

[illegible]

Maximum recorded temperature of 48 degC from thermometers in LEH-Q1					
Caliper check in casing reads 8.83 from ASCII and 8.834 expected.					
Additional mud information:					
Chloride: 19000 mg/L, Calicium: 40mg/L, Potassium: 21,076 mg/L, KCL: 3.9%					
Barite present in mud					
RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:			PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
10C0-306					
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1

RUN 2

SURFACE EQUIPMENT	
LCM-AA 2747	NCS-VB
GSR-U/Y	GSR-U
NCT-B	WITM (DTS)-A
CNB-AB	

DOWNHOLE EQUIPMENT	
BSP	40.84
BRT-S 22	
SP SPARC	28.73
LEH-QT 1570	22.56
LEH-QT 1570	
DTC-H	21.39
ECH-KC	21.67
CTEM	20.75
TelStatus	
ToolStatu	
HNGS-BA	20.75
HNGS-BA 129	20.05
HNSH-BA 3	19.84
Upper_1	
Lower_2	
HNGC-A	17.72
HNGH-A	18.25
HNGC-A 10	17.19
HNGC Stat	
HGNS HTEM	
HMCA	
Gamma-Ray	16.96
HILTB-FTB	17.19
HGNSD-B 1751	
HMCA	
HGNS-H 1775	
NLS-KL	15.18
NSR-F 2111	15.03
HACCZ	
HCNT	
HGR	
HRCC-B 1769	
HRMS-B 1765	13.10
HRGD-B 1760	11.44
GLS-VJ 3739	11.30
MCFL Device	
HILT Nucl. LS	
HILT Nucl. SS	
HILT Nucl. BS	
BOW-SPR	
HRCC cart	
MCFL	
HILT cali	
HRDD-LS	
HRDD-SS	
HRDD-BS	11.18
DSLT-H	10.59
DSLC-HA 8223	
ECH_KH 8273	

USF
LSF USN
LSN

7.85
7.55
7.24

DSL T Aux. 4.88

4.88

HALS-B
HALS-B 769

HALS-B 2.29

DF
HTEN HMAS HV
Accelerom
Tension

0.00

TOOL ZERO

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

Client: Essential Petroleum Resources Limited

6/30/2004

Well: Findra-1

Field: PRP 159

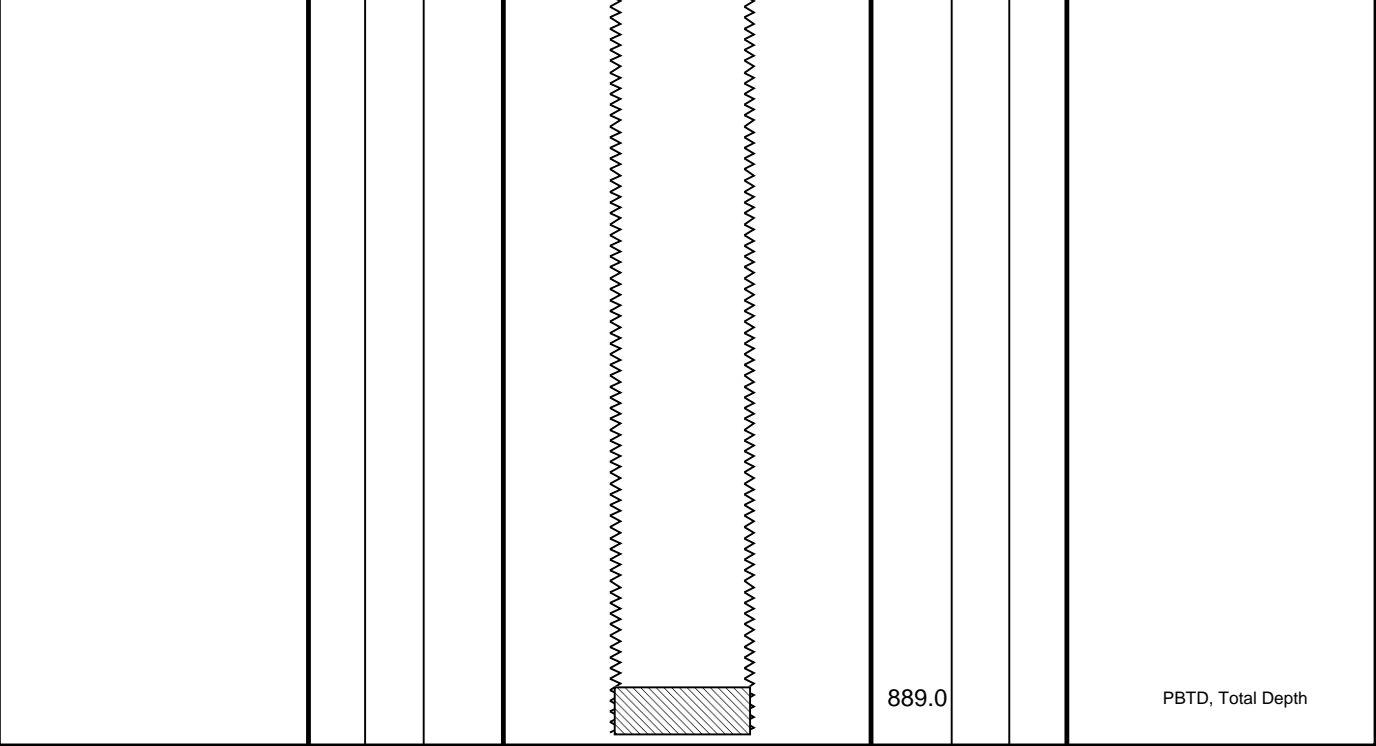
Rig Name: Hunt Rig # 2

State: Victoria

Country: Australia

Elevation: 61.0 m

Production String	(in)		(m)	Well Schematic	(m)	(in)		Casing String
	OD	ID	MD		MD	OD	ID	
					0.0	17.500		Borehole Segment
					61.0	13.375		Casing Shoe
					150.0	9.625		Casing Shoe



Resistivity–Sonic
1:200 Scale

MAXIS Field Log

Company: Essential Petroleum Resources Limited Well: Findra–1



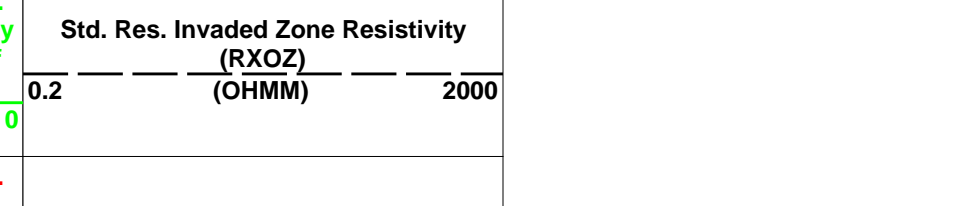
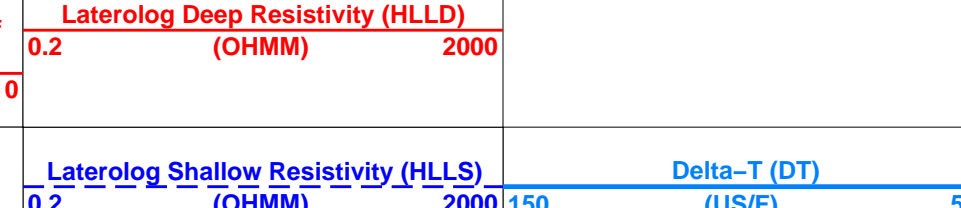
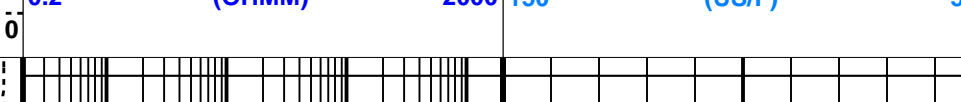
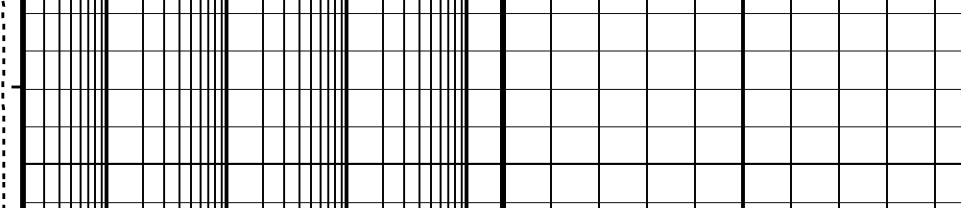
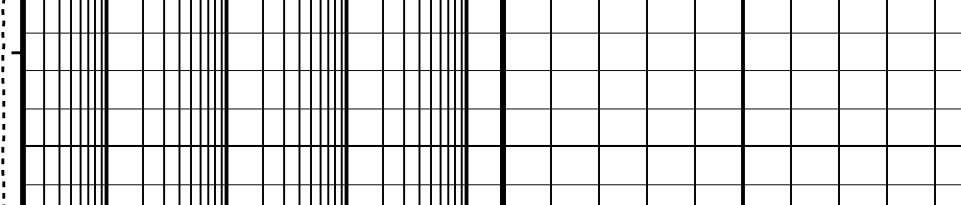
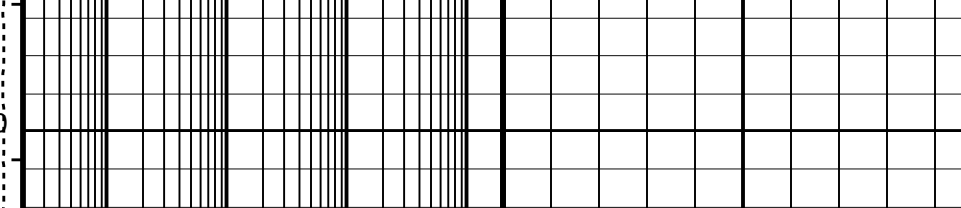
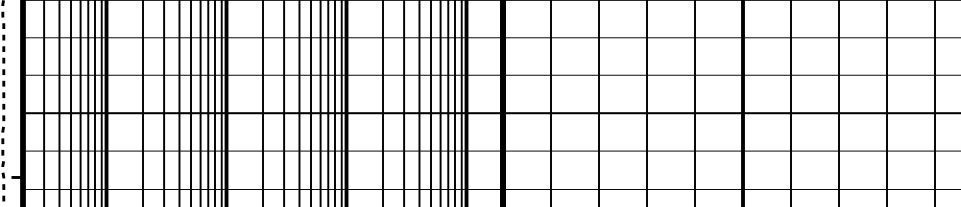
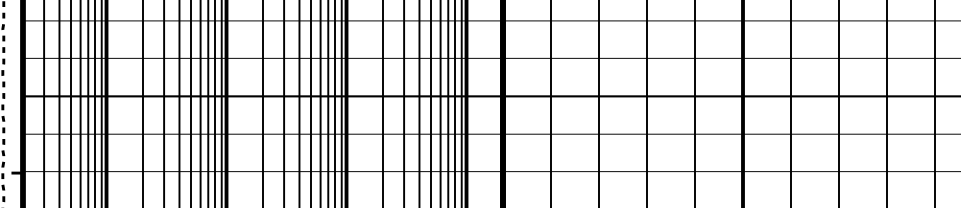
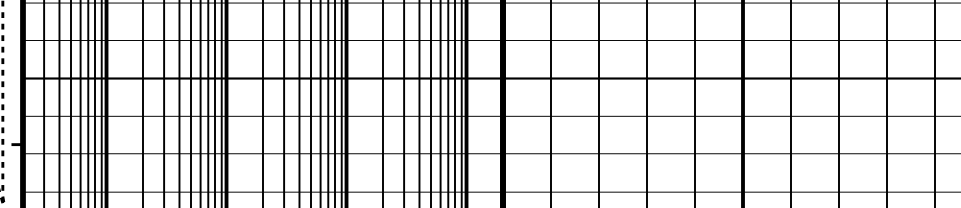
Input DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_007LUP	FN:11	PRODUCER	30–Jun–2004 17:55	880.1 M	28.4 M
Output DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_010PUP	FN:15	PRODUCER	30–Jun–2004 20:05	880.3 M	34.4 M
OP System Version: 12C0–301						
MCM						
HALS–B	12C0–301		DSLT–H	12C0–301		
HILTB–FTB	12C0–301		HNGC–A	12C0–301		
HNGS–BA	12C0–301		DTC–H	12C0–301		
BSP	12C0–301					

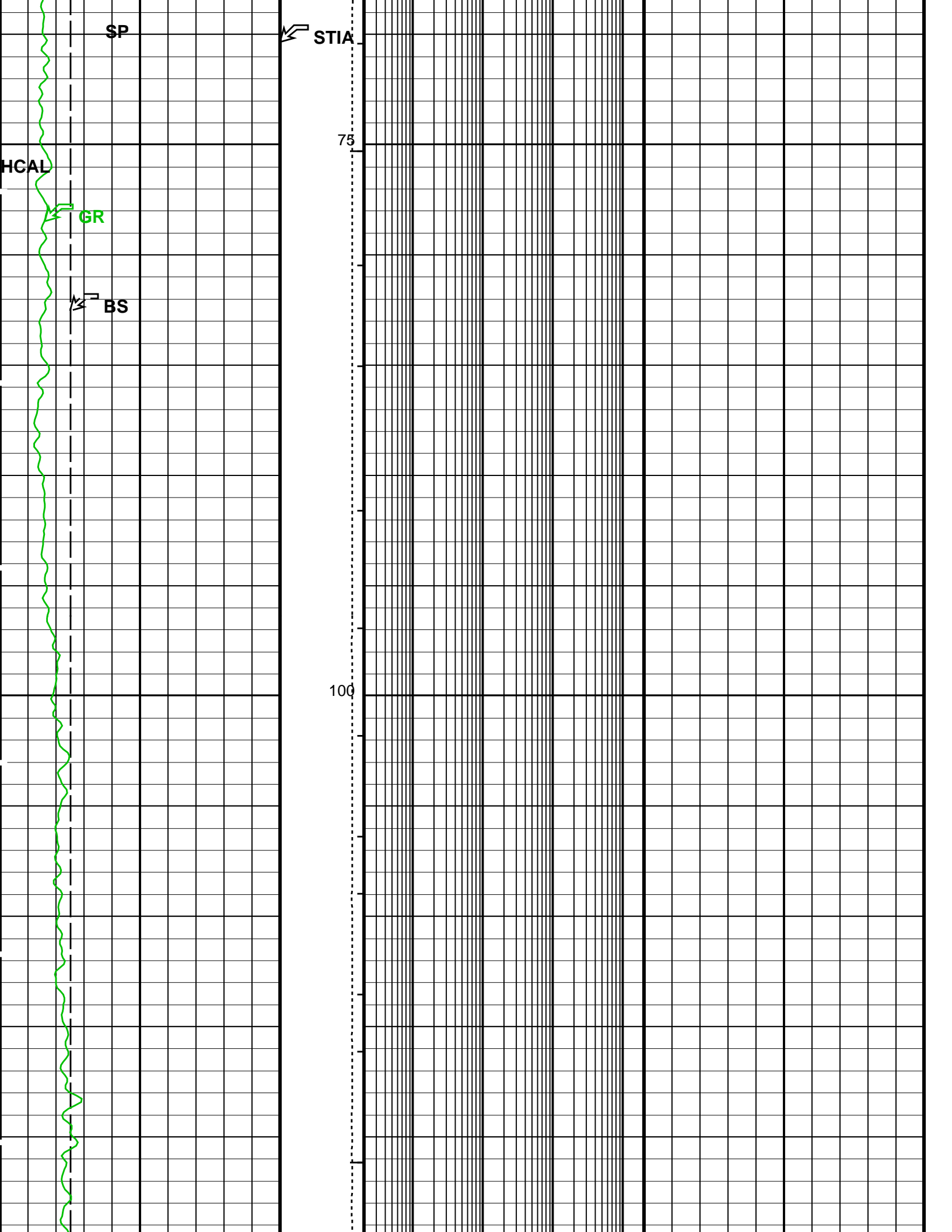
PIP SUMMARY

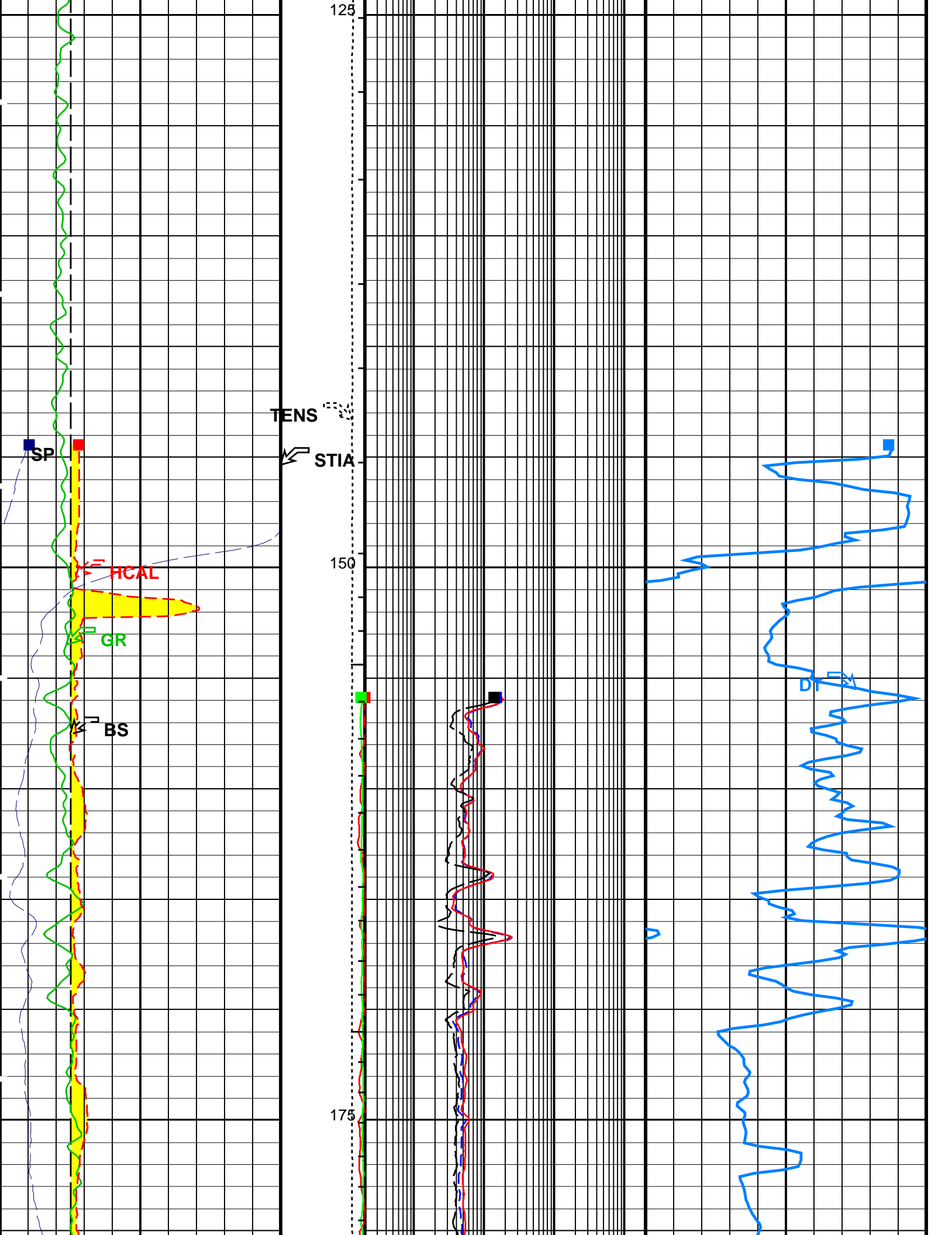
– Integrated Transit Time Minor Pip Every 1 MS

