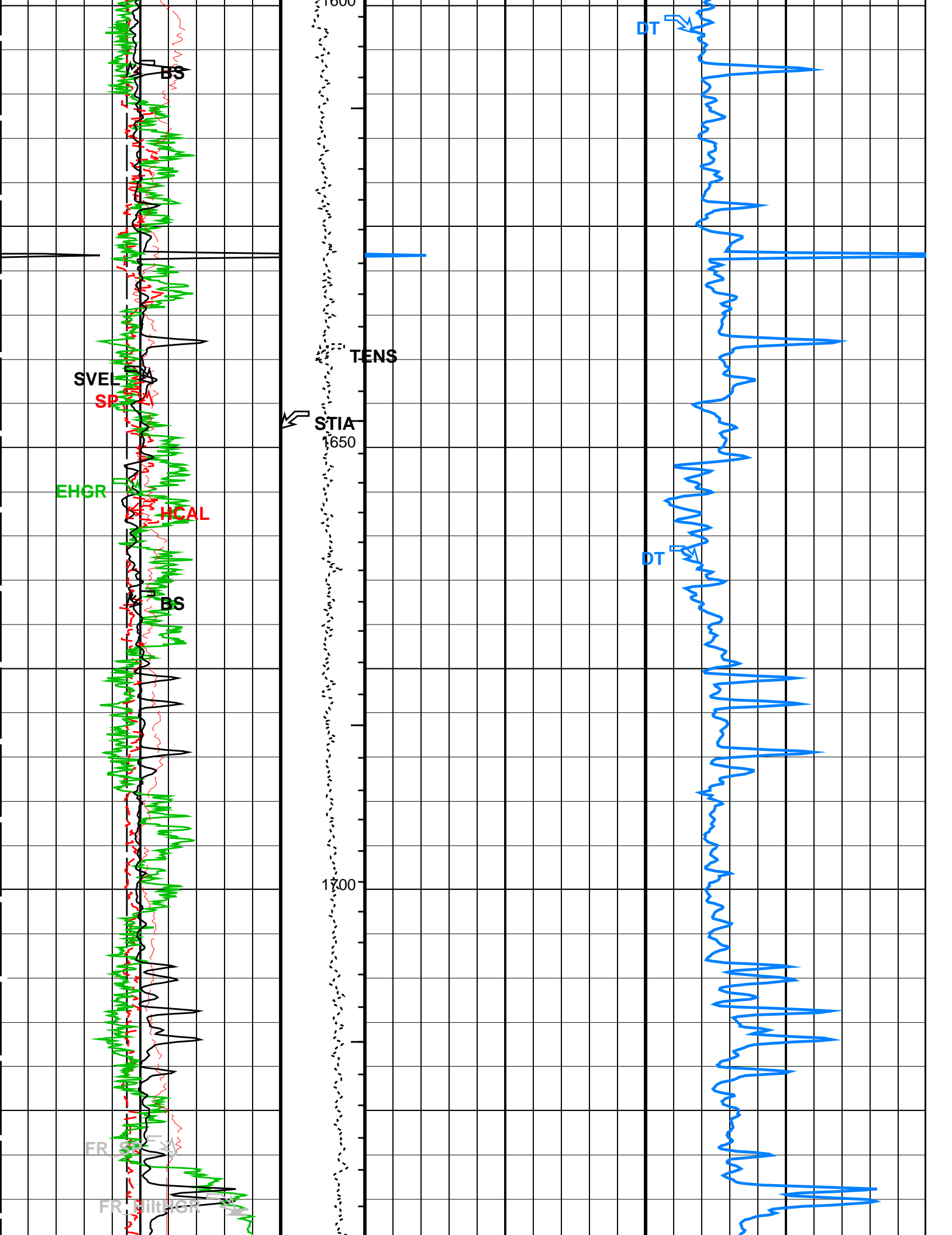
HALS-B	11C0-305	DSLT-H	OP11-KP1
HILTB-FTB	11C0-305	DTC-H	11C0-305
BSP	11C0-305		

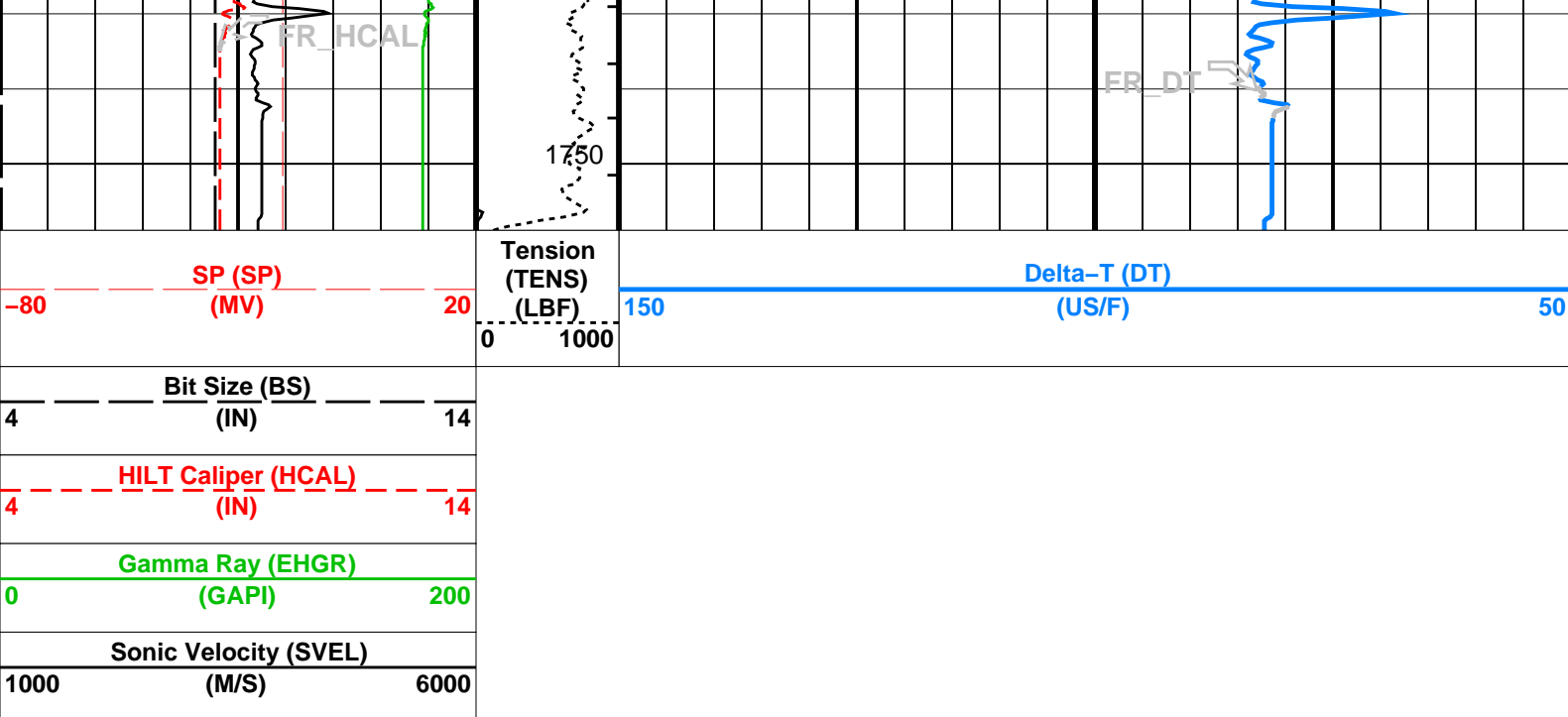
PIP SUMMARY

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









PIP SUMMARY

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

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HALS-B: HILT Azimuthal Laterolog Sonde B	HALS Type of Image	Conductivities
DSLTT-H: Digitizing Sonic Logging Tool	Telemetry Mode	DSLCT_FTB
	DSLTT Firing Mode	SDDB
DDEL	Digitizing Delay	0 US
DIVL	DSLTT Depth Sampling Interval	20
DRCS	DSLTT DLIS Recording Size	180
DSIN	Digitizing Sample Interval	10
DTFS	DSLCT Telemetry Frame Size	396
DWCO	Digitizing Word Count	180
GAI	Manual Gain	40
ITTS	Integrated Transit Time Source	DT
MAHTR	Manual High Threshold Reference	120
MGAI	Maximum Gain	60
MNHTR	Minimum High Threshold Reference	100
NMSG	Near Minimum Sliding Gate	140 US
NMXG	Near Maximum Sliding Gate	970 US
RATE	Firing Rate	R15
SFAF	Sonic Formation Attenuation Factor	10 DB/M
SGCL	Sliding Gate Closing Delta-T	140 US/F
SGDT	Sliding Gate Delta-T	40 US/F
SGW	Sliding Gate Width	110 US
SLEV	Signal Level for AGC	5000
WMOD	Waveform Firing Mode	FULL
HILTB-FTB: High resolution Integrated Logging Tool-DTS		
NMT	HILT Nuclear Mud Type	BARITE
SOCN	Standoff Distance	0.125 IN
SOCO	Standoff Correction Option	NO
BSP: Bridle SP		
SPNV	SP Next Value	0 MV
STI: Stuck Tool Indicator		
LBFR	Trigger for MAXIS First Reading Label	TDL
STKT	STI Stuck Threshold	0.762 M
TDD	Total Depth - Driller	1775.00 M
TDL	Total Depth - Logger	1753.30 M
System and Miscellaneous		
BS	Bit Size	8.500 IN
DFD	Drilling Fluid Density	1.22 G/C3
DO	Depth Offset for Playback	0.7 M
DORL	Depth Offset for Repeat Analysis	0.0 M
PP	Playback Processing	RECOMPUTE

OP System Version: 11C0-305
MCM

HALS-B	11C0-305	DSLT-H	OP11-KP1
HILTB-FTB	11C0-305	DTC-H	11C0-305
BSP	11C0-305		

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_016LUP	FN:20	PRODUCER	25-Dec-2003 02:34	1753.7 M	1341.9 M
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Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_049PUP	FN:67	PRODUCER	25-Dec-2003 10:22		
CUSTOMER	HALS_SONIC_TLD_MCFL_049PUC	FN:68	CUSTOMER	25-Dec-2003 10:22		



Casing Gamma Ray 1:500 Scale
Standard Resolution

MAXIS Field Log

Company: LAKES OIL N.L. Well: Wombat 1

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_022LUP	FN:32	PRODUCER	25-Dec-2003 04:10	1423.4 M	13.7 M
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Output DLIS Files

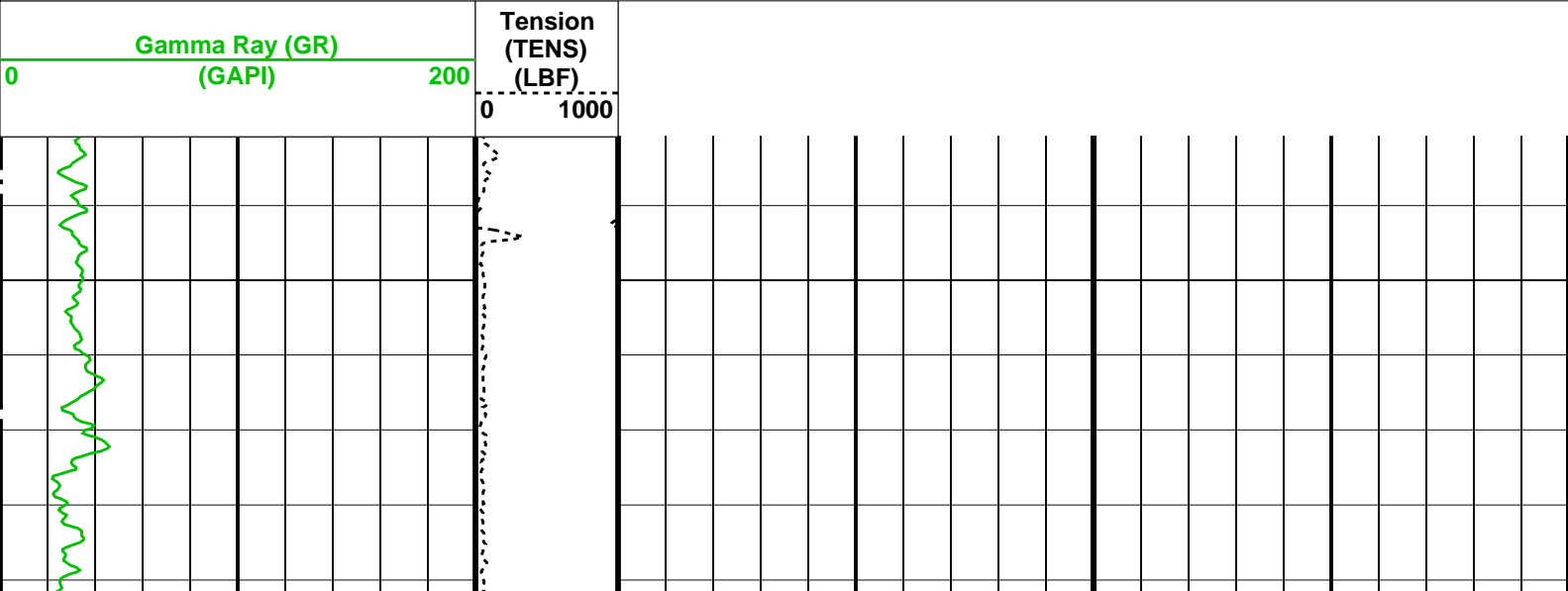
DEFAULT	HALS_SONIC_TLD_MCFL_051PUP	FN:71	PRODUCER	25-Dec-2003 10:52	1375.0 M	15.4 M
CUSTOMER	HALS_SONIC_TLD_MCFL_051PUC	FN:72	CUSTOMER	25-Dec-2003 10:52	1375.0 M	15.4 M