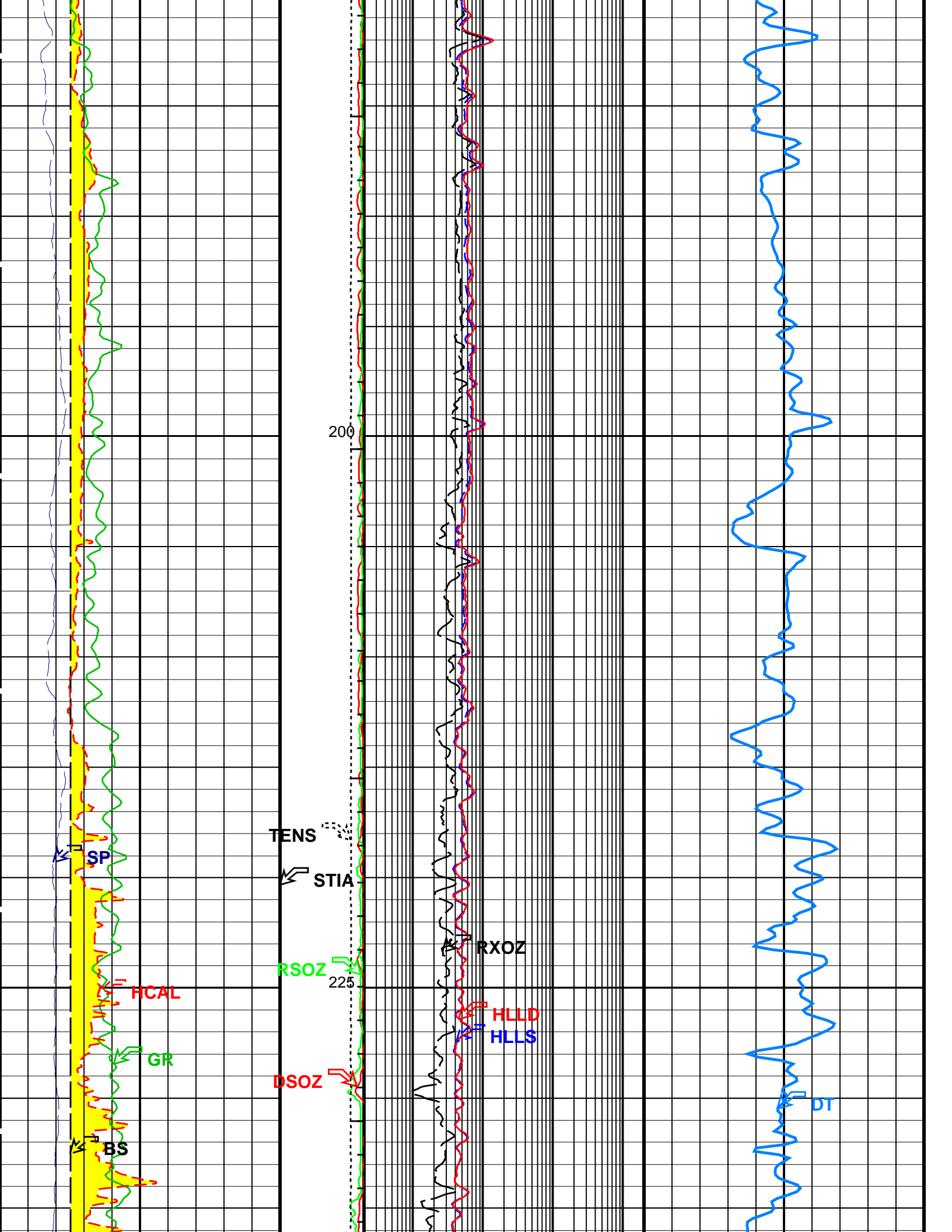
Time Mark Every 60 S

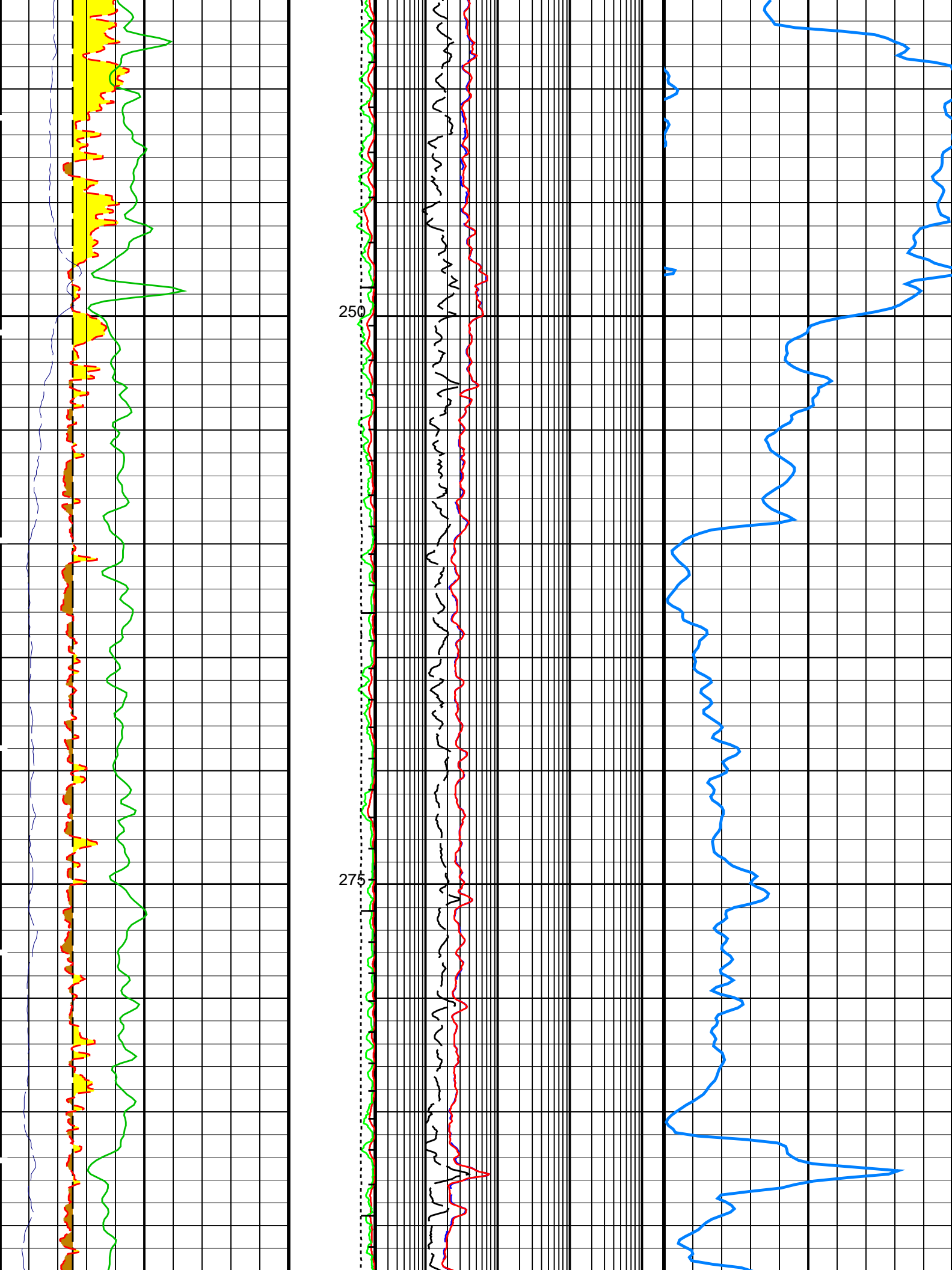
— Integrated Transit Time Major Pip Every 10 MS

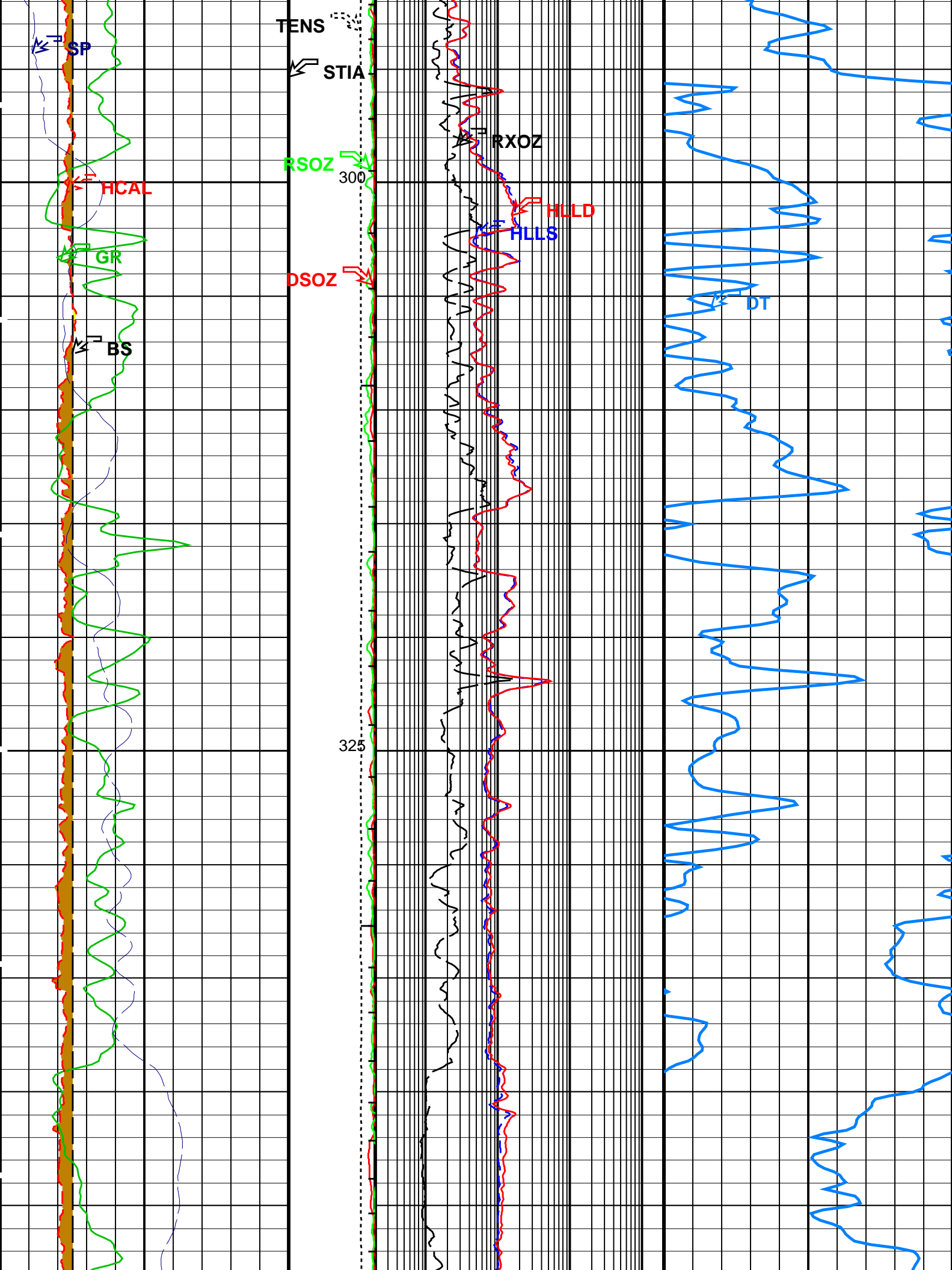
Mudcake From HCAL to BS							
Washout From BS to HCAL							
HILT Caliper (HCAL) (IN) 6 ----- 16							
Gamma Ray (GR) (GAPI) 0 ----- 150		Std. Res. Resistivity Standoff (RSOZ) 65 (MM) 0		Std. Res. Invaded Zone Resistivity (RXOZ) (OHMM) 0.2 ----- 2000			
Bit Size (BS) (IN) 6 ----- 16		Std. Res. Density Standoff (DSOZ) 65 (MM) 0		Laterolog Deep Resistivity (HLLD) (OHMM) 0.2 ----- 2000			
SP (SP) (MV) -80 ----- 20		Tension (TENS) (LBF) 10000 ----- 0		Laterolog Shallow Resistivity (HLLS) (OHMM) 0.2 ----- 2000			Delta-T (DT) (US/F) 150 ----- 50
							
							
							
							

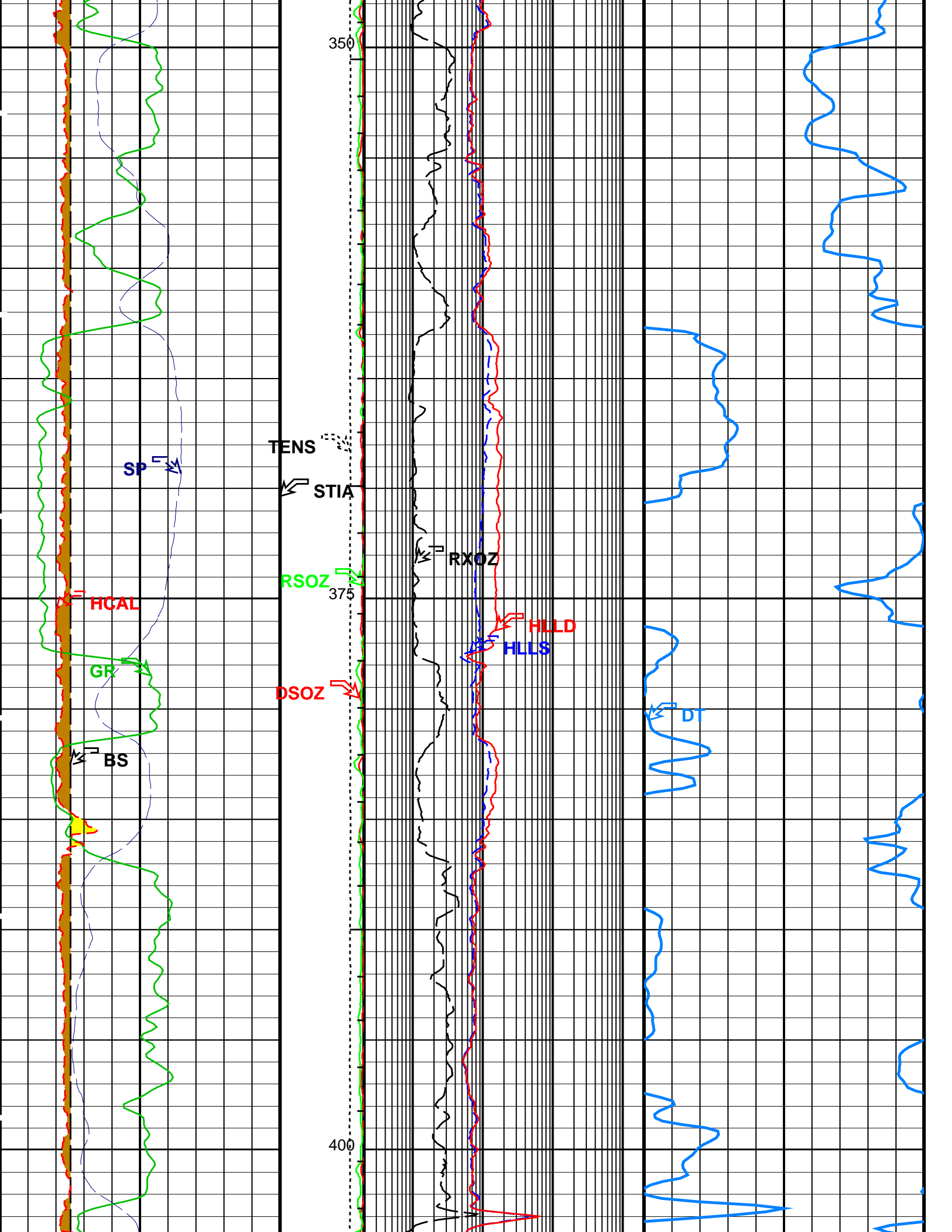


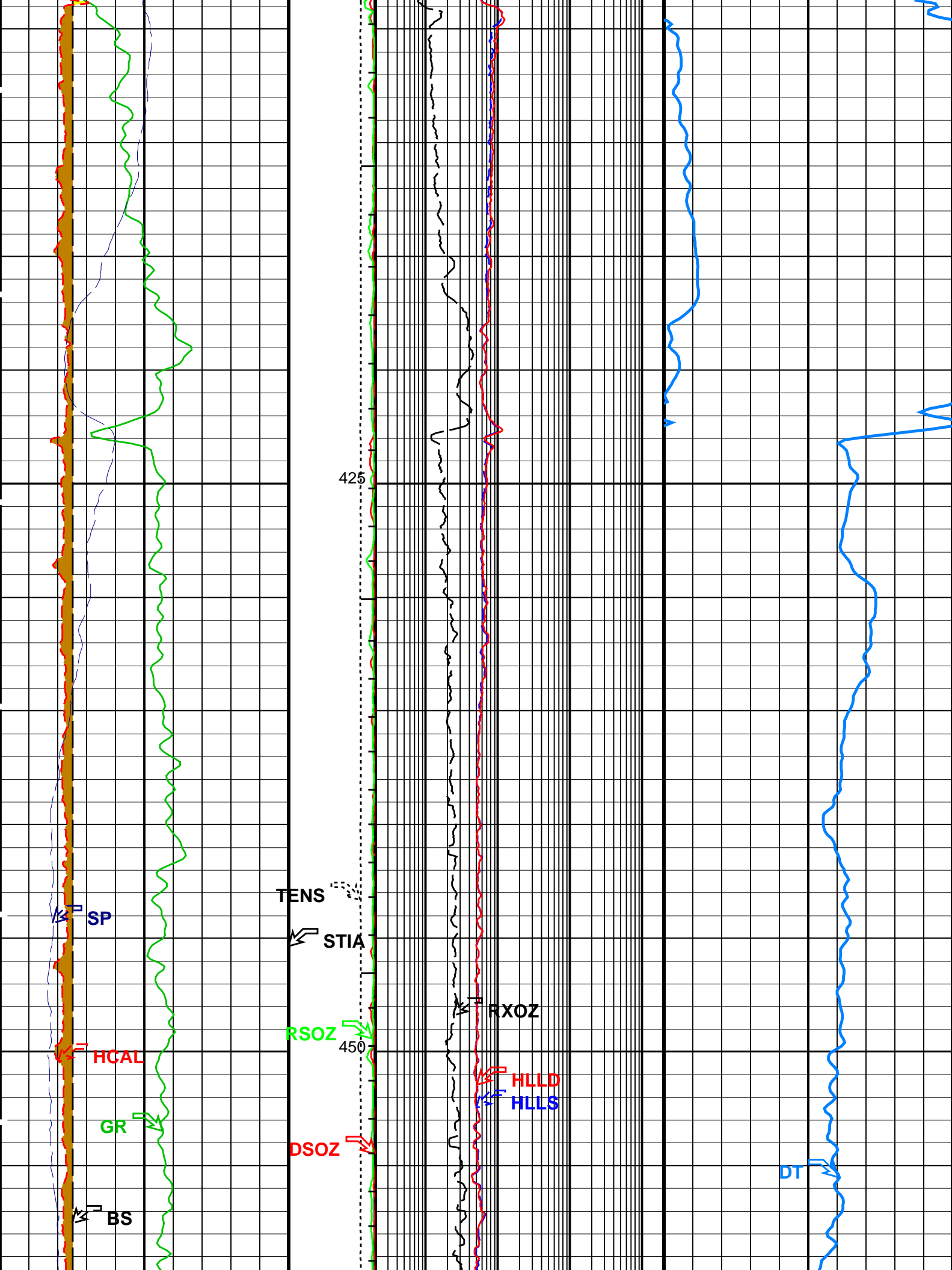


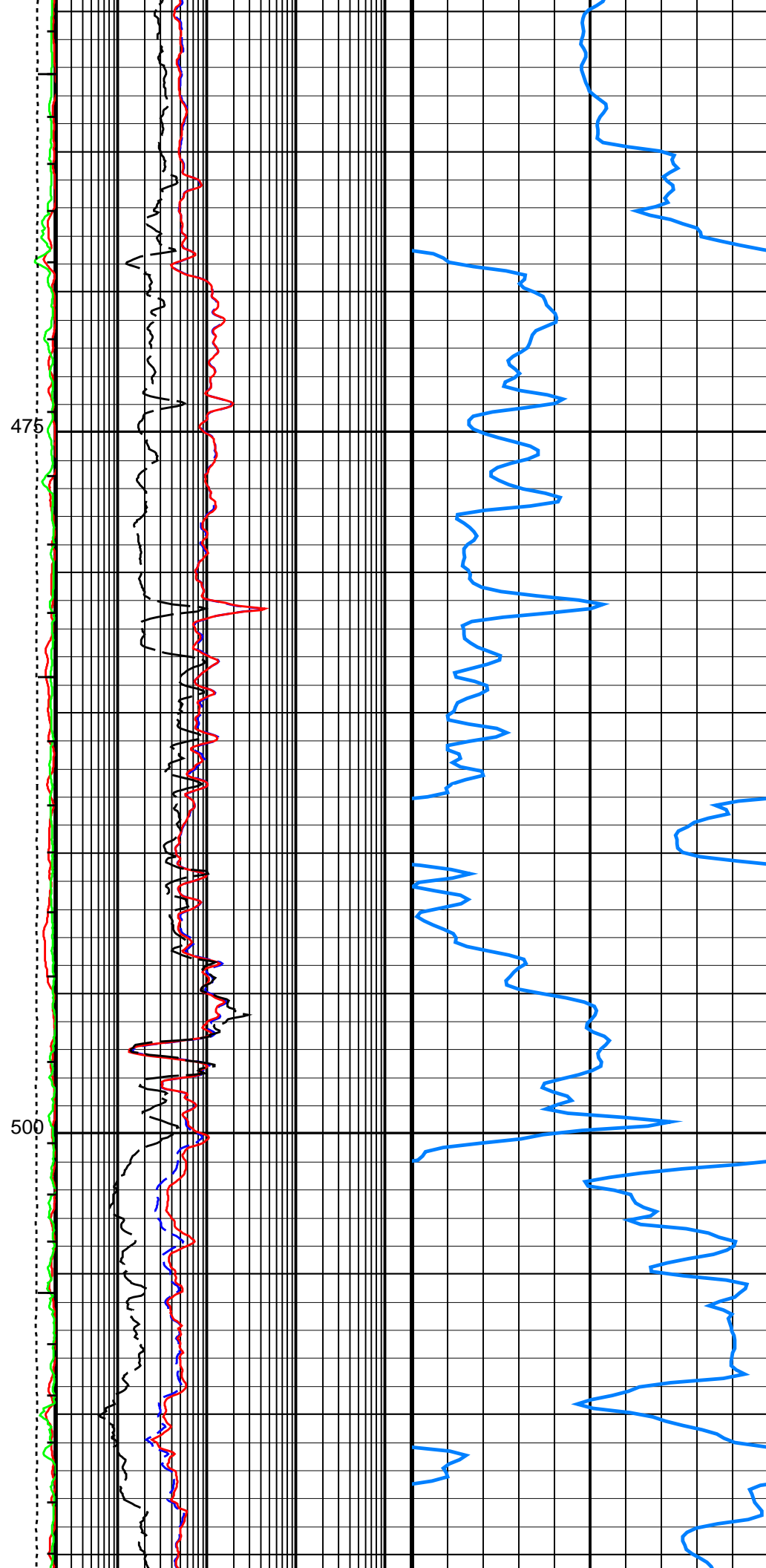
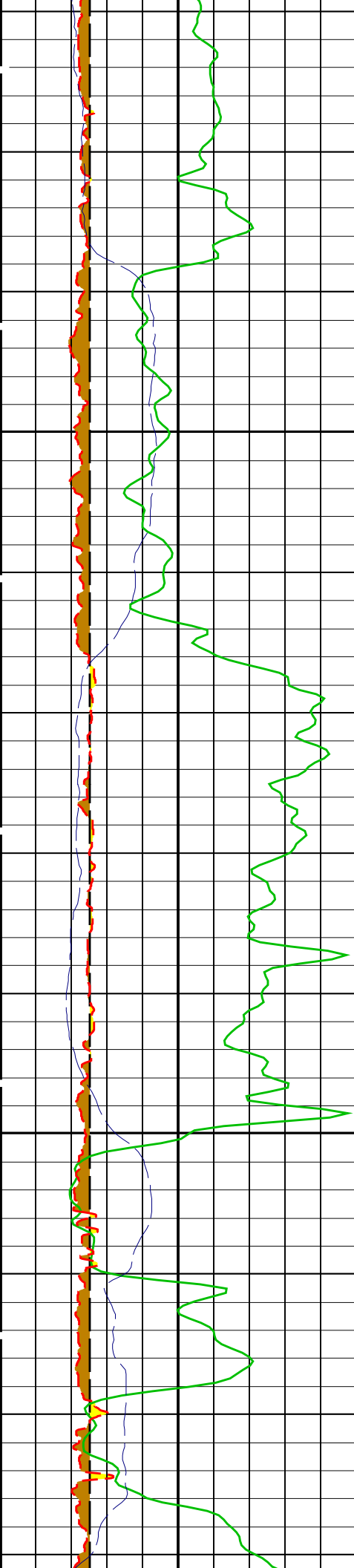