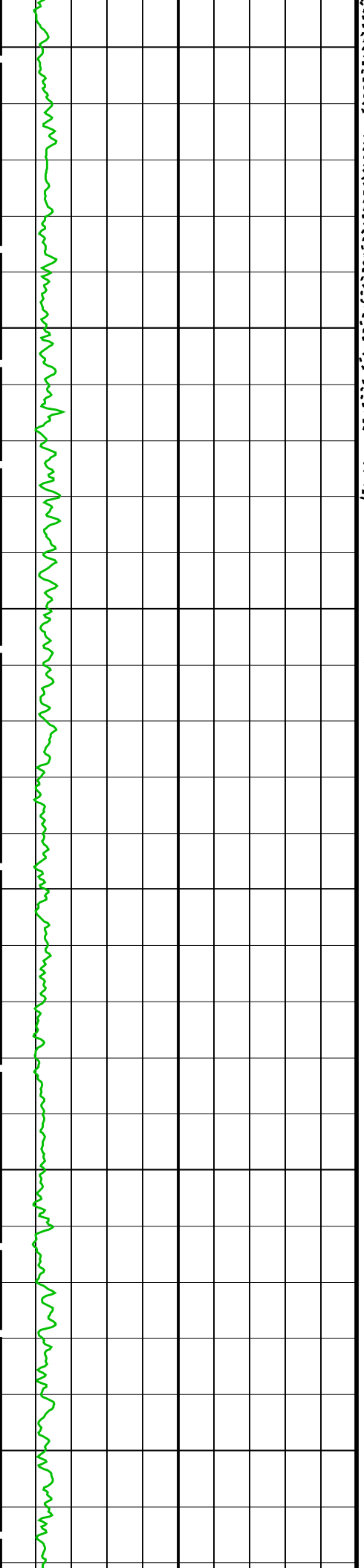
OP System Version: 11C0-305
MCM

HALS-B	11C0-305	DSLT-H	OP11-KP1
HILTB-FTB	11C0-305	DTC-H	11C0-305
BSP	11C0-305		

PIP SUMMARY

Time Mark Every 60 S

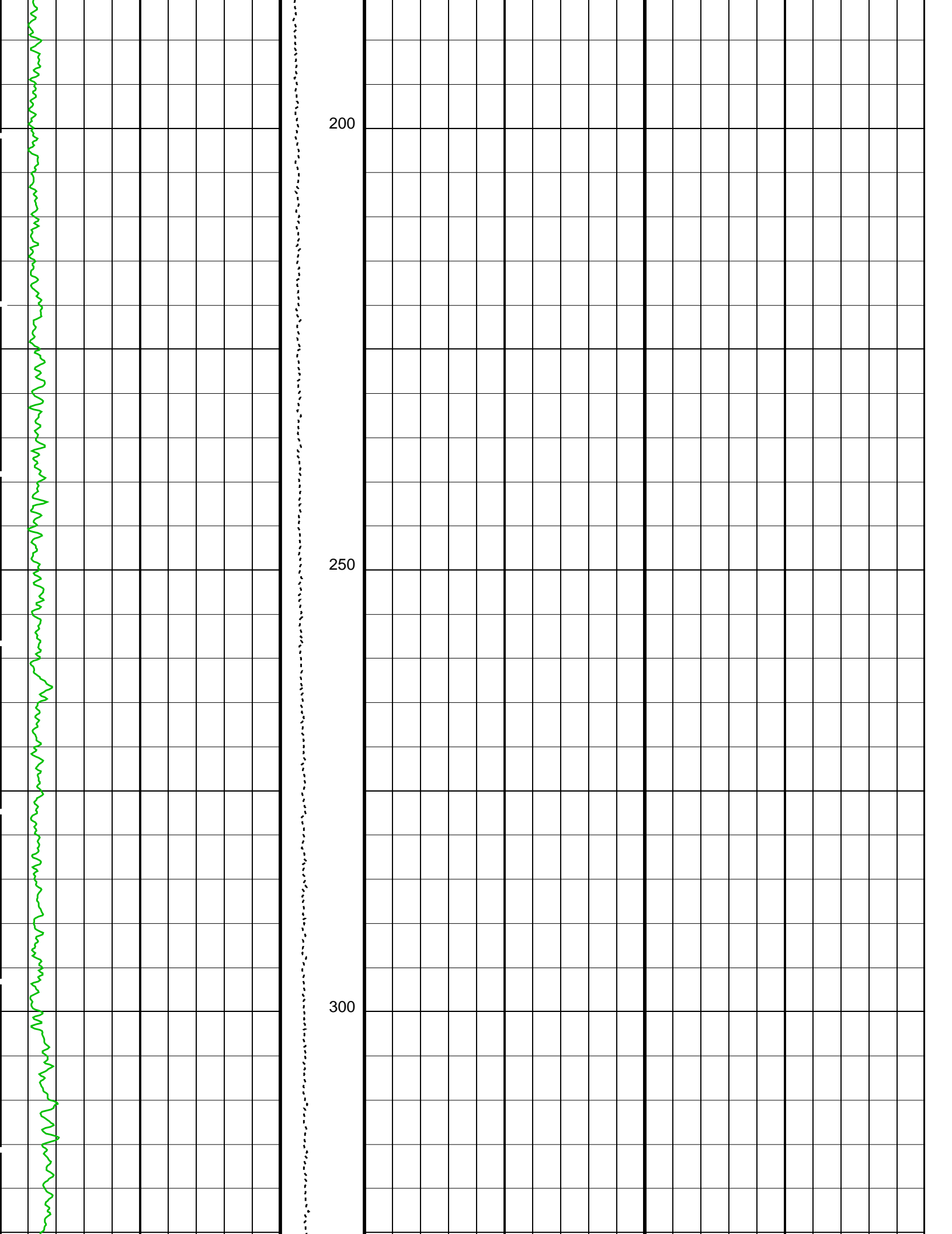


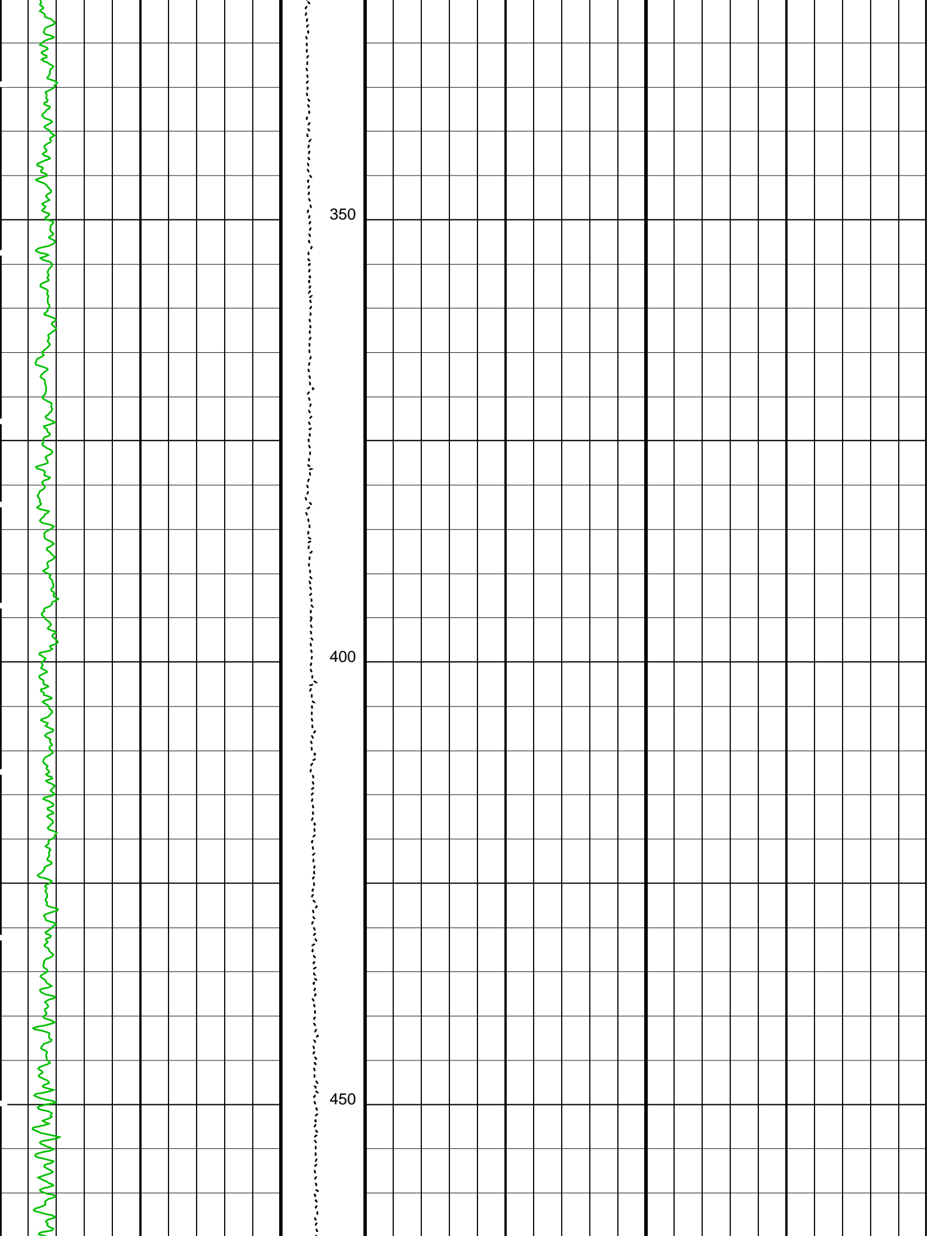


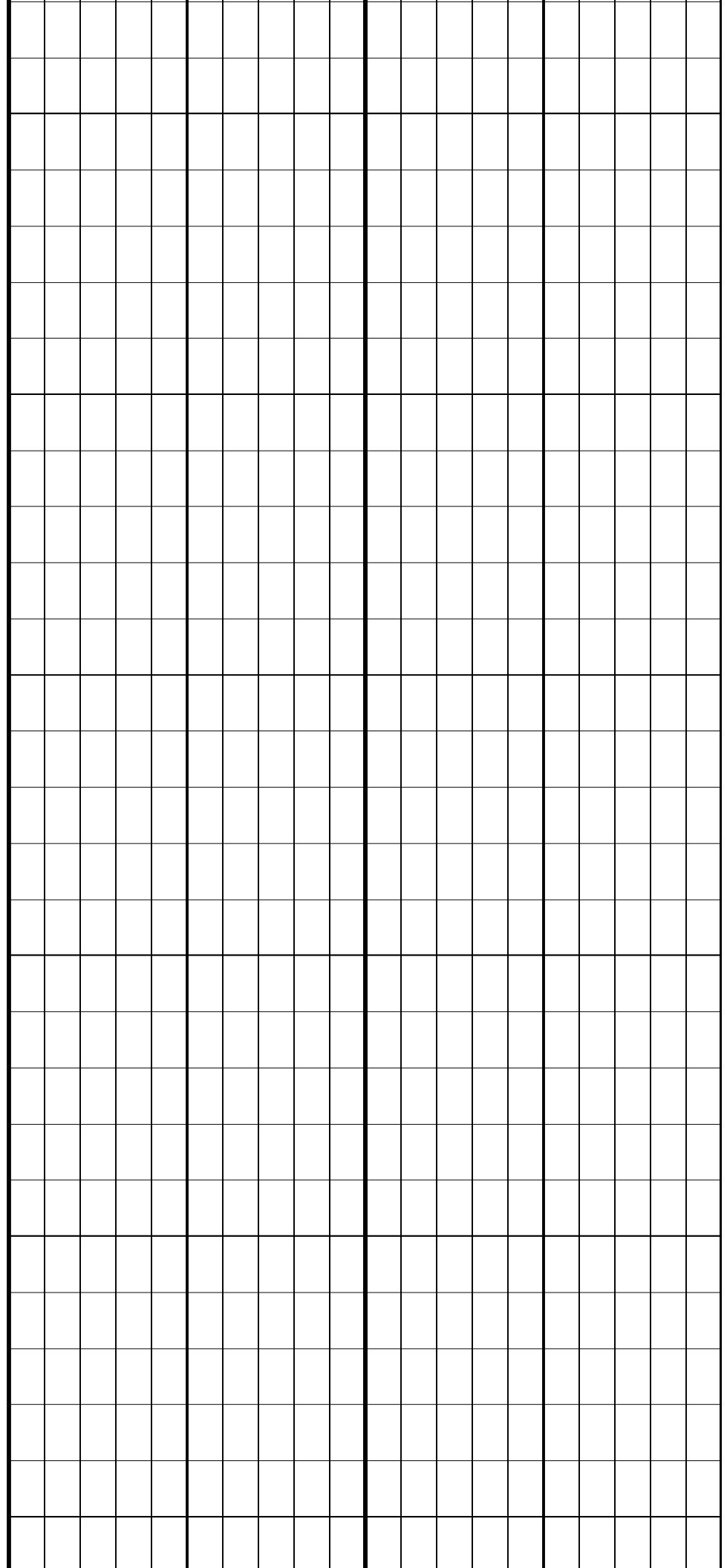
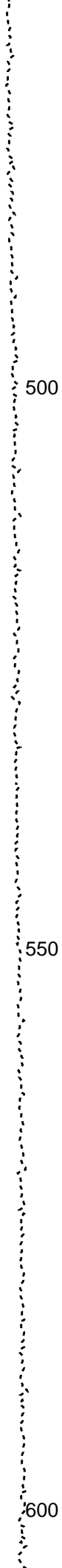
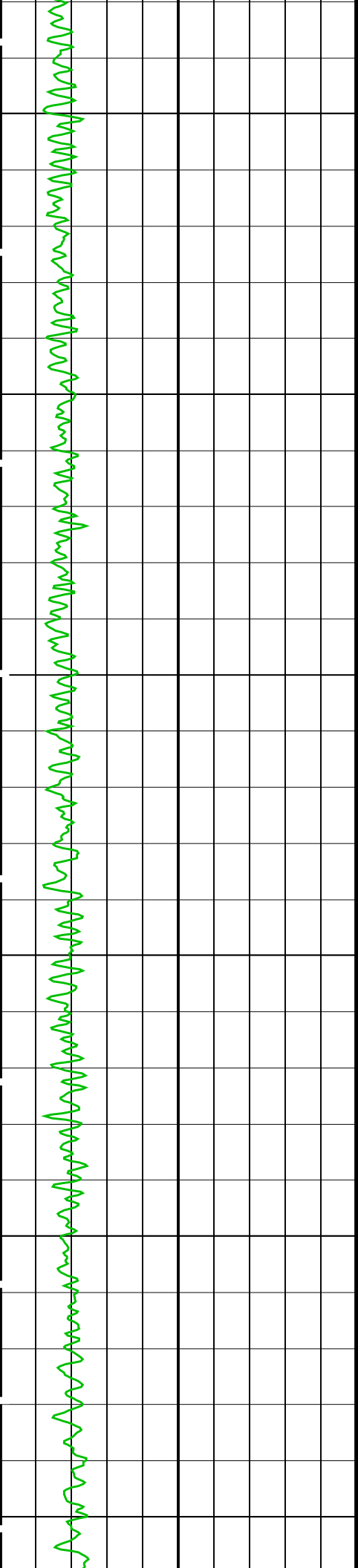
50

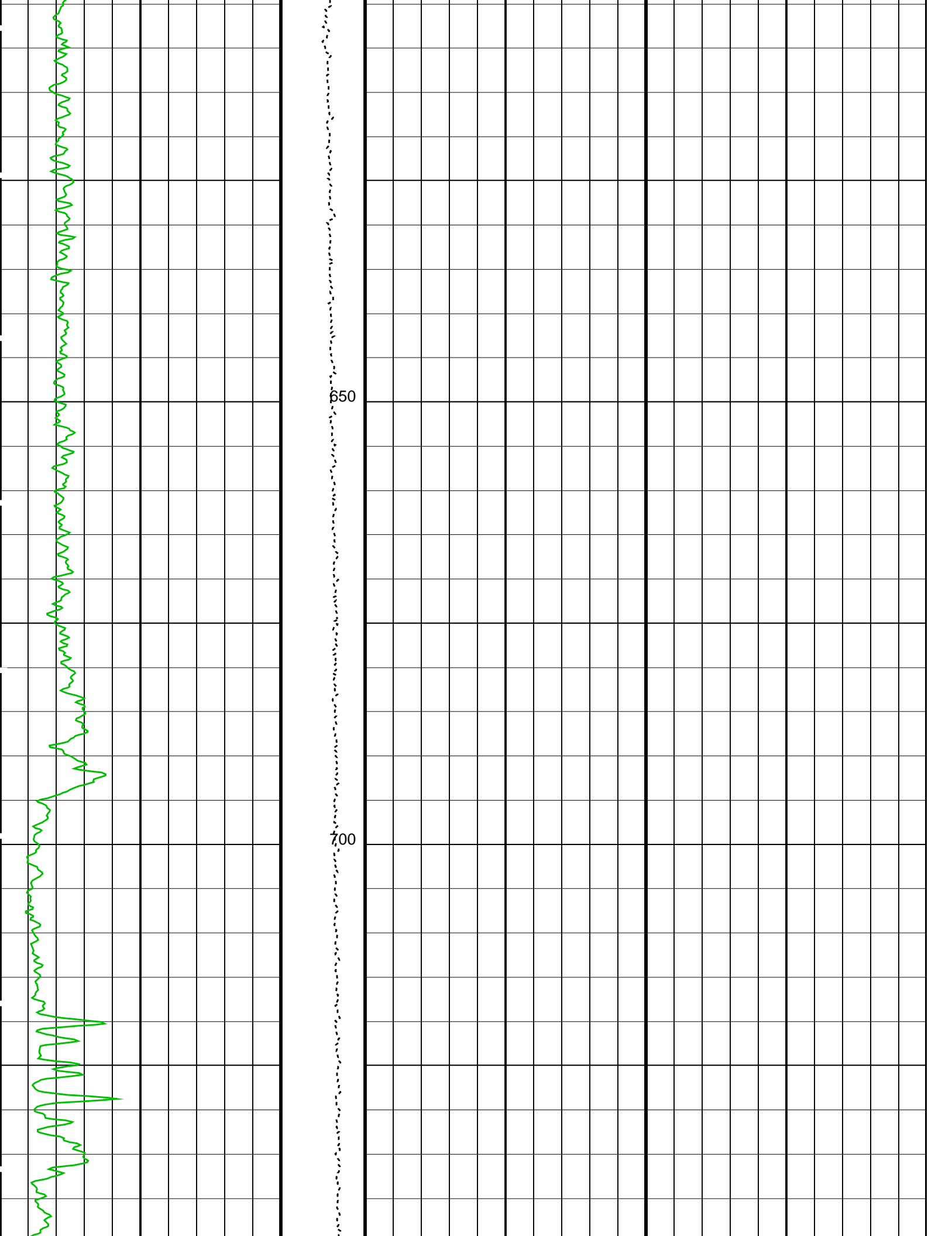
100

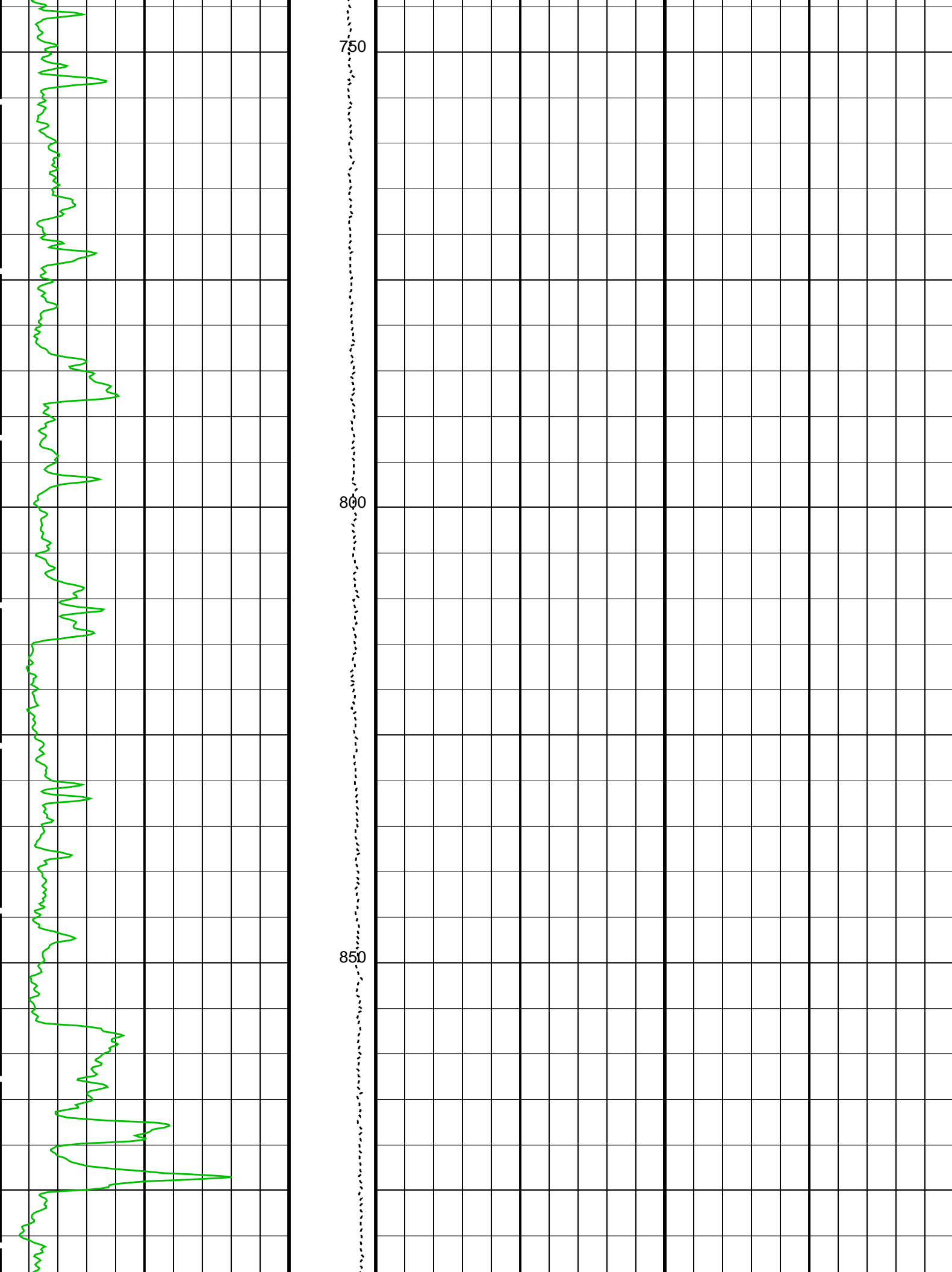
150

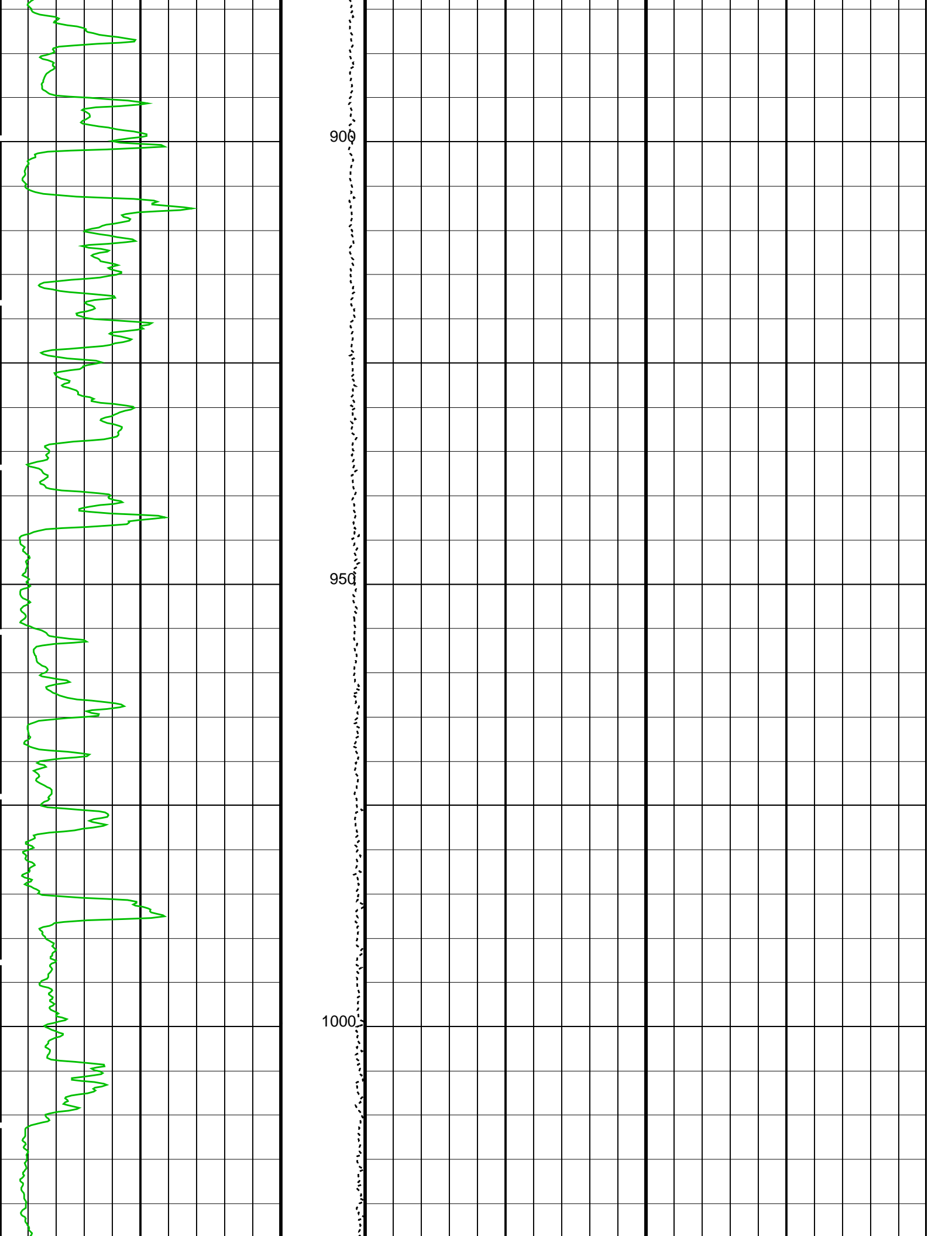


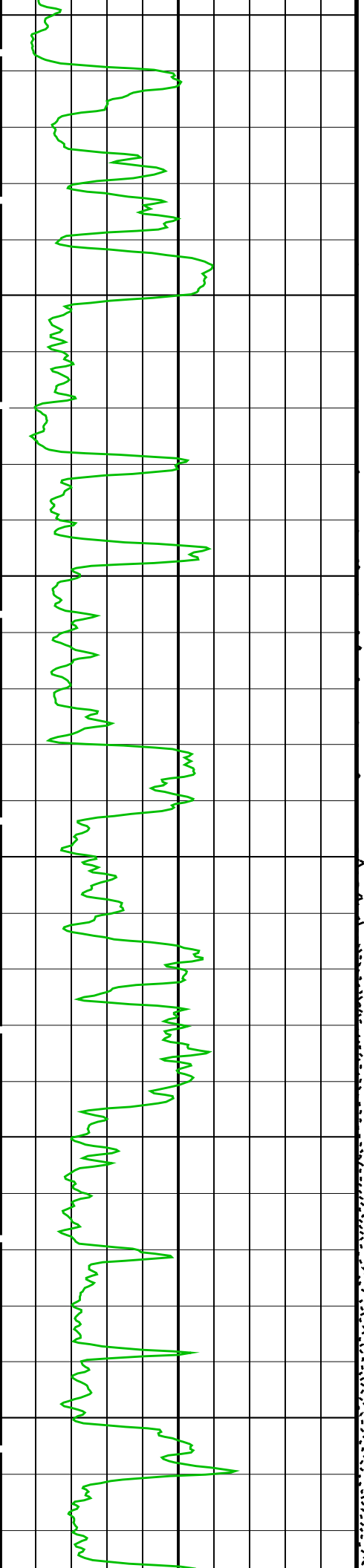








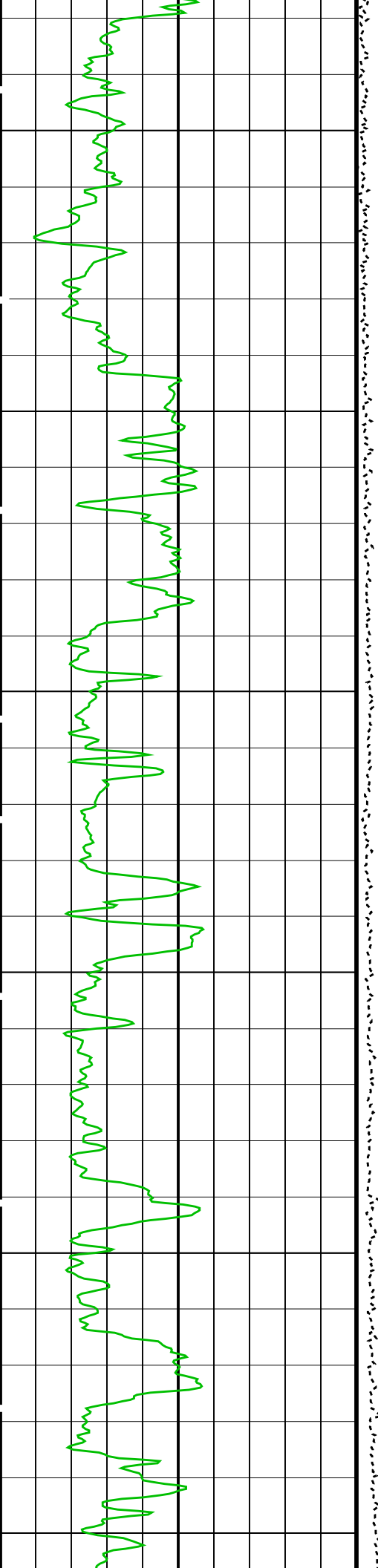




1050

1100

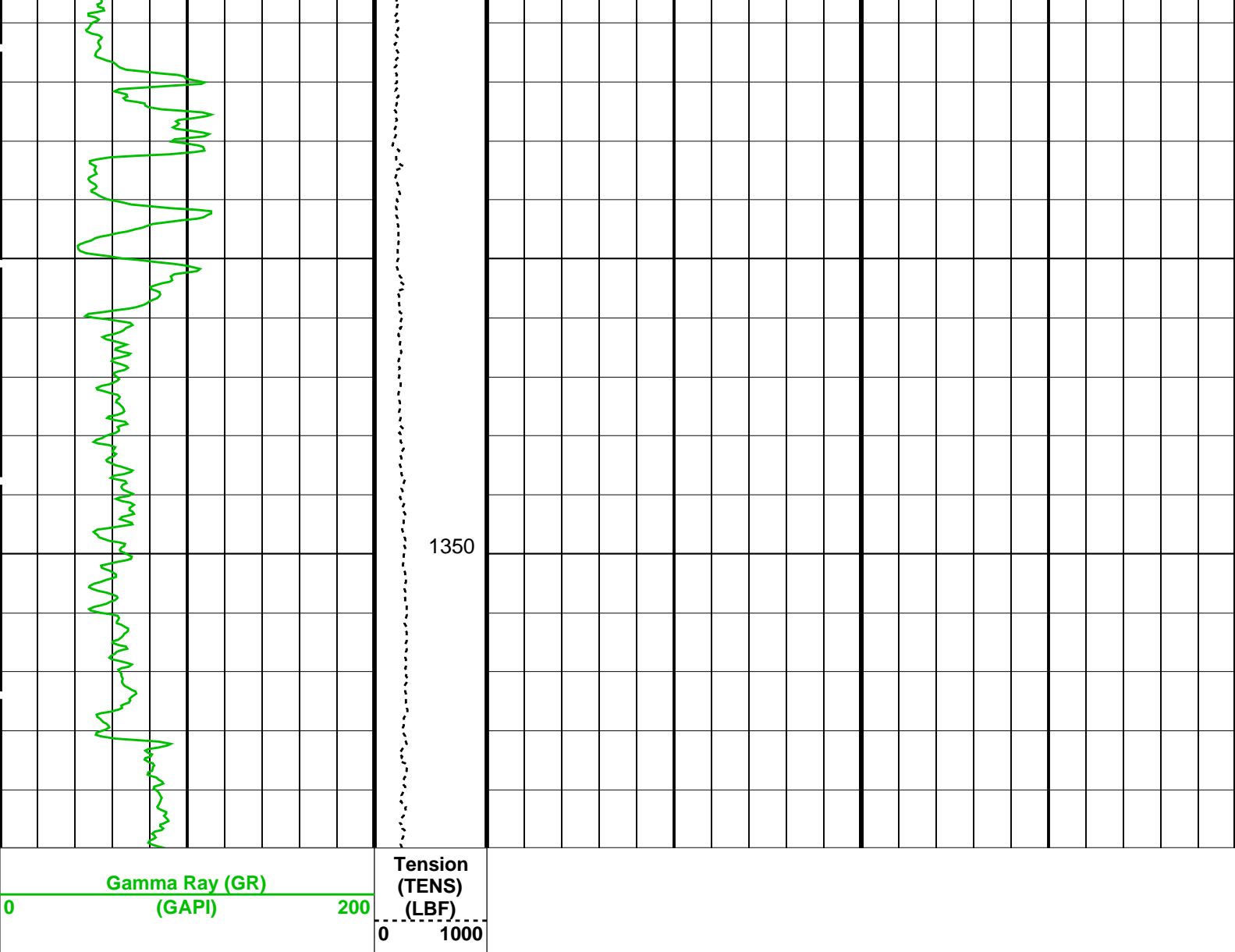
1150



1200

1250

1300



PIP SUMMARY						
Time Mark Every 60 S						
Parameters						
DLIS Name		Description		Value		
System and Miscellaneous						
DO		Depth Offset for Playback		0.0	M	
PP		Playback Processing		RECOMPUTE		
Format: Empty3TrackLog_1		Vertical Scale: 1:500		Graphics File Created: 25-Dec-2003 10:52		
OP System Version: 11C0-305						
MCM						
HALS-B	11C0-305	DSLT-H	OP11-KP1			
HILTB-FTB	11C0-305	DTC-H	11C0-305			
BSP	11C0-305					
Input DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_022LUP	FN:32	PRODUCER	25-Dec-2003 04:10	1423.4 M	13.7 M