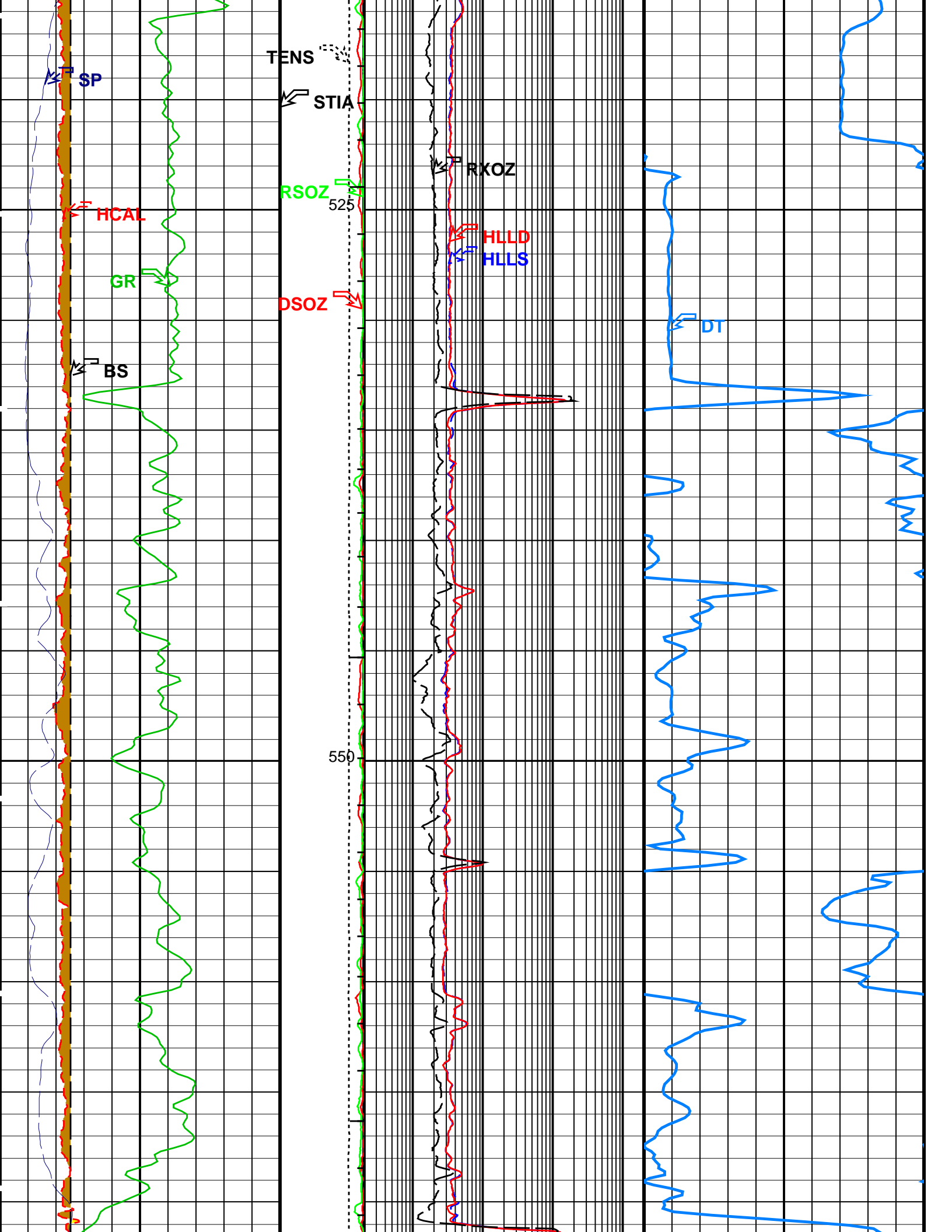


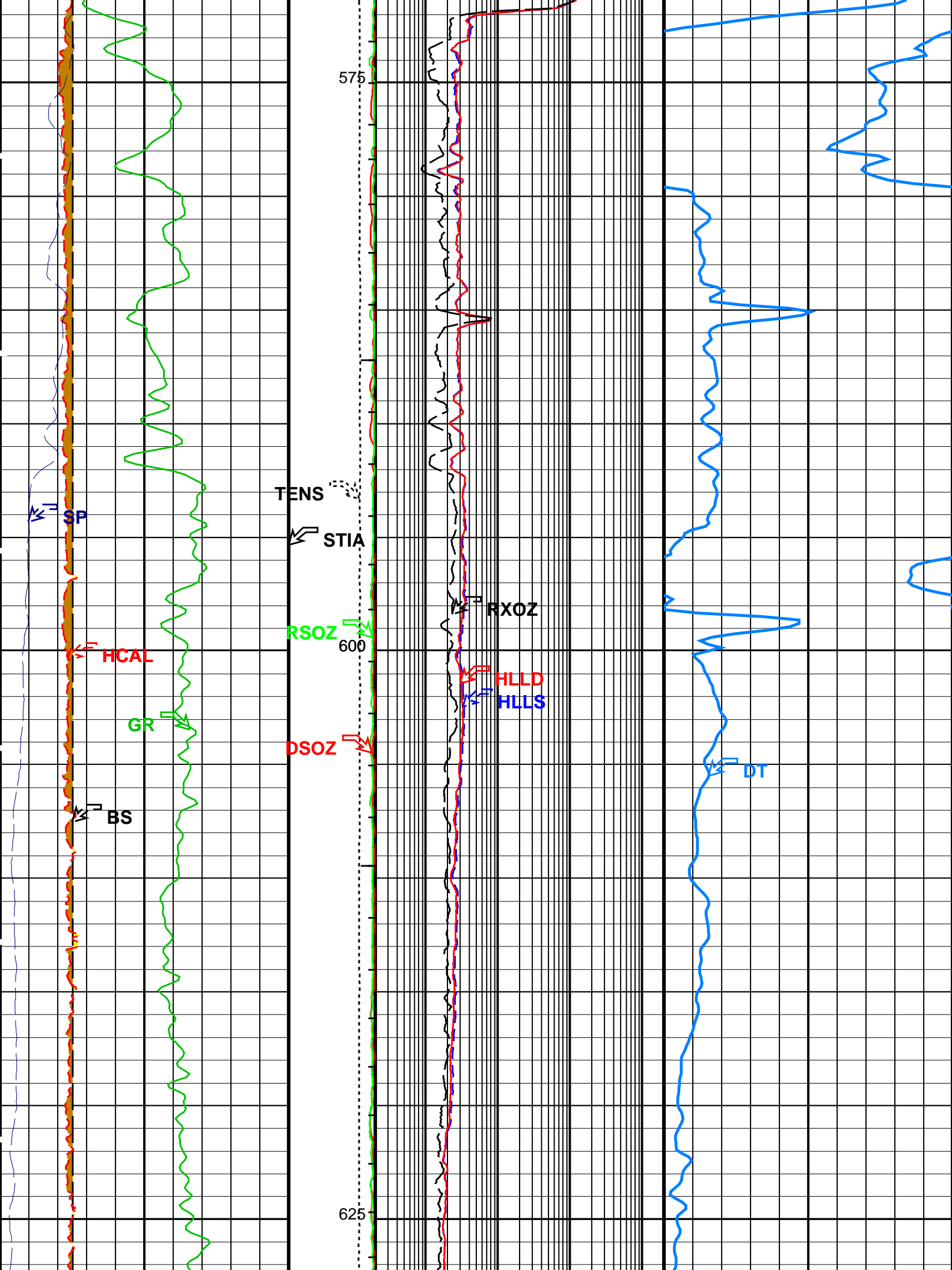


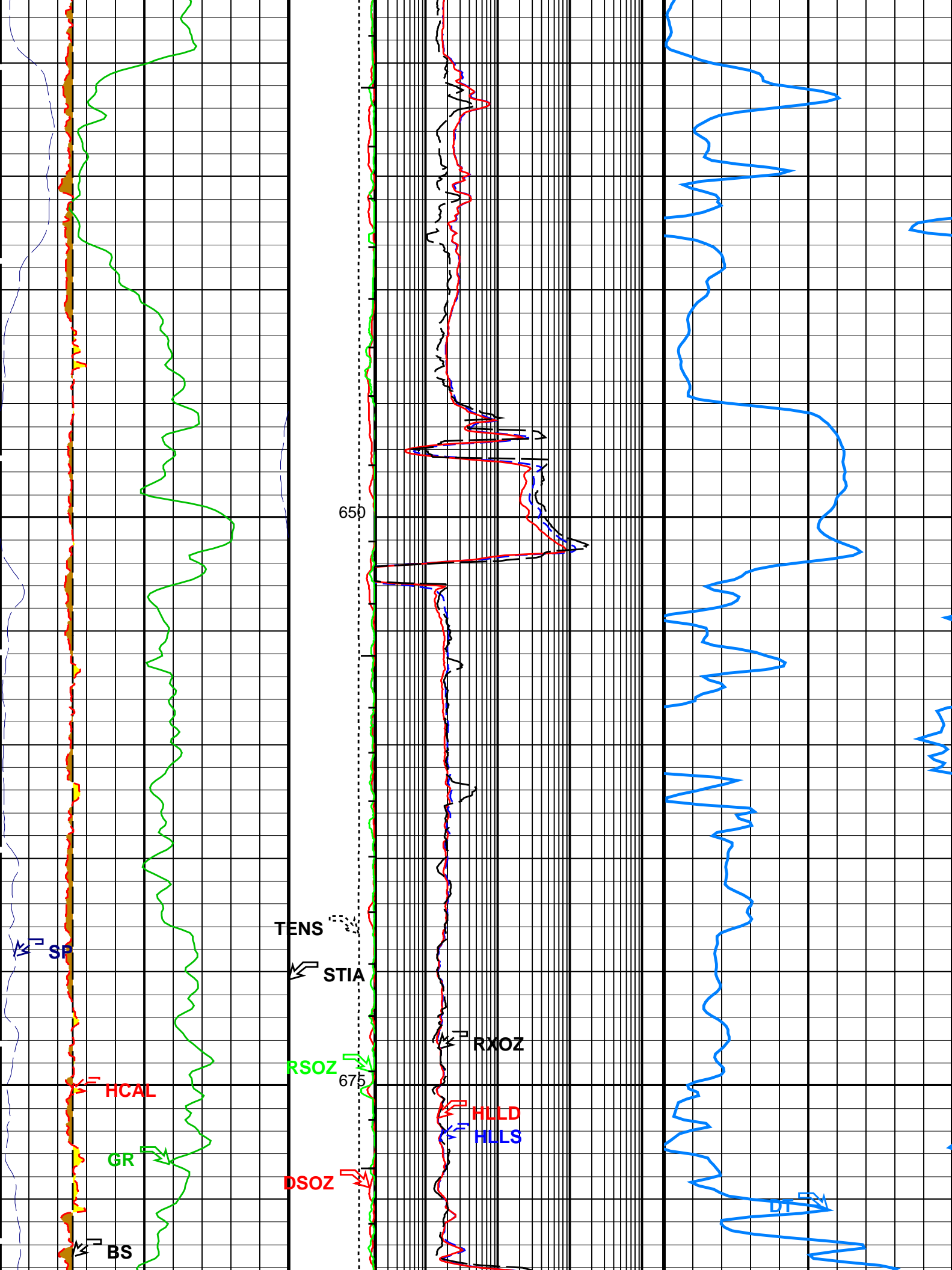


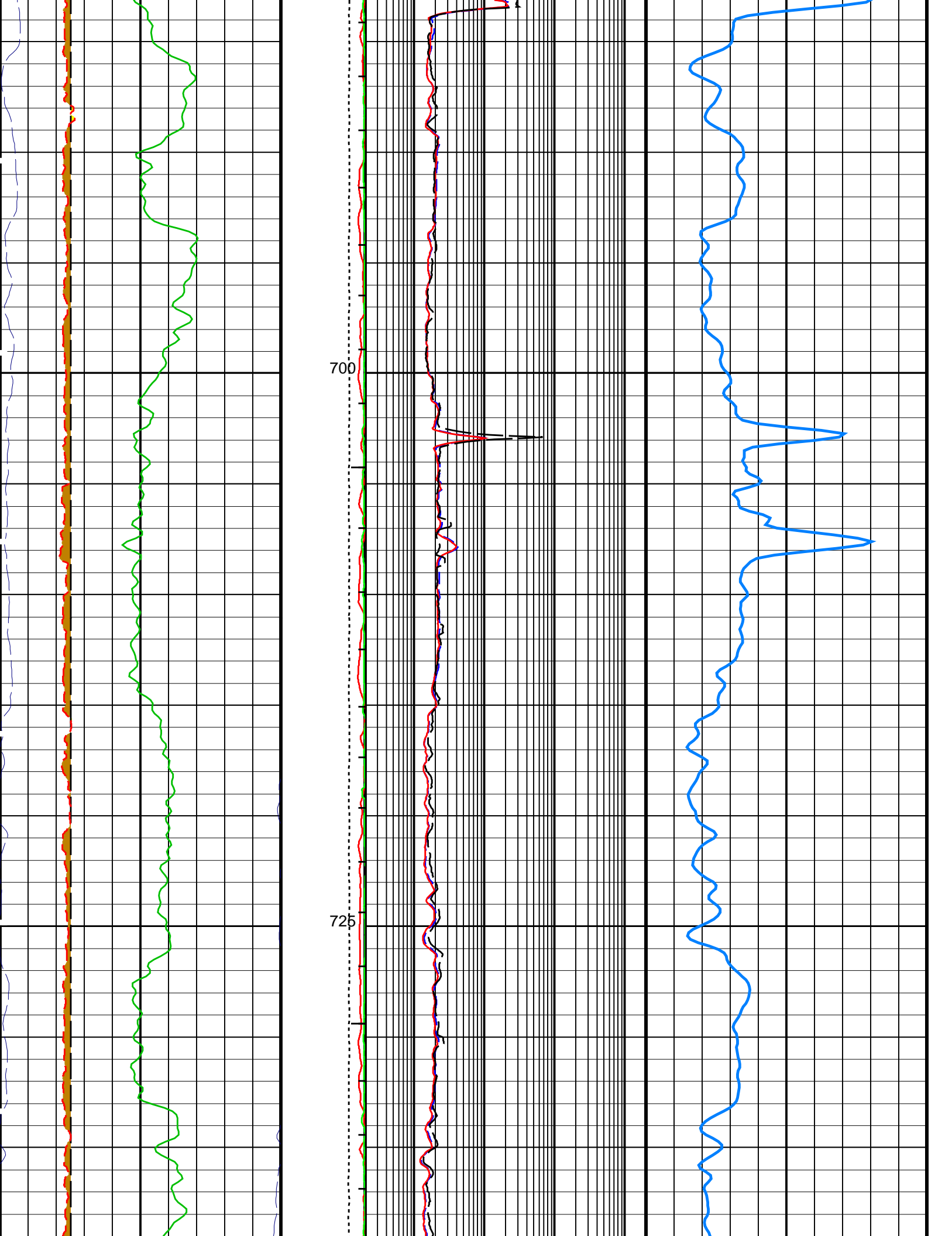


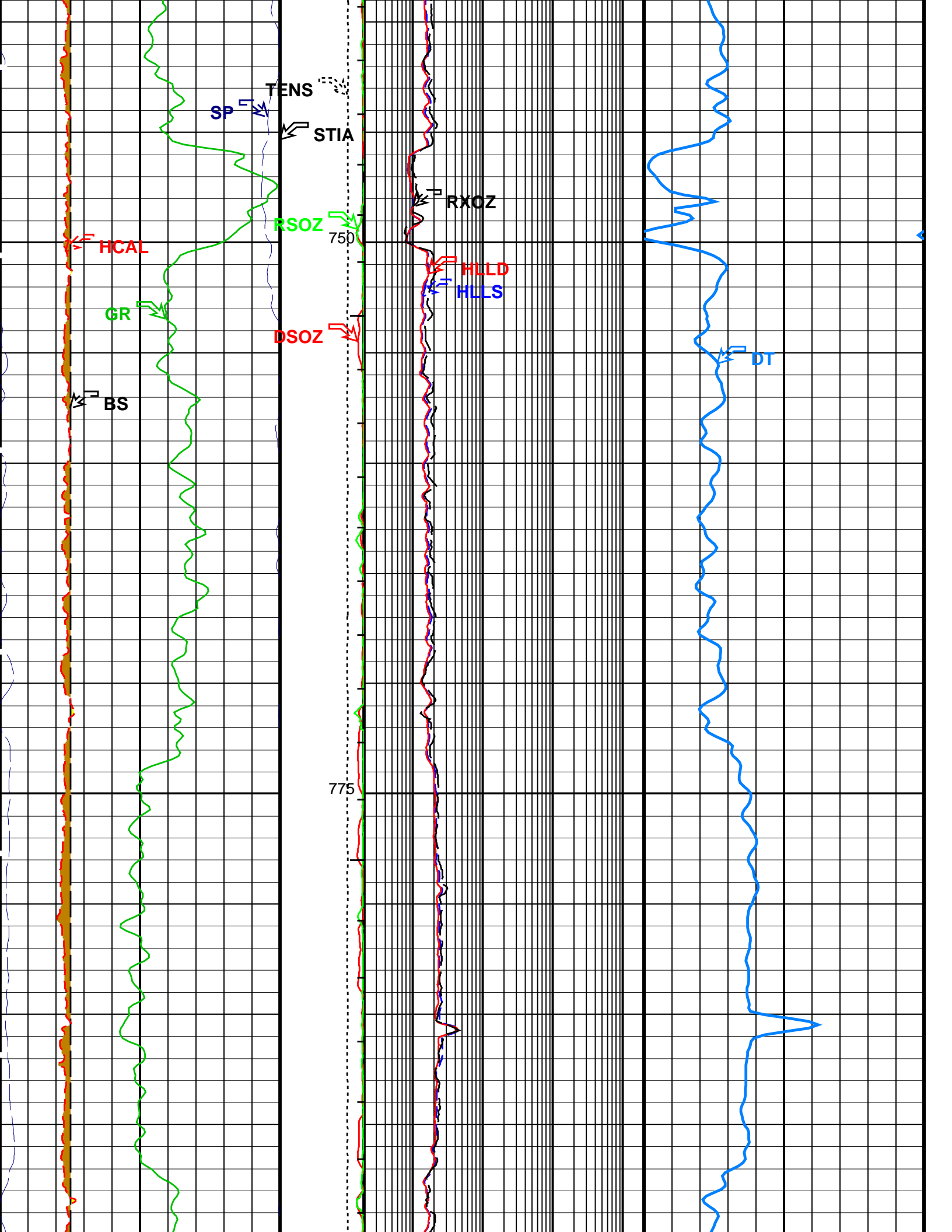


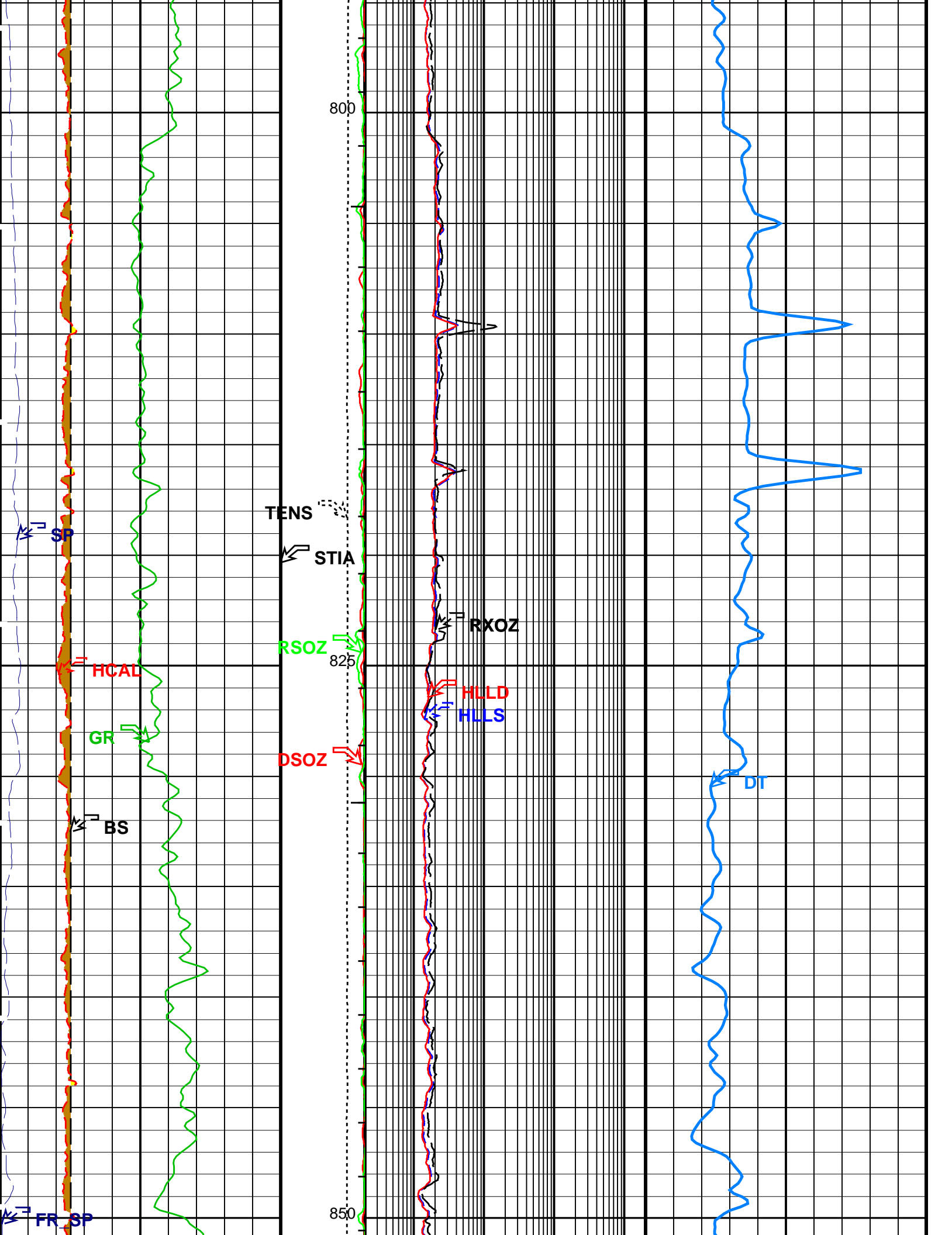


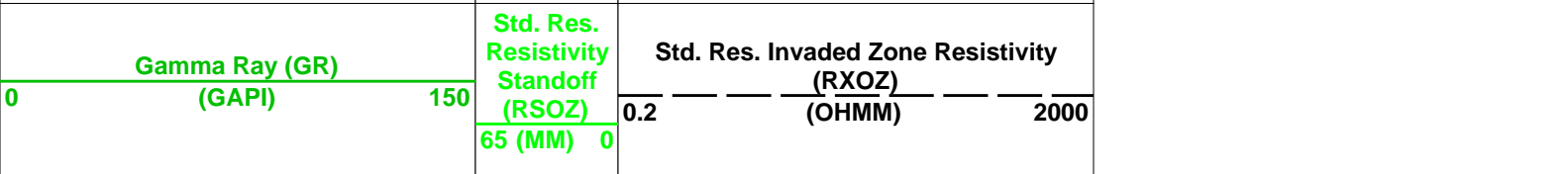
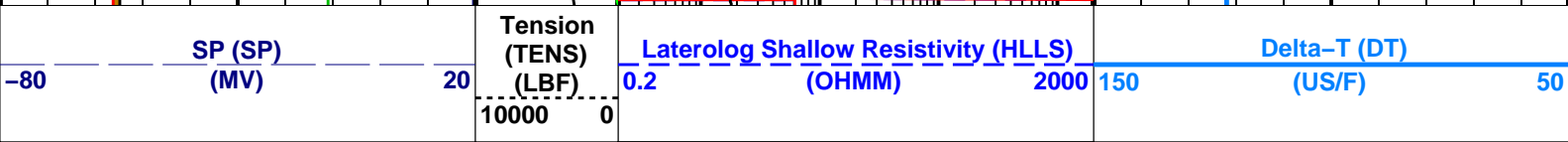
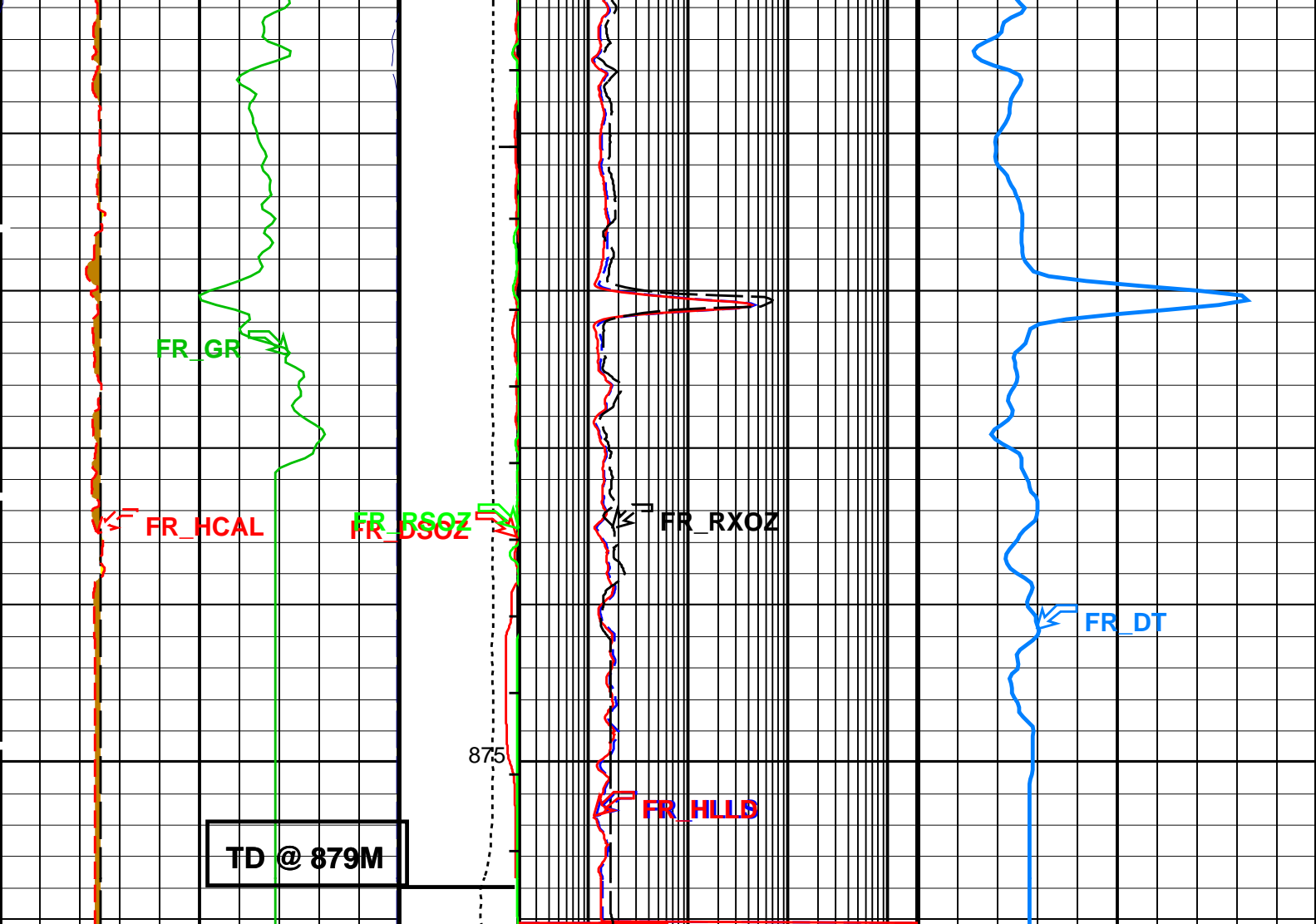












PIP SUMMARY

- └ 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				
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)	48	DEGC	
	Diameter & Eccentering used in HALS Borehole Corrections	Caliper_Eccentered		
GCSE	Generalized Caliper Selection	HCAL		
GDEV	Average Angular Deviation of Borehole from Normal	1	DEG	
GGRD	Geothermal Gradient	0.018227	DC/M	
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	LIMESTONE		
RIMP	HALS Right Image Processing	ShallowRaw		
RTCOMP	HALS Rt Computation	Hals_Highres		
RTRE	HALS Resistivity Threshold	100000	OHMM	
SHT	Surface Hole Temperature	15	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	
DSLTL-H: Digitizing Sonic Logging Tool				
	Telemetry Mode	DSLCL_FTB		
	DSLTL Firing Mode	SDDDB		
AGC	Automatic Gain Control Status	ON		
AMSG	Auxiliary Minimum Sliding Gate	140	US	
BILI	Bond Index Level for Zone Isolation	0.8		
CBAF	CBL Adjustment Factor	1		
CBCF	CBL Correction Factor	4		
CBLG	CBL Gate Width	45	US	
CDTS	C-Delta-T Shale	100	US/F	
CSTR	Compressive Strength of Cement	0	KPAA	
DDEL	Digitizing Delay	0	US	
DETE	Delta-T Detection	E2		
DFAD	Digital First Arrival Detection Switch	HOST		
DIVL	DSLTL Depth Sampling Interval	20		
DRCS	DSLTL DLIS Recording Size	180		
DSIN	Digitizing Sample Interval	10		
DTCM	Delta-T Computation Mode	FULL		
DTF	Delta-T Fluid	189	US/F	
DTFS	DSLCL Telemetry Frame Size	396		
DTM	Delta-T Matrix	56	US/F	
DWCO	Digitizing Word Count	180		
FCF	CBL Fluid Compensation Factor	1		
GAI	Manual Gain	40		
GOBO	Good Bond	2	MV	
ITTS	Integrated Transit Time Source	DT		
MAHTR	Manual High Threshold Reference	120		
MCI	Minimum Cemented Interval for Isolation	4.51523	M	
MGAI	Maximum Gain	60		
MIGA	Minimum Gain	1		
MNHTR	Minimum High Threshold Reference	100		
MODE	Sonic Firing Mode	SDDDB		
MSA	Minimum Sonic Amplitude	15.924	MV	
NMSG	Near Minimum Sliding Gate	140	US	
NMXG	Near Maximum Sliding Gate	970	US	
NUMP	Number of Detection Passes	2		
RATE	Firing Rate	R15		
RDFA	Reset DFAD	OFF		
SDTH	Switch Down Threshold	20000		
SFAF	Sonic Formation Attenuation Factor	10	DB/M	
SGAD	Sliding Gate Status	ON		
SGAI	Selectable Acquisition Gain	AUTO		
SGCL	Sliding Gate Closing Delta-T	140	US/F	
SGCW	Sliding Gate Closing Width	25	US	
SGDT	Sliding Gate Delta-T	40	US/F	
SGW	Sliding Gate Width	110	US	
SLFV	Signal Level for AGC	5000		

SELEV	Signal Level for AGC	3000	
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DT	
SUTH	Switch Up Threshold	1000	
VDLG	VDL Manual Gain	40	
WAGC	Waveform AGC Allow/Disallow	OFF	
WGA1	Waveform Manual Gain	20	
WGDT	Waveform Gain Delta-T	240	US/F
WGIN	Waveform Gain Interval	2540	US
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)	48	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
EXSICL	External Shale Indicator Clean Value	20	
EXSISH	External Shale Indicator Shale Value	150	
FD	Fluid Density	1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	1	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HACPP	Accelerometer PROM Presence	PRESENT_DOWNHOLE	
HART	Accelerometer Reference Temperature	20	DEGC
HDCOD	HILT Density Coal detection	2	G/C3
HDSAD	HILT Density Salt detection	2.1	G/C3
HILT_GAS_DENSITY	HILT Gas Downhole Density	0	G/C3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HNCOD	HILT Neutron Coal detection	45	PU
HNSAD	HILT Neutron Salt detection	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	LIMESTONE	
MCCO	Mud Cake Correction Option	YES	
MCOR	Mud Correction	BARI	
MDEN	Matrix Density	2.71	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	NO	
SDAT	Standoff Data Source	SOCN	
SEXP_HILT	HILT Saturation Exponent	2	
SHT	Surface Hole Temperature	15	DEGC
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
HNGBS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGBS Detector 1 Barite Constant	0.949873	
BAR2	HNGBS Detector 2 Barite Constant	0.954316	
BHK	HNGBS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	48	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGBS Barite Constant Correction Flag	USER	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	1	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGBS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGBS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGBS Borehole Potassium Running Average	0.00208055	
HALF	HNGBS Alpha Filter Length	60	IN
HCRB	HNGBS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	

HNPE	HNGS Processing Enable	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	-999.25	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	-999.25	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	15	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.982575	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.994701	
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)	48	DEGC
FCD	Future Casing (Outer) Diameter	7	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	1	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	LIMESTONE	
SHT	Surface Hole Temperature	15	DEGC
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	889.00	M
TDL	Total Depth - Logger	879.00	M
System and Miscellaneous			
ALTDCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	41000.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	40.00	LB/F
DFD	Drilling Fluid Density	1.10	G/C3
DO	Depth Offset for Playback	0.2	M
MST	Mud Sample Temperature	12.20	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.2050	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	889	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: Resistivity_Sonic Vertical Scale: 1:200 Graphics File Created: 30-Jun-2004 20:05

OP System Version: 12C0-301

MCM

HALS-B	12C0-301	DSLT-H	12C0-301
HILTB-FTB	12C0-301	HNGC-A	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_007LUP	FN:11	PRODUCER	30-Jun-2004 17:55	880.1 M	28.4 M
---------	----------------------------	-------	----------	-------------------	---------	--------

Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_010PUP	FN:15	PRODUCER	30-Jun-2004 20:05		
---------	----------------------------	-------	----------	-------------------	--	--