Output DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_051PUP	FN:71	PRODUCER	25-Dec-2003 10:52		
CUSTOMER	HALS_SONIC_TLD_MCFL_051PUC	FN:72	CUSTOMER	25-Dec-2003 10:52		

Company: LAKES OIL N.L

Well: Wombat 1

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_022LUP	FN:32	PRODUCER	25-Dec-2003 04:10	1423.4 M	13.7 M
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Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_055PUP	FN:78	PRODUCER	25-Dec-2003 11:15	249.9 M	225.4 M
CUSTOMER	HALS_SONIC_TLD_MCFL_055PUC	FN:79	CUSTOMER	25-Dec-2003 11:15	249.9 M	225.4 M

OP System Version: 11C0-305

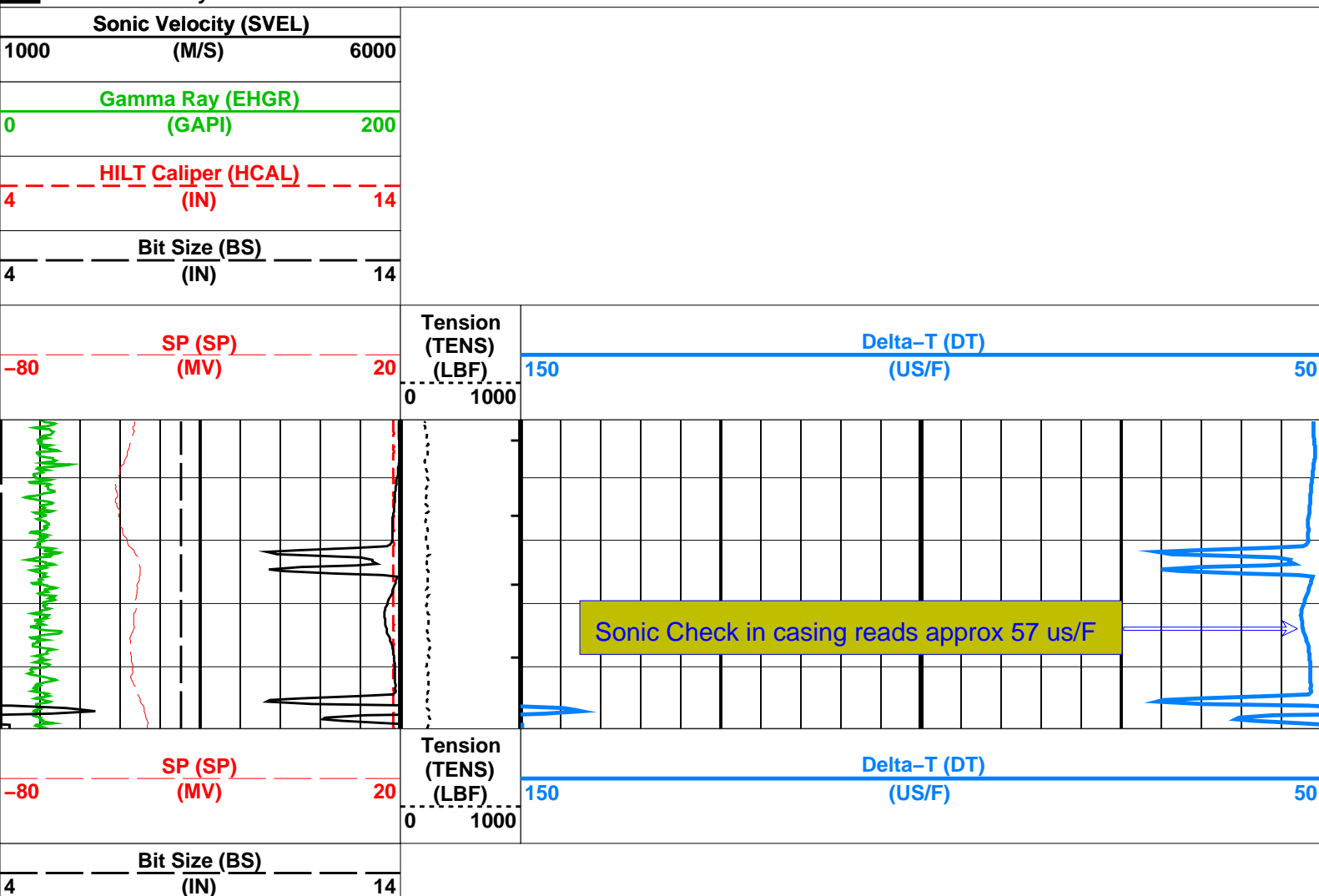
MCM

HALS-B	11C0-305	DSLT-H	OP11-KP1
HILTB-FTB	11C0-305	DTC-H	11C0-305
BSP	11C0-305		

PIP SUMMARY

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

Time Mark Every 60 S



HILT Caliper (HCAL)		
4	(IN)	14
Gamma Ray (EHGR)		
0	(GAPI)	200
Sonic Velocity (SVEL)		
1000	(M/S)	6000

PIP SUMMARY		
└ Integrated Transit Time Minor Pip Every 1 MS		
└ Integrated Transit Time Major Pip Every 10 MS		
Time Mark Every 60 S		

Parameters			
DLIS Name	Description	Value	
HALS-B: HILT Azimuthal Laterolog Sonde B	HALS Type of Image	Conductivities	
DSLTL-H: Digitizing Sonic Logging Tool	Telemetry Mode	DSLCL_FTB	
	DSLTL Firing Mode	SDDB	
DDEL	Digitizing Delay	0	US
DIVL	DSLTL Depth Sampling Interval	20	
DRCS	DSLTL DLIS Recording Size	180	
DSIN	Digitizing Sample Interval	10	
DTFS	DSLCL Telemetry Frame Size	396	
DWCO	Digitizing Word Count	180	
GAI	Manual Gain	40	
ITTS	Integrated Transit Time Source	DT	
MAHTR	Manual High Threshold Reference	120	
MGAI	Maximum Gain	60	
MNHTR	Minimum High Threshold Reference	100	
NMSG	Near Minimum Sliding Gate	140	US
NMXG	Near Maximum Sliding Gate	970	US
RATE	Firing Rate	R15	
SFAF	Sonic Formation Attenuation Factor	10	DB/M
SGCL	Sliding Gate Closing Delta-T	140	US/F
SGDT	Sliding Gate Delta-T	40	US/F
SGW	Sliding Gate Width	110	US
SLEV	Signal Level for AGC	5000	
WMOD	Waveform Firing Mode	FULL	
HILTB-FTB: High resolution Integrated Logging Tool-DTS			
NMT	HILT Nuclear Mud Type	BARITE	
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	1775.00	M
TDL	Total Depth - Logger	1753.30	M
System and Miscellaneous			
BS	Bit Size	8.500	IN
DFD	Drilling Fluid Density	1.22	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: Sonic_500	Vertical Scale: 1:500	Graphics File Created: 25-Dec-2003 11:15
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OP System Version: 11C0-305			
MCM			
HALS-B	11C0-305	DSLTL-H	OP11-KP1
HILTB-FTB	11C0-305	DTC-H	11C0-305
BSP	11C0-305		

Input DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_022LUP	FN:32	PRODUCER	25-Dec-2003 04:10	1423.4 M	13.7 M
Output DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_055PUP	FN:78	PRODUCER	25-Dec-2003 11:15		
CUSTOMER	HALS_SONIC_TLD_MCFL_055PUC	FN:79	CUSTOMER	25-Dec-2003 11:15		

Company: LAKES OIL N.L

Well: Wombat 1

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_016LUP FN:20	PRODUCER	25-Dec-2003 02:34	1753.7 M	1341.9 M
DEFAULT	HALS_SONIC_TLD_MCFL_021LUP FN:30	PRODUCER	25-Dec-2003 03:54	1555.2 M	1462.8 M

Output DLIS Files

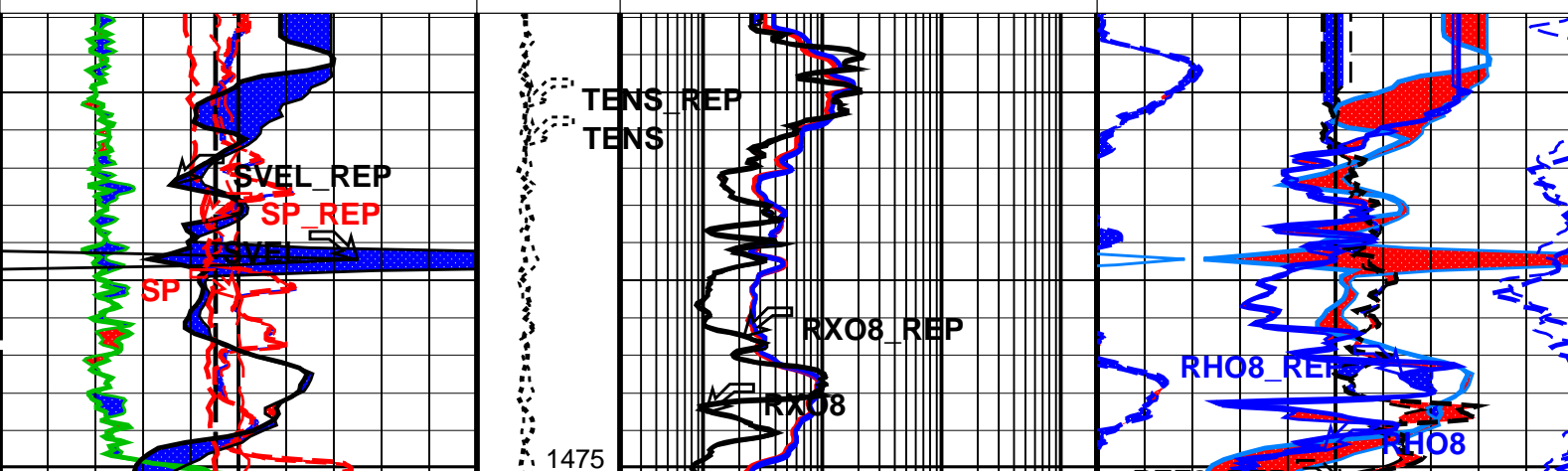
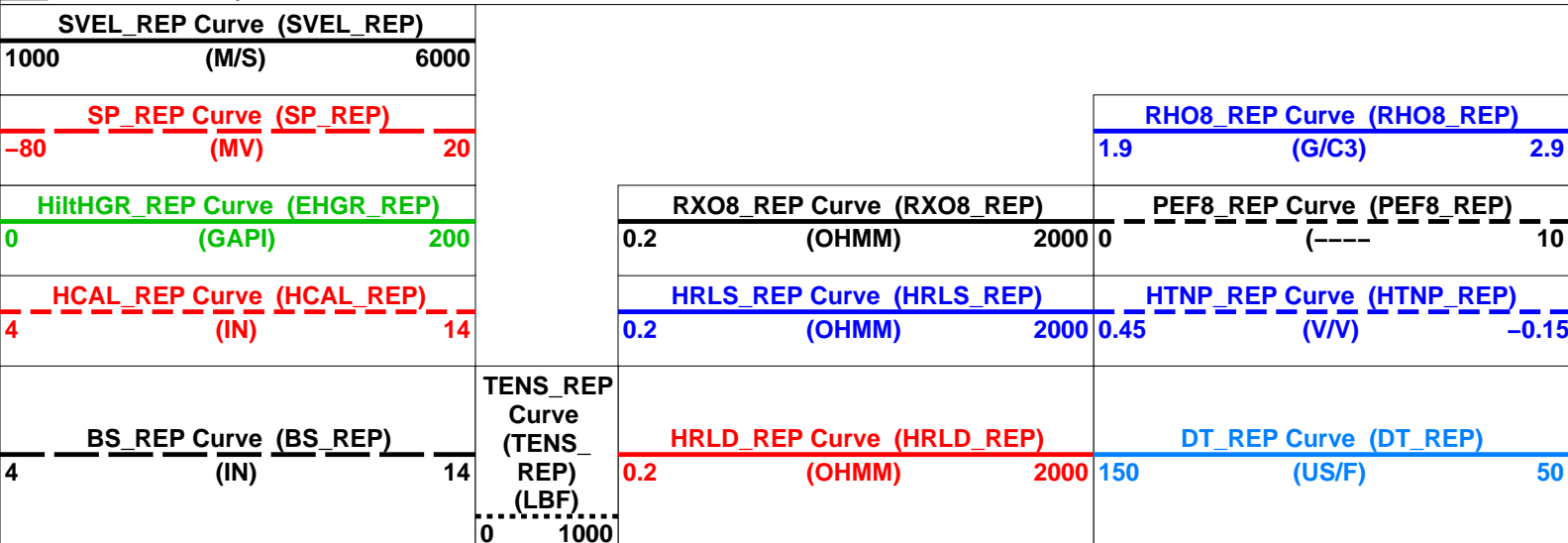
DEFAULT	HALS_SONIC_TLD_MCFL_049PUP FN:67	PRODUCER	25-Dec-2003 10:22
CUSTOMER	HALS_SONIC_TLD_MCFL_049PUC FN:68	CUSTOMER	25-Dec-2003 10:22