Schlumberger

**Resistivity-Sonic Hi-Resolution
1:200 Scale**

MAXIS Field Log

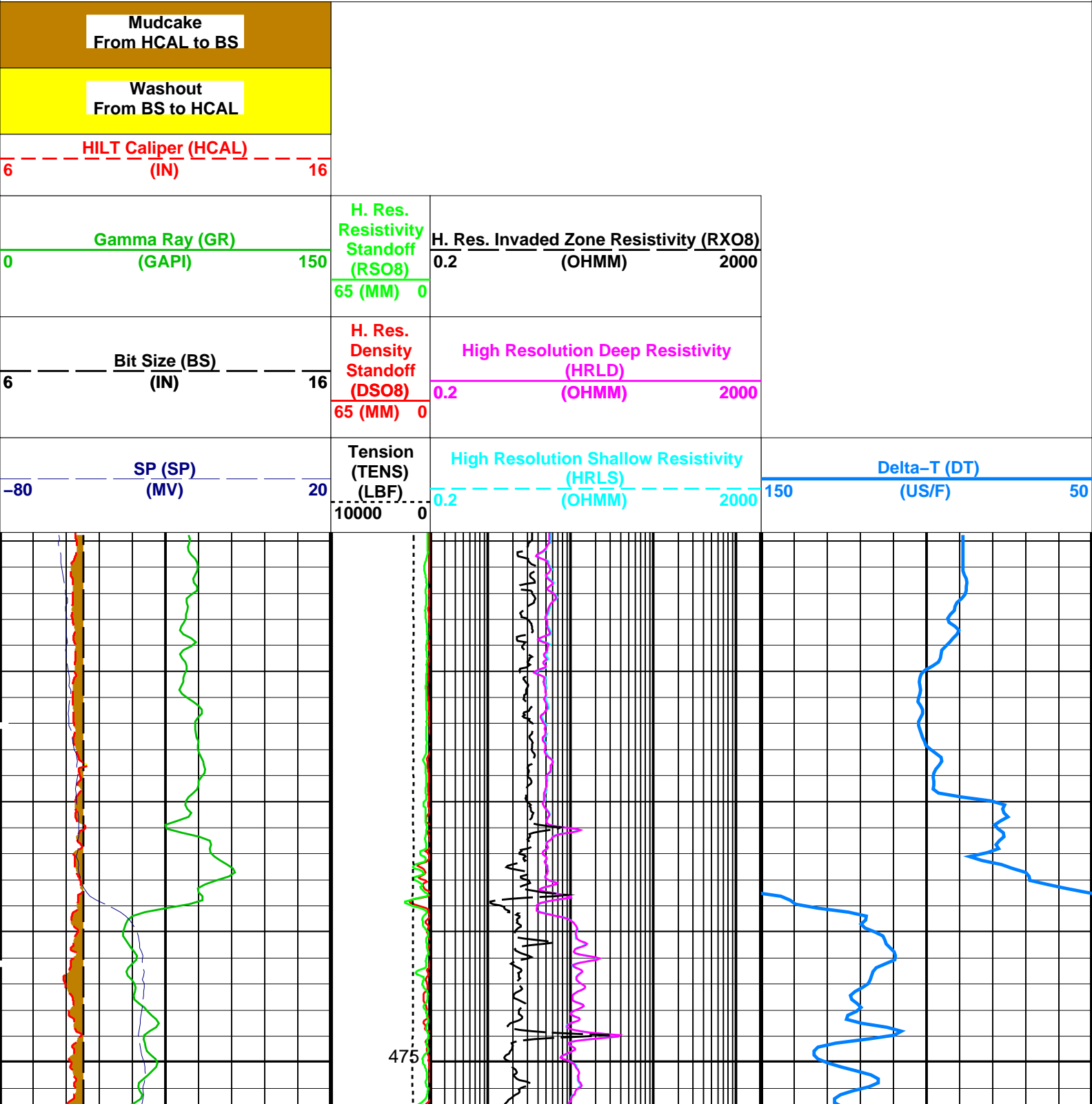
Output DLIS Files

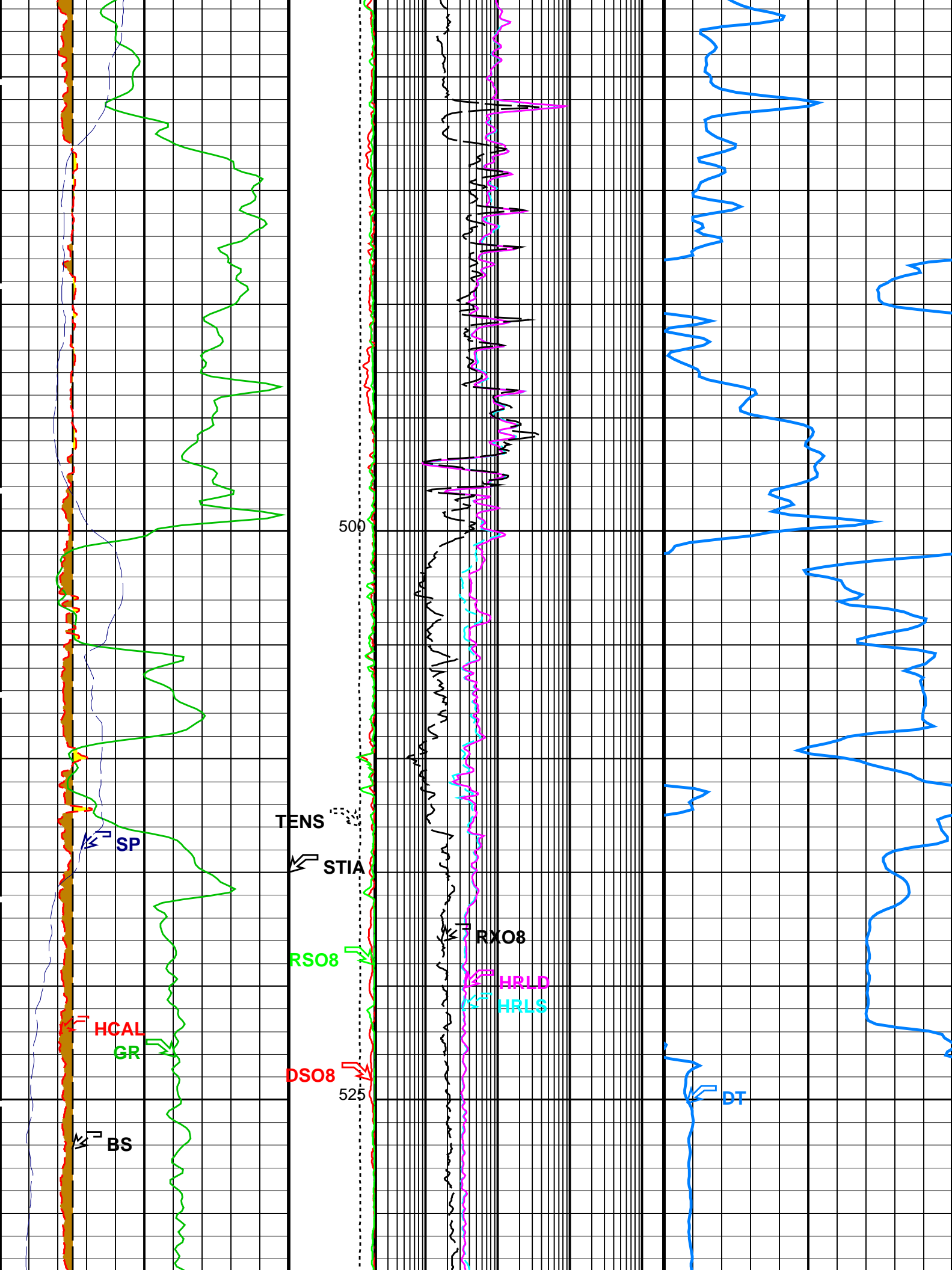
OP System Version: 12C0-301
MCM

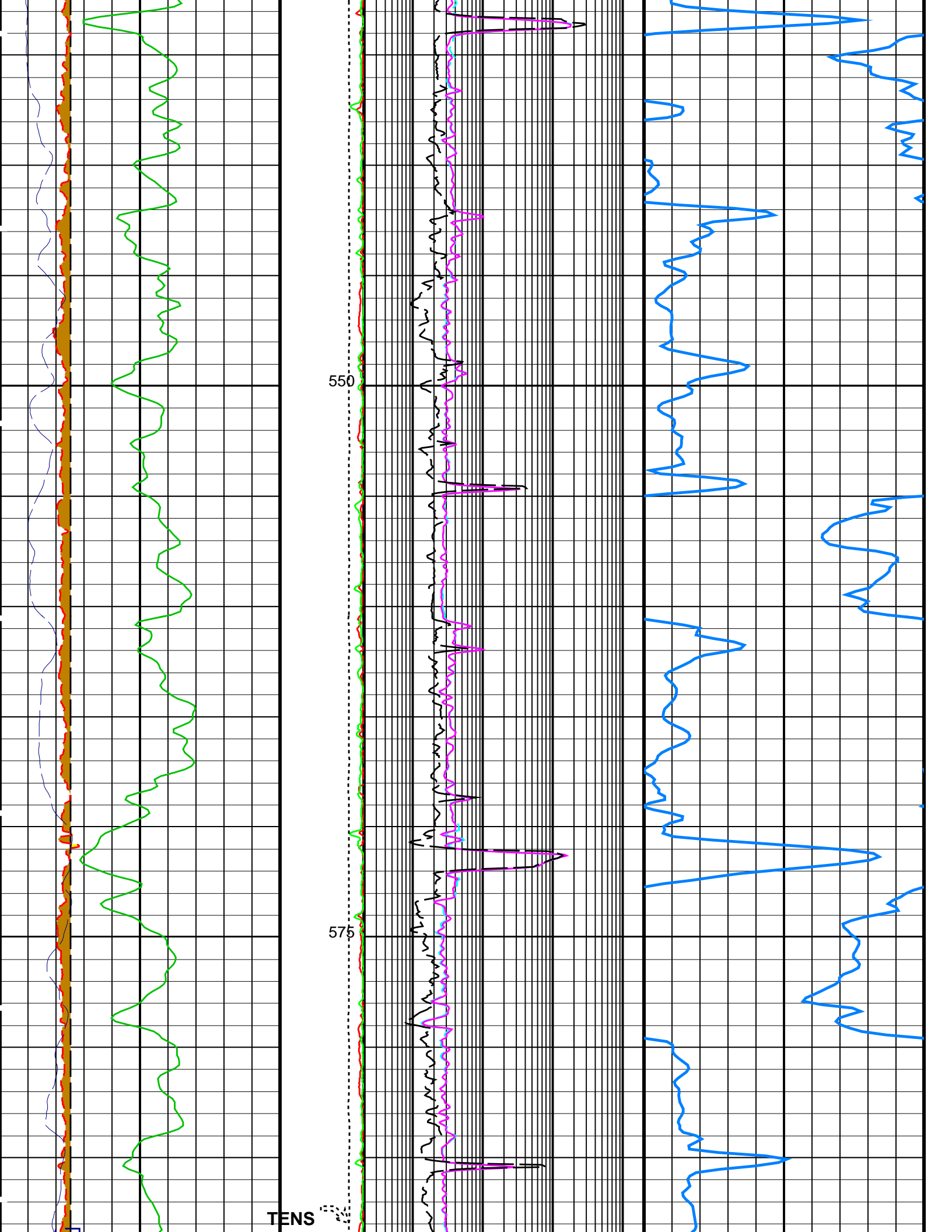
HALS-B	12C0-301	DSLT-H	12C0-301
HILTB-FTB	12C0-301	HNGC-A	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

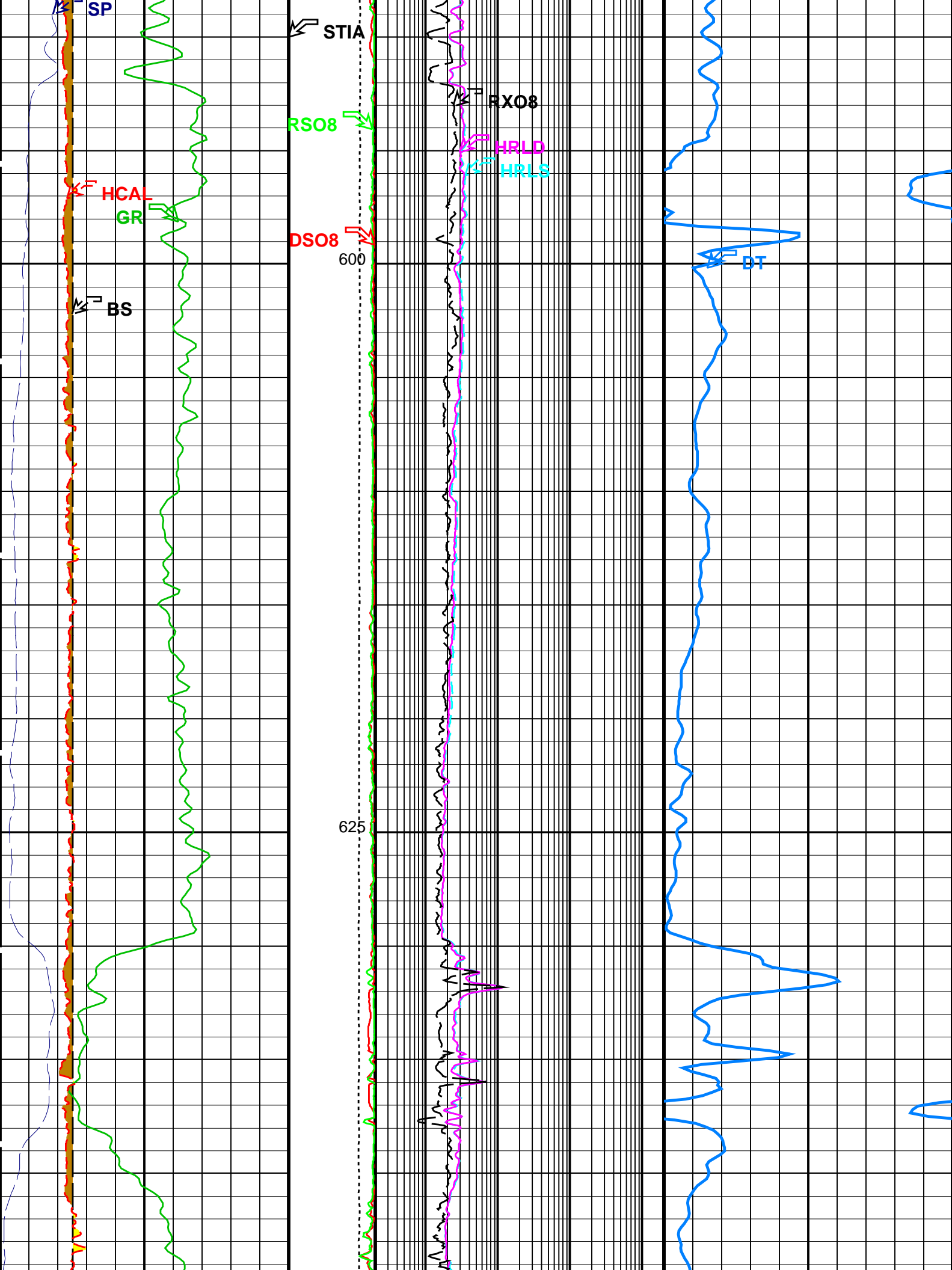
PIP SUMMARY

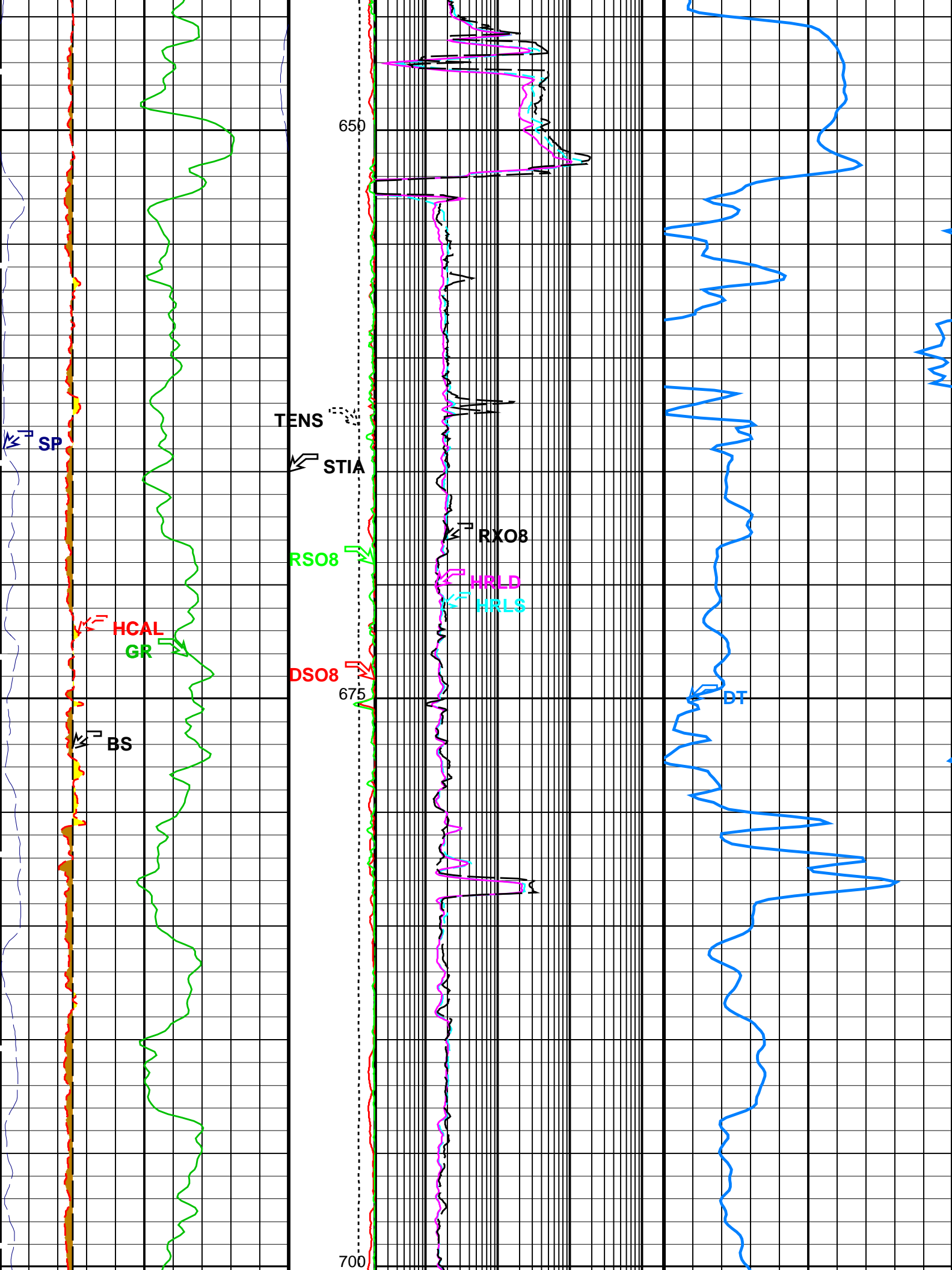
 Time Mark Every 60 S

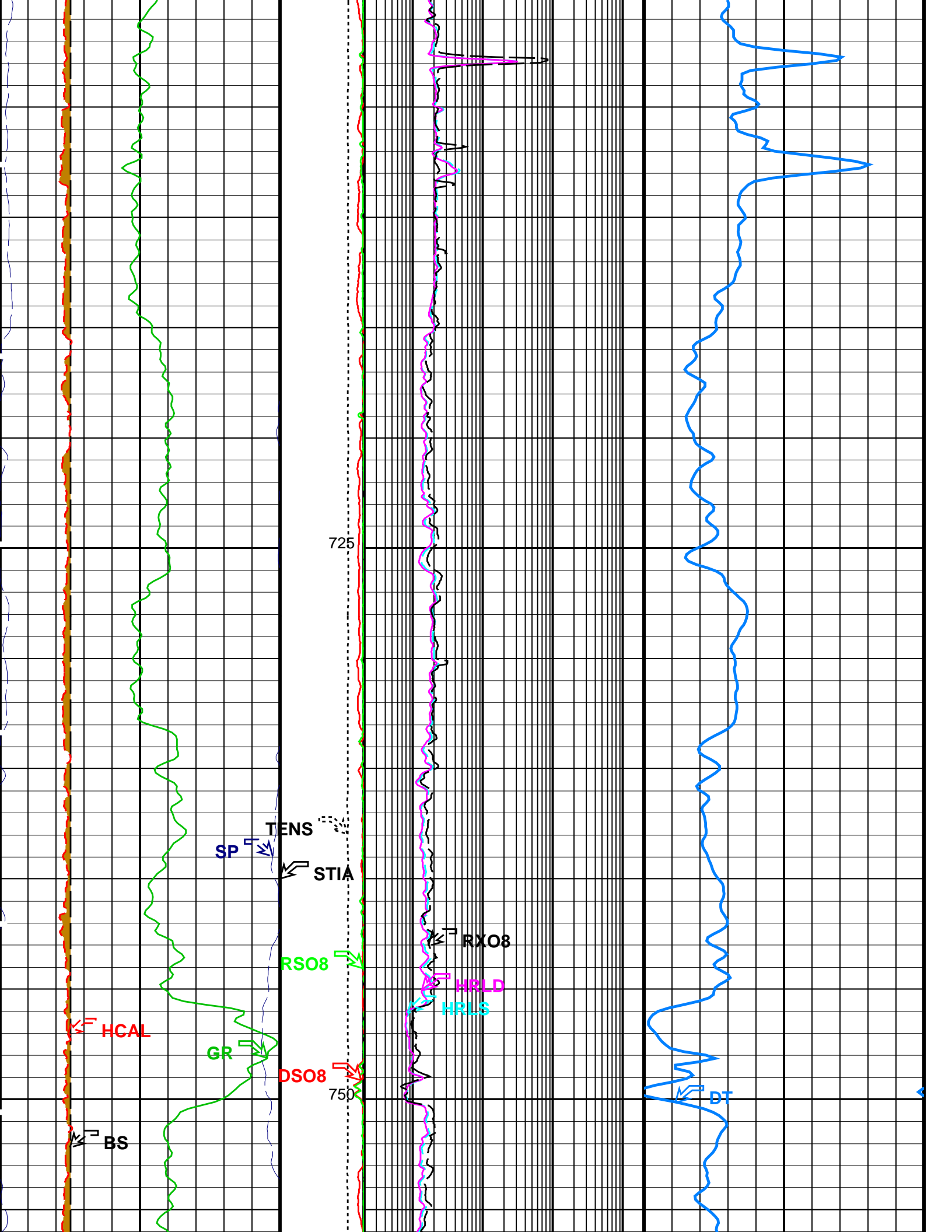


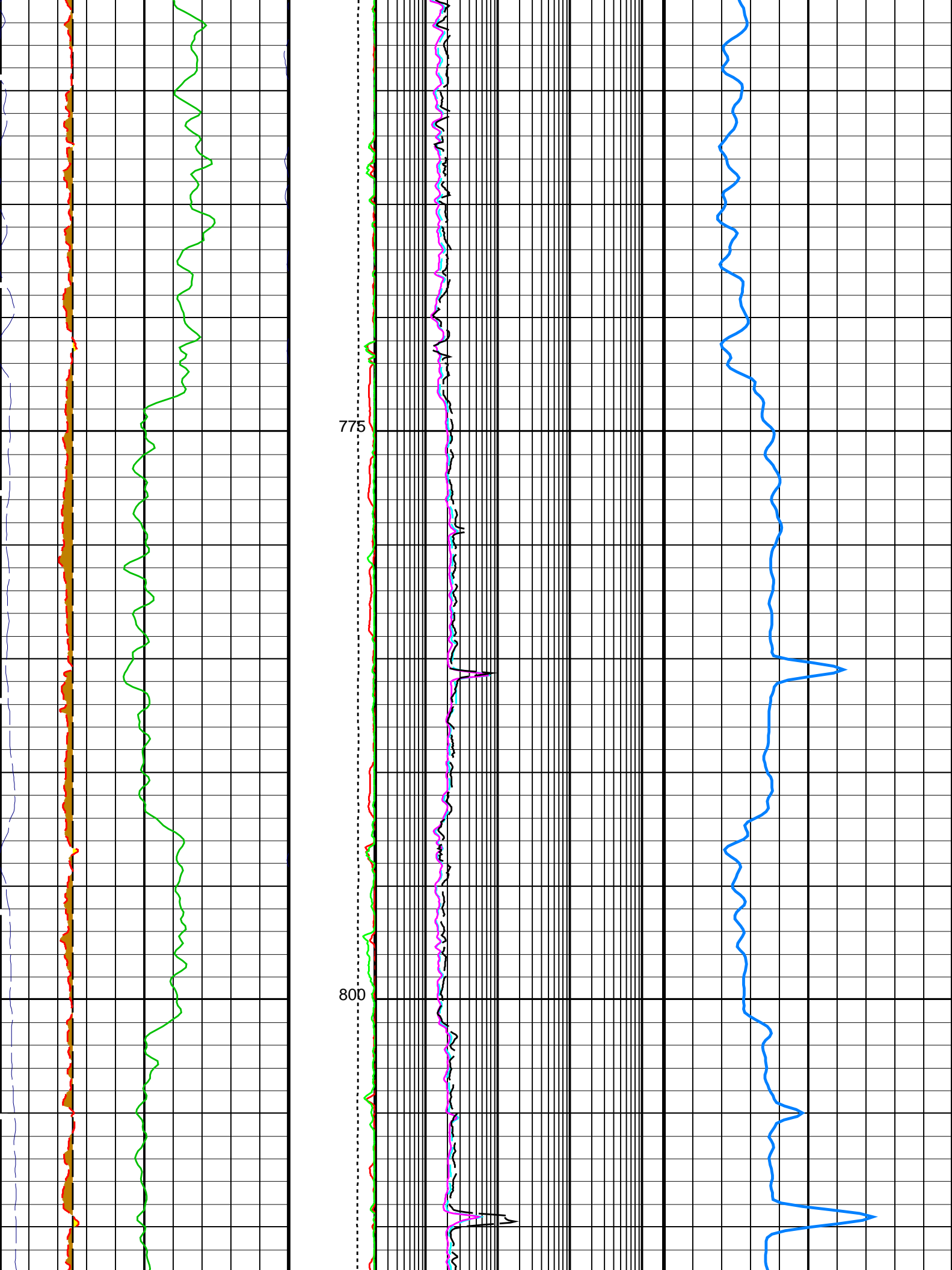


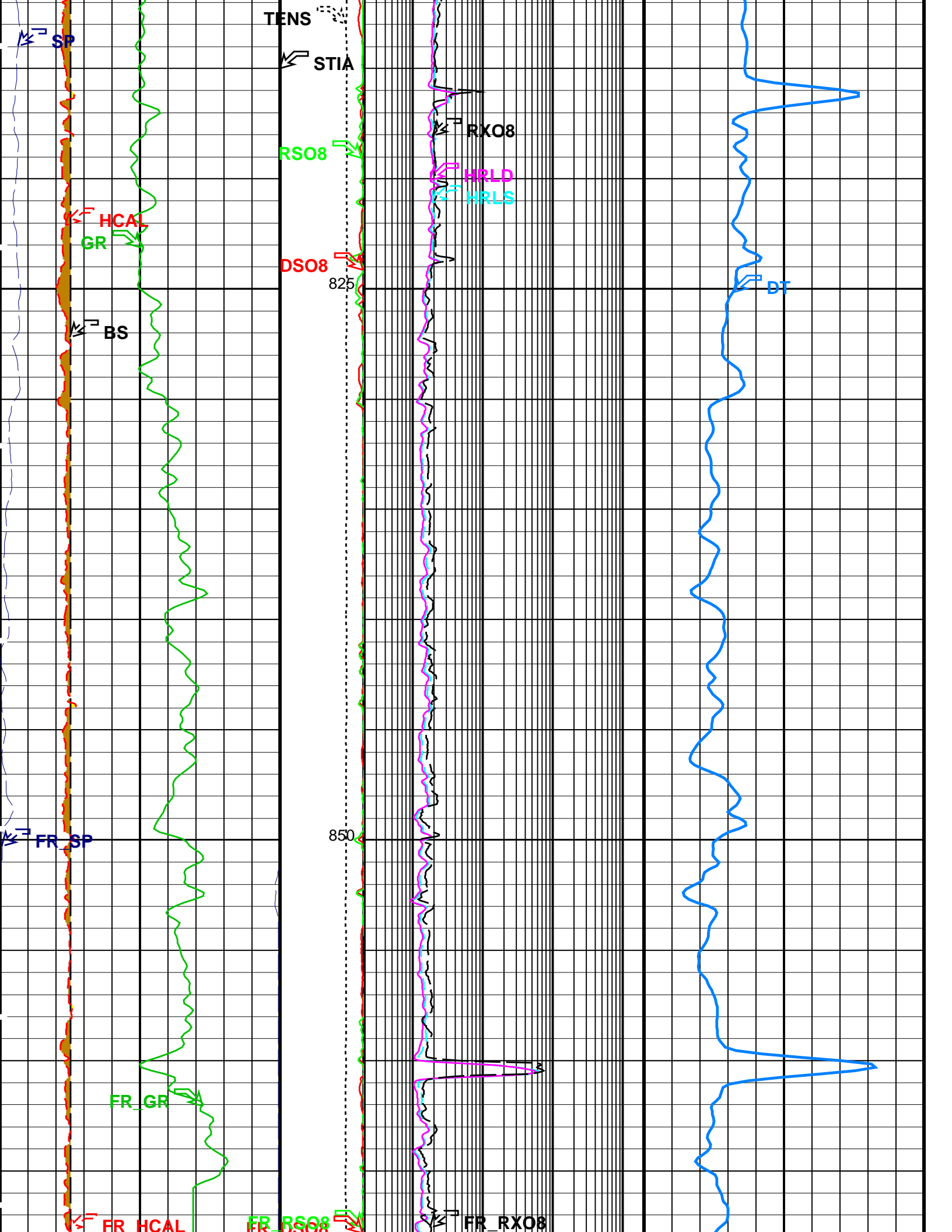


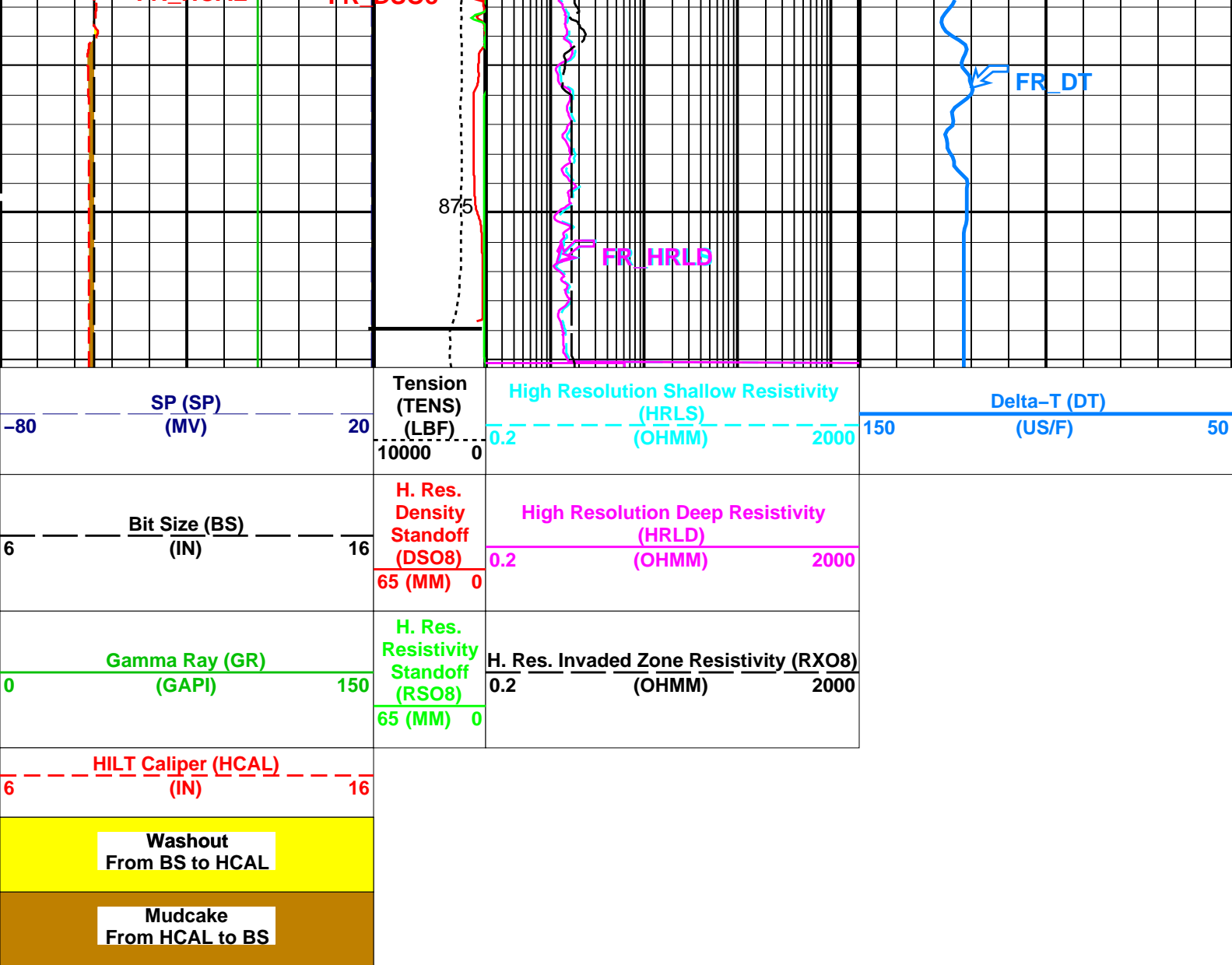












PIP SUMMARY

Parameters

DLIS Name	Description	Value
HALS-B: HILT Azimuthal Laterolog Sonde B		
ARIP_LTS	HALS Type of Image	Conductivities
ARIP_SHOULDER	HALS Long Tool String Correction	OFF
BHCC	HALS Shoulder Correction	OFF
BHT	HALS Borehole Correction	ON
DHOP	Bottom Hole Temperature (used in calculations)	48 DEGC
	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
DSLTLT-H: Digitizing Sonic Logging Tool		
	Telemetry Mode	DSLTLT_FTB
	DSLTLT Firing Mode	SDDDB
DDEL	Digitizing Delay	0 US
DIVL	DSLTLT Depth Sampling Interval	20
DRCS	DSLTLT DLIS Recording Size	180
DSIN	Digitizing Sample Interval	10
DTFS	DSLTLT 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			
BHT	Bottom Hole Temperature (used in calculations)	48	DEGC
DHC	Density Hole Correction	BS	
GCSE	Generalized Caliper Selection	HCAL	
MPOF	MCFL Processing Operation Mode	ON	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	BARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BHT	Bottom Hole Temperature (used in calculations)	48	DEGC
GCSE	Generalized Caliper Selection	HCAL	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
HOLEV: Integrated Hole/Cement Volume			
BHT	Bottom Hole Temperature (used in calculations)	48	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	889.00	M
TDL	Total Depth - Logger	879.00	M
System and Miscellaneous			
BS	Bit Size	8.500	IN
DO	Depth Offset for Playback	0.2	M
DORL	Depth Offset for Repeat Analysis	0.1	M