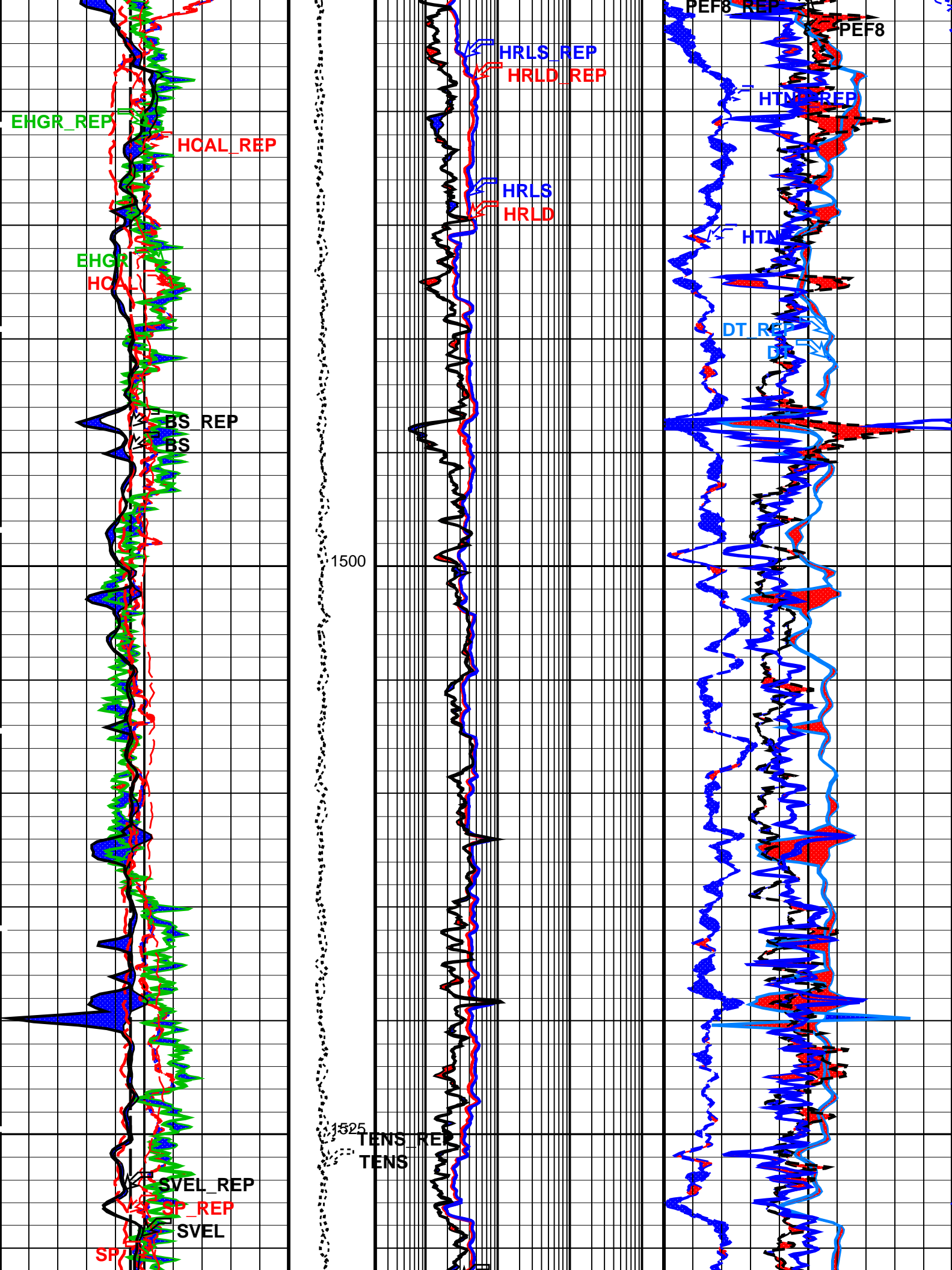
OP System Version: 11C0-305
MCM

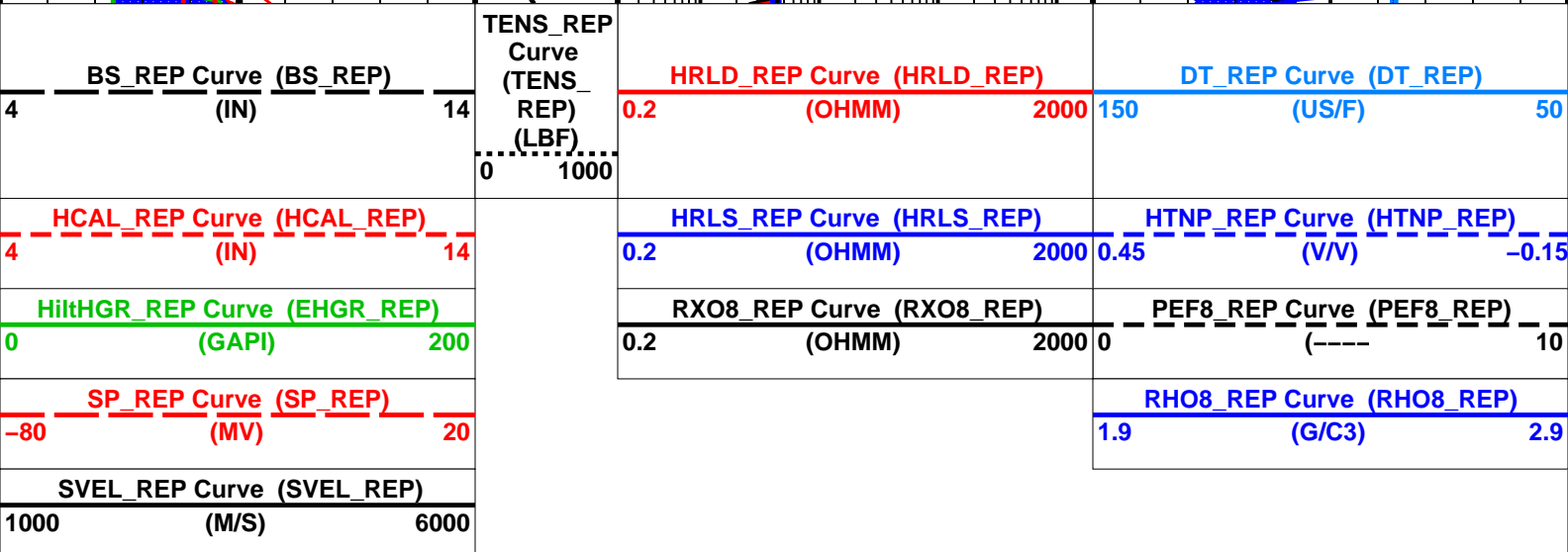
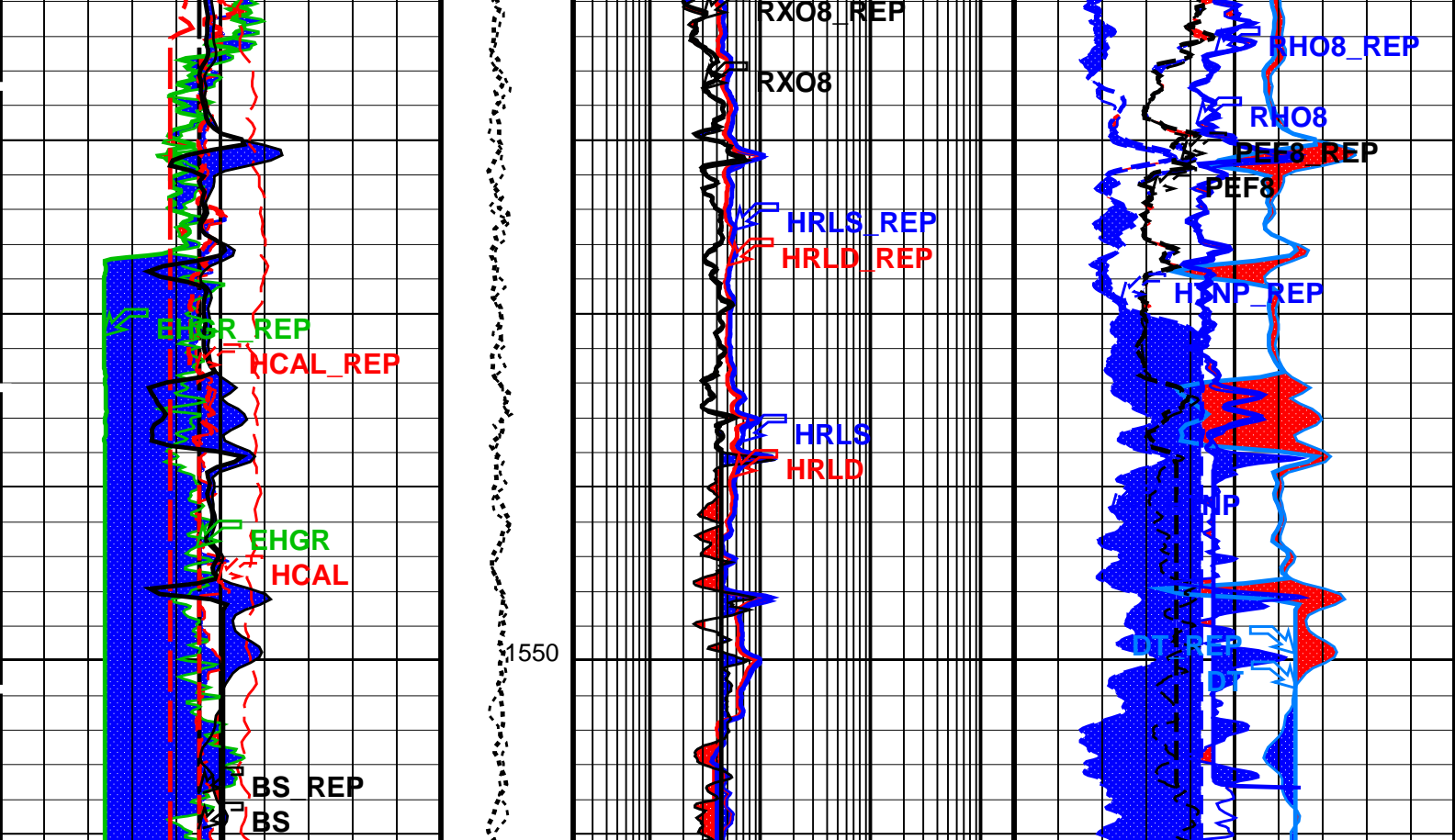
HALS-B	11C0-305	DSLT-H	OP11-KP1
HILTB-FTB	11C0-305	DTC-H	11C0-305
BSP	11C0-305		

PIP SUMMARY

Time Mark Every 60 S







PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HALS-B: HILT Azimuthal Laterolog Sonde B			
	HALS Type of Image	Conductivities	
ARIP_LTS	HALS Long Tool String Correction	OFF	
ARIP_SHOULDER	HALS Shoulder Correction	OFF	
BHCC	HALS Borehole Correction	ON	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	64.4445	DEGC
DHOP	Diameter & Eccentering used in HALS Borehole Corrections	Caliper_Eccentered	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRCC	HALS Groningen Correction	OFF	
HMSO	HALS Mechanical Standoff	1.5	IN
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	49	DEGC
TCOR	HALS T/C Correction	OFF	

COR	HALS TEC Correction	OFF	
UNSPK	HALS Despiking Filter Option	20	%
UNSPK_THOLD	HALS Despiking Filter Threshold (in %)	6	IN
UNSPK_WINDOW	HALS Despiking Filter Window (inches)		
DSLT-H: Digitizing Sonic Logging Tool			
	Telemetry Mode	DSLC_FTB	
	DSLT Firing Mode	SDDB	
DDEL	Digitizing Delay	0	US
DIVL	DSLT Depth Sampling Interval	20	
DRCS	DSLT DLIS Recording Size	180	
DSIN	Digitizing Sample Interval	10	
DTFS	DSLC Telemetry Frame Size	396	
DWCO	Digitizing Word Count	180	
GAI	Manual Gain	40	
MAHTR	Manual High Threshold Reference	120	
MGAI	Maximum Gain	60	
MNHTR	Minimum High Threshold Reference	100	
NMSG	Near Minimum Sliding Gate	140	US
NMXG	Near Maximum Sliding Gate	970	US
RATE	Firing Rate	R15	
SFAF	Sonic Formation Attenuation Factor	10	DB/M
SGCL	Sliding Gate Closing Delta-T	140	US/F
SGDT	Sliding Gate Delta-T	40	US/F
SGW	Sliding Gate Width	110	US
SLEV	Signal Level for AGC	5000	
WMOD	Waveform Firing Mode	FULL	
HILTB-FTB: High resolution Integrated Logging Tool-DTS			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	64.4445	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
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
GGRD	Geothermal Gradient	0.018227	DC/M
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	YES	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	BARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	49	DEGC
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	64.4445	DEGC
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	49	DEGC
STI: Stuck Tool Indicator			
TDL	Total Depth - Logger	1753.30	M
System and Miscellaneous			
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	35000.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	36.00	LB/F
DFD	Drilling Fluid Density	1.22	G/C3
DO	Depth Offset for Playback	0.7	M
DORL	Depth Offset for Repeat Analysis	0.0	M
MST	Mud Sample Temperature	23.20	DEGC
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.1558	OHMM

Format: Main_200_REP

Vertical Scale: 1:200

Graphics File Created: 25-Dec-2003 10:22

OP System Version: 11C0-305

MCM

HALS-B 11C0-305

DSLT-H

OP11-KP1

HILTB-FTB 11C0-305

DTC-H

11C0-305

BSP 11C0-305

Input DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_016LUP	FN:20	PRODUCER	25-Dec-2003 02:34	1753.7 M	1341.9 M
DEFAULT	HALS_SONIC_TLD_MCFL_021LUP	FN:30	PRODUCER	25-Dec-2003 03:54	1555.2 M	1462.8 M
Output DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_049PUP	FN:67	PRODUCER	25-Dec-2003 10:22		
CUSTOMER	HALS_SONIC_TLD_MCFL_049PUC	FN:68	CUSTOMER	25-Dec-2003 10:22		



Calibrations

Schlumberger

Calibrations

MAXIS Field Log

Calibration and Check Summary							
Measurement	Nominal	Master	Before	After	Change	Limit	Units
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Total current mode 1							
Before: 24–Dec–2003 11:43							
Itot 1 Gain	1.000	N/A	0.997	N/A	N/A	0.026	MA
Itot 1 Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 1							
Before: 24–Dec–2003 11:43							
Iaux 1 Gain	1.000	N/A	0.995	N/A	N/A	0.035	MA
Iaux 1 Phase	0.000	N/A	0.031	N/A	N/A	1.900	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 2							
Before: 24–Dec–2003 11:43							
Iaux 2 Gain	1.000	N/A	0.979	N/A	N/A	0.048	MA
Iaux 2 Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3A							
Before: 24–Dec–2003 11:43							
I0 3A Gain	1.000	N/A	0.984	N/A	N/A	0.036	UA
I0 3A Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3B							
Before: 24–Dec–2003 11:43							
I0 3B Gain	1.000	N/A	0.992	N/A	N/A	0.036	UA
I0 3B Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage gains							
Before: 24–Dec–2003 11:43							
Zvt 1 Gain	1.000	N/A	0.994	N/A	N/A	0.025	MV
Zvt 2 Gain	1.000	N/A	0.986	N/A	N/A	0.045	MV
Zvt 3 Gain	1.000	N/A	0.987	N/A	N/A	0.045	MV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage Phases							
Before: 24–Dec–2003 11:43							
Zvt 1 Phase	0.000	N/A	0.150	N/A	N/A	2.300	DEG
Zvt 2 Phase	0.000	N/A	0.763	N/A	N/A	0.800	DEG
Zvt 3 Phase	0.000	N/A	0.490	N/A	N/A	0.500	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Upper Bridle Voltage mode 1							
Before: 24–Dec–2003 11:43							
Zvb 1 Gain	1.000	N/A	0.994	N/A	N/A	0.025	MV
Zvb 1 Phase	0.000	N/A	0.071	N/A	N/A	2.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–M2 Voltage gains							
Before: 24–Dec–2003 11:43							