PP	Playback Processing	RECOMPUTE	

Format: Resistivity_Sonic_HR Vertical Scale: 1:200 Graphics File Created: 30-Jun-2004 19:55

OP System Version: 12C0-301

MCM

HALS-B	12C0-301	DSLT-H	12C0-301
HILTB-FTB	12C0-301	HNGC-A	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_007LUP	FN:11	PRODUCER	30-Jun-2004 17:55	880.1 M	28.4 M
---------	----------------------------	-------	----------	-------------------	---------	--------

Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_008PUP	FN:13	PRODUCER	30-Jun-2004 19:55		
---------	----------------------------	-------	----------	-------------------	--	--

Schlumberger

Repeat Analysis
1:200 Scale

MAXIS Field Log

Company: Essential Petroleum Resources Limited Well: Findra-1

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_006LUP	FN:9	PRODUCER	30-Jun-2004 17:21	745.2 M	597.3 M
DEFAULT	HALS_SONIC_TLD_MCFL_007LUP	FN:11	PRODUCER	30-Jun-2004 17:55	880.1 M	28.4 M

Output DLIS Files

DEFAULT

HALS_SONIC_TLD_MCFL_008PUP FN:13

PRODUCER

30-Jun-2004 19:55

OP System Version: 12C0-301

MCM

HALS-B 12C0-301
HILTB-FTB 12C0-301
HNGS-BA 12C0-301
BSP 12C0-301

DSLT-H 12C0-301
HNGC-A 12C0-301
DTC-H 12C0-301

PIP SUMMARY

Time Mark Every 60 S

Mudcake
From HCAL to BS

Washout
From BS to HCAL

SP_REP Curve (SP_REP)
(MV) -80 20

HCAL_REP Curve (HCAL_REP)
(IN) 6 16

GR_REP Curve (GR_REP)
(GAPI) 0 150

BS_REP Curve (BS_REP)
(IN) 6 16

TENS_REP
Curve
(TENS_
REP)
(LBF)
10000 0

RXOZ_REP Curve (RXOZ_REP)
(OHMM) 0.2 2000

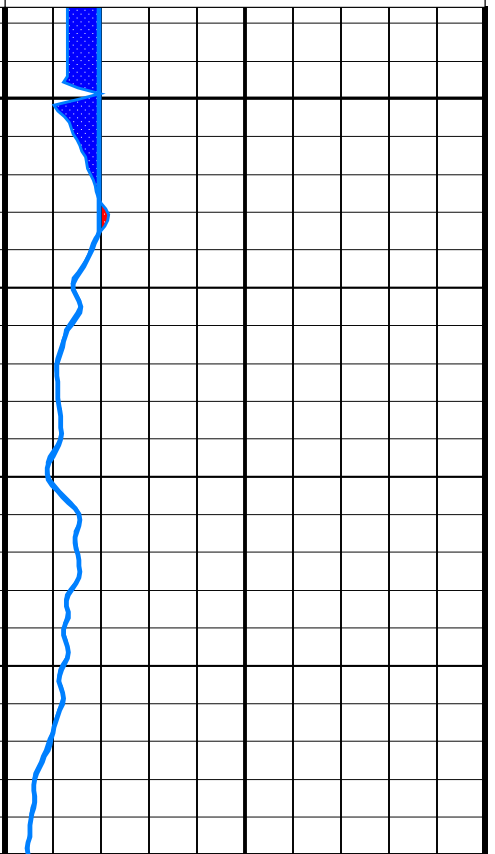
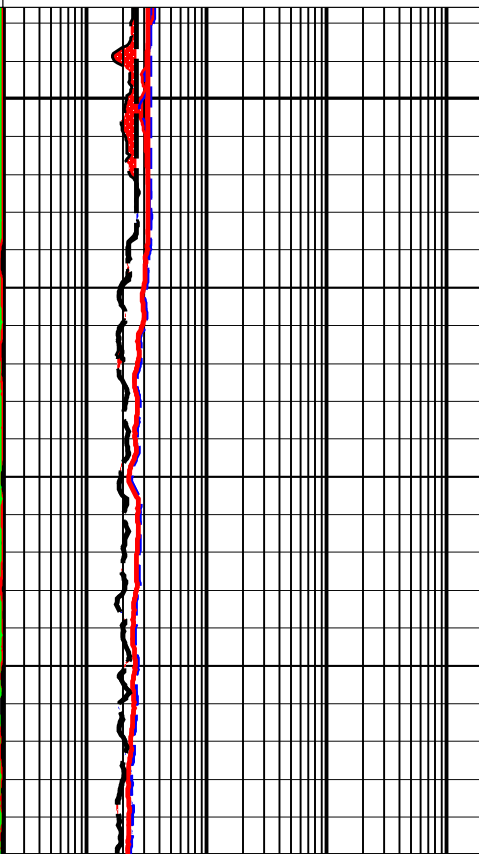
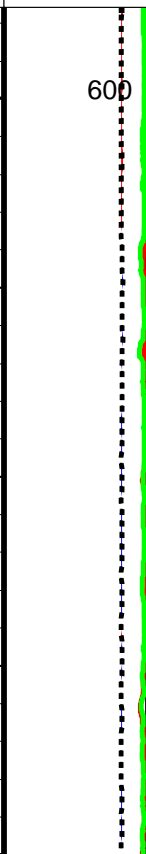
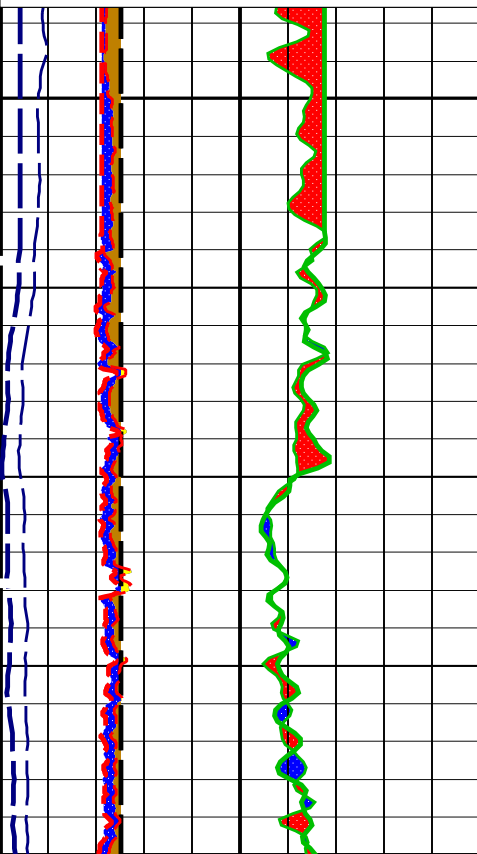
RSOZ_REP
Curve
(RSOZ_
REP)
65 (MM) 0

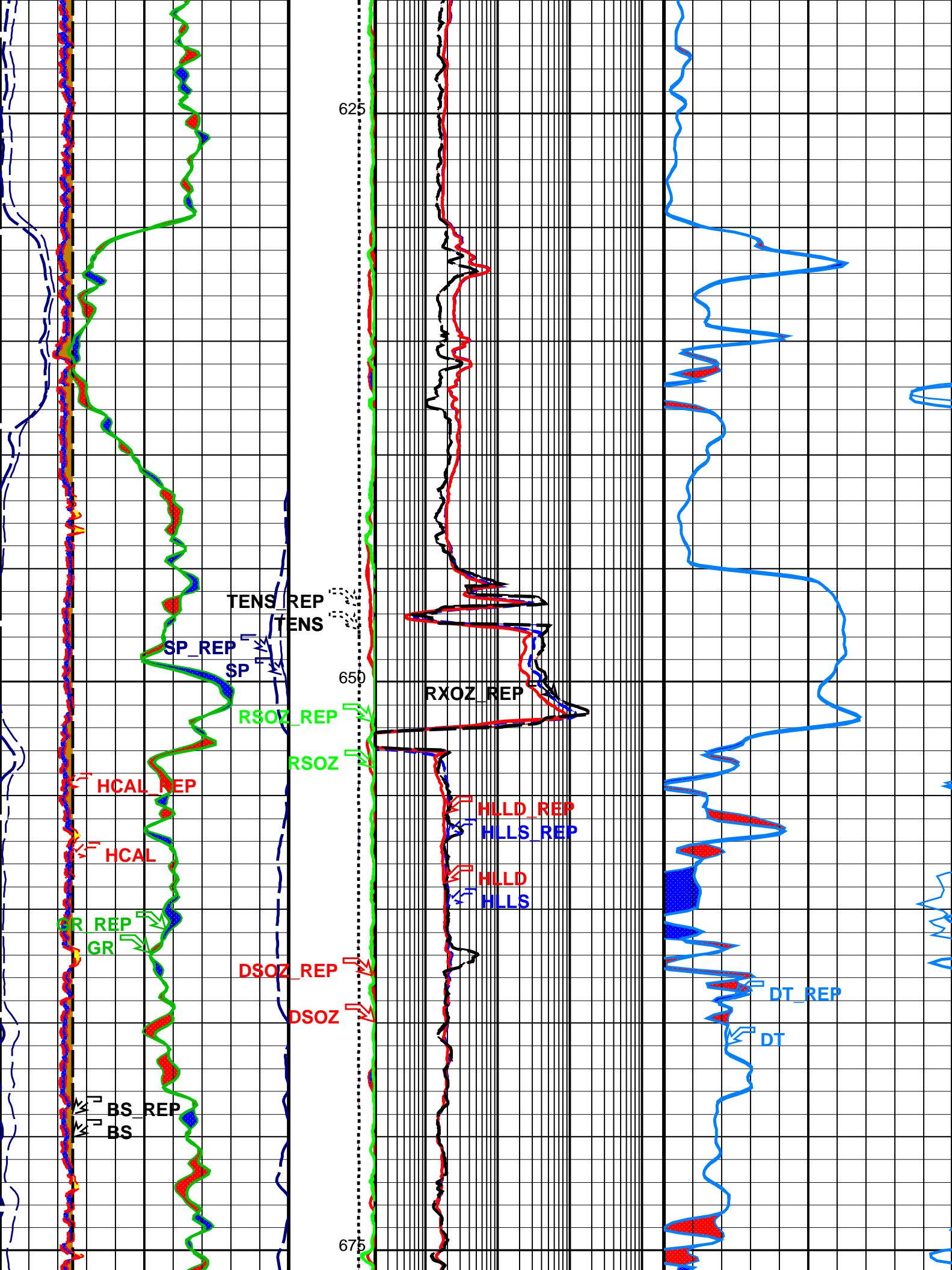
HLLD_REP Curve (HLLD_REP)
(OHMM) 0.2 2000

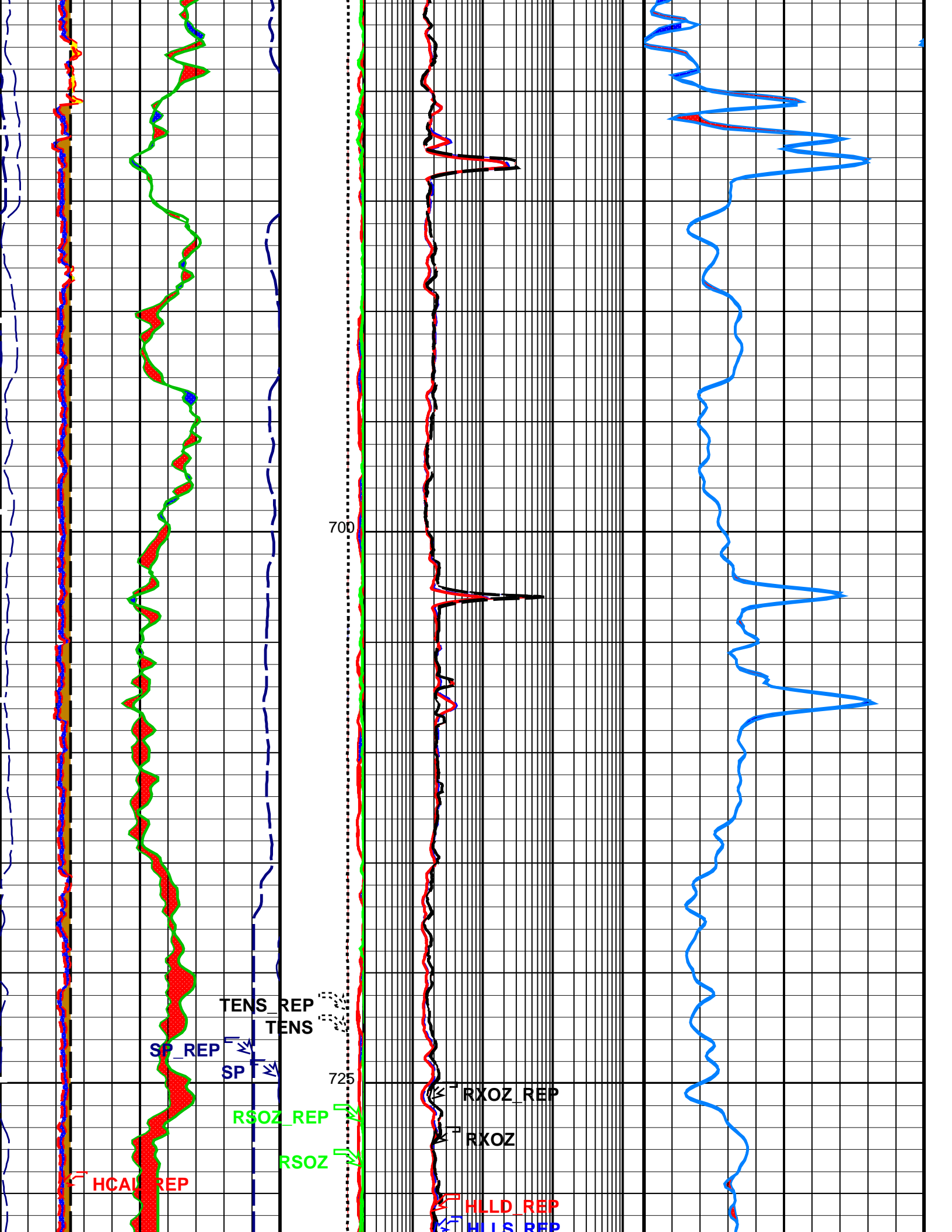
DSOZ_REP
Curve
(DSOZ_
REP)
65 (MM) 0

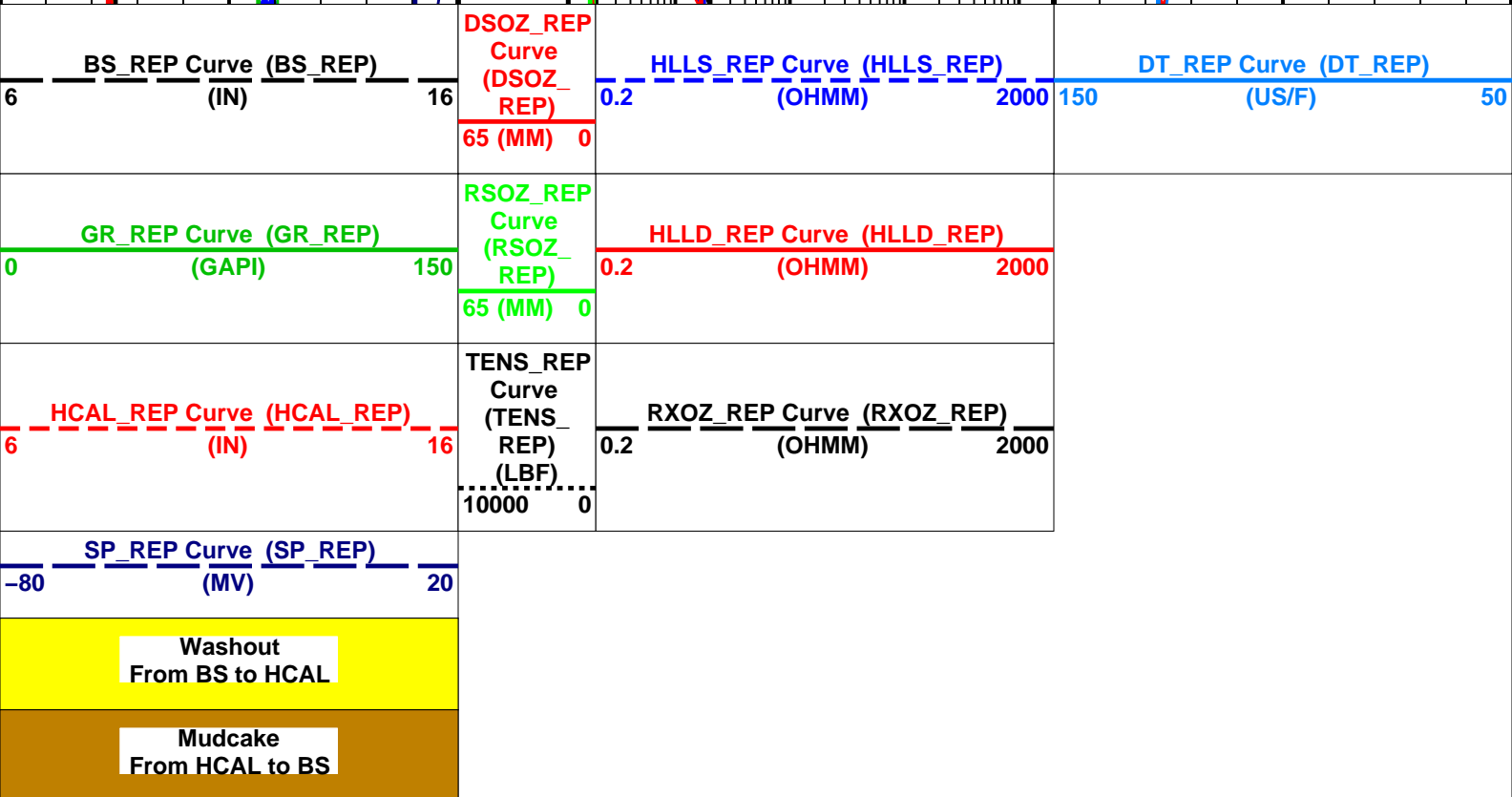
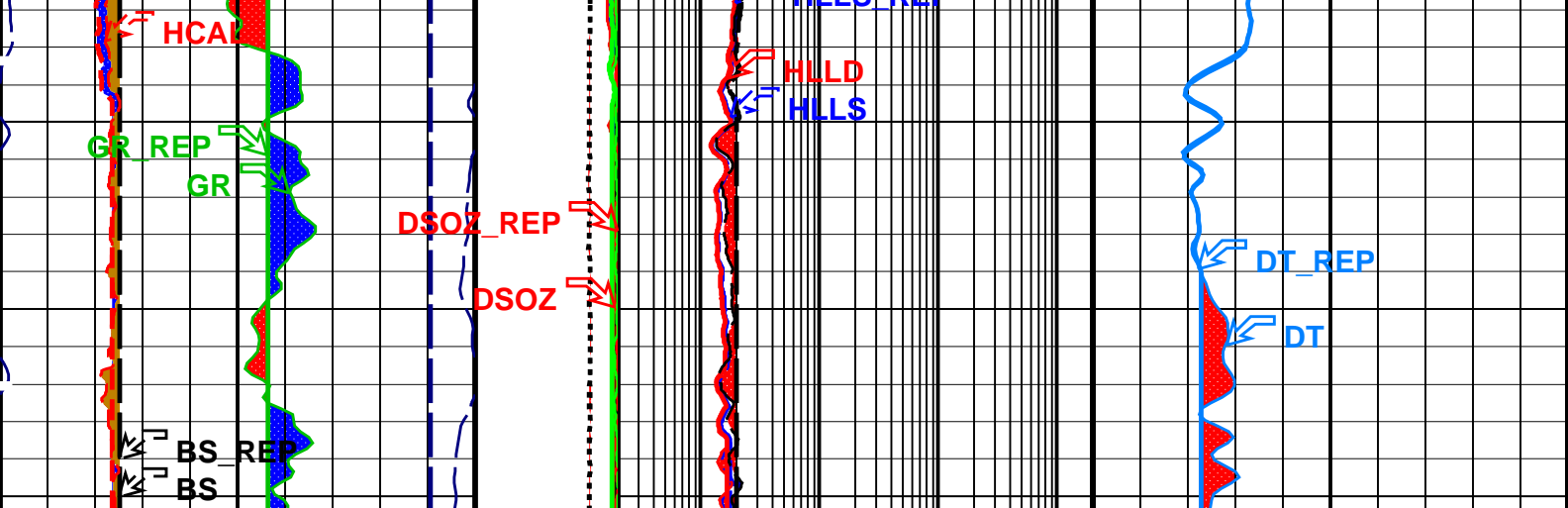
HLLS_REP Curve (HLLS_REP)
(OHMM) 0.2 2000

DT_REP Curve (DT_REP)
(US/F) 150 50









PIP SUMMARY

Time Mark Every 60 S

Format: Resistivity_Sonic_REP Vertical Scale: 1:200 Graphics File Created: 30-Jun-2004 19:55

OP System Version: 12C0-301

MCM

HALS-B	12C0-301	DSLT-H	12C0-301
HILTB-FTB	12C0-301	HNGC-A	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_006LUP FN:9	PRODUCER	30-Jun-2004 17:21	745.2 M	597.3 M
DEFAULT	HALS_SONIC_TLD_MCFL_007LUP FN:11	PRODUCER	30-Jun-2004 17:55	880.1 M	28.4 M

Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_008PUP FN:13	PRODUCER	30-Jun-2004 19:55
---------	----------------------------------	----------	-------------------

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: 30–Jun–2004 16:22							
Itot 1 Gain	1.000	N/A	0.998	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: 30–Jun–2004 16:22							
laux 1 Gain	1.000	N/A	0.994	N/A	N/A	0.035	MA
laux 1 Phase	0.000	N/A	–0.123	N/A	N/A	1.900	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 2							
Before: 30–Jun–2004 16:22							
laux 2 Gain	1.000	N/A	0.974	N/A	N/A	0.048	MA
laux 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: 30–Jun–2004 16:22							
I0 3A Gain	1.000	N/A	0.983	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: 30–Jun–2004 16:22							
I0 3B Gain	1.000	N/A	0.980	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: 30–Jun–2004 16:22							
Zvt 1 Gain	1.000	N/A	0.994	N/A	N/A	0.025	MV
Zvt 2 Gain	1.000	N/A	0.997	N/A	N/A	0.045	MV
Zvt 3 Gain	1.000	N/A	1.004	N/A	N/A	0.045	MV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage Phases							
Before: 30–Jun–2004 16:22							
Zvt 1 Phase	0.000	N/A	–0.102	N/A	N/A	2.300	DEG
Zvt 2 Phase	0.000	N/A	0.006	N/A	N/A	0.800	DEG
Zvt 3 Phase	0.000	N/A	–0.172	N/A	N/A	0.500	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Upper Bridle Voltage mode 1							
Before: 30–Jun–2004 16:22							
Zvb 1 Gain	1.000	N/A	0.994	N/A	N/A	0.025	MV
Zvb 1 Phase	0.000	N/A	–0.132	N/A	N/A	2.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–M2 Voltage gains							
Before: 30–Jun–2004 16:22							
ZVM 1 Gain	1.000	N/A	0.996	N/A	N/A	0.039	UV
ZVM 2 Gain	1.000	N/A	0.993	N/A	N/A	0.019	UV
ZVM 3 Gain	1.000	N/A	0.991	N/A	N/A	0.019	UV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–M2 Voltage Phases							
Before: 30–Jun–2004 16:22							
ZVM 1 Phase	0.000	N/A	0.224	N/A	N/A	3.800	DEG
ZVM 2 Phase	0.000	N/A	1.871	N/A	N/A	1.300	DEG
ZVM 3 Phase	0.000	N/A	1.002	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–A0* Voltage gains							
Before: 30–Jun–2004 16:22							
ZVH 1 Gain	1.000	N/A	0.997	N/A	N/A	0.013	UV
ZVH 2 Gain	1.000	N/A	0.990	N/A	N/A	0.046	UV
ZVH 3 Gain	1.000	N/A	0.990	N/A	N/A	0.046	UV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1–A0* Voltage Phases							
Before: 30–Jun–2004 16:22							

Before: 30-Jun-2004 16:22	ZVH 1 Phase	0.000	N/A	0.109	N/A	N/A	3.800	DEG
	ZVH 2 Phase	0.000	N/A	1.992	N/A	N/A	1.300	DEG
	ZVH 3 Phase	0.000	N/A	0.993	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage gains								
Before: 30-Jun-2004 16:22	ZVA 1 Gain	1.000	N/A	1.070	N/A	N/A	0.032	MV
	ZVA 2 Gain	1.000	N/A	1.063	N/A	N/A	0.045	MV
	ZVA 3 Gain	1.000	N/A	1.013	N/A	N/A	0.045	MV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage Phases								
Before: 30-Jun-2004 16:22	ZVA 1 Phase	0.000	N/A	1.005	N/A	N/A	2.300	DEG
	ZVA 2 Phase	0.000	N/A	0.153	N/A	N/A	0.800	DEG
	ZVA 3 Phase	0.000	N/A	0.162	N/A	N/A	0.500	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 1								
Before: 30-Jun-2004 16:22	ZVD 1 Gain	1.000	N/A	0.997	N/A	N/A	0.047	UV
	ZVD 1 Phase	0.000	N/A	0.096	N/A	N/A	3.800	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 2								
Before: 30-Jun-2004 16:22	ZVD 2 Gain	1.000	N/A	0.982	N/A	N/A	0.056	UV
	ZVD 2 Phase	0.000	N/A	1.287	N/A	N/A	1.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 3A								
Before: 30-Jun-2004 16:22	ZVD 3A Gain	1.000	N/A	0.988	N/A	N/A	0.056	UV
	ZVD 3A Phase	0.000	N/A	0.566	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*–A0** Diff. Voltage mode 3B								
Before: 30-Jun-2004 16:22	ZVD 3B Gain	1.000	N/A	1.000	N/A	N/A	0.054	UV
	ZVD 3B Phase	0.000	N/A	–0.039	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 1								
Before: 30-Jun-2004 16:22	ZVV 1 Gain	1.000	N/A	0.997	N/A	N/A	0.022	UV
	ZVV 1 Phase	0.000	N/A	0.163	N/A	N/A	2.800	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 2								
Before: 30-Jun-2004 16:22	ZVV 2 Gain	1.000	N/A	0.985	N/A	N/A	0.036	UV
	ZVV 2 Phase	0.000	N/A	2.626	N/A	N/A	1.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 1								
Before: 30-Jun-2004 16:22	Az 1 Gain – 0	1.000	N/A	0.999	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	0.999	N/A	N/A	0.047	UV
	Az 1 Gain – 3	1.000	N/A	0.994	N/A	N/A	0.047	UV
	Az 1 Gain – 4	1.000	N/A	0.999	N/A	N/A	0.047	UV
	Az 1 Gain – 5	1.000	N/A	0.999	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	0.998	N/A	N/A	0.047	UV
	Az 1 Gain – 8	1.000	N/A	0.997	N/A	N/A	0.047	UV
	Az 1 Gain – 9	1.000	N/A	0.997	N/A	N/A	0.047	UV
	Az 1 Gain – 10	1.000	N/A	1.001	N/A	N/A	0.047	UV
	Az 1 Gain – 11	1.000	N/A	0.996	N/A	N/A	0.047	UV
	AZ 1 Phase – 0	0.000	N/A	–0.001	N/A	N/A	3.800	DEG
	AZ 1 Phase – 1	0.000	N/A	0.135	N/A	N/A	3.800	DEG
	AZ 1 Phase – 2	0.000	N/A	0.098	N/A	N/A	3.800	DEG
	AZ 1 Phase – 3	0.000	N/A	0.102	N/A	N/A	3.800	DEG
	AZ 1 Phase – 4	0.000	N/A	0.211	N/A	N/A	3.800	DEG
	AZ 1 Phase – 5	0.000	N/A	0.094	N/A	N/A	3.800	DEG
	AZ 1 Phase – 6	0.000	N/A	0.065	N/A	N/A	3.800	DEG
	AZ 1 Phase – 7	0.000	N/A	0.015	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	0.021	N/A	N/A	3.800	DEG
	AZ 1 Phase – 10	0.000	N/A	0.126	N/A	N/A	3.800	DEG
	AZ 1 Phase – 11	0.000	N/A	0.106	N/A	N/A	3.800	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 2								
Before: 30-Jun-2004 16:22	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	0.983	N/A	N/A	0.056	UV
	Az 2 Gain – 2	1.000	N/A	0.984	N/A	N/A	0.056	UV
	Az 2 Gain – 3	1.000	N/A	0.979	N/A	N/A	0.056	UV
	Az 2 Gain – 4	1.000	N/A	0.985	N/A	N/A	0.056	UV
	Az 2 Gain – 5	1.000	N/A	0.984	N/A	N/A	0.056	UV

Az 2 Gain – 6	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Gain – 7	1.000	N/A	0.983	N/A	N/A	0.056	UV
Az 2 Gain – 8	1.000	N/A	0.983	N/A	N/A	0.056	UV
Az 2 Gain – 9	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Gain – 10	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 2 Gain – 11	1.000	N/A	0.981	N/A	N/A	0.056	UV
Az 2 Phase – 0	0.000	N/A	1.350	N/A	N/A	1.300	DEG
Az 2 Phase – 1	0.000	N/A	1.308	N/A	N/A	1.300	DEG
Az 2 Phase – 2	0.000	N/A	1.317	N/A	N/A	1.300	DEG
Az 2 Phase – 3	0.000	N/A	1.304	N/A	N/A	1.300	DEG
Az 2 Phase – 4	0.000	N/A	1.333	N/A	N/A	1.300	DEG
Az 2 Phase – 5	0.000	N/A	1.344	N/A	N/A	1.300	DEG
Az 2 Phase – 6	0.000	N/A	1.368	N/A	N/A	1.300	DEG
Az 2 Phase – 7	0.000	N/A	1.363	N/A	N/A	1.300	DEG
Az 2 Phase – 8	0.000	N/A	1.382	N/A	N/A	1.300	DEG
Az 2 Phase – 9	0.000	N/A	1.336	N/A	N/A	1.300	DEG
Az 2 Phase – 10	0.000	N/A	1.398	N/A	N/A	1.300	DEG
Az 2 Phase – 11	0.000	N/A	1.280	N/A	N/A	1.300	DEG

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

Before: 30-Jun-2004 16:22

Az 3A Gain – 0	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 1	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 3A Gain – 2	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 3A Gain – 3	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 3A Gain – 4	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 3A Gain – 5	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 6	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Gain – 7	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 8	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 3A Gain – 9	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Gain – 10	1.000	N/A	0.992	N/A	N/A	0.056	UV
Az 3A Gain – 11	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Phase – 0	0.000	N/A	0.602	N/A	N/A	1.000	DEG
Az 3A Phase – 1	0.000	N/A	0.598	N/A	N/A	1.000	DEG
Az 3A Phase – 2	0.000	N/A	0.599	N/A	N/A	1.000	DEG
Az 3A Phase – 3	0.000	N/A	0.585	N/A	N/A	1.000	DEG
Az 3A Phase – 4	0.000	N/A	0.613	N/A	N/A	1.000	DEG
Az 3A Phase – 5	0.000	N/A	0.599	N/A	N/A	1.000	DEG
Az 3A Phase – 6	0.000	N/A	0.609	N/A	N/A	1.000	DEG
Az 3A Phase – 7	0.000	N/A	0.610	N/A	N/A	1.000	DEG
Az 3A Phase – 8	0.000	N/A	0.647	N/A	N/A	1.000	DEG
Az 3A Phase – 9	0.000	N/A	0.595	N/A	N/A	1.000	DEG
Az 3A Phase – 10	0.000	N/A	0.639	N/A	N/A	1.000	DEG
Az 3A Phase – 11	0.000	N/A	0.565	N/A	N/A	1.000	DEG

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

Before: 30-Jun-2004 16:22

Az 3B Gain – 0	1.000	N/A	1.007	N/A	N/A	0.054	UV
Az 3B Gain – 1	1.000	N/A	1.002	N/A	N/A	0.054	UV
Az 3B Gain – 2	1.000	N/A	1.006	N/A	N/A	0.054	UV
Az 3B Gain – 3	1.000	N/A	0.999	N/A	N/A	0.054	UV
Az 3B Gain – 4	1.000	N/A	1.006	N/A	N/A	0.054	UV
Az 3B Gain – 5	1.000	N/A	1.006	N/A	N/A	0.054	UV
Az 3B Gain – 6	1.000	N/A	1.005	N/A	N/A	0.054	UV
Az 3B Gain – 7	1.000	N/A	1.006	N/A	N/A	0.054	UV
Az 3B Gain – 8	1.000	N/A	1.006	N/A	N/A	0.054	UV
Az 3B Gain – 9	1.000	N/A	1.003	N/A	N/A	0.054	UV
Az 3B Gain – 10	1.000	N/A	1.010	N/A	N/A	0.054	UV
Az 3B Gain – 11	1.000	N/A	0.997	N/A	N/A	0.054	UV
Az 3B Phase – 0	0.000	N/A	0.232	N/A	N/A	1.000	DEG
Az 3B Phase – 1	0.000	N/A	0.167	N/A	N/A	1.000	DEG
Az 3B Phase – 2	0.000	N/A	0.106	N/A	N/A	1.000	DEG
Az 3B Phase – 3	0.000	N/A	0.121	N/A	N/A	1.000	DEG
Az 3B Phase – 4	0.000	N/A	0.061	N/A	N/A	1.000	DEG
Az 3B Phase – 5	0.000	N/A	0.181	N/A	N/A	1.000	DEG
Az 3B Phase – 6	0.000	N/A	0.111	N/A	N/A	1.000	DEG
Az 3B Phase – 7	0.000	N/A	0.192	N/A	N/A	1.000	DEG
Az 3B Phase – 8	0.000	N/A	0.136	N/A	N/A	1.000	DEG
Az 3B Phase – 9	0.000	N/A	0.131	N/A	N/A	1.000	DEG
Az 3B Phase – 10	0.000	N/A	0.190	N/A	N/A	1.000	DEG
Az 3B Phase – 11	0.000	N/A	-0.014	N/A	N/A	1.000	DEG