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–M2 Voltage Phases							
Before: 24–Dec–2003 11:43							
ZVM 1 Gain	1.000	N/A	0.997	N/A	N/A	0.039	UV
ZVM 2 Gain	1.000	N/A	0.994	N/A	N/A	0.019	UV
ZVM 3 Gain	1.000	N/A	0.992	N/A	N/A	0.019	UV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–A0* Voltage gains							
Before: 24–Dec–2003 11:43							
ZVH 1 Gain	1.000	N/A	0.998	N/A	N/A	0.013	UV
ZVH 2 Gain	1.000	N/A	0.992	N/A	N/A	0.046	UV
ZVH 3 Gain	1.000	N/A	0.991	N/A	N/A	0.046	UV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–A0* Voltage Phases							
Before: 24–Dec–2003 11:43							
ZVH 1 Phase	0.000	N/A	0.118	N/A	N/A	3.800	DEG
ZVH 2 Phase	0.000	N/A	1.820	N/A	N/A	1.300	DEG
ZVH 3 Phase	0.000	N/A	0.970	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage gains							
Before: 24–Dec–2003 11:43							
ZVA 1 Gain	1.000	N/A	1.057	N/A	N/A	0.032	MV
ZVA 2 Gain	1.000	N/A	0.991	N/A	N/A	0.045	MV
ZVA 3 Gain	1.000	N/A	1.009	N/A	N/A	0.045	MV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage Phases							
Before: 24–Dec–2003 11:43							
ZVA 1 Phase	0.000	N/A	–0.040	N/A	N/A	2.300	DEG
ZVA 2 Phase	0.000	N/A	0.379	N/A	N/A	0.800	DEG
ZVA 3 Phase	0.000	N/A	–0.192	N/A	N/A	0.500	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 1							
Before: 24–Dec–2003 11:43							
ZVD 1 Gain	1.000	N/A	1.002	N/A	N/A	0.047	UV
ZVD 1 Phase	0.000	N/A	–0.301	N/A	N/A	3.800	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 2							
Before: 24–Dec–2003 11:43							
ZVD 2 Gain	1.000	N/A	0.987	N/A	N/A	0.056	UV
ZVD 2 Phase	0.000	N/A	1.082	N/A	N/A	1.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 3A							
Before: 24–Dec–2003 11:43							
ZVD 3A Gain	1.000	N/A	0.993	N/A	N/A	0.056	UV
ZVD 3A Phase	0.000	N/A	0.466	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 3B							
Before: 24–Dec–2003 11:43							
ZVD 3B Gain	1.000	N/A	1.016	N/A	N/A	0.054	UV
ZVD 3B Phase	0.000	N/A	–0.057	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 1							
Before: 24–Dec–2003 11:43							
ZVV 1 Gain	1.000	N/A	0.998	N/A	N/A	0.022	UV
ZVV 1 Phase	0.000	N/A	0.309	N/A	N/A	2.800	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 2							
Before: 24–Dec–2003 11:43							
ZVV 2 Gain	1.000	N/A	0.985	N/A	N/A	0.036	UV
ZVV 2 Phase	0.000	N/A	2.475	N/A	N/A	1.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 1							
Before: 24–Dec–2003 11:43							
Az 1 Gain – 0	1.000	N/A	0.997	N/A	N/A	0.047	UV
Az 1 Gain – 1	1.000	N/A	0.998	N/A	N/A	0.047	UV
Az 1 Gain – 2	1.000	N/A	0.997	N/A	N/A	0.047	UV
Az 1 Gain – 3	1.000	N/A	0.998	N/A	N/A	0.047	UV
Az 1 Gain – 4	1.000	N/A	0.996	N/A	N/A	0.047	UV
Az 1 Gain – 5	1.000	N/A	0.993	N/A	N/A	0.047	UV
Az 1 Gain – 6	1.000	N/A	0.997	N/A	N/A	0.047	UV
Az 1 Gain – 7	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 8	1.000	N/A	0.998	N/A	N/A	0.047	UV
Az 1 Gain – 9	1.000	N/A	1.000	N/A	N/A	0.047	UV
Az 1 Gain – 10	1.000	N/A	0.998	N/A	N/A	0.047	UV
Az 1 Gain – 11	1.000	N/A	0.997	N/A	N/A	0.047	UV
AZ 1 Phase – 0	0.000	N/A	0.127	N/A	N/A	3.800	DEG
AZ 1 Phase – 1	0.000	N/A	0.055	N/A	N/A	3.800	DEG
AZ 1 Phase – 2	0.000	N/A	–0.115	N/A	N/A	3.800	DEG

AZ 1 Phase – 3	0.093	N/A	0.093	N/A	N/A	3.800	DEG
AZ 1 Phase – 4	0.000	N/A	–0.049	N/A	N/A	3.800	DEG
AZ 1 Phase – 5	0.000	N/A	0.081	N/A	N/A	3.800	DEG
AZ 1 Phase – 6	0.000	N/A	0.001	N/A	N/A	3.800	DEG
AZ 1 Phase – 7	0.000	N/A	0.058	N/A	N/A	3.800	DEG
AZ 1 Phase – 8	0.000	N/A	–0.129	N/A	N/A	3.800	DEG
AZ 1 Phase – 9	0.000	N/A	0.208	N/A	N/A	3.800	DEG
AZ 1 Phase – 10	0.000	N/A	0.083	N/A	N/A	3.800	DEG
AZ 1 Phase – 11	0.000	N/A	0.057	N/A	N/A	3.800	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 2

Before: 24–Dec–2003 11:43

Az 2 Gain – 0	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 1	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 2	1.000	N/A	0.983	N/A	N/A	0.056	UV
Az 2 Gain – 3	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 4	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Gain – 5	1.000	N/A	0.979	N/A	N/A	0.056	UV
Az 2 Gain – 6	1.000	N/A	0.983	N/A	N/A	0.056	UV
Az 2 Gain – 7	1.000	N/A	0.985	N/A	N/A	0.056	UV
Az 2 Gain – 8	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 9	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 2 Gain – 10	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 11	1.000	N/A	0.983	N/A	N/A	0.056	UV
Az 2 Phase – 0	0.000	N/A	1.240	N/A	N/A	1.300	DEG
Az 2 Phase – 1	0.000	N/A	1.228	N/A	N/A	1.300	DEG
Az 2 Phase – 2	0.000	N/A	1.235	N/A	N/A	1.300	DEG
Az 2 Phase – 3	0.000	N/A	1.190	N/A	N/A	1.300	DEG
Az 2 Phase – 4	0.000	N/A	1.205	N/A	N/A	1.300	DEG
Az 2 Phase – 5	0.000	N/A	1.232	N/A	N/A	1.300	DEG
Az 2 Phase – 6	0.000	N/A	1.111	N/A	N/A	1.300	DEG
Az 2 Phase – 7	0.000	N/A	1.235	N/A	N/A	1.300	DEG
Az 2 Phase – 8	0.000	N/A	1.166	N/A	N/A	1.300	DEG
Az 2 Phase – 9	0.000	N/A	1.233	N/A	N/A	1.300	DEG
Az 2 Phase – 10	0.000	N/A	1.192	N/A	N/A	1.300	DEG
Az 2 Phase – 11	0.000	N/A	1.200	N/A	N/A	1.300	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 3A

Before: 24–Dec–2003 11:43

Az 3A Gain – 0	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 3A Gain – 1	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 2	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Gain – 3	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 4	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Gain – 5	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 3A Gain – 6	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 3A Gain – 7	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 3A Gain – 8	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 9	1.000	N/A	0.992	N/A	N/A	0.056	UV
Az 3A Gain – 10	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 11	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 3A Phase – 0	0.000	N/A	0.607	N/A	N/A	1.000	DEG
Az 3A Phase – 1	0.000	N/A	0.578	N/A	N/A	1.000	DEG
Az 3A Phase – 2	0.000	N/A	0.562	N/A	N/A	1.000	DEG
Az 3A Phase – 3	0.000	N/A	0.584	N/A	N/A	1.000	DEG
Az 3A Phase – 4	0.000	N/A	0.572	N/A	N/A	1.000	DEG
Az 3A Phase – 5	0.000	N/A	0.607	N/A	N/A	1.000	DEG
Az 3A Phase – 6	0.000	N/A	0.524	N/A	N/A	1.000	DEG
Az 3A Phase – 7	0.000	N/A	0.587	N/A	N/A	1.000	DEG
Az 3A Phase – 8	0.000	N/A	0.517	N/A	N/A	1.000	DEG
Az 3A Phase – 9	0.000	N/A	0.610	N/A	N/A	1.000	DEG
Az 3A Phase – 10	0.000	N/A	0.574	N/A	N/A	1.000	DEG
Az 3A Phase – 11	0.000	N/A	0.574	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 3B

Before: 24–Dec–2003 11:43

Az 3B Gain – 0	1.000	N/A	1.019	N/A	N/A	0.054	UV
Az 3B Gain – 1	1.000	N/A	1.019	N/A	N/A	0.054	UV
Az 3B Gain – 2	1.000	N/A	1.020	N/A	N/A	0.054	UV
Az 3B Gain – 3	1.000	N/A	1.016	N/A	N/A	0.054	UV
Az 3B Gain – 4	1.000	N/A	1.016	N/A	N/A	0.054	UV
Az 3B Gain – 5	1.000	N/A	1.014	N/A	N/A	0.054	UV
Az 3B Gain – 6	1.000	N/A	1.011	N/A	N/A	0.054	UV
Az 3B Gain – 7	1.000	N/A	1.019	N/A	N/A	0.054	UV
Az 3B Gain – 8	1.000	N/A	1.016	N/A	N/A	0.054	UV
Az 3B Gain – 9	1.000	N/A	1.020	N/A	N/A	0.054	UV
Az 3B Gain – 10	1.000	N/A	1.016	N/A	N/A	0.054	UV
Az 3B Gain – 11	1.000	N/A	1.015	N/A	N/A	0.054	UV
Az 3B Phase – 0	0.000	N/A	0.147	N/A	N/A	1.000	DEG
Az 3B Phase – 1	0.000	N/A	0.235	N/A	N/A	1.000	DEG
Az 3B Phase – 2	0.000	N/A	0.211	N/A	N/A	1.000	DEG
Az 3B Phase – 3	0.000	N/A	0.108	N/A	N/A	1.000	DEG

Az 3B Phase – 4	0.000	N/A	0.124	N/A	N/A	1.000	DEG
Az 3B Phase – 5	0.000	N/A	0.269	N/A	N/A	1.000	DEG
Az 3B Phase – 6	0.000	N/A	-0.156	N/A	N/A	1.000	DEG
Az 3B Phase – 7	0.000	N/A	0.261	N/A	N/A	1.000	DEG
Az 3B Phase – 8	0.000	N/A	0.049	N/A	N/A	1.000	DEG
Az 3B Phase – 9	0.000	N/A	0.212	N/A	N/A	1.000	DEG
Az 3B Phase – 10	0.000	N/A	0.070	N/A	N/A	1.000	DEG
Az 3B Phase – 11	0.000	N/A	0.208	N/A	N/A	1.000	DEG

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

Before: 24–Dec–2003 11:43

BS Window Ratio	0.7744	N/A	0.7702	N/A	N/A	N/A	
BS Window Sum	11930	N/A	11920	N/A	N/A	N/A	CPS
SS Window Ratio	0.4829	N/A	0.4819	N/A	N/A	N/A	
SS Window Sum	9985	N/A	9991	N/A	N/A	N/A	CPS
LS Window Ratio	0.2979	N/A	0.2993	N/A	N/A	N/A	
LS Window Sum	1327	N/A	1326	N/A	N/A	N/A	CPS

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

Before: 24–Dec–2003 11:43

BS PM High Voltage (Command)	1517	N/A	1529	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1645	N/A	1623	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1810	N/A	1800	N/A	N/A	N/A	V

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

Before: 24–Dec–2003 11:43

BS Crystal Resolution	10.38	N/A	10.50	N/A	N/A	N/A	%
SS Crystal Resolution	9.653	N/A	9.653	N/A	N/A	N/A	%
LS Crystal Resolution	9.563	N/A	9.401	N/A	N/A	N/A	%

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

Before: 24–Dec–2003 11:39

Raw B0 Resistivity	3875	N/A	3874	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3840	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3831	N/A	N/A	N/A	OHMM

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

Before: 24–Dec–2003 11:36

HILT Caliper Zero Measurement	8.000	N/A	8.147	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.37	N/A	N/A	N/A	IN

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

Before: 24–Dec–2003 11:38

Gamma Ray Background	30.00	N/A	27.80	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	167.8	N/A	167.8	N/A	N/A	15.26	GAPI
Gamma Ray (Calibrated)	162.0	N/A	162.0	N/A	N/A	15.00	GAPI

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

Master: 15–Dec–2003 19:03 Before: 24–Dec–2003 11:40

CNTC Background	29.38	29.38	29.76	N/A	N/A	4.407	CPS
CFTC Background	26.47	26.47	26.65	N/A	N/A	3.970	CPS

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

Before: 25–Dec–2003 1:21

Z–Axis Acceleration	9.810	N/A	9.785	N/A	N/A	N/A	M/S2
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High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results

Master: 13–Dec–2003 18:41

Rho Aluminum	2.596	2.599	--	--	--	--	G/C3
Rho Magnesium	1.686	1.687	--	--	--	--	G/C3
Pe Aluminum	2.570	2.562	--	--	--	--	
Pe Magnesium	2.650	2.611	--	--	--	--	

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

Master: 13–Dec–2003 18:41

BS Average Deviation	0	0.2824	--	--	--	--	%
BS Max Deviation	0	0.6103	--	--	--	--	%
SS Average Deviation	0	0.3001	--	--	--	--	%
SS Max Deviation	0	1.188	--	--	--	--	%
LS Average Deviation	0	0.4102	--	--	--	--	%
LS Max Deviation	0	1.288	--	--	--	--	%

High resolution Integrated Logging Tool–DTS Master Calibration – Tank Measurement

Master: 15–Dec–2003 19:03

Thermal Near Corr. (Tank)	6031	5447	--	--	--	--	CPS
Thermal Far Corr. (Tank)	2793	2278	--	--	--	--	CPS
CNTC/CFTC (Tank)	2.159	2.391	--	--	--	--	

High resolution Integrated Logging Tool–DTS Master Calibration – Tank Measurement

Master: 15–Dec–2003 19:03

Thermal Near Corr. (Tank)	6031	5447	--	--	--	--	CPS
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Thermal Far Corr. (Tank)	2793	2278	--	--	--	--	CPS
CNTC/CFTC (Tank)	2.159	2.391	--	--	--	--	

The GLS-VJ source activity is acceptable.

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

NCT-B Water Temperature 20.6 DEGC.
Thermal Housing Size 3.390 IN.

HILT Azimuthal Laterolog Sonde B / Equipment Identification

Primary Equipment:

Auxiliary Equipment:

Laterolog Control Module

LCM - AA

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Total current mode 1					
Itot 1 Gain MA			Value	Itot 1 Phase DEG	
			0.997		
0.926	1.000	1.081		-0.100	0.100
(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Maximum)
Before: 24-Dec-2003 11:43					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 1					
Iaux 1 Gain MA			Value	Iaux 1 Phase DEG	
			0.995		
0.854	1.000	1.180		-4.600	4.600
(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Maximum)
Before: 24-Dec-2003 11:43					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 2					
Iaux 2 Gain MA			Value	Iaux 2 Phase DEG	
			0.979		
0.816	1.000	1.232		-1.000	0.100
(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Maximum)
Before: 24-Dec-2003 11:43					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3A					
I0 3A Gain UA			Value	I0 3A Phase DEG	
			0.984		
0.893	1.000	1.114		-1.000	0.100
(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Maximum)
Before: 24-Dec-2003 11:43					




HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3B					
I0 3B Gain UA			Value	I0 3B Phase DEG	
			0.992		
0.893	1.000	1.114		-1.000	0.100
(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Maximum)
Before: 24-Dec-2003 11:43					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage gains					
Zvt 1 Gain MV			Value	Zvt 2 Gain MV	
			0.994		
0.925	1.000	1.078		0.865	1.153
(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Maximum)
Before: 24-Dec-2003 11:43					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage Phases					
Zvt 1 Phase DEG			Value	Zvt 2 Phase DEG	
			0.150		
-4.400	0.000	4.400		-2.800	2.800
(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Maximum)
Before: 24-Dec-2003 11:43					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Upper Bridle Voltage mode 1					
Zvb 1 Gain MV			Value	Zvb 1 Phase DEG	
			0.994		
0.925	1.000	1.078		-4.400	4.400
(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Maximum)
Before: 24-Dec-2003 11:43					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage gains					



HILSB M1-A0* Voltage gains			HILSB M1-A0* Voltage gains			HILSB M1-A0* Voltage gains		
ZVM 1 Gain UV	Value		ZVM 2 Gain UV	Value		ZVM 3 Gain UV	Value	
	0.997			0.994			0.992	
0.895 (Minimum)	1.000 (Nominal)	1.117 (Maximum)	0.943 (Minimum)	1.000 (Nominal)	1.056 (Maximum)	0.943 (Minimum)	1.000 (Nominal)	1.056 (Maximum)
Before: 24-Dec-2003 11:43								



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage Phases					
ZVM 1 Phase DEG	Value		ZVM 2 Phase DEG	Value	
	0.255			1.583	
-6.500 (Minimum)	0.000 (Nominal)	6.500 (Maximum)	-3.300 (Minimum)	0.000 (Nominal)	3.300 (Maximum)
Before: 24-Dec-2003 11:43					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-A0* Voltage gains					
ZVH 1 Gain UV	Value		ZVH 2 Gain UV	Value	
	0.998			0.992	
0.962 (Minimum)	1.000 (Nominal)	1.039 (Maximum)	0.864 (Minimum)	1.000 (Nominal)	1.154 (Maximum)
Before: 24-Dec-2003 11:43					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-A0* Voltage Phases					
ZVH 1 Phase DEG	Value		ZVH 2 Phase DEG	Value	
	0.118			1.820	
-6.500 (Minimum)	0.000 (Nominal)	6.500 (Maximum)	-3.300 (Minimum)	0.000 (Nominal)	3.300 (Maximum)
Before: 24-Dec-2003 11:43					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux Voltage gains					
ZVA 1 Gain MV	Value		ZVA 2 Gain MV	Value	
	1.057			0.991	
0.905 (Minimum)	1.000 (Nominal)	1.103 (Maximum)	0.866 (Minimum)	1.000 (Nominal)	1.151 (Maximum)
Before: 24-Dec-2003 11:43					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux Voltage Phases					
ZVA 1 Phase DEG	Value		ZVA 2 Phase DEG	Value	
	-0.040			0.379	
-4.100 (Minimum)	0.000 (Nominal)	4.100 (Maximum)	-2.300 (Minimum)	0.000 (Nominal)	2.300 (Maximum)
Before: 24-Dec-2003 11:43					


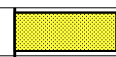
HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 1			
ZVD 1 Gain UV	Value	ZVD 1 Phase DEG	Value
	1.002		-0.301
0.874 (Minimum)	1.000 (Nominal)	-6.300 (Minimum)	0.000 (Nominal)
Before: 24-Dec-2003 11:43			

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 2			
ZVD 2 Gain UV	Value	ZVD 2 Phase DEG	Value
	0.987		1.082
0.842 (Minimum)	1.000 (Nominal)	-3.300 (Minimum)	0.000 (Nominal)
Before: 24-Dec-2003 11:43			

























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 3A			
ZVD 3A Gain UV	Value	ZVD 3A Phase DEG	Value
	0.993		0.466
0.842 (Minimum)	1.000 (Nominal)	-2.000 (Minimum)	0.000 (Nominal)
Before: 24-Dec-2003 11:43			

























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 3B			
ZVD 3B Gain UV	Value	ZVD 3B Phase DEG	Value
	1.016		-0.057
0.845 (Minimum)	1.000 (Nominal)	-2.000 (Minimum)	0.000 (Nominal)
Before: 24-Dec-2003 11:43			

























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB vertical Voltage mode 1			
ZVV 1 Gain UV	Value	ZVV 1 Phase DEG	Value
	0.998		0.309
0.936 (Minimum)	1.000 (Nominal)	-4.600 (Minimum)	0.000 (Nominal)
Before: 24-Dec-2003 11:43			

























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB vertical Voltage mode 2			
ZVV 2 Gain UV	Value	ZVV 2 Phase DEG	Value
	0.985		2.475
0.895 (Minimum)	1.000 (Nominal)	-2.800 (Minimum)	0.000 (Nominal)
Before: 24-Dec-2003 11:43			

Before: 24-Dec-2003 11:43

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 1					
Idx	Az 1 Gain UV	Value	Idx	AZ 1 Phase DEG	Value
0		0.997	0		0.127
1		0.998	1		0.055
2		0.997	2		-0.115
3		0.998	3		0.093
4		0.996	4		-0.049
5		0.993	5		0.081
6		0.997	6		0.001
7		0.999	7		0.058
8		0.998	8		-0.129
9		1.000	9		0.208
10		0.998	10		0.083
11		0.997	11		0.057
0.874		1.000	-6.300		0.000
(Minimum)		(Nominal)	(Minimum)		(Nominal)
		(Maximum)			(Maximum)
Before: 24-Dec-2003 11:43					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 2					
Idx	Az 2 Gain UV	Value	Idx	Az 2 Phase DEG	Value
0		0.984	0		1.240
1		0.984	1		1.228
2		0.983	2		1.235
3		0.984	3		1.190
4		0.982	4		1.205
5		0.979	5		1.232
6		0.983	6		1.111
7		0.985	7		1.235
8		0.984	8		1.166
9		0.987	9		1.233
10		0.984	10		1.192
11		0.983	11		1.200
0.842		1.000	-3.300		0.000
(Minimum)		(Nominal)	(Minimum)		(Nominal)
		(Maximum)			(Maximum)
Before: 24-Dec-2003 11:43					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 3A					
Idx	Az 3A Gain UV	Value	Idx	Az 3A Phase DEG	Value
0		0.988	0		0.607
1		0.989	1		0.578
2		0.987	2		0.562
3		0.989	3		0.584
4		0.987	4		0.572
5		0.984	5		0.607
6		0.988	6		0.524
7		0.990	7		0.587
8		0.989	8		0.517
9		0.992	9		0.610
10		0.989	10		0.574
11		0.988	11		0.574
0.842		1.000	-2.000		0.000
(Minimum)		(Nominal)	(Minimum)		(Nominal)
		(Maximum)			(Maximum)
Before: 24-Dec-2003 11:43					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 3B					
Idx	Az 3B Gain UV	Value	Idx	Az 3B Phase DEG	Value
0		1.019	0		0.147
1		1.019	1		0.235
2		1.020	2		0.211
3		1.016	3		0.108
4		1.016	4		0.124
5		1.014	5		0.269
6		1.011	6		-0.156
7		1.019	7		0.261
8		1.016	8		0.049
9		1.020	9		0.212
10		1.016	10		0.070
11		1.015	11		0.208
0.845		1.000	-2.000		0.000
(Minimum)		(Nominal)	(Minimum)		(Nominal)
		(Maximum)			(Maximum)
Before: 24-Dec-2003 11:43					

High resolution Integrated Logging Tool-DTS / Equipment Identification


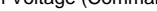

Primary Equipment:




HILT high-Resolution Mechanical Sonde
HILT Rxo Gamma-ray Device
HILT Nuclear Back-Scatter Detector
HILT Nuclear Short-Spacing Detector
HILT Nuclear Long-Spacing Detector
Micro Cylindrically Focused Log Device
GR Logging Source
HILT High Res. Control Cartridge




HRMS - B	1730	Red
HRGD -	755	Red
HILT -		
HILT -		
HILT -		
MCFL -	755	Red
GLS - VJ	1893	Red
HRCC - B	756	Red

Auxiliary Equipment:

Phase	BS Window Ratio		Value	Phase	SS Window Ratio		Value	Phase	LS Window Ratio		Value
Before			0.7702	Before			0.4819	Before			0.2993
0.7357 (Minimum)				0.4588 (Minimum)				0.2830 (Minimum)			
0.7744 (Nominal)				0.4829 (Nominal)				0.2979 (Nominal)			
0.8131 (Maximum)				0.5071 (Maximum)				0.3128 (Maximum)			
Phase	BS Window Sum CPS		Value	Phase	SS Window Sum CPS		Value	Phase	LS Window Sum CPS		Value
Before			11920	Before			9991	Before			1326
11340 (Minimum)				9486 (Minimum)				1260 (Minimum)			
11930 (Nominal)				9985 (Nominal)				1327 (Nominal)			
12530 (Maximum)				10480 (Maximum)				1393 (Maximum)			
Before: 24-Dec-2003 11:43											

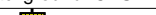



High resolution Integrated Logging Tool–DTS Wellsite Calibration														
Photo–multiplier High Voltages Calibrations														
Phase	BS PM High Voltage (Command) V			Value	Phase	SS PM High Voltage (Command) V			Value	Phase	LS PM High Voltage (Command) V			Value
Before				1529	Before				1623	Before				1800
1417 (Minimum)					1545 (Minimum)					1710 (Minimum)				
1517 (Nominal)					1645 (Nominal)					1810 (Nominal)				
1617 (Maximum)					1745 (Maximum)					1910 (Maximum)				
Before: 24–Dec–2003 11:43														

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				10.50	Before				9.653	Before				9.401
9.379 (Minimum)					8.653 (Minimum)					8.563 (Minimum)				
10.38 (Nominal)					9.653 (Nominal)					9.563 (Nominal)				
11.38 (Maximum)					10.65 (Maximum)					10.56 (Maximum)				
Before: 24–Dec–2003 11:43														

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				3874	Before				3840	Before				3831
3565 (Minimum)					3524 (Minimum)					3524 (Minimum)				
3875 (Nominal)					3830 (Nominal)					3830 (Nominal)				
4185 (Maximum)					4136 (Maximum)					4136 (Maximum)				
Before: 24–Dec–2003 11:39														





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	<div><div></div></div>		8.147	Before	<div><div></div></div>		12.37
6.000 (Minimum)				9.000 (Minimum)			
8.000 (Nominal)				12.00 (Nominal)			
10.00 (Maximum)				15.00 (Maximum)			
Before: 24-Dec-2003 11:36							







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				27.80	Before				167.8	Before				162.0
0 (Minimum)					152.6 (Minimum)					147.0 (Minimum)				
30.00 (Nominal)					167.8 (Nominal)					162.0 (Nominal)				
120.0 (Maximum)					183.1 (Maximum)					177.0 (Maximum)				
Before: 24–Dec–2003 11:38														




High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Zero Measurement											
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value		
Master				29.38	Master				26.47		
Before				29.76	Before				26.65		
5.000 (Minimum)					5.000 (Minimum)						
29.38 (Nominal)					26.47 (Nominal)						
40.00 (Maximum)					40.00 (Maximum)						
Master: 15-Dec-2003 19:03					Before: 24-Dec-2003 11:40						

High resolution Integrated Logging Tool-DTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration M/S2	Value
Before		9.785

9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)
Before: 25-Dec-2003 1:21		

High resolution Integrated Logging Tool-DTS Master Calibration									
Inversion results									
Phase	Rho Aluminum G/C3			Value	Phase	Rho Magnesium G/C3			Value
Master				2.599	Master				1.687
	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				2.562	Master				2.611
	2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)			2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)	
Master: 13-Dec-2003 18:41									

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				0.2824	Master				0.3001	Master				0.4102
	-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				0.6103	Master				1.188	Master				1.288
	-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: 13-Dec-2003 18:41														

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				5447	Master				2278	Master				2.391
	5000 (Minimum)	6031 (Nominal)	7200 (Maximum)		2075 (Minimum)	2793 (Nominal)	3125 (Maximum)		2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)			
Master: 15–Dec–2003 19:03														

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	<div><div></div></div>		5447	Master	<div><div></div></div>		2278	Master	<div><div></div></div>		2.391
	5000 (Minimum)	6031 (Nominal)	7200 (Maximum)		2075 (Minimum)	2793 (Nominal)	3125 (Maximum)		2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)
Master: 15–Dec–2003 19:03											

Company: **LAKES OIL N.L**

Schlumberger

Well: **Wombat 1**

Field: **Wildcat**

Rig: **Hunt #2**

Country: **Australia**

HALS-BHC-PEX

Field Print

1:500 Scale