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

Before: 30-Jun-2004 16:18

BS Window Ratio	1.011	N/A	1.012	N/A	N/A	N/A	
BS Window Sum	16100	N/A	16060	N/A	N/A	N/A	CPS
SS Window Ratio	0.4808	N/A	0.4806	N/A	N/A	N/A	
SS Window Sum	10970	N/A	10980	N/A	N/A	N/A	CPS
LS Window Ratio	0.2955	N/A	0.2944	N/A	N/A	N/A	
LS Window Sum	1160	N/A	1164	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo–multiplier High Voltages Calibrations							
Before: 30–Jun–2004 16:18							
BS PM High Voltage (Command)	1495	N/A	1468	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1944	N/A	1923	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1839	N/A	1832	N/A	N/A	N/A	V
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration							
Before: 30–Jun–2004 16:18							
BS Crystal Resolution	12.17	N/A	12.12	N/A	N/A	N/A	%
SS Crystal Resolution	11.48	N/A	11.55	N/A	N/A	N/A	%
LS Crystal Resolution	9.283	N/A	9.483	N/A	N/A	N/A	%
High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration							
Before: 30–Jun–2004 16:19							
Raw B0 Resistivity	3875	N/A	3799	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3768	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3798	N/A	N/A	N/A	OHMM
High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration							
Before: 30–Jun–2004 16:15							
HILT Caliper Zero Measurement	8.000	N/A	8.215	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.39	N/A	N/A	N/A	IN
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration							
Before: 30–Jun–2004 16:14							
Gamma Ray Background	30.00	N/A	26.47	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	174.8	N/A	174.8	N/A	N/A	15.89	GAPI
Gamma Ray (Calibrated)	160.0	N/A	160.0	N/A	N/A	15.00	GAPI
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement							
Master: 15–Jun–2004 17:21 Before: 30–Jun–2004 16:15							
CNTC Background	32.30	32.30	30.57	N/A	N/A	4.845	CPS
CFTC Background	29.13	29.13	29.39	N/A	N/A	4.370	CPS
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration							
Before: 30–Jun–2004 16:17							
Z–Axis Acceleration	9.810	N/A	9.802	N/A	N/A	N/A	M/S2
High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results							
Master: 15–Jun–2004 11:26							
Rho Aluminum	2.596	2.599	---	---	---	---	G/C3
Rho Magnesium	1.686	1.688	---	---	---	---	G/C3
Pe Aluminum	2.570	2.561	---	---	---	---	
Pe Magnesium	2.650	2.615	---	---	---	---	
High resolution Integrated Logging Tool–DTS Master Calibration – Deviation Summary							
Master: 15–Jun–2004 11:26							
BS Average Deviation	0	0.4141	---	---	---	---	%
BS Max Deviation	0	0.9721	---	---	---	---	%
SS Average Deviation	0	0.2442	---	---	---	---	%
SS Max Deviation	0	1.285	---	---	---	---	%
LS Average Deviation	0	0.4543	---	---	---	---	%
LS Max Deviation	0	0.9733	---	---	---	---	%
High resolution Integrated Logging Tool–DTS Master Calibration – Tank Measurement							
Master: 15–Jun–2004 17:21							
Thermal Near Corr. (Tank)	6031	5825	---	---	---	---	CPS
Thermal Far Corr. (Tank)	2793	2452	---	---	---	---	CPS
CNTC/CFTC (Tank)	2.159	2.376	---	---	---	---	
High resolution Integrated Logging Tool–DTS Master Calibration – Tank Measurement							
Master: 15–Jun–2004 17:21							
Thermal Near Corr. (Tank)	6031	5825	---	---	---	---	CPS
Thermal Far Corr. (Tank)	2793	2452	---	---	---	---	CPS
CNTC/CFTC (Tank)	2.159	2.376	---	---	---	---	
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 17–Jun–2004 21:58 Before: 30–Jun–2004 16:27							
Na 511 Peak Loc	40.00	40.64	39.64	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.25	15.10	N/A	N/A	2.000	%
High Voltage	1150	1159	1163	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	145.9	143.2	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.737	8.315	N/A	N/A	2.000	%
Temperature	15.50	13.72	16.29	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	42.07	43.16	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Master: 17–Jun–2004 21:58 Before: 30–Jun–2004 16:27							
Na 511 Peak Loc	40.00	39.68	39.72	N/A	N/A	1.000	
Na 511 Peak Res	15.50	14.94	14.70	N/A	N/A	2.000	%
High Voltage	1150	1080	1085	N/A	N/A	N/A	V

Na 1785 Peak Loc	142.6	143.0	141.9	N/A	N/A	7.000	%
Na 1785 Peak Res	8.500	8.683	8.147	N/A	N/A	2.000	DEGC
Temperature	15.50	14.40	15.55	N/A	N/A	N/A	CPS
Na Count Rate	45.00	41.97	42.72	N/A	N/A	8.000	

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2

Master: 17-Jun-2004 21:58 Before: 30-Jun-2004 16:27

Coincidence Count Rate Ratio	1.000	1.006	1.012	N/A	N/A	0.05000	
------------------------------	-------	-------	-------	-----	-----	---------	--

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration

Master: 17-Jun-2004 21:53

Na 511 Peak Set Point	40.00	42.00	--	--	--	--	
Th Peak Loc	209.6	211.5	--	--	--	--	
Th Peak Res	7.000	7.826	--	--	--	--	%
Background Count Rate	142.5	140.0	--	--	--	--	CPS
Gain Ratio	1.000	0.9901	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration

Master: 17-Jun-2004 21:53

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	207.7	--	--	--	--	
Th Peak Res	7.000	7.127	--	--	--	--	%
Background Count Rate	142.5	133.6	--	--	--	--	CPS
Gain Ratio	1.000	0.9954	--	--	--	--	

The GLS-VJ source activity is acceptable.

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

NCT-B Water Temperature 11.1 DEGC.

Thermal Housing Size 3.369 IN.

HILT Azimuthal Laterolog Sonde B / Equipment Identification



Primary Equipment:



Auxiliary Equipment:



Laterolog Control Module



LCM – AA



2747




HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Total current mode 1					
Itot 1 Gain MA		Value	Itot 1 Phase DEG		Value
		0.998			-0.000
0.926	1.000	1.081	-0.100	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 30-Jun-2004 16:22					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 1					
Iaux 1 Gain MA		Value	Iaux 1 Phase DEG		Value
		0.994			-0.123
0.854	1.000	1.180	-4.600	0.000	4.600
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 30-Jun-2004 16:22					




HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 2					
Iaux 2 Gain MA		Value	Iaux 2 Phase DEG		Value
		0.974			0.000
0.816	1.000	1.232	-1.000	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 30-Jun-2004 16:22					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3A					
I0 3A Gain UA		Value	I0 3A Phase DEG		Value
		0.983			-0.000
0.893	1.000	1.114	-1.000	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 30-Jun-2004 16:22					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3B					
I0 3B Gain UA		Value	I0 3B Phase DEG		Value
		0.980			-0.000
0.893	1.000	1.114	-1.000	0.000	0.100
(Minimum) (Nominal) (Maximum)			(Minimum) (Nominal) (Maximum)		
Before: 30-Jun-2004 16:22					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage gains					
Zvt 1 Gain MV	Value	Zvt 2 Gain MV	Value	Zvt 3 Gain MV	Value
	0.994		0.997		1.004
0.925 1.000 1.078		0.865 1.000 1.153		0.865 1.000 1.153	
(Minimum) (Nominal) (Maximum)		(Minimum) (Nominal) (Maximum)		(Minimum) (Nominal) (Maximum)	




Before: 30-Jun-2004 16:22

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage Phases					
Zvt 1 Phase DEG	Value	Zvt 2 Phase DEG	Value	Zvt 3 Phase DEG	Value
	-0.102		0.006		-0.172
-4.400 0.000 4.400 (Minimum) (Nominal) (Maximum)		-2.800 0.000 2.800 (Minimum) (Nominal) (Maximum)		-1.400 0.000 1.400 (Minimum) (Nominal) (Maximum)	




Before: 30-Jun-2004 16:22

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB Upper Bridle Voltage mode 1			
Zvb 1 Gain MV	Value	Zvb 1 Phase DEG	Value
	0.994		-0.132
0.925 1.000 1.078 (Minimum) (Nominal) (Maximum)		-4.400 0.000 4.400 (Minimum) (Nominal) (Maximum)	




Before: 30-Jun-2004 16:22

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage gains					
ZVM 1 Gain UV	Value	ZVM 2 Gain UV	Value	ZVM 3 Gain UV	Value
	0.996		0.993		0.991
0.895 1.000 1.117 (Minimum) (Nominal) (Maximum)		0.943 1.000 1.056 (Minimum) (Nominal) (Maximum)		0.943 1.000 1.056 (Minimum) (Nominal) (Maximum)	




Before: 30-Jun-2004 16:22

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage Phases					
ZVM 1 Phase DEG	Value	ZVM 2 Phase DEG	Value	ZVM 3 Phase DEG	Value
	0.224		1.871		1.002
-6.500 0.000 6.500 (Minimum) (Nominal) (Maximum)		-3.300 0.000 3.300 (Minimum) (Nominal) (Maximum)		-2.000 0.000 2.000 (Minimum) (Nominal) (Maximum)	




Before: 30-Jun-2004 16:22

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-A0* Voltage gains					
ZVH 1 Gain UV	Value	ZVH 2 Gain UV	Value	ZVH 3 Gain UV	Value
	0.997		0.990		0.990
0.962 1.000 1.039 (Minimum) (Nominal) (Maximum)		0.864 1.000 1.154 (Minimum) (Nominal) (Maximum)		0.864 1.000 1.154 (Minimum) (Nominal) (Maximum)	




Before: 30-Jun-2004 16:22

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-A0* Voltage Phases					
ZVH 1 Phase DEG	Value	ZVH 2 Phase DEG	Value	ZVH 3 Phase DEG	Value
	0.109		1.992		0.993
-6.500 0.000 6.500 (Minimum) (Nominal) (Maximum)		-3.300 0.000 3.300 (Minimum) (Nominal) (Maximum)		-2.000 0.000 2.000 (Minimum) (Nominal) (Maximum)	



Before: 30-Jun-2004 16:22



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux Voltage gains					
ZVA 1 Gain MV	Value	ZVA 2 Gain MV	Value	ZVA 3 Gain MV	Value
	1.070		1.063		1.013
0.905 1.000 1.103 (Minimum) (Nominal) (Maximum)		0.866 1.000 1.151 (Minimum) (Nominal) (Maximum)		0.866 1.000 1.151 (Minimum) (Nominal) (Maximum)	

Before: 30-Jun-2004 16:22



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux Voltage Phases					
ZVA 1 Phase DEG	Value	ZVA 2 Phase DEG	Value	ZVA 3 Phase DEG	Value
	1.005		0.153		0.162
-4.100 0.000 4.100 (Minimum) (Nominal) (Maximum)		-2.300 0.000 2.300 (Minimum) (Nominal) (Maximum)		-1.000 0.000 1.000 (Minimum) (Nominal) (Maximum)	



Before: 30-Jun-2004 16:22

























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 1			
ZVD 1 Gain UV	Value	ZVD 1 Phase DEG	Value
	0.997		0.096

























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 2			
ZVD 2 Gain UV	Value	ZVD 2 Phase DEG	Value
	0.982		1.287

0.874 (Minimum)	1.000 (Nominal)	1.147 (Maximum)	-6.300 (Minimum)	0.000 (Nominal)	6.300 (Maximum)
Before: 30-Jun-2004 16:22					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0*-A0** Diff. Voltage mode 3A					
ZVD 3A Gain UV		Value	ZVD 3A Phase DEG		Value
		0.988			0.566
0.842 (Minimum)	1.000 (Nominal)	1.187 (Maximum)	-2.000 (Minimum)	0.000 (Nominal)	2.000 (Maximum)
Before: 30-Jun-2004 16:22					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB vertical Voltage mode 1					
ZVV 1 Gain UV		Value	ZVV 1 Phase DEG		Value
		0.997			0.163
0.936 (Minimum)	1.000 (Nominal)	1.065 (Maximum)	-4.600 (Minimum)	0.000 (Nominal)	4.600 (Maximum)
Before: 30-Jun-2004 16:22					

























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		0.999	0		-0.001
1		0.998	1		0.135
2		0.999	2		0.098
3		0.994	3		0.102
4		0.999	4		0.211
5		0.999	5		0.094
6		0.997	6		0.065
7		0.998	7		0.015
8		0.997	8		0.129
9		0.997	9		0.021
10		1.001	10		0.126
11		0.996	11		0.106
0.874 (Minimum)	1.000 (Nominal)	1.147 (Maximum)	-6.300 (Minimum)	0.000 (Nominal)	6.300 (Maximum)
Before: 30-Jun-2004 16:22					

























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		0.989	0		0.602
1		0.988	1		0.598
2		0.990	2		0.599
3		0.984	3		0.585
4		0.990	4		0.613
5		0.989	5		0.599
6		0.987	6		0.609
7		0.989	7		0.610
8		0.988	8		0.647
9		0.987	9		0.595
10		0.992	10		0.639
11		0.987	11		0.565
0.842 (Minimum)	1.000 (Nominal)	1.187 (Maximum)	-2.000 (Minimum)	0.000 (Nominal)	2.000 (Maximum)

0.842 (Minimum)	1.000 (Nominal)	1.187 (Maximum)	-3.300 (Minimum)	0.000 (Nominal)	3.300 (Maximum)
Before: 30-Jun-2004 16:22					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0*-A0** Diff. Voltage mode 3B					
ZVD 3B Gain UV		Value	ZVD 3B Phase DEG		Value
		1.000			-0.039
0.845 (Minimum)	1.000 (Nominal)	1.183 (Maximum)	-2.000 (Minimum)	0.000 (Nominal)	2.000 (Maximum)
Before: 30-Jun-2004 16:22					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB vertical Voltage mode 2					
ZVV 2 Gain UV		Value	ZVV 2 Phase DEG		Value
		0.985			2.626
0.895 (Minimum)	1.000 (Nominal)	1.112 (Maximum)	-2.800 (Minimum)	0.000 (Nominal)	2.800 (Maximum)
Before: 30-Jun-2004 16:22					

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		1.350
1		0.983	1		1.308
2		0.984	2		1.317
3		0.979	3		1.304
4		0.985	4		1.333
5		0.984	5		1.344
6		0.982	6		1.368
7		0.983	7		1.363
8		0.983	8		1.382
9		0.982	9		1.336
10		0.987	10		1.398
11		0.981	11		1.280
0.842 (Minimum)	1.000 (Nominal)	1.187 (Maximum)	-3.300 (Minimum)	0.000 (Nominal)	3.300 (Maximum)
Before: 30-Jun-2004 16:22					

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		1.007	0		0.232
1		1.002	1		0.167
2		1.006	2		0.106
3		0.999	3		0.121
4		1.006	4		0.061
5		1.006	5		0.181
6		1.005	6		0.111
7		1.006	7		0.192
8		1.006	8		0.136
9		1.003	9		0.131
10		1.010	10		0.190
11		0.997	11		-0.014
0.845 (Minimum)	1.000 (Nominal)	1.183 (Maximum)	-2.000 (Minimum)	0.000 (Nominal)	2.000 (Maximum)

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 1765
 HRGD – B 1760
 HILT –
 HILT –
 HILT –
 MCFL –
 GLS – VJ 3739
 HRCC – B 1769

Auxiliary Equipment:

High resolution Integrated Logging Tool-DTS Wellsite Calibration




Stab Measurement Summary

Phase	BS Window Ratio	Value	Phase	SS Window Ratio	Value	Phase	LS Window Ratio	Value
Before		1.012	Before		0.4806	Before		0.2944
	0.9600 (Minimum)	1.011 (Nominal)	1.061 (Maximum)		0.4567 (Minimum)	0.4808 (Nominal)	0.5048 (Maximum)	
Phase	BS Window Sum CPS	Value	Phase	SS Window Sum CPS	Value	Phase	LS Window Sum CPS	Value
Before		16060	Before		10980	Before		1164
	15290 (Minimum)	16100 (Nominal)	16900 (Maximum)		10420 (Minimum)	10970 (Nominal)	11520 (Maximum)	
	1102 (Minimum)	1160 (Nominal)	1218 (Maximum)					

Before: 30-Jun-2004 16:18

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		1468	Before		1923	Before		1832
	1395 (Minimum)	1495 (Nominal)	1595 (Maximum)		1844 (Minimum)	1944 (Nominal)	2044 (Maximum)	
	1739 (Minimum)	1839 (Nominal)	1939 (Maximum)					

Before: 30-Jun-2004 16:18

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		12.12	Before		11.55	Before		9.483
	11.17 (Minimum)	12.17 (Nominal)	13.17 (Maximum)		10.48 (Minimum)	11.48 (Nominal)	12.48 (Maximum)	
	8.283 (Minimum)	9.283 (Nominal)	10.28 (Maximum)					

Before: 30-Jun-2004 16:18

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		3799	Before		3768	Before		3798
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)	

Before: 30-Jun-2004 16:19

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				8.215	Before				12.39
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)			9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)	

Before: 30-Jun-2004 16:15

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		26.47	Before		174.8	Before		160.0
	0	30.00	120.0		158.9	174.8	190.7	
					145.0	160.0	175.0	

Before: 30-Jun-2004 16:14

High resolution Integrated Logging Tool-DTS Wellsite Calibration									
Zero Measurement									
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value
Master				32.30	Master				29.13
Before				30.57	Before				29.39
5.000 (Minimum) 32.30 (Nominal) 40.00 (Maximum)					5.000 (Minimum) 29.13 (Nominal) 40.00 (Maximum)				
Master: 15-Jun-2004 17:21					Before: 30-Jun-2004 16:15				

Master: 15-Jun-2004 17:21

Before: 30-Jun-2004 16:15

High resolution Integrated Logging Tool-DTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration M/S2	Value
Before		9.802
9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)		

Before: 30-Jun-2004 16:17

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				1.688
2.586 (Minimum)		2.596 (Nominal)		2.606 (Maximum)	1.676 (Minimum)		1.686 (Nominal)		1.696 (Maximum)
Phase	Pe Aluminum			Value	Phase	Pe Magnesium			Value
Master				2.561	Master				2.615
2.470 (Minimum)		2.570 (Nominal)		2.670 (Maximum)	2.550 (Minimum)		2.650 (Nominal)		2.750 (Maximum)
Master: 15-Jun-2004 11:26									

Master: 15-Jun-2004 11:26

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	<div><div></div></div>			0.4141	Master	<div><div></div></div>			0.2442	Master	<div><div></div></div>			0.4543
-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	<div><div></div></div>			0.9721	Master	<div><div></div></div>			1.285	Master	<div><div></div></div>			0.9733
-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: 15-Jun-2004 11:26														

Master: 15-Jun-2004 11:26

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				5825	Master				2452	Master				2.376
5000 (Minimum) 6031 (Nominal) 7200 (Maximum)					2075 (Minimum) 2793 (Nominal) 3125 (Maximum)					2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)				
Master: 15–Jun–2004 17:21														

Master: 15-Jun-2004 17:21

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				5825	Master				2452	Master				2.376
5000 (Minimum) 6031 (Nominal) 7200 (Maximum)					2075 (Minimum) 2793 (Nominal) 3125 (Maximum)					2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)				
Master: 15–Jun–2004 17:21														

Master: 15-Jun-2004 17:21

Hostile Natural Gamma Ray Cartridge - A / Equipment Identification

Primary Equipment:

Auxiliary Equipment:
HNGC Housing

HNGH - A

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:
HNGS Sonde

HNGS - BA 129

Auxiliary Equipment:
HNGS Sonde Housing
Gamma Source Radioactive

HNSH - BA 3
GSR - U

Hostile Natural Gamma Ray Sonde Wellsite Calibration



Detector 1 Check

Phase	Na 511 Peak Loc		Value	Phase	Na 511 Peak Res %		Value	Phase	High Voltage V		Value			
Master			40.64	Master			16.25	Master			1159			
Before			39.64	Before			15.10	Before			1163			
37.50 (Minimum)			40.00 (Nominal)	42.50 (Maximum)			12.00 (Minimum)	15.50 (Nominal)	19.00 (Maximum)			900.0 (Minimum)	1150 (Nominal)	1600 (Maximum)
Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value			
Master			145.9	Master			8.737	Master			13.72			
Before			143.2	Before			8.315	Before			16.29			
135.0 (Minimum)			142.6 (Nominal)	150.3 (Maximum)			7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)			-28.89 (Minimum)	15.50 (Nominal)	60.00 (Maximum)
Phase	Na Count Rate CPS		Value											
Master			42.07											
Before			43.16											
10.00 (Minimum)			45.00 (Nominal)									100.0 (Maximum)		
Master: 17-Jun-2004 21:58				Before: 30-Jun-2004 16:27										






Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Detector 1 Check			Detector 2 Check					
Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		39.68	Master		14.94	Master		1080
Before		39.72	Before		14.70	Before		1085
37.50 (Minimum) 40.00 (Nominal) 42.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)		
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		143.0	Master		8.683	Master		14.40
Before		141.9	Before		8.147	Before		15.55
135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)			-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)		
Phase	Na Count Rate CPS	Value						
Master		41.97						
Before		42.72						
10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)								
Master: 17-Jun-2004 21:58			Before: 30-Jun-2004 16:27					

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		1.006
Before		1.012
<div><div>0.9500 (Minimum)</div><div>1.000 (Nominal)</div><div>1.050 (Maximum)</div></div>		
Master: 17-Jun-2004 21:58		
Before: 30-Jun-2004 16:27		

Hostile Natural Gamma Ray Sonde Master Calibration														
Detector 1 Calibration														
Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value	Phase	Th Peak Res %			Value
Master	<div><div></div></div>			42.00	Master	<div><div></div></div>			211.5	Master	<div><div></div></div>			7.826
	38.00 (Minimum)	40.00 (Nominal)	42.00 (Maximum)		201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)			5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)		
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value					
Master	<div><div></div></div>			140.0	Master	<div><div></div></div>			0.9901					
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)		0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)							
Master: 17-Jun-2004 21:53														

Hostile Natural Gamma Ray Sonde Master Calibration														
Detector 2 Calibration														
Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value	Phase	Th Peak Res %			Value
Master				41.00	Master				207.7	Master				7.127
	38.00 (Minimum)	40.00 (Nominal)	42.00 (Maximum)		201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)			5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)		
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value					
Master				133.6	Master				0.9954					
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)		0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)							
Master: 17-Jun-2004 21:53														

Company: **Essential Petroleum Resources Limited**

Schlumberger

Well: **Findra-1**
Field: **PEP 159**
Rig: **Hunt Rig #2**
Country: **Australia**

HALS-BHC-PEX-HNG:
Resistivity-Sonic Print
Scale 1:200